DSAG & ASUG & ES: Security Patching

Germany America EMEA/Asia

https://wiki.scn.sap.com/wiki/x/MIOeJQ

Frank Buchholz, SAP CoE Security Services
January 2023

News from ASUG

- **ASUG Insights → Security**
  https://www.asug.com/insights/business-function/information-security
  https://www.asug.com/insights/topic/cybersecurity
- **ASUG Insights → Solution Manager**
  https://www.asug.com/insights/sap-product/sap-solution-manager-solman
- **SAP Customer Influence program - SAP Identity Management 8.0 (2021)**
  https://influence.sap.com/sap/ino/#/campaign/2566

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News from DSAG

AK/AG-Sprecher

AK Security und Vulnerability Management

AK Sprecher
Dr. Alexander Ziesemer
thyssenkrupp Materials Services GmbH

AK Stellvertreter
Axel Daldorf
AKQUINET

Fachlicher Ansprechpartner
Stefan Czech
DSAG

SAP Ansprechpartner
Frank Buchholz
SAP SE

SAP Ansprechpartner
Regine Schimmer
SAP SE

AG Cloud Security

AG Sprecher
Andreas Kirchebner
Accenture

AG Stellvertreter
Oliver Villwock
CBS Consulting

SAP Ansprechpartner
Oliver Burmeister
SAP SE

SAP Ansprechpartner
Arndt Lingscheid
SAP SE

AG IdM 8.x

AG Sprecher
Aydin Tekin
Ibsolution Gmbh

SAP Ansprechpartner
Regine Schimmer
SAP SE

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News from DSAG

DSAG-Technologietage am 22. und 23. März 2023 in Mannheim
Erfahrungsberichte erwünscht unter http://www.vortraege.dsag.de

Nächstes SAP Security Notes Webinar: 16. Februar 2023 um 15 Uhr
Voraussichtliche Änderung des üblichen Termins auf den 16. März bzw. 11. Mai

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News from DSAG

DSAG Jahreskongress in Leipzig, 11. - 13. Oktober 2022

Download der Vorträge und Keynote

Auswahl der Vorträge zum Thema „Sicherheit“:

V049	Wie kann man Angriffe auf SAP-Applikationen erkennen und verhindern?
V050	Sicherheit und Prüfung von SAP S/4HANA
V051	Einführung S4 bei thyssenkrupp Materials Services – mit Sicherheit
V067	Der neue Prüfleitfaden SAP S/4HANA & Cloud Services – Best-PracticeEmpfehlungen
V069	Praxisbericht Datenschutz mit SAP: Einführung von SAP-ILM zum Sperren und Löschen von Daten nach der EU-DSGVO
V145	Threat Landscape 2022 und Erfahrungsberichte aus dem Onapsis Research Lab
V146	SAP GUI Single Sign-On und die Cloud: Wie geht das zusammen?
V147	Zwei Jahre nach der Stunde Null – Ein Update zum SAP IDM am Universitätsklinikum Düsseldorf
V156	Balance von Security-Anforderungen und Operational Impact am Beispiel SAP HANA
VP004	SAP-Compliance und Risikomanagement – Alles unter Kontrolle
VP011	Revisionssichere, zentrale SAP-Benutzerverwaltung bei der Hugo Boss AG
VP012	Sicherheits-Technologien von SUSE für SAP-Landschaften
VP020	Ransomware-Attack: Bericht eines Cyberangriffs und deren Konsequenzen. Ein realer, aktueller Fall
VP040	Die Beweggründe für die Einführung von Application Security aus Sicht eines CISOs
VP042	Ganzheitlicher Ansatz für Ihre SAP-Cybersicherheit - Frühzeitige Erkennung von Missbrauch mit SAST SUITE
VP048	Top Pain Points bei Fiori-Berechtigungen

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Overview

Support Portal – Security Notes
https://support.sap.com/securitynotes
This is a filtered list
→ All SAP Security Notes
Here you can find all Security Notes

Support Portal – Expert Search
https://support.sap.com/notes
→ Expert Search
for Document Type = SAP Security Notes
Here you can find all Security Notes

Security Patch Process FAQ
https://scn.sap.com/community/security/blog/2012/03/27/security-patch-process-faq

SAP Solution Manager application „System Recommendations“
This is the selection of security notes (from the full list on Support Portal), which *is relevant* or *might be relevant* for a specific technical system (ABAP, Java, HANA, etc).
Notes which are not shown here are not relevant for *this* system.

RSECNOTE and the corresponding chapter in the EWA show a small – and old – selection of security notes only.
Do not use RSECNOTE anymore - its content is outdated and incomplete - use System Recommendations!

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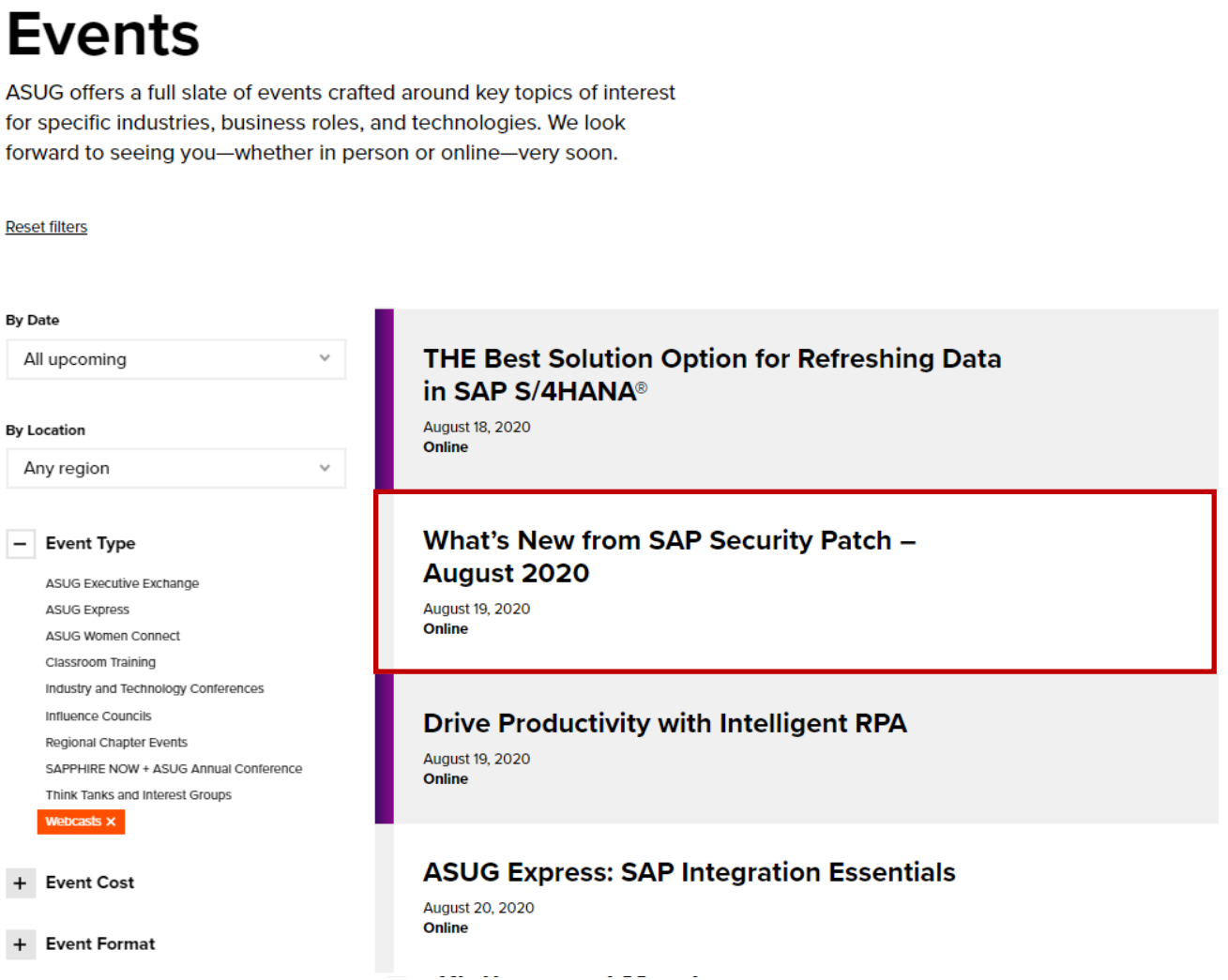
Hosts of the Security Notes Webinar

ASUG

[ASUG Information Security]

Regular schedule:
Wednesday in the week after the Patch Day
18:00-19:00 CEST = 12:00 EST = 9:00 PST

Calendar:
https://www.asug.com/events?events%5B%5D=1356781



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Hosts of the Security Notes Webinar

DSAG

DSAG AK Security & Vulnerability Management

Regular schedule:
Thursday in the week after the patch day
15:00 - 16:00 CET

Calendar:
https://dsagnet.de/dsag-resource?id=91659&app=veranstaltungskalender

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Hosts of the Security Notes Webinar

SAP Enterprise Support Academy

SAP Enterprise Support Academy

Regular schedule:
Thursday in the week after the patch day
09:00 - 10:00 CET

Calendar:
Updates from the last SAP Security Patch Day

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SAP Learning Hub Edition for SAP Enterprise Support

External sign up

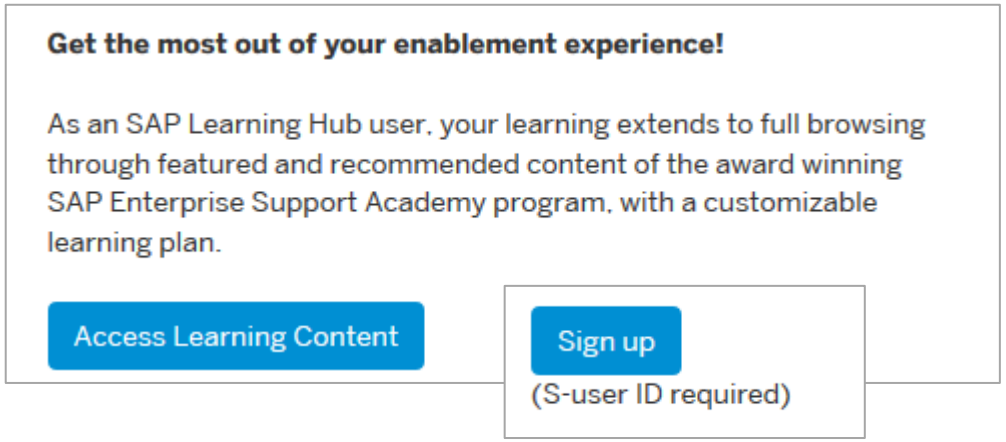
Preparation if the user has no access to the SAP Enterprise Support catalogue yet.

Even if the user has access to another catalogue in the SAP Learning Hub, a one-time sign up per S-User is mandatory.

How to sign up for the Support Edition:

1. **Navigate to the sign up page**

2. **Click the *Sign up* button. Authenticate yourself with your S-User. Upon first access, the system will check your eligibility, create a new SAP Learning Hub user, and populate your learning catalog respectively.**



3. **Within two hours, you will then receive a registration confirmation via e-mail and access to the catalogue is granted.**

How to guide: How to sign up for the SAP Learning Hub Edition for SAP Enterprise Support

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SAP Learning Hub Edition for SAP Enterprise Support

Registration | withdraw | watch a recording | find the survey

Direct access to SAP Learning Hub **(Login with your S-User ID)**

Find Courses: "Updates from the last SAP Security Patch Day"
or code: SUP_EBW_0650_1906

How to Guide:
Register for, withdraw and join the Meet the Expert live Session or recording

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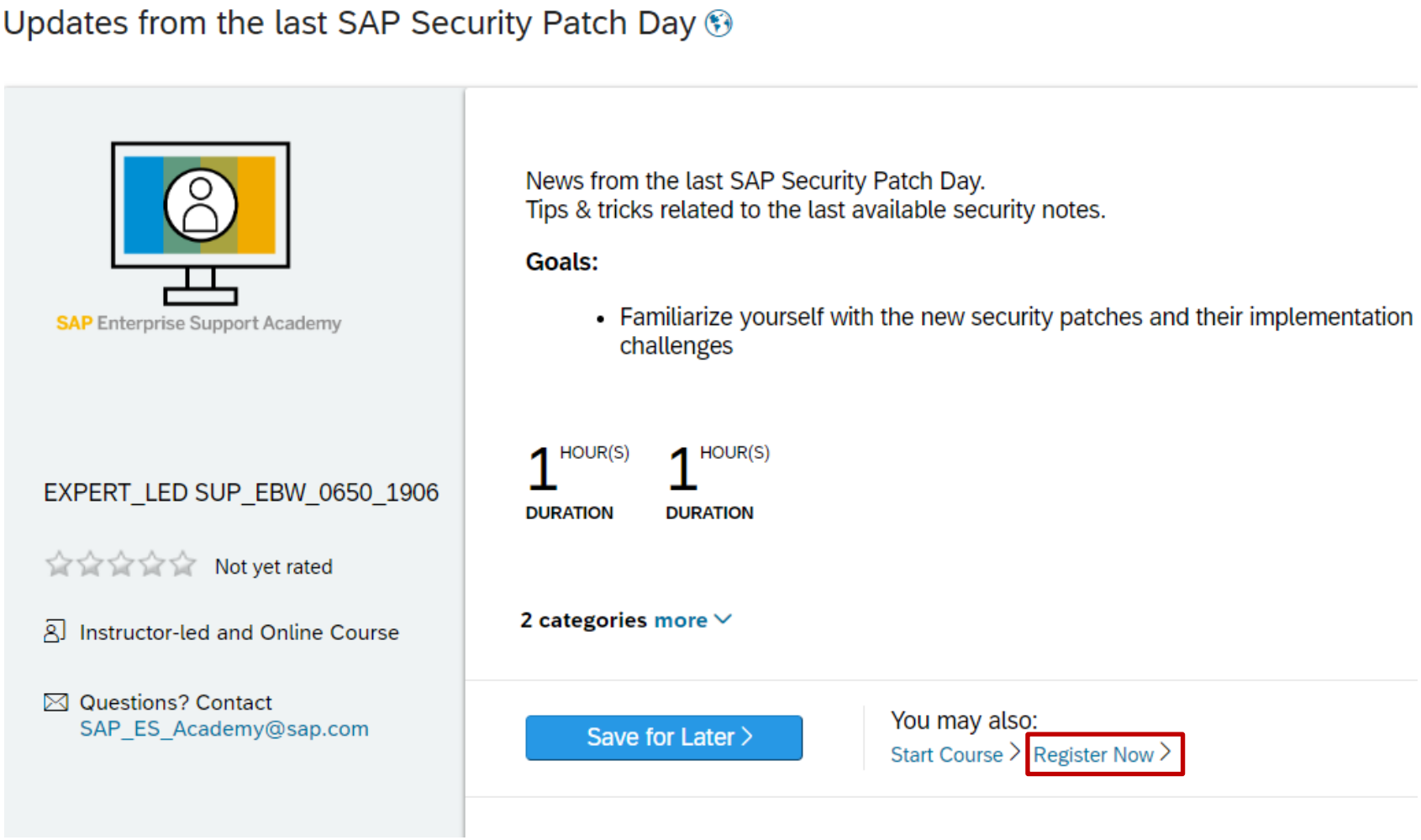
SAP Learning Hub Edition for SAP Enterprise Support

Registration | withdraw | watch a recording | find the survey

Register to course
“**Updates from last SAP Security Patch Day**”
SUP_EBW_0650_1906



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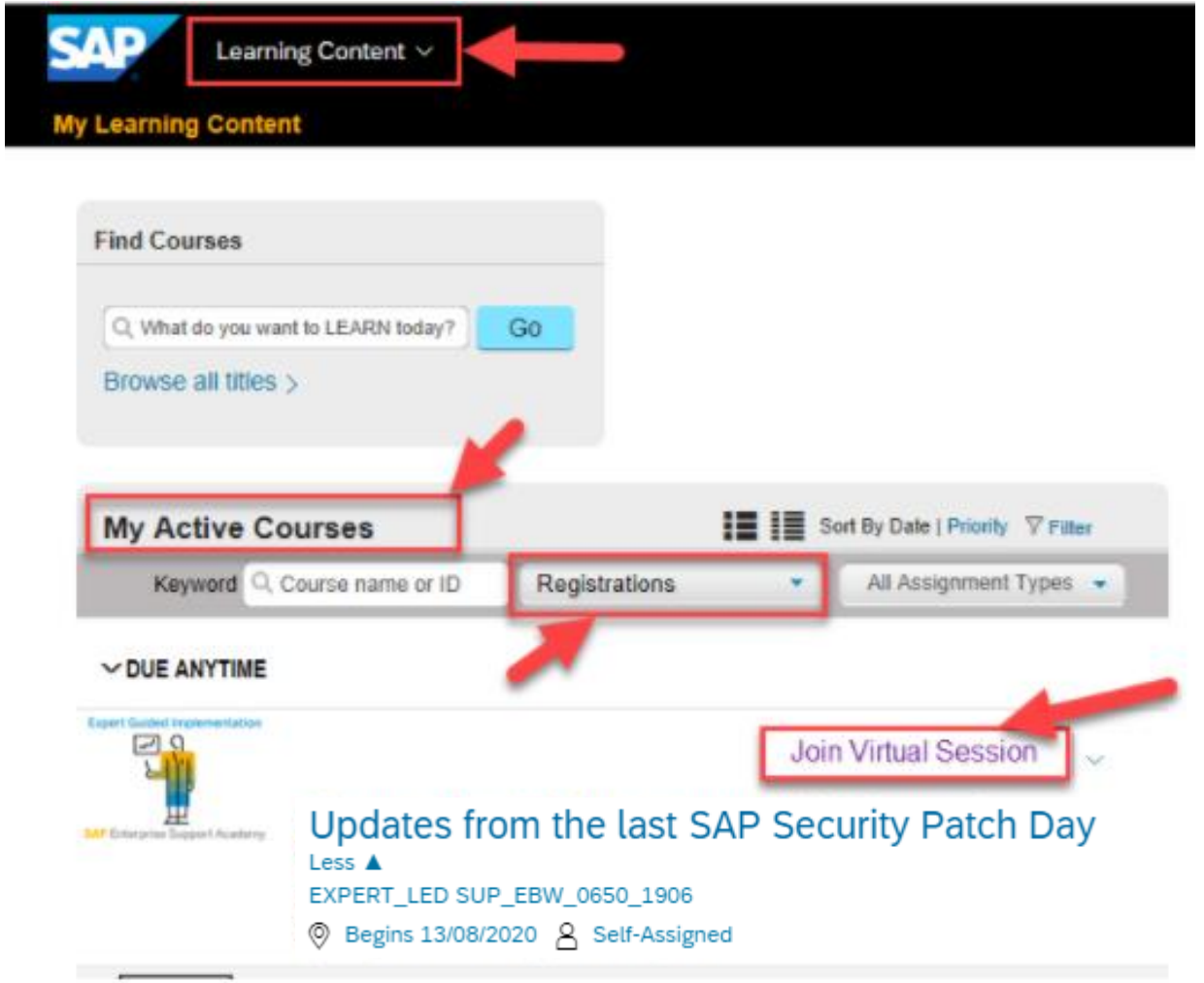
SAP Learning Hub Edition for SAP Enterprise Support

How to join your registered session within the SAP Learning Hub

30 Minutes prior to session start time, please go to your SAP Learning Hub "My Learning Content" section and look at your "active courses" (you can filter for "registrations") and the drop down next to the course should show "join virtual session"



To watch the recording, click on the course link and *"start course":*

Updates from the last SAP Security Patch Day

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SAP Learning Hub Edition for SAP Enterprise Support

How to reset the password or change the email address after sign up

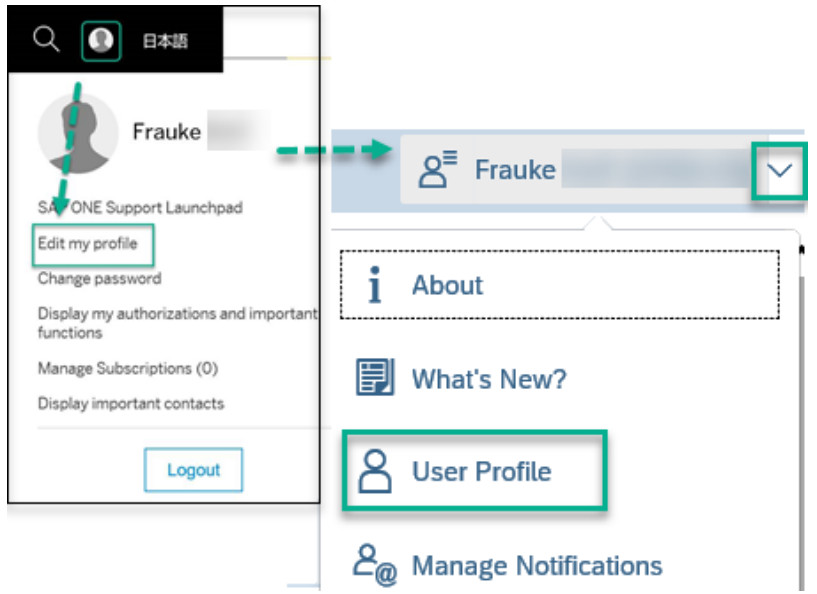
In case the customer forgot the S-User password, the password reset, cannot be done within the SAP Learning Hub/ SAP SuccessFactors logon page.
The password can be reset here:

https://accounts.sap.com/ui/createForgottenPasswordMail?spId=55365985e4b07dc3abdfc16c&targetUrl=&sourceUrl

In case the access to SAP Learning Hub is still not successful and you get redirected to the logon page again, this can be a sign for a missing sign up. → External Sign up

How to check and change your email address

1. **Go to https://support.sap.com**
2. **Login and click on your profile to edit**
3. **You will be redirected to the SAP Launchpad where you can check and change your email adress**



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TechEd Recording

SEC104 - Security Notes, System Recommendations and Business Process Change Analyzer

http://events.sap.com/teched/en/session/13574

This sessions shows how to set up a monthly patch process based on the application System Recommendations in SAP Solution Manager 7.1. See the integration with the usage procedure logging (UPL) and the business process change analyzer (BPCA) to identify business processes which might get affected by the implementation of security notes.

The presentation is based on the standard slide deck at https://support.sap.com/sos

→ CoE Security Services - Security Patch Process

In the Media Library you find the monthly updated SAP Security Notes Advisory, too.

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January 2023

Topics January 2023

https://wiki.scn.sap.com/wiki/display/Security/Security+Notes+Webinar+-+2023-01

The SAP Security Patch Day Blog

Security Baseline Template 2.4

Note 3089413 - Capture-replay vulnerability in SAP NetWeaver AS for ABAP and ABAP Platform

Note 3283283 - Cross-Site Scripting (XSS) vulnerability in SAP NetWeaver AS for ABAP and ABAP Platform

Note 3015325 - SAL | Supplementation of information tools Transaction/Report `RSAU_GET_WUSL`

Note 3274382 - ST 720 CV Target download store content or template to excel adjust

Note 3279191 - SDCCN: Certificate Renewal isn't triggered by Maintenance Package task

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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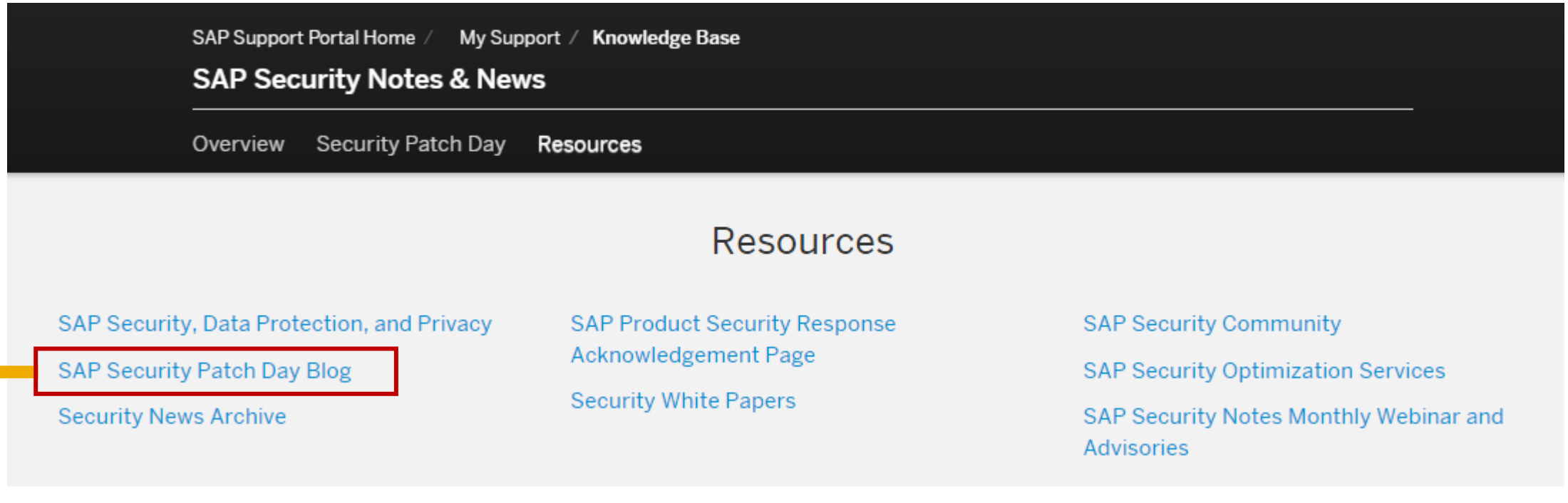
The SAP Security Patch Day Blog

This post shares information on Security Notes that remediate vulnerabilities discovered in SAP products. The blog now shows a list of all new or changed security notes for the latest patch day.
You find the SAP Security Patch Day Blog at https://support.sap.com/securitynotes



https://www.sap.com/documents/2022/02/fa865ea4-167e-0010-bca6-c68f7e60039b.html

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The SAP Security Patch Day Blog

You find the archived blogs from 2022 at https://d.dam.sap.com/a/3Hat4sC

To know more about the security researchers and research companies who have contributed for security patches, visit https://www.sap.com/documents/2022/02/089613a0-167e-0010-bca6-c68f7e60039b.html

If you have any comments or feedback about this post, you can write to secure@sap.com

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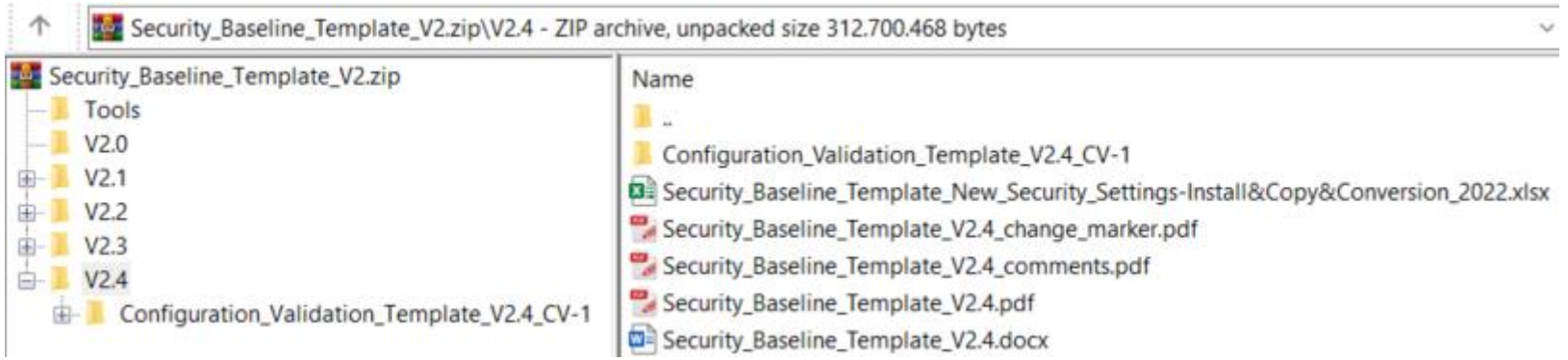
Security Baseline Template 2.4

New version available on https://support.sap.com/sos

- **Requirements extended and aligned with Secure-by-Default 2022**
- **Updated requirements for BTP (Cloud)**
- **Corrections (see change markers in Word and PDF files)**



The corresponding package 2.4_CV-1 for application Configuration Validation published, too

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Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP Overview

Trust relationships can be used to link ABAP based systems and minimize the amount of stored authentication credentials required for remote logons:

If a client system is registered to the remote server system as a *calling* system, no password is required for the logon. The target server system is known as the *called* system.

Trust relationships between ABAP based systems have the following benefits:

- ✓ **A single logon for multiple systems.**
- ✓ **No passwords are stored on the client system or transmitted in the network.**
- ✓ **Timeout mechanisms for the logon data protect against illegal logon attempts.**
- ✓ **User-specific logon data is checked in the trusting system.**

The solution described by of the security note changes the method how the *calling* and the *called* systems of a trusted/trusting relationship recognize each other.

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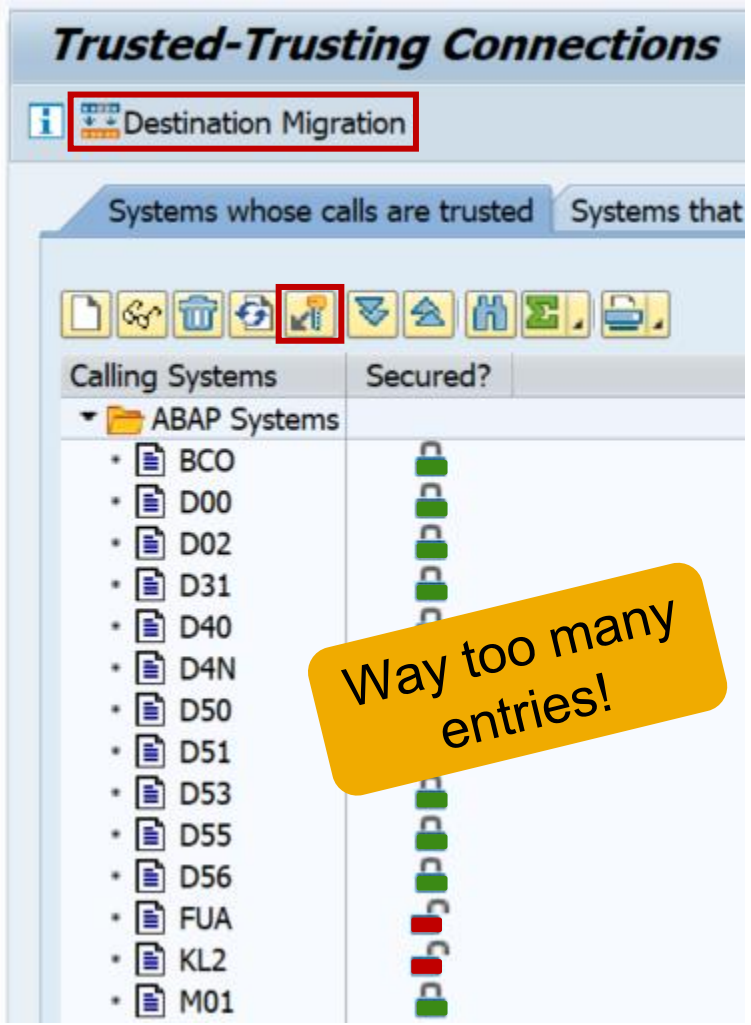
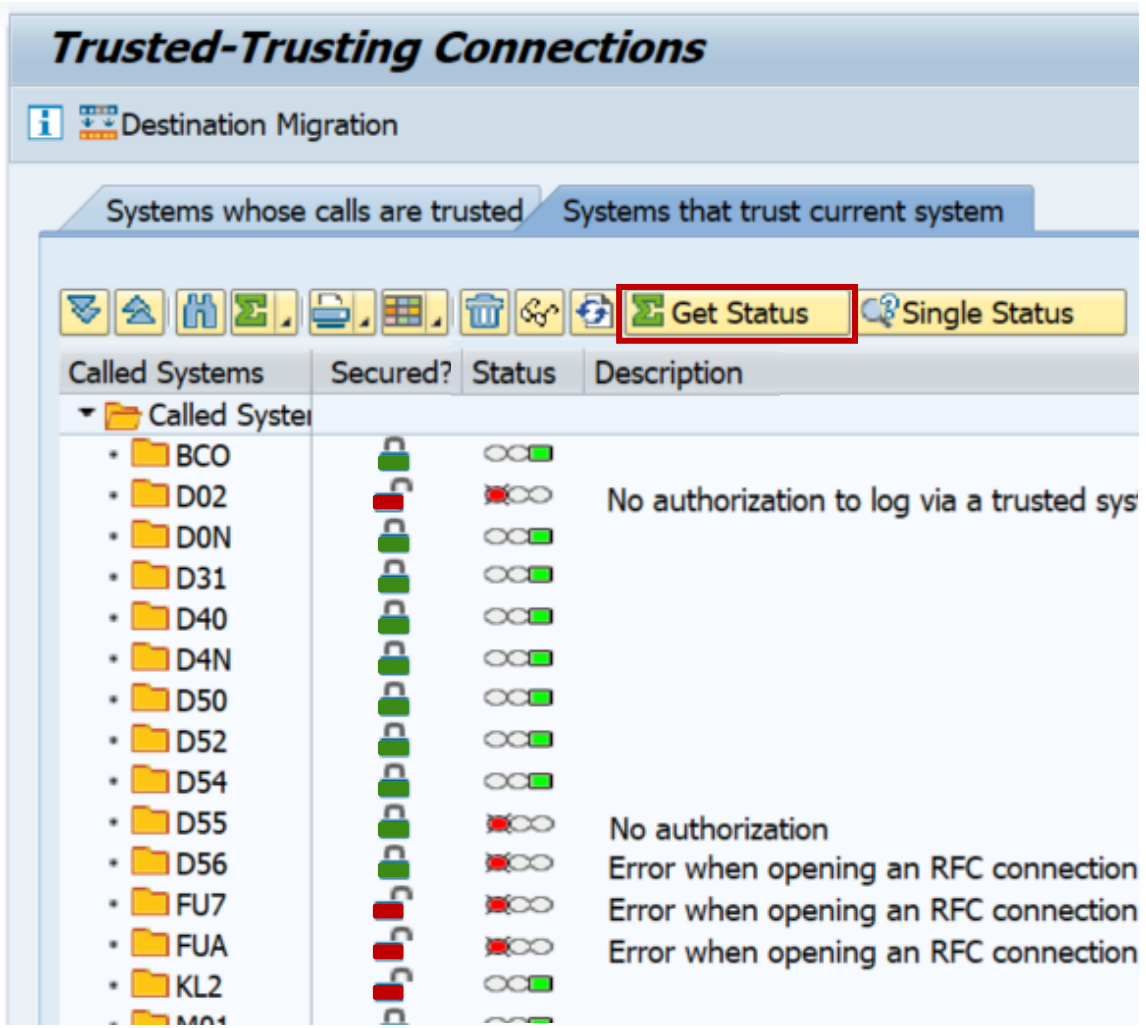
Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP Goal





- ✓ **After updating the software, you have migrated all destinations and renewed all trusted relationships in transaction `SMT1`.**
- ✓ You have removed all destinations and trust relationships which are not longer in use.
- ✓ You have activated a profile parameter which prevents any insecure connection.
- ✓ In addition you have reviewed the authorizations for `S_RFCACL` and `S_RFC_TT`.

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Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP How to implement the solution

All systems that use trusted/trusting destinations are affected by the potential replay attack. So especially in these systems the security note has to be implemented.

Therefore it is required to implement the complete solution (Kernel + ABAP + migration of destinations + update of trust relationships) in both, the calling and the called systems.

As long as not all pieces are available you do not get stronger security.

Informational notes:

- **FAQ Note 3281854 - FAQ for Security Note 3089413**
- **Consulting note 3224161 - Prerequisites for Note 3089413**
  The note describes the minimum software levels to implement the solution
- **Consulting note 3157268 - How-To-Guide: Migration of Trusted/Trusting Relationships**

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Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP How to implement the solution

Procedure

1. **Update Kernel in all systems**
2. **Update ABAP in all systems**
3. **Migrate destinations that use trusted/trusting relationships by executing the migration report `RS_MIGRATE_TTDESTS` via transaction `SMT1` in all systems.**
   This step adds information in the destinations about the system ID (necessary) and the installation number (recommended respective necessary if a system is connected to several systems with the same system ID).
   (Run the migration report `RS_MIGRATE_TO_NEW_EXT_TICKET` in the SAP Solution Manager systems, too)
4. **Migrate trusted and trusting relationships in all systems one by one in transaction `SMT1`.**
   This step creates new, individual keys and stores them in the "Secure Store" (and no longer in a database table). This is the crucial action!
5. **Set profile parameter `rfc/allowoldticket4tt` in all systems to block connections that were not updated via step 3. and 4.**

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Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP How to implement the solution

Correction notes for ABAP - Implement required prerequisite notes beforehand (see below).

- **Security note 3089413 - [CVE-2023-0014] Capture-replay vulnerability in SAP NetWeaver AS for ABAP and ABAP Platform**
  Contains (a quite large) TCI and automatic correction instructions for transaction `SNOTE`

- **Correction note 3287611 - Error in Migration Report RS_MIGRATE_TTDESTS**
  Contains automatic correction instructions for transaction `SNOTE`

For the SAP Solution Manager you use 2 additional notes which contains automatic correction instructions for transaction SNOTE:

- **Correction note 3283990 - Trusted RFC creation in `SOLMAN_SETUP` after implementing security note 3089413**

- **Correction note 3284618 - Migration Report `RS_MIGRATE_TO_NEW_EXT_TICKET` for New External Ticket**

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Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP How to implement the solution

Related notes

- **Note 3127135 - Improved RFC ticket handling**
  The note describes the Kernel update
- **Note 3238586 - `RFC_NO_AUTHORITY` after implementing note 3127135**
  The note describes potential issues with the user `BGRFC_SUPER` and the bgRFC scheduler programs in case of using older Kernel versions than the versions listed in the "prerequisite" section.
- **Note 3288422 - After SAP_BASIS 7.00 SP 40 Syntax error in program "`SAPLCRFC`“**
  The issue described in this note is solved with the installation of note 3089413
- **Note 3246345 - `rfc/sendInstNr4tt` is not working**
  The note solves further issues in case you are using profile parameter `rfc/sendInstNr4tt` to deal with non-unique system ids in the system landscape. The note will be updated as soon as the corresponding kernel patches are available.
- **Consulting note 2187425 - Information about Transport based Correction Instructions (TCI)**

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Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP Prerequisites

Minimum Kernel

The solution works only if both the client systems as well as the server systems of a trusting/trusted connection runs on a suitable Kernel version:
(The grey version numbers are listed in some of notes, however, the complete solution requires the highest versions across all notes.)

7.22	**1214**
7.49	**Not Supported. Use 753 / 754 instead**
7.53	**(1028) 1036**
7.54	**18**
7.77	**(500) 516**
7.81	**(251) 300**
7.85	**(116, 130) 214**
7.88	**21**
7.89	**10**

Minimum SAP_BASIS for SNOTE

You only can implement the notes 3089413 and 3287611 using transaction SNOTE if the system runs on a suitable ABAP version:

SAP_BASIS 700	**SP 35**	**(solved with SP 41)**
SAP_BASIS 701	**SP 20**	**(solved with SP 26)**
SAP_BASIS 702	**SP 20**	**(solved with SP 26)**
SAP_BASIS 731	**SP 19**	**(solved with SP 33)**
SAP_BASIS 740	**SP 16**	**(solved with SP 30)**
SAP_BASIS 750	**SP 12**	**(solved with SP 26)**
SAP_BASIS 751	**SP 7**	**(solved with SP 16)**
SAP_BASIS 752	**SP 1**	**(solved with SP 12)**
SAP_BASIS 753		**(solved with SP 10)**
SAP_BASIS 754		**(solved with SP 8)**
SAP_BASIS 755		**(solved with SP 6)**
SAP_BASIS 756		**(solved with SP 4)**
SAP_BASIS 757		**(solved with SP 2)**

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Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP
Prerequisite ABAP notes

You only can implement the notes 3089413 and 3287611 if following prerequisite notes are either not required or installed. Take care to implement the notes in the given order! Some of the notes have manual activities, too, which you have to execute before implementing the next notes. You should gather all notes and the changes of the manual activities on the same transport.

Warning: Before you start implementing the correction instructions about OAuth, you must take a backup of the development system as a restore might be required.
The reason for this is that central ABAP programs get touched and if an error occurs that you cannot rollback the change using transaction SNOTE. Do not forget to execute the correction reports described in the manual post activities of some of the notes!

Note 2464596 - System PKI: Improvements in test programs SNOTE + manual activity to adjust a GUI status of a program	Prerequisite for SAP_BASIS 7.40
Note 2927569 - Lock error when deleting several RFC destinations SNOTE + manual activity to adjust a DDIC object	
Note 2942276 - RFC_METADATA_GET support for CDS and INT8 SNOTE	Prerequisite for SAP_BASIS 7.40
Note 3104738 - OA2C: Enhancements for OAuth 2.0 Client interface to CL_HTTP_CLIENT SNOTE + manual post activity to execute report SOAUTH2_CLIENT_NOTE_3104405 (The report will generate the DDIC objects required for application of note 3104405.)	Prerequisite for SAP_BASIS 7.50, 7.51
Note 3113055 - OA2C: Downport of grant type Client Credentials (DDIC objects generation) SNOTE + manual post activity to execute report SOAUTH2_CLIENT_NOTE_3041322 (The report will generate the DDIC objects required for application of note 3041322.)	Prerequisite for SAP_BASIS 7.50, 7.51

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Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP
Prerequisite ABAP notes

Note 3105486 - OA2C: Clock Skew Tolerance (DDIC Objects Generation) SNOTE + manual post activity to execute report SOAUTH2_CLIENT_NOTE_2952190 (The report will generate the DDIC objects required for application of note 2952190.)	Prerequisite for SAP_BASIS 7.50 – 7.55
Note 2952190 - OA2C: Clock Skew Tolerance SNOTE	Prerequisite for SAP_BASIS 7.52 – 7.55
Note 3104405 - OA2C: Enhancements for OAuth 2.0 Client interface to CL_HTTP_CLIENT SNOTE	Prerequisite for SAP_BASIS 7.50, 7.51
Note 3041322 - OAuth 2.0 Client: Downport of grant type Client Credentials SNOTE	Prerequisite for SAP_BASIS 7.50, 7.51
Note 3120902 - OAuth 2.0 Client: Downport of method SET_TOKEN_AUTOMATIC SNOTE + manual post activity to execute report SOAUTH2_CLIENT_NOTE_3120024 (The report will generate the DDIC objects required for application of note 3120024.)	Prerequisite for SAP_BASIS 7.50 – 7.55
Note 3120024 - OAuth 2.0 Client: Downport of method SET_TOKEN_AUTOMATIC SNOTE	Prerequisite for SAP_BASIS 7.50 – 7.55
Note 3146766 - NI_NAME_TO_ADDR and NI_ADDR_TO_(FQ)_NAME are limited to 63 characters SNOTE + manual activity to create a DDIC object	Prerequisite for SAP_BASIS 7.00 – 7.56
Note 3266103 - Empty error message creating new Trusted/Trusting relation SNOTE	

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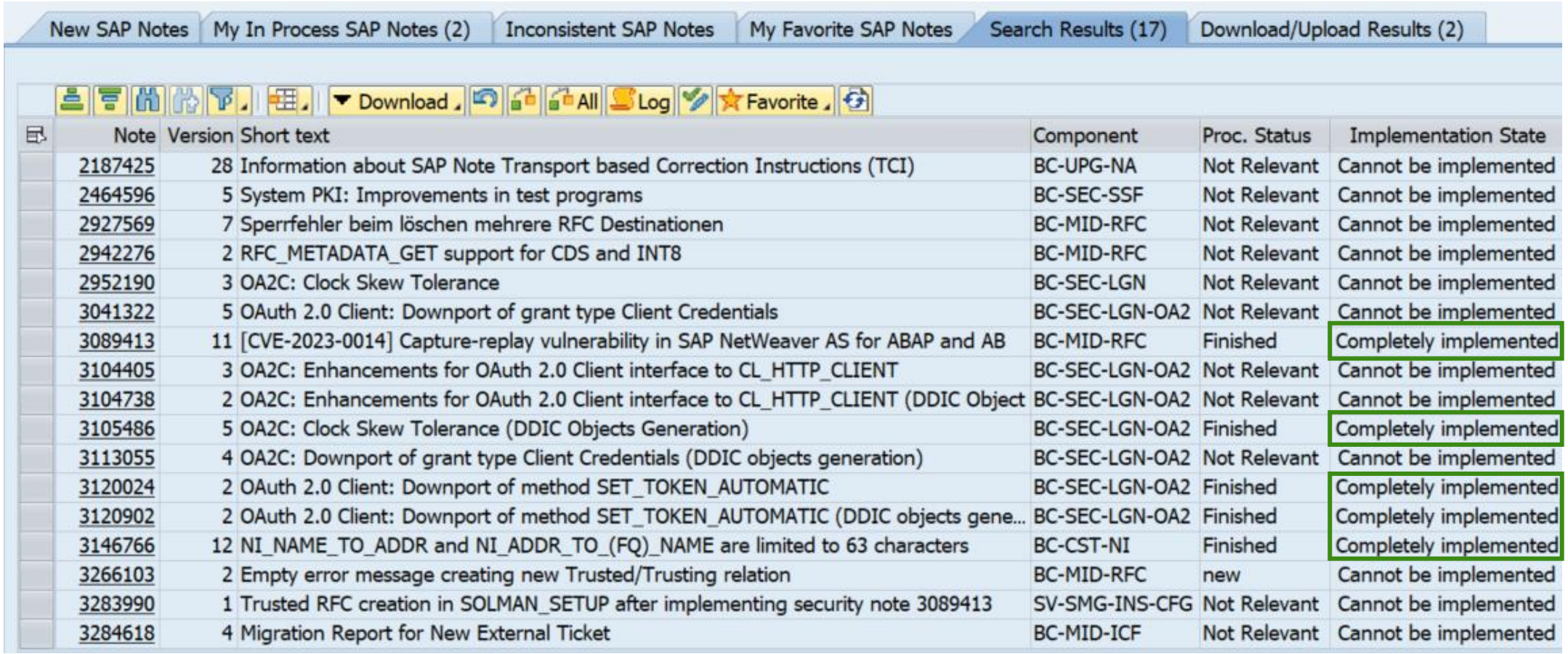
Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP Prerequisite ABAP notes

You can copy&paste following list of notes into transaction SNOTE to download and review all potential relevant notes in one step:

2187425
2464596
2927569
2942276
3104738
3113055
3105486
2952190
3104405
3041322
3089413
3120902
3120024
3146766
3266103
3089413
3283990
3284618



Note	Version	Short text	Component	Proc. Status	Implementation State
2187425	28	Information about SAP Note Transport based Correction Instructions (TCI)	BC-UPG-NA	Not Relevant	Cannot be implemented
2464596	5	System PKI: Improvements in test programs	BC-SEC-SSF	Not Relevant	Cannot be implemented
2927569	7	Sperrfehler beim löschen mehrere RFC Destinationen	BC-MID-RFC	Not Relevant	Cannot be implemented
2942276	2	RFC_METADATA_GET support for CDS and INT8	BC-MID-RFC	Not Relevant	Cannot be implemented
2952190	3	OA2C: Clock Skew Tolerance	BC-SEC-LGN	Not Relevant	Cannot be implemented
3041322	5	OAuth 2.0 Client: Downport of grant type Client Credentials	BC-SEC-LGN-OA2	Not Relevant	Cannot be implemented
3089413	11	[CVE-2023-0014] Capture-replay vulnerability in SAP NetWeaver AS for ABAP and AB	BC-MID-RFC	Finished	Completely implemented
3104405	3	OA2C: Enhancements for OAuth 2.0 Client interface to CL_HTTP_CLIENT	BC-SEC-LGN-OA2	Not Relevant	Cannot be implemented
3104738	2	OA2C: Enhancements for OAuth 2.0 Client interface to CL_HTTP_CLIENT (DDIC Object	BC-SEC-LGN-OA2	Not Relevant	Cannot be implemented
3105486	5	OA2C: Clock Skew Tolerance (DDIC Objects Generation)	BC-SEC-LGN-OA2	Finished	Completely implemented
3113055	4	OA2C: Downport of grant type Client Credentials (DDIC objects generation)	BC-SEC-LGN-OA2	Not Relevant	Cannot be implemented
3120024	2	OAuth 2.0 Client: Downport of method SET_TOKEN_AUTOMATIC	BC-SEC-LGN-OA2	Finished	Completely implemented
3120902	2	OAuth 2.0 Client: Downport of method SET_TOKEN_AUTOMATIC (DDIC objects gene...	BC-SEC-LGN-OA2	Finished	Completely implemented
3146766	12	NI_NAME_TO_ADDR and NI_ADDR_TO_(FQ)_NAME are limited to 63 characters	BC-CST-NI	Finished	Completely implemented
3266103	2	Empty error message creating new Trusted/Trusting relation	BC-MID-RFC	new	Cannot be implemented
3283990	1	Trusted RFC creation in SOLMAN_SETUP after implementing security note 3089413	SV-SMG-INS-CFG	Not Relevant	Cannot be implemented
3284618	4	Migration Report for New External Ticket	BC-MID-ICF	Not Relevant	Cannot be implemented

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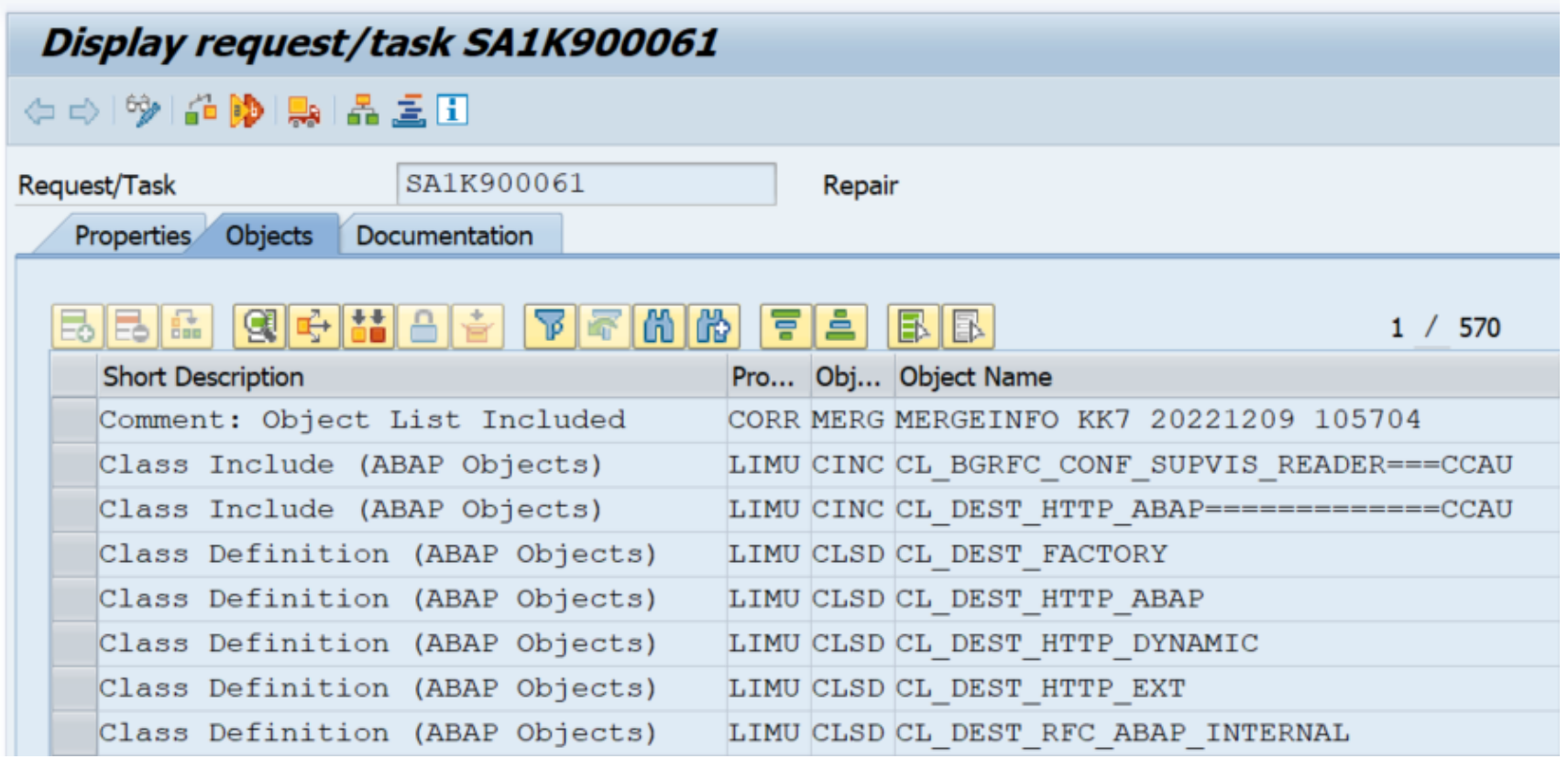
Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP Prerequisite ABAP notes

Depending on the age of the system you could end up with a transport which already contains more than 100 objects.

Now you can implement the notes 3089413 and 3287611 which add some more hundreds of objects to the transport.

Here is a typical result:



Short Description	Pro...	Obj...	Object Name
Comment: Object List Included	CORR	MERG	MERGEINFO KK7 20221209 105704
Class Include (ABAP Objects)	LIMU	CINC	CL_BGRFC_CONF_SUPVIS_READER===CCAU
Class Include (ABAP Objects)	LIMU	CINC	CL_DEST_HTTP_ABAP==========CCAU
Class Definition (ABAP Objects)	LIMU	CLSD	CL_DEST_FACTORY
Class Definition (ABAP Objects)	LIMU	CLSD	CL_DEST_HTTP_ABAP
Class Definition (ABAP Objects)	LIMU	CLSD	CL_DEST_HTTP_DYNAMIC
Class Definition (ABAP Objects)	LIMU	CLSD	CL_DEST_HTTP_EXT
Class Definition (ABAP Objects)	LIMU	CLSD	CL_DEST_RFC_ABAP_INTERNAL

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Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP How to identify systems using trusting/trusting connections

Do there exist trusting/trusted relationships?

a) **Run new report `RS_DISPLAY_TT_INFO` to show a list of trusted servers and trusting clients. (The report does not indicate if a trusted relationship is already migrated.)**

b) **Check both tabs in transaction `SMT1`**
(The lock icon shows if a relationship is already migrated or not.)

c) **Check tables `RFCSYSACL` (systems whose calls are trusted) and `RFCTRUST` (systems that trust current system) in transaction `SE16`**
Entries in table `RFCSYSACL` showing an empty field `RFCSECKEY` and showing version number `3` in field `RFCSLOPT` indicate migrated trusting relationships.

d) **Inspect configuration store `RFCSYSACL` in the SAP Solution Manager or FRUN to get a cross-system report about trusted systems.**
Migrated trusted relationships show the version number 3 as first character in field value `RFCSLOPT`. (There does not exists a similar store for trusting systems.)

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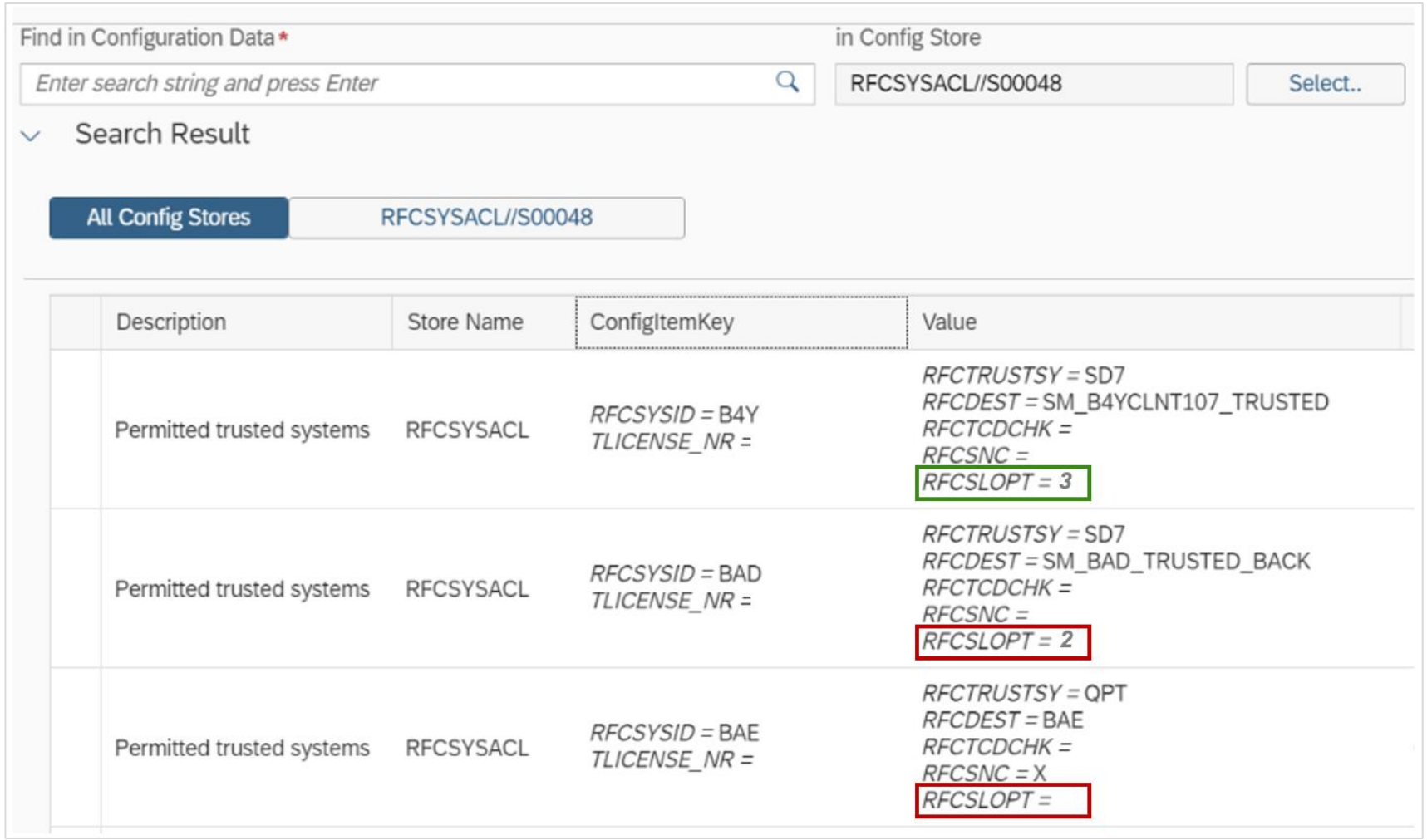
Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP Do there exist trusting/trusted relationships?

Example from FRUN:

Hint: Try both views, the standard view and the table view, to download data to Excel



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Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP Do there exist trusting/trusted relationships?

A corresponding policy for FRUN could look like this:

```
<?xml version="1.0" encoding="utf-8"?>
<targetsystem xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" desc="Updated trusted relationships
according to note 3089413" id="RFCSYSACL_OPT3" multisql="Yes" version="0001"
xsi:schemaLocation="csa_policy.xsd">
  <!-- [p1-CVSS 9.0]  BC-MID-RFC 0003089413 - [CVE-2023-0014] Capture-replay vulnerability in SAP NetWeaver
AS for ABAP and ABAP Platform (Version 0011)  -->
  <configstore name="RFCSYSACL">
    <checkitem desc="[p1-CVSS 9.0] Updated trusted relationships according to note 3089413" id="0003089413"
not_found="ignore">
      <compliant>
                RFCSYSID like '%'  and  TLICENSE_NR like '%'  and  RFCTRUSTSY like '%'  and
                RFCDEST like '%'   and  RFCTCDCHK like '%'    and  RFCSNC like '%'      and
                RFCSLOPT like '3%'
      </compliant>
      <noncompliant>
                RFCSYSID like '%'  and  TLICENSE_NR like '%'  and  RFCTRUSTSY like '%'  and
                RFCDEST like '%'   and  RFCTCDCHK like '%'    and  RFCSNC like '%'      and
                RFCSLOPT not like '3%'
      </noncompliant>
    </checkitem>
  </configstore>
</targetsystem>
```

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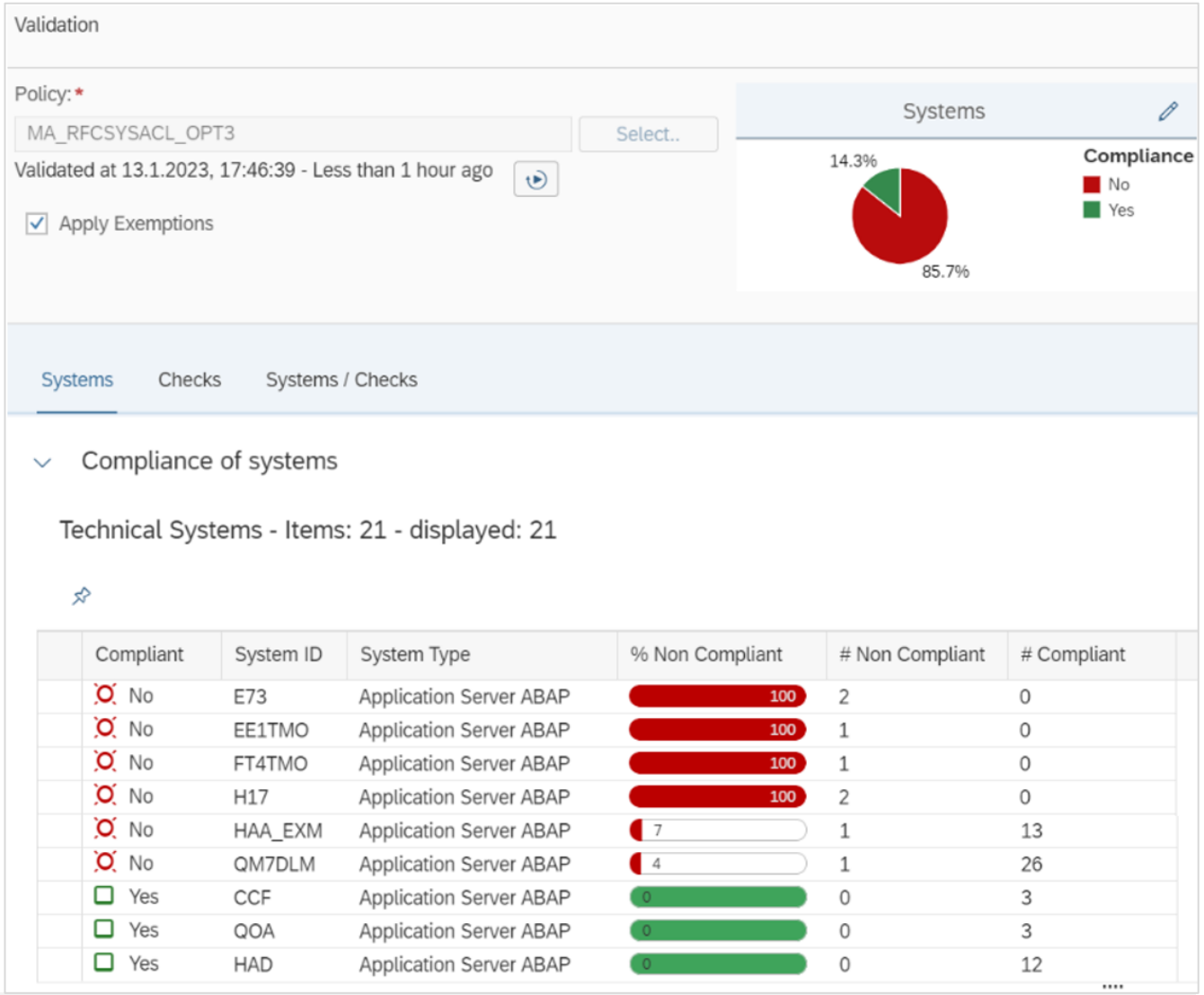
Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP Do there exist trusting/trusted relationships?

A typical result in FRUN using this policy could look like this:



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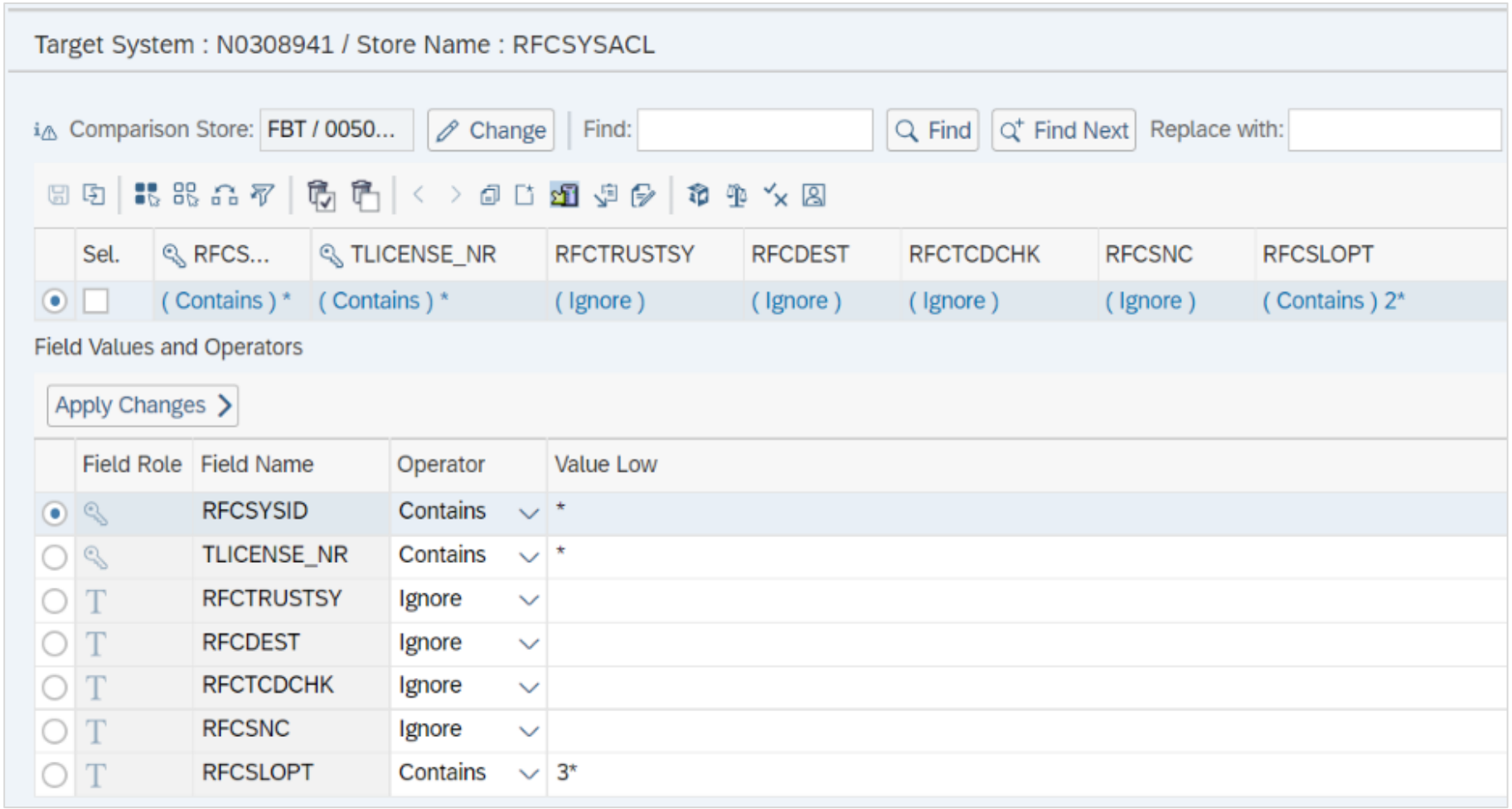
Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP Do there exist trusting/trusted relationships?

In the SAP Solution Manager you can construct a target system like this:



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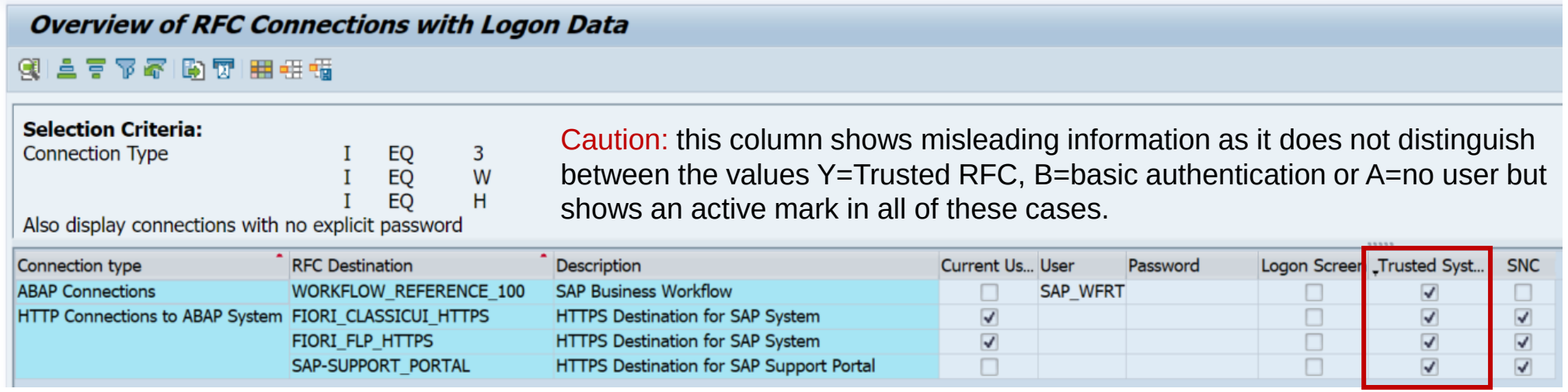
Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP
Do there exist destinations using a trusting/trusted relationship?

a) Run report `RSRFCCHK` for the connection types `3`, `H`, and `W` and activate the checkbox about destinations without explicit passwords. Then use a filter for column "Trusted system".



Overview of RFC Connections with Logon Data

Selection Criteria:

Connection Type	I	EQ	3
	I	EQ	W
	I	EQ	H

Also display connections with no explicit password

Caution: this column shows misleading information as it does not distinguish between the values Y=Trusted RFC, B=basic authentication or A=no user but shows an active mark in all of these cases.

Connection type	RFC Destination	Description	Current Us...	User	Password	Logon Screen	Trusted Syst...	SNC
ABAP Connections	WORKFLOW_REFERENCE_100	SAP Business Workflow	☐	SAP_WFRT		☐	☑	☐
HTTP Connections to ABAP System	FIORI_CLASSICUI_HTTPS	HTTPS Destination for SAP System	☑			☐	☑	☑
	FIORI_FLP_HTTPS	HTTPS Destination for SAP System	☑			☐	☑	☑
	SAP-SUPPORT_PORTAL	HTTPS Destination for SAP Support Portal	☐			☐	☑	☑

b) Run new report `RS_DISPLAY_TT_INFO` to show a list of trusted/trusting destinations.

(Both reports does not indicate if a trusted destination is already migrated.)

```
Program RS_DISPLAY_TT_INFO

Trusted server:
SE1                                    SAP-INTERN

Trusted client:

Destinations with Trusted/Trusting:
FIORI_FLP_HTTPS                        H
FIORI_CLASSICUI_HTTPS                  H
WORKFLOW_REFERENCE_100                 3
S41CLNT000                             3
```

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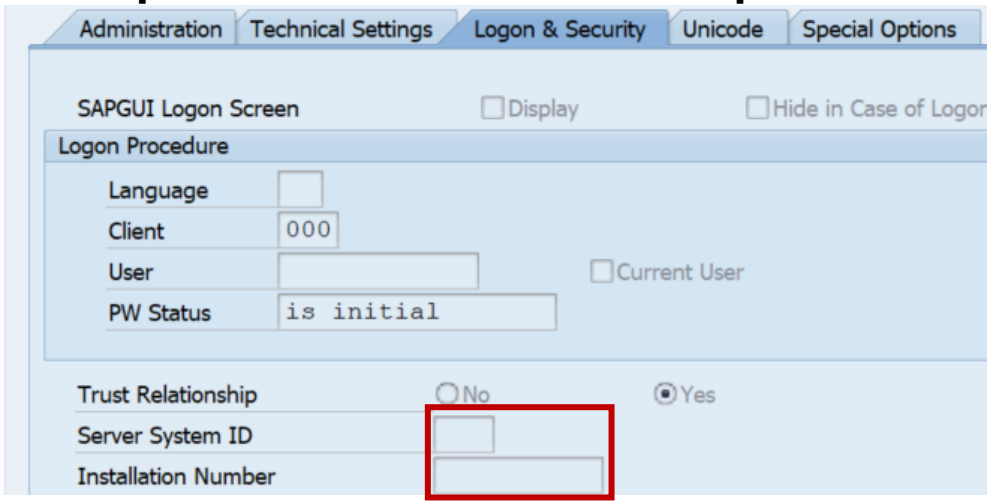
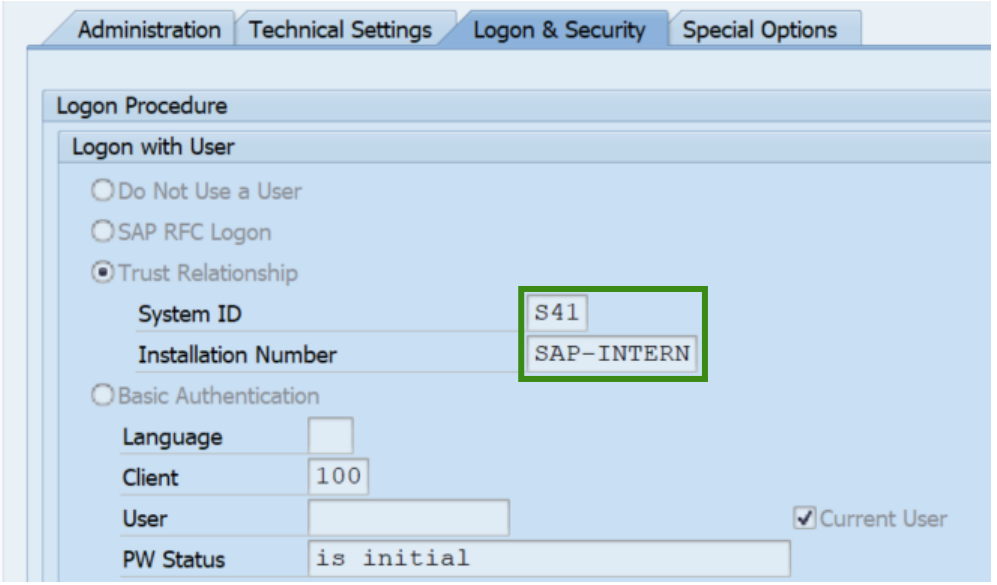
Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP
Do there exist destinations using a trusting/trusted relationship?

c) **Check table `RFCDES` in transaction `SE16` for entries with `RFCTYPE` = `3`, `W`, or `H` and one of the `RFCOPTIONS` fields containing `*,Q=Y*` (this is not 100% reliable as the token could be part of two fields).**

d) **Open each `3`, `W`, or `H` destination in transaction `SM59` and inspect tab "Logon & Security" for the radio button about the "Trust Relationship".**
Destinations which already show the correct system id (mandatory) and installation number (recommended) are already migrated.

Examples for an RFC and an http destination:





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Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP
Do there exist destinations using a trusting/trusted relationship?

e) Inspect configuration store `RFCDES` in the SAP Solution Manager or FRUN to get a cross-system report

The field `RFCOPIONS` shows a string with all RFC options, you have to look for the token `Q=Y` which indicates trusted/trusting destinations. Therefore, use `*Q=Y*` as element pattern to find these elements directly in transaction `CCDB`.

Migrated destinations show values for the tokens `[`= for the system id (mandatory), and `^`= for the installation number (recommended).

The configuration stores `RFCDES_TYPE_3` and `RFCDES_TYPE_3_CHECK` indicate trusted/trusting destinations in field `TRUSTED_SYSTEM` but do not show the other tokens mentioned above.

The configuration store `RFCDES_TYPE_H` seems to show fields like `TRUST_SERVERSYSID` and `TRUST_SERVERINSTNT` but it's not yet confirmed that these fields indicate migrated entries.

There does not exist a special store for type `W` destinations.

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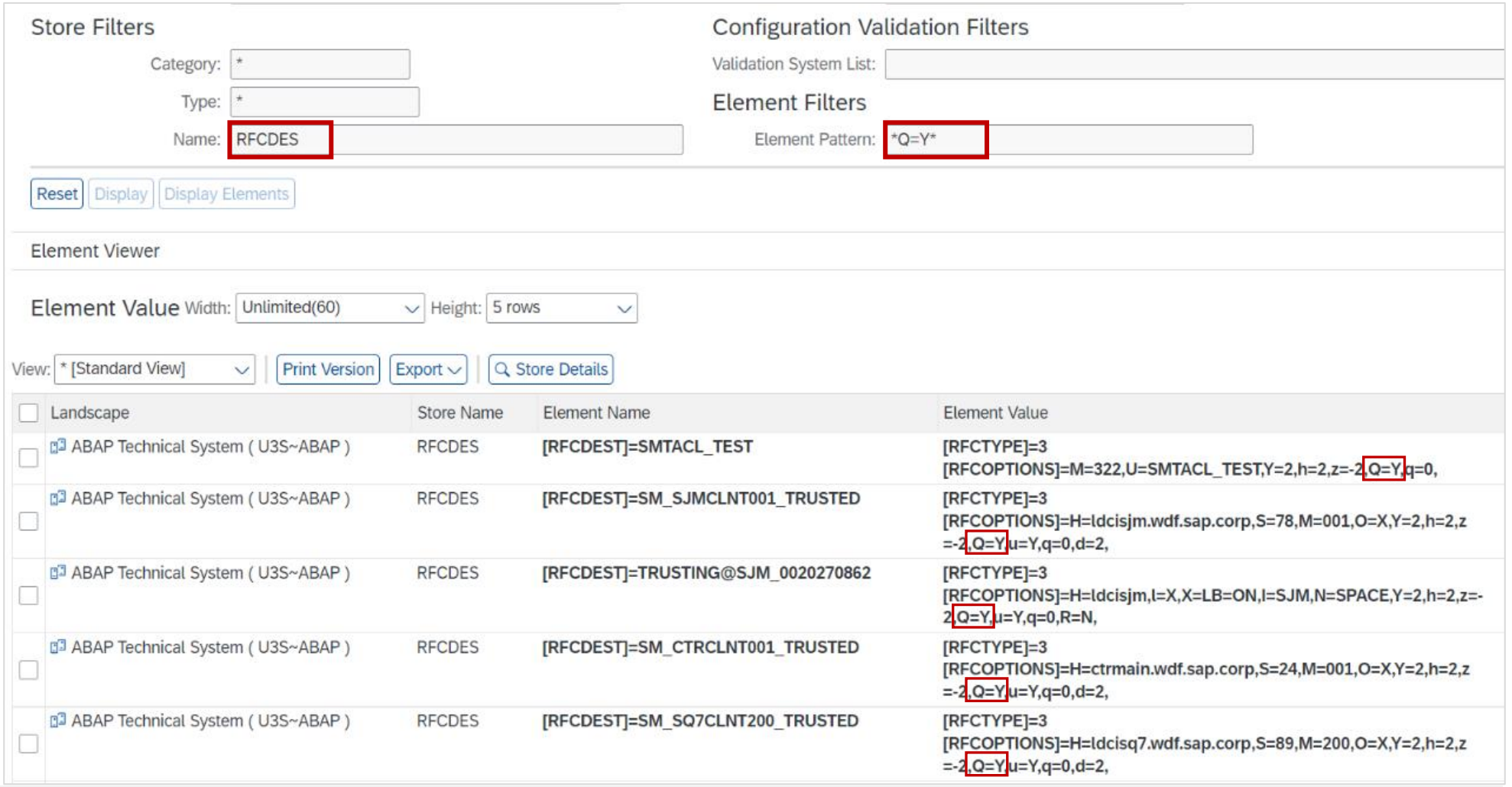
Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP
Do there exist destinations using a trusting/trusted relationship?

Example from SolMan:



Landscape	Store Name	Element Name	Element Value
ABAP Technical System (U3S~ABAP)	RFCDES	[RFCDEST]=SMTACL_TEST	[RFCTYPE]=3 [RFCOPTIONS]=M=322,U=SMTACL_TEST,Y=2,h=2,z=-2,Q=Y,q=0,
ABAP Technical System (U3S~ABAP)	RFCDES	[RFCDEST]=SM_SJMCLNT001_TRUSTED	[RFCTYPE]=3 [RFCOPTIONS]=H=ldcisjm.wdf.sap.corp,S=78,M=001,O=X,Y=2,h=2,z=-2,Q=Y,u=Y,q=0,d=2,
ABAP Technical System (U3S~ABAP)	RFCDES	[RFCDEST]=TRUSTING@SJM_0020270862	[RFCTYPE]=3 [RFCOPTIONS]=H=ldcisjm,I=X,X=LB=ON,I=SJM,N=SPACE,Y=2,h=2,z=-2,Q=Y,u=Y,q=0,R=N,
ABAP Technical System (U3S~ABAP)	RFCDES	[RFCDEST]=SM_CTRCLNT001_TRUSTED	[RFCTYPE]=3 [RFCOPTIONS]=H=ctrmain.wdf.sap.corp,S=24,M=001,O=X,Y=2,h=2,z=-2,Q=Y,u=Y,q=0,d=2,
ABAP Technical System (U3S~ABAP)	RFCDES	[RFCDEST]=SM_SQ7CLNT200_TRUSTED	[RFCTYPE]=3 [RFCOPTIONS]=H=ldcisq7.wdf.sap.corp,S=89,M=200,O=X,Y=2,h=2,z=-2,Q=Y,u=Y,q=0,d=2,

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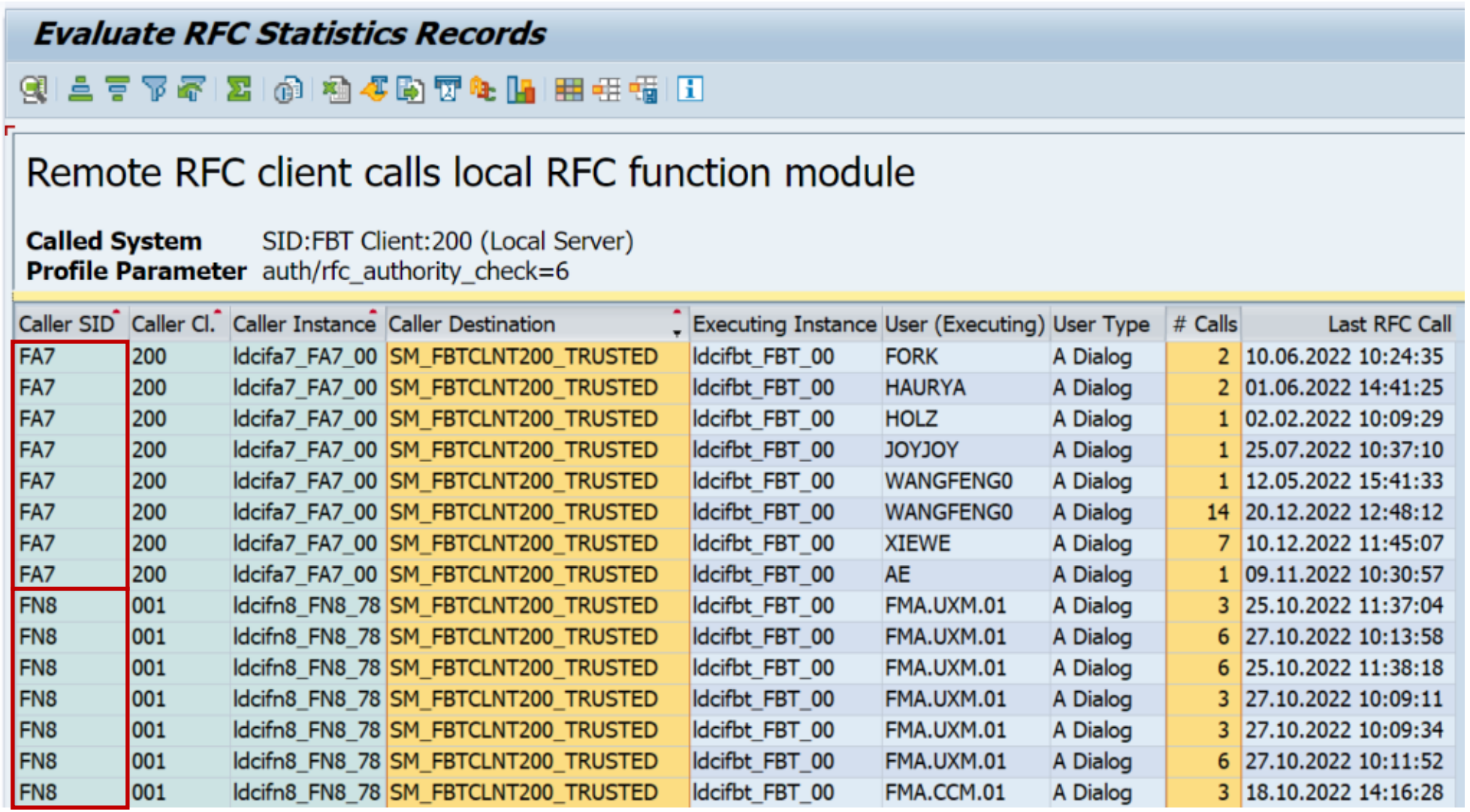
Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP
Do there exist destinations which are not in use?



Evaluate RFC Statistics Records

Remote RFC client calls local RFC function module

Called System SID:FBT Client:200 (Local Server)
Profile Parameter auth/rfc_authority_check=6

Caller SID	Caller Cl.	Caller Instance	Caller Destination	Executing Instance	User (Executing)	User Type	# Calls	Last RFC Call
FA7	200	ldcifa7_FA7_00	SM_FBTCLNT200_TRUSTED	ldcifbt_FBT_00	FORK	A Dialog	2	10.06.2022 10:24:35
FA7	200	ldcifa7_FA7_00	SM_FBTCLNT200_TRUSTED	ldcifbt_FBT_00	HAURYA	A Dialog	2	01.06.2022 14:41:25
FA7	200	ldcifa7_FA7_00	SM_FBTCLNT200_TRUSTED	ldcifbt_FBT_00	HOLZ	A Dialog	1	02.02.2022 10:09:29
FA7	200	ldcifa7_FA7_00	SM_FBTCLNT200_TRUSTED	ldcifbt_FBT_00	JOYJOY	A Dialog	1	25.07.2022 10:37:10
FA7	200	ldcifa7_FA7_00	SM_FBTCLNT200_TRUSTED	ldcifbt_FBT_00	WANGFENG0	A Dialog	1	12.05.2022 15:41:33
FA7	200	ldcifa7_FA7_00	SM_FBTCLNT200_TRUSTED	ldcifbt_FBT_00	WANGFENG0	A Dialog	14	20.12.2022 12:48:12
FA7	200	ldcifa7_FA7_00	SM_FBTCLNT200_TRUSTED	ldcifbt_FBT_00	XIEWE	A Dialog	7	10.12.2022 11:45:07
FA7	200	ldcifa7_FA7_00	SM_FBTCLNT200_TRUSTED	ldcifbt_FBT_00	AE	A Dialog	1	09.11.2022 10:30:57
FN8	001	ldcifn8_FN8_78	SM_FBTCLNT200_TRUSTED	ldcifbt_FBT_00	FMA.UXM.01	A Dialog	3	25.10.2022 11:37:04
FN8	001	ldcifn8_FN8_78	SM_FBTCLNT200_TRUSTED	ldcifbt_FBT_00	FMA.UXM.01	A Dialog	6	27.10.2022 10:13:58
FN8	001	ldcifn8_FN8_78	SM_FBTCLNT200_TRUSTED	ldcifbt_FBT_00	FMA.UXM.01	A Dialog	6	25.10.2022 11:38:18
FN8	001	ldcifn8_FN8_78	SM_FBTCLNT200_TRUSTED	ldcifbt_FBT_00	FMA.UXM.01	A Dialog	3	27.10.2022 10:09:11
FN8	001	ldcifn8_FN8_78	SM_FBTCLNT200_TRUSTED	ldcifbt_FBT_00	FMA.UXM.01	A Dialog	3	27.10.2022 10:09:34
FN8	001	ldcifn8_FN8_78	SM_FBTCLNT200_TRUSTED	ldcifbt_FBT_00	FMA.UXM.01	A Dialog	6	27.10.2022 10:11:52
FN8	001	ldcifn8_FN8_78	SM_FBTCLNT200_TRUSTED	ldcifbt_FBT_00	FMA.CCM.01	A Dialog	3	18.10.2022 14:16:28

Destinations which are not in use for a couple of month might be candidates for deletion.

You can use transaction `STRFCTRACE` to show incoming RFC usage based on the data from the Workload Statistics (see transaction `ST03N`).

You can consolidate the result to show a list of active incoming destinations including how often they have been used.

Unfortunately you cannot get a list of not-used inactive destinations this way.

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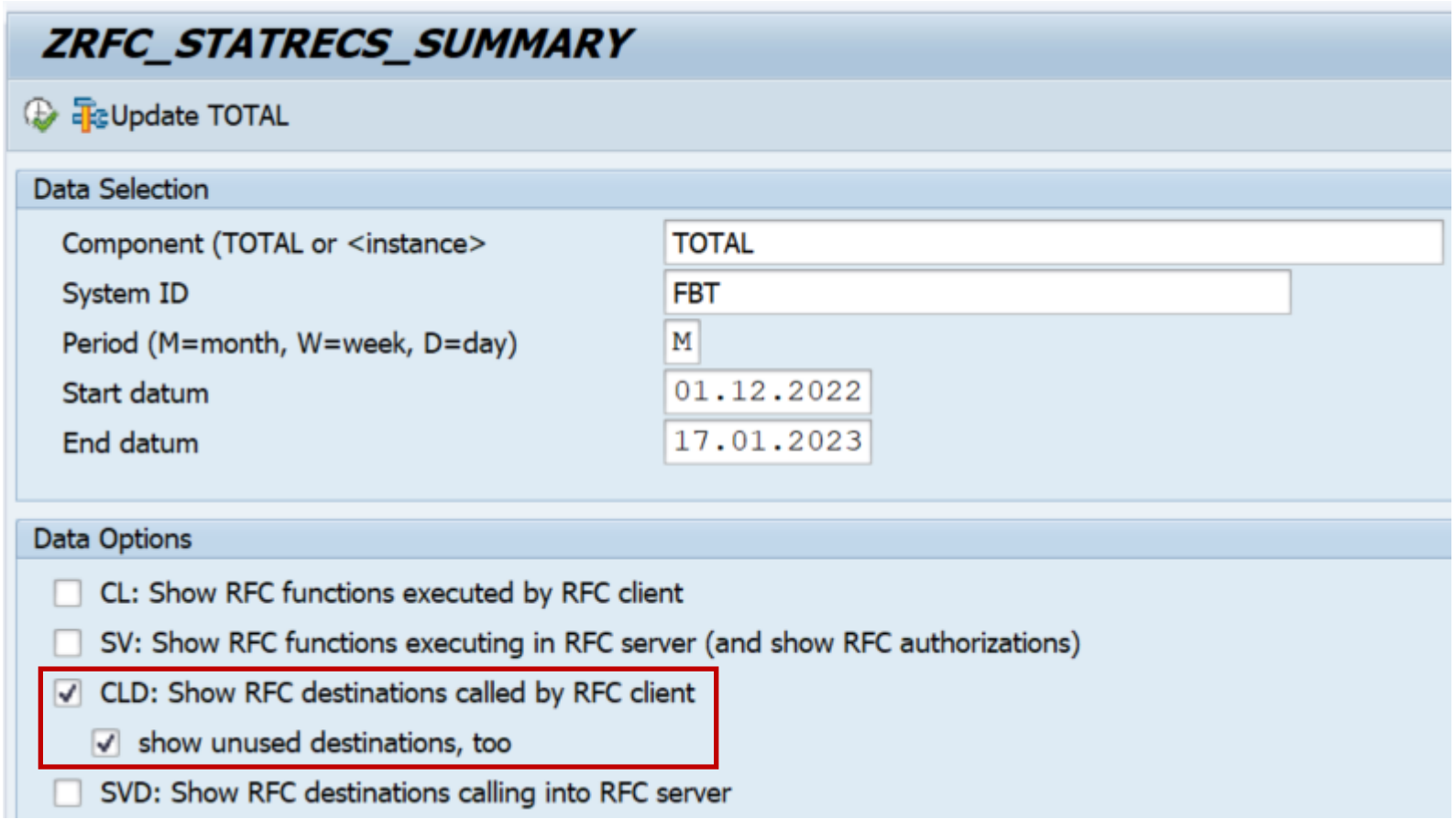
Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP
Do there exist destinations which are not in use?

In addition, you can use the custom report `ZRFC_STATRECS_SUMMARY` to show a list of destinations including how often they have been used based on the data from the Workload Statistics (see transaction `ST03N`). The list could include not-used inactive destinations, too. You can get the report from Github.

- **Choose a date range for the data from the workload statistics**
- **Use the data option CLD (Client Destinations)**
- **Activate the checkbox to show unused destinations, too.**



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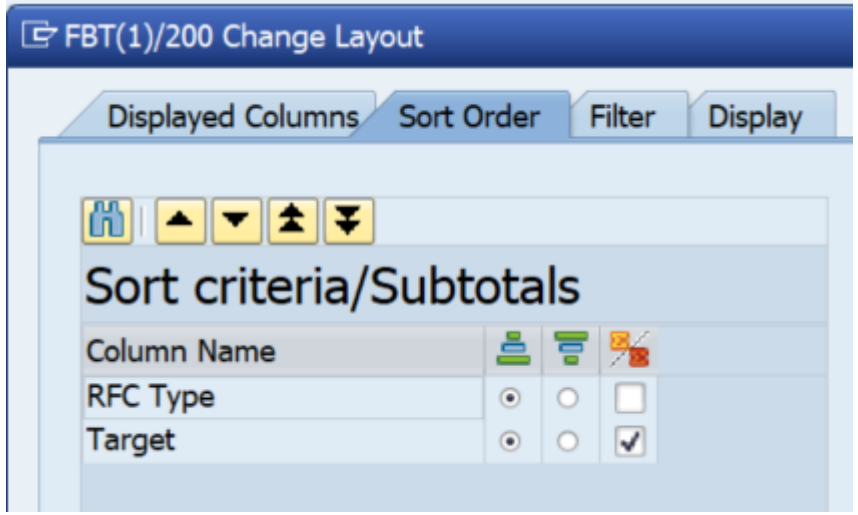
Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP
Do there exist destinations which are not in use?

Use the ALV functions to hide some columns, filter for RFC type 3*, H*, W*, filter for 'Trusted RFC' = Y and to add subtotals to the target column:



Save an ALV variant and enter it on the selection screen, too

RFC Statistics

System	FBT on ldai2fbt client 200
Selection	TOTAL month from 01.12.2022 to 01.01.2023

RFC Type	Target	No of calls
		30.633
3 Connection to ABAP System	A12_TRUST_RFC	0
3 Connection to ABAP System	ATC_CHECKS_C74	1.871
3 Connection to ABAP System	ATC_CHECKS_FA7	1.870
3 Connection to ABAP System	ATC_CHECKS_FB7	1.869
3 Connection to ABAP System	ATC_CHECKS_FT7	47
3 Connection to ABAP System	BENU_TEST	0
3 Connection to ABAP System	CWBADM_A12_001	0
3 Connection to ABAP System	CWBADM_MW1_100	0
3 Connection to ABAP System	CWBADM_MW1_111	0
3 Connection to ABAP System	CWBADM_MW5_100	0
3 Connection to ABAP System	CWBADM_MW8_100	0
3 Connection to ABAP System	CWBUSR_FA7_000	0
3 Connection to ABAP System	CWBUSR_FA7_200	0
3 Connection to ABAP System	CWBUSR_FA7_200_E	0
3 Connection to ABAP System	FA7	1
3 Connection to ABAP System	FLP_FVMCLNT001_TRUSTED	0
3 Connection to ABAP System	JF_HF2_TRUSTED	0
3 Connection to ABAP System	KLP	0
3 Connection to ABAP System	N52_TRUST	0

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Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP
Do there exist destinations which are not in use?

RFC Statistics

System	FBT on ldai2fbt client 200
Selection	TOTAL month from 01.12.2022 to 01.01.2023

RFC Type	Target	No of calls	RemoteInst	RFC Host	RFC SysID	RFC Client	RFC User	RFC Pwd	TrustedRFC
		30.633							
3 Connection to ABAP Syste...	**A12_TRUST_RFC**	**0**							
3 Connection to ABAP System	A12_TRUST_RFC	0		10.76.199.96		001	<same user>		Y
3 Connection to ABAP System	A12_TRUST_RFC	0		10.76.199.96		001	<same user>		Y
3 Connection to ABAP Syste...	**ATC_CHECKS_C74**	**1.871**							
3 Connection to ABAP System	ATC_CHECKS_C74	511	ldcic74_C74_11	ldcic74	C74	001	<same user>		Y
3 Connection to ABAP System	ATC_CHECKS_C74	612	ldcic74_C74_11	ldcic74	C74	001	<same user>		Y
3 Connection to ABAP System	ATC_CHECKS_C74	483	ldcic74_C74_11	ldcic74	C74	001	<same user>		Y
3 Connection to ABAP System	ATC_CHECKS_C74	265	ldcic74_C74_11	ldcic74	C74	001	<same user>		Y
3 Connection to ABAP Syste...	**ATC_CHECKS_FA7**	**1.870**							
3 Connection to ABAP Syste...	**ATC_CHECKS_FB7**	**1.869**							
3 Connection to ABAP Syste...	**ATC_CHECKS_FT7**	**47**							
3 Connection to ABAP Syste...	**BENU_TEST**	**0**							
3 Connection to ABAP Syste...	**CWBADM_A12_001**	**0**							
3 Connection to ABAP Syste...	**CWBADM_MW1_100**	**0**							
3 Connection to ABAP Syste...	**CWBADM_MW1_111**	**0**							
3 Connection to ABAP Syste...	**CWBADM_MW5_100**	**0**							
3 Connection to ABAP Syste...	**CWBADM_MW8_100**	**0**							
3 Connection to ABAP Syste...	**CWBUSR_FA7_000**	**0**							
3 Connection to ABAP Syste...	**CWBUSR_FA7_200**	**0**							
3 Connection to ABAP Syste...	**CWBUSR_FA7_200_E**	**0**							
3 Connection to ABAP Syste...	**FA7**	**1**							

You can open the details and navigate into transaction `SM59`

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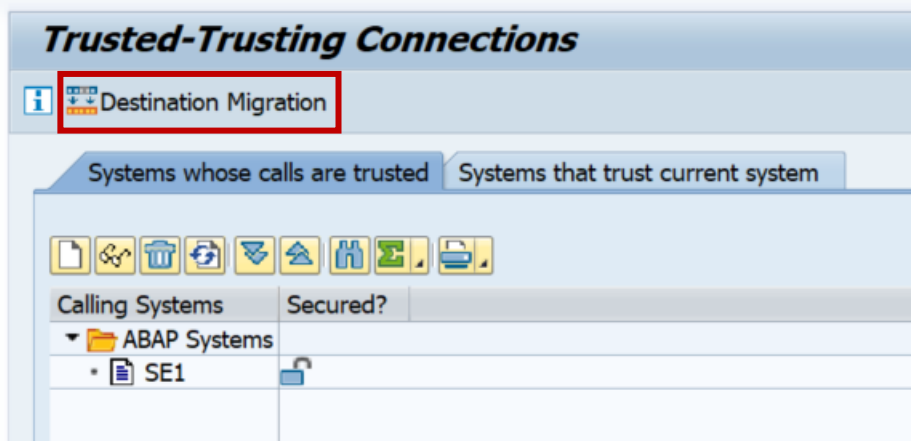
Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP
How to use the migration report RS_MIGRATE_TTDESTS

The report validates all trusting/trusted destinations and adds the correct system id and installation number if missing.

There is no test mode.

You do not get any result if there do not exist any trusting/trusted destinations.



You can start it either via transaction SA38 or as a generated background job via transaction SMT1 (in this case you would inspect the job log of generated job MIGRATE_DESTINATIONS). Using the job is preferred because it can handle potential timeouts in RFC connections better.

Job log overview for job: MIGRATE_DESTINATIONS / 18371100

Date	Time	Message text		
10.01.2023	18:37:11	Job MIGRATE_DESTINATIONS 18371100 started		
10.01.2023	18:37:11	Step 001 started (program RS_MIGRATE_TTDESTS, variant , user ID D019687)		
10.01.2023	18:37:11	OK	FIORI_FLP_HTTPS	Uses new method already
10.01.2023	18:37:11	OK	FIORI_CLASSICUI_HTTPS	Uses new method already
10.01.2023	18:37:11	OK	WORKFLOW_REFERENCE_100	Uses new method already
10.01.2023	18:37:11	Error	S41CLNT000	Error when saving00024rabax during sapgui logon
10.01.2023	18:37:11	Job finished		

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Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP How to use the migration report on a SAP Solution Manager system

You can use the test mode of migration report `RS_MIGRATE_TO_NEW_EXT_TICKET` first.

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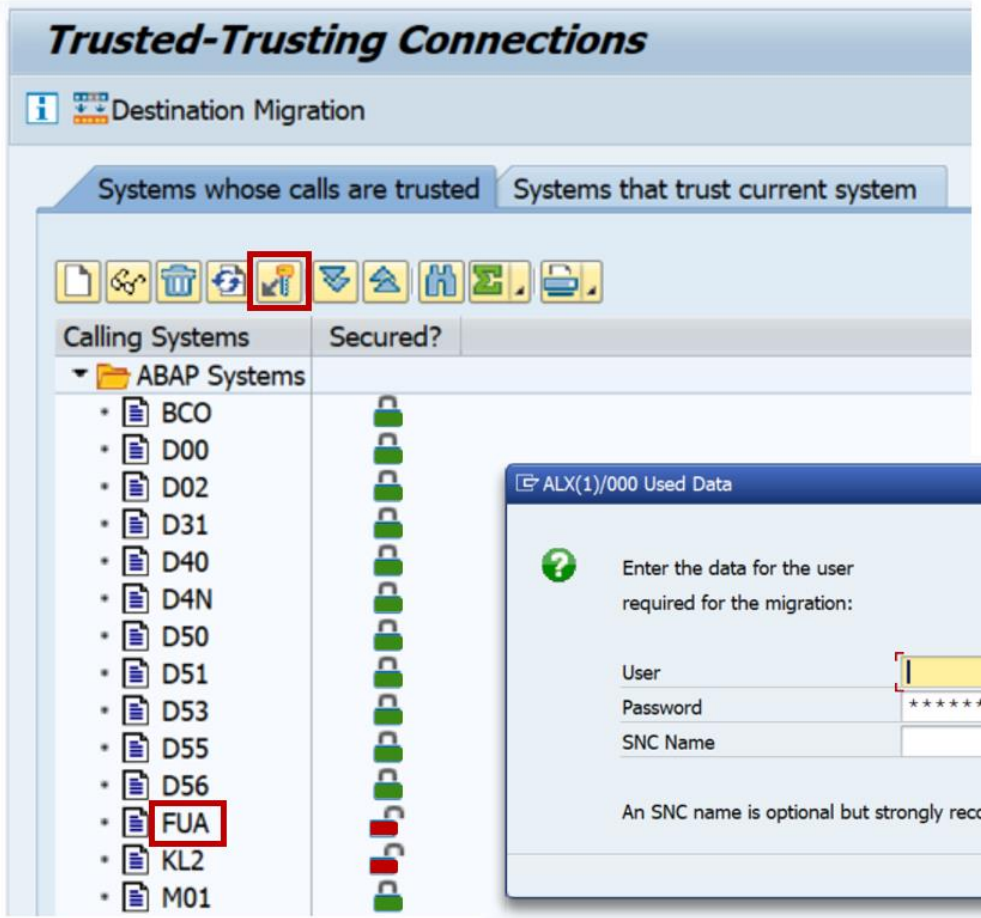
Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP How to migrate trusting relationships in all systems

Use transaction `SMT1` to migrate (= re-create) the existing trusted relationships.

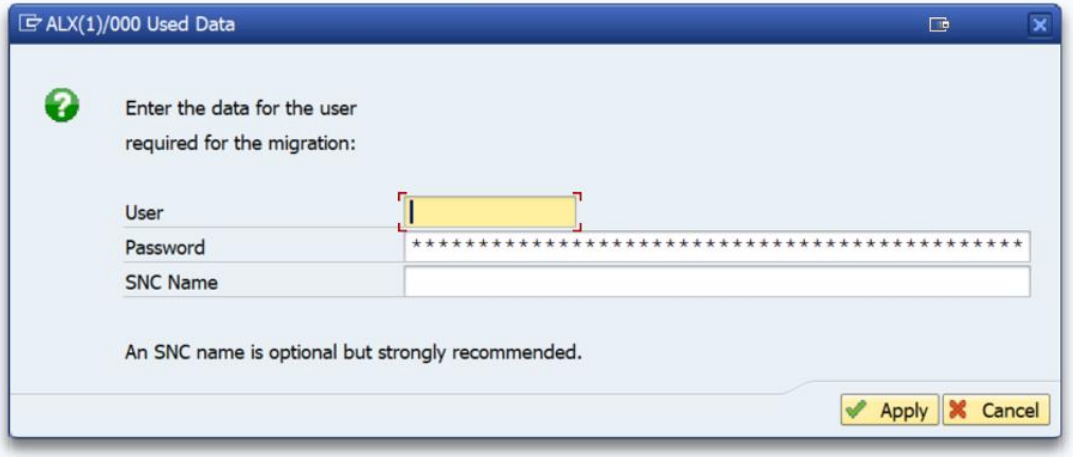
Select a system, which shows an old insecure trust relationship (open lock symbol) and use the 'Secure Connection' button.



Enter a valid administrator user (having change authorizations for `S_RFC_TT`) with password in client `000` (I guess it's client `000`) of the trusted system.

Enter the SNC name of the trusted system if SNC is configured and available between these both systems to encrypt the connection.

Enter the server host and instance number of the trusted system if necessary.



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Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP How to migrate trusting relationships in all systems

The migration uses the predefined destination (which usually has a name like `TRUSTED@<sysid><installation>`) as a reference to connect to the trusted system into client 000 (as I guess). It first verifies if the migration will work on both systems before actually doing it.

The migration actually re-creates the trusted relationship in the server system and the trusting relationship in the client system. Therefore the users require activity `01` (=create) in addition to activity `02` (=change) for authorization object `S_RFC_TT`.

As the result you will see a locked icon on tab "Systems whose calls are trusted" in `SMT1` in the current server system and a locked icon on tab "Systems that trust current system“ in `SMT1` in the client system.

The table `RSCSYSACL` now shows an empty field `RFCSECKEY` and the value in field `RFCSLOPT` starts with the version number `3`.

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Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP How to use the profile parameters

Profile parameter `rfc/allowoldticket4tt`

As soon as you have migrated a system or have finished the migration for a group of connected systems you may want to prohibit any insecure connection which might get implemented later on. You can use profile parameter `rfc/allowoldticket4tt` to allow or forbid the old (target-system-independent) trusted/trusting method.

You can change the value dynamically in transaction `RZ11` without restarting the system (but do not forget to change it in the default profile, too).

Values:

`both` (default) - old method allowed as client and server
`client` - old method allowed as client
`server` - old method allowed as server
`no` - old method not allowed

After migration of all trusted relationships via transaction `SMT1` in one system you can set profile parameter `rfc/allowoldticket4tt` = `client` in this system to secure this server system and permit only secured incoming connections.

After migration of all trusted and therefore implicitly also all trusting relationships via transaction `SMT1` in the whole system landscape you can set profile parameter `rfc/allowoldticket4tt` = `no` in all systems to permit only secured connections.

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Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP How to use the profile parameters

Profile parameter `rfc/sendInstNr4tt`

The installation number in the destinations is only mandatory in client systems which have trust relationships to multiple server systems having the same system id. However, it's recommend to use the field in any case. The profile parameter `rfc/sendInstNr4tt` in server systems allows the report `RS_MIGRATE_TTDESTS` (which you execute in client systems) to fill this field automatically.

You can change the value dynamically in transaction `RZ11` in server systems without restarting these systems. As you need the parameter only during the migration, it might not be necessary to add the parameter to the default profile. You do not need this profile parameter if you enter the installation number manually into the destinations.

Activating the profile parameter allows the installation number to be sent in a logon-free state.

If unknown, the trusted/trusting method determines the system ID and installation number automatically. If the system ID is unique, the installation number is optional. The profile parameter is used to determine whether the sending of the installation number is allowed in a logon-free state.

Values:

`0` (default) - installation number cannot be sent
`1` - installation number can be sent

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Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP What else should I do?

- Verify if existing trusted/trusting relationships are required
  (Caution: a relationship might be required for RFC as well as for http connections)
- Verify if existing trusted/trusting destinations are still in use (see transaction `ST03N`)
- Consider to activate the setting "use transaction code" for all trusted relationships in transaction `SMT1` (which might require to update authorizations for `S_RFCACL`)
- Verify and reduce authorizations for `S_RFCACL`, especially in case of the switch-user scenario based on `EQUSER = N`
  (respective the access control entries which you might have defined in transaction `SMTACL`)
- Protect access to table `RFCSYSACL` using authorization object `S_TABU_DIS` / `S_TABU_NAM`
- Verify authorizations for authorization objects `S_RFC_TT` and `S_RFC_ADM`
- Verify profile parameter `rfc/selftrust = 0`

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Note 3089413 - Capture-replay vulnerability in SAP NetWeaver ABAP What about old reports?

The reports `RS_SECURITY_TRUST_RELATIONS` and `RS_UPDATE_TRUST_RELATIONS` had been introduced with note 1491645. Do not use these reports.

Report `RS_SECURITY_TRUST_RELATIONS` lists trust relationships similar to the view in transaction `SMT1` and offers to delete superfluous entries. However, it does not understand the new security method 3, and therefore would show false results.

Report `RS_UPDATE_TRUST_RELATIONS` is outdated as well as it does not understand the new security method 3.

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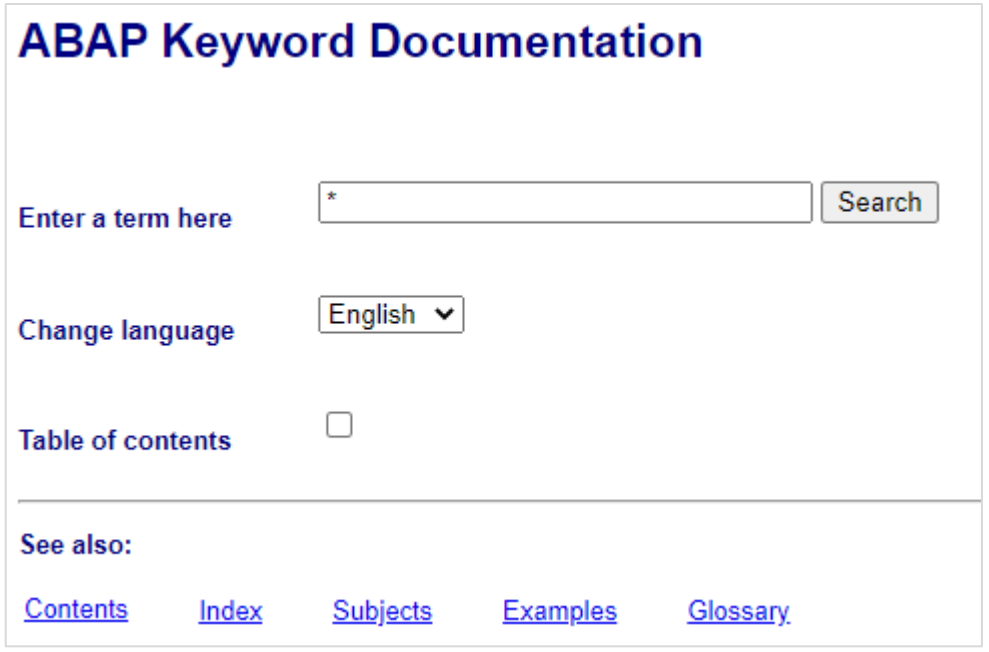
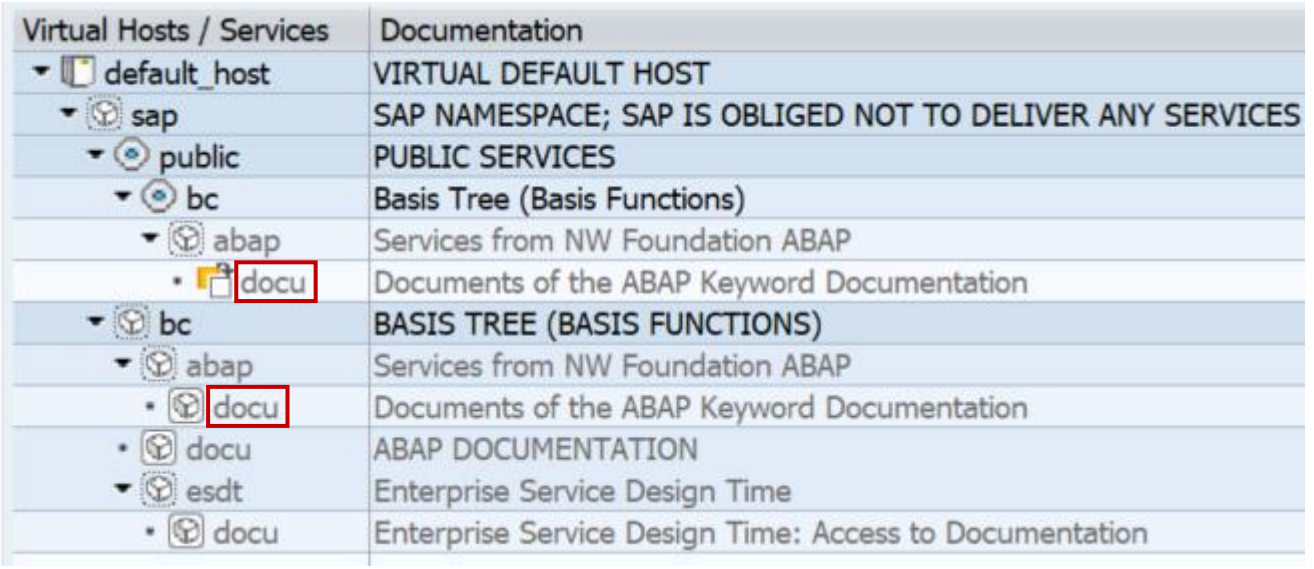
Note 3283283 - Cross-Site Scripting (XSS) vulnerability in SAP NetWeaver AS for ABAP and ABAP Platform

XSS with public ABAP keyword documentation:
`/sap/public/bc/abap/docu`



Workaround: Deactivate the `docu` services in transaction `SICF`:



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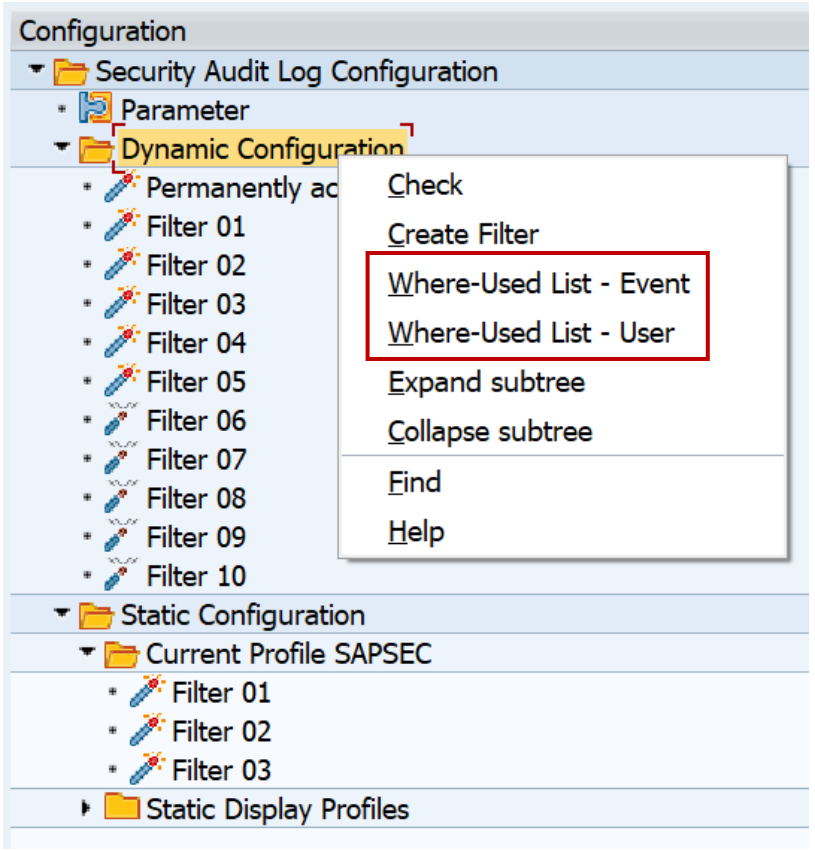
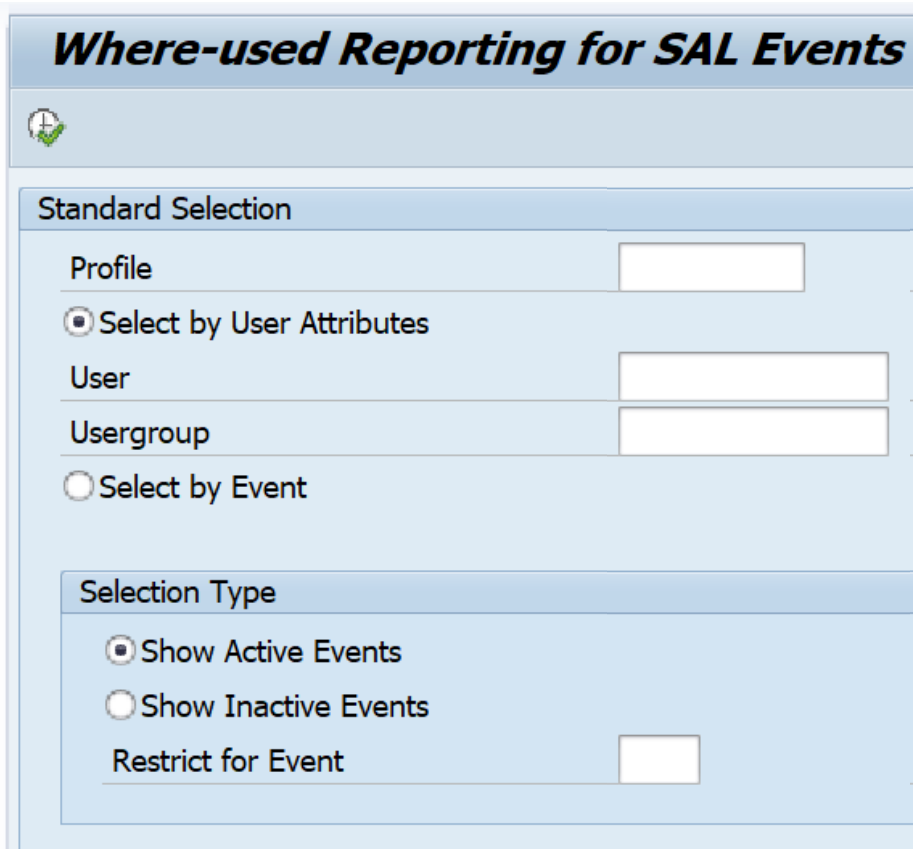
Note 3015325 - SAL | Supplementation of information tools
Transaction/Report RSAU_GET_WUSL

Transaction/Report RSAU_GET_WUSL as of 7.55 via Note 3015325

Check logging status for events/users in Security Audit Log

You find the report in transaction RSAU_CONFIG





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Note 3015325 - SAL | Supplementation of information tools
Transaction/Report RSAU_GET_WUSL

Selection by event

The condensed report combines the filter numbers into one field

Event I...	Message text	Count	Filter	User group	User
AU2	Logon failed (reason=&B, type=&A, method=&C)	167	03,04	SUPER	BB_TEST_01
					BB_TEST_02
					D040549
					D049957
					D049957_TEST
					D057799
					D059320
					DDIC
					FF_01_WEB
					I039549
					I065824
					I072607
					I307499
					I354145
					I515691
					I537683
					RFC_IAG_CORE
					SDMI_LMNQJME
					TEST_ESMA
					TESTBATCH
				Z_ADM940-UGR	BB_PAM01
					BB_PAM02

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Note 3015325 - SAL | Supplementation of information tools

Transaction/Report RSAU_GET_WUSL

Selection by user

The condensed report combines the filter numbers into one field

User	Group	Long name	Count	Filter	Event ID	Message text
AC_RFC			189	02,03,04	BUP	&A
				02,03,04,05	AUE	Audit configuration changed
					AUF	Audit: Slot &A: Class &B, Severity &C, User &D, Client &E, &F
					AUG	Application server started
					AUH	Application server stopped
					AUI	Audit: Slot &A Inactive
					AUJ	Audit: Active status set to &1
					BUZ	> in program &A, line &B, event &C
					CUL	Field content in debugger changed by user &A(&B): &C (&D)
					CUM	Jump to ABAP Debugger by user &A(&B): &C (&D)
					CUN	A process was stopped from the debugger by user &A(&B) (&D)
					CUO	Explicit database operation in debugger by user &A(&B): &C (&D)
					CUP	Non-exclusive debugging session started by user &A(&B) (&D)
					CUY	> &A
					EU1	System changeability changed (&A to &B)
					EU2	Client setting for &A changed (&B)
					EU3	&A change documents deleted without archiving (&B)
					EU5	Audit log data of &A was deleted (&B data records)
					FU0	Exclusive security audit log medium changed (new status &A)
					FU1	RFC function &B with dynamic destination &C was called in program &A
					FU2	Parsing of an XML data stream canceled for security reasons (reason = &A)
					FUA	Audit alert: &A | &B &C &D
					FUB	TEMP: Customer-specific event FUB &A &B &C &D

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Note 3274382 - ST 720 CV Target download store content or template to excel adjust

In Configuration Validation you can download a store template respective the content of a configuration store as an Excel file in xml format. The note corrects the creation of this xml file.

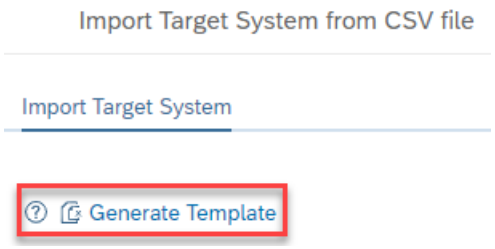
The Target System Maintenance screen shows 4 options to export data to Excel:

1. Export target system with multiple stores (without operators)
2. Export target system with multiple stores (with operators)

3. Export a single store from a target system (without operators)

4. Generate template for a store (without operators)

You can use such files to document target systems
and to manage content in Excel to upload it afterwards.



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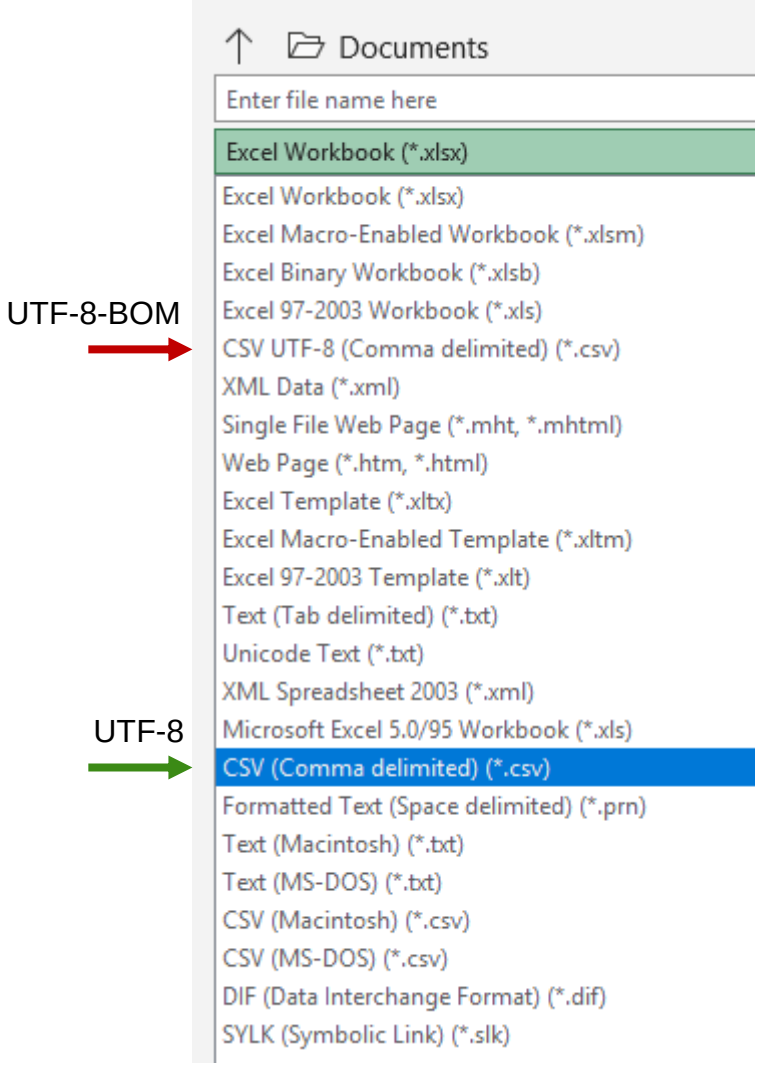
Note 3274382 - ST 720 CV Target download store content or template to excel adjust

Using such Excel files you can create an CSV file utilizing ";" as separator which you can use to upload content into a target system of Configuration Validation.

Keep in mind that you have to store the file in pure UTF-8 format.

The first CSV entry in the save-as dialog of Excel represents UTF-8-BOM, therefore you have to use the second entry



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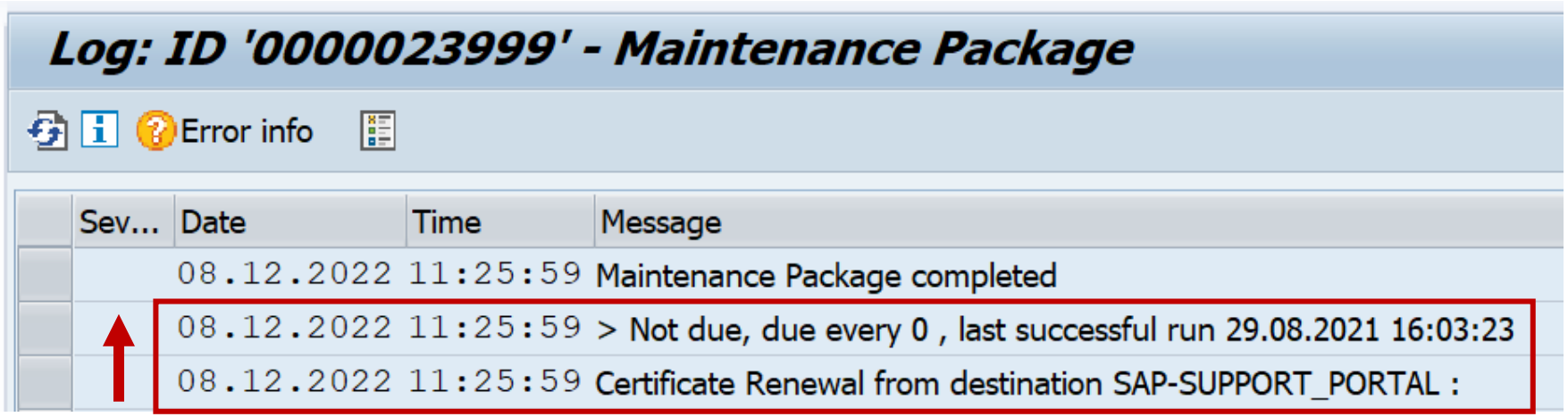
Note 3279191 - SDCCN: Certificate Renewal isn't triggered by Maintenance Package task

SAP ABAP systems are connected to the SAP Support Portal. Among others the destination `SAP-SUPPORT_PORTAL` is used for that purpose. You can either use a technical S-user plus password or the client certificate of a technical S-user for authentication. If you are using a client certificate, then you have to renew it once per year.

The Maintenance Package task within transaction `SDCCN` should implicitly trigger the Certificate Renewal task regularly, but it doesn't execute it a second time. Instead of this you get a message *"> Not due, due every 0, ..."* like the following:

Solution: Implement this note

Workaround (just for this time): create and run the single Certificate Renewal task in transaction `SDCCN`



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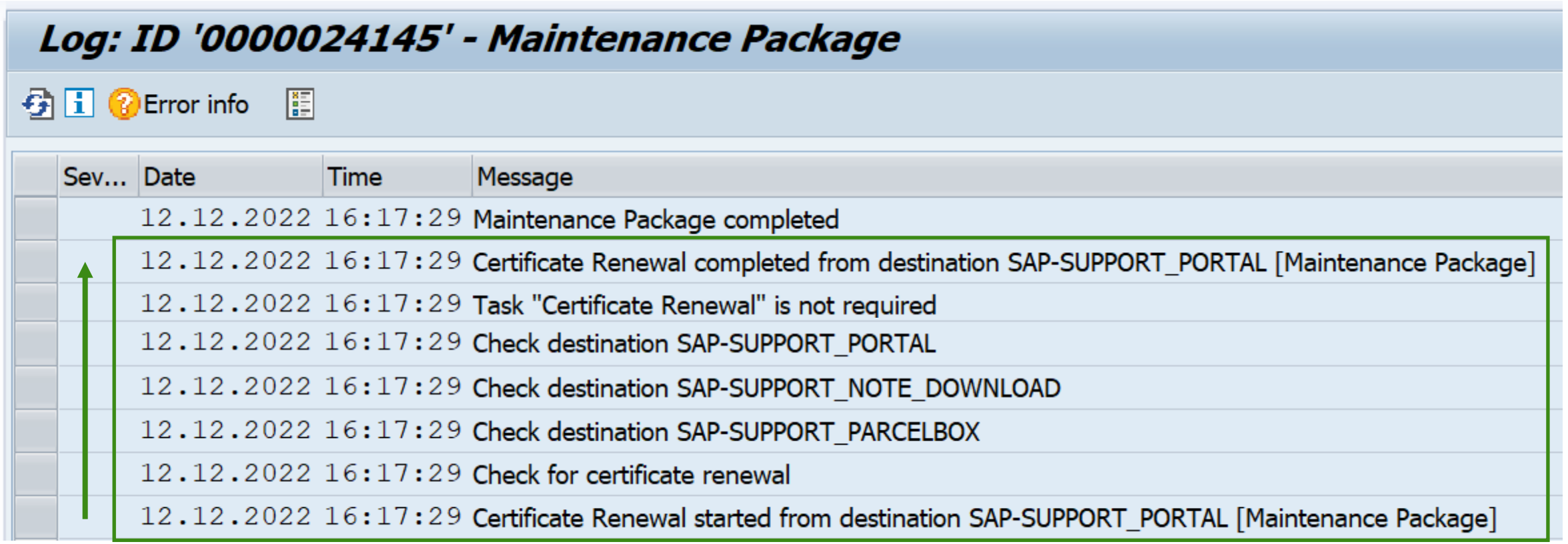
Note 3279191 - SDCCN: Certificate Renewal isn't triggered by Maintenance Package task

Here is the correct result (the example shows that no certificate needs an update):



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December 2022

Topics December 2022

https://wiki.scn.sap.com/wiki/display/Security/Security+Notes+Webinar+-+2022-12

SAP Secure by default for S/4HANA on Premise 2022
Note 2926224 New security settings for SAP S/4HANA & SAP BW/4HANA using SL Toolset/SUM

Notes 3273480 and 3267780 - Improper access control in SAP NetWeaver Process Integration

Note 3268172 - Code Injection vulnerability in SAP BASIS

Notes / KBA about Apache Commons Text CVE-2022-42889

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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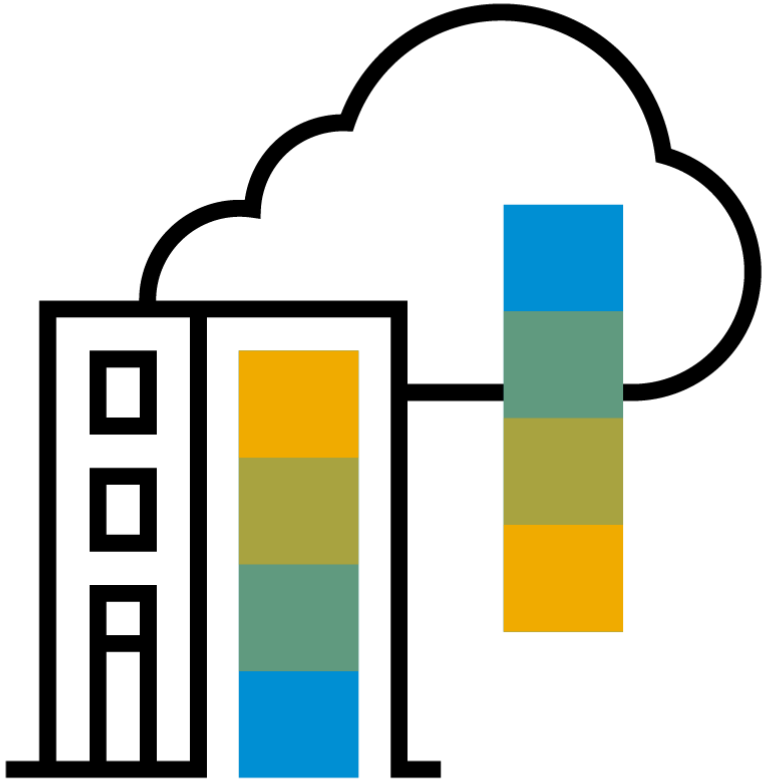
Secure by Default Update for S/4HANA onPremise 2022



Bjoern Brencher, SAP S/4HANA Security
December 2022

PUBLIC

THE BEST RUN SAP

SAP Secure by default for SAP S/4HANA

Motivation

Customer challenge

After installation of an SAP S/4HANA on-premise system, customers need to invest significant time and resources to apply various security settings and configurations.

Project goal – Secure by default for SAP S/4HANA

- Switch security settings directly after installation, system copies or conversions to secure defaults
- Ensure that customer systems have a reasonable security status directly after installation
- Decrease the effort required by customers to apply security settings

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Status for SAP S/4HANA 2022

SAP Secure by default for SAP S/4HANA

Status

Products in scope

- SAP S/4HANA 2022*
- SAP BW/4HANA 2021**
- Products based on SAP S/4HANA Foundation 2022, e.g.
  - SAP Focused Run 3.0
  - SAP Access Control
  - SAP Customer Activity Repository

Customer documentation

- SAP Note 2926224 is a collection note including attachment
- SAP Blog https://blogs.sap.com/2022/11/03/secure-by-default-returns-with-sap-s-4hana-2022/

Status

- First shipment done with SAP S/4HANA 1909
- Additional security topics shipped with SAP S/4HANA 2020, 2021 and 2022

* Settings were partially shipped since SAP S/4HANA 1909
** Settings of SAP S/4HANA 2021 are applied

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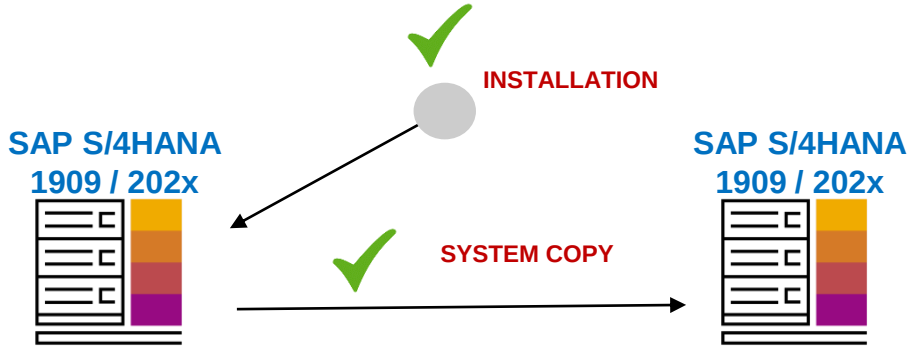
SAP Secure by default for SAP S/4HANA

How can customers get the improvements?

Secure by default in SAP S/4HANA
(SAP Note 2926224) is shipped and enabled for

New installations and system copies



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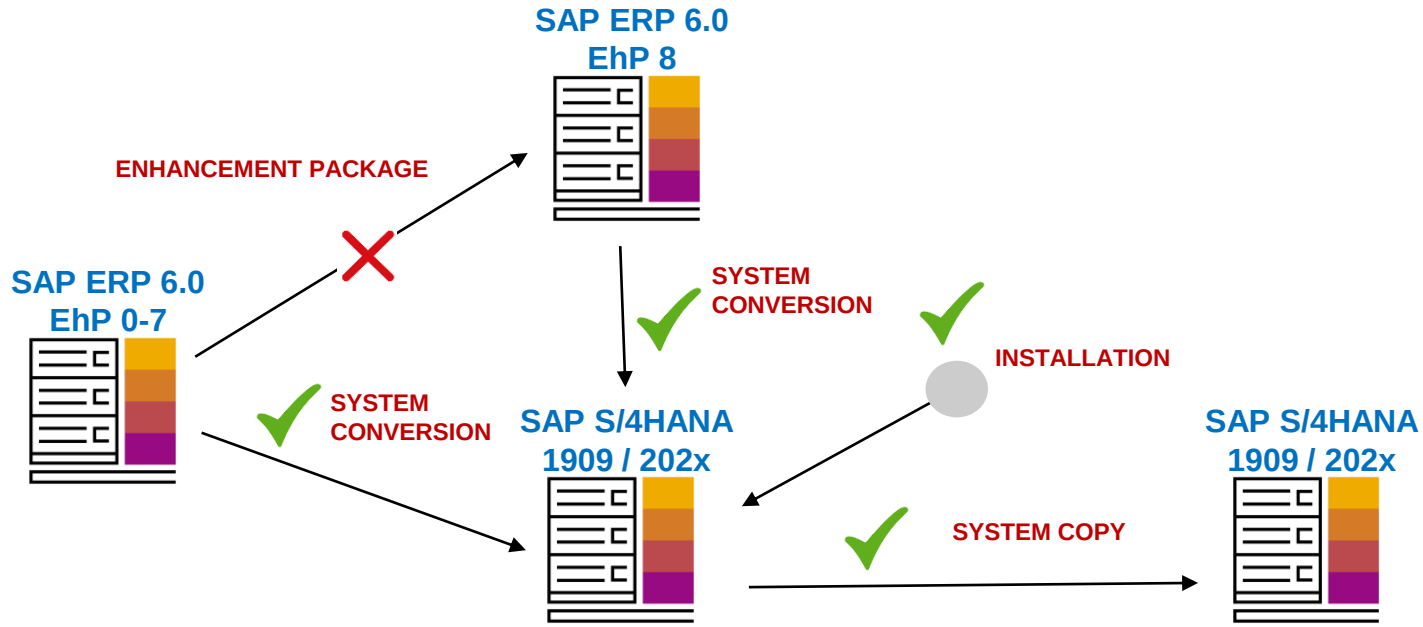
SAP Secure by default for SAP S/4HANA

How can customers get the improvements?

Secure by default in SAP S/4HANA
(SAP Note 2926224) is shipped and enabled for

New installations and system copies

Conversions from ERP to SAP S/4HANA



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SAP Secure by default for SAP S/4HANA

How can customers get the improvements?

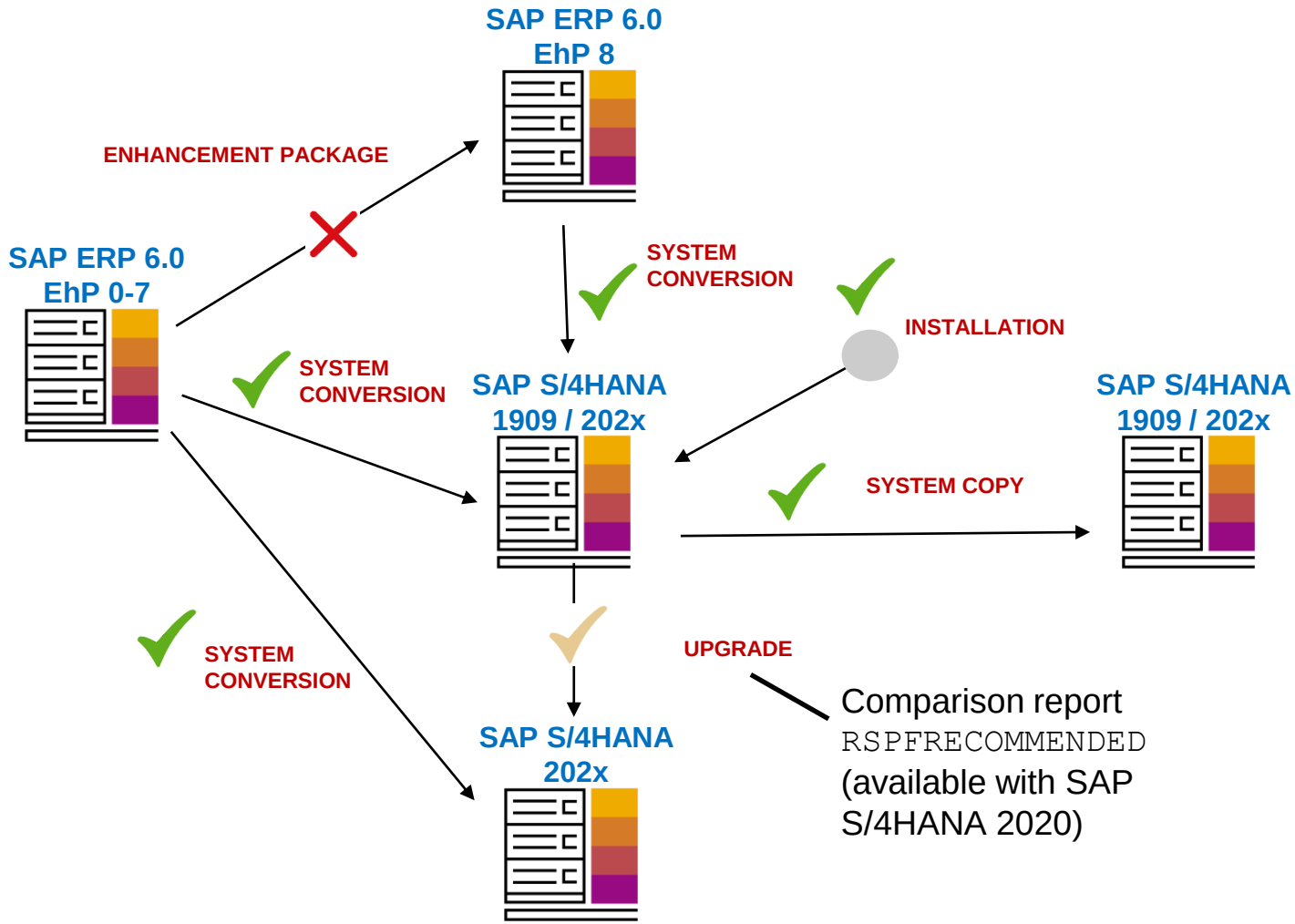
Secure by default in SAP S/4HANA
(SAP Note 2926224) is shipped and enabled for

New installations and system copies

Conversions from ERP to SAP S/4HANA

Upgrades within the SAP S/4HANA product

- **No automated changes**
- Report can be used to compare recommended SAP kernel parameters with configured parameters
- In addition, refer to SAP-provided tools and services for security checks (e.g. EWA, SOS, Config Validation)



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SAP Secure by default for SAP S/4HANA 1909 / 2020 / 2021 / 2022

Technical view

Profile parameters are set to secure values for SAP S/4HANA 1909 - 2022

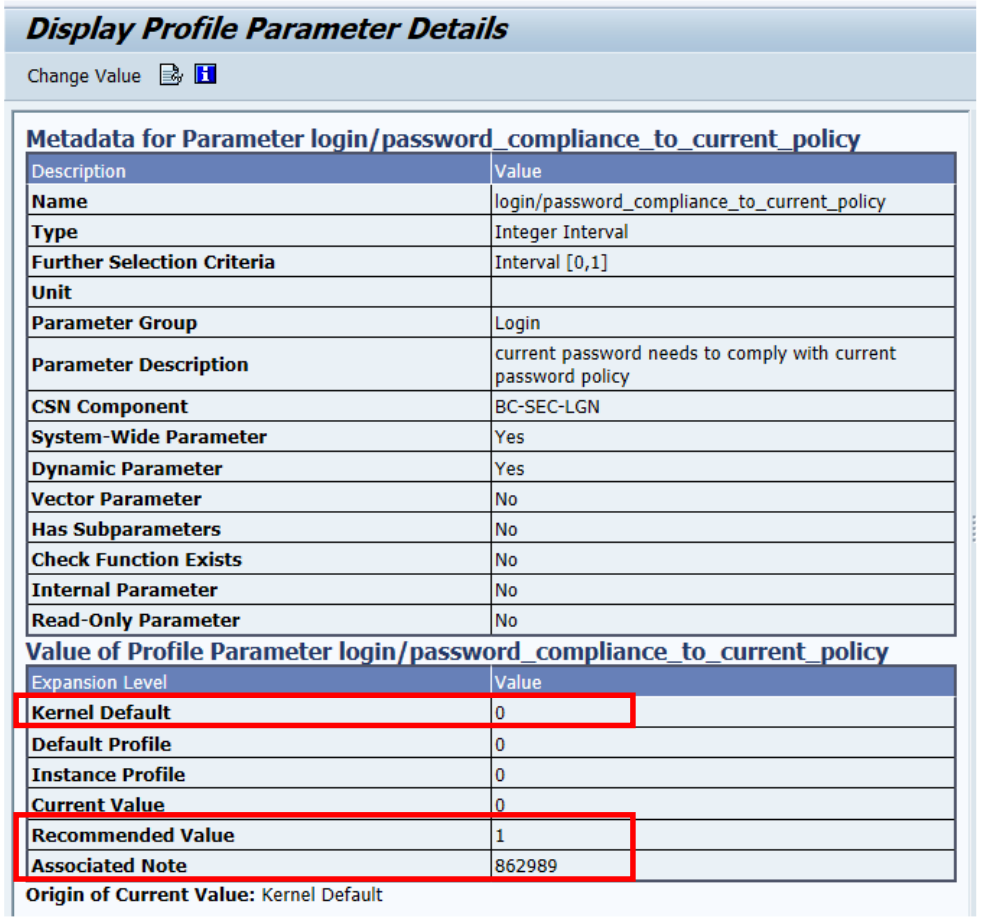
- 21 recommended values
- 27 parameter default values were changed in SAP S/4HANA 2020 (SAP Kernel 7.81)

Security Audit Log (SAL) (shipped with S/4HANA 1909)

Automatic configuration of the security audit log (if not already set up by the customer) which allows customers to trace critical activities in the system

Switchable Authorization Framework (SACF) (shipped with 2020)

Automatic activation of all SACF scenarios to enable additional business authorization checks for technical function modules (if not already set up by the customer)



Display Profile Parameter Details

Change Value

Metadata for Parameter login/password_compliance_to_current_policy

Description	Value
Name	login/password_compliance_to_current_policy
Type	Integer Interval
Further Selection Criteria	Interval [0,1]
Unit	
Parameter Group	Login
Parameter Description	current password needs to comply with current password policy
CSN Component	BC-SEC-LGN
System-Wide Parameter	Yes
Dynamic Parameter	Yes
Vector Parameter	No
Has Subparameters	No
Check Function Exists	No
Internal Parameter	No
Read-Only Parameter	No

Value of Profile Parameter login/password_compliance_to_current_policy

Expansion Level	Value
Kernel Default	0
Default Profile	0
Instance Profile	0
Current Value	0
Recommended Value	1
Associated Note	862989

Origin of Current Value: Kernel Default

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SAP Secure by default for SAP S/4HANA 1909 / 2020 / 2021

Technical view

HANA Audit Policies for SAP S/4HANA (shipped with 2021)

- Activation of SAP HANA auditing in the SAP HANA database
- Activation of basic SAP HANA audit policies (tradeoff between log volume and traceability)

Table logging (shipped with 2021)

Activation of ABAP table logging for business-critical tables

Security improvements for transport management (shipped with 2021)

Set 3 transport profile parameters to secure values for increased traceability of transport changes

Security configurations (shipped with 2021)

- Activation of “start authorization checks” for increased protection of Web Dynpro Applications
- Enablement of the UCON HTTP Allowlist framework for increased protection of HTTP traffic

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SAP Secure by default for SAP S/4HANA 2022

Technical view

Reference user usage

Prevent usage of non-reference user as reference user (common attack vector to hide `SAP_ALL` assignment)

TLS1.2 usage

Enforce TLS1.2-only for S/4HANA and `saphostagent`

Support Attack Surface Reduction after installation / conversion with

- RFC Logging (can be used with UCON)
- SICF Logging

Security configurations

- Enable SSL for protection of session logon tickets
- Protect the RFC gateway against unauthorized RFC call forwarding

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SAP Secure by default for SAP S/4HANA 1909 / 2020 / 2021 / 2022

Log Retention

As part of secure by default, several logs are enabled by default in SAP S/4HANA systems for security and compliance reasons

Component	Default Retention Configured	Storage
ICM Server Log	Yes, 7 files with max 100.000 KB (compressed)	Filesystem
ICM Client Log	Yes, 7 files with max 100.000 KB (compressed)	Filesystem
SAP ABAP Security Audit Log	No	Filesystem SAP HANA table (default)
SAP ABAP Table Log	No	SAP HANA table
SAP HANA Audit Log	Yes for SAP HANA table No for syslog and filesystem	SAP HANA table (default) Syslog, Filesystem
SAP RFC Usage Log	No continuous growth expected	SAP HANA table
SAP SICF Usage Log	No continuous growth expected	SAP HANA table

Customers need to decide and configure log retention to limit log growth!

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SAP Secure by default for SAP S/4HANA

Central Documentation

Secure by default in SAP S/4HANA (SAP Note 2926224)

A	B	C	D	E	F	G	H	I	J	K
Area	Type of setti	Name	Storage	Description	Relevant SAP Note	SAP Note URL	New recommended value	Impact to operations	Mitigation of impact	Revert back method
Authorizations	Customizing	Generic Application Access Rules (SLDW)	SLDW	In certain situations, SAP needs to deliver new allowlists for existing functionality. The generic application access rules allow the activation of these additional allowlists. If SLDW scenarios are not enabled, additional allowlists are not enforced.	1922712	1922712	If SLDW does not contain customer configurations, all SLDW scenarios are set to productive scenario as shipped by SAP. In certain cases, additional activation of allowlist checks might be necessary (status of check is not active).	It might be necessary to adjust allowlists for SLDW scenarios. Please refer to SAP Note for the SLDW scenario.	-	Use transaction SLDW_COMPARE -> Mass update - Header Data Active Rules -> select SLDW entries to be disabled -> select Status and / or SAL Mode to change settings for selected SLDW entries (SAP Note 1922712)
Authorizations	Customizing	Usage of user types as reference user	SM30 -> table PRGN_CUST	Controls which type of users can be assigned as a reference user to an existing user.	513694	513694	If REF_USER_CHECK is not set, the switch is set to REF_USER_CHECK = E – Error: Only users of type reference user are allowed as reference user.	Only new assignments of reference users to users will fail if the reference user is not of type reference user. Existing	Review table USREFUS for reference user assignment and validate that assigned users are set to user type reference	Set REF_USER_CHECK = W - Warning (default)
Server infrastructure	Transport Profile Parameters	Transport Management: RECCLIENT	Table TPSYSTEMDEFAULTS	Controls whether write operations on certain tables are logged if changes are imported using transports. Tables need to be flagged appropriately in their technical settings in ABAP Dictionary. If not set to ALL, table auditing is disabled for all clients for transports.	84052	84052	If variable is not set in transport profile, ALL	Experience has shown that usually table logging does not cause problems in the productive system, nor in Customizing and development environments. System operators need to	Analyze tables logging table changes frequently and deactivate logging in transaction SE13 for this specific table if not required for legal/compliance reasons (SAP Note 608835).	Set transport profile parameter RECCLIENT to OFF in the transport profile.
Server infrastructure	Transport Profile Parameters	Transport Management: TLOGOCHECK	Table TPSYSTEMDEFAULTS	Controls whether certain consistency checks for transport object definitions are done. This check prevents the import of table entries that do not belong to the object definition in the target system.	2671160	2671160	If variable is not set in transport profile, TRUE	This change may only cause issues in case own transport objects (transaction SOBJ) have been defined. It might affect cross release transports of SAP defined objects (which are critical	To overcome this you may temporarily disable the TLOGOCHECK.	Set transport profile parameter TLOGOCHECK to FALSE in the transport profile.
Server infrastructure	Transport Profile Parameters	Transport Management: VERS_AT_IMP	Table TPSYSTEMDEFAULTS	This parameter enables creation of new versions during transport imports. If VERS_AT_IMP is not set, versioning in the version database is deactivated upon import (repository object, e.g. report lacks version history in the production system).	1784800	1784800	If variable is not set in transport profile, ALWAYS	Two additional import steps will be executed, which increases the duration of transport imports.	-	Set transport profile parameter VERS_AT_IMP to NEVER in the transport profile.
Server infrastructure	HANA auditing	HANA audit activation and HANA audit policies for S/4HANA HANA TenantDB	HANA TenantDB of S/4HANA systems	Configures a recommended initial set of HANA audit policies with target HANA database and enables HANA auditing if necessary. Without these audit policies, HANA auditing will not record any S/4 relevant security events	3016478	3016478	Unless customer has its own HANA audit policy configuration in the TenantDB, HANA auditing is enabled in TenantDB and a recommended set of HANA audit policies is configured in TenantDB.	HANA audit logging will be enabled/enhanced. No impact other than space consumption of HANA audit logs is expected. However, if a SIEM system is active that	Monitor disk space properly. Adapt SIEM interface consuming HANA audit logs.	Disable or delete the HANA audit policies with the prefix _SAP_ that were configured by S/4HANA.
SAP Host Agent	Profile parameter	ssl/ciphersuites ssl/client_ciphersuites ssl/client_sni_enabled	SAP Host Agent host_profile	Controls which TLS versions are supported by the SAP Host Agent for HTTPS connections. If not set explicitly, old TLS versions 1.0 and 1.1 are supported.	3213711	3213711	Requires SAP Host Agent 7.22 PL57 or higher ssl/ciphersuites = 545:PFS:HIGH::EC_X25519:EC_P256:EC_HIGH ssl/client_ciphersuites = 150:PFS:HIGH::EC_X25519:EC_P256:EC_HIGH	Outdated client components might not be able to connect to the SAP Hot Agent anymore in case they do not support TLS1.2.	Update / reconfigure outdated client components to support HTTPS connections with TLS1.2.	Comment out profile parameter ssl/ciphersuites or set to value 135:PFS:HIGH::EC_X25519:EC_P256:EC_HIGH (kernel default).

S4HANA 2022 | S4HANA 2021 | S4HANA 2020 | S4HANA 1909 | Info

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Detailed review of Secure by Default

News with SAP S/4HANA 2022

SAP Secure by default for SAP S/4HANA 2022
Technical view

TLS1.2 only for S/4HANA "server" components: ICM / sapstartsrv / saphostagent (*)

- TLS1.0 and TLS1.1 was deprecated with IETF RFC 8996
- Only TLS1.2 is enabled for all web interfaces of SAP S/4HANA
  Necessary configurations are applied to
  - ICM + sapstartsrv in `DEFAULT.PFL`
  - saphostagent in `host_profile`
- SAP recommended value: `ssl/ciphersuites = 545:PFS:HIGH::EC_X25519:EC_P256:EC_HIGH`

Enable SSL for protection of session logon tickets

- Sniffing of session logon tickets can lead to unauthorized session hijacking
- Session logon tickets must be considered confidential like user credentials and must therefore only be transmitted via HTTPS
- SAP recommended value: `login/ticket_only_by_https = 1`

* S/4HANA client components support TLS1.0 up to TLS1.2 by default (controlled with profile parameter `ssl/client_ciphersuites`)

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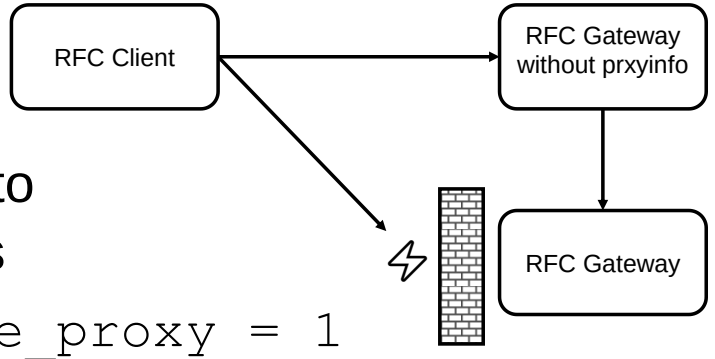
SAP Secure by default for SAP S/4HANA 2022
Technical view

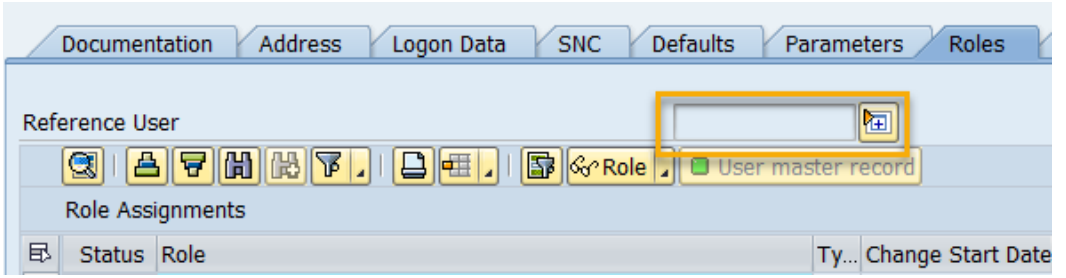
Protection of RFC Gateway



- `secinfo` and `reginfo` are maintained with secure by default
- With SAP S/4HANA 2022, `prxyinfo` is enabled for secure by default to block unauthorized RFC call forwarding that could bypass firewall rules
- SAP recommended value for S/4AHAN2022 and higher: `gw/acl_mode_proxy = 1`
- In older releases, customers need to maintain entries in `prxyinfo`

Prevent usage of non-reference user as reference user

- Common attack vector to hide `SAP_ALL` assignment as often only users with `SAP_ALL` are monitored
- Customizing setting will enforce that only users of type “reference user” can be assigned as reference user
- Table `PRGN_CUST`, entry `REF_USER_CHECK`, value = `E`



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SAP Secure by default for SAP S/4HANA 2022

Technical view

Support attack surface reduction after installation / conversion with RFC / SICF logging (only S/4HANA 2022+)

- Typically in an S/4HANA system only several 100 RFC function modules and SICF are used (depending on the application scenarios)
- Active, but unused RFC / SICF services bear security risks and need to be disabled
- With S/4HANA 2022, a high performance log is enabled by default to provide a usage statistic for RFC / SICF. These information can be used to disable unused services

Transaction `SBDLOG` for RFC functions:

Name of Function Module	Called Client	Number of Calls	Last Call	First call
/ZJCOTEST/NAMESPACE_TEST	000	49	27.06.2022	26.05.2022
BAPI_TRANSACTION_COMMIT	000	49	27.06.2022	26.05.2022
BAPI_TRANSACTION_ROLLBACK	000	49	27.06.2022	26.05.2022
BGRFC_CONF_READ_INB_DEST	000	49	27.06.2022	26.05.2022
	000	1	20.06.2022	20.06.2022
BGRFC_GET_UNIT_ID	000	MAX	27.06.2022	26.05.2022
	000	1	20.06.2022	20.06.2022
CHBTEST42	000	49	27.06.2022	26.05.2022
CREATE_WS_DESTINATION	000	MAX	27.06.2022	26.05.2022
	000	3	01.06.2022	27.05.2022
JTEST_ADD_INT	000	MAX	27.06.2022	26.05.2022
JTEST_COMPLEX_DATA	000	MAX	27.06.2022	26.05.2022
NGRFC_REGISTER_RUCKSACK	000	MAX	27.06.2022	26.05.2022
NGRFC_RUCKSACK_OVERWRITE	000	49	27.06.2022	26.05.2022
NGRFC_SESSION_RUCKSACK	000	MAX	27.06.2022	26.05.2022
NGRFC_SIMPLE	000	49	27.06.2022	26.05.2022
NGRFC_STRUCT	000	MAX	27.06.2022	26.05.2022
NGRFC_TABLE	000	MAX	27.06.2022	26.05.2022
RFC_PING_AND_WAIT	000	49	27.06.2022	26.05.2022
RFC_RAISE_ERROR	000	MAX	27.06.2022	26.05.2022
SBC_CLEAR_DEMOTAB	000	49	27.06.2022	26.05.2022
SBC_CLEAR_TYPTABS	000	MAX	27.06.2022	26.05.2022
	000	1	20.06.2022	20.06.2022
SBC_DEMO_SAVE	000	MAX	27.06.2022	26.05.2022
SBC_ERROR_CHECK	000	MAX	27.06.2022	26.05.2022
	000	1	20.06.2022	20.06.2022
SBC_OPT_TEST_ONEWAY	000	MAX	27.06.2022	26.05.2022
SBC_READ_DEMOTAB	000	MAX	27.06.2022	26.05.2022
SBC_VOLUME_TEST	000	49	27.06.2022	26.05.2022
SCON_BIG_STRINGS	000	49	27.06.2022	26.05.2022
SCON_INT8_TYPES	000	49	27.06.2022	26.05.2022
SCON_UCON_BLOCKED	000	49	27.06.2022	26.05.2022

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SAP Secure by default for SAP S/4HANA 2022

Technical view

Support attack surface reduction after installation / conversion with RFC / SICF logging (only S/4HANA 2022+)

Transaction `SBDLOG` for SICF services:

ICF logging is active

ICF Path	Number of Calls	Last Call	First Call	Public Service	HTTP Service
/sap/public/bc/ur/nw7/js/classes/PasswordFieldDelegate.js	1	14.12.2022	14.12.2022	☑	/default_host/sap/bc/echo
/sap/public/bc/ur/nw7/js/classes/LoadingAnimation.js	1	14.12.2022	14.12.2022	☑	/default_host/sap/bc/echo
/sap/public/bc/ur/nw7/js/classes/LayeredControl.js	1	14.12.2022	14.12.2022	☑	/default_host/sap/bc/echo
/sap/public/icman/icr_config_push	20	14.12.2022	14.12.2022	☑	
/sap/bc/wdisp/admin/icp/show_serv.icp	1	14.12.2022	14.12.2022	☐	/default_host/sap/bc/echo
/sap/bc/wdisp/admin/icp/show_clientiptable.icp	1	14.12.2022	14.12.2022	☐	/default_host/sap/bc/echo
/sap/bc/sql/sql1/sap/s_privileged	MAX	14.12.2022	14.12.2022	☐	
/sap/opu/odata/build/core_srv/builds('7ILD4QPRWUPO3HW4YIW523M2NA')	3	14.12.2022	14.12.2022	☐	OData Service
/sap/opu/odata/build/core_srv/builds('7ILD4QPRWUPO3HW4YIW523M2NA')/tasks	1	14.12.2022	14.12.2022	☐	OData Service
/sap/opu/odata/build/core_srv/tasks(build_id='7ILD4QPRWUPO3HW4YIW523M2NA',task_id=0)/logs	1	14.12.2022	14.12.2022	☐	OData Service
/sap/opu/odata/build/core_srv/tasks(build_id='7ILD4QPRWUPO3HW4YIW523M2NA',task_id=1)/logs	1	14.12.2022	14.12.2022	☐	OData Service
/sap/opu/odata/build/core_srv/tasks(build_id='7ILD4QPRWUPO3HW4YIW523M2NA',task_id=2)/logs	1	14.12.2022	14.12.2022	☐	OData Service
/sap/opu/odata/build/core_srv/tasks(build_id='7ILD4QPRWUPO3HW4YIW523M2NA',task_id=3)/logs	1	14.12.2022	14.12.2022	☐	OData Service
/sap/opu/odata/build/core_srv/builds('7ILD4QPRWUPO3HW4YIW523M2NA')/values	1	14.12.2022	14.12.2022	☐	OData Service
/sap/opu/odata/build/core_srv/builds('7ILD4QPRWUPO3HW4ZQVBPX35QM')	3	14.12.2022	14.12.2022	☐	OData Service
/sap/opu/odata/build/core_srv/builds('7ILD4QPRWUPO3HW4ZQVBPX35QM')/tasks	1	14.12.2022	14.12.2022	☐	OData Service
/sap/opu/odata/build/core_srv/tasks(build_id='7ILD4QPRWUPN3HW53L5KEULKJY',task_id=1)/logs	1	14.12.2022	14.12.2022	☐	OData Service
/sap/opu/odata/build/core_srv/tasks(build_id='7ILD4QPRWUPN3HW53L5KEULKJY',task_id=0)/logs	1	14.12.2022	14.12.2022	☐	OData Service
/sap/opu/odata/build/core_srv/builds('7ILD4QPRWUPN3HW53L5KEULKJY')/tasks	1	14.12.2022	14.12.2022	☐	OData Service
/sap/opu/odata/build/core_srv/builds('7ILD4QPRWUPN3HW53L5KEULKJY')	3	14.12.2022	14.12.2022	☐	OData Service
/sap/zfw_show_tell	79	14.12.2022	14.12.2022	☐	/default_host/sap/bc/gui/sa...
/sap/testhilal	1	14.12.2022	14.12.2022	☐	/default_host/sap/bc/gui/sa...

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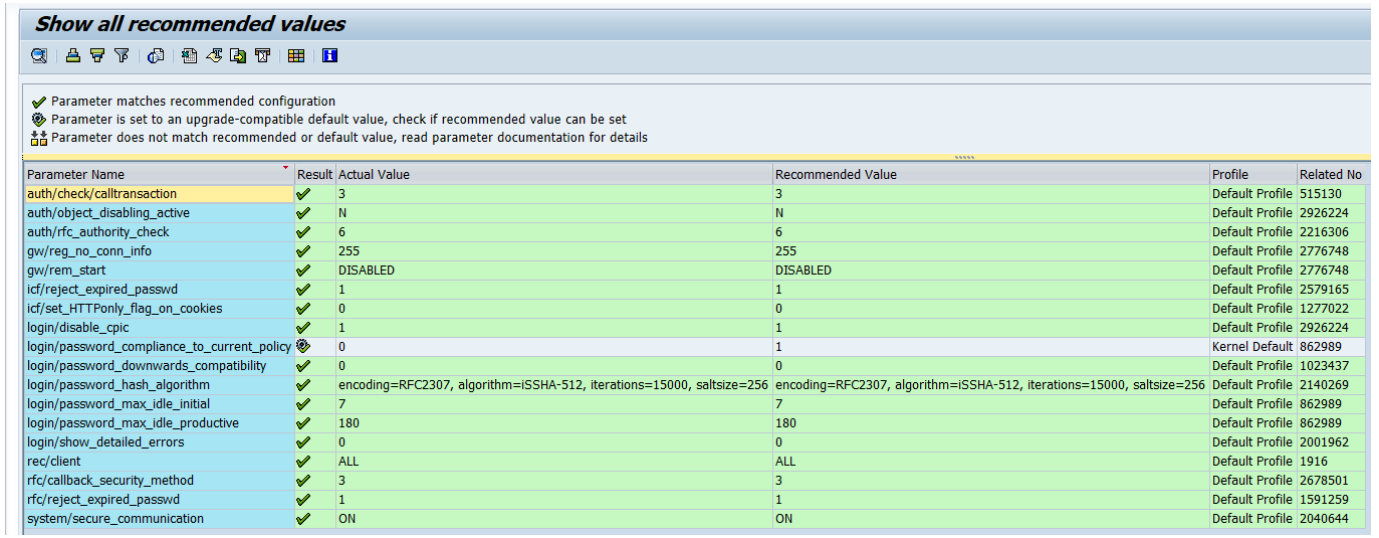
What about Upgrades?

SAP Secure by default for S/4HANA on-premise
Upgrade Scenarios

No automated changes during upgrade

Support of S/4HANA 2020 – 2022 upgrade scenario

Comparison report `RSPFRECOMMENDED` shows actual system values vs recommended security profile parameters



Parameter Name	Result	Actual Value	Recommended Value	Profile	Related No
auth/check/calltransaction	✓	3	3	Default Profile	515130
auth/object_disabling_active	✓	N	N	Default Profile	2926224
auth/rfc_authority_check	✓	6	6	Default Profile	2216306
gw/reg_no_conn_info	✓	255	255	Default Profile	2776748
gw/rem_start	✓	DISABLED	DISABLED	Default Profile	2776748
icf/reject_expired_passwd	✓	1	1	Default Profile	2579165
icf/set_HTTPonly_flag_on_cookies	✓	0	0	Default Profile	1277022
login/disable_cpic	✓	1	1	Default Profile	2926224
login/password_compliance_to_current_policy	◈	0	1	Kernel Default	862989
login/password_downwards_compatibility	✓	0	0	Default Profile	1023437
login/password_hash_algorithm	✓	encoding=RFC2307, algorithm=iSSHA-512, iterations=15000, saltsize=256	encoding=RFC2307, algorithm=iSSHA-512, iterations=15000, saltsize=256	Default Profile	2140269
login/password_max_idle_initial	✓	7	7	Default Profile	862989
login/password_max_idle_productive	✓	180	180	Default Profile	862989
login/show_detailed_errors	✓	0	0	Default Profile	2001962
rec/client	✓	ALL	ALL	Default Profile	1916
rfc/callback_security_method	✓	3	3	Default Profile	2678501
rfc/reject_expired_passwd	✓	1	1	Default Profile	1591259
system/secure_communication	✓	ON	ON	Default Profile	2040644

What about the Secure By Default configuration items?

Customers can use the SAP-provided tools and services to identify gaps in the security configurations (e.g. EWA, SOS, Config Validation, FRUN)

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Is Secure by Default enough Security?

SAP Secure by default for SAP S/4HANA
Is this enough security?

Is secure by default enough security?

- Secure by default settings cannot and will not cover all aspects of security settings in systems running SAP S/4HANA.
- SAP highly recommends that customers perform additional reviews and improvements of their security settings.

Where can customers find more information on SAP security?

Use the SAP-provided tools and services (https://support.sap.com/sos).
These inform you about gaps in a cost-efficient way.

- SAP EarlyWatch Alert (alert on most critical topics)
- SAP Solution Manager - Configuration validation (check security configurations)
- SAP Solution Manager - System recommendations (display missing security patches)
- SAP Focused Run - Configuration and Security Analytics (check security configurations)

Review SAP security white papers (https://support.sap.com/securitywp)

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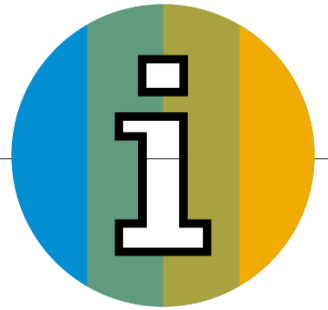
SAP Secure by default for SAP S/4HANA

Further Information



SAP Note 2926224 – SAP S/4HANA Secure by Default

https://launchpad.support.sap.com/#/notes/2926224

SAP Blog – SAP S/4HANA Secure by Default

https://blogs.sap.com/2022/11/03/secure-by-default-returns-with-sap-s-4hana-2022/

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Thank you.

Contact information:

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SAP Product Engineering, SAP SE
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Notes 3273480 and 3267780 - Improper access control in SAP NetWeaver Process Integration

The notes are not restricted to Process Integration systems. Both notes are relevant for all Java based systems because the software component MESSAGING is a core component of the application server Java.

The correction introduces a side-effect error, which gets solved with the patches of another note:

Note 3280409 - Errors in UDS: Error while indexing payload for message key

Currently (15.12.2022) you find patches for MESSAGING SYSTEM SERVICE 7.50 for support packages 20 – 25. The upcoming support package 26 is not yet available.

Keep in mind to use the Software Update Manager (SUM) for the implementation.

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Note 3268172 - Code Injection vulnerability in SAP BASIS

The correction instruction of this note simply deactivates the obsolete but critical code.

→ Simply do it.

The vulnerability is about a generic option to call any class method remotely:

Workaround: You can use UCON respective authorizations for `S_RFC` to close access to remote enabled function `SHDB_TOOLS_RFC_WRAPPER`

```
*&---------------------------------------------------------------------*
*& Object          FUNC SHDB_TOOLS_RFC_WRAPPER
*& Object Header   FUGR SHDB_TOOLS_FUNCTIONS
*&---------------------------------------------------------------------*
*& FUNCTION SHDB_TOOLS_RFC_WRAPPER
*&---------------------------------------------------------------------*

FUNCTION shdb_tools_rfc_wrapper.
```

```
*>>>> START OF DELETION <<<<<
  DATA:
     lt_param     TYPE abap_parmbind_tab,
     ls_param     TYPE abap_parmbind_tab,
     lt_exc       TYPE abap_excpbind_tab,
     ls_exc       TYPE abap_excpbind,
     lr_exc_dcall TYPE REF TO cx_sy_dyn_call_error,
     lv_wp_pid    TYPE char8,
     lv_wp_no     TYPE char2,
     lr_instance  TYPE REF TO object,
     lr_parallelizable TYPE REF TO if_lib_parallelizable,
     lv_res_id    LIKE if_lib_parallelizable=>mv_resource_id,
     lr_res_ctx   LIKE if_lib_parallelizable=>mr_resource_context,
     ls_tech_info TYPE if_lib_parallelizable=>ts_parallel_info.
```

```
      IF lr_instance IS BOUND.
        lr_parallelizable ?= lr_instance.
        lr_parallelizable->mv_resource_id = lv_res_id.
        lr_parallelizable->mr_resource_context = lr_res_ctx.
        "Full dynamic instance method call:
        CALL METHOD lr_instance->(iv_method) PARAMETER-TABLE lt_param.
      ELSE.
        "Full dynamic static method call:
        CALL METHOD (iv_class)=>(iv_method) PARAMETER-TABLE lt_param.
      ENDIF.
    CATCH cx_sy_dyn_call_error INTO lr_exc_dcall.
      "ATTENTION! In 7.31/7.40 class based exceptions are NOT allowed in
      "RFC context, anymore!
      RAISE sy_dyn_call_error.
  ENDTRY.
```

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Notes / KBA about Apache Commons Text CVE-2022-42889 Vulnerability

Apache Commons Text CVE-2022-42889
https://commons.apache.org/proper/commons-text/security.html

"Apache Commons Text is a low-level library for performing various text operations, such as escaping, calculating string differences, and substituting placeholders in the text with values looked up through interpolators. When using the string substitution feature, some of the available interpolators can trigger network access or code execution. This is intended, but it also means an application that includes user input in the string passed to the substitution without properly sanitizing it would allow an attacker to trigger those interpolators.

For that reason the Apache Commons Text team have decided to update the configuration to be more "secure by default", so that the impact of a failure to validate inputs is mitigated and will not give an attacker access to these interpolators. However, it is still recommended that users treat untrusted input with care.

We're not currently aware of any applications that pass untrusted input to the substitutor and thus would have been impacted by this problem prior to Apache Commons Text 1.10.0."

Conclusion: Any default lookups could still potentially represent a security risk such as accessing files or system properties. Use lookup features with caution in custom code and make sure that all user input gets sanitized for example based on an allow list.

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Notes / KBA about Apache Commons Text CVE-2022-42889

SAP Security Notes

Number	Application Area	Short text	SAP Product
3271523	CEC-COM-CPS-COR	Remote Code Execution vulnerability associated with Apache Commons Text in SAP Commerce Related FAQ note 3278497 The product is not directly affected but you might have custom code which use the "StringSubstitutor" Recommendation to validate custom code Update is recommended in general	SAP Commerce

SAP Commerce uses a version of open source Java library Apache Commons Text which has vulnerabilities CVE-2022-42889.

Which customers are affected?

- All customers that use interpolation for “StringSubstitutor” in their SAP Commerce code.

Should I search for usage of “StringSubstitutor” in custom code?

- Yes

Which patches contain all security related solutions?

- The patches of this note from 24.10.2022 solve this issue
  However, you should go for the newer patches from 12.12.2022 as described in another security note 3248255

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Notes / KBA about Apache Commons Text CVE-2022-42889

SAP Security Notes

Vulnerability	CVE-2022-42889 Commons Text	CVE-2022-41266 XSS
Solution	Note 3271523	Note 3248255
Available as of	24.10.2022	12.12.2022
Patch	1905.47 2005.31 2011.26 2105.16 2205.5	1905.49 2005.33 2011.28 2105.18 2205.7

You find more entries about solving CVE vulnerabilities on the Patch Release overview page:

Patch	Priority	Summary
Search column	Search column	CVE
2205.7	High	BP2205 fix Spring Security 5.7.3 & [CVE-2022-42252][7.5] Apache Tomcat 9.0.65 (sbg)
2205.7	Very High	BP2205 CXEC-20678 [CVE-2022-31692] <9.8> Vulnerability in Spring Security 5.6.5 (core)
2205.7	Very High	BP2205 CXEC-20675 [CVE-2022-41853] <9.8> Vulnerability in HyperSQL Database Engine 2.4.1 (dbdriver)
2205.7	Medium	BP2205 CVE-2022-31692 (BDSA-2022-3106) - <9.8> Spring Security 5.7.3
2205.7	Medium	BP2205 <CVE-2021-43138> - Async 1.5.0
2205.6	Medium	BP2205 <CVE-2022-3517> - minimatch 3.0.4
2205.6	Medium	BP2205 <CVE-2022-37616> - @xmldom/xmldom 0.7.5
2205.6	Medium	BP2205 [CVE-2022-24823] Netty 4.1.75.Final
2205.6	High	BP2205 CXEC-19575 [CVE-2022-42003] <7.5> Vulnerability in jackson-databind 2.13.2.1 (core)
2205.6	Low	BP2205 CVE-2022-42003 (BDSA-2022-2765) - <7.5> jackson-databind 2.13.4
2205.6	High	BP2205 CXEC-19245 [CVE-2022-40146] <7.5> Vulnerability in Batik XML utility library 1.14 (commons)
2205.5	Very High	BP2205 CXEC-20073 [CVE-2022-42889] <9.8> Vulnerability in Apache Commons Text 1.6 (core)
2205.5	Medium	BP2205 [SolR] [jackson-databind] CVE-2022-42003 and CVE-2022-42004
2205.5	Very High	BP2205 [CVE-2022-42889] <9.8> Vulnerability in Apache Commons Text 1.6 (search-and-nav)
2205.5	Medium	BP2205 CXEC-12622 [SolR] [netty] CVE-2022-24823

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Notes / KBA about Apache Commons Text CVE-2022-42889

SAP KBA / Notes stating that a specific SAP product is not affected

Number	Application Area	Short text	SAP Product
3259998	BC-JAS-COR	CVE-2022-42889 - AS Java Core Components' impact for Apache Commons Text vulnerability (Recommendation to validate custom code)	SAP Java Virtual Machine SAP NetWeaver Application Server for Java
3259413	BC-MID-SCC	Is SAP Cloud Connector affected by Apache Commons Text RCE vulnerability CVE-2022-42889 ?	SAP Cloud Connector
3260912	BC-SYB-ASE	Are ASE and RepServer affected by the Apache vulnerability CVE-2022-42889 Text4Shell - SAP ASE	SAP Adaptive Server Enterprise 16.0 SAP Replication Server 16.0
3260611	BC-XI-PIT	Impact of Apache Commons CVE-2022-42889 vulnerability on SAP Process Orchestration	SAP Process Orchestration (PO) SAP Process Integration (PI)
3259911	BC-XI-PIT	Open Source update of Apache Commons Text (Update is recommended in general)	PI Test Tool (PIT) and its Eclipse plug-in
2914574	BI-BIP-SEC	Third-party software Vulnerabilities (CVE) NOT impacting SAP BusinessObjects 4.x	SAP BusinessObjects Business Intelligence Platform (BI)
3276493	EIM-DS-DEP	Is SAP Data Services affected by Apache Vulnerability CVE-2022-42889?	SAP Data Services
3265598	HAN-DP-SDI	Is SDI affected by Apache Commons Text RCE vulnerability CVE-2022-42889	SAP HANA smart data integration 2.0
3259945	SV-SMG-DIA-SRV-AGT	(CVE-2022-42889) Impact of Apache Commons Text RCE vulnerability to SAP Solution Manager JAVA and Diagnostics Agent	SAP Solution Manager 7.2

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Notes / KBA about Apache Commons Text CVE-2022-42889

How to identify potential vulnerable custom code

In general you could search for the .jar file to find the library:

1. **Move to the directory where the applications are installed**
2. **Execute a search command to find the vulnerable library, such as:**
   `find . -name "*commons*text*.jar"`
   (The search command to execute depends on the operating system used)
3. **Locate the affected .jar files and update them (see here for the official release website)**
4. **Commit the changes via the version control system**
5. **You might need to re-build and re-deploy the application**

On an SAP NetWeaver Application Server for Java you can use following command to search for applications which might use the vulnerable library:

```
llr -all -f org/apache/commons/text/lookup/StringLookup.class
```

See note 3259998 and this blog:
How to Find Java Library Resource File Possessing Information for Class Name
https://blogs.sap.com/2012/10/19/how-to-locate-java-library-resource-during-java-development-in-pi/

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Notes / KBA about Apache Commons Text CVE-2022-42889

External check tools

You can use external check tools to analyze own applications.

Here are some samples:

- **commons-text-tools**
  https://github.com/jfrog/text4shell-tools
  Local file scanner that searches for vulnerable programs in a specified directory to detect the version of Commons Text based on strings that appear in the library's code

- **Text4Shell scanner for Burp Suite**
  https://github.com/silentsignal/burp-text4shell
  Network-based scanner that attempts to exploit the vulnerability in web applications via the Burp Suite

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November 2022

Topics November 2022

https://wiki.scn.sap.com/wiki/display/Security/Security+Notes+Webinar+-+2022-11

SAP Universal ID

Note 3249990 - Multiple Vulnerabilities in SQlite bundled with SAPUI5

Note 3098792 - SE16N: Enhancement of change documents
Note 2911103 - SE16N: Alternative edit mode

Note 2627358 - Information system for scope of table authorizations

SAP Secure By Default for S/4HANA on Premise 2022
Note 2926224 New security settings for SAP S/4HANA & SAP BW/4HANA using SL Toolset/SUM

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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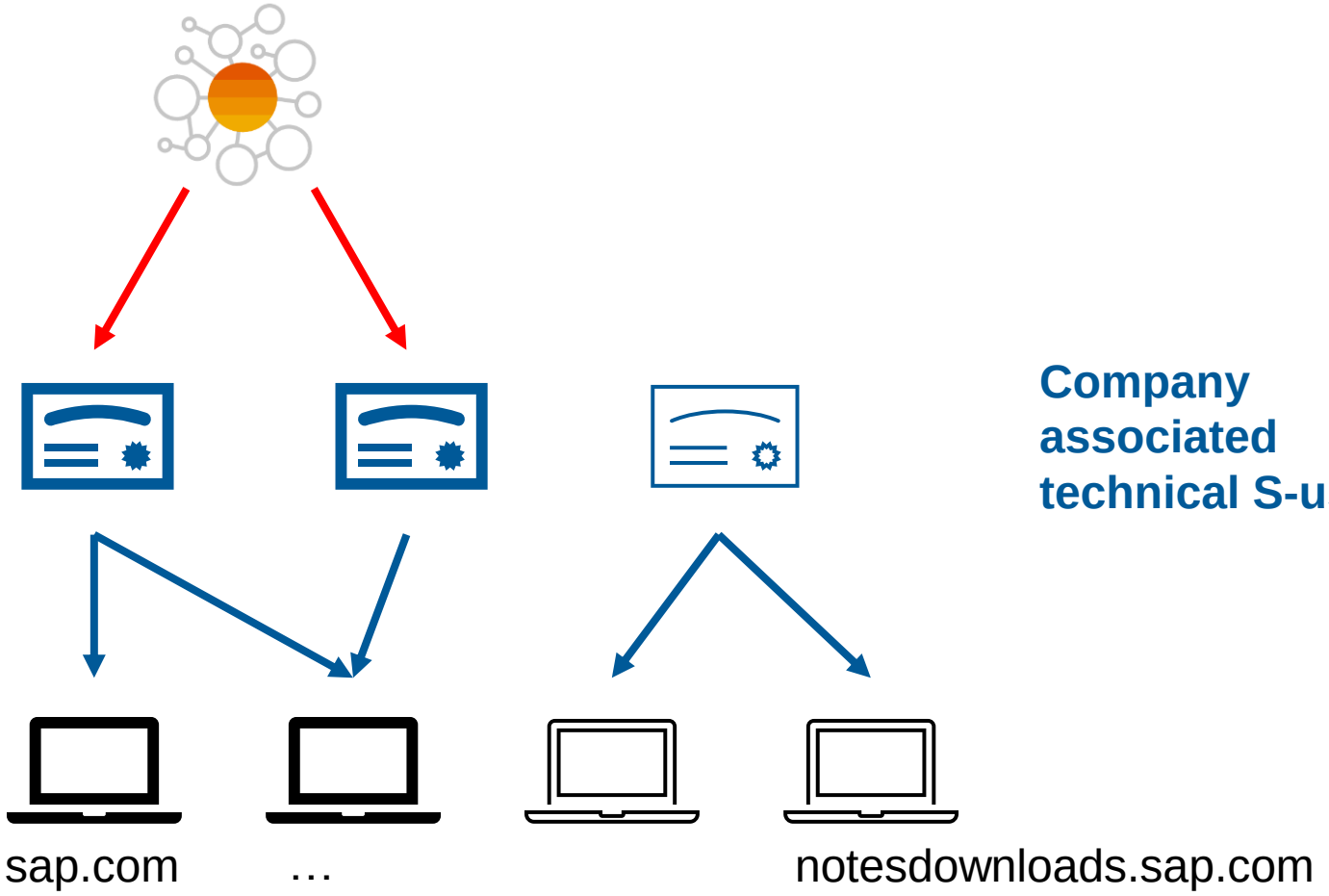
SAP Universal ID

Your personal SAP Universal ID

Company associated S- or P-user

SAP Applications



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SAP Universal ID

SAP Universal ID is your personal account and allows you to logon to SAP sites using this one account, linking all your existing company associations (S/P-user IDs) and switching between them as needed.

Starting October 12, 2022, SAP Universal ID will be the standard account for logging in to SAP.com (other systems are not affected yet)

Technical Communication Users are not affected

Component: XX-SER-UID

- SAP Universal ID page on SAP.com (including FAQs)
- One Identity for Life (SAP Thought Leadership Paper)
- Identity & User Management Policy
- SAP Universal ID Account Manager
- SAP Universal ID Creation Link
- SAP Universal ID Creation step-by-step Video
- Email guidelines for SAP Universal ID and S-user IDs
- SAP Multi-Factor Authentication (MFA)

Blogs

- SAP Universal ID Simplified Login Experience
- Conditional and Enhanced Integration for SAP Universal ID
- Identity and User Management Transformation at SAP

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Note 3249990 - Multiple Vulnerabilities in SQlite bundled with SAPUI5

The note solves two vulnerabilities in the external SQlite library which is bundled with SAPUI5

CVE-2021-20223 about SQLite < 3.34.0 with CVSS Score 9.8 (REJECTED)
https://sqlite.org/src/info/b7b7bde9b7a03665
with discussion at https://www.sqlite.org/forum/forumpost/09609d7e22

CVE-2022-35737 about SQLite < 3.39.2 with CVSS Score 7.5 (UNDERGOING REANALYSIS)
https://sqlite.org/releaselog/3_39_2.html

Both issues are fixed in these patch releases of SAP UI5 (but not in any older or other version):

- patch **1.71.51** respective Support Package for SAP_UI 7.54 SP 12 (not available yet)
- patch **1.84.29** respective Support Package for SAP_UI 7.55 SP 9? (not available yet)
- patch **1.96.14** respective Support Package for SAP_UI 7.56 SP ?
- patch **1.102.8** respective Support Package for SAP_UI 7.57 SP 2 (not available yet)
- patch **1.105.2** (based on SAP_UI 7.57 but used for Cloud only)

Implement the patch according to note 3155948 either via Upload/Transport or later via Support Package update.

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Note 3249990 - Multiple Vulnerabilities in SQlite bundled with SAPUI5

You find an **overview about SAPUI5 versions** here:
https://sapui5.hana.ondemand.com/versionoverview.html

In case of older or other installed versions like SAPUI5 1.60.x you have to upgrade the component. Note 2217489 shows details about supported versions.

Caution: Applications are created based on a specific SAPUI5 version. Large jumps in the release version could lead to issues in how applications behave, therefore check if your applications are still properly working.

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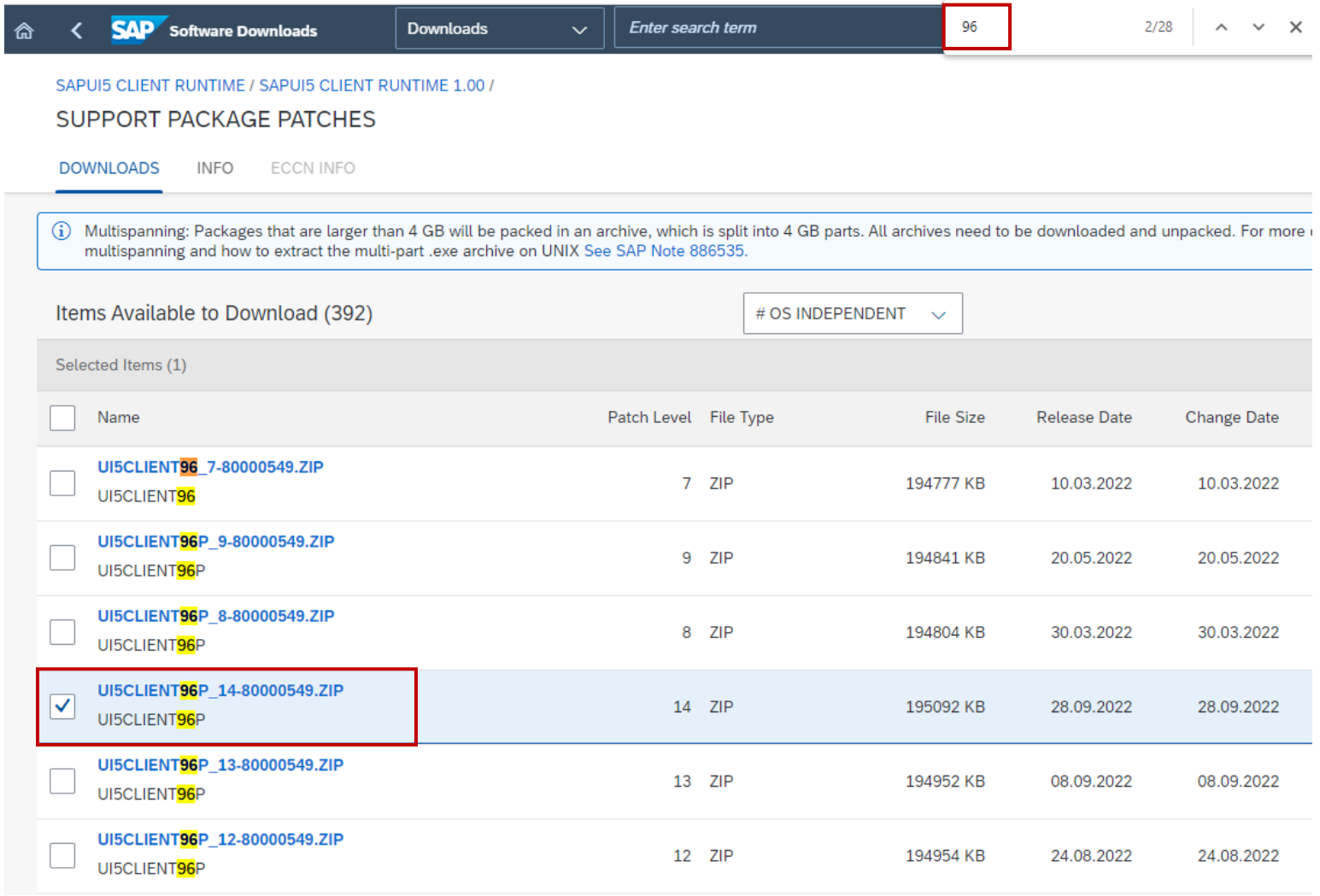
Note 3249990 - Multiple Vulnerabilities in SQlite bundled with SAPUI5

For **Upload&Transport** (for ABAP) you have to identify and download the corresponding zip-File of SAPUI5 CLIENT RUNTIME:



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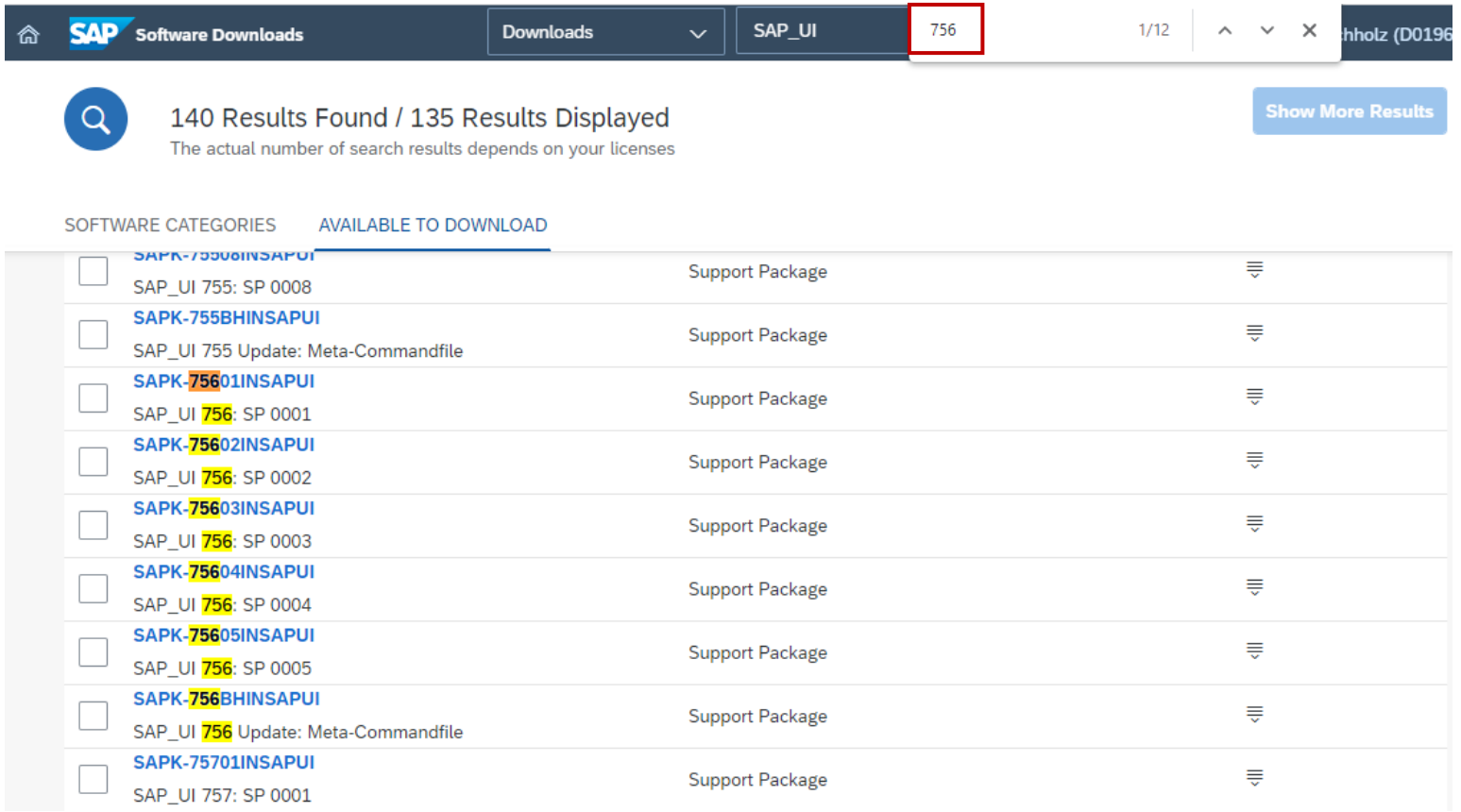
Note 3249990 - Multiple Vulnerabilities in SQlite bundled with SAPUI5

For a **Support Package update for ABAP** you have to identify and download the corresponding `.sar` file of SAP_UI (after pressing "Show more results" you can search for the version number) as soon as it's available:



Caution: It might be the case that you have to wait for the support package containing the correction - I do not have a complete list of corrected support packages yet.

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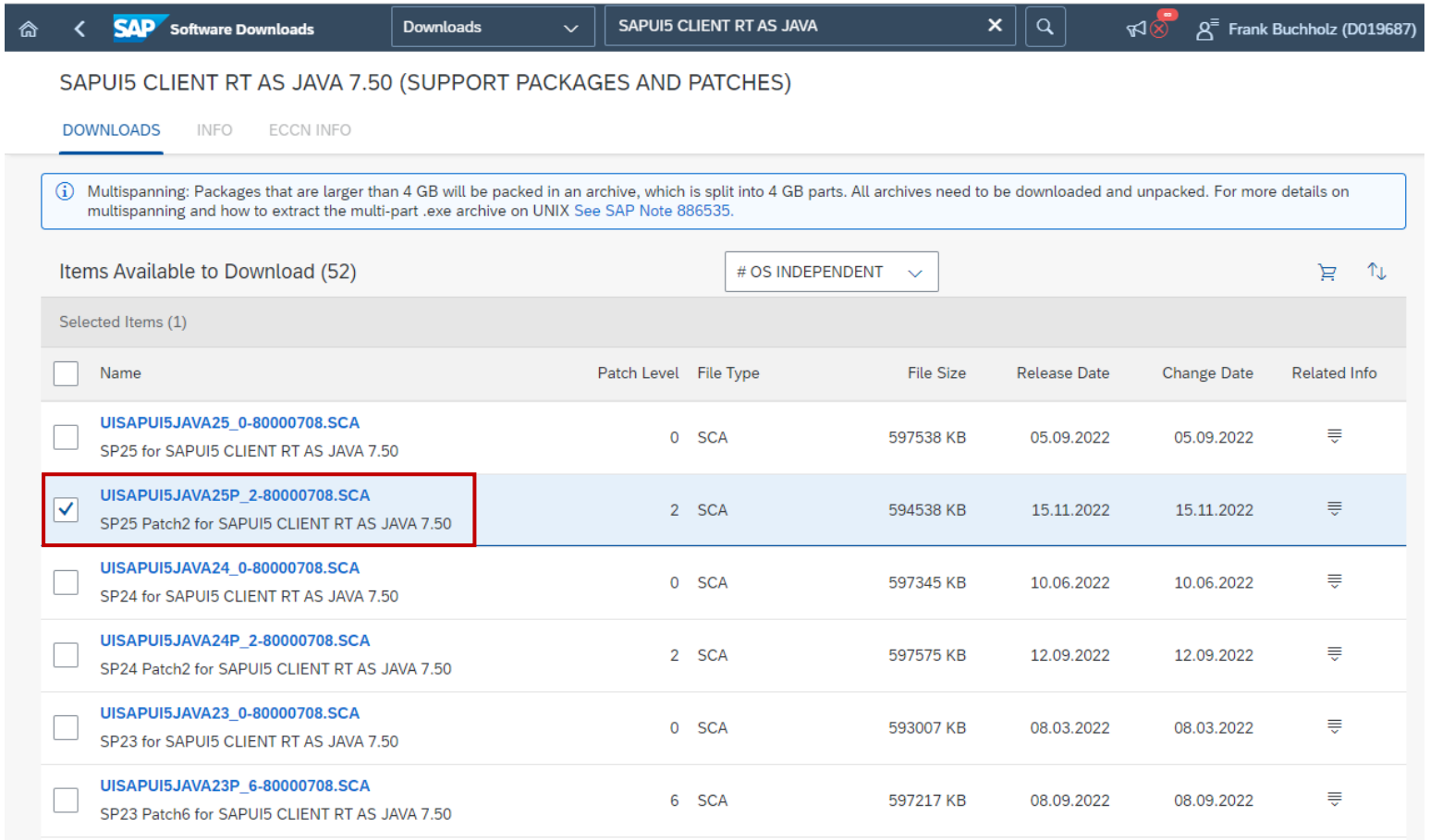
Note 3249990 - Multiple Vulnerabilities in SQlite bundled with SAPUI5

For a **Support Package update for JAVA** you use the corresponding sar-File of SAPUI5 CLIENT RT AS JAVA release 7.50 support package 25 containing SAPUI5 1.71 as described in the FAQ note 3268215:

Current view showing an entry for 7.50 support package 25 patch 2 from 15.11.2022
(List sorted by Patch Level):



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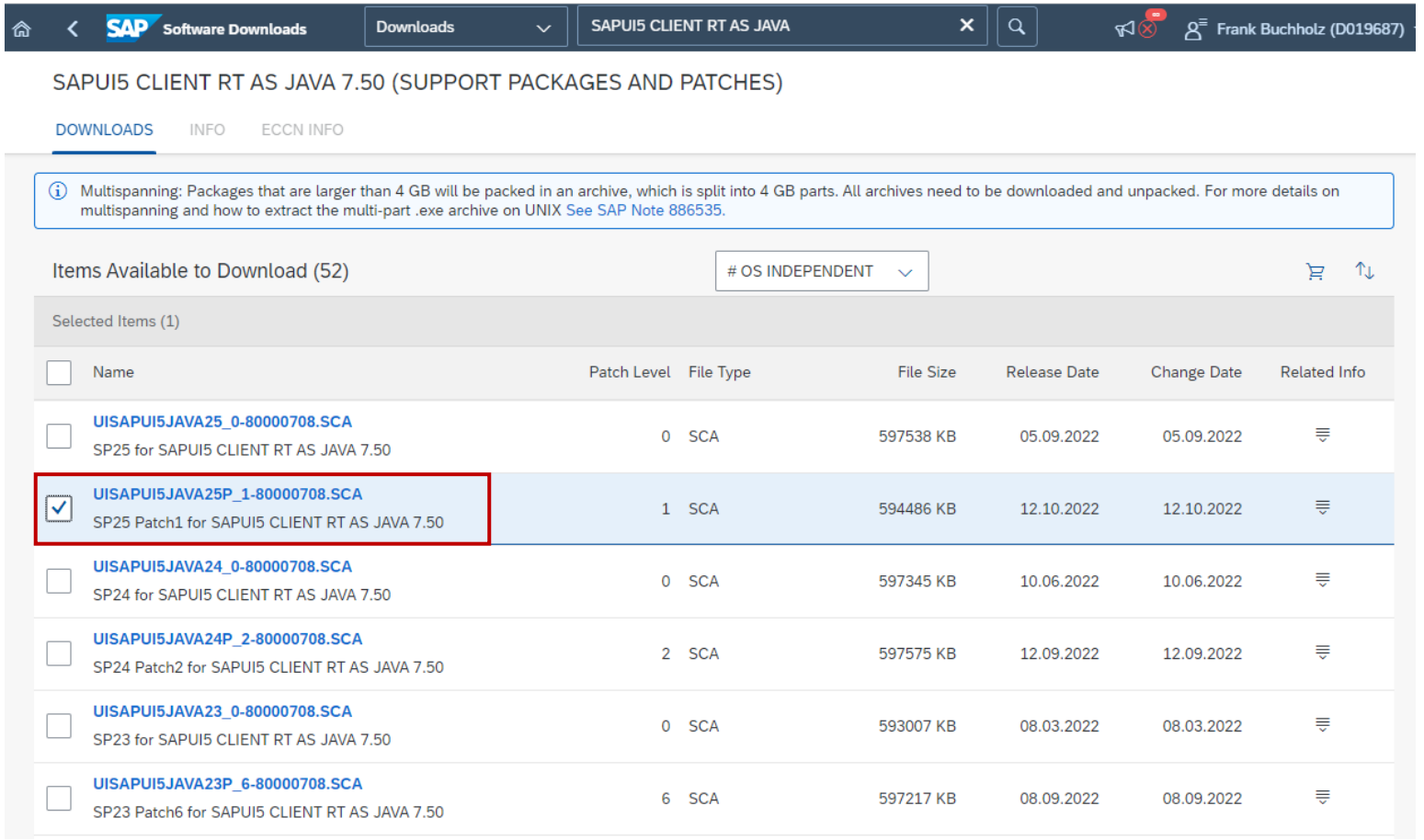
Note 3249990 - Multiple Vulnerabilities in SQlite bundled with SAPUI5

For a **Support Package update for JAVA** you use the corresponding `.sar` file of SAPUI5 CLIENT RT AS JAVA release 7.50 support package 25 containing SAPUI5 1.71 as described in the FAQ note 3268215:

View on the patch day showing an entry for 7.50 support package 25 patch 1 from 12.10.2022 (List sorted by Patch Level):



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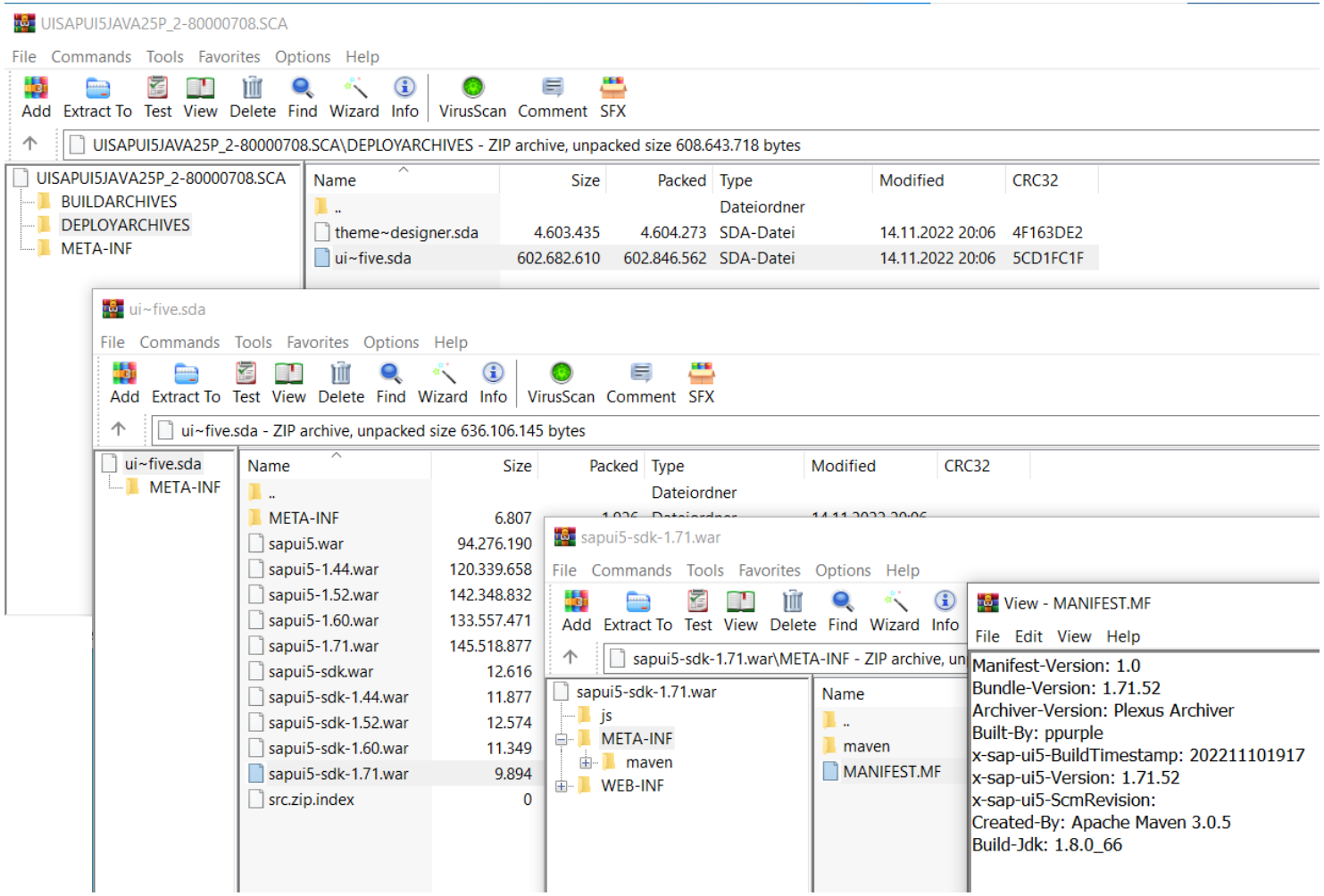
Note 3249990 - Multiple Vulnerabilities in SQlite bundled with SAPUI5

You can verify the version of SAPUI5 within the `.SCA` file:

`UISAPUI5JAVA25P_2-80000708.SCA`
→ `DEPLOYARCHIVES`
→ `ui~five.sda`
→ `sapui5-sdk-1.71.war`
→ `META-INF`
→ `MANIFEST.MF`
→ Bundle-Version: 1.71.52



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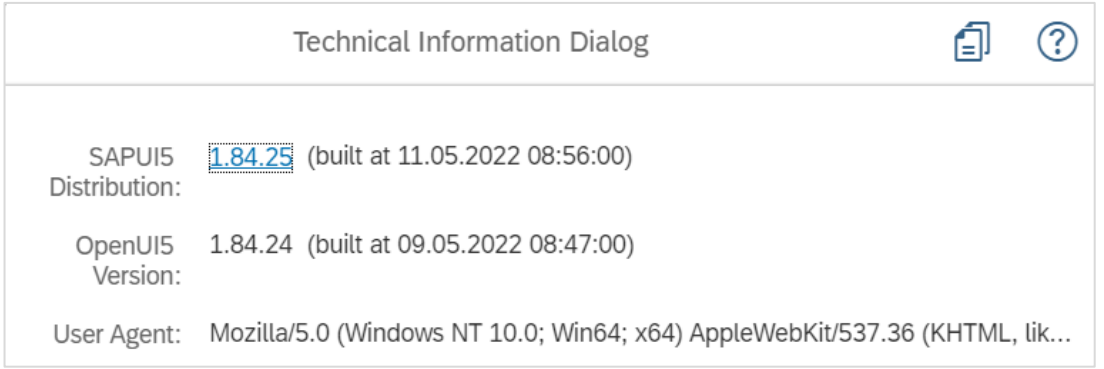
Note 3249990 - Multiple Vulnerabilities in SQlite bundled with SAPUI5

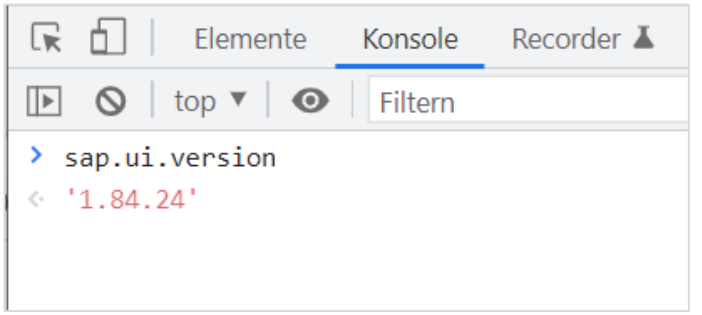
How to check the installed version of SAPUI5?

Note 2282103 describes several options to check the version. Among others is shows two options which you can use directly in your browser while viewing some Fiori applications:

"Ctrl+Alt+Shift+P":



Open F12 Development Console
show `sap.ui.version`
or `sap.ui.versioninfo`



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Note 3249990 - Multiple Vulnerabilities in SQlite bundled with SAPUI5

How to check the version using Configuration Validation for ABAP?

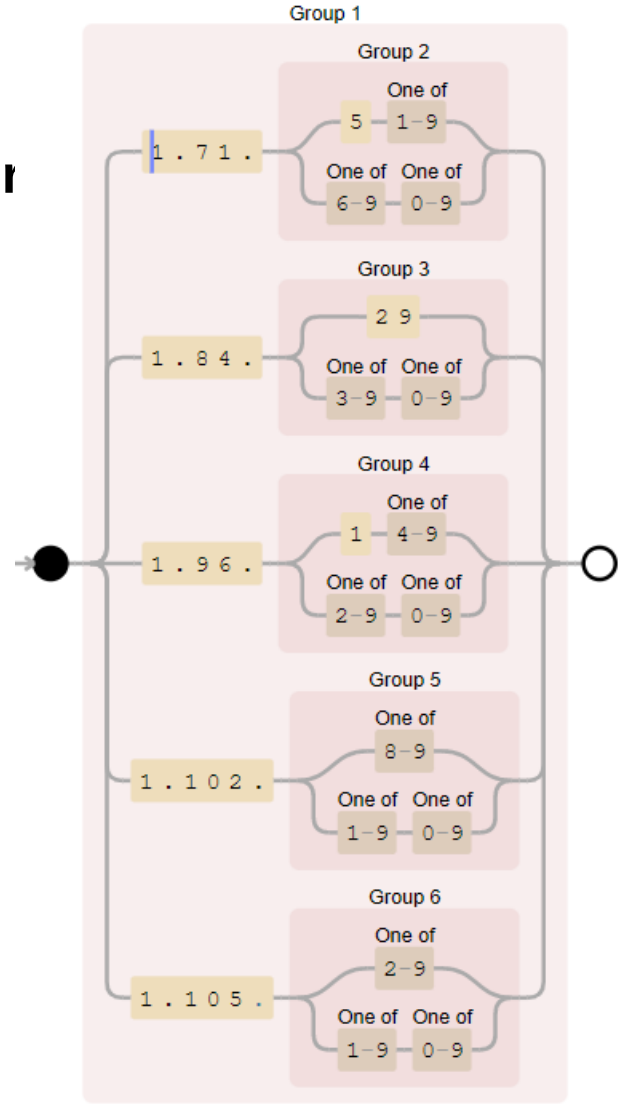
It is not easy to validate version strings. Here are incomplete proposals for Configuration Store `SAPUI5_LIBS` using regular expressions which covers all current and some of the future versions:

The issues are fixed in these patch releases of SAP UI5:

- **1.71.51** `(1\.71\.(5[1-9]|[6-9][0-9]))`
- **1.84.29** `(1\.84\.(29|[3-9][0-9]))`
- **1.96.14** `(1\.96\.(1[4-9]|[2-9][0-9]))`
- **1.102.8** `(1\.102\.([8-9]|[1-9][0-9]))`
- **1.105.2** `(1\.105.([2-9]|[1-9][0-9]))`

Combined regular expression for Configuration Store `SAPUI5_VERSION`:

```
(1\.71\.(5[1-9]|[6-9][0-9])|1\.84\.(29|[3-9][0-9])|1\.96\.(1[4-9]|[2-9][0-9])|1\.102\.([8-9]|[1-9][0-9])|1\.105.([2-9]|[1-9][0-9]))
```



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Note 3249990 - Multiple Vulnerabilities in SQlite bundled with SAPUI5

Result for ABAP:

None of the systems is patched in following example:

SAP System ID	ConfigStore Name	Config. Item Value	Value of Target System	Compliance	Compliant (1=Yes, -1=No, ' '=Not valuated)
FA7	SAPUI5_LIBS	VERSION:1.71.45/TIMESTAMP:20220426121900/LIBRARY_NAME:sap.viz	VERSION:(1\.71\.(5[1-9]|[6-9][0-9]))/TIMESTAMP:20220426121900/LIBRARY_NAME:sap.viz	No	-1
	SAPUI5_VERSION	1.71.48	(1\.71\.(5[1-9]|[6-9][0-9])|1\.84\.(29|[3-9][0-9])|1\.96\.(1[4-9]|[2-9][0-9])|1\.102\.([8-9]|[1-9][0-9])|1\.105.([2-9]|[1-9][0-9]))	No	-1
FBT	SAPUI5_LIBS	VERSION:1.71.45/TIMESTAMP:20220426121900/LIBRARY_NAME:sap.viz	VERSION:(1\.71\.(5[1-9]|[6-9][0-9]))/TIMESTAMP:20220426121900/LIBRARY_NAME:sap.viz	No	-1
	SAPUI5_VERSION	1.71.48	(1\.71\.(5[1-9]|[6-9][0-9])|1\.84\.(29|[3-9][0-9])|1\.96\.(1[4-9]|[2-9][0-9])|1\.102\.([8-9]|[1-9][0-9])|1\.105.([2-9]|[1-9][0-9]))	No	-1
FS7	SAPUI5_LIBS	VERSION:1.71.45/TIMESTAMP:20220426121900/LIBRARY_NAME:sap.viz	VERSION:(1\.71\.(5[1-9]|[6-9][0-9]))/TIMESTAMP:20220426121900/LIBRARY_NAME:sap.viz	No	-1
	SAPUI5_VERSION	1.71.48	(1\.71\.(5[1-9]|[6-9][0-9])|1\.84\.(29|[3-9][0-9])|1\.96\.(1[4-9]|[2-9][0-9])|1\.102\.([8-9]|[1-9][0-9])|1\.105.([2-9]|[1-9][0-9]))	No	-1
QE4	SAPUI5_VERSION	1.38	(1\.71\.(5[1-9]|[6-9][0-9])|1\.84\.(29|[3-9][0-9])|1\.96\.(1[4-9]|[2-9][0-9])|1\.102\.([8-9]|[1-9][0-9])|1\.105.([2-9]|[1-9][0-9]))	No	-1
QEX	SAPUI5_VERSION	1-next	(1\.71\.(5[1-9]|[6-9][0-9])|1\.84\.(29|[3-9][0-9])|1\.96\.(1[4-9]|[2-9][0-9])|1\.102\.([8-9]|[1-9][0-9])|1\.105.([2-9]|[1-9][0-9]))	No	-1

For configuration store `SAPIU5_LIBS` you have to choose a specific library while defining the target system (here: `sap.viz`). The version number of a specific library might be lower than the version of the whole package which you validate using configuration store `SAPUI5_VERSION`. The library `sap.ui.server.abap` seem to show the same version.

For configuration store `SAPIU5_LIBS` you get several results with status "Item not found" which you should filter out.

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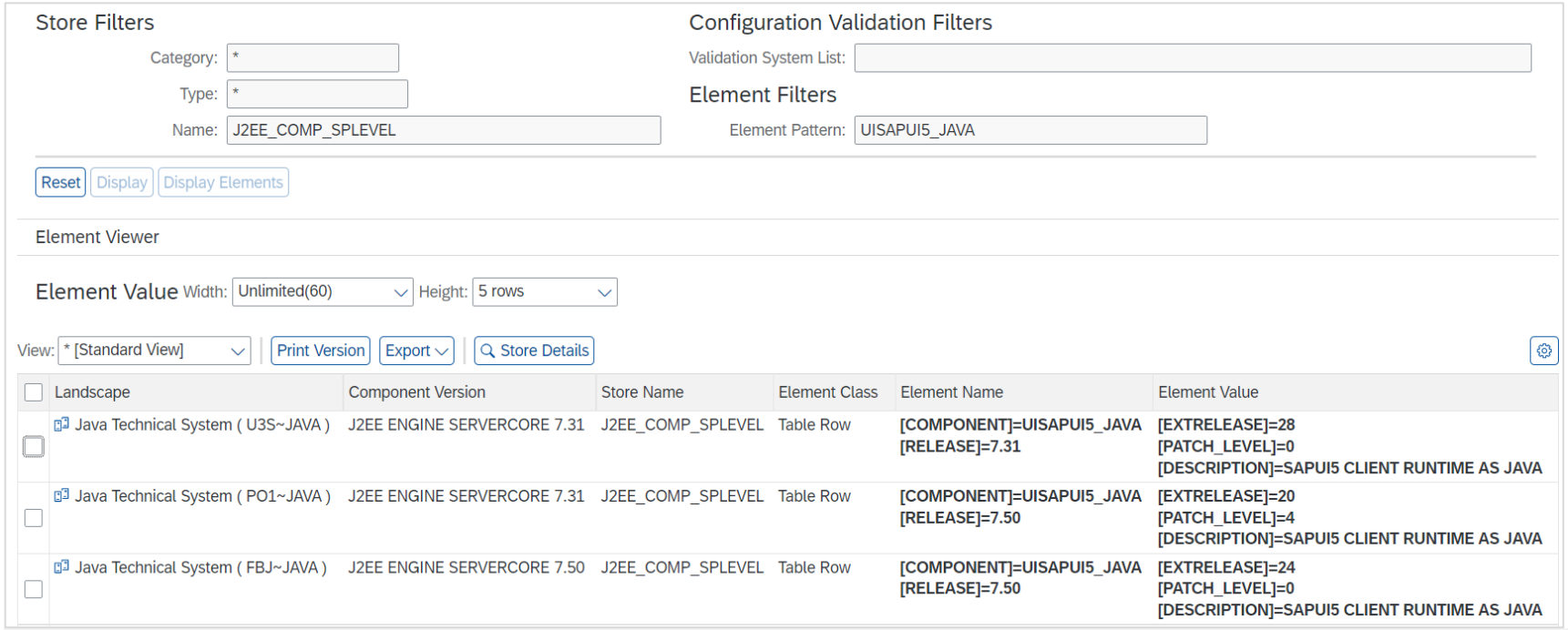
Note 3249990 - Multiple Vulnerabilities in SQlite bundled with SAPUI5

How to check the version using Configuration Validation for Java?

On the SAP Solution Manager you can use Configuration Store `J2EE_COMP_SPLEVEL` with configuration items containing `COMPONENT=UISAPUI5_JAVA` which shows values like this example:

`COMPONENT=UISAPUI5_JAVA, RELEASE=7.50, EXTRELEASE=20, PATCH_LEVEL=4, DESCRIPTION=SAPUI5 CLIENT RUNTIME AS JAVA`



Landscape	Component Version	Store Name	Element Class	Element Name	Element Value
Java Technical System (U3S~JAVA)	J2EE ENGINE SERVERCORE 7.31	J2EE_COMP_SPLEVEL	Table Row	[COMPONENT]=UISAPUI5_JAVA [RELEASE]=7.31	[EXTRELEASE]=28 [PATCH_LEVEL]=0 [DESCRIPTION]=SAPUI5 CLIENT RUNTIME AS JAVA
Java Technical System (PO1~JAVA)	J2EE ENGINE SERVERCORE 7.31	J2EE_COMP_SPLEVEL	Table Row	[COMPONENT]=UISAPUI5_JAVA [RELEASE]=7.50	[EXTRELEASE]=20 [PATCH_LEVEL]=4 [DESCRIPTION]=SAPUI5 CLIENT RUNTIME AS JAVA
Java Technical System (FBJ~JAVA)	J2EE ENGINE SERVERCORE 7.50	J2EE_COMP_SPLEVEL	Table Row	[COMPONENT]=UISAPUI5_JAVA [RELEASE]=7.50	[EXTRELEASE]=24 [PATCH_LEVEL]=0 [DESCRIPTION]=SAPUI5 CLIENT RUNTIME AS JAVA

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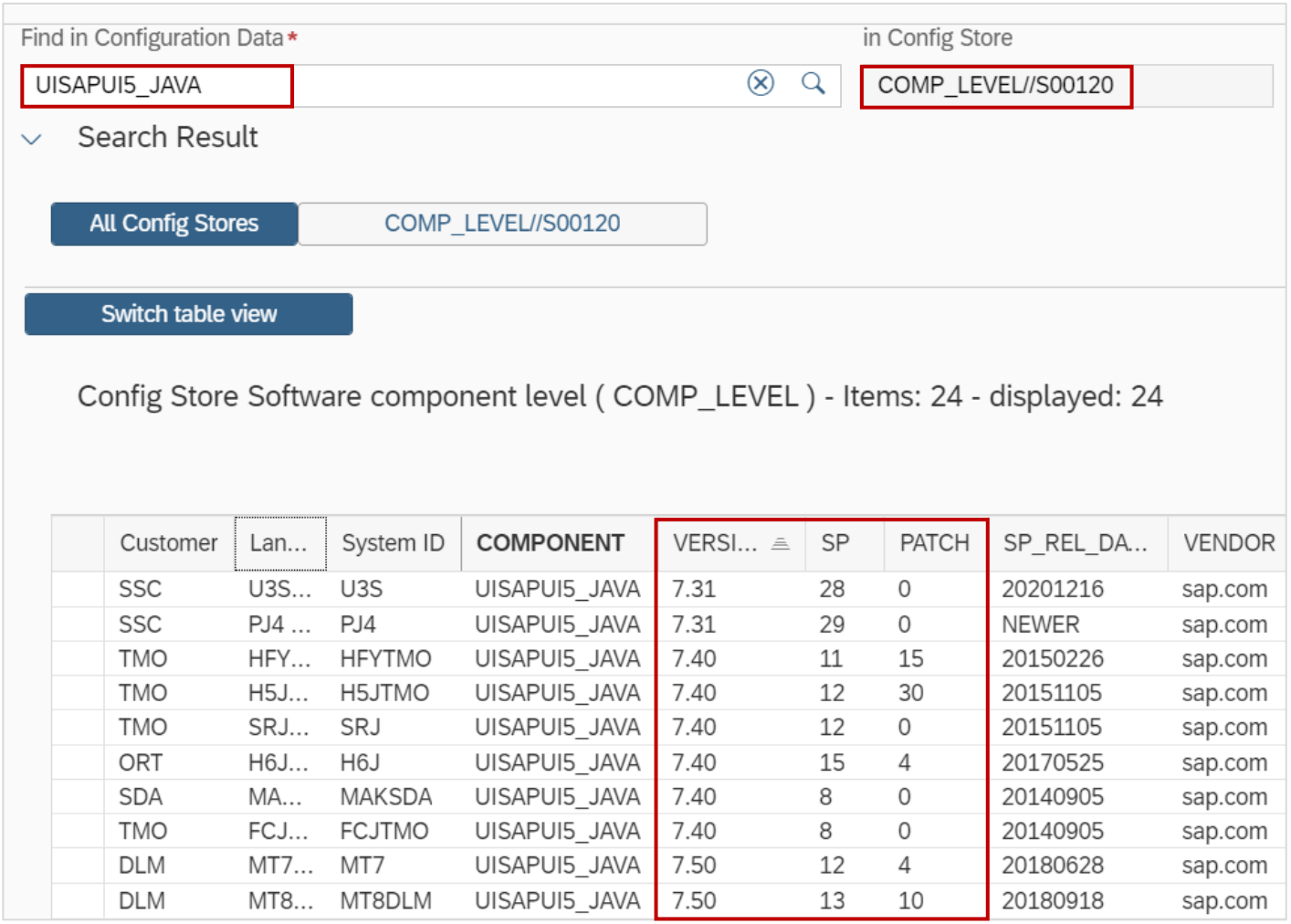
Note 3249990 - Multiple Vulnerabilities in SQlite bundled with SAPUI5

How to check the version using FRUN for Java?

On Focused Run (FRUN) you can use Configuration Store
`COMP_LEVEL/S00120`
with configuration item key
`COMPONENT=UISAPUI5_JAVA`
which shows values like this example:

`VERSION=7.40, SP=12,`
`SP_REL_DATE=, PATCH=30,`
`VENDOR=sap.com`



Customer	Lan...	System ID	COMPONENT	VERSI...	SP	PATCH	SP_REL_DA...	VENDOR
SSC	U3S...	U3S	UISAPUI5_JAVA	7.31	28	0	20201216	sap.com
SSC	PJ4 ...	PJ4	UISAPUI5_JAVA	7.31	29	0	NEWER	sap.com
TMO	HFY...	HFYTMO	UISAPUI5_JAVA	7.40	11	15	20150226	sap.com
TMO	H5J...	H5JTMO	UISAPUI5_JAVA	7.40	12	30	20151105	sap.com
TMO	SRJ...	SRJ	UISAPUI5_JAVA	7.40	12	0	20151105	sap.com
ORT	H6J...	H6J	UISAPUI5_JAVA	7.40	15	4	20170525	sap.com
SDA	MA...	MAKSDA	UISAPUI5_JAVA	7.40	8	0	20140905	sap.com
TMO	FCJ...	FCJTMO	UISAPUI5_JAVA	7.40	8	0	20140905	sap.com
DLM	MT7...	MT7	UISAPUI5_JAVA	7.50	12	4	20180628	sap.com
DLM	MT8...	MT8DLM	UISAPUI5_JAVA	7.50	13	10	20180918	sap.com

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Note 3098792 - SE16N: Enhancement of change documents

Transactions `SE16N` and `SE16N_EMERGENCY` write the table changes made with them to their own change documents, which can be displayed using the report `RKSE16N_CD_DISPLAY`.

The displayed changed rows can be compared with the current database values using the function 'Compare with Current Entry'. However, you cannot display the value to which the field was changed when the change took place. Therefore you could misinterpret older log entries.

The correction was published via Support Package in September 2021, therefore you might already have it.

Related correction notes which you should install too:

Note 3071700 - SE16N_EMERGENCY: Change possible without specifying a reason (Nov 2021)
Note 2985178 - SE16N_EMERGENCY: Explanation popup occurs even with no change of data (Jan 2021)

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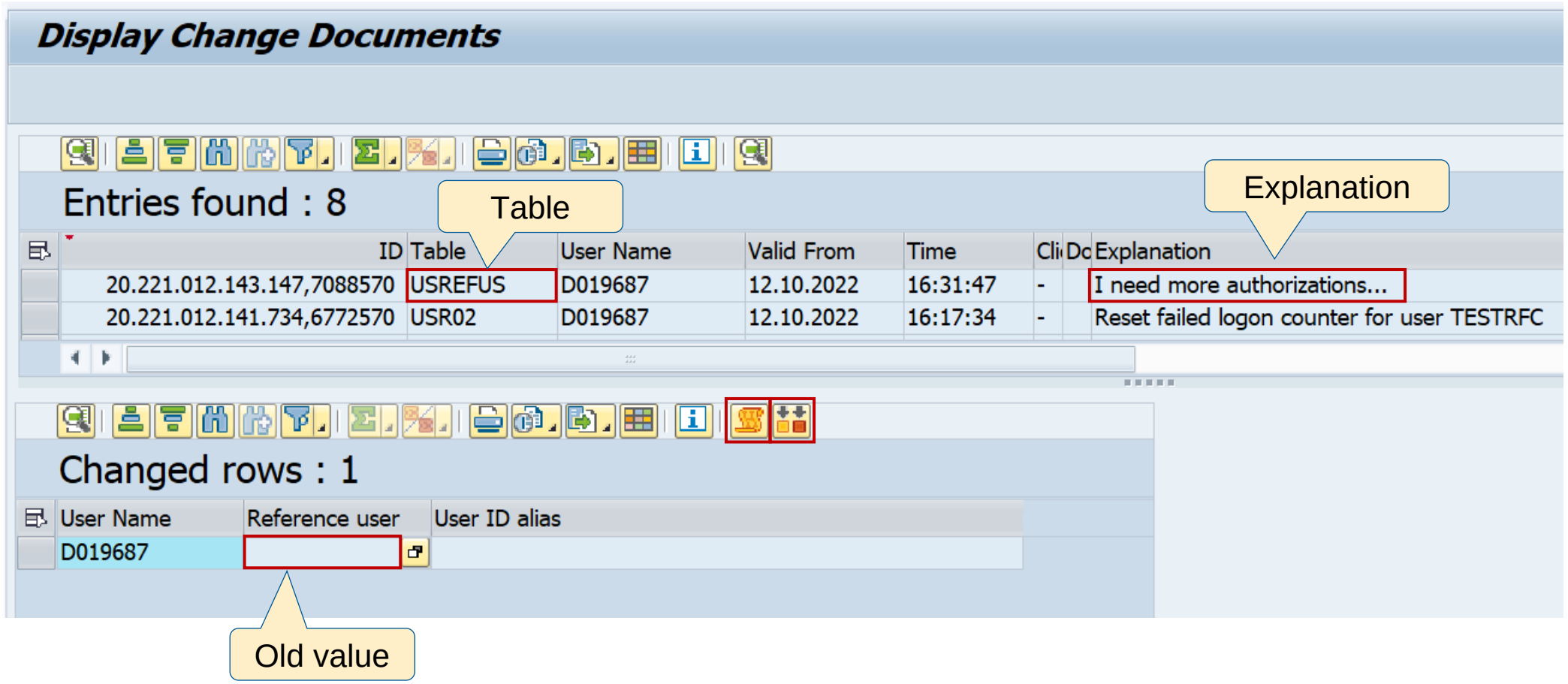
Note 3098792 - SE16N: Enhancement of change documents



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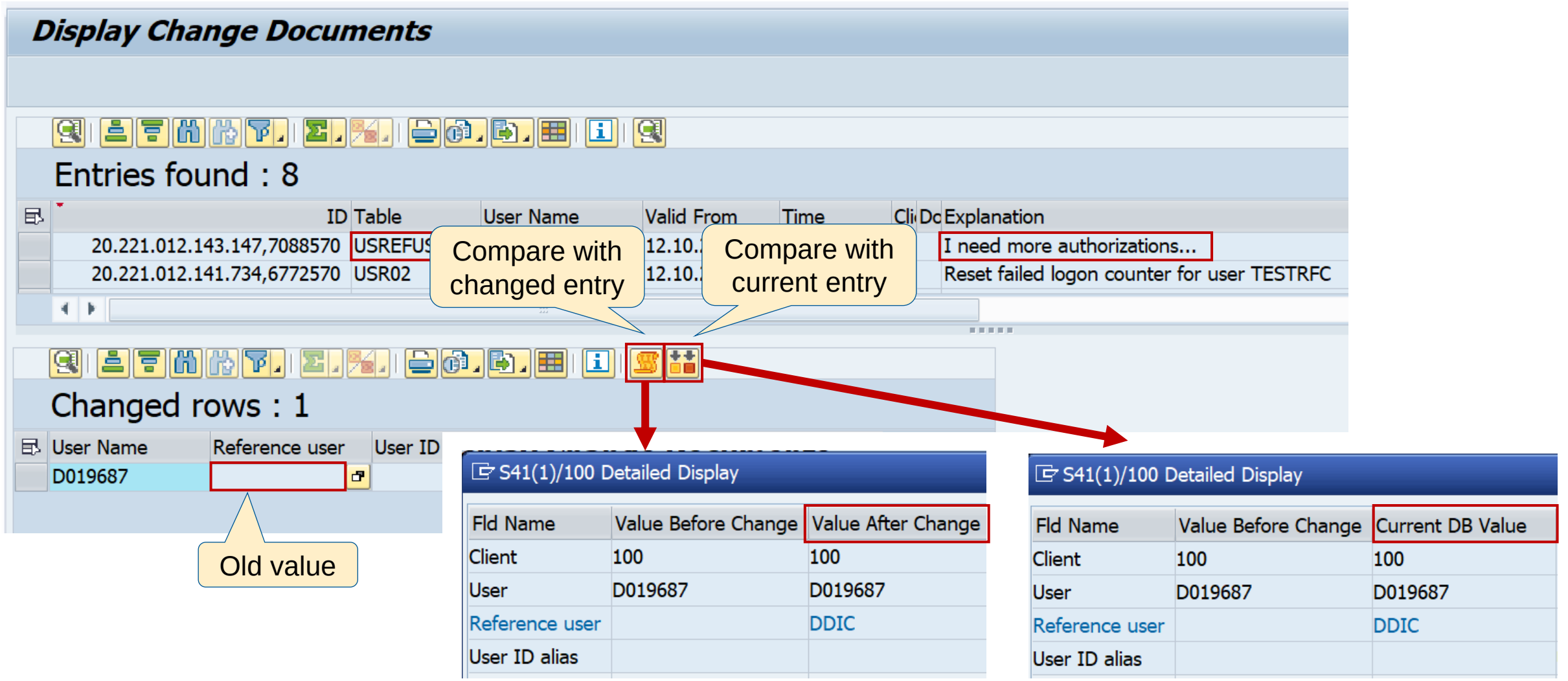
Note 3098792 - SE16N: Enhancement of change documents



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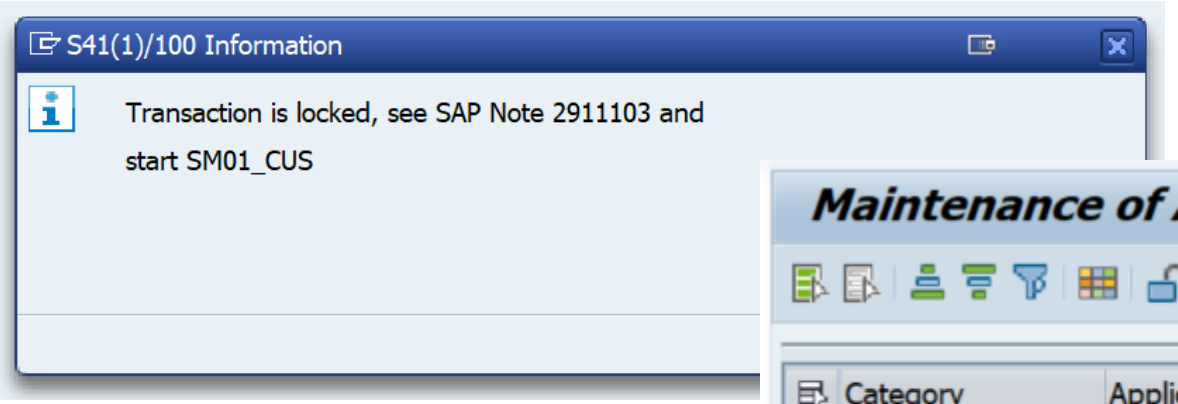
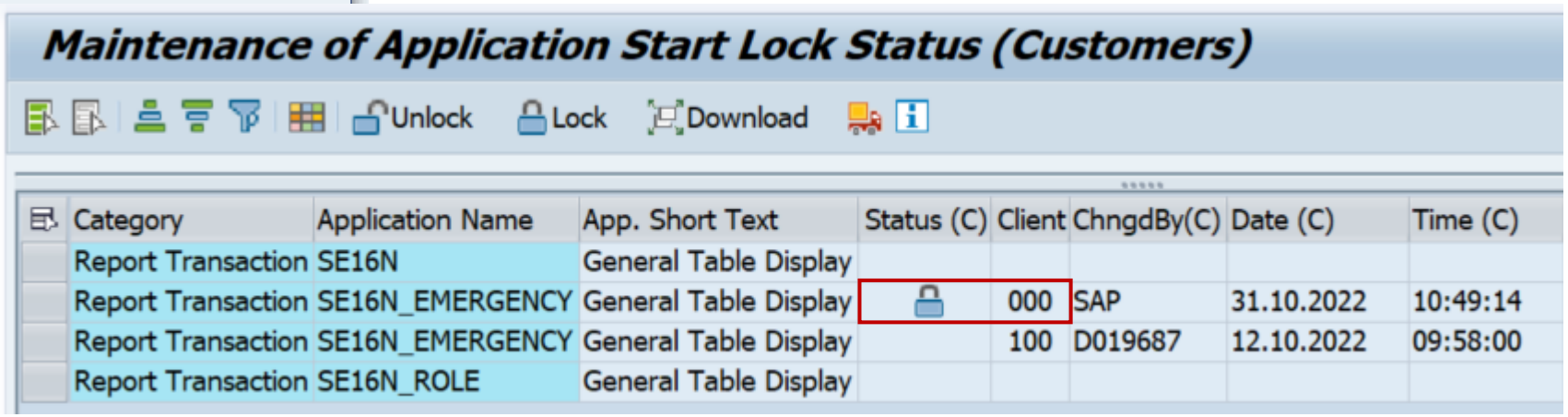
Note 2911103 - SE16N: Alternative edit mode

Transactions `SE16N_EMERGENCY` – the edit mode of transaction `SE16N` – is not active by default. With the first call in a client it gets locked in that client automatically.

If you want to use it in a specific client you have to unlock it in transaction `SM01_CUS` after the first call.



Example: The first call of transaction SE16N_EMERGENCY in a new client locks it



Category	Application Name	App. Short Text	Status (C)	Client	ChngdBy(C)	Date (C)	Time (C)
Report Transaction	SE16N	General Table Display					
Report Transaction	SE16N_EMERGENCY	General Table Display		000	SAP	31.10.2022	10:49:14
Report Transaction	SE16N_EMERGENCY	General Table Display		100	D019687	12.10.2022	09:58:00
Report Transaction	SE16N_ROLE	General Table Display					

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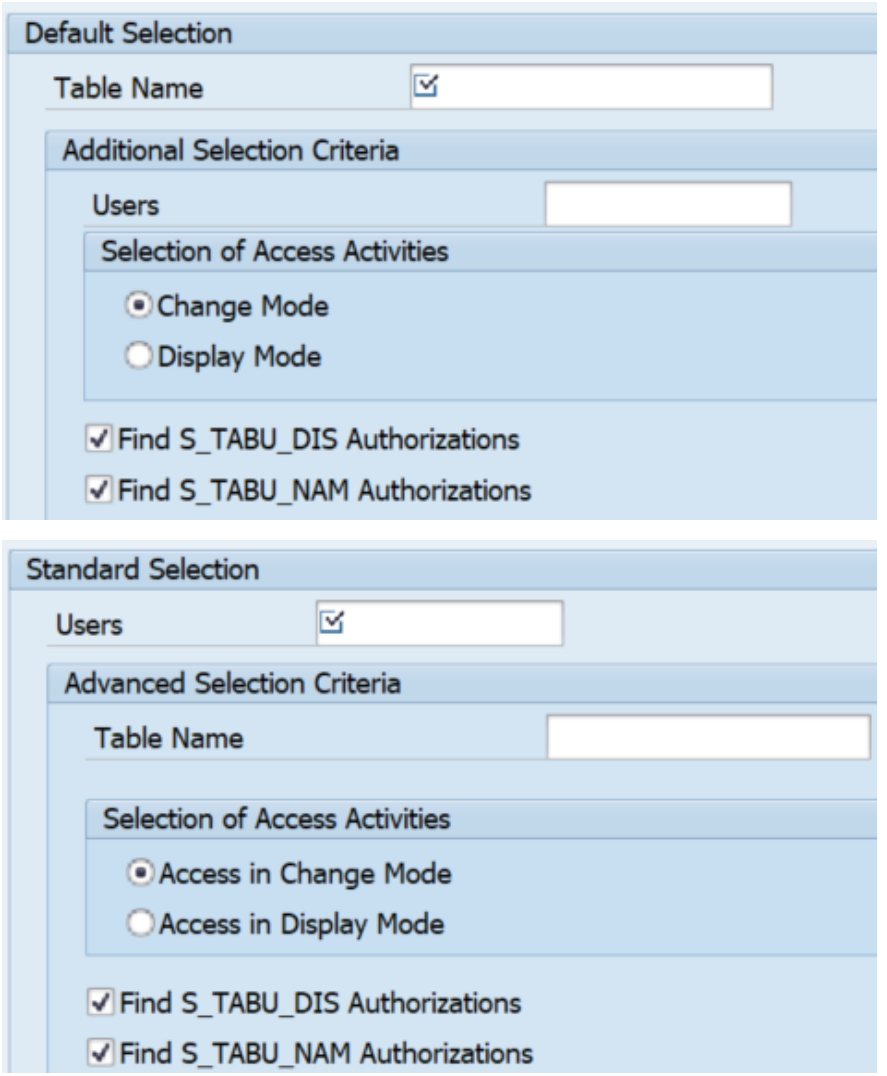
Note 2627358 - Information system for scope of table authorizations

During an audit, you want to check the resulting access rights for a user with regard to generic table access. The User Information System (transaction `SUIM`) is not sufficient for this task.

Report `SAIS_TABU_USER` shows the users with generic table access for a specific table

Report `SAIS_USER_TABU` shows the tables for which a user has generic table access

These reports are available as of release 7.50



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SAP Secure By Default for S/4HANA on-premise 2022

Central Documentation

Secure by default in SAP S/4HANA (Note 2926224)

The attached spreadsheet was updated with the list of security settings for SAP S/4HANA 2022.

https://blogs.sap.com/2022/11/03/secure-by-default-returns-with-sap-s-4hana-2022/

Area	Type of setting	Name	Relevant SAP Note	SAP Note URL	Accepted values according to Security Baseline Template	New recommended value S/4HANA 2022
Authorizations	Profile parameter	auth/check/calltransaction	515130	515130	2 or 3	3
Authorizations	Profile parameter	auth/object_disabling_active	2926224	2926224	N	N
Authorizations	Profile parameter	auth/rfc_authority_check	2216306	2216306	1 or 6	6
Server infrastructure	Profile parameter	**gw/acl_mode_proxy**	3224889	3224889	1 (as of v2.4)	**1**
Server infrastructure	Profile parameter	gw/reg_no_conn_info	2776748 1444282	2776748	Set at least bit 1, 2, 3, and 4 (bit 1 as of Kernel 7.40) must be set.	255
Server infrastructure	Profile parameter	gw/rem_start	2776748 1520096	2776748	DISABLED or SSH_SHELL	DISABLED

S4HANA 2022 | S4HANA 2021 | S4HANA 2020 | S4HANA 1909 | Kernel Defaults | Info

Here is a similar table which shows an additional column about the Security Baseline Template.

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SAP Secure By Default for S/4HANA on-premise 2022

Central Documentation

- Security tickets are only send via TLS protected connections — Note 1531399
  Profile parameter **`login/ticket_only_by_https = 1`**
- Restricted usage of user types as reference user — Note 513694
  (Only users of type reference user are allowed as reference user.)
  Table `PRGN_CUST` entry `REF_USER_CHECK = E`
- Profile parameter to enforce TLS 1.2 — Note 3198351
  Profile parameter **`ssl/ciphersuites = 545:PFS:HIGH::EC_X25519:EC_P256:EC_HIGH`** — Note 2384290
- SAP Host Agent profile parameters to enforce TLS 1.2 as of release 7.22 patch 57 (update recommended) — Note 3213711
  `ssl/ciphersuites = 545:PFS:HIGH::EC_X25519:EC_P256:EC_HIGH` — Note 2384290
  `ssl/client_ciphersuites = 150:PFS:HIGH::EC_X25519:EC_P256:EC_HIGH`
  `ssl/client_sni_enabled = TRUE`
- Activation of the access control list for RFC forwarding by RFC Gateway as of Kernel 7.89 — Note 3224889
  Profile parameter **`gw/acl_mode_proxy = 1`**
- Logging for RFC, WebSocket RFC and SICF communication as of S/4HANA 2022 — SAP Help
  Profile parameter **`rfc/log/active = 1`**
  Profile parameter **`icf/log/active = 1`**

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SAP Secure By Default for S/4HANA on-premise 2022

Report ZSPFRECOMMENDED

You can use report **`ZSPFRECOMMENDED`** to show an overview about the recommended profile parameters according to the secure-by-default project.

Source: https://github.com/SAP-samples/security-services-tools

Compared with the similar standard report `RSPFRECOMMENDED` you will notice following improvements:

- ✓ Show all profile parameters of the secure-by-default project
  (The standard report shows only these for which the Kernel knows about a recommended value)
- ✓ Downported to SAP_BASIS 7.40 to validate if such old systems already fulfill up-to-date standards
- ✓ Long values are continued in an additional line (the ALV shows max 128 characters per cell).
  Tipp: You can use Ctrl-Y Ctrl-C to copy both cells in one step.

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SAP Secure By Default for S/4HANA on-premise 2022

Report ZSPFRECOMMENDED

Show recommended profile parameter values

Parameter matches recommended configuration
Parameter is set to an upgrade-compatible default value, check if recommended value can be set
Parameter does not match recommended or default value, read parameter documentation for details
Long values are continued in an additional line
Program version: 02.11.2022

Parameter Name	Result	Actual Value	Recommended Value	Profile	Related Note
auth/check/calltransaction		2	3	Kernel Default	515130
auth/object_disabling_active		Y	N	Kernel Default	2926224
auth/rfc_authority_check		3	6	Dynamic Switching	2216306
gw/reg_no_conn_info		1	255	Kernel Default	2776748
gw/rem_start		REMOTE_SHELL	DISABLED	Kernel Default	2776748
icf/reject_expired_passwd		0	1	Kernel Default	2579165
icf/set_HTTPonly_flag_on_cookies		0	0	Default Profile	1277022
icm/HTTP/logging_0		PREFIX=/, LOGFILE=icmhttph.log, FILTER=...	PREFIX=/,LOGFILE=http_%y_%m.log,MAXF...	Default Profile	2788140
			2		
icm/HTTP/logging_client_0		Value Undefined	PREFIX=/,LOGFILE=http_client_%y_%m.lo...	Default Profile	2788140
icm/security_log		LOGFILE=dev_icm_sec,MAXSIZEKB=10000	LOGFILE=dev_icm_sec_%y_%m,LEVEL=3,...	Kernel Default	2788140
login/disable_cpic		0	1	Kernel Default	2926224
login/password_compliance_to_current_policy		0	1	Kernel Default	862989

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SAP Secure By Default for S/4HANA on-premise 2022

Central Documentation

Overview about profile parameter changes

a) Changed defaults (no entry in default profile necessary anymore)

b) Changed recommendations (see report `RSPFRECOMMENDED`)

- ABAP Platform 2022: Profile Parameter Changes with Kernel 7.89
  https://help.sap.com/docs/ABAP_PLATFORM_NEW/e067931e0b0a4b2089f4db327879cd55/5ccabdb46ed34aeba508182724c1d248.html
- ABAP Platform 2021: Profile Parameter Changes with Kernel 7.85
  https://help.sap.com/docs/ABAP_PLATFORM_NEW/e067931e0b0a4b2089f4db327879cd55/5ccabdb46ed34aeba508182724c1d248.html?version=202110.latest
- ABAP Platform 2020: Profile Parameter Changes with Kernel 7.81
  https://help.sap.com/docs/ABAP_PLATFORM_NEW/e067931e0b0a4b2089f4db327879cd55/5ccabdb46ed34aeba508182724c1d248.html?version=202009.latest

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SAP Secure By Default for S/4HANA on-premise 2022

Update settings for SAP Host Agent

SAP Host Agent - Frequently Asked Questions

- **Can SAP Host Agent, be configured to use TLS 1.2 only ?**

Yes, with SAP Host Agent 722 patch 57 you can use following command to update the settings:

```
<SAP Host Agent Path>/saphostexec -setup tls12
```

```
saphost:/usr/sap/hostctrl/exe # ./saphostexec -setup tls12
HARD Scenario 'tls12' found
Updating /usr/sap/hostctrl/exe/host_profile ...
Parameter ssl/ciphersuites found ... replace 543:PFS:HIGH::EC_X25519:EC_P256:EC_HIGH with 545:PFS:HIGH::EC_X25519:EC_P256:EC_HIGH
Parameter ssl/client_ciphersuites found ... do not update. (Same Value)
Adding ssl/ciphersuites = 545:PFS:HIGH::EC_X25519:EC_P256:EC_HIGH to profile
Adding ssl/client_sni_enabled = TRUE to profile

saphostexec is already running (pid=677). Stopping...-> Start /usr/sap/hostctrl/exe/saphostexec pf=/usr/sap/hostctrl/exe/host_profile <-
start hostcontrol using profile /usr/sap/hostctrl/exe/host_profile
```

If TLS 1.2 needs to be configured for older SAP Host Agent versions, information can be found in notes 510007 and 2384290

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October 2022

Topics October 2022

https://wiki.scn.sap.com/wiki/display/Security/Security+Notes+Webinar+-+2022-10

Supported Object Types in Note Assistant
Note 3051466 - Note Assistant Made Easy : Revamped Note Assistant

Note 3150454 - Information Disclosure vulnerability in SAP NetWeaver Application Server ABAP and ABAP Platform (reloaded)

Note 3234755 - Information Disclosure vulnerability in Master Data Governance

Note 3075533 - Login parameters (login/*) not effective with Security Policies
Show overview about security policies (SECPOL)

Note 3256864 - SDCCN: Missing entry "Certificate Renewal" in table /BDL/TASK_ATTR

What's New for the User Administration and Logging Check in S/4HANA On Premise (part 5)

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Supported Object Types in Note Assistant

Note Assistant
https://support.sap.com/en/my-support/knowledge-base/note-assistant.html

Additional supported object types for automatic correction instruction in transaction `SNOTE`

- **No manual implementation steps necessary**
- **Any manual instruction exists only to support old basis versions**
- **Limitation: In case of texts, only the main language is part of the correction**

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Supported Object Types in Note Assistant

introduced in 2019

REPT	Report text
CUAD	GUI Status
XSLT	Transformation
FUGR	Creation of function group
BDEF	Behavior of a business object/application
DTDC	Dictionary tuning: Static cache

introduced in 2020

CUS0, CUS1, CUS2	IMG activities
DEVC	Packages (development classes)
MESS	Single message
MSAD	Message class: Definition and all short texts

introduced in 2021

TRAN	Transactions
PARA	SPA/GPA Parameters
SHLD	Search helps
VIED	Maintenance views
VIET	Technical settings of maintenance views

introduced in 2022

DOCU	Documentation
SCP1	BC-Sets

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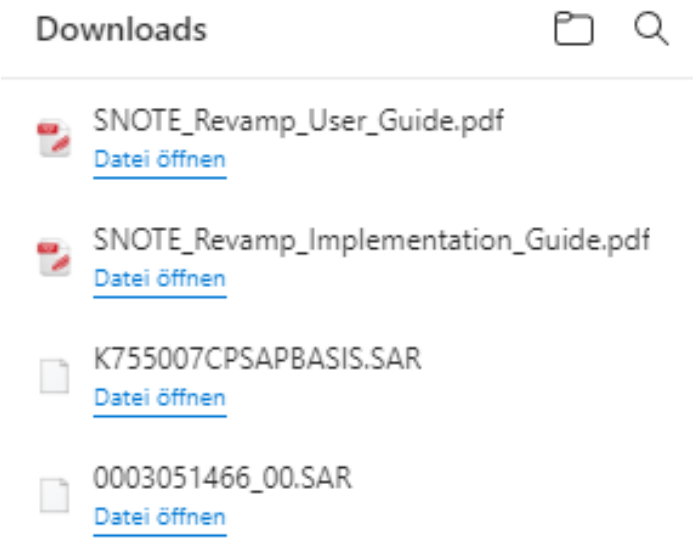
Note 3051466 - Note Assistant Made Easy : Revamped Note Assistant

Note 3051466 contains the documentation, a TCI, and an automatic correction instruction:

Note Assistant Made Easy
https://blogs.sap.com/2022/01/07/note-assistant-made-easy/



FAQ Note 3131774 - FAQ - Note Assistant Made Easy: Revamped Note Assistant(SNOTE)

In `SNOTE`, you still can use report variants via `SAVE` and Goto→Variants

You still can launch the old Note Assistant using the transaction `SNOTE_OLD`

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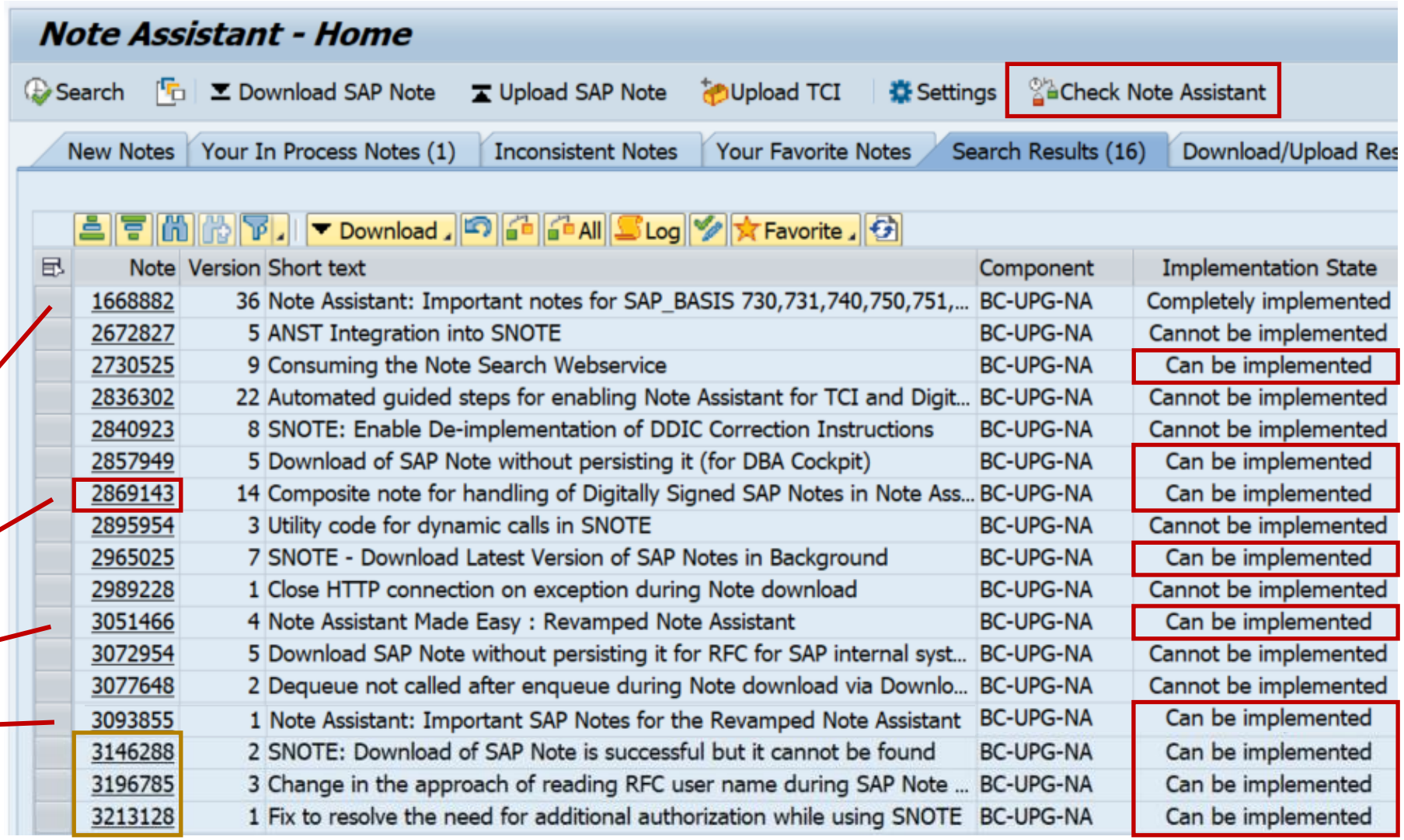
Note 3051466 - Note Assistant Made Easy : Revamped Note Assistant

Function “Check Note Assistant” verifies some important notes

You may want to verify more recommended composite notes regularly:

- **1668882**
- **2869143**
- **3051466**
- **3093855**



Note	Version	Short text	Component	Implementation State
1668882	36	Note Assistant: Important notes for SAP_BASIS 730,731,740,750,751,...	BC-UPG-NA	Completely implemented
2672827	5	ANST Integration into SNOTE	BC-UPG-NA	Cannot be implemented
2730525	9	Consuming the Note Search Webservice	BC-UPG-NA	Can be implemented
2836302	22	Automated guided steps for enabling Note Assistant for TCI and Digit...	BC-UPG-NA	Cannot be implemented
2840923	8	SNOTE: Enable De-implementation of DDIC Correction Instructions	BC-UPG-NA	Cannot be implemented
2857949	5	Download of SAP Note without persisting it (for DBA Cockpit)	BC-UPG-NA	Can be implemented
2869143	14	Composite note for handling of Digitally Signed SAP Notes in Note Ass...	BC-UPG-NA	Can be implemented
2895954	3	Utility code for dynamic calls in SNOTE	BC-UPG-NA	Cannot be implemented
2965025	7	SNOTE - Download Latest Version of SAP Notes in Background	BC-UPG-NA	Can be implemented
2989228	1	Close HTTP connection on exception during Note download	BC-UPG-NA	Cannot be implemented
3051466	4	Note Assistant Made Easy : Revamped Note Assistant	BC-UPG-NA	Can be implemented
3072954	5	Download SAP Note without persisting it for RFC for SAP internal syst...	BC-UPG-NA	Cannot be implemented
3077648	2	Dequeue not called after enqueue during Note download via Downlo...	BC-UPG-NA	Cannot be implemented
3093855	1	Note Assistant: Important SAP Notes for the Revamped Note Assistant	BC-UPG-NA	Can be implemented
3146288	2	SNOTE: Download of SAP Note is successful but it cannot be found	BC-UPG-NA	Can be implemented
3196785	3	Change in the approach of reading RFC user name during SAP Note ...	BC-UPG-NA	Can be implemented
3213128	1	Fix to resolve the need for additional authorization while using SNOTE	BC-UPG-NA	Can be implemented

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Note 3150454 - Information Disclosure vulnerability in SAP NetWeaver Application Server ABAP and ABAP Platform (reloaded)

Version 11 from 04.10.2022 in English

UPDATE 4th October 2022: As the correction instructions may give an implementation error, the correction instructions have been adjusted.
Note 3089413 is not a prerequisite anymore.

UPDATE 27th September 2022: As the correction instructions may give an implementation error, the correction instructions have been adjusted.

UPDATE 13th September 2022: As the correction instructions lead to syntax errors, the correction instructions have been adjusted.

UPDATE 23rd August 2022: This note has been re-released with updated 'Correction instruction' information. We have updated the Correction instruction to support the later implementation of the lower SP levels in the customer systems.

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Note 3234755 - Information Disclosure vulnerability in Master Data Governance

"If after the implementation of the correction […] are not working anymore, check the authorizations of the standard RFC user that is used for accessing the ERP client system from the MDG hub system."

New display authorization check for `F_LFA1_GEN` and `F_KNA1_GEN`

Check (and update) function `ZMDG_RETRIEVE_KNVK` if it exists in the system according to the manual instruction

```
*&---------------------------------------------------------------------*
*& FUNCTION MDG_RETRIEVE_KNVK
*&---------------------------------------------------------------------*
...
ENDIF.

CHECK ct_knvk[] IS NOT INITIAL.
*>>>> START OF DELETION <<<<<
SELECT * FROM KNVK INTO TABLE lt_knvk FOR ALL ENTRIES IN ct_knvk WHERE parnr = ct_knvk-parnr.
*>>>> END OF DELETION <<<<<<<

*>>>> START OF INSERTION <<<<<

  AUTHORITY-CHECK OBJECT 'F_LFA1_GEN'
                      ID 'ACTVT' FIELD '03'.

  IF sy-subrc IS INITIAL.
    AUTHORITY-CHECK OBJECT 'F_KNA1_GEN'
                      ID 'ACTVT' FIELD '03'.
    IF sy-subrc IS NOT INITIAL.
      RETURN.
    ENDIF.
  ELSE.
    RETURN.
  ENDIF.

  SELECT * FROM knvk INTO TABLE lt_knvk FOR ALL ENTRIES IN ct_knvk WHERE parnr = ct_knvk-parnr.
*>>>> END OF INSERTION <<<<<<
```

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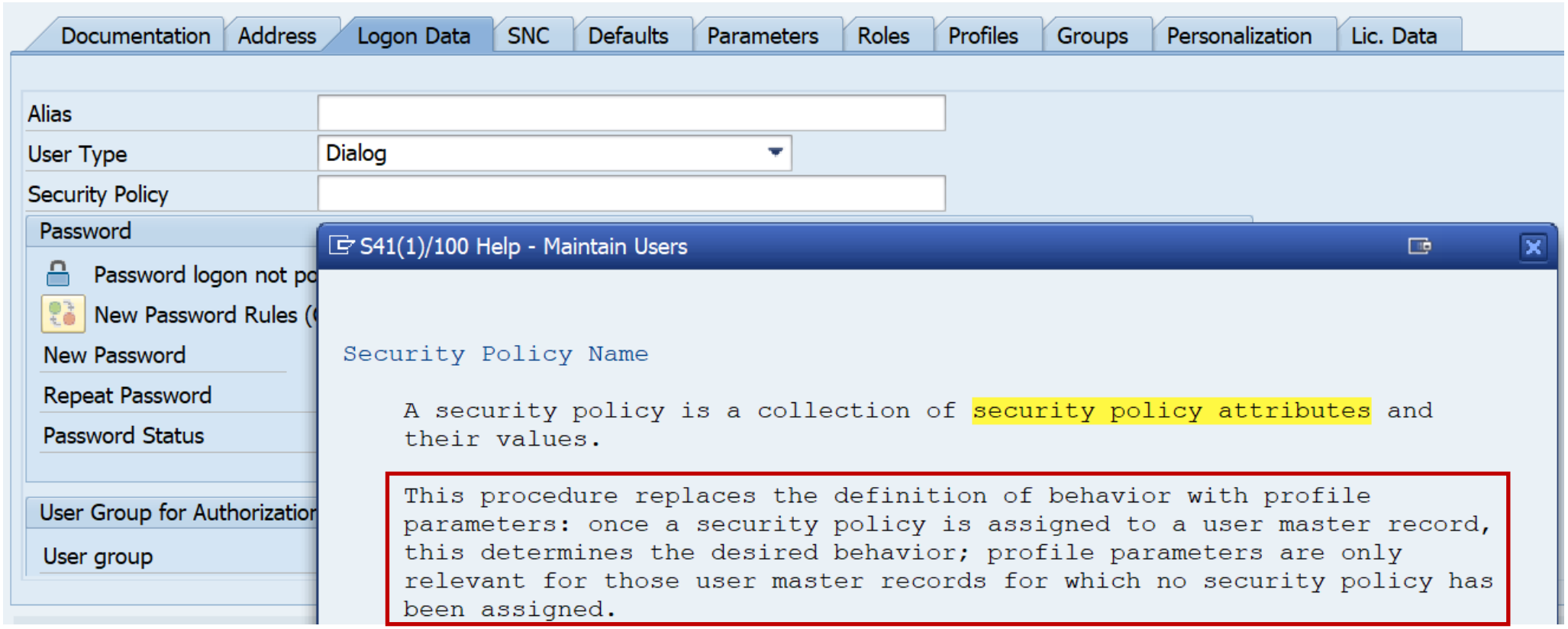
Note 3075533 - Login parameters (login/*) not effective with Security Policies

For **users who are assigned** to a security policy, the fallback for not defined security policy attributes is the **Kernel default**.

To achieve the same standard as without SECPOL, all attribute values deviating from Kernel defaults must also be set explicitly!

See F1 help:



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Note 3075533 - Login parameters (login/*) not effective with Security Policies

For **users who are assigned** to a security policy, the fallback for not defined security policy attributes is the **Kernel default**.

You see the effective values in transaction `SECPOL` in column "Effective values".

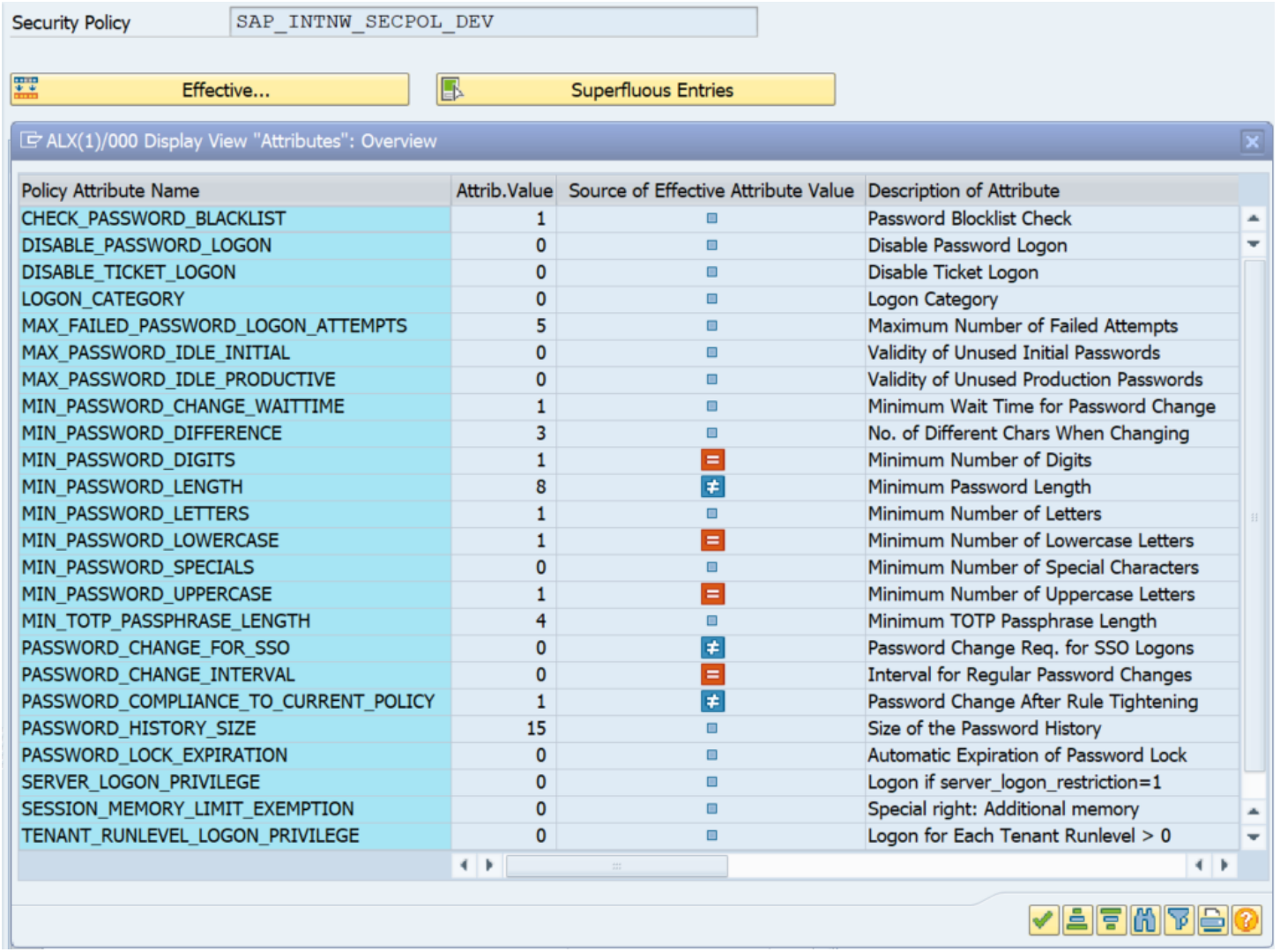
You see

( ) attributes values which are loaded from the Kernel default values,

(=) defined attributes which are identical to Kernel default values and

(≠) defined attributes which differ from the Kernel default values.

The current settings of corresponding profile parameters is not shown!



Policy Attribute Name	Attrib.Value	Source of Effective Attribute Value	Description of Attribute
CHECK_PASSWORD_BLACKLIST	1		Password Blocklist Check
DISABLE_PASSWORD_LOGON	0		Disable Password Logon
DISABLE_TICKET_LOGON	0		Disable Ticket Logon
LOGON_CATEGORY	0		Logon Category
MAX_FAILED_PASSWORD_LOGON_ATTEMPTS	5		Maximum Number of Failed Attempts
MAX_PASSWORD_IDLE_INITIAL	0		Validity of Unused Initial Passwords
MAX_PASSWORD_IDLE_PRODUCTIVE	0		Validity of Unused Production Passwords
MIN_PASSWORD_CHANGE_WAITTIME	1		Minimum Wait Time for Password Change
MIN_PASSWORD_DIFFERENCE	3		No. of Different Chars When Changing
MIN_PASSWORD_DIGITS	1	=	Minimum Number of Digits
MIN_PASSWORD_LENGTH	8	≠	Minimum Password Length
MIN_PASSWORD_LETTERS	1		Minimum Number of Letters
MIN_PASSWORD_LOWERCASE	1	=	Minimum Number of Lowercase Letters
MIN_PASSWORD_SPECIALS	0		Minimum Number of Special Characters
MIN_PASSWORD_UPPERCASE	1	=	Minimum Number of Uppercase Letters
MIN_TOTP_PASSPHRASE_LENGTH	4		Minimum TOTP Passphrase Length
PASSWORD_CHANGE_FOR_SSO	0	≠	Password Change Req. for SSO Logons
PASSWORD_CHANGE_INTERVAL	0	=	Interval for Regular Password Changes
PASSWORD_COMPLIANCE_TO_CURRENT_POLICY	1	≠	Password Change After Rule Tightening
PASSWORD_HISTORY_SIZE	15		Size of the Password History
PASSWORD_LOCK_EXPIRATION	0		Automatic Expiration of Password Lock
SERVER_LOGON_PRIVILEGE	0		Logon if server_logon_restriction=1
SESSION_MEMORY_LIMIT_EXEMPTION	0		Special right: Additional memory
TENANT_RUNLEVEL_LOGON_PRIVILEGE	0		Logon for Each Tenant Runlevel > 0

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Note 3075533 - Login parameters (login/*) not effective with Security Policies

For **users who are assigned** to a security policy, the fallback for not defined security policy attributes is the **Kernel default**.

You see the effective values in transaction SECPOL in column "Effective values“.

One reason for this surprising system behavior is, that there exist policy attributes for which there is no profile parameter.

Security Policy Attribute	Kernel default (release specific)	Redeemed profile parameter	Description
CHECK_PASSWORD_BLACKLIST	1	-	Check the Password Blacklist
DISABLE_PASSWORD_LOGON	0	login/disable_password_logon	Disable Password Logon
DISABLE_TICKET_LOGON	0	-	Disable Ticket Logon
MAX_FAILED_PASSWORD_LOGON_ATTEMPTS	5	login/fails_to_user_lock	Maximum Number of Failed Attempts
MAX_PASSWORD_IDLE_INITIAL	0	login/password_max_idle_initial	Validity of Unused Initial Passwords
MAX_PASSWORD_IDLE_PRODUCTIVE	0	login/password_max_idle_productive	Validity of Unused Production Passwords
MIN_PASSWORD_CHANGE_WAITTIME	1	login/password_change_waittime	Minimum Wait Time for Password Change
MIN_PASSWORD_DIFFERENCE	1	login/min_password_diff	No. of Different Chars When Changing
MIN_PASSWORD_DIGITS	1	login/min_password_digits	Minimum Number of Digits
MIN_PASSWORD_LENGTH	10	login/min_password_lng	Minimum Password Length
MIN_PASSWORD_LETTERS	1	login/min_password_letters	Minimum Number of Letters
MIN_PASSWORD_LOWERCASE	1	login/min_password_lowercase	Minimum Number of Lowercase Letters
MIN_PASSWORD_SPECIALS	0	login/min_password_specials	Minimum Number of Special Characters
MIN_PASSWORD_UPPERCASE	1	login/min_password_uppercase	Minimum Number of Uppercase Letters
MIN_TOTP_PASSPHRASE_LENGTH	4	-	Minimum TOTP Passphrase Length (new)
PASSWORD_CHANGE_FOR_SSO	1	login/password_change_for_SSO	Password Change Req. for SSO Logons
PASSWORD_CHANGE_INTERVAL	0	login/password_expiration_time	Interval for Regular Password Changes
PASSWORD_COMPLIANCE_TO_CURRENT_POLICY	0	login/password_compliance_to_current_policy	Password Change After Rule Tightening
PASSWORD_HISTORY_SIZE	15	login/password_history_size	Size of the Password History
PASSWORD_LOCK_EXPIRATION	0	login/failed_user_auto_unlock	Automatic Expiration of Password Lock
SERVER_LOGON_PRIVILEGE	0	-	Logon if server_logon_restriction=1
SESSION_MEMORY_LIMIT_EXEMPTION	0	-	Special right: Additional memory (new)
TENANT_RUNLEVEL_LOGON_PRIVILEGE	0	-	Logon for Each Tenant Runlevel > 0

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Note 3075533 - Login parameters (login/*) not effective with Security Policies

On the other hand, there still exist profile parameters for which there does not exists any security policy attribute.

Here are some examples:

Security Policy Attribute	Kernel default (release specific)	Redeemed profile parameter	Description
-	0	login/password_downwards_compatibility	password downwards compatibility (8 / 40 characters, case-sensitivity)
-	encoding=RFC2307, algorithm=iSSHA-512, iterations=15000, saltsize=256	login/password_hash_algorithm	encoding and hash algorithm used for new passwords
-		login/password_logon_usergroup	users of this group can still logon with passwords
		…	

Another reason is the following: Security policies can be transported using customizing transports and thus need to be self-contained. This would not work, if they would be an extension to the profile parameters, because in this case the effective policy on different systems (on the same release) could be different.

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Note 3075533 - Login parameters (login/*) not effective with Security Policies

Required authorizations to maintain security policies (not all of them are listed in SU22/SU24):

S_TCODE	for transaction SECPOL
S_SECPOL	for the security policy
S_TABU_NAM	for the views V_SEC_POLICY_CUS and V_SEC_POLICY_RT
S_SECPOL_A	for the security policy attribute
S_TRANSPRT	to record the change on a customizing transport

You can use transaction CCDB or the applications change reporting or configuration validation in the SAP Solution Manager (or similar functions in FRUN) to run cross-system analysis of security policies using the following configuration stores:

AUTH_SECURITY_POLICY	Definition of security policies
SECURITY_POLICY_USAGE	Assignment of security policies to users

Online Help - Security Policy Attributes for Logon and Passwords
Online Help - Profile Parameters for Logon and Password (Login Parameters)
SCN Blog - SAP Security policies / Group policies (2013)
Daniel Berlin Blog - A note on SECPOL behavior (2015)
RZ10 Blog - SAP-Passwortregeln: Profilparameter und Security Policies via SECPOL (2019)

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Show overview about security policies (SECPOL)

https://blogs.sap.com/2022/10/07/show-overview-about-security-policies-secpol/

Report `ZSHOW_SECPOL` https://github.com/SAP-samples/security-services-tools

Default attribute value which is used if a policy does not define a specific value

Effective policy attribute values (the specific values are marked in yellow)

Current profile parameter value (values which differ from the default values are marked in red)

Show security policies

Attribute type	Policy Attribute Name	Default	SAP_INTNW_SECPOL_DEV	SAP_INTNW_SECPOL_WEAK	Description	Parameter Name	Par. V...	Kernel
Password Rule Attribute	CHECK_PASSWORD_BLACKLIST	1	1	1	Password Blocklist Check			
Password Rule Attribute	MIN_PASSWORD_DIGITS	1	1	0	Minimum Number of Digits	login/min_password_digits	1	1
Password Rule Attribute	MIN_PASSWORD_LENGTH	10	8	6	Minimum Password Length	login/min_password_lng	8	10
Password Rule Attribute	MIN_PASSWORD_LETTERS	1	1	0	Minimum Number of Letters	login/min_password_letters	1	1
Password Rule Attribute	MIN_PASSWORD_LOWERCASE	1	1	0	Minimum Number of Lowercase Letters	login/min_password_lowercase	1	1
Password Rule Attribute	MIN_PASSWORD_SPECIALS	0	0	0	Minimum Number of Special Characters	login/min_password_specials	0	0
Password Rule Attribute	MIN_PASSWORD_UPPERCASE	1	1	0	Minimum Number of Uppercase Letters	login/min_password_uppercase	1	1
Password Change Policy Attribute	MIN_PASSWORD_CHANGE_WAITTIME	1	1	1	Minimum Wait Time for Password Change	login/password_change_waittime	1	1
Password Change Policy Attribute	MIN_PASSWORD_DIFFERENCE	3	3	3	No. of Different Chars When Changing	login/min_password_diff	3	3
Password Change Policy Attribute	PASSWORD_CHANGE_FOR_SSO	1	0	1	Password Change Req. for SSO Logons	login/password_change_for_SSO	1	1
Password Change Policy Attribute	PASSWORD_CHANGE_INTERVAL	0	0	0	Interval for Regular Password Changes	login/password_expiration_time	0	0
Password Change Policy Attribute	PASSWORD_COMPLIANCE_TO_CURRENT_POLICY	0	1	0	Password Change After Rule Tightening	login/password_compliance_to_current_policy	0	0
Password Change Policy Attribute	PASSWORD_HISTORY_SIZE	15	15	15	Size of the Password History	login/password_history_size	15	15
Logon Policy Attribute	DISABLE_PASSWORD_LOGON	0	0	0	Disable Password Logon	login/disable_password_logon	0	0
Logon Policy Attribute	DISABLE_TICKET_LOGON	0	0	0	Disable Ticket Logon			
Logon Policy Attribute	LOGON_CATEGORY	0	0	0	Logon Category			
Logon Policy Attribute	MAX_FAILED_PASSWORD_LOGON_ATTEMPTS	5	5	5	Maximum Number of Failed Attempts	login/fails_to_user_lock	5	5
Logon Policy Attribute	MAX_PASSWORD_IDLE_INITIAL	0	0	0	Validity of Unused Initial Passwords	login/password_max_idle_initial	0	0
Logon Policy Attribute	MAX_PASSWORD_IDLE_PRODUCTIVE	0	0	0	Validity of Unused Productive Passwords	login/password_max_idle_productive	0	0
Lo	TION	0	0	0	Automatic Expiration of Password Lock	login/failed_user_auto_unlock	0	0
Lo	E	0	0	0	Logon if server_logon_restriction=1			
Lo	N_PRIVILEGE	0	0	0	Logon for Each Tenant Runlevel > 0			
General Policy	SESSION_MEMORY_LIMIT_EXEMPTION	0	0	0	Special right: Additional memory			
Guidelines for Time ed One-Ti...	MIN_TOTP_PASSPHRASE_LENGTH	4	4	4	Minimum TOTP Passphrase Length			
Usage	Count of users	0	1.358	20				

In addition you get a line showing the count of assigned users per policy.

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Note 3256864 - SDCCN: Missing entry "Certificate Renewal" in table /BDL/TASK_ATTR

Client certificates have a limited lifetime of 1 year. Therefore you have to renew the certificates at least once per year – either manually or automatically.

The `SDCC` task "Certificate Renewal" performs this step automatically: If its expiration date is lower that 60 days, then the certificate is renewed.

On some versions of ST-PI 7.40 the task is missing. In this case on support package 19-20, you can implement this note 3256864. The next run of the `SDCCN` job will then create the task.

As soon as this process works fine, you do not need a job for report `RSUPPORT_HUB_CERT_RENEWAL` as described in note 2946444.

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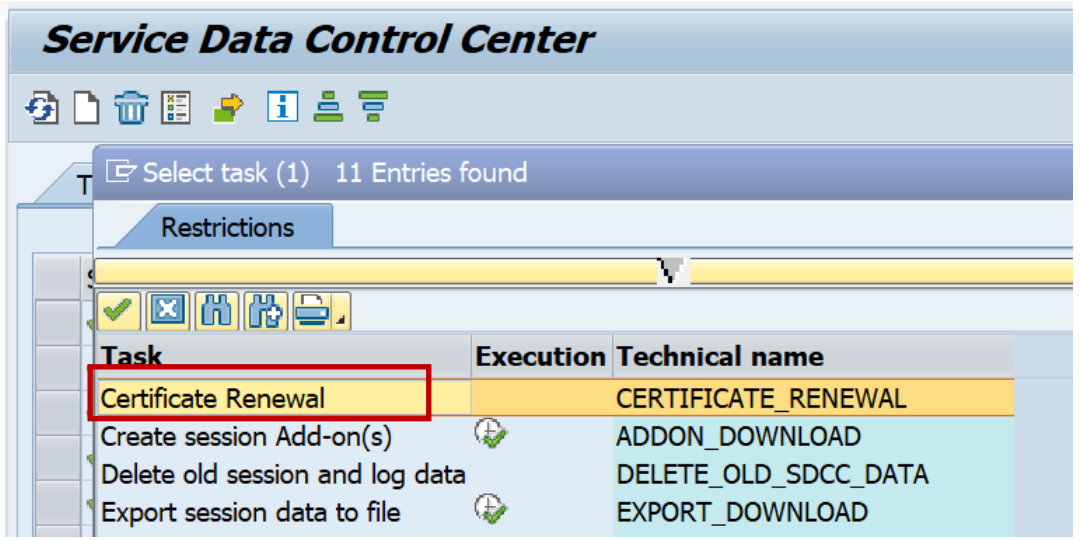
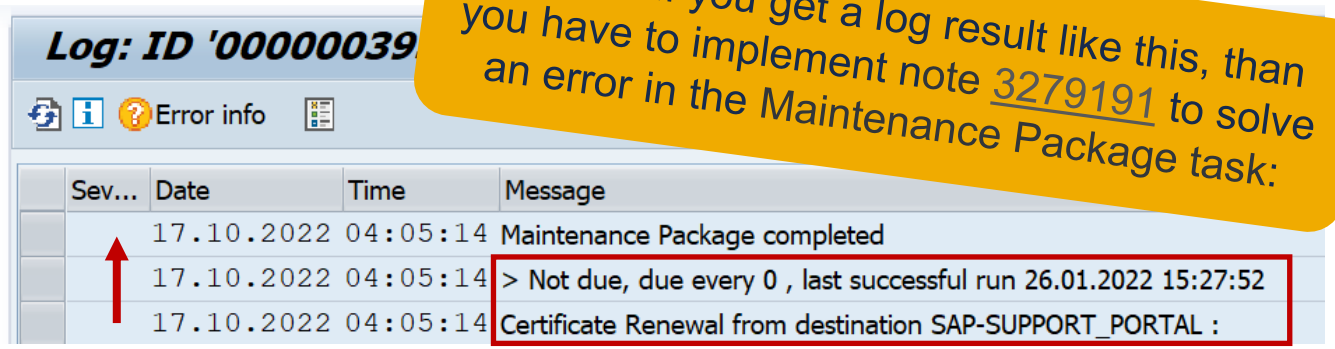
Note 3256864 - SDCCN: Missing entry "Certificate Renewal" in table /BDL/TASK_ATTR

You can trigger this task manually to test it.



However, as this task is part of the general "Maintenance Package" task in SDCCN, you do not need to schedule anything.

You can view the log of the task execution (ether of a manually triggered "Certificate Renewal" or the scheduled task "Maintenance Package") on the "Done" tab in SDCCN.



Caution: If you get a log result like this, than you have to implement note 3279191 to solve an error in the Maintenance Package task:

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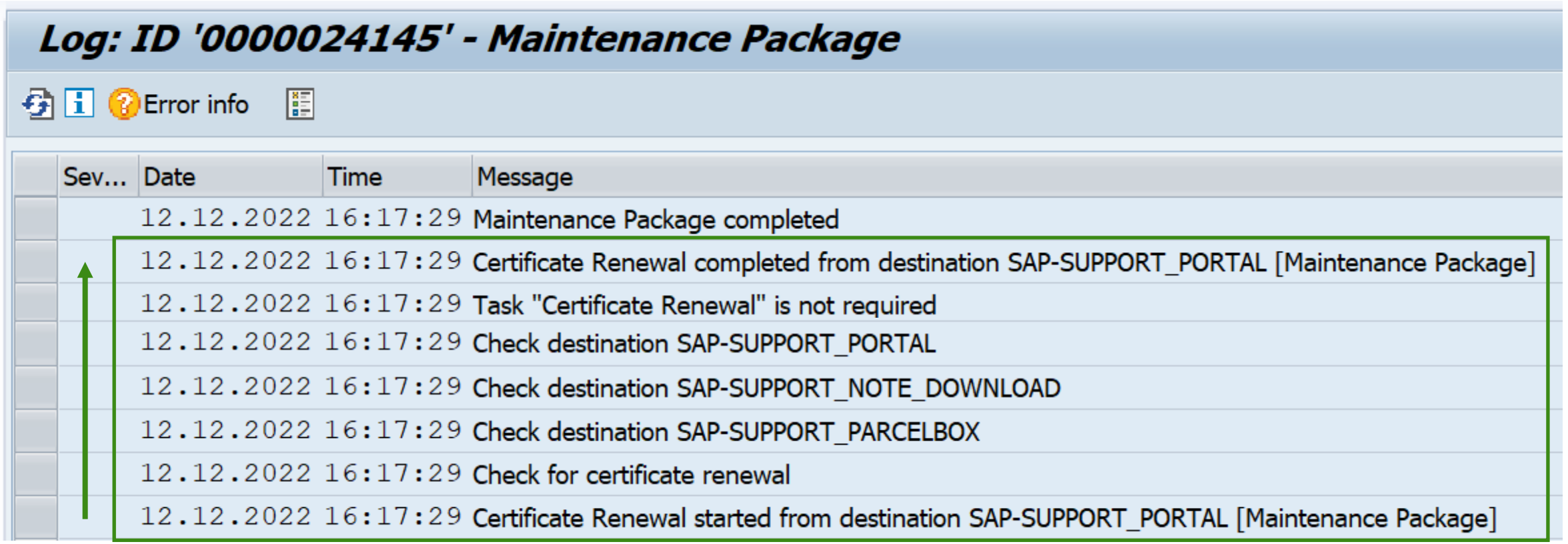
Note 3256864 - SDCCN: Missing entry "Certificate Renewal" in table /BDL/TASK_ATTR

Here is the correct result (the example shows that no certificate needs an update):



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What's New for the User Administration and Logging Check in S/4HANA On Premise

a)	Note 1856125 - FAQ | Tools for using the Audit Information System	AIS
b)	Note 139418 - Logging of user actions (ABAP server)	Logging
c)	Note 382318 - FAQ | Function module RFC_READ_TABLE	RFC
d)	Note 2680888 - SAL | Report for determination of differences in event parameters	SAL
e)	Note 2883981 - RSAU_READ* | anonymized display of Security Audit Log data	SAL
f)	Note 3090132 - RSUSR200 | Addition of logon information from job management	User
g)	Note 3113345 - SUIM | Reporting for User Documentation	User
h)	Note 3150573 - SUIM | Optimization of RSUSR_AUTH_DATA_VERSION	User
i)	**Note 3147103 - SAIS | Check of customer-specific programs**	**Code**
j)	**Note 3204960 - SAIS_SEARCH_APPL | Search for programs without transaction**	**TCODE**

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i) Note 3147103 - SAIS | Check of customer-specific programs

One aim during an audit is to ensure that customer or partner programs do not impede seamless change tracking in SAP standard tables.

Note 3147103 provides the transaction / report `SAIS_CODE_SCAN` as part of the Audit Information System.

The report supports the check of customer-specific programs and ABAP classes with regard to direct changing accesses to database tables.

The provided results list contains forward navigation to the found source code point in question, the last transport request, ~~and the option of double-clicking on the text field to store your own comments for each object~~.

Available via Support Package as of 7.40 (implementation via note requires manual creation of database table)

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i) Note 3147103 - SAIS | Check of customer-specific programs

Transaction / report `SAIS_CODE_SCAN`

Check Non-Standard ABAP for Critcal Database Access

Release / SystemId / Client: 755 / S41 / 100
Selected Reports: 3
Reports with Findings: 0
Finding Positions: 9

Program Name	Request	Date	Obj. Ty...	Package	Line	Action	Table Name	Prot.-Flag	Comment for Check
Z_COPY_USER	EC1K951428	10.12.2021	PROG	Z_SECURITY_SERVICES	47	INSERT	USR02		Critical table of user management!
			PROG		55	INSERT	USR04		
			PROG		63	INSERT	UST04		
			PROG		78	INSERT	USRBF2		
			PROG		93	INSERT	AGR_USERS		
			PROG		106	INSERT	USREFUS		
Z_SUDOKU			PROG	ZABAPGIT_SUDOKU	322	DELETE	ZWD_SUDOKU_SAV...		Demo, not intended for production...
			PROG		329	INSERT	ZWD_SUDOKU_SAV...		
ZSUPPORT_HUB_CERT_RENEWAL			PROG	Z_SECURITY_SERVICES	801	INSERT	STRUSTSSL		see note 2946444 - SAP Support Po...

Comments are not persistent, yet

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j) Note 3204960 - SAIS_SEARCH_APPL | Search for programs without transaction

You want to identify reports to which no transaction has yet been assigned.

Use the additional option in the application `SAIS_SEARCH_APPL` to start the search for directly startable programs without an assigned transaction.

Available via Support Package in September/October 2022 as of 7.50 (no implementation via note)

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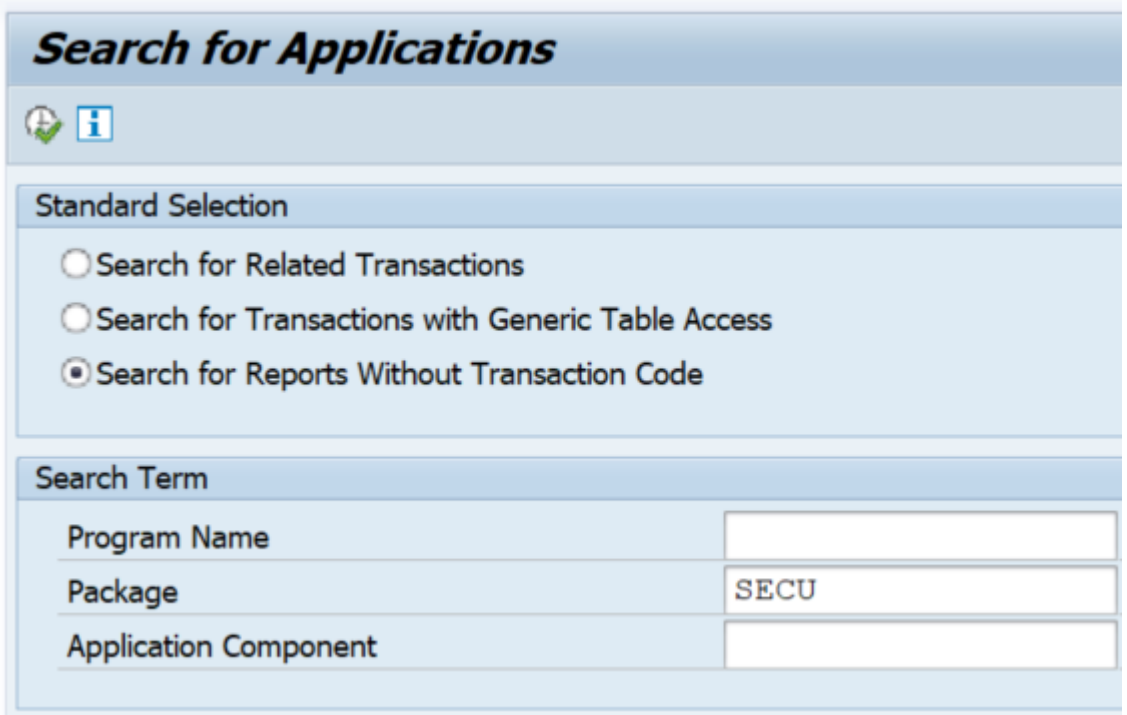
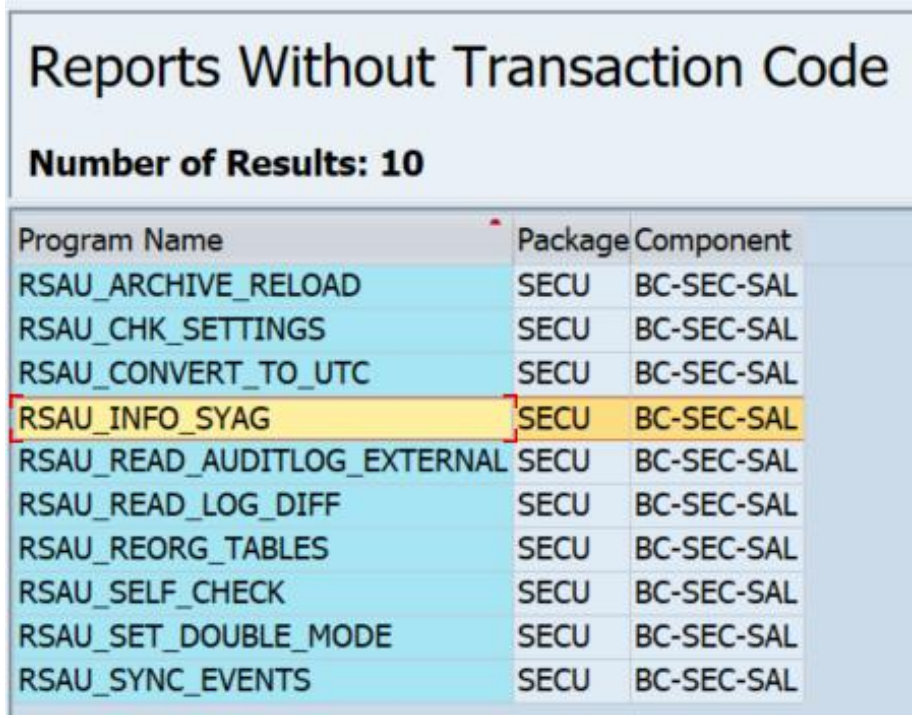
j) Note 3204960 - SAIS_SEARCH_APPL | Search for programs without transaction





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September 2022

Topics September 2022

https://wiki.scn.sap.com/wiki/display/Security/Security+Notes+Webinar+-+2022-09

SAP Security Recommendations for SAP Cloud Services

Note 3235573 - Service connection "SAP NI with SNC/SSO“

Notes 3150454 - Information Disclosure vulnerability in SAP NetWeaver Application Server ABAP and ABAP Platform

Note 3237075 - Insufficient Firefighter Session Expiration in SAP GRC Access Control Emergency Access Management

Note 2634023 - Missing authorization check in Consumption of CDS Views (or) OData Services in QM-QN

Note 3102769 - Cross-Site Scripting (XSS) vulnerability in SAP Knowledge Warehouse (update)

What's New for the User Administration and Logging Check in S/4HANA On Premise (part 4)

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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SAP Security Recommendations for SAP Cloud Services

Updated on 19.09.2022

My Trust Center - Tools & Documentation

https://support.sap.com/en/my-support/trust-center/tools-documentation.html

Recommended Security Configuration for SAP Cloud Services (Landing Page)

- SAP Business Technology Platform (52 entries)
- SAP Concur (5 entries)
- SAP S/4 HANA Cloud (text)
- SAP Fieldglass (2 entries)
- SAP SuccessFactor (13 entries)
- SAP Commissions (3 entries)
- SAP Analytics Cloud (6 entries)

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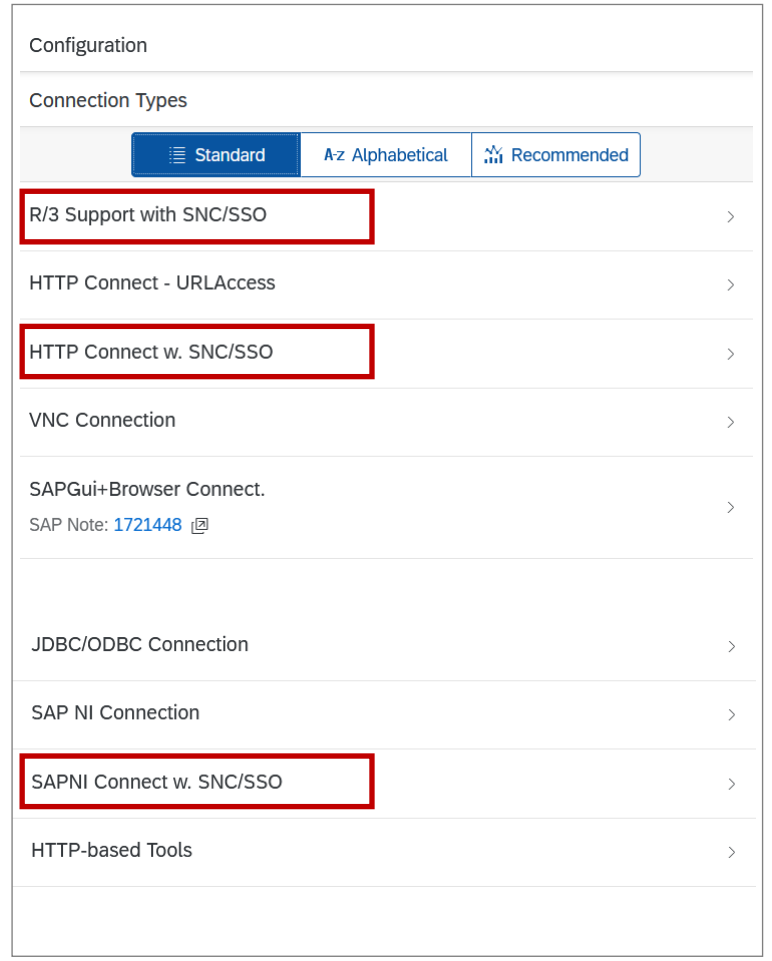
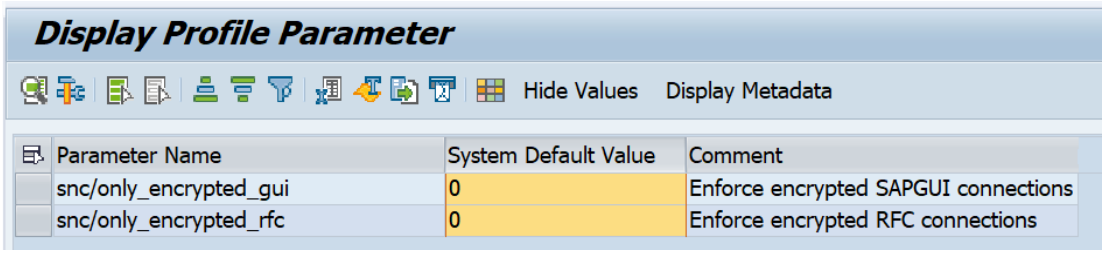
Note 3235573 - Service connection "SAP NI with SNC/SSO"

Secured Connection Types:

- **R/3 Support with SNC/SSO according to note 2562127**
- **HTTP Connect w. SNC/SSO according to note 2562154**
- **SAP NI with SNC/SSO according to note 3235573**



This is a prerequisite to change these parameters to 1:



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Note 3235573 - Service connection "SAP NI with SNC/SSO"

SAP NI with SNC/SSO connection acts as a generic remote service allowing SAP Support employees to access your SAP server via specific channels.

List of verified tools supporting SAP NI with SNC/SSO:

- **Office Analysis**

SAP operates a PKI to allow Secure Network Connections (SNC) and Single Sign On (SSO) to access customer systems remotely. The CA issues generated certificates for the user `SAPSUPPORT` with a validity of 8 hours.

This secure remote access scenario eliminates maintaining the target user credentials in the Customer Remote Logon Depot (aka SAP Secure Area). In order to use Single Sign-On, the SNC Name `p:CN=SAPSUPPORT, O=SAP-SE, C=DE` can be assigned to one or multiple users on the SAP system instead.

Limitation: A dedicated user approach (1:1 relationship between SAP user and SNC name) is not supported.

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Note 3150454 - Information Disclosure vulnerability in SAP NetWeaver Application Server ABAP and ABAP Platform

Version 9 from 13.09.2022 in English

UPDATE 13th September 2022: As the correction instructions lead to syntax errors, the correction instructions have been adjusted.

UPDATE 23rd August 2022: This note has been re-released with updated 'Correction instruction' information. We have updated the Correction instruction to support the later implementation of the lower SP levels in the customer systems.

Caveats:

- You may need to adjust the correction by commenting out the declaration of `G_PROXY_SERVER_OLD` in include `LCRFCI01` to solve another syntax error.
- Note 3089413 is a prerequisite on releases 7.50, 7.54, 7.55, 7.56. However this prerequisite note is not released yet.

→ Wait for next version 10 which should solve the syntax error
… and wait for the prerequisite note

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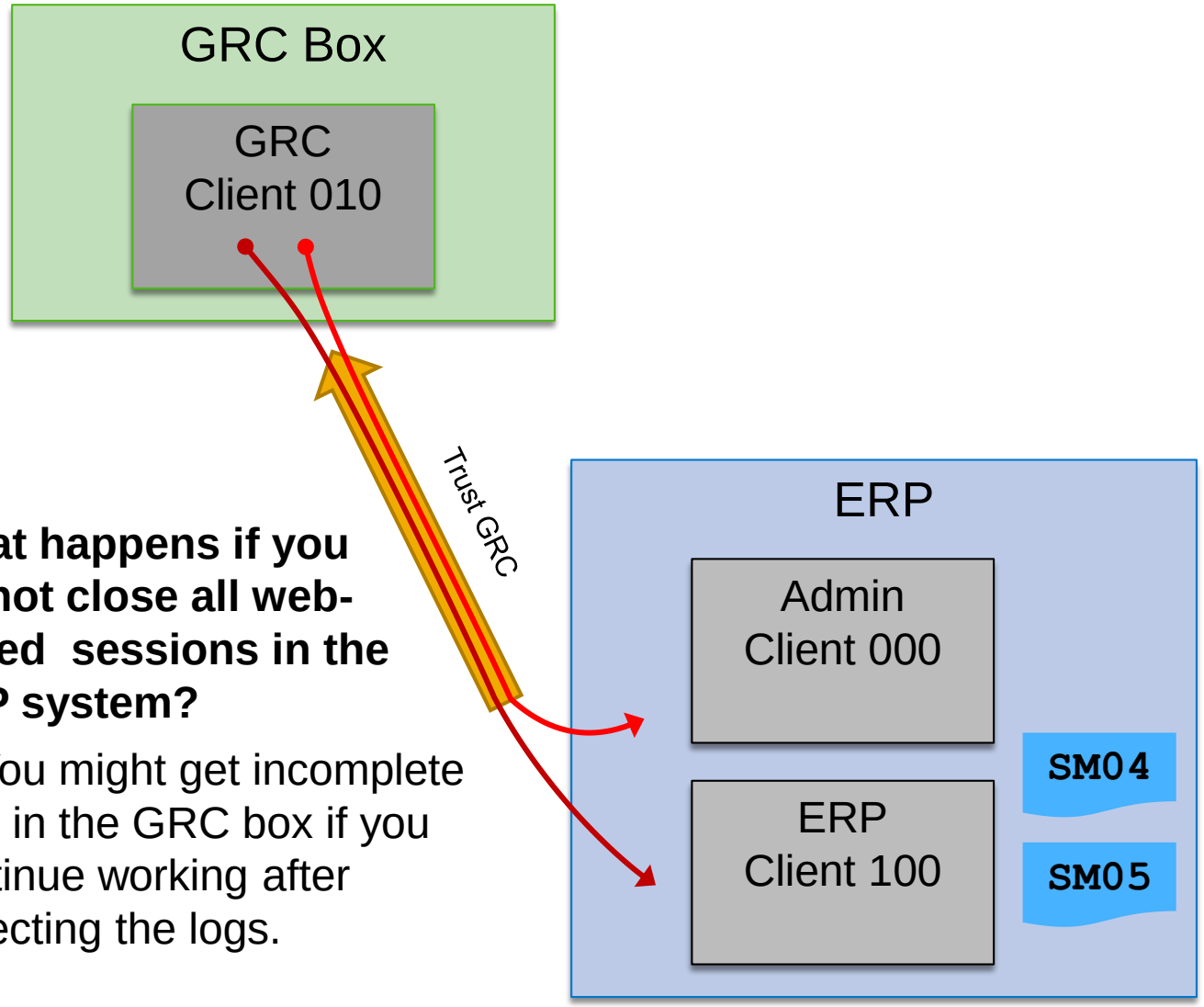
Note 3237075 - Insufficient Firefighter Session Expiration in SAP GRC Access Control Emergency Access Management



What happens if you do not close all web-based sessions in the ERP system?

A: You might get incomplete logs in the GRC box if you continue working after collecting the logs.

Normal order of operation:

1. Start transaction `/GRCPI/GRAC_EAM` in WEBGui to execute web-based Firefighter
2. Start FireFighter session for the ERP system
3. Finish FireFighter session, GRC verifies if no stateful sessions in `SM04` are still open
4. Close the EAM launchpad
5. Run the log sync job `GRAC_SPM_LOG_SYNC_UPDATE` to collect logs into the GRC box

Solution

With the correction of the note not only stateful sessions in `SM04` but also stateless sessions in `SM05` get checked before closing the GRC case.

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Note 3237075 - Insufficient Firefighter Session Expiration in SAP GRC Access Control Emergency Access Management

The functional correction is required if GRC is in use. Implement the correction instruction for all plugin systems, where Web Based Firefighter is used.

With this correction, the Firefighter Session will be detected using SM04 and SM05 information.

To properly retrieve the SM05 data, the RFC user needs an authorization for authorization object S_ADMI_FCD with field S_ADMI_FCD = PADM.

Usually you copy role SAP_GRAC_SPM_FFID to role Z_SAP_GRC_SPM_FFID which you then assign to the FFIDs. The name of this role must be identical to the name which you have configured in the GRC box using the Implementation Guide, transaction SPRO, in activity "Maintain Configuration Settings" in parameter 4010 "Firefighter ID role name" (respective the role configured in the connector settings).

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Note 3237075 - Insufficient Firefighter Session Expiration in SAP GRC Access Control Emergency Access Management

Related references:

Blog: Secure Trusted RFC in GRC Access Control EAM and other Applications
https://blogs.sap.com/2017/02/14/secure-trusted-rfc-in-grc-access-control-eam-and-other-applications/
Note 2413716 - Setup of Trusted RFC in GRC Access Control EAM

Note 3098498 - Role expired for Firefighter ID error message received if FFID has multiple FFID Role, but there are expired ones

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Note 2634023 - Missing authorization check in Consumption of CDS Views (or) OData Services in QM-QN

Old note from April 2018 but still might be relevant for EA_APPL 6.17 and SAP_APPL 6.18

If you implement it, do not forget to implement a side-effect solving note:
Note 2681570 - Error in SAP Note 2634023 (authorization check)

If the Fiori App "My Quality Tasks" is in use, extent the authorizations for users because additional authorization checks are added by the corrections:

Authorization object `S_TCODE` for `QM01`, `IQS8`, and `IQS9`

Authorization object `Q_TCODE` for `QM01`

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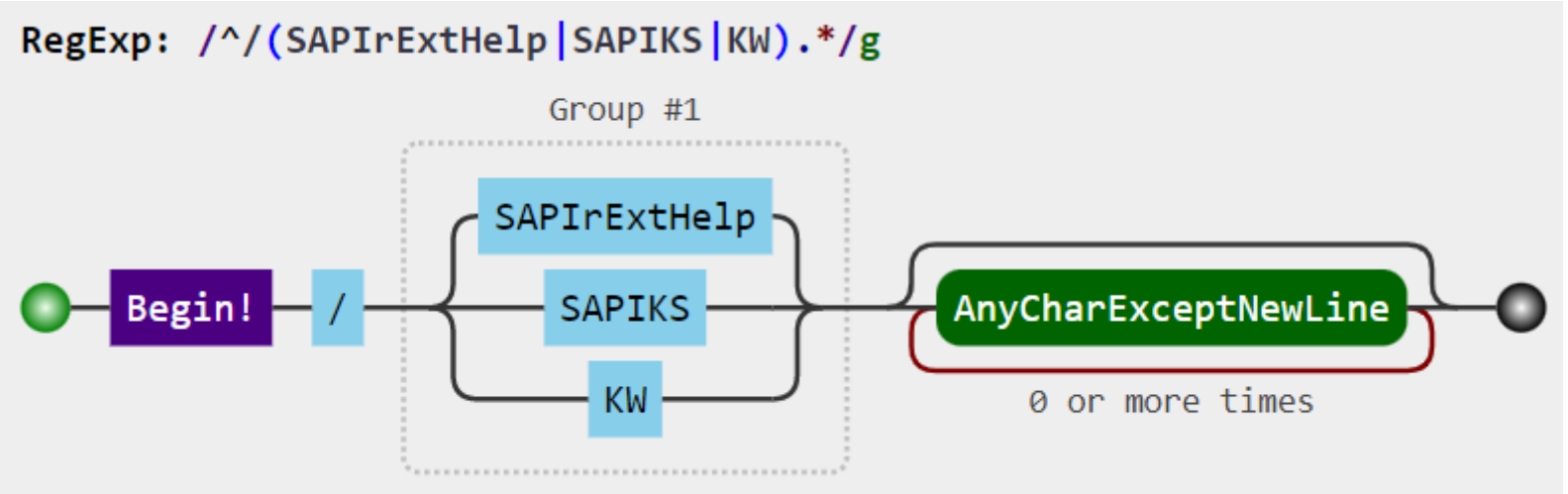
Note 3102769 - Cross-Site Scripting (XSS) vulnerability in SAP Knowledge Warehouse (update)

The filter rule to deactivate the SAP IKS component described in related note 3221696 was updated:

```
RegIForbiddenUrl ^/(SAPIrExtHelp|SAPIKS|KW).*  -
```

Explanation



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What's New for the User Administration and Logging Check in S/4HANA On Premise

Frank Buchholz, Dieter Goedel, SAP
June 14, 2022

INTERNAL – SAP and Customers Only

THE BEST RUN SAP

What's New for the User Administration and Logging Check in S/4HANA On Premise

a)	Note 1856125 - FAQ | Tools for using the Audit Information System	AIS
b)	Note 139418 - Logging of user actions (ABAP server)	Logging
c)	Note 382318 - FAQ | Function module RFC_READ_TABLE	RFC
d)	Note 2680888 - SAL | Report for determination of differences in event parameters	SAL
e)	Note 2883981 - RSAU_READ* | anonymized display of Security Audit Log data	SAL
f)	**Note 3090132 - RSUSR200 | Addition of logon information from job management**	**User**
g)	**Note 3113345 - SUIM | Reporting for User Documentation**	**User**
h)	**Note 3150573 - SUIM | Optimization of RSUSR_AUTH_DATA_VERSION**	**User**
i)	Note 3147103 - SAIS | Check of customer-specific programs	Code
j)	Note 3204960 - SAIS_SEARCH_APPL | Search for programs without transaction	TCODE

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f) Note 3090132 - RSUSR200 | Addition of logon information from job management

The SUIM report `RSUSR200` might not show the expected last logon date for users which are running job steps.
Such events do not update the last logon timestamps.

The correction of this note provides a checkbox for displaying the last logon of job users on the selection screen. If the option is selected, the result list contains additional columns with the time a user was last used in a job step.

In addition, you get the new transaction / report `SAIS_JOB_USER` which provides an overview of job steps restricted to the logon client. The report supports navigation for user details, job details, and ABAP programs or classes started in the job step. (This reports replaces an analysis based on the very simple usage of transaction `SE16` for view `V_OP`.)

Available via Support Package as of 7.40 or implementation via note (which require some more prerequisite notes and a manual implementation step)

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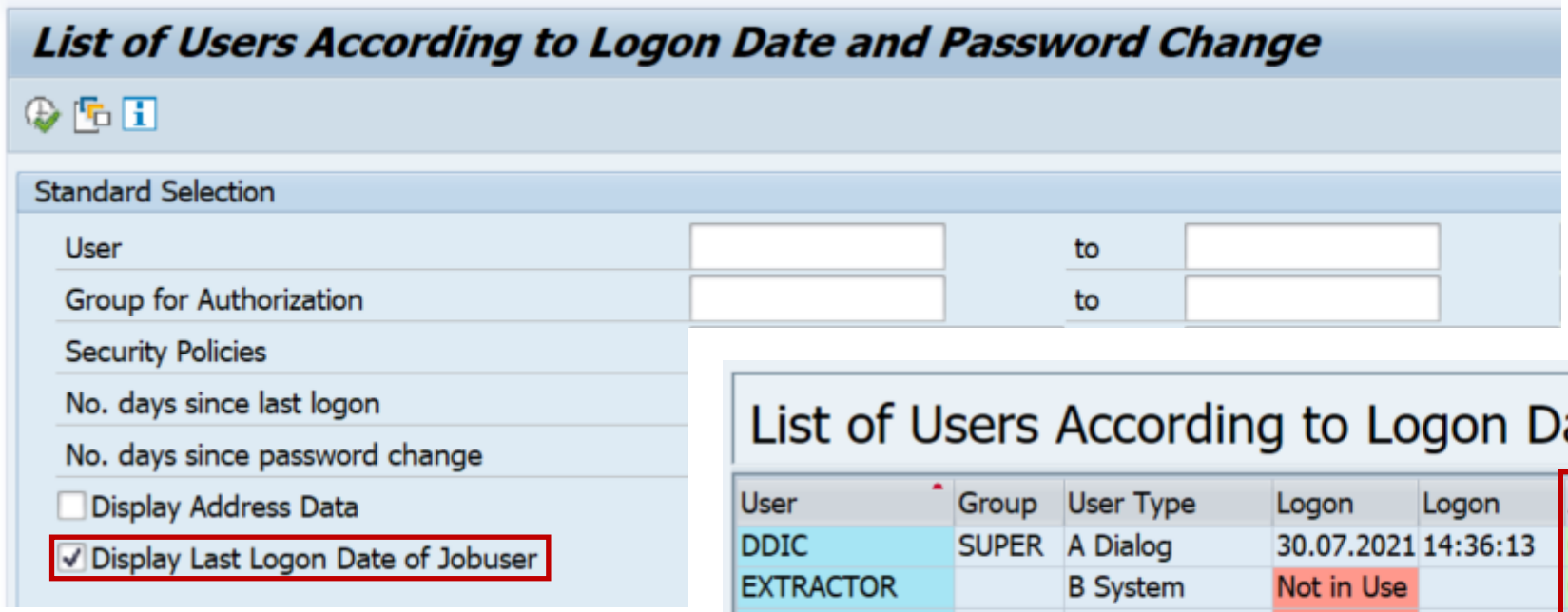
f) Note 3090132 - RSUSR200 | Addition of logon information from job management

Report RSUSR200



List of Users According to Logon Date and Password Change

User	Group	User Type	Logon	Logon	Job Logon	Job Logon	Password	Password
DDIC	SUPER	A Dialog	30.07.2021	14:36:13	09.06.2022	14:54:35	✓	30.07.2021
EXTRACTOR		B System	Not in Use		09.06.2022	14:54:35	✓	29.03.2022
GR00-FI1	ZGR00	A Dialog	Not in Use				✗	25.11.2021
GR00-FI2	ZGR00	A Dialog	Not in Use				✗	25.11.2021
GR00-MM1	ZGR00	A Dialog	Not in Use				✗	25.11.2021
GR00-MM2	ZGR00	A Dialog	Not in Use				✗	25.11.2021
GR00-SD1	ZGR00	A Dialog	Not in Use				✗	25.11.2021
GR00-SD2	ZGR00	A Dialog	Not in Use				✗	25.11.2021
GR00ADM	ZGR00	A Dialog	Not in Use				✗	24.11.2021
GR01-ADM	Z_GR01	A Dialog	Not in Use				✗	27.12.2021
I026881		A Dialog	Not in Use				✗	01.02.2022
I034077		A Dialog	01.03.2022	09:32:47	09.06.2022	14:44:35	✓	07.02.2022

You can use this list to identify dialog users who are running jobs as well.

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f) Note 3090132 - RSUSR200 | Addition of logon information from job management

Transaction / report `SAIS_JOB_USER` shows job steps in current client

Username	Job name	Start Condition	Status	Executed Program or Command	Planned Date	Planned	Executed	Executed
D056975	/UI5/APP_INDEX_CALCULATE	Periodic Job	Finished	ABAP: /UI5/APP_INDEX_CALCULATE	09.06.2022	15:31:16	09.06.2022	15:31:35
		Periodic Job	Released	ABAP: /UI5/APP_INDEX_CALCULATE	09.06.2022	15:46:16		
	/UI5/UPD_ODATA_METADATA_CACHE	Periodic Job	Finished	ABAP: /UI5/UPD_ODATA_METADATA_CACHE	09.06.2022	15:16:16	09.06.2022	15:16:35
		Periodic Job	Released	ABAP: /UI5/UPD_ODATA_METADATA_CACHE	09.06.2022	16:16:16		
EXTRACTOR	SECM_LOG_2_ESP	Periodic Job	Finished	ABAP: SECM_LOG_2_ESP	09.06.2022	15:35:15	09.06.2022	15:35:35
		Periodic Job	Released	ABAP: SECM_LOG_2_ESP	09.06.2022	15:36:15		
I034077	RTM_PERIODIC_JOB	Periodic Job	Finished	ABAP: RTM_COLLECT_ALL	09.06.2022	14:43:46	09.06.2022	14:44:35
		Periodic Job	Released	ABAP: RTM_COLLECT_ALL	09.06.2022	15:43:46		
I307499	SECM_LOG_2_ESP	Periodic Job	Finished	ABAP: SECM_LOG_2_ESP	09.06.2022	15:34:38	09.06.2022	15:35:35
		Periodic Job	Released	ABAP: SECM_LOG_2_ESP	09.06.2022	15:39:38		
	SECM_MASTER_DATA_2_ESP	Periodic Job	Finished	ABAP: SECM_MASTER_DATA_2_ESP	09.06.2022	15:00:25	09.06.2022	15:00:35
		Periodic Job	Released	ABAP: SECM_MASTER_DATA_2_ESP	09.06.2022	16:00:25		
SJOBREPO	/AIF/ODATA_TRANSFER_TECH_JOB	Periodic Job	Finished	ABAP: /AIF/ODATA_TRANSFER_JOB_20	09.06.2022	15:26:41	09.06.2022	15:27:35
		Periodic Job	Released	ABAP: /AIF/ODATA_TRANSFER_JOB_20	09.06.2022	15:41:41		
	/AIF/SAP_AIF_AUTO_REPROCESSING	Periodic Job	Finished	ABAP: /AIF/PERS_RUN_AUTO_REPROCESS	09.06.2022	15:26:33	09.06.2022	15:26:35
		Periodic Job	Released	ABAP: /AIF/PERS_RUN_AUTO_REPROCESS	09.06.2022	15:41:33		
	/AIF/SAP_AIF_DISPATCH	Event trigger...	Released	ABAP: /AIF/DISPATCH_RESTART_USER				
	/BUILD/STARTER	Event trigger...	Released	ABAP: /BUILD/STARTER				
	/FTI/LCP_EVET_TRIGGER	Event trigger...	Released	ABAP: /FTI/CHANGE_PROJECT_STATUS				

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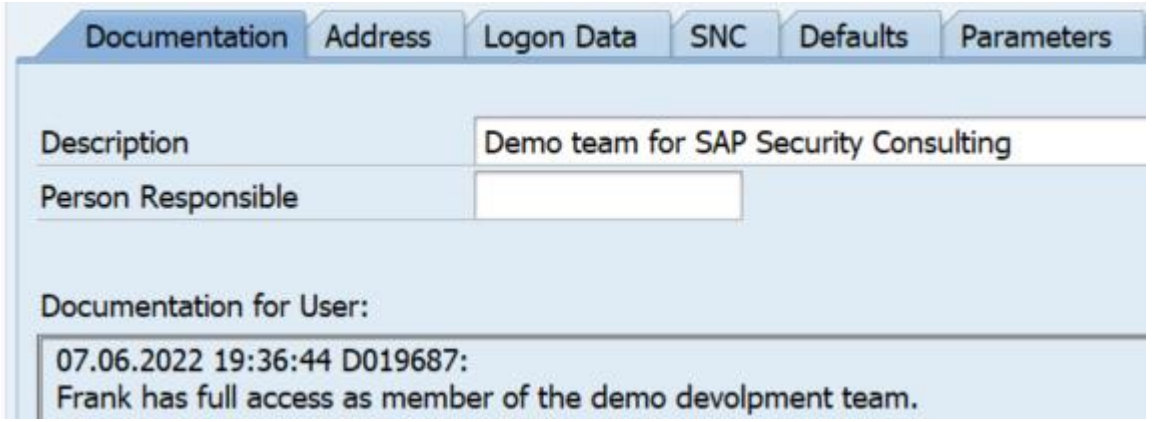
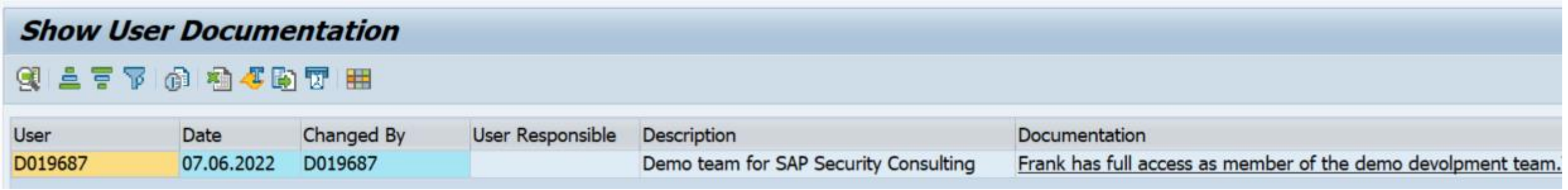
g) Note 3113345 - SUIM | Reporting for User Documentation

You can add a description to users and log documentation about changes in transaction `SU01`.

Using note 3113345 you get transaction/report `SUIM_SHOW_USDOCU` which shows this information in list and print format.

Available via Support Package as of 7.50
or implementation via note





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h) Note 3150573 - SUIM | Optimization of RSUSR_AUTH_DATA_VERSION

When you want to analyze the history of authorization data in roles you might start identifying changed roles using the SUIM transaction / report `RSSCD100_PFCG`.

Then you can use transaction `ROLE_VERS` (=report `RSUSR_AUTH_DATA_VERSION`) to obtain an overview of the versions of a specific role.

However, the result seems to be incomplete if the role was imported via a transport – which is standard for production systems.

In addition to the history resulting from the change documents, the report now also displays the times of imports and their transport requests. You can navigate to a transport request.

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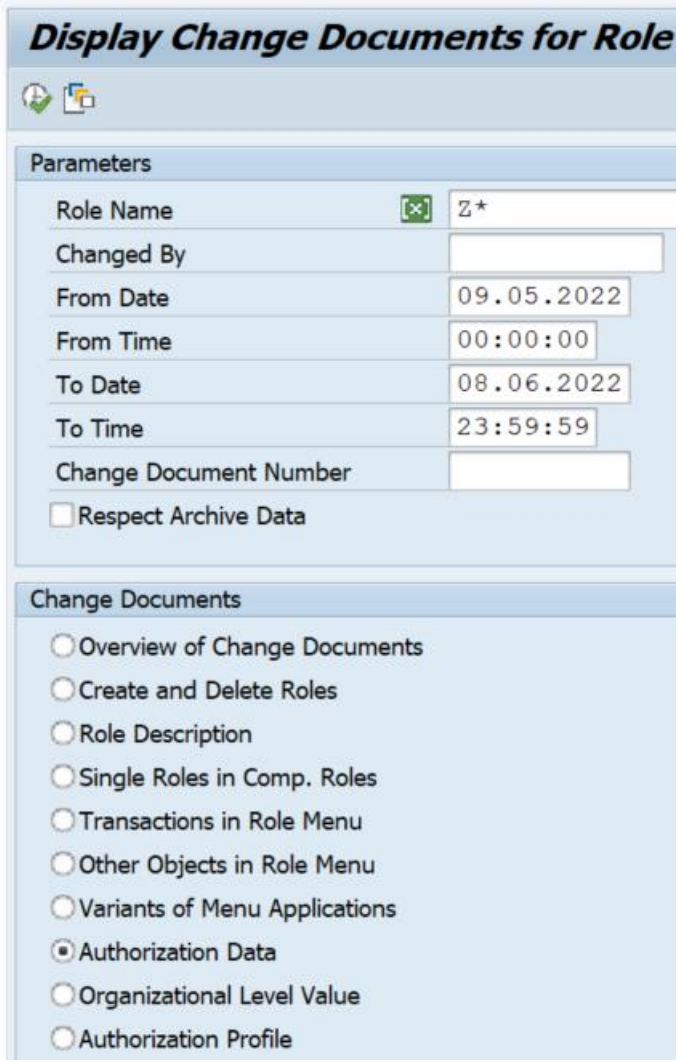
h) Note 3150573 - SUIM | Optimization of RSUSR_AUTH_DATA_VERSION



SUIM transaction / report `RSSCD100_PFCG`

Role	Date	Action	Object	Authorization	Field name	Old From...	New From...
SAP_BCA_ACCOUNTS_ADMIN	06.06.2022	Authorization deleted	B_BUPA_ATT	T_K415002801			
		Value Deleted			ACTVT	01	
		Value Deleted				02	
		Value Deleted				03	
		Value Deleted			AUTHTYP	*	
		Value Deleted			AUVAL1	*	
		Value Deleted			AUVAL2	*	
		New Authorization		T-S118017300			
		New Value			ACTVT		01
		New Value					02
		New Value					03
		New Value			AUTHTYP		*
		New Value			AUVAL1		*
		New Value			AUVAL2		*
		Authorization deleted	B_BUPA_FDG	T_K415002801			
		Value Deleted			ACTVT	01	
		Value Deleted				02	
		Value Deleted				03	
		New Authorization		T-S118017300			
		New Value			ACTVT		01
		New Value					02
		New Value					03
		New Value			FLDGR		

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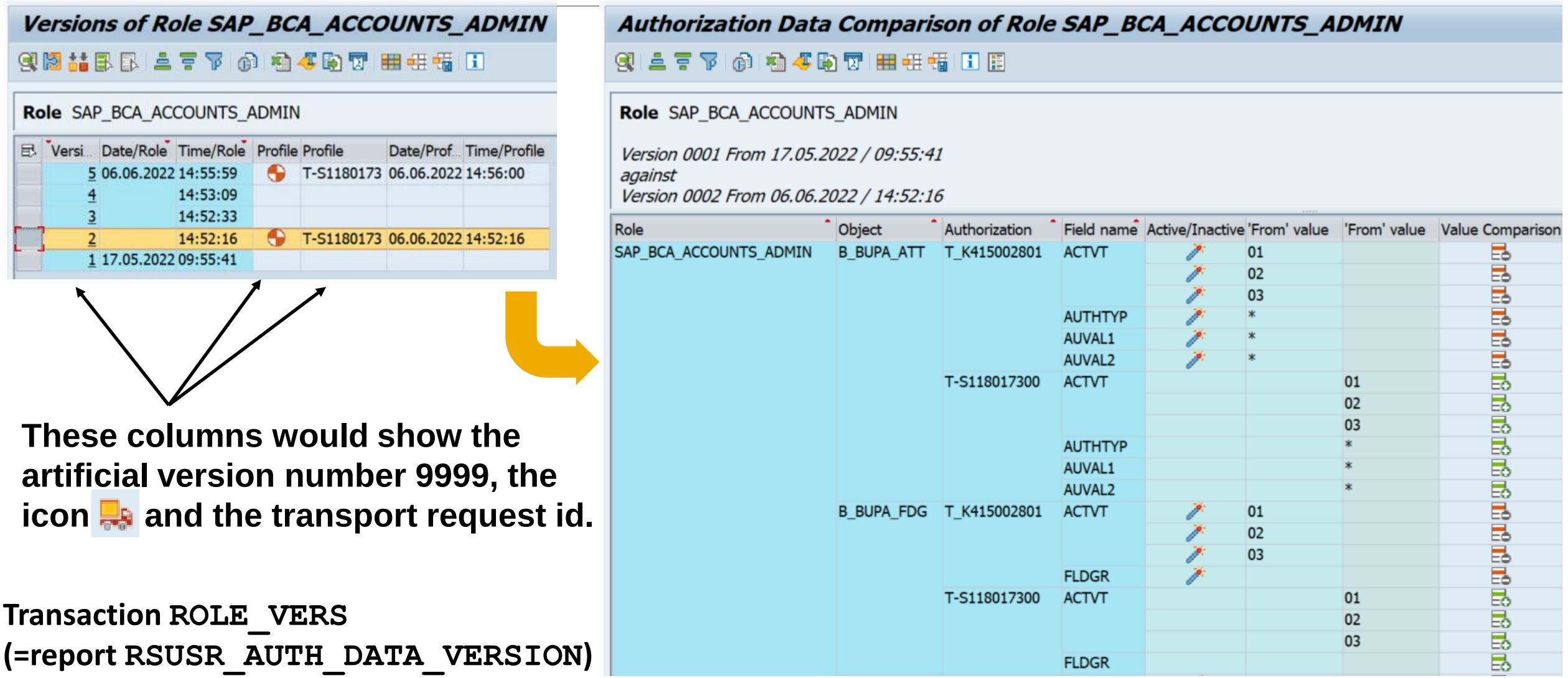
h) Note 3150573 - SUIM | Optimization of RSUSR_AUTH_DATA_VERSION



These columns would show the artificial version number 9999, the icon and the transport request id.

Transaction `ROLE_VERS`
(=report `RSUSR_AUTH_DATA_VERSION`)

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August 2022

Topics August 2022

https://wiki.scn.sap.com/wiki/display/Security/Security+Notes+Webinar+-+2022-08

Why you should really get rid of old password hashes *NOW*

Note 3202536 - EWA: “Users with Critical Authorizations” - Exclude users having SAP_ALL from all other authorization checks than the “Super User Accounts” section itself

Note 3102769 - Cross-Site Scripting (XSS) vulnerability in SAP Knowledge Warehouse

Note 2245130 - Potential bypass of unified connectivity runtime checks possible in BC-MID-RFC

Note 3213141 - Information Disclosure in SAP Landscape Management

What's New for the User Administration and Logging Check in S/4HANA On Premise (part 3)

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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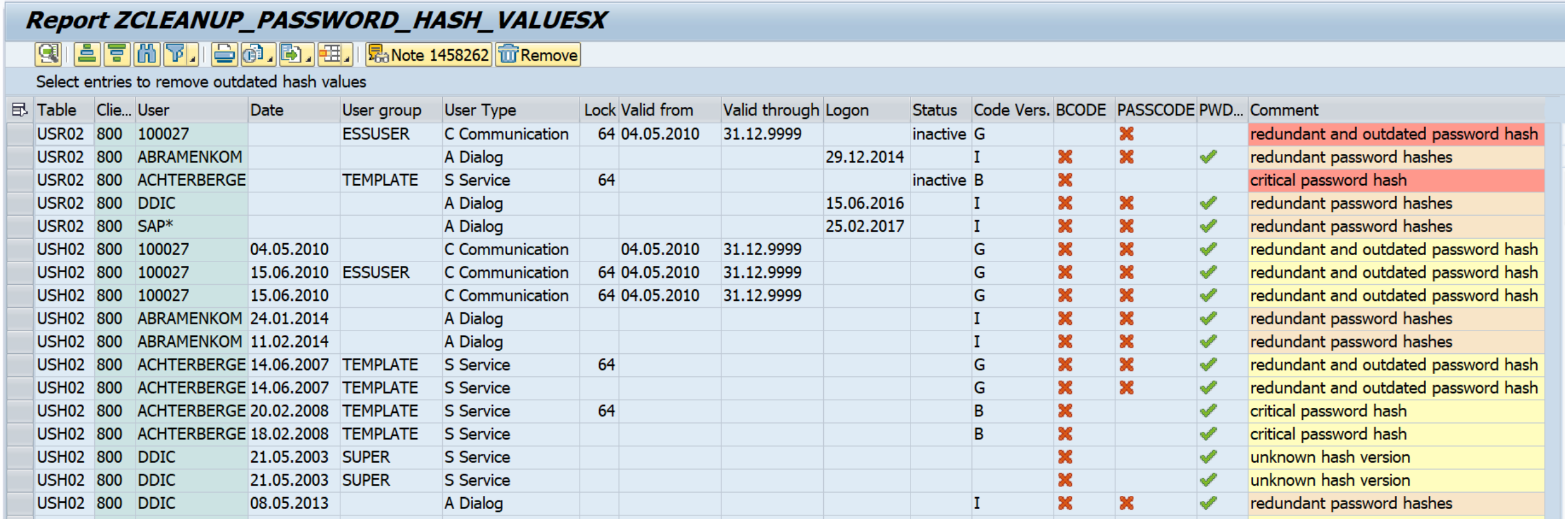
Why you should really get rid of old password hashes *NOW*

Report ZCLEANUP_PASSWORD_HASH_VALUESX – Remove weak password hash values

https://blogs.sap.com/2022/07/22/report-zcleanup_password_hash_valuesx-remove-weak-password-hash-values/



Report ZCLEANUP_PASSWORD_HASH_VALUESX

Note 1458262 | Remove

Select entries to remove outdated hash values

Table	Clie...	User	Date	User group	User Type	Lock	Valid from	Valid through	Logon	Status	Code Vers.	BCODE	PASSCODE	PWD...	Comment
USR02	800	100027		ESSUSER	C Communication	64	04.05.2010	31.12.9999		inactive	G		✗		redundant and outdated password hash
USR02	800	ABRAMENKOM			A Dialog				29.12.2014		I	✗	✗	✓	redundant password hashes
USR02	800	ACHTERBERGE		TEMPLATE	S Service	64				inactive	B	✗			critical password hash
USR02	800	DDIC			A Dialog				15.06.2016		I	✗	✗	✓	redundant password hashes
USR02	800	SAP*			A Dialog				25.02.2017		I	✗	✗	✓	redundant password hashes
USH02	800	100027	04.05.2010		C Communication		04.05.2010	31.12.9999			G	✗	✗	✓	redundant and outdated password hash
USH02	800	100027	15.06.2010	ESSUSER	C Communication	64	04.05.2010	31.12.9999			G	✗	✗	✓	redundant and outdated password hash
USH02	800	100027	15.06.2010		C Communication	64	04.05.2010	31.12.9999			G	✗	✗	✓	redundant and outdated password hash
USH02	800	ABRAMENKOM	24.01.2014		A Dialog						I	✗	✗	✓	redundant password hashes
USH02	800	ABRAMENKOM	11.02.2014		A Dialog						I	✗	✗	✓	redundant password hashes
USH02	800	ACHTERBERGE	14.06.2007	TEMPLATE	S Service	64					G	✗	✗	✓	redundant and outdated password hash
USH02	800	ACHTERBERGE	14.06.2007	TEMPLATE	S Service						G	✗	✗	✓	redundant and outdated password hash
USH02	800	ACHTERBERGE	20.02.2008	TEMPLATE	S Service	64					B	✗		✓	critical password hash
USH02	800	ACHTERBERGE	18.02.2008	TEMPLATE	S Service						B	✗		✓	critical password hash
USH02	800	DDIC	21.05.2003	SUPER	S Service							✗		✓	unknown hash version
USH02	800	DDIC	21.05.2003	SUPER	S Service							✗		✓	unknown hash version
USH02	800	DDIC	08.05.2013		A Dialog						I	✗	✗	✓	redundant password hashes

Published at Security Services Tools

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Why you should really get rid of old password hashes *NOW*

Check Configuration Store `USER_PASSWD_HASH_USAGE` in CCDB or Change Analysis or Configuration Validation to analyse the content of table `USR02` (but not of the other tables)

Store Content

Search:

History | History filter | Incl. Deleted | Deleted

History	USER_TYPE	BCODE	PASSCODE	PWDSALTEDHASH	NUM_USER	PERC_USER
1	COMMUNICATION	UNUSED	UNUSED	USED	4	36.36
1		UNUSED	USED	UNUSED	5	45.46
1		USED	UNUSED	UNUSED	2	18.18
112	DIALOG	UNUSED	UNUSED	UNUSED	21	3.03
182		UNUSED	UNUSED	USED	587	84.58
119		UNUSED	USED	UNUSED	21	3.03
158		USED	UNUSED	UNUSED	65	9.36
16	SERVICE	UNUSED	UNUSED	USED	6	46.16
16		UNUSED	USED	UNUSED	5	38.46
16		USED	UNUSED	UNUSED	2	15.38
2	SYSTEM	UNUSED	UNUSED	USED	12	70.59
2		UNUSED	USED	UNUSED	3	17.65
2		USED	UNUSED	UNUSED	2	11.76

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Note 3202536 - EWA: “Users with Critical Authorizations” – Exclude users having SAP_ALL from all other authorization checks

In the EarlyWatch Alert (EWA) section “**Users with Critical Authorizations**”, users who were assigned the **`SAP_ALL`** profile are included in all authorization checks, even though they are listed in the separate “Super User Accounts” section.

After implementing the correction of this SAP Note, users who were assigned the **`SAP_ALL`** profile are excluded from all other authorization checks than the “Super User Accounts” section itself.

The EWA Solution Finder in the SAP Support Portal shows following categories:

- **Critical authorizations, which allow to do anything** (including “Super User Accounts”)
- **Critical authorizations, which should not be used in production**
- **Critical authorizations, which should only see very limited use in production**

See note 863362 - Security checks in SAP EarlyWatch Alert, EarlyWatch and GoingLive sessions

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Note 3102769 - Cross-Site Scripting (XSS) vulnerability in SAP Knowledge Warehouse

The solution was published in December 2021

A PoC about the vulnerability was published in March 2022

KM is a standard part of Java systems, especially it's part of SAP Enterprise Portal.
Such Portals might be accessible via Internet

KM is not used anymore to publish SAP training courses but you can use it to manage own documents.

It's installed in inactive state as of Java 7.50 SP 26 but active by default in any older version.

→ Critical, therefore patching is strongly recommended

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Note 3102769 - Cross-Site Scripting (XSS) vulnerability in SAP Knowledge Warehouse

The workaround in related consulting note 3221696 suggests to disable the component "Internet Knowledge Servlet" (IKS).

How to check if KM / IKS is in use?

- **There exist an SAP Content Server on MaxDB which stores the files (`PDF`, `PPTX`, `DOCX`, `XLSX`, `HTML`, …)**
  Check the list of repositories of that content server which refer to the ABAP system

- **In the ABAP system you maintain meta data and authorizations**
  Check transaction `OACT` for categories `IWB0` / `IWB1` / `IWB1SRC` / `IWB2` / `IWB2SRC`: The repository has to be different than `SAPDEFAULT`
  Check in `SE16` if tables like `IWB0LOIO`, `IWB1LOIO` `IWB2LOIO`, `QMM_LOIO` contain more than a couple of entries

- **The AS Java (used as UI server) is connected via Java Connector (Jco) to the ABAP system**

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Note 3102769 - Cross-Site Scripting (XSS) vulnerability in SAP Knowledge Warehouse

Prove of concept https://seclists.org/fulldisclosure/2022/Mar/32 (example)
https://github.com/pondoksiber/SAP-Pentest-Cheatsheet

Let's show what the PoC does:

https://HOST/SAPIrExtHelp/random/%22%3e%3c%53%56%47%20%4f%4e%4c%4f%41%44%3d%26%23%39%37%26%23%31%30%38%26%23%31%30%31%26%23%31%31%34%26%23%31%31%36%28%26%23%78%36%34%26%23%78%36%66%26%23%78%36%33%26%23%78%37%35%26%23%78%36%64%26%23%78%36%35%26%23%78%36%65%26%23%78%37%34%26%23%78%32%65%26%23%78%36%34%26%23%78%36%66%26%23%78%36%64%26%23%78%36%31%26%23%78%36%39%26%23%78%36%65%29%3e.asp

Decode URL https://www.urldecoder.org/ (example)

```
"><SVG ONLOAD=&#97&#108&#101&#114&#116(&#x64&#x6f&#x63&#x75&#x6d&#x65&#x6e&#x74&#x2e&#x64&#x6f&#x6d&#x61&#x69&#x6e)>
```

Decode html entities https://mothereff.in/html-entities (example)

```
alert(document.domain)
```

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Note 2245130 - Potential bypass of unified connectivity runtime checks possible in BC-MID-RFC

Old note from 2016

Do not de-implement via `SNOTE` if implemented via `SNOTE`

Reason: Program `SAPMSSY1` is a central basis program

2245130 - Potential bypass of unified connectivity runtime checks possible in BC-MID-RFC

Version	16	**Type**	SAP Security Note
Language	English	**Master Language**	English
Component	BC-MID-RFC (RFC)	**Released On**	0915.0207.20162022

Symptom

UPDATE July 15, 2022: Correction instructions for the release 7.40 have been re-released to facilitate future corrections.

A bypass of the Unified Connectivity runtime check is possible in case the first user logon failed.

Other Terms

UCON, Unified Connectivity, RFC

Reason and Prerequisites

If first logon fails, Unified Connectivity applies checks of client "000".

Solution

Please implement the kernel patch level and ABAP Support Package mentioned in this SAP Note. As an alternative you may apply the Kernel patch level mentioned in this SAP Note and the ABAP correction instruction.

Caution:

1. **Do not de-implement** the ABAP corrections of this SAP Note as this may result in an error causing your system to stop working properly.
2. The ABAP corrections of this SAP Note can be implemented without the corresponding kernel patches. Without the corresponding kernel patches, they don't have any effect on your system behavior.

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Note 3213141 - Information Disclosure in SAP Landscape Management

SAP Landscape Management is a central component to manage distributed systems.
The vulnerable component is located on the managed systems (similar to the Host Agent).

This vulnerability only occurs if the steps "Change Password" or "HANA Change SYSTEMDB password" are executed on an SAP HANA system via a provisioning process or a custom process.

Neither Software Component VMC (for the central system) nor SAP ADAPTIVE EXTENSION (for the distributed component) are visible in application System Recommendations or FRUN.

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Note 3213141 - Information Disclosure in SAP Landscape Management

Actions:

1. **Install patch centrally and distribute it using LaMa to managed systems**
   see: Managing SAP Adaptive Extensions Installations
   https://help.sap.com/docs/SAP_LANDSCAPE_MANAGEMENT_ENTERPRISE/e7dead4286c545808b3bd24feee7448c/de3826afa9534da9b79617d4073acba9.html
2. **Change passwords of SAP HANA system users in system DB and in tenants**
   These system users should be deactivated anyway!
3. **Remove log files and archived log files which could contain old credentials of the system users**

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What's New for the User Administration and Logging Check in S/4HANA On Premise

Frank Buchholz, Dieter Goedel, SAP
June 14, 2022

INTERNAL – SAP and Customers Only

THE BEST RUN SAP

What's New for the User Administration and Logging Check in S/4HANA On Premise

a)	Note 1856125 - FAQ | Tools for using the Audit Information System	AIS
b)	Note 139418 - Logging of user actions (ABAP server)	Logging
c)	Note 382318 - FAQ | Function module RFC_READ_TABLE	RFC
d)	**Note 2680888 - SAL | Report for determination of differences in event parameters**	**SAL**
e)	**Note 2883981 - RSAU_READ* | anonymized display of Security Audit Log data**	**SAL**
f)	Note 3090132 - RSUSR200 | Addition of logon information from job management	User
g)	Note 3113345 - SUIM | Reporting for User Documentation	User
h)	Note 3150573 - SUIM | Optimization of RSUSR_AUTH_DATA_VERSION	User
i)	Note 3147103 - SAIS | Check of customer-specific programs	Code
j)	Note 3204960 - SAIS_SEARCH_APPL | Search for programs without transaction	TCODE

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d) Note 2680888 - SAL | Report for determination of differences in event parameters

Report `RSAU_READ_LOG_DIFF` supplements the standard functions of the transaction/report `RSAU_READ_LOG`.

In the display type "Full Event List", all events with reference to the log configuration change are displayed in accordance with the selection criteria (event definitions: `AUE`, `AUF`, `AUG`, `AUH`, `AUI`, `AUJ`, `EU5`, and `FU0`).

In the display type "Show resulting changes", selected log configuration changes (event definitions `AUF`, `AUI`, `AUJ`, and `FU0`) are displayed in accordance with the selection criteria. Log entries with identical content are summarized:
Only the first log entry is displayed, and all further pseudo changes are suppressed.

`AUE`	Audit configuration changed
`AUF`	Audit: Slot &A: Class &B, Severity &C, User &D, Client &E, &F
`AUG`	Application server started
`AUH`	Application server stopped
`AUI`	Audit: Slot &A Inactive
`AUJ`	Audit: Active status set to &1
`EU5`	Audit log data of &A was deleted (&B data records)
`FU0`	Exclusive security audit log medium changed (new status &A)

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d) Note 2680888 - SAL | Report for determination of differences in event parameters

Date	Time	AS Instance	Clie...	Message I...	Char	Peer Address	Message Text
10.05.2022	08:42:12	runsap_zb_84		AUF			Audit: Slot 1: Class 0, Severity 0, User * , Client * , A0B0C0D0E0F0A1B1C1D1E1F1G1A2B2C2D2E2F2G2A3...
		runsap_zb_84					Audit: Slot 2: Class 111, Severity 5, User (G+) A* , Client 000,
		runsap_zb_84					Audit: Slot 3: Class 0, Severity 0, User * , Client * , F0E1F1G
	12:33:45	runsap_zb_84	000	AUF	THOMAS...	10.239.60.165	Audit: Slot 1: Class 255, Severity 2, User SAP#* , Client * ,
		runsap_zb_84	000		THOMAS...	10.239.60.165	Audit: Slot 2: Class 255, Severity 2, User * , Client 066,
		runsap_zb_84	000		THOMAS...	10.239.60.165	Audit: Slot 3: Class 0, Severity 0, User * , Client * , A0B0C0D0E0F0A1B1C1D1E1F1G1A2B2C2D2E2F2G2A3...
12.05.2022	19:34:03	ldciyi3_YI3_33		AUF			Audit: Slot 1: Class 0, Severity 0, User * , Client * , A0B0C0D0E0F0A1B1C1D1E1F1G1A2B2C2D2E2F2G2A3...
		ldciyi3_YI3_33					Audit: Slot 2: Class 111, Severity 5, User (G+) A* , Client 000,
		ldciyi3_YI3_33					Audit: Slot 3: Class 0, Severity 0, User * , Client * , F0E1F1G1E2F2E3E5FAFBAEAFAGAHAIAJCLCMCNCOCP...
	19:34:04	ldai1yi3_YI3_33		AUF			Audit: Slot 1: Class 0, Severity 0, User * , Client * , A0B0C0D0E0F0A1B1C1D1E1F1G1A2B2C2D2E2F2G2A3...
		ldai1yi3_YI3_33					Audit: Slot 2: Class 111, Severity 5, User (G+) A* , Client 000,
		ldai1yi3_YI3_33					Audit: Slot 3: Class 0, Severity 0, User * , Client * , F0E1F1G1E2F2E3E5FAFBAEAFAGAHAIAJCLCMCNCOCP...

Full event list

Date	Time	AS Instance	Clie...	Message I...	Char	Peer Address	Message Text
10.05.2022	08:42:12	runsap_zb_84		AUF			Audit: Slot 1: Class 0, Severity 0, User * , Client * , A0B0C0D0E0F0A1B1C1D1E1F1G1A2B2C2D2E2F2G2A3...
		runsap_zb_84					Audit: Slot 2: Class 111, Severity 5, User (G+) A* , Client 000,
		runsap_zb_84					Audit: Slot 3: Class 0, Severity 0, User * , Client * , F0E1F1G
	12:33:45	runsap_zb_84	000	AUF	THOMAS...	10.239.60.165	Audit: Slot 1: Class 255, Severity 2, User SAP#* , Client * ,
		runsap_zb_84	000		THOMAS...	10.239.60.165	Audit: Slot 2: Class 255, Severity 2, User * , Client 066,
		runsap_zb_84	000		THOMAS...	10.239.60.165	Audit: Slot 3: Class 0, Severity 0, User * , Client * , A0B0C0D0E0F0A1B1C1D1E1F1G1A2B2C2D2E2F2G2A3...
12.05.2022	19:34:03	ldciyi3_YI3_33		AUF			Audit: Slot 1: Class 0, Severity 0, User * , Client * , A0B0C0D0E0F0A1B1C1D1E1F1G1A2B2C2D2E2F2G2A3...
		ldciyi3_YI3_33					Audit: Slot 2: Class 111, Severity 5, User (G+) A* , Client 000,
		ldciyi3_YI3_33					Audit: Slot 3: Class 0, Severity 0, User * , Client * , F0E1F1G1E2F2E3E5FAFBAEAFAGAHAIAJCLCMCNCOCP...

Resulting changes

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e) Note 2883981 - RSAU_READ* | anonymized display of Security Audit Log

Note 2883981 provides transaction `RSAU_READ_LOG_ADM` which shows pseudonymized user names and terminal names based on a generated hash code. Within a report, a user name or terminal ID is always displayed with the same pseudonym. (The hash code changes once per week.)

Use this transaction for general administration tasks and risk analysis without having access to personal data.
You can use the report `RSAU_READ_LOG_ADM` for pseudonymized evaluation in a background job.

Users that are not to be pseudonymized can be defined in the productive exception list `SAL_SHOW_IDENTITY`.
You cave to activate and maintain this exception list in transaction `SLDW` or `SLWD_COMPARE`.

Transaction `RSAU_READ_LOG` is unchanged. Use it if you need access to personal data, too.
In the authorization concept, the two tools are distinguished by the required start authorization for authorization object `S_TCODE`.

Available via Support Package as of 7.50 or implementation via note.

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e) Note 2883981 - RSAU_READ* | anonymized display of Security Audit Log

Transaction / report `RSAU_READ_LOG_ADM` pseudonymizes user names and terminal of personal users

SAP System	Cl.	Message I...	User	Terminal Name	Source Transaction	Audit Log Msg. Text
S41	100	AU3	469120C0B0E86...	F48D27BB567...	SESSION_MANAGER	Transaction SESSION_MANAGER started.
S41	100	AU3			SESSION_MANAGER	Transaction RSAU_READ_LOG started.
S41	100	AU3			SESSION_MANAGER	Transaction RSAU_CONFIG started.
S41	100	BU4			RSAU_CONFIG	Dynamic ABAP code: Event -, event type G!, check total -
S41	100	AUE			S000	Audit configuration changed
S41	100	AUI			S000	Audit: Slot 3 Inactive
S41	500	BU4	DDIC		S000	Dynamic ABAP code: Event -, event type G!, check total -
S41	500	BU4			S000	Dynamic ABAP code: Event -, event type G!, check total -
S41	500	BU0			S000	RAL configuration access: Action: R, type: S, name
S41	500	DU9			S000	Generic table access call to /IWXBE/C_EVTSTAT with activity 02 (auth. check: passed)
S41	500	DU9			S000	Generic table access call to /IWXBE/C_EVENT with activity 02 (auth. check: passed)
S41	000	BU4			S000	Dynamic ABAP code: Event -, event type G!, check total -
S41	500	BU4			S000	Dynamic ABAP code: Event -, event type G!, check total -
S41	500	DU9			S000	Generic table access call to /IWXBE/SU_ERRLOG with activity 02 (auth. check: passed)
S41	100	DU9	F7D46E4143AA...		S000	Generic table access call to /IWFND/C_V4_RSAG with activity 03 (auth. check: passed)
S41	100	BU4	SJOBREPO		S000	Dynamic ABAP code: Event -, event type G!, check total -
S41	100	DU9			S000	Generic table access call to /IWXBE/C_EVTSTAT with activity 02 (auth. check: passed)
S41	100	DU9			S000	Generic table access call to /IWXBE/C_EVENT with activity 02 (auth. check: passed)
S41	100	BU4			S000	Dynamic ABAP code: Event -, event type G!, check total -
S41	100	BU0			S000	RAL configuration access: Action: R, type: S, name
S41	100	BU4			S000	Dynamic ABAP code: Event -, event type G!, check total -

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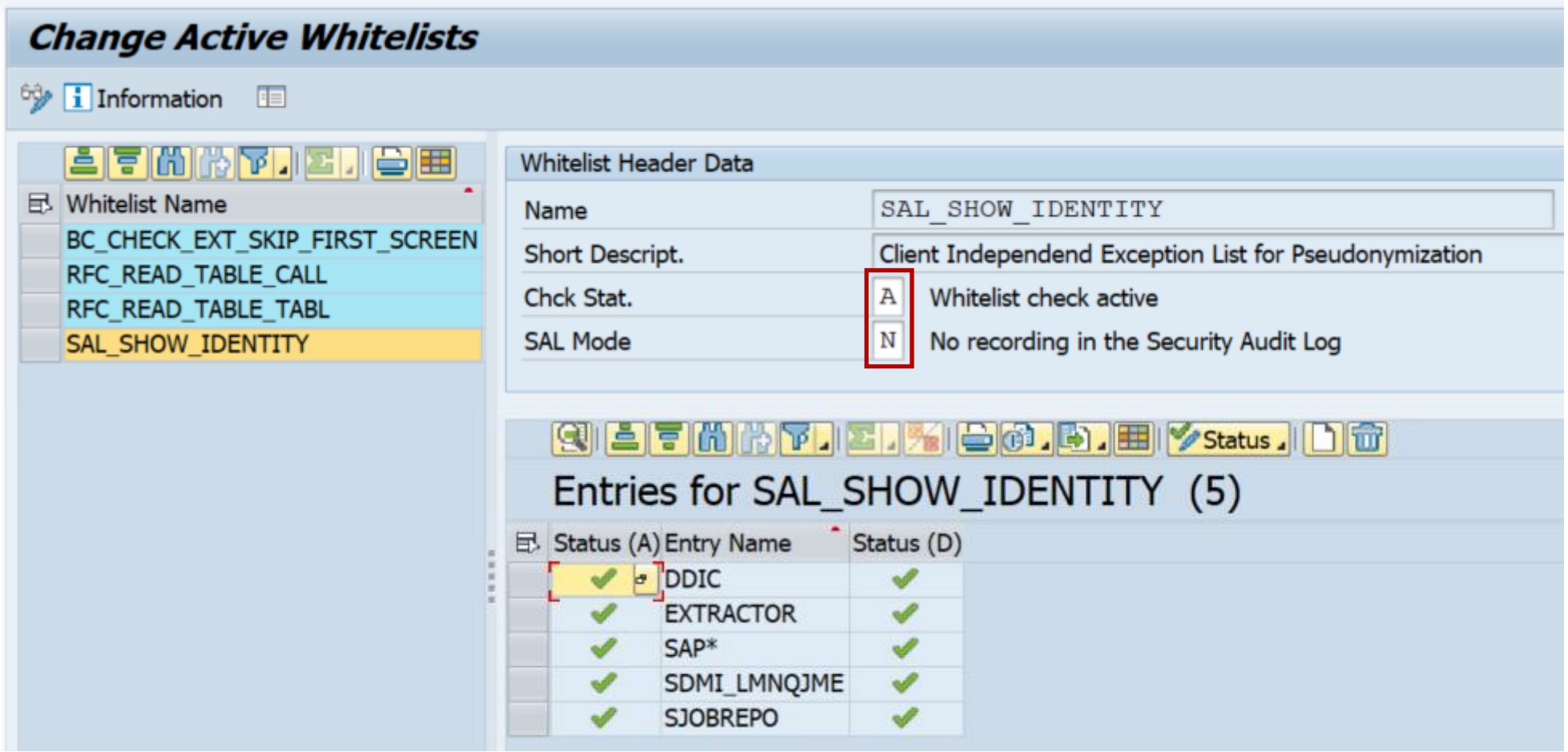
e) Note 2883981 - RSAU_READ* | anonymized display of Security Audit Log

Transactions **SLDW** and **SLDW_COMPARE** for access control list **SAL_SHOW_IDENTITY**



Check is active but no additional SAL logging is required.

Some more user names are added to the exception list (`DDIC` and `SAP*` are the default values)

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July 2022

Topics July 2022

https://wiki.scn.sap.com/wiki/display/Security/Security+Notes+Webinar+-+2022-07

How to download the SAP Security Patch Day Blog

Note 3219457 - Call to action: Urgent update of the SSO certificate for SAP Support users

Note 2726124 - Missing Authorization Check in multiple components under SAP Automotive Solutions

Notes 3221288 3213279 3203079 3194361 - Vulnerabilities in SAP BusinessObjects

Notes 3150454 3150463 - Information Disclosure vulnerability in SAP NetWeaver Application Server ABAP and ABAP Platform

Note 3153525 - Improvement of SecureStoreFS encryption algorithms

What's New for the User Administration and Logging Check in S/4HANA On Premise (part 2)

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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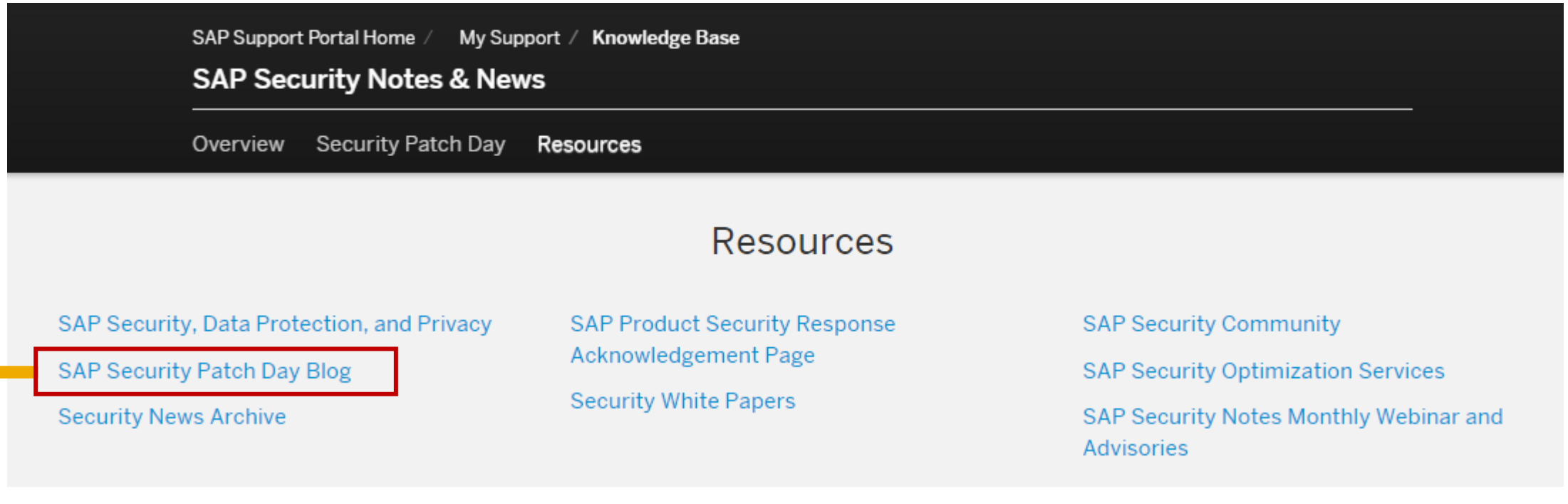
How to download the SAP Security Patch Day Blog

You find the SAP Security Patch Day Blog at https://support.sap.com/securitynotes



https://dam.sap.com/mac/app/e/pdf/preview/embed/ucQrx6G?ltr=a&rc=10

You can download the corresponding PDF file as well: https://d.dam.sap.com/a/ucQrx6G

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Note 3219457 - Call to action: Urgent update of the SSO certificate for SAP Support users

Environment:

You are using certificates to authenticate a SAP support user for following support connections:

- **R/3 Support with SNC/SSO according to note 2562127**
- **HTTP Connect w. SNC/SSO according to note 2562154**

SAP has established and operates a new dedicated PKI to allow Secure Network Connections (SNC) and Single Sign On (SSO) to access customer systems remotely. This CA only issues temporary generated certificates for the user `SAPSUPPORT` with a validity of 8 hours.

This new secure remote access scenario is part of the SAP standard support package and eliminates maintaining the target user credentials in the Customer Remote Logon Depot.

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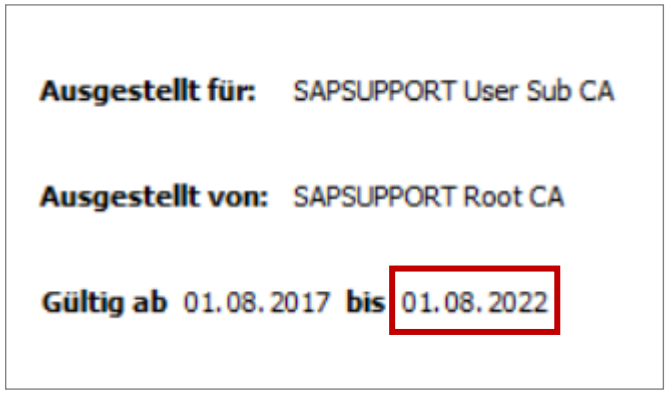
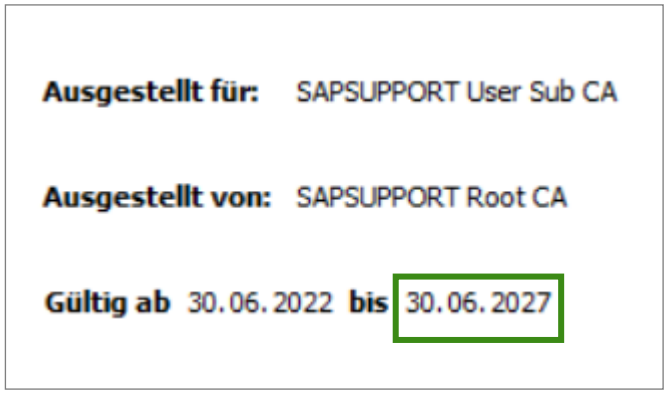
Note 3219457 - Call to action: Urgent update of the SSO certificate for SAP Support users

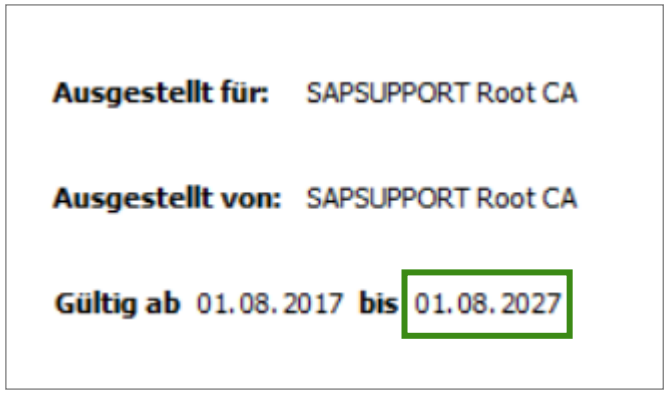
The currently used "SAPSUPPORT User Sub CA" certificate will expire August 1st, 2022!
The currently used "SAPSUPPORT Root CA" certificate will expire August 1st, 2027

SAPSUPPORT User SubCA





SAPSUPPORT Root CA



- Import the sub CA certificate **SAPSUPPORT User Sub CA** into both PSE stores **SNC SAPCryptolib** (for SAPGUI) and **SSL-Server Standard** (for HTTP connections)

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Note 2726124 - Missing Authorization Check in multiple components under SAP Automotive Solutions

New authorization check for `V_VBAK_VKO`, `V_VBAK_AAT` (and some restrictions concerning external remote calls for internal functions) in various remote enabled function modules of ECC-DIMP / S4CORE

The solution was published with Support Packages in 2019

→ No action required now (assuming you already got the Support Package)

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Notes 3221288 3213279 3203079 3194361 3169239 3167430 Vulnerabilities in SAP BusinessObjects

Note 3221288 just shows the corrected versions in the text:

4.2 SP09 Patch 9, 4.3 SP01 and above

Note 3213279 just show an Support Package Patch for release 4.2 (yes, that is correct for this note)

Notes 3203079, 3194361, 3169239 and 3167430 show all corrected Support Packages Patches section:

Support Package Patches

Software Component	Support Package	Patch Level	Download
SBOP BI PLATFORM SERVERS 4.2	SP009	000900	
SBOP BI PLATFORM SERVERS 4.3	SP001	001300	
	SP002	000400	
	SP003	000000	

- **On release 4.2 you get the correction in the same version SP09 patch 900**
  On release 4.3 you require patches, too

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Notes 3150454 3150463 - Information Disclosure vulnerability in SAP NetWeaver Application Server ABAP and ABAP Platform

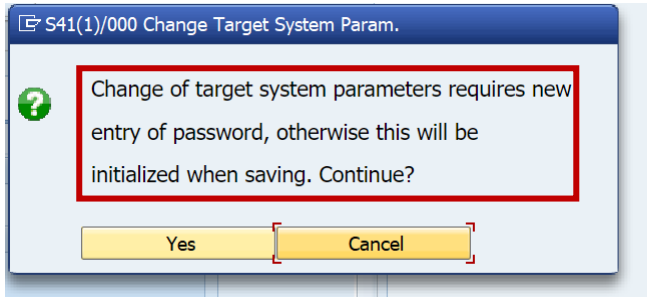
Both notes change transaction SM59:

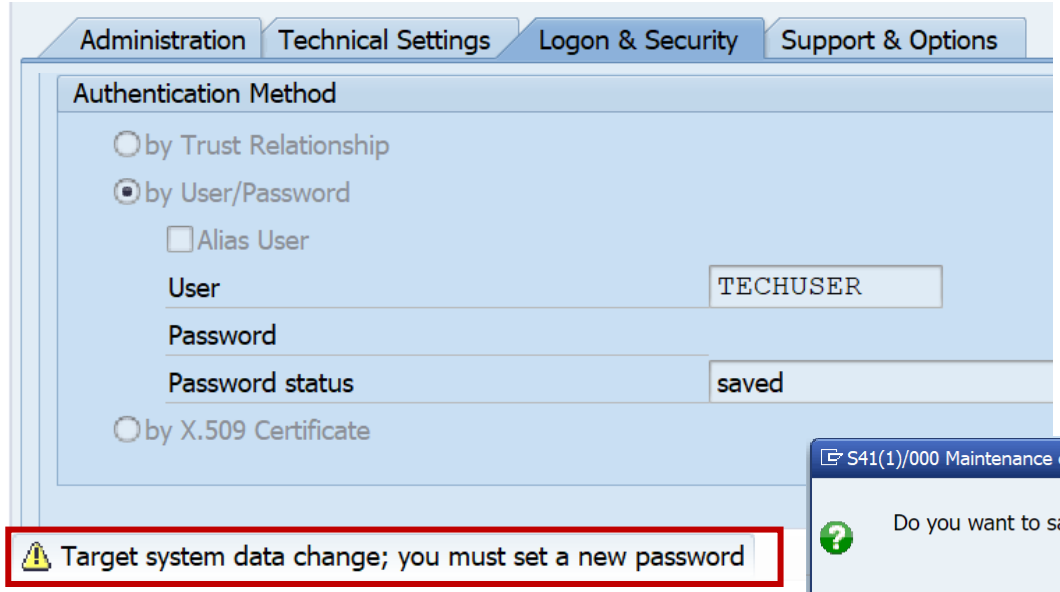
You have to enter the password of a technical user after changing target system related data:

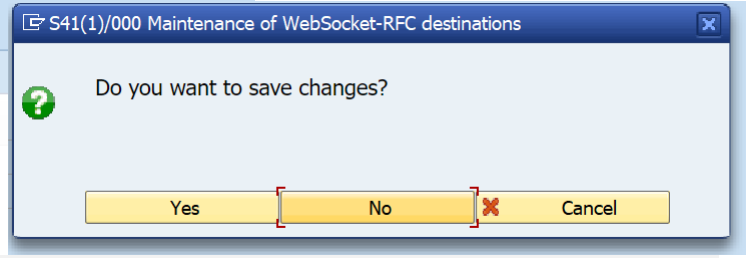
Note 3150454 deals with type 3

and 3150463 with type W destinations.

Cancel saving if you do not have the password available!







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Note 3153525 - Improvement of SecureStoreFS encryption algorithms

The Secure Store in the File System of SAP NetWeaver AS Java is using a legacy algorithm for encrypting data. This algorithm is deprecated and must be replaced with a stronger one.

Encrypted data of older systems, performing an SP update or upgrade to 7.50 SP 24 or higher, will not be migrated automatically during the SUM process.

Follow these steps:

- Stop the Java cluster
- Create a database backup
- Open the Config Tool `<AS_Java_install_dir>\configtool\configtool.bat`
- Go to "`secure store`" section and choose "Change Key Phrase"
- Enter a keyphrase and choose the encryption algorithm. AES256 is the default algorithm.
  If *JCE unlimited cryptography* is not installed, only AES128 algorithm will be available
- Click OK, then 'Apply changes' button and wait for the encryption process to finish
- Make sure the message "**The migration of the key phrase of the Secure Store is performed successfully.**" appeared, before you close the window.
- Start the Java cluster

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Note 3153525 - Improvement of SecureStoreFS encryption algorithms

How to confirm that the reencryption has been applied successfully:

a) You got files `secstore.bak` and `Reencrypt.key` - these files are your backup of the old keyphrase

b) check the update time of file `SecStore.key` in folder `\usr\sap\<SID>\SYS\global\security\data`

c) Check the version shown in this file:

7.50.000.005 - AES256

7.50.000.004 - AES128

7.00.000.001 - 3DES

See also:

KBA 1683616 - Configtool Key phrase change: AS Java doesn't start

KBA 1895736 - Check if secure store keyphrase is correct

KBA 2126229 - Recreating the SecStore.properties and SecStore.key for 7.3/7.4/7.5 J2EE NetWeaver System

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What's New for the User Administration and Logging Check in S/4HANA On Premise

Frank Buchholz, Dieter Goedel, SAP
June 14, 2022

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What's New for the User Administration and Logging Check in S/4HANA On Premise

a)	Note 1856125 - FAQ | Tools for using the Audit Information System	AIS
b)	Note 139418 - Logging of user actions (ABAP server)	Logging
c)	**Note 382318 - FAQ | Function module RFC_READ_TABLE**	**RFC**
d)	Note 2680888 - SAL | Report for determination of differences in event parameters	SAL
e)	Note 2883981 - RSAU_READ* | anonymized display of Security Audit Log data	SAL
f)	Note 3090132 - RSUSR200 | Addition of logon information from job management	User
g)	Note 3113345 - SUIM | Reporting for User Documentation	User
h)	Note 3150573 - SUIM | Optimization of RSUSR_AUTH_DATA_VERSION	User
i)	Note 3147103 - SAIS | Check of customer-specific programs	Code
j)	Note 3204960 - SAIS_SEARCH_APPL | Search for programs without transaction	TCODE

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c) Note 382318 - FAQ | Function module RFC_READ_TABLE

Note 382318 - FAQ | Function module RFC_READ_TABLE

Note 2246160 - Enhancement RFC_READ_TABLE (7.40+)

```
* extended logic with note 2246160                          (27.04.2021)
* - check against system access rule RFC_READ_TABLE_TABL for table name (transaction SLDW)
* - check against system access rule RFC_READ_TABLE_CALL for table name (transaction SLDW)
* - SQL-Query check including SAL event EUU + raise TABLE_NOT_AVAILABLE
* - new output format string line (no fixed column length)
* - sort option for stable access to HANA
* - ignore STRING and XSTRING in DATA output
* - STRING/XTSTRING/Type P are supported in ET_DATA
```

Note 3139000 - RFC_READ_TABLE | Column order in results table

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c) Note 382318 - FAQ | Function module RFC_READ_TABLE

Authorization Concept

- Function `RFC_READ_TABLE` is the only member of function group **`SDTX`**. To avoid the unwished (local) start via the workbench toolset, no user should be granted for **`S_DEVELOP`** with **`OBJTYPE`** = **`FUGR`**, **`OBJNAME`** = **`SDTX`**, **`ACTVT`** = **`16`**.
- When the function is called via RFC, the authority check against object **`S_RFC`** with **`RFCTYPE`** = **`FUGR`**, **`RFC_NAME`** = **`SDTI`**, **`ACTVT`** = **`16`** or **`RFCTYPE`** = **`FUNC`**, **`RFC_NAME`** = **`RFC_READ_TABLE`**, **`ACTVT`** = **`16`**) will be processed.
- Inside the business logic of that function module, the authority check for generic table access will be checked against authorization objects **`S_TABU_DIS`** or **`S_TABU_NAM`** (See note 1434284 for more details).

Blocking System Access

- To block or allow access to function **`RFC_READ_TABLE`** you should implement note 2246160. As of that version you can control the list of external "visible" tables via transaction **`SLDW`** (FAQ Note 1922712) and the application access rules **`RFC_READ_TABLE_TABL`** and **`RFC_READ_TABLE_CALL`**. Please remark, only the settings of the active access rule take effect for access.
- To monitor the effect of the access rule you should activate the SAL recording in **`SLDW`** and SAL. Take care about the events **`DUL`**, **`DUM`** and **`DUN`**.

Access Monitoring

- As of the program version of Note 1539105 you should use the Security Audit Log (SAL) to get check your system regarding generic table access. Take care that at least for all authorized user, the Security Audit Log Event **`CUZ`** is activated for recording.
- Use transaction **`ST03N`** to check the current usage of this function module and check if that are the supposed usage scenarios.
- Use the where-used-search in transaction **`SE80`** to get an overview about the static usage of **`RFC_READ_TABLE`** in current ABAP sources.

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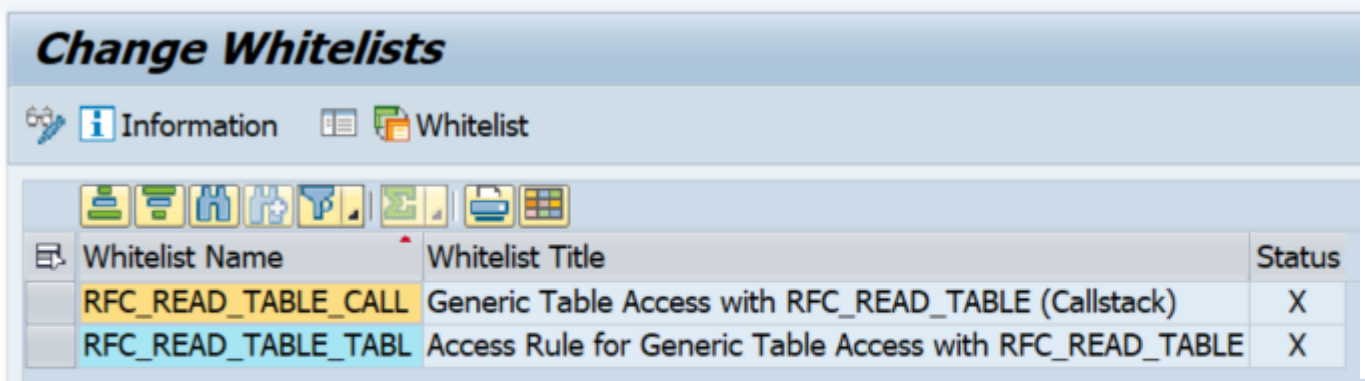
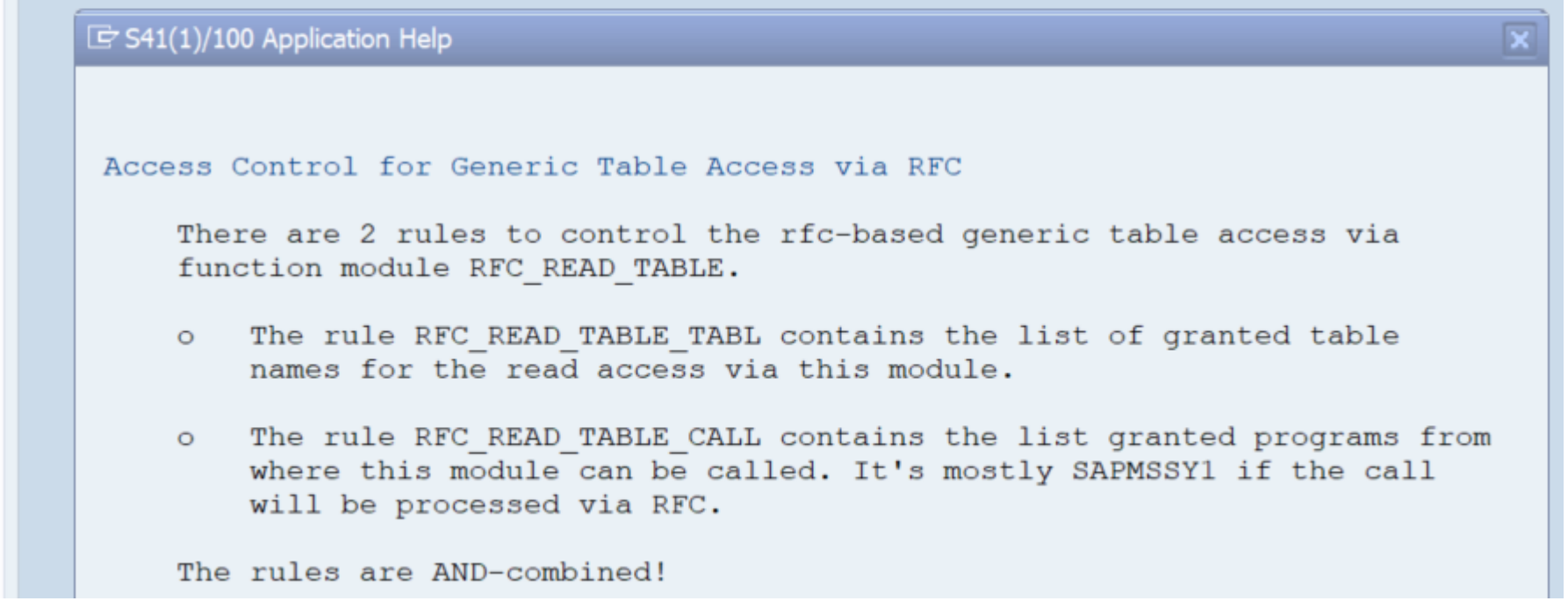
c) Note 382318 - FAQ | Function module RFC_READ_TABLE





Transaction `SLDW_COMPARE`

For access control lists
`RFC_READ_TABLE_TABL`
`RFC_READ_TABLE_CALL`

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June 2022

Topics June 2022

https://wiki.scn.sap.com/wiki/display/Security/Security+Notes+Webinar+-+2022-06

Security Optimization Service for SAP Business Technology Platform (BTP)

System Recommendations - Recommended notes and KBAs

Note 3158375 - Improper Access Control of SAProuter for SAP NetWeaver and ABAP Platform

Note 3104349 - Missing authorization check in S/4HANA finance for advanced payment management

Note 3043532 - Web Dynpro application opens always in Internet Explorer (IE11) when called from SAPGUI

What's New for the User Administration and Logging Check in S/4HANA On Premise (part 1)

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Security Optimization Service for SAP Business Technology Platform (BTP)

Blog: New Security Optimization Service Continuous Quality Check for SAP Business Technology Platform (CQC SOS for BTP)

https://blogs.sap.com/2022/05/05/new-security-optimization-service-continuous-quality-check-for-business-technology-platform-cqc-sos-for-btp/

The SOS for the SAP Business Technology Platform provides a security assessment of those security-relevant configurations and authorization assignments which are in the responsibility of the customer.

It covers all layers of the SAP Business Technology Platform (global account, directory, subaccount/organization and space) and focuses on reviewing the platform aspects including but not limited to: application and service authorizations, user and role management for platform and business users, trust configuration, API access and audit log setup.

Security Optimization Service - Sample Report for SAP BTP

Note 696478 - SAP Security Optimization: Preparation

How to request the service?

- Create an incident under component SV-BO-REQ (note 1296527) or
- Contact the SAP Enterprise Support Advisory team via our Customer Interaction Center (CIC)

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System Recommendations
Recommended notes and KBAs

Request access to these Pilot notes via ticket on SV-SMG-SR

Note 3116601 - Long runtime of system recommendations job when there is invalid RFC connection

Workaround correction to limit the timeout to 3 seconds per failing connection

However, you should repair the configuration instead, see application log (Transaction `SLG1` for `AGS_SR`):

Type	Message Text
	System A24~ABAP: calculate from 20220601 to 20220617
	Error to get RFC destination defined for the technical system WNX~ABAP

Note 3199477 - Fallback for kernel information in system recommendations

New fallback mechanism for kernel information in system recommendations in case kernel information is not available in LMDB or kernel data in LMDB is obsolete: System Recommendations will try to read kernel information directly from ABAP managed system via RFC.

If the fallback is used you find shows messages like these in the application log (Transaction `SLG1` for `AGS_SR`):

```
System &1: LMDB kernel information not available, read via RFC &2
System &1: LMDB kernel patch level &2, read via RFC &3 patch level &4
```

Type	Message Text
	Read RFC destination SM_FQ7CLNT000_READ is used for the ABAP technical system FQ7~ABAP
	System FQ7~ABAP: kernel information not availablein LMDB, read via RFC SM_FQ7CLNT000_READ

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System Recommendations
Recommended notes and KBAs

Note 3058231 - SysRec: Job downloads notes only once a day
Useful if you want to refresh the result list within a day.

KBA 3105490 - Recommendation of job frequency of Job SM:SYSTEM RECOMMENDATIONS
Re-schedule the job `SM:SYSTEM RECOMMENDATIONS` daily after midnight Walldorf time (=time zone CET) because most security notes get published on 2nd Tuesday per month at midnight automatically

Note 3134903 - SysRec 7.2: Enhance system authorization check in Note Overview Page
Required if you have defined restrictions on user access to system via authorization object `AI_LMDB_OB`

Note 3191942 - SysRec: Updated flag of note is back after clicking the Refresh button
Improve processing of updated (republished) notes

Note 3196680 - The release of kernel component is missing in configuration validation report
Correction for missing release information of some kernel notes

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System Recommendations
Troubleshooting

KBA 2449853 - SolMan 7.2: How to clear the SysRec buffer to refresh the calculation
Clear buffer manually if out of sync

KBA 3000603 - Note count in System Overview page is inconsistent to the Note count in Note Overview
Explanation that the statistics get updated by the System Recommendations job

KBA 3191401 - Old SIDs displayed in SysRec CSV export
Decommission old systems manually

KBA 3195616 - Invalid kernel notes recommended in System Recommendations
Explanation that only full Kernel updates are recognizes by System Recommendations

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Note 3158375 - Improper Access Control of SAProuter for SAP NetWeaver and ABAP Platform

SAProuter configurations are vulnerable when a saprouttab entry of type `P` or `S` exists with

`P/S <source-host> <dest-host> <dest-service> <password>`

- **a wildcard (`*`) for the destination host `<dest-host>`, and**
- **either a wildcard (`*`) or saprouter's own port number (`3299` by default) for the destination port `<dest-service>`.**

Note 1895350 - Secure configuration of SAProuter

- ✓ Maintain only necessary connections in the table. Be as restrictive as possible
- ✓ Do not use wildcards (`*`) for the destination host and the destination port in `P` or `S` lines
- ✓ If possible, use `S` (secure) instead of `P` (permit) for all positive entries
- ✓ Maintain prohibition rule `D * * * *` (deny anything else) explicitly as the last entry in the table
- ✓ Prevent connections of the SAProuter to itself (loopback, option `-X`), see note 1853140
- ✓ Activate SAProuter logging (options `-G -J -V -E`) to be able to reproduce connections

See chapter SAProuter Options - Reference

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SAProuter

You find SAProuter Security Notes like all other Security Notes on https://support.sap.com/notes with Document type = SAP Security Notes

Let's assume we can find the name SAPROUTER in the short text of basis notes – but as there might be written as SAP ROUTER let's search for "router" giving following result:

Note 3158375 - Improper Access Control of SAProuter	14.06.2022
Note 2622434 - Information disclosure relating to password in SAProuter	10.07.2018
Note 2037492 - Potential denial of service in SAP Router	14.10.2014
Note 1986895 - Potential disclosure of information in SAProuter	08.04.2014
Note 1853140 - Managing SAProuter from external host	12.11.2013
Note 1820666 - Potential remote code execution in SAProuter	08.05.2013
Note 1663732 - Potential information disclosure relating to SAProuter	03.08.2012

You get the same list if you search for application component BC-CST-NI

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Note 3158375 - Improper Access Control of SAProuter for SAP NetWeaver and ABAP Platform

How to check the version of SAProuter?

Command `saprouter -v` shows the kernel release and patch

For the local SAProuter of an ABAP system you can use report `RSBDCOS0` :

```
$(DIR_BINARY)/saprouter -v
```

Required versions from SAP Software Downloads:
https://launchpad.support.sap.com/#/softwarecenter/search/SAPROUTER

722 patch 1119 from 20.05.2022
753 patch 1011 from 08.04.2022 (recommended)

```
SAProuter information

kernel release              749
kernel make variant         749_REL
compiled on                 Linux GNU SLES-11 x86_64
compiled for                64 BIT
compilation mode            UNICODE
compile time                Mar  5 2017 02:57:15
update level                0
patch number                200
source id                   0.200
```

The command `saprouter -l` shows the corresponding build number 40.4:

```
Wed Jun 22 10:02:56 2022
SAP Network Interface Router, Version 40.4
```

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Note 3104349 - Missing authorization check in S/4HANA finance for advanced payment management

Component: FIN-FSCM-PF
Priority: low

Reason and Prerequisites
Ensure the Product 'SAP Advanced Payment Management' is licensed and in use in your systems.
Do not install the note, if you are not using the product.
There is a high number of dependent notes to be installed, if you are running on a low patch level.

The addition **FOR TESTING** is used to defined a class as a test class for the ABAP Unit tool.

The source code in a test class is not part of the production code of the program and is **not generated in production systems** (controlled using the profile parameter **abap/test_generation**).

```
    METHODS:
      key_mapping FOR TESTING,
*>>>> START OF DELETION <<<<<
      execute FOR TESTING.
*>>>> END OF DELETION <<<<<<<

*>>>> START OF INSERTION <<<<<
      execute FOR TESTING,
      delete_entity for testing.
*>>>> END OF INSERTION <<<<<<
```

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Note 3043532 - Web Dynpro application opens always in Internet Explorer (IE11) when called from SAPGUI

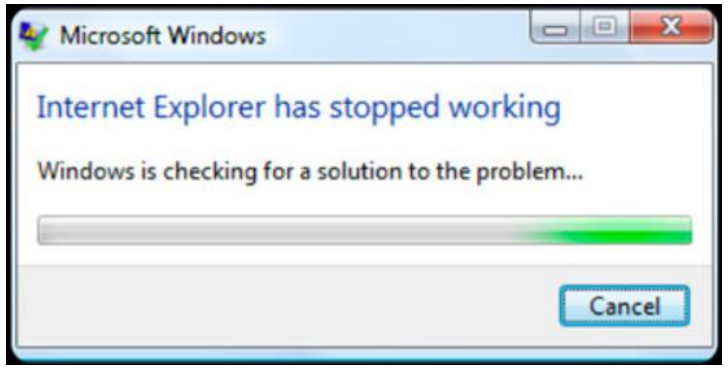
Starting with SAP_UI 7.56 IE11 will no longer be supported by Web Dynpro ABAP

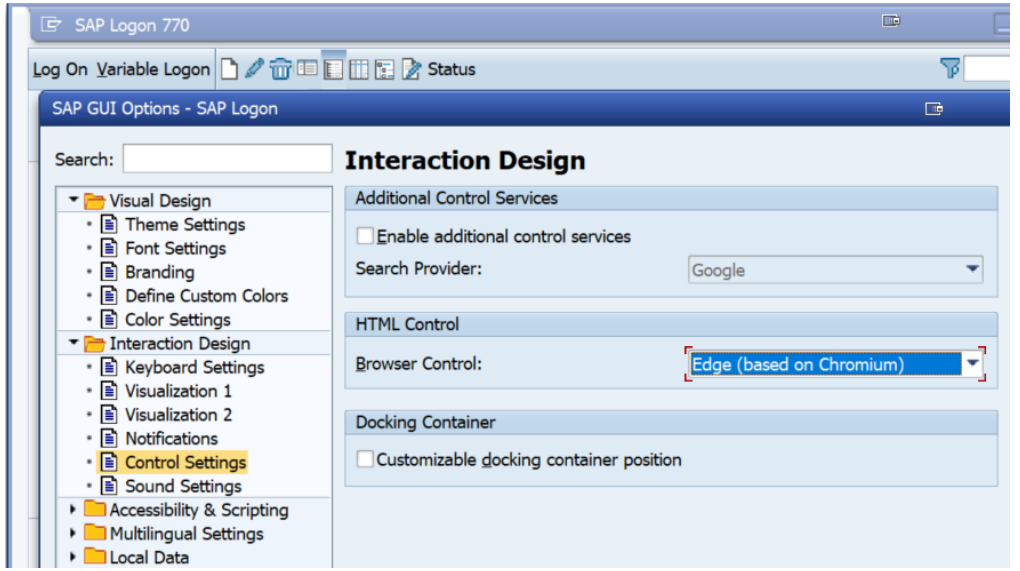
Get SAP Logon 770

See https://blogs.sap.com/2021/01/27/sap-gui-for-windows-7.70-new-features-lifecycle-information/

Activate Edge (Chromium) in the settings:
Options → Interaction Design → Control Settings HTML Control

Additionally WEBVIEW 2 must be installed as advised in note 2796898.





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What's New for the User Administration and Logging Check in S/4HANA On Premise

Frank Buchholz, Dieter Goedel, SAP
June 14, 2022

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What's New for the User Administration and Logging Check in S/4HANA On Premise

a)	Note 1856125 - FAQ | Tools for using the Audit Information System	AIS
b)	Note 139418 - Logging of user actions (ABAP server)	Logging
c)	Note 382318 - FAQ | Function module RFC_READ_TABLE	RFC
d)	Note 2680888 - SAL | Report for determination of differences in event parameters	SAL
e)	Note 2883981 - RSAU_READ* | anonymized display of Security Audit Log data	SAL
f)	Note 3090132 - RSUSR200 | Addition of logon information from job management	User
g)	Note 3113345 - SUIM | Reporting for User Documentation	User
h)	Note 3150573 - SUIM | Optimization of RSUSR_AUTH_DATA_VERSION	User
i)	Note 3147103 - SAIS | Check of customer-specific programs	Code
j)	Note 3204960 - SAIS_SEARCH_APPL | Search for programs without transaction	TCODE

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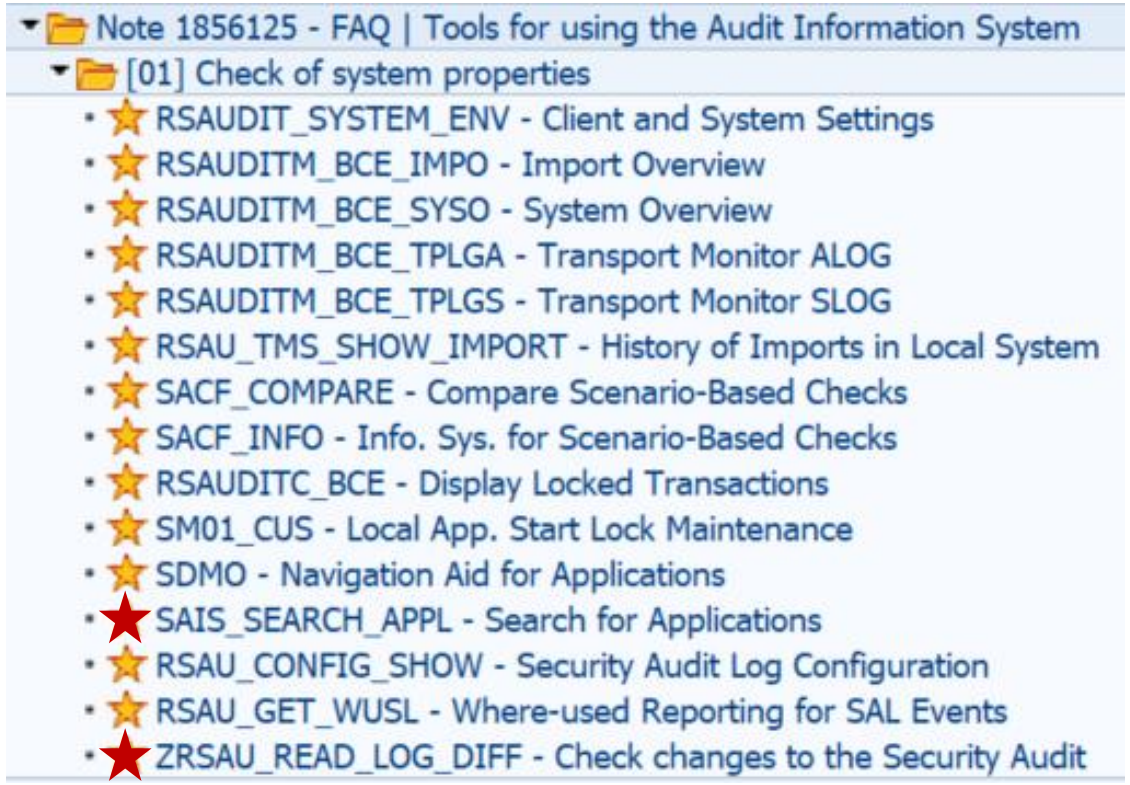
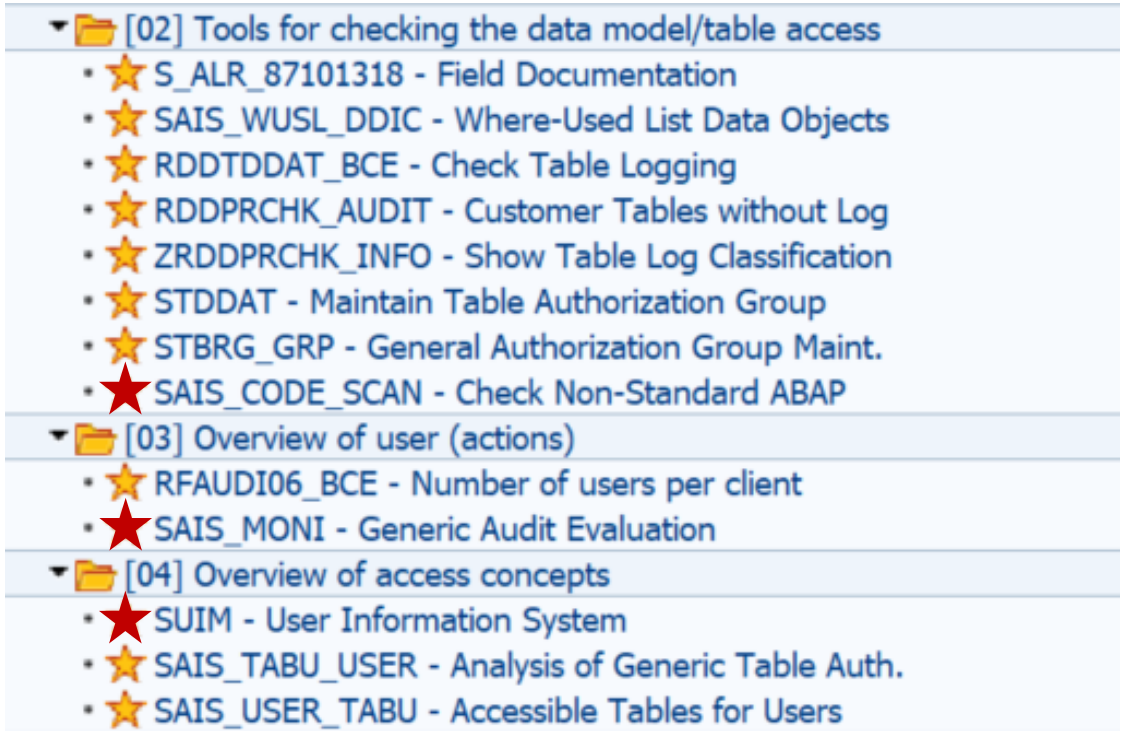
a) Note 1856125 - FAQ | Tools for using the Audit Information System

Complete rework with Version 4 from 26.05.2021 listing various analysis reports.

(not all of these reports are already part of the audit structures `SAP_AIS_BC_SA` …)





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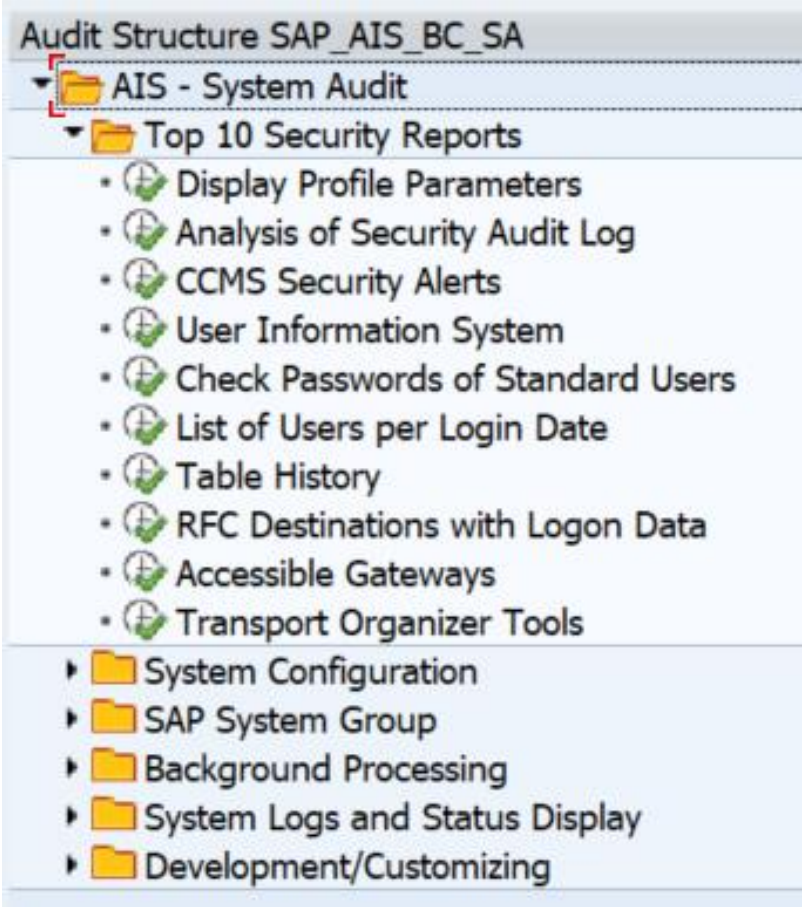
a) Note 1881429 - FAQ | Usage of menu-based audit (SAIS)

Transaction `SAIS_ADM`	**AIS - Administration**
Transaction `SAIS`	**AIS - Workplace**
Transaction `SAIS_LOG`	**AIS- Log Analysis**

Audit structures:

`SAP_AIS_BC_SA`	**AIS - System Audit**
`SAP_AIS_BC_SA_CCM_USR`	**AIS - Users and Authorizations**
`SAP_AIS_BC_SA_CUS_TOL`	**AIS - Repository/Tables**
`S4H_AUDIT_TAX`	**S/4HANA Tax Audit**



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b) Note 139418 - Logging of user actions (ABAP server)

Complete rework with Version 7 from 20.10.2020

In the standard SAP System, extensive functions exist for logging user activities and changes to the system. When you log user activities you must generally note that existing data protection laws are not violated (for example, German Data Protection Act).

In certain cases, recording is permitted only when approved by the data protection officer and an employee representative and is additionally subject to the regulations of a company agreement.

In general, the following recordings are available in the standard SAP system for tracking user actions:

- System log
- Security Audit Log
- Read access log
- General change documents
- Generic logging of table content changes
- Performance statistics on user behavior
- Version management in ABAP Workbench
- Transport logs
- Background processing logs
- Application-specific change documents
- Technical traces

SAP Note 2423576 provides transaction `SAIS_MONI`, which supports a summarized, time-stream related evaluation for selected recording types.

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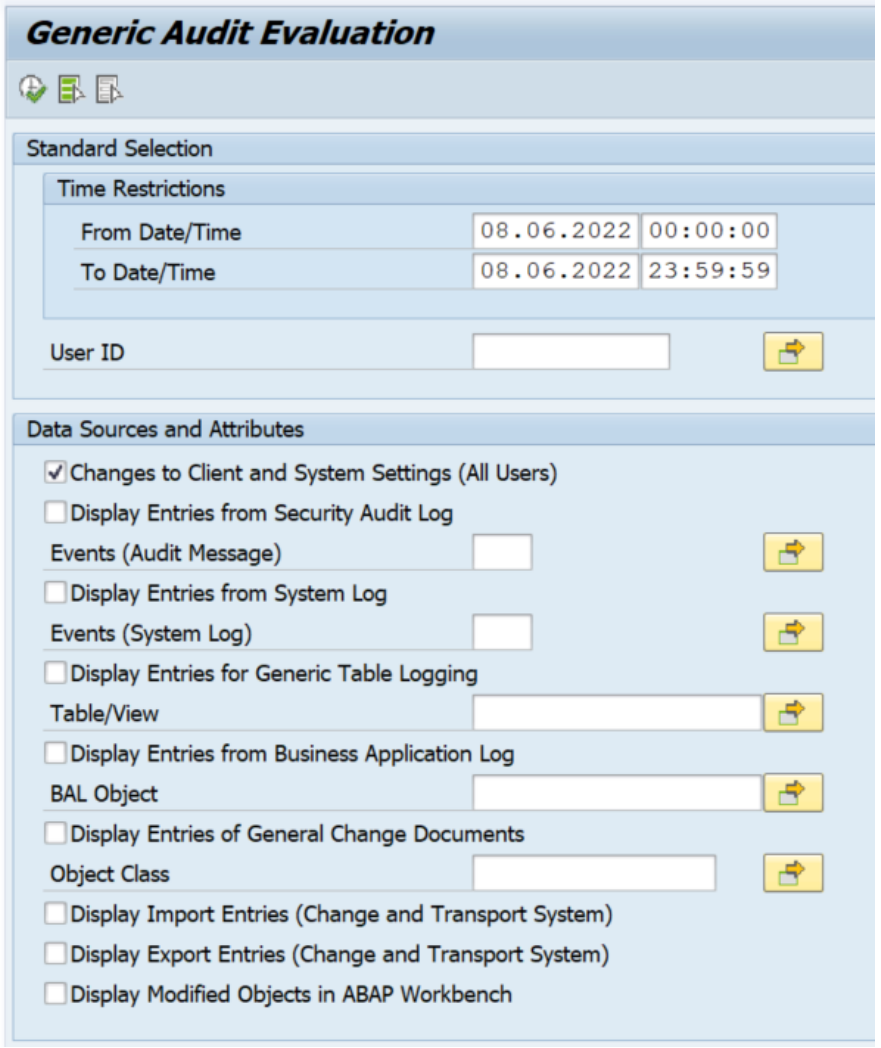
b) Note 2423576 - SAIS | Generic audit report about system changes



Note 2423576 provides transaction / report `SAIS_MONI`, which supports a summarized, time-stream related evaluation for selected recording types.

KBA 2915635 adds some background information.

Changes to Client and System Settings (All Users)	**Transaction `SE06`**
Display Entries from Security Audit Log	**Transaction / Report `RSAU_READ_LOG`**
Display Entries from System Log	**Transaction `SM21` / Report `RSYSLOG`**
Display Entries for Generic Table Logging	**Report `RSTBHIST` or `RSYSLOG`**
Display Entries from Business Application Log	**Transaction `SLG1`**
Display Entries of General Change Documents	**Reports `RSSCD100` or `CHANGEDOCU_READ`**
Display Import Entries (Change and Transport System)	**Transaction `SE03` / Report `RSWBOSSR`**
Display Export Entries (Change and Transport System)	**Transaction `SE03` / Report `RSWBOSSR`**
Display Modified Objects in ABAP Workbench	**Transaction `SE95`**
Display Changed/Created Objects in ABAP Workbench	**Transaction `SE84`**

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May 2022

Topics May 2022

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Note 3165801 - Missing Authorization check in SAP NetWeaver Application Server ABAP

Note 3158188 - Information Disclosure vulnerability in SAP Host Agent logfile
Note 3145702 - Memory Corruption vulnerability in SAP Host Agent, SAP NetWeaver ABAP

Notes 2756188 and 2754555 - Cross-Site Request Forgery (CSRF) vulnerability in F0673 Approve Bank Payments

Note 2925755 - DBACOCKPIT missing authorizations / Critical authorizations S_DBCON and S_TABU_SQL

Note 2370836 - File access management with transaction `SFILE`

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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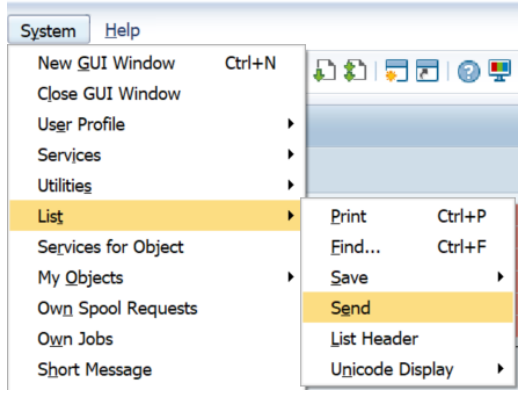
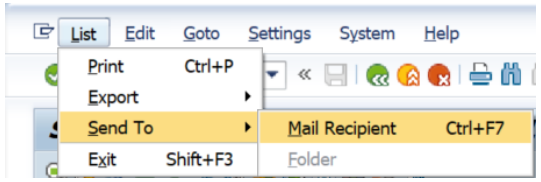
Note 3165801 - Missing Authorization check in SAP NetWeaver Application Server for ABAP and ABAP Platform



This is a simple ABAP note to be implemented using SNOTE.

Function "System → List → Send" now checks authorization object `S_OC_SEND` early. This authorization will be checked later anyway, therefore no update of roles is necessary.

The similar ALV list functions do not execute such an early check:



The manual instruction asks for kernel note 2198580 from 2015 which you can ignore as it is most likely already implemented (e.g. Kernel 7.22 patch 10 or higher).
This note is required because the code was protected by a special comment:

```
*&---------------------------------------
*& Object          FUNC LIST_COMMAND
*& Object Header   FUGR SYSF
*&---------------------------------------
*>>>> START OF DELETION <<<<<
**@#@@[SAP]
*>>>> END OF DELETION <<<<<<
...
*&---------------------------------------
*& FUNCTION LIST_COMMAND
*&---------------------------------------
```

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Note 3158188 - Information Disclosure vulnerability in SAP Host Agent logfile
Note 3145702 - Memory Corruption vulnerability in SAP Host Agent, SAP NetWeaver ABAP

Note 3145702 is a Kernel note and solves a denial-of-service issue. You need to get `msg_server` from `scs.sar` and `sapstartsrv` either from `scs.sar`, `sapwebdisp.sar` or `sapexe.sar`.

Also an update to newest SAP Host Agent 722 Patch 56, from 06.05.2022, is necessary.

This solves the vulnerability described in note 3158188, too. This vulnerability is critical if the SAP Host Agent debug trace level is set to 3.

Information on how to update SAP Host Agent can be found in note 1031096.

SAP HANA will get the updated version of the SAP Host Agent later, however, as it is an independent component you can install it manually.

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Notes 2756188 and 2754555 - Cross-Site Request Forgery (CSRF) vulnerability in F0673 Approve Bank Payments

Both notes are related to the same issue but handle different software components which may exist in the same or in different systems:

Note 2756188 Fiori front-end system, UIAPFI70 Release 300, 400

Note 2754555 Fiori back-end system, S4CORE Release 100

The correction was published in March 2019 and is most likely already implemented.

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Note 2925755 - DBACOCKPIT missing authorizations / Critical authorizations S_DBCON and S_TABU_SQL

The note explains how to extend a role like `SAP_BC_S_DBCON_USER` to execute SQL statements in the DBACOCKPIT for analysis purposes.

The DBACOCKPIT provides the SQL Editor which can be used to execute any kind of SQL statements on connected databases.

https://help.sap.com/docs/SAP_NETWEAVER_DBOS/6b8fe8492ce14d24af5855c3d10701e3/d4716e2d3f304b238463499cb3117b33.html

Authorization object `S_DBCON` activity `36` (extended maintenance):

> **Caution**
>
> This authorization is very powerful and should not be granted on a routine basis.

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Note 2925755 - DBACOCKPIT missing authorizations / Critical authorizations S_DBCON and S_TABU_SQL

Blog: The danger of the SQL Editor of DBACOCKPIT from Joe Goerlich
https://blogs.sap.com/2022/05/10/the-danger-of-the-sql-editor-of-dbacockpit/

"Since the SQL statements are executed on DB level as the connecting user, the privileges of this particular user are applied. For the ABAP system's primary database, it is the schema user SAPDAT, SAP<SID>, or SAPABAP<n>.

*With this, the SQL Editor can be used, for example, to access **all tables** of the ABAP schema.*

*Please also note that on database level, there is **no special handling of the client field (field 'MANDT').** This leads to data of any client can be accessed or modified, even if the SQL Editor is started, for example, in client 000.*

The authorization object S_DBCON with activity 36 is very powerful and should not be granted on a routine basis. It allows to harm the data's integrity and availability.

Hint: SAP agreed to add a check for S_DBCON with activity 36 to the Security Check in SAP EarlyWatch Alert.

The authorization object S_DBCON with activity 03 in combination with S_TABU_SQL is also very powerful and should not be granted on a routine basis. It allows to harm the data's confidentiality."

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Directory Traversal

The often forgotten path

Reasons to consider Directory Traversal as part of your secure system configuration:

There are more than 1000 notes dealing with the topic of Directory Traversal for NetWeaver ABAP-based solutions.

There is a variety of business applications which store business critical business data on the application server.

Protecting the system against undesired file operations by traversing other files and folders is an essential part to save your critical business data.

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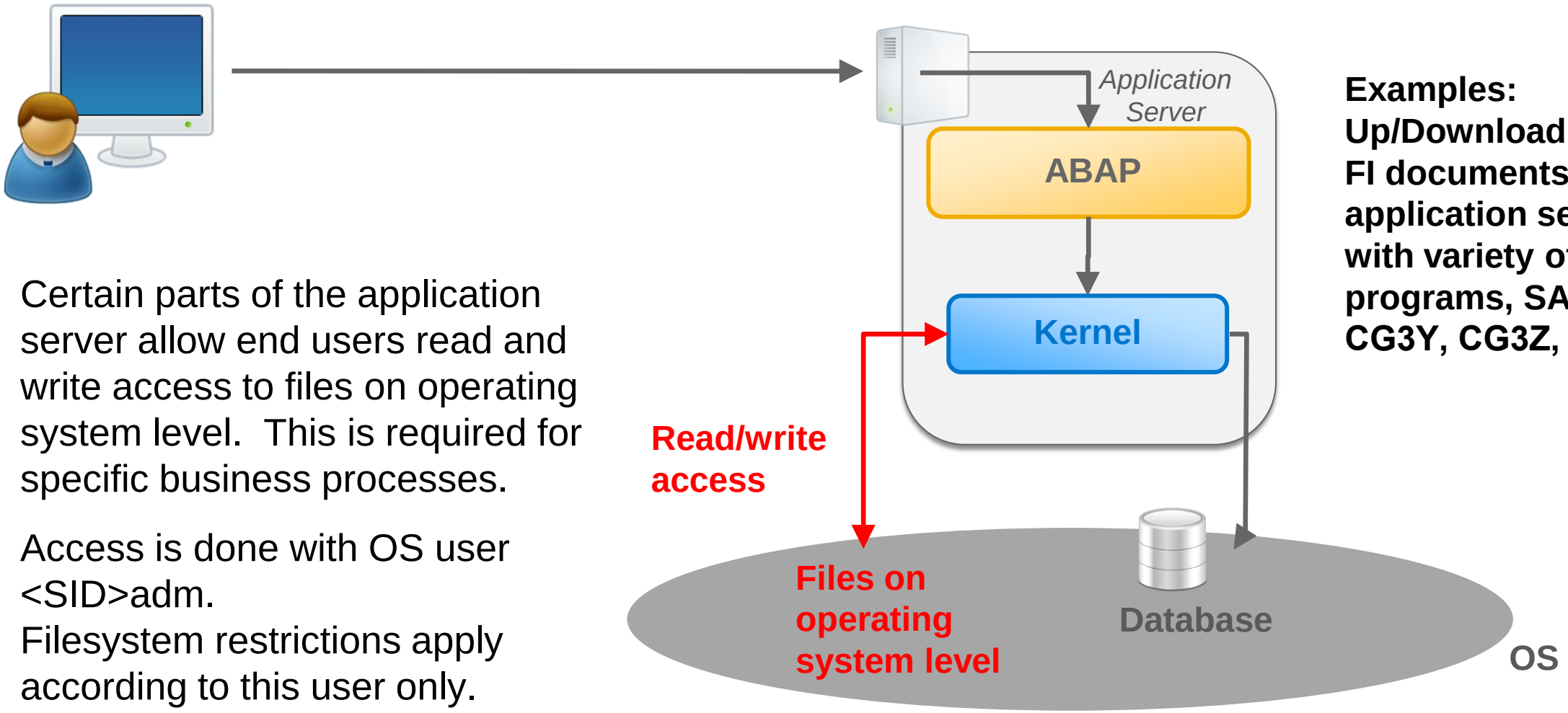
File Access in SAP Systems



Certain parts of the application server allow end users read and write access to files on operating system level. This is required for specific business processes.

Access is done with OS user <SID>adm.
Filesystem restrictions apply according to this user only.

Examples: Up/Download of HR or FI documents from/to application server with variety of programs, SA38, CG3Y, CG3Z, …

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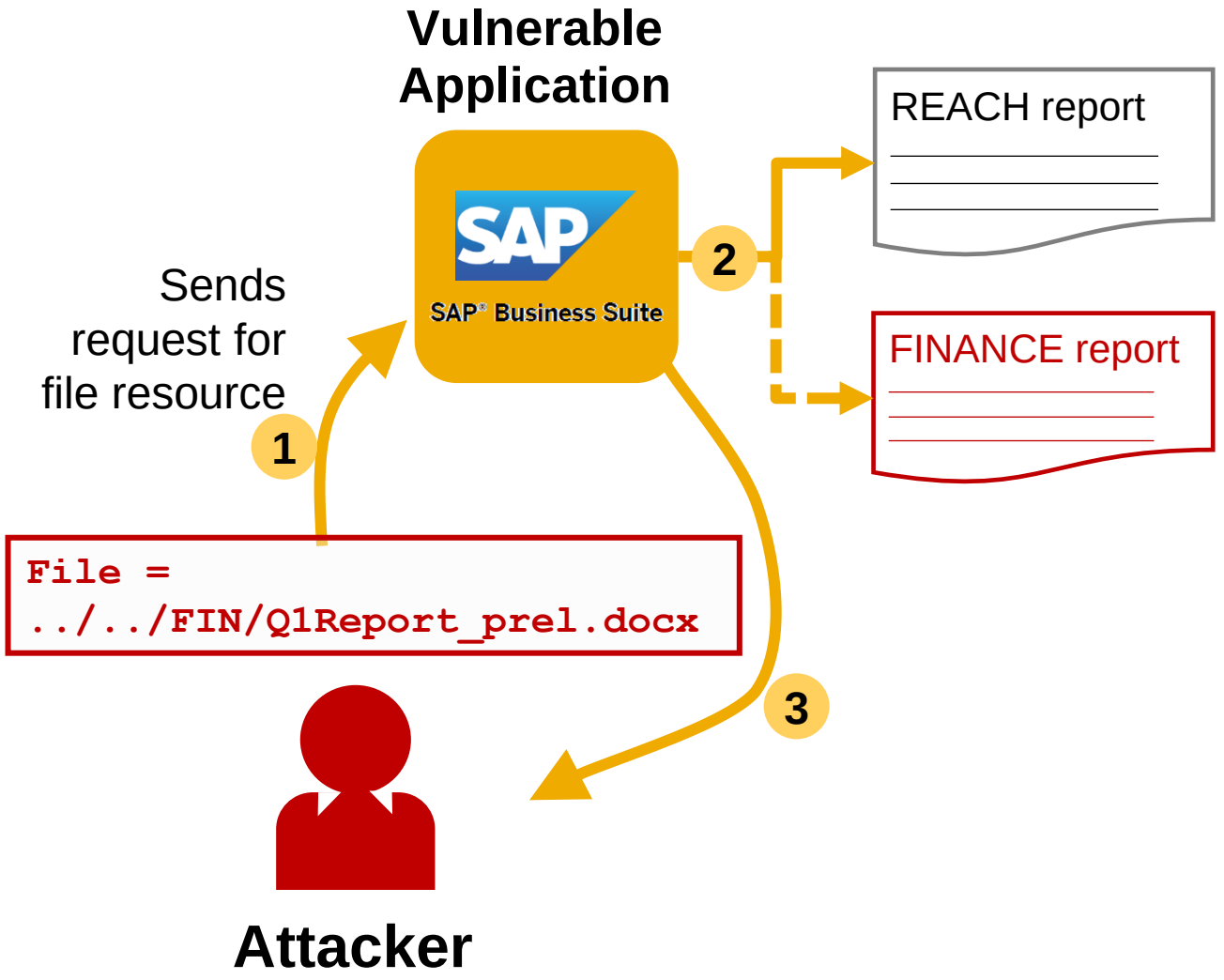
Note 2370836 - File access management with transaction SFILE

Vulnerability synopsis



Applications exposing access to files on backend server not properly validating user input can be used to access arbitrary files.

Directory Traversal Attacks allow an adversary to **disclose, modify and delete sensitive data stored on filesystem**.

➔ **Critical data leaked**

➔ **Data integrity breached**

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Note 2370836 - File access management with transaction SFILE

Solution concept

SAP NetWeaver ABAP allows to restrict the File Access of the system at following levels:

- **Application** – Logical File Name concept
- **General** – SPTH access control list
- **User** – authorization object S_DATASET

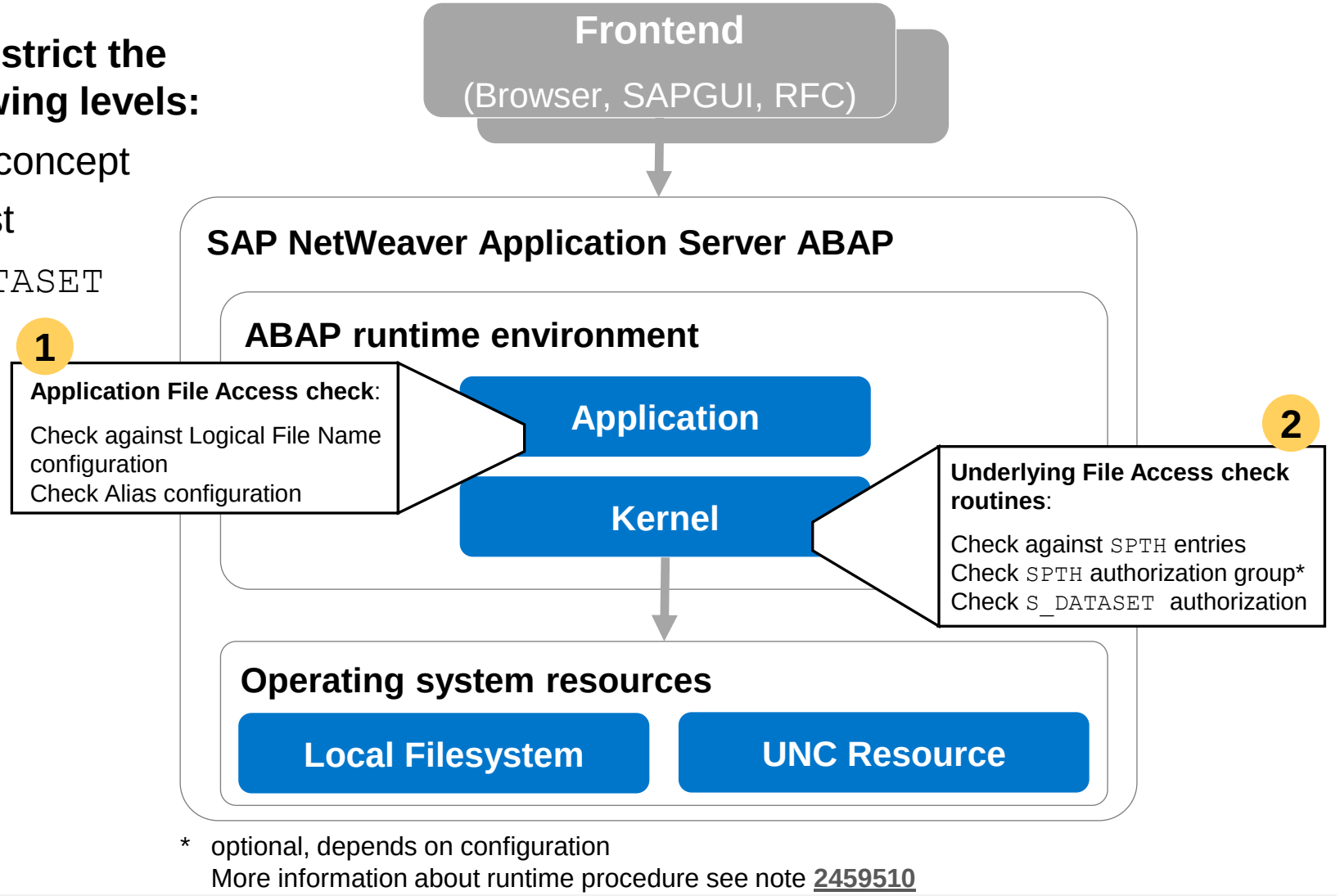
1

```
CALL FUNCTION 'FILE_VALIDATE_NAME'
  EXPORTING
  logical_filename  = gc_fname
* any parameters defined for that logical file name
  CHANGING
  physical_filename = ld_physfile
  EXCEPTIONS
  OTHERS    = 1.

  IF sy-subrc <> 0.
* Implement suitable error handling here, for example,
*  MESSAGE ID sy-msgid TYPE sy-msgty NUMBER sy-msgno
*  WITH sy-msgv1 sy-msgv2 sy-msgv3 sy-msgv4.
  ENDIF.
```

2

```
  OPEN DATASET ld_physfile
  FOR INPUT IN TEXT MODE ENCODING DEFAULT.
  IF sy-subrc <> 0.
* ...
  ENDIF.
```



* optional, depends on configuration
More information about runtime procedure see note 2459510

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Note 2370836 - File access management with transaction SFILE

Solution concept

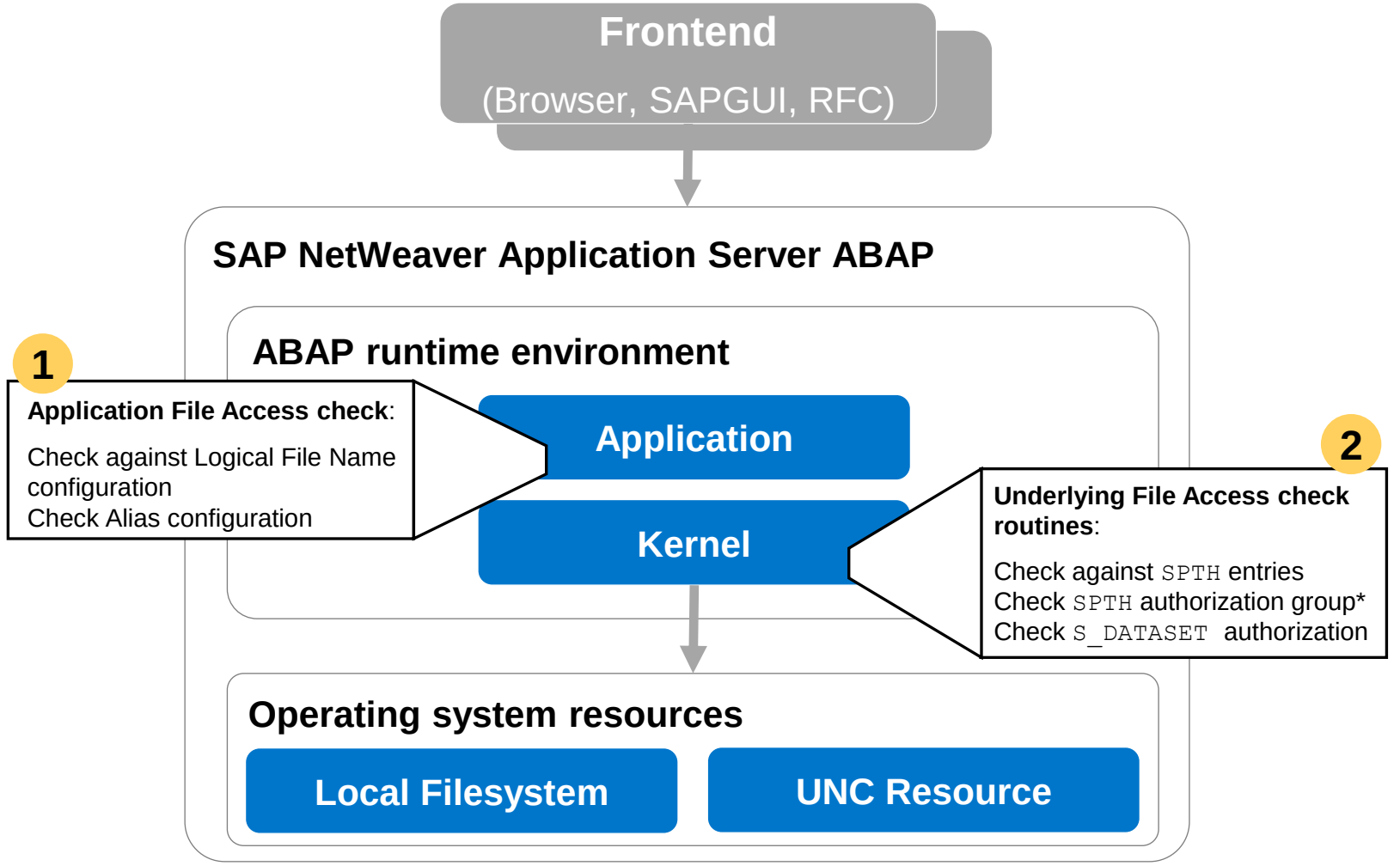
1

```
CALL FUNCTION 'FILE_VALIDATE_NAME'
  EXPORTING
  logical_filename  = gc_fname
* any parameters defined for that logical file name
  CHANGING
  physical_filename = ld_physfile
  EXCEPTIONS
  OTHERS    = 1.

  IF sy-subrc <> 0.
* Implement suitable error handling here, for example,
*  MESSAGE ID sy-msgid TYPE sy-msgty NUMBER sy-msgno
*  WITH sy-msgv1 sy-msgv2 sy-msgv3 sy-msgv4.
  ENDIF.
```

2

```
  OPEN DATASET ld_physfile
  FOR INPUT IN TEXT MODE ENCODING DEFAULT.
  IF sy-subrc <> 0.
* ...
  ENDIF.
```



* optional, depends on configuration
More information about runtime procedure see note 2459510

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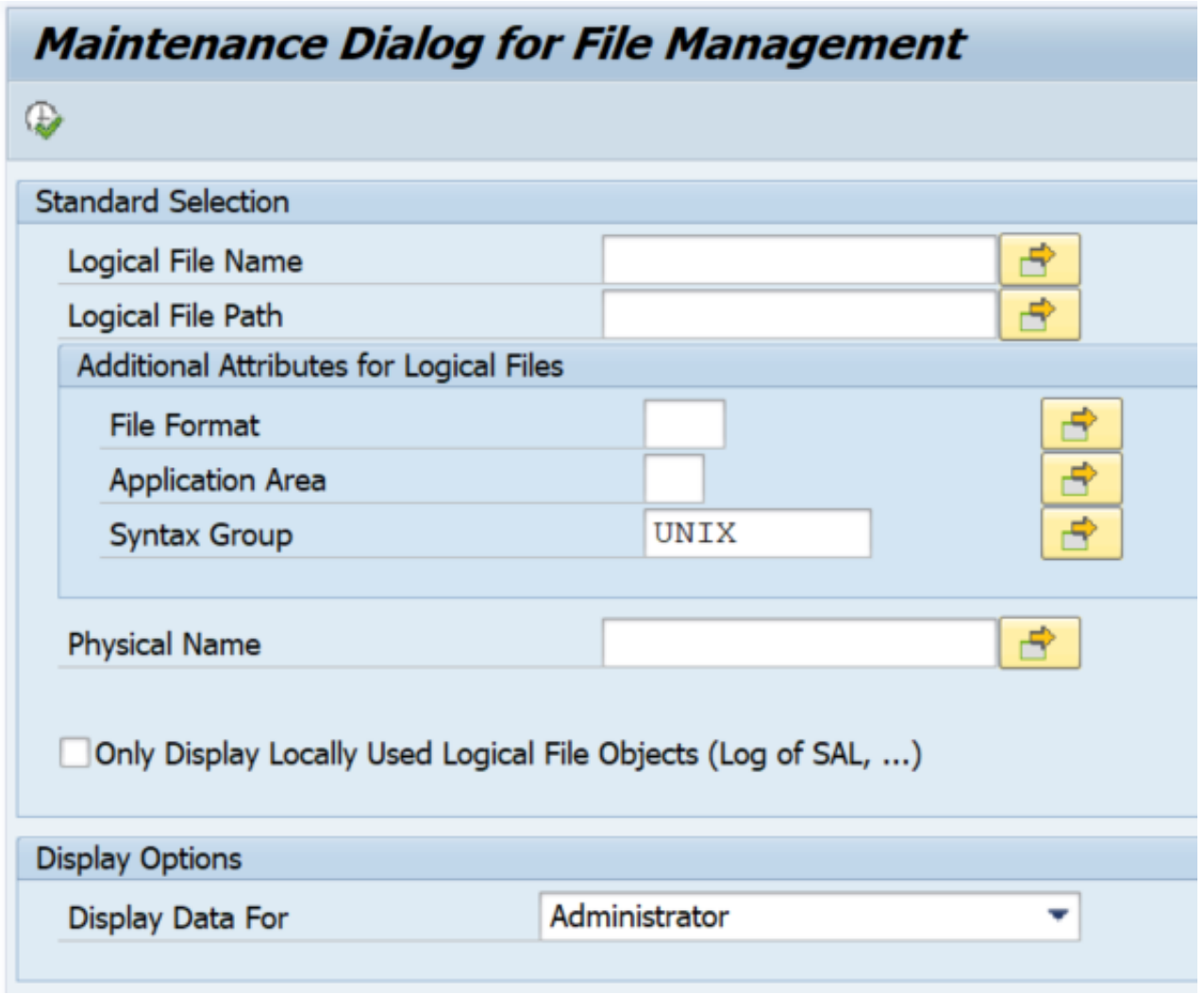
Note 2370836 - File access management with transaction SFILE

Configuration – Transaction SFILE



Available with
SAP_BASIS 751 SP01
respective
S/4HANA OP 1610 SP01

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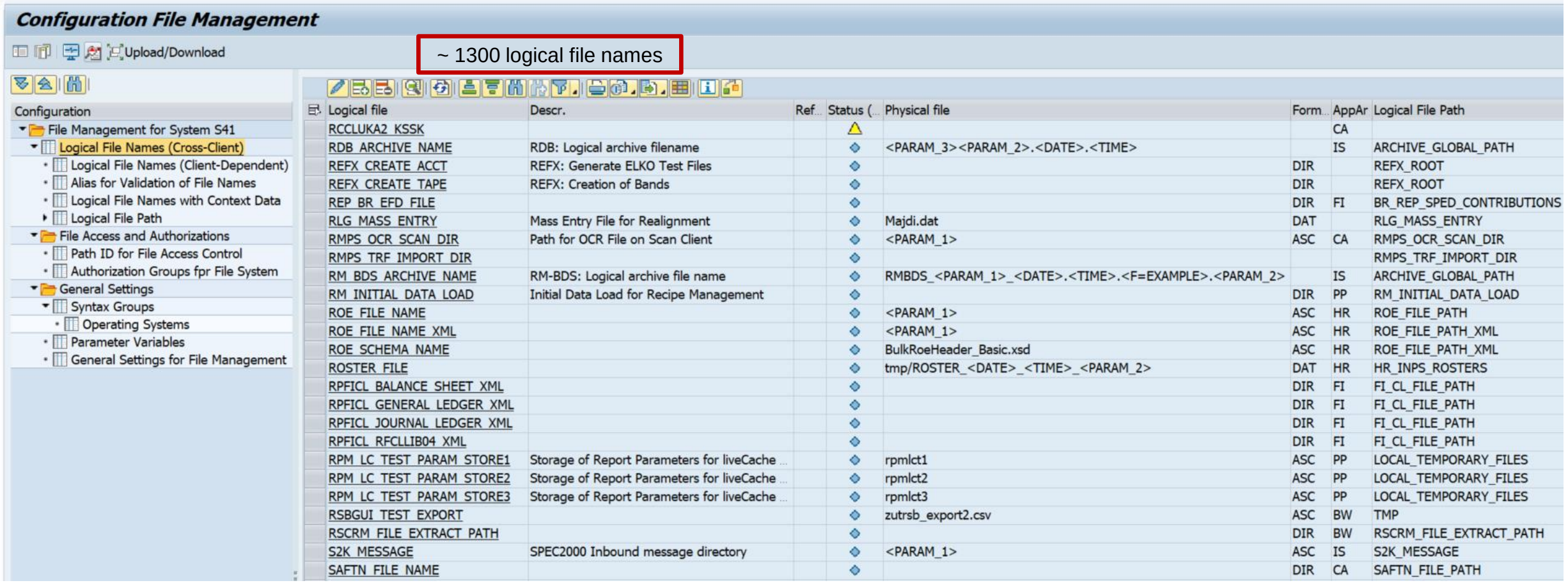
Note 2370836 - File access management with transaction SFILE

Configuration – Transaction SFILE



Logical file	Descr.	Ref...	Status (...	Physical file	Form...	AppAr	Logical File Path
RCCLUKA2_KSSK			⚠			CA	
RDB_ARCHIVE_NAME	RDB: Logical archive filename		◇	<PARAM_3><PARAM_2>.<DATE>.<TIME>		IS	ARCHIVE_GLOBAL_PATH
REFX_CREATE_ACCT	REFX: Generate ELKO Test Files		◇		DIR		REFX_ROOT
REFX_CREATE_TAPE	REFX: Creation of Bands		◇		DIR		REFX_ROOT
REP_BR_EFD_FILE			◇		DIR	FI	BR_REP_SPED_CONTRIBUTIONS
RLG_MASS_ENTRY	Mass Entry File for Realignment		◇	Majdi.dat	DAT		RLG_MASS_ENTRY
RMPS_OCR_SCAN_DIR	Path for OCR File on Scan Client		◇	<PARAM_1>	ASC	CA	RMPS_OCR_SCAN_DIR
RMPS_TRF_IMPORT_DIR			◇				RMPS_TRF_IMPORT_DIR
RM_BDS_ARCHIVE_NAME	RM-BDS: Logical archive file name		◇	RMBDS_<PARAM_1>_<DATE>.<TIME>.<F=EXAMPLE>.<PARAM_2>		IS	ARCHIVE_GLOBAL_PATH
RM_INITIAL_DATA_LOAD	Initial Data Load for Recipe Management		◇		DIR	PP	RM_INITIAL_DATA_LOAD
ROE_FILE_NAME			◇	<PARAM_1>	ASC	HR	ROE_FILE_PATH
ROE_FILE_NAME_XML			◇	<PARAM_1>	ASC	HR	ROE_FILE_PATH_XML
ROE_SCHEMA_NAME			◇	BulkRoeHeader_Basic.xsd	ASC	HR	ROE_FILE_PATH_XML
ROSTER_FILE			◇	tmp/ROSTER_<DATE>_<TIME>_<PARAM_2>	DAT	HR	HR_INPS_ROSTERS
RPFICL_BALANCE_SHEET_XML			◇		DIR	FI	FI_CL_FILE_PATH
RPFICL_GENERAL_LEDGER_XML			◇		DIR	FI	FI_CL_FILE_PATH
RPFICL_JOURNAL_LEDGER_XML			◇		DIR	FI	FI_CL_FILE_PATH
RPFICL_RFCLLIB04_XML			◇		DIR	FI	FI_CL_FILE_PATH
RPM_LC_TEST_PARAM_STORE1	Storage of Report Parameters for liveCache ...		◇	rpmlct1	ASC	PP	LOCAL_TEMPORARY_FILES
RPM_LC_TEST_PARAM_STORE2	Storage of Report Parameters for liveCache ...		◇	rpmlct2	ASC	PP	LOCAL_TEMPORARY_FILES
RPM_LC_TEST_PARAM_STORE3	Storage of Report Parameters for liveCache ...		◇	rpmlct3	ASC	PP	LOCAL_TEMPORARY_FILES
RSBGUI_TEST_EXPORT			◇	zutrsb_export2.csv	ASC	BW	TMP
RSCRM_FILE_EXTRACT_PATH			◇		DIR	BW	RSCRM_FILE_EXTRACT_PATH
S2K_MESSAGE	SPEC2000 Inbound message directory		◇	<PARAM_1>	ASC	IS	S2K_MESSAGE
SAFTN_FILE_NAME			◇		DIR	CA	SAFTN_FILE_PATH

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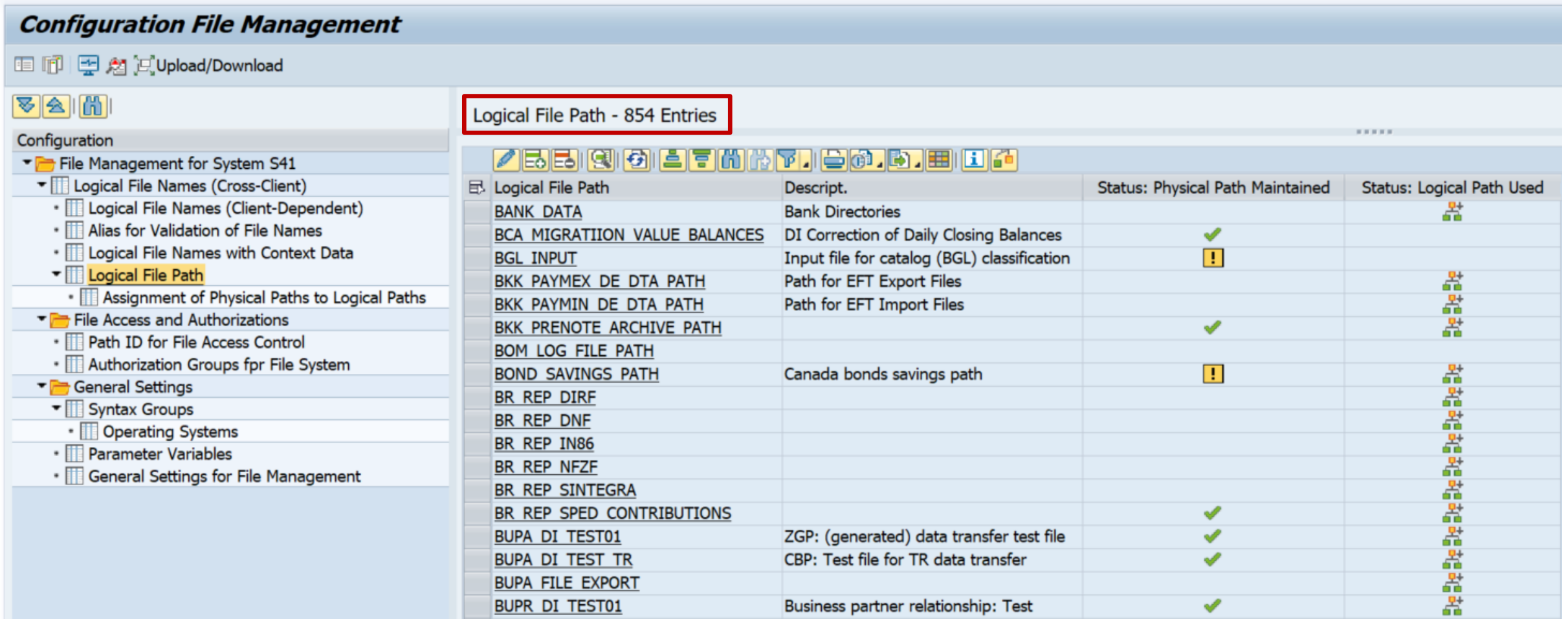
Note 2370836 - File access management with transaction SFILE

Configuration – Transaction SFILE



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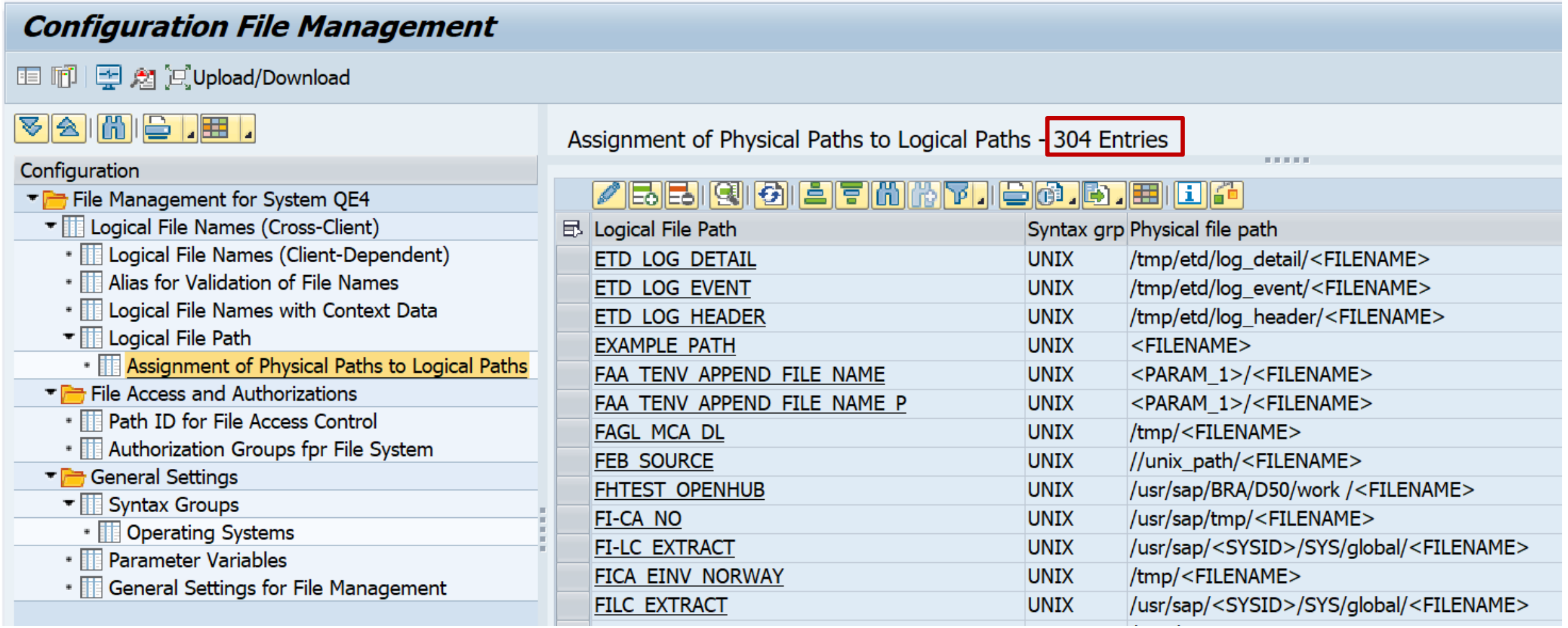
Note 2370836 - File access management with transaction SFILE

Configuration – Transaction SFILE



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Note 2370836 - File access management with transaction SFILE

Required actions in a nutshell

Pre-consideration

- Check system requirements for transaction SFILE
  → see note 2370836
- Activate Security Audit Log (SAL)
- Activate the events CUQ, CUR, CUS, CUT, DU5, and EU4
- Run the system with activated SAL for several months (including month-end, quarter-end and possibly year-end processes).
- Set profile parameter abap/path_normalization = ext

Custom code

- Custom code with OPEN DATASET needs to introduce path validation in case of user input:
  → Secure Programming Guide - Directory Traversal and ABAP keyword Documentation
- *JAVA*: Custom code needs to perform canonicalization and validation in case of user input:
  → Canonicalization utility class JavaDoc

Configuration settings

- Use transaction SFILE_MAINT_LOG to transfer SAL data for configuration
- Use transaction SFILE for configuration of Logical File Names, and check configuration of SPTH and S_DATASET:
  → see Cheat Sheet for more information

Additional information

- After finalizing configuration activate strong security by enforcing restriction to defined LFNs:
  → see note 2251231

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Note 2370836 - File access management with transaction SFILE

Cheat Sheet

Logging-based solution to identify vulnerable logical file names (LFN) based on usage

- Activate Security Audit Log (SAL) via transaction RSAU_CONFIG
- Activate the events CUQ, CUR, CUS, CUT, DU5, and EU4

Recommendation: *To get the best results, run the system with activated SAL for several months (including month-end, quarter-end and possibly year-end processes).*

- Transfer logged SAL data to directory traversal specific data buffer

1. Call transaction SFILE_MAINT_LOG
2. press the button 'SAL-Buffer', proceed with the given selection screen

Transaction SFILE is comparable to a cockpit allowing to manage all file management operations.

1. Call transaction SFILE. Check note **2370836** for latest recommendations.
2. In section 'Display Options', choose 'Administrator' and execute.
3. Select node 'Logical File Names (Cross client)' and look for 'Weighting' column with following indicators:

   RED – LFN is used, but logical and physical file paths are not configured
   YELLOW – LFN is not yet used and logical and physical file paths are not configured
   GREEN – LFN is used with both logical and physical file paths configured
   BLUE - LFN not yet used and configurations are securely maintained
4. Configure red and yellow LFNs with relevant logical and physical file paths to improve the security.

Authorization for programs and file access

- Table SPTH and authorization object S_PATH, more details here.
- To control general access rights to files from ABAP or user dependent authorization checks.
  1. Call transaction SFILE and choose node 'File Access & Authorization'.
  2. Choose option 'Path ID for File Access Control'.

     Maintain blocklist – Provide dedicated file paths with enabling option 'No Read'

     Maintain allowlist – Provide dedicated file paths with available options

- Authorization object S_DATASET, more details here.
  - To control access for particular files of particular programs
  - Additional information in note **2459510**

Enforcement switch is provided to ensure that LFNs with missing configuration (physical path) cannot be accessed by any user in the system.
More details see note **2251231**

1. Call transaction SFILE and select node 'General Setting'.
2. Select subnode 'General Setting for File Management'.
3. Select parameter REJECT_EMPTY_PATH and option 'ON'.

   ON - enforcement switch is on

   OFF - enforcement switch is off

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Note 2370836 - File access management with transaction SFILE

Notes

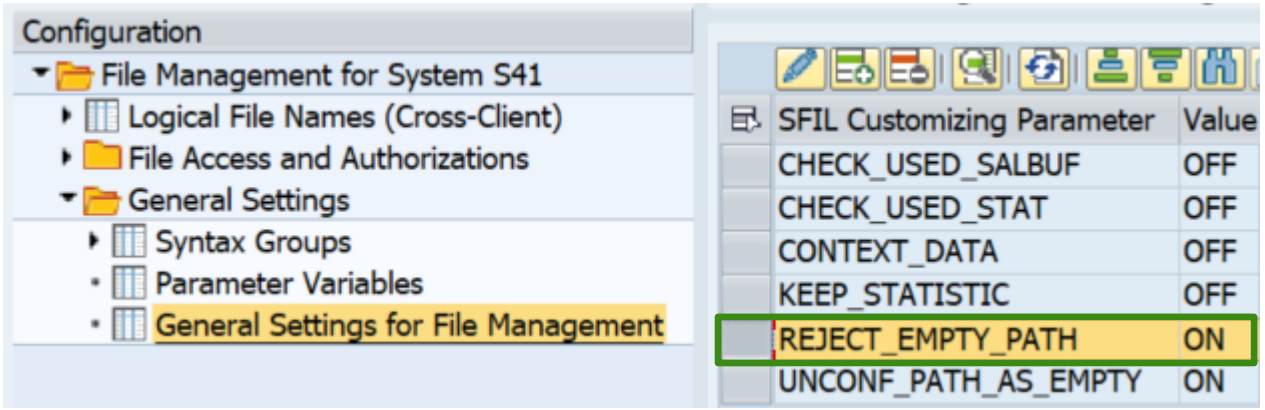
Note 2370836 - FAQ | File access management with transaction SFILE

Note 2562089 - Directory Traversal vulnerability in ABAP File Interface

Note 2471775 - How to get the file path with virtual global host name by FILE_GET_NAME in a cluster environment

Note 2459510 - FAQ: Authorization check with S_PATH when accessing files

Note 2251231 - File validation enforcement switch for empty physical path



and…

Note 27 - Recommendations for ABAP file interface

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April 2022

Topics April 2022

https://wiki.scn.sap.com/wiki/display/Security/Security+Notes+Webinar+-+2022-04

Note 1753378 - Directory traversal in Web Container

Note 2190119 - Background information about SAP S/4HANA technical job repository

Spring Framework RCE in Java applications

My Trust Center / Security Whitepapers

Note 3143705 - Silent migration of iterated random-salted password hashes when configuration is hardened

Note 3192199 - Enabling SNC in Jco communications from Diagnostics Agent

Note 3170439 - SM19 | Detail selection for EU* and FU* events

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Note 1753378 - Directory traversal in Web Container

I. Update your AS Java to a fixed version and SP. For more details see "SP Patch Level" section of this note

→The solution was published in 2013. All Java systems should have the required software level.

II. Change value of the property DirectoryStructureProtection of the HTTP Provider service (http) to "true" by following the steps:
For SAP Netweaver 7.10 and up

1. Open Configtool.
2. Choose "View" -> "Expert mode" should be checked.
3. Navigate to "Template" -> instance -> services -> http.
4. Choose "DirectoryStructureProtection" property.
5. In the Value field type *true*
6. Click Set Custom Value button
7. Press the Save button (diskette icon) in the top-left corner
8. Restart the server nodes for changes to take effect

→ This part is still relevant!

Tipps:

a) It is recommended to change on global/template level so that you can execute the change at once for all instances.

b) The recommended way to change offline properties is via Config tool as listed in the note and not directly in the offline configuration.

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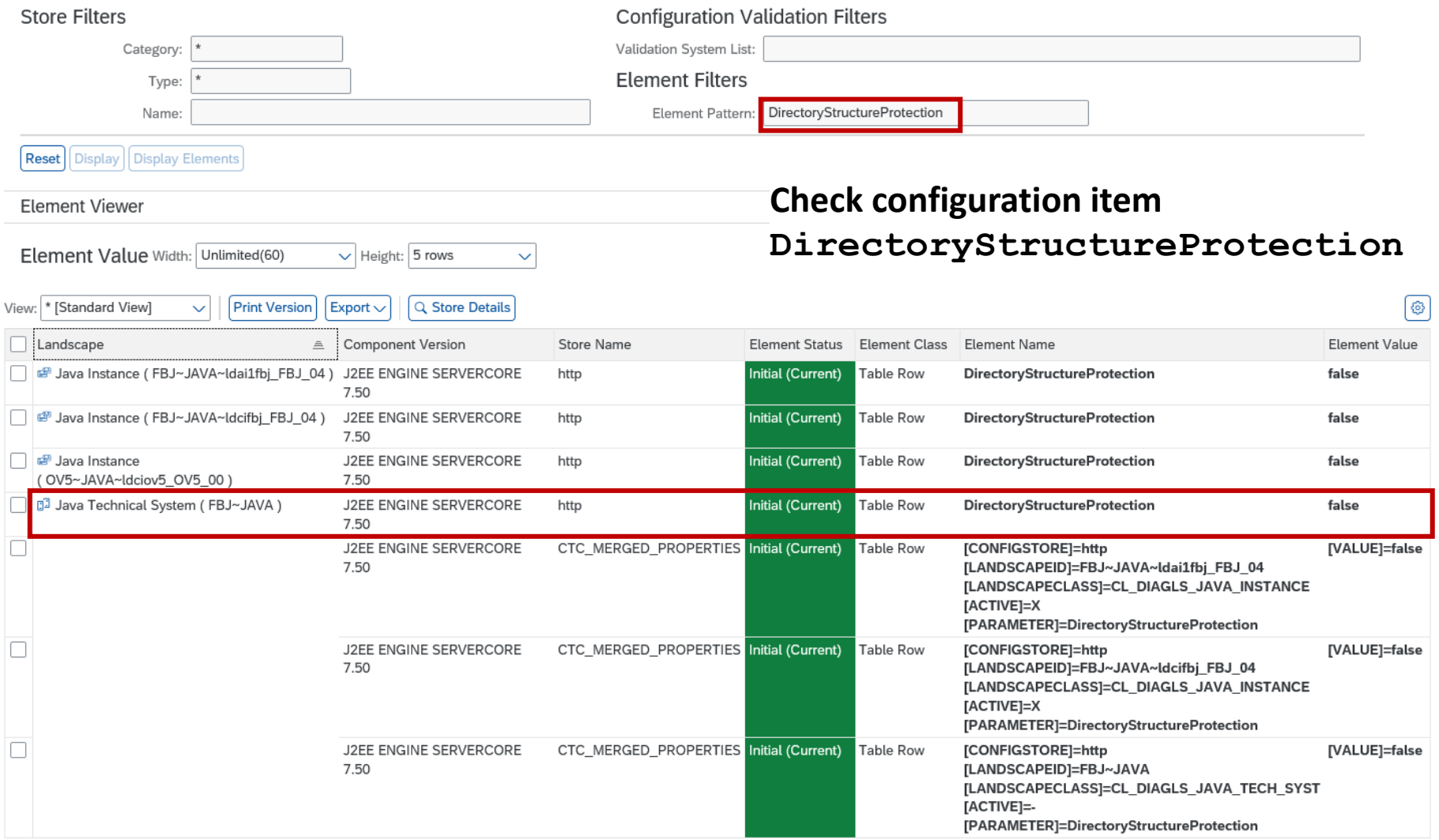
Note 1753378 - Directory traversal in Web Container

c) Cross system analysis using CCDB / change reporting / configuration validation in the SAP Solution Manager (as well as in similar function of FRUN) is possible using configuration store `http` of the landscape about "Java Technical System"

You will find the configuration item several times but this is the important entry



Check configuration item `DirectoryStructureProtection`

Landscape	Component Version	Store Name	Element Status	Element Class	Element Name	Element Value
Java Instance (FBJ~JAVA~ldai1fbj_FBJ_04)	J2EE ENGINE SERVERCORE 7.50	http	Initial (Current)	Table Row	**DirectoryStructureProtection**	**false**
Java Instance (FBJ~JAVA~ldcifbj_FBJ_04)	J2EE ENGINE SERVERCORE 7.50	http	Initial (Current)	Table Row	**DirectoryStructureProtection**	**false**
Java Instance (OV5~JAVA~ldciov5_OV5_00)	J2EE ENGINE SERVERCORE 7.50	http	Initial (Current)	Table Row	**DirectoryStructureProtection**	**false**
Java Technical System (FBJ~JAVA)	J2EE ENGINE SERVERCORE 7.50	http	Initial (Current)	Table Row	**DirectoryStructureProtection**	**false**
	J2EE ENGINE SERVERCORE 7.50	CTC_MERGED_PROPERTIES	Initial (Current)	Table Row	**[CONFIGSTORE]=http [LANDSCAPEID]=FBJ~JAVA~ldai1fbj_FBJ_04 [LANDSCAPECLASS]=CL_DIAGLS_JAVA_INSTANCE [ACTIVE]=X [PARAMETER]=DirectoryStructureProtection**	**[VALUE]=false**
	J2EE ENGINE SERVERCORE 7.50	CTC_MERGED_PROPERTIES	Initial (Current)	Table Row	**[CONFIGSTORE]=http [LANDSCAPEID]=FBJ~JAVA~ldcifbj_FBJ_04 [LANDSCAPECLASS]=CL_DIAGLS_JAVA_INSTANCE [ACTIVE]=X [PARAMETER]=DirectoryStructureProtection**	**[VALUE]=false**
	J2EE ENGINE SERVERCORE 7.50	CTC_MERGED_PROPERTIES	Initial (Current)	Table Row	**[CONFIGSTORE]=http [LANDSCAPEID]=FBJ~JAVA [LANDSCAPECLASS]=CL_DIAGLS_JAVA_TECH_SYST [ACTIVE]=- [PARAMETER]=DirectoryStructureProtection**	**[VALUE]=false**

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Note 2190119 - Background information about SAP S/4HANA technical job repository

Required authorization for the background job user in all clients: Authorization profile `SAP_ALL` in S/4HANA 1610, role or profile `SAP_APP` (= quite identical as `SAP_ALL`) as of S/4HANA 1709

Note 2731999 - Assign custom step user for Technical Job Repository (`SJOBREPO`)
Create role or profile `SAP_APP` (= quite identical as `SAP_ALL`) using report `REGENERATE_SAP_APP` and assign it manually to the job user in all clients.

As you have to make sure that Basis and HR objects are included - otherwise no job can be executed and HR related job definitions might fail – there is almost no difference between `SAP_ALL` and `SAP_APP`.

Transaction `SJOBREPO_STEPUSER` still generates a user of type B=System, no password and authorization profile `SAP_ALL`.

Note 2437635 - Optimization of `SAP_APP` generation
“The composite profile `SAP_APP` is generally not intended for use in production systems.”

→ It does not matter if you use `SAP_ALL` or `SAP_APP` (at least not for this scenario), both are critical

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Note 2190119 - Background information about SAP S/4HANA technical job repository

Report `REGENERATE_SAP_APP` uses following `PRGN_CUST` settings:

`ADD_S_RFCACL`	**(default: no)**
`ADD_ALL_CUST_OBJECTS`	**(default: no)**
`ADD_OLD_AUTH_OBJECTS`	**(default: no)**

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Spring Framework RCE in Java applications

Is Spring4Shell related to Log4Shell?
While the name itself was inspired by Log4Shell (CVE-2021-44228), the two are not related.

Is Proof of Concept exploit code available?
Yes, there are multiple working proof-of-concept (PoC) exploits available for Spring4Shell.

Blogs:
https://www.cyberkendra.com/2022/03/springshell-rce-0-day-vulnerability.html

https://www.lunasec.io/docs/blog/spring-rce-vulnerabilities/

https://www.rapid7.com/blog/post/2022/03/30/spring4shell-zero-day-vulnerability-in-spring-framework/

https://www.microsoft.com/security/blog/2022/04/04/springshell-rce-vulnerability-guidance-for-protecting-against-and-detecting-cve-2022-22965/

[…]

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Spring Framework RCE in Java applications

CVE-2022-22965 - Spring Framework RCE via Data Binding on JDK 9+
https://tanzu.vmware.com/security/cve-2022-22965

Spring Framework RCE, Early Announcement
https://spring.io/blog/2022/03/31/spring-framework-rce-early-announcement

Am I Impacted (e.g. with own applications on SAP BTP)?

- Running on JDK 9 or higher and
- Apache Tomcat as the Servlet container and
- Packaged as a traditional WAR and deployed in a standalone Tomcat instance and
  Typical Spring Boot deployments using an embedded Servlet container or reactive web server are not impacted
- `spring-webmvc` or `spring-webflux` dependency and
- Spring Framework versions 5.3.0 to 5.3.17 (or older versions like 5.2.0 to 5.2.19)

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Spring Framework RCE in Java applications

CVE-2022-22965 - Spring Framework RCE via Data Binding on JDK 9+
https://tanzu.vmware.com/security/cve-2022-22965

Spring Framework RCE, Early Announcement
https://spring.io/blog/2022/03/31/spring-framework-rce-early-announcement

How to fix?

- **Update** to **Spring Framework** versions **5.3.18** or **5.2.20** or **higher**
- **Update** to **Spring Boot** versions **2.6.6** or **higher**, https://spring.io/blog/2022/03/31/spring-boot-2-6-6-available-now
- Workaround (not recommended): See section *Suggested Workarounds* of *Early Announcement*

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Spring Framework RCE in Java applications

Notes:

Note 3170990 - Central Security Note for Remote Code Execution vulnerability associated with Spring Framework
https://support.sap.com/content/dam/support/en_us/library/ssp/my-support/trust-center/sap-tc-01-5031.pdf

Note 3189428 - Remote Code Execution vulnerability associated with Spring Framework used in SAP HANA Extended Application Services

- Description how to identify if there are vulnerable applications in addition to the XSA service itself
- Link to SAP EXTENDED APP SERVICES 1 patch 145

and

Note 3171255 - SAP BTP Cloud Foundry Environment - Detecting and remediating Spring 4 Shell CVE-2022-22965 and CVE-2022-22963

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Spring Framework RCE in Java applications

Notes:

Note 3187290 - Remote Code Execution vulnerability associated with Spring Framework used in SAP Customer Checkout

Note 3189429 - Remote Code Execution vulnerability associated with Spring Framework used in PowerDesigner Web (upto including 16.7 SP05 PL01)
[required if you have updated the default installation which is based on JRE 1.8]

Note 3189635 - Remote Code Execution vulnerability associated with Spring Framework used in SAP Customer Profitability Analytics
[published on 14.04.2022]

Note 3171258 - Remote Code Execution vulnerability associated with Spring Framework used in SAP Commerce
[published on 18.04.2022]

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Spring Framework RCE in Java applications

Github repo: https://github.com/spring-projects/spring-framework

Compiled versions: https://repo.spring.io/ui/native/release/org/springframework/spring/

Related topic:

CVE-2022-22963 - Remote code execution in Spring Cloud Function by malicious Spring Expression
https://tanzu.vmware.com/security/cve-2022-22963

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My Trust Center / Security Whitepapers

My Security
https://support.sap.com/en/my-support/trust-center/tools-documentation.html

- SAP: Security Configuration Guide
- SAP S/4HANA: Encryption
- …

Security Whitepapers
https://support.sap.com/securitywp
https://support.sap.com/en/security-whitepapers.html

- SAP HANA Security Whitepaper
- SAP Security Recommendations: Securing Remote Function Calls (RFC)
- …

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Note 3143705 - Silent migration of iterated random-salted password hashes when configuration is hardened

With profile parameter `login/password_hash_algorithm` you configure a more secure setting for iterated random-salted password hashes.

Default: `encoding=RFC2307, algorithm=iSSHA-1, iterations=15000, saltsize=128`
Changed: `encoding=RFC2307, algorithm=iSSHA-512, iterations=15000, saltsize=256`

Only passwords which are afterwards created or changed make use of the new setting. With the kernel patches of this SAP Note (available as of kernel release 753), the kernel will update a password hash also when just verifying a password, for example during password-based user logon.

The metric for the security of a password hash uses the following hierarchy:

1. Hash algorithm (iSSHA-512 > iSSHA-384 > iSSHA-256 > iSSHA-1). When the algorithm is equal:
2. Number of iterations (e.g. 15000 > 10000). When the number of iterations is equal:
3. Saltsize (e.g. 128 > 96).

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Note 3192199 - Enabling SNC in Jco communications from Diagnostics Agent

The SAP NetWeaver ABAP system is already SNC enabled.

You want to enforce that all connections of an SAP NetWeaver ABAP system are encrypted. Therefore, you want to **set profile parameter `snc/only_encrypted_rfc` to 1**.

The connection between the SAP Solution Manager Diagnostics Agent and the locally monitored SAP NetWeaver ABAP system use JCo/RFC, too. It requires special configuration to encrypt this communication channel.

Implementing SNC for the Diagnostics Agents consists of three steps:

1. **Provide an SNC identity to the Diagnostics Agent (basically, provide a PSE file with a certificate and give access to this file).**
2. **Allow connections from the Diagnostics Agent to SAP NetWeaver ABAP.**
3. **Activate SNC in the connection settings.**

This setup requires a good understanding of the SNC mechanism and its implementation for JCo/RFC connections as well as a general understanding of certificates and their management in SAP systems. Since this is an advanced configuration, an initial implementation with some consulting support is usually recommended.

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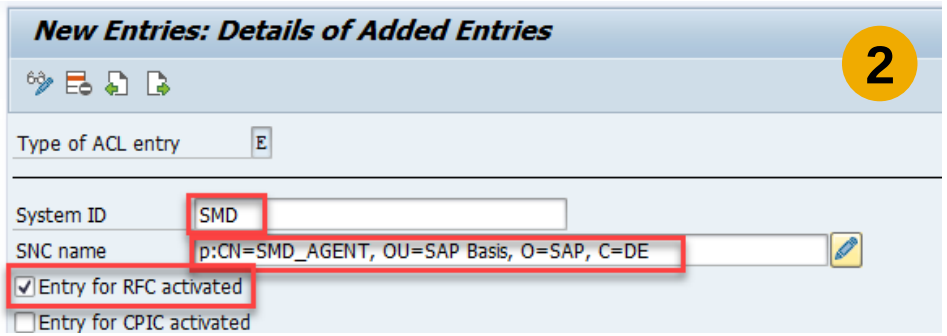
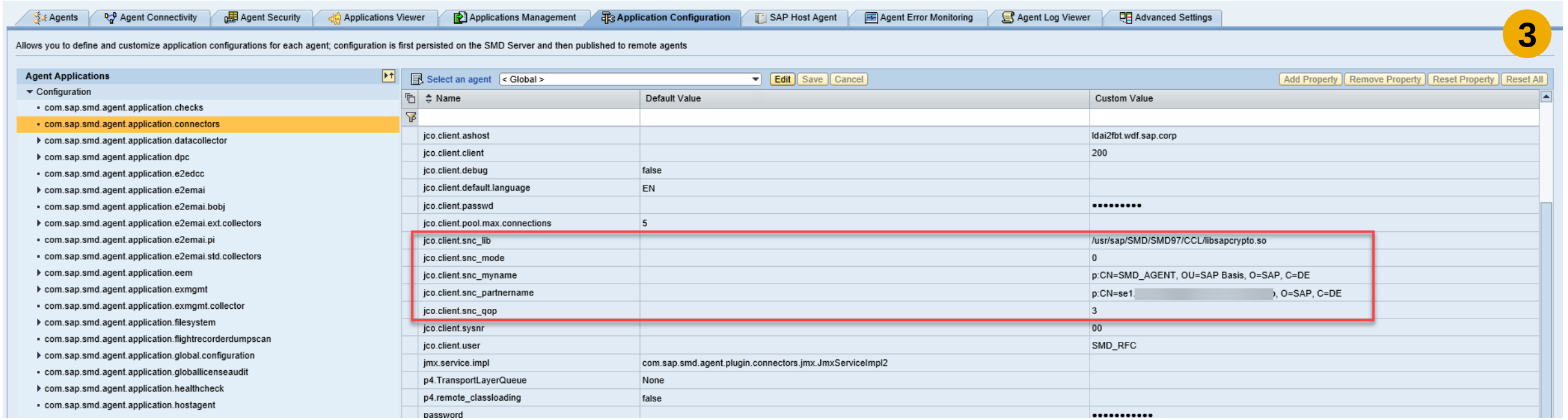
Note 3192199 - Enabling SNC in Jco communications from Diagnostics Agent

```
[redacted]:/usr/sap/SMD/SMD97/sec$ ./sapgenpse gen_pse -s 4096 -x '' -p SAPSNCS.pse "CN=SMD_AGENT, OU=SAP Basis, O=SAP, C=DE"

!!! WARNING: For security reasons it is recommended to use a PIN/passphrase
!!! WARNING: which is at least 8 characters long and contains characters in
!!! WARNING: upper and lower case, numbers and non-alphanumeric symbols.

Certificate Request:
 Signed Part:
  Subject:                    CN=SMD_AGENT, OU=SAP Basis, O=SAP, C=DE
  Key:                        rsaEncryption (4096 bits)
  Attributes:                 None
 Signature:
  Signature algorithm:        sha256WithRsaEncryption (1.2.840.113549.1.1.11)
  Signature:                  <Not displayed>
```

1



Sample screens



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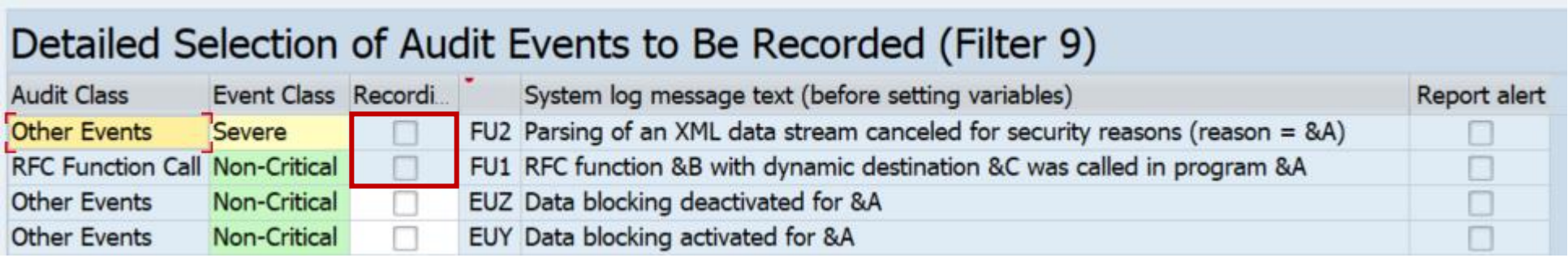
Note 3170439 - SM19 | Detail selection for EU* and FU* events

Extension for SAP_BASIS 7.40 to be able to select messages `FU*` in `SM19`:



Detailed Selection of Audit Events to Be Recorded (Filter 9)

Audit Class	Event Class	Recordi...		System log message text (before setting variables)	Report alert
Other Events	Severe	☐	FU2	Parsing of an XML data stream canceled for security reasons (reason = &A)	☐
RFC Function Call	Non-Critical	☐	FU1	RFC function &B with dynamic destination &C was called in program &A	☐
Other Events	Non-Critical	☐	EUZ	Data blocking deactivated for &A	☐
Other Events	Non-Critical	☐	EUY	Data blocking activated for &A	☐

`FU1` RFC function &B with dynamic destination &C was called in program &A

Dynamic destinations are generated by an ABAP program at runtime and do not have to be defined in transaction **`SM59`**. Depending on the configuration of the dynamic connection, it is also possible to switch users or log on without a password using trusted RFC.
For more information, see note 2156564.

`FU2` Parsing of an XML data stream canceled for security reasons (reason = &A

The ABAP XML parser canceled the parsing of an XML data stream for security reasons. It is possible that the data stream in question contains harmful DTD.

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March 2022

Topics March 2022

https://wiki.scn.sap.com/wiki/display/Security/Security+Notes+Webinar+-+2022-03

SAP Support Portal connection - Renew client certificate of technical S-user

Note 2452425 - Collective Note - SAP SSO Certificate Lifecycle Management for ABAP

Generic recommendations to secure support access

Note 3145987 - Missing Authentication check in SAP Focused Run (Simple Diagnostics Agent 1.0)
Note 3147102 - Information Disclosure vulnerability in SAP Focused Run (Simple Diagnostics Agent 1.0)

Note 3149805 - Cross-Site Scripting (XSS) vulnerability in SAP Fiori launchpad

Note 3111110 - Denial of service (DOS) in SAPCAR

Note 863362 - Security checks in SAP EarlyWatch Alert, EarlyWatch, and GoingLive sessions

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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SAP Support Portal connection
Renew client certificate of technical S-user

Client certificates have a limited lifetime of 1 year. Therefore you have to renew the certificates at least once per year – either manually or automatically.

KBA 2805811 - How to enable client certificate authentication for technical communication users
Method 1: Get SAP Passport from SAP Support Portal.
This PSE is protected by a password, automatic renewal is not possible due to limitations.
Method 2: Generate PSE in transaction `STRUST` and process a Certificate Signing Request (CSR)
You can use automatic creation as well as automatic renewal.

KBA 2911301 - SAP Support Portal connection - Renew client certificate of technical S-user

Note 2946444 - SAP Support Portal connection - Renew client certificate of technical S-user according to KBA 2911301
The new version of report `RSUPPORT_HUB_CERT_RENEWAL` verifies if the PSE is accessible for automatic renewal.

Note 3158150 - SDCC task Certificate Renewal: Dump TABLE_INVALID_INDEX in program /BDL/SAPLBDL11
The new version of the `SDCCN` task "Certificate Renewal" verifies if the PSE is accessible for automatic renewal.

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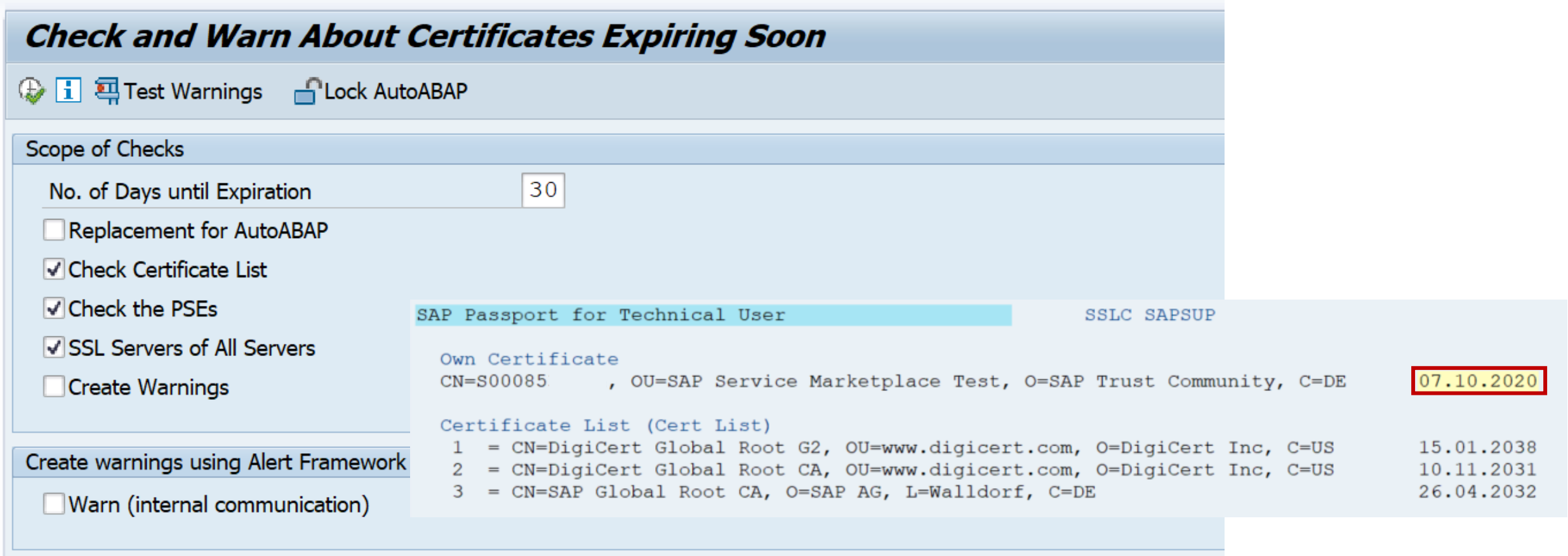
Note 2452425 - Collective Note - SAP SSO Certificate Lifecycle Management for ABAP

Report `SSF_ALERT_CERTEXPIRE` alerts on expiring certificates (MTE class R3SyslogSecurity)
or AutoABAP report `SSFALRTEXP`, see note 572035

Alerts only, no renewal



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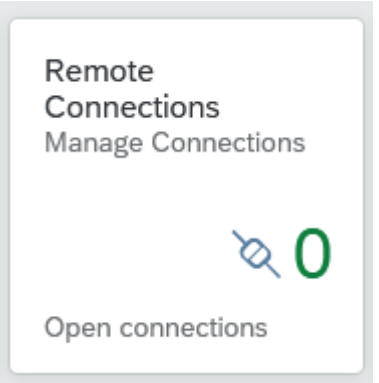
Generic recommendations to secure support access

- **Check Remote Connections and the Remote Logbook regularly**
  https://support.sap.com/en/tools/connectivity-tools/remote-support.html

  Maintain Connections
  https://launchpad.support.sap.com/#/remoteconnectivity

  View Logbook
  https://launchpad.support.sap.com/#/remoteconnectivitylogbook

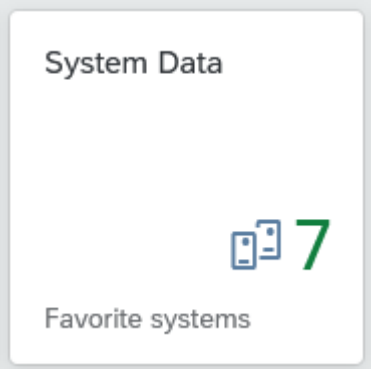
  Get an overview about open connections and recently used remote connections for selected systems in a chosen time period, including details like service type, actions taken, reasons, etc.



- **Check Customer Logon Data regularly**
  https://support.sap.com/en/tools/connectivity-tools/remote-support.html

  System Data
  https://launchpad.support.sap.com/#/systemdata

  Review lifetime of stored credentials



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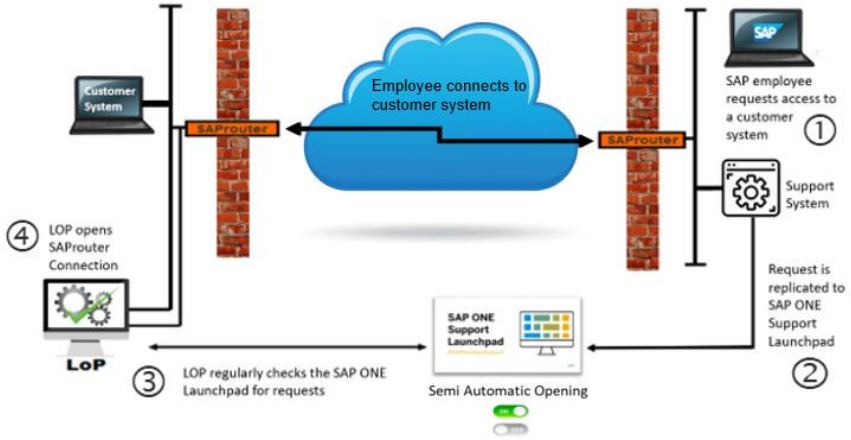
Generic recommendations to secure support access

- **Activate Remote Access Restrictions [for EU Access] / [for CN Access]**
  https://support.sap.com/en/my-support/help-support-applications/tile-overview.html
  https://support.sap.com/en/my-support/help-support-applications/tile-overview/tile2card.html

  Edit "System Data" to flag systems as EU data protection-relevant to restrict remote access and data storage to SAP support employees from countries that have implemented the EU Data Protection Directive.

- **Deactivate semi-automatic Service Line Opener (LOP)**
  https://support.sap.com/en/tools/connectivity-tools/line-opener.html
  Note 797124 - LOP - Semi Automatic Line Opener Program

  Deactivate the Semi-Automatic Line Opener which is directly integrated into the Solution Manager as well as any standalone Java application.



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Note 3145987 - Missing Authentication check in SAP Focused Run (Simple Diagnostics Agent 1.0)

Solution

1. Upgrade the Simple Diagnostics Agent to version 1.58.0 or later.
   See SP58 release note (3138374) and general release note (2369401).

2. Upgrade the SAP Host Agent to 7.22 PL55 or later. See note 3113553

Both parts are required!

The note not only solves CVE-2021-42550 as described in referred notes. (This vulnerability is considered to pose a lesser threat than log4shell because it requires access to logback's configuration file by the attacker, which requires to sign on to an already compromised system. See https://logback.qos.ch/news.html)

The note solves CVE-2022-24396, which has CVSS score 9.3, priority HotNews.
The solution covers Note 3147102, too.

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Note 3149805 - Cross-Site Scripting (XSS) vulnerability in SAP Fiori launchpad

In the meantime the FAQ 3157089 was updated:

> Will the issue be fixed once SAP Security Note 3149805 is implemented or do we need to upgrade to the latest SP?

Yes, once the note is implemented the issue will be fixed. No full SP upgrade is required for the releases mentioned in the note.

This is the important part of the correction:

```
*&---------------------------------------------------------------------*
*& Object          METH /UI2/CL_FLP_HTTP_HANDLER
*&                     GET_BOOT_THEME
*& Object Header   CLAS /UI2/CL_FLP_HTTP_HANDLER
*&---------------------------------------------------------------------*
...
      if me->is_style_url_secure( io_request = io_request
                                  iv_url = url_theme_root_from_url
                                  iv_check_origin_only = abap_true ) = abap_true.
*>>>> START OF DELETION <<<<<
        ev_theme_root = url_theme_root_from_url.
*>>>> END OF DELETION <<<<<<<

*>>>> START OF INSERTION <<<<<
        ev_theme_root = escape( val = url_theme_root_from_url format = cl_abap_format=>e_url ).
*>>>> END OF INSERTION <<<<<<
```

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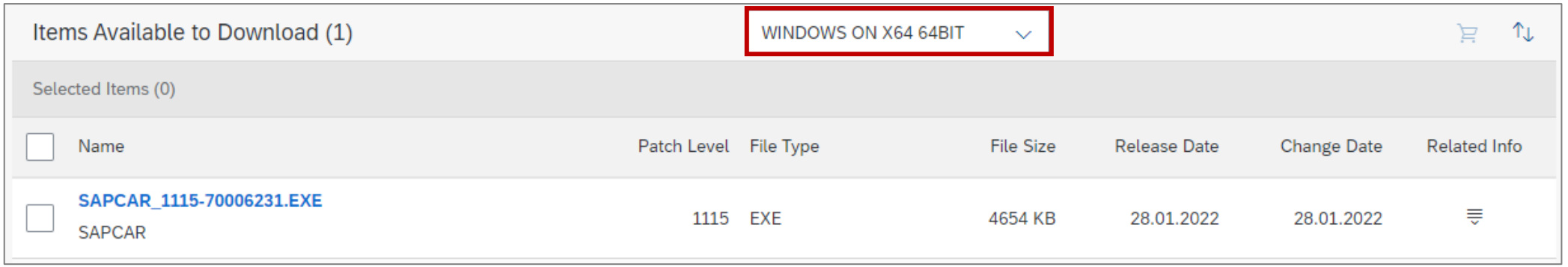
Note 3111110 - Denial of service (DOS) in SAPCAR

Solution: Use version 1115 or higher of program `sapcar`

There might exist many of copies of program `sapcar` somewhere on client machines and on servers.

→ Inform administrator to select the correct OS system and get the current version of `sapcar` from SAP Software Downloads:



Mitigation: Old version of `sapcar` produce correct archive files. A potential attacker need to construct a `sar` file without using `sapcar`.

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Note 863362 - Security checks in SAP EarlyWatch Alert, EarlyWatch, and GoingLive sessions

Separation of alerts for client 000 respective not 000

III. ABAP Stack related checks

Default Passwords of Standard Users

⊗ Critical standard users have default passwords in client 000	`SAP*, DDIC`	[red]
⊗ Critical standard users have default passwords in other client(s) than 000		[red]
⚠ Standard users have default passwords in client 000		[yellow]
⚠ Standard users have default passwords in other client(s) than 000	`SAPCPIC, EARLYWATCH, TMSADM`	[yellow]
⚠ TMSADM exists in another client than 000		[yellow]

Usage of User SAP*

`login/no_automatic_user_sapstar`

⊗ User SAP* does not exist in client 000, allowing critical logon to the system	[red]
⊗ User SAP* does not exist in other client(s) than 000, allowing critical logon to the system	[red]
⚠ User SAP* does not exist in client 000, potentially allowing critical logon in the future	[yellow]
⚠ User SAP* does not exist in other client(s) than 000, potentially allowing critical logon in the future	[yellow]

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Note 863362 - Security checks in SAP EarlyWatch Alert, EarlyWatch, and GoingLive sessions

Separation of alerts about critical authorizations into three topic areas

III. ABAP Stack related checks

Critical authorizations, which allow to do anything

⊗ Users with critical authorizations, which allow to do anything in client 000 [red]

⊗ Users with critical authorizations, which allow to do anything in other client(s) than 000 [red]

Critical authorizations, which should not be used in production

⊗ Users with critical authorizations, which should not be used in production in client 000 [red]

⊗ Users with critical authorizations, which should not be used in production in other client(s) than 000 [red]

Critical authorizations, which should only see very limited use in production
(Only shown if there is no ‘red’ alert)

⚠ Users with critical authorizations, which should only see very limited use in production in client 000 [yellow]

⚠ Users with critical authorizations, which should only see very limited use in production in other client(s) than 000 [yellow]

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Note 863362 - Security checks in SAP EarlyWatch Alert, EarlyWatch, and GoingLive sessions

Separation of checks about critical authorizations into three topic areas

III. ABAP Stack related checks

Critical authorizations, which allow to do anything

⊗ Super user accounts	`SAP_ALL`	Since authorizations of this category are particularly critical and should generally not be assigned, a “red” rating occurs for a single determined user.
⊗ Users authorized to debug/replace	`S_DEVELOP 02 DEBUG`	

Critical authorizations, which should not be used in production

⊗ Users authorized to change or display all tables	`S_TABU_DIS 02/03 *`	Critical if a large number of users in a client have the authorization: • More than 75 users of a client have the authorization • More than 10% of the users (but at least 11) of a client have the authorization

Critical authorizations, which should only see very limited use in production

⚠ Users authorized to start all reports	`S_PROGRAM SUBMIT *`	Same valuation rules as previous group The highest possible rating of these authorization checks is "yellow".
⚠ Users authorized to administer RFC connections	`S_RFC_TT 02 *`	
⚠ Users authorized to reset/change user passwords	`S_USER_GRP 05 *`	

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February 2022

Topics February 2022

https://wiki.scn.sap.com/wiki/display/Security/Security+Notes+Webinar+-+2022-02

Note 3140940 - Missing segregation of duties in SAP Solution Manager Diagnostics Root Cause Analysis Tools

Note 3123396 - Request smuggling and request concatenation in SAP NetWeaver, SAP Content Server and SAP Web Dispatcher

Note 3123427 - HTTP Request Smuggling in SAP NetWeaver Application Server Java

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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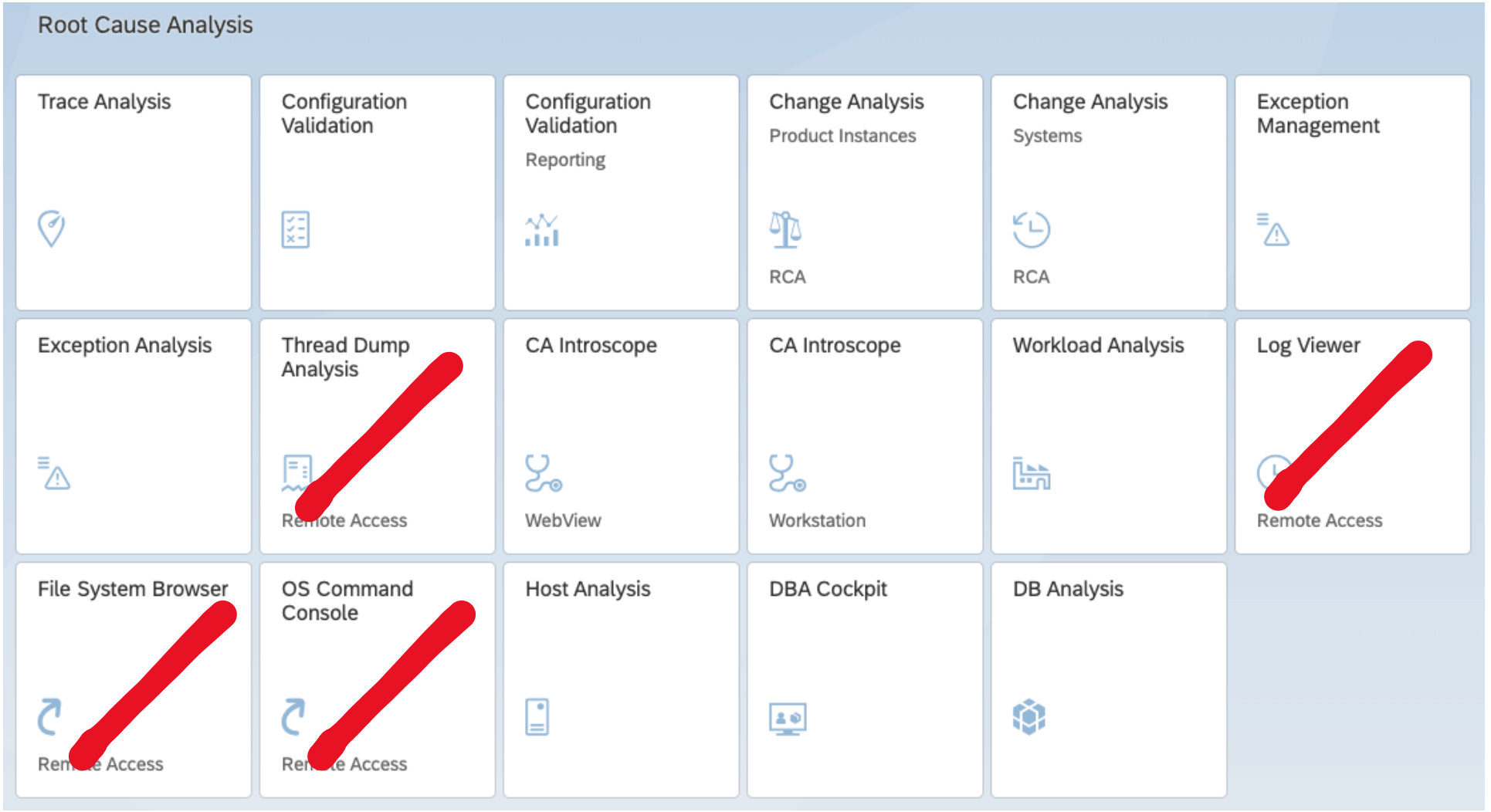
Note 3140940 - Missing segregation of duties in SAP Solution Manager Diagnostics Root Cause Analysis Tools



The security note removes the following Root Cause Analysis tools from the SAP Solution Manager

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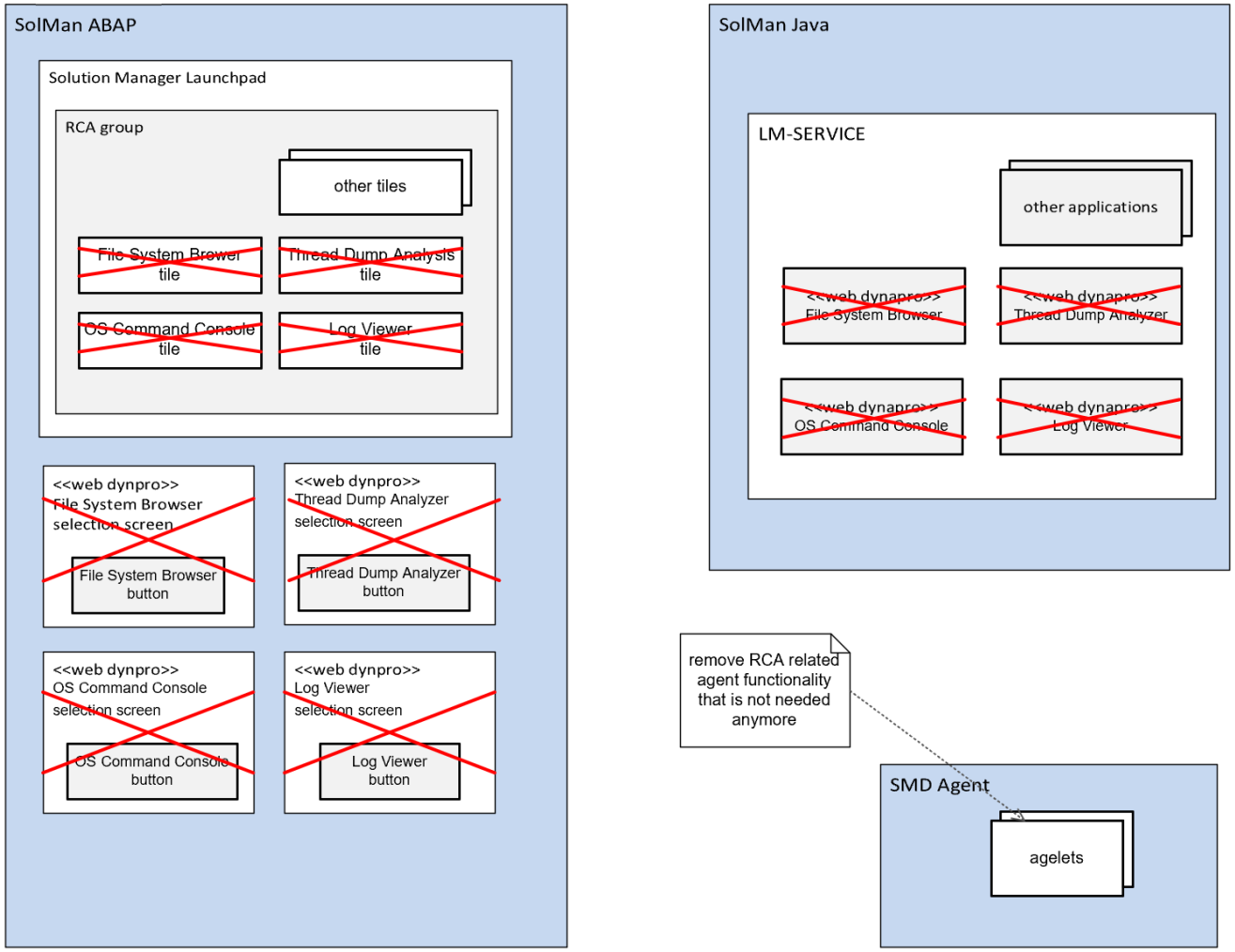
Note 3140940 - Missing segregation of duties in SAP Solution Manager Diagnostics Root Cause Analysis Tools

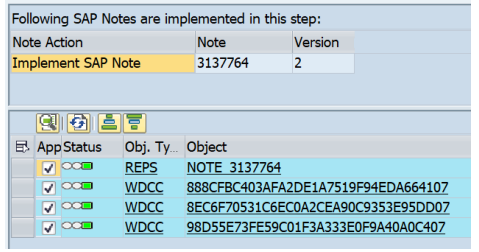


Insides: Complete Removal from ABAP and Java for SolMan 7.20 SP 3 or higher

ABAP:

Implement Note 3137764 - RCA Tools Removal

Then run new report `NOTE_3137764` once in DEV and use the same transport.



Java:

Implement this Note 3145008 - Removal of RCA Tools

Deploy the latest patch of your LM-SERVICE Support Package SP version via the Software Update Manager, see Note 1715441.

Only this deployment option will remove the applications completely.
(If you use the faster deployment via telnet, then you have to undeploy 3 development components manually.)

The deployment requires the activation of Maintenance Mode which will temporarily disconnect all the diagnostics agents.

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Note 3140940 - Missing segregation of duties in SAP Solution Manager Diagnostics Root Cause Analysis Tools

Removed function	Replacement
OS Command Console `tc~webadministrator~oscommand`	Execute commands via the operating system's remote access.
File System Browser `tc~webadministrator~fsbrowser`	Use the local operating system specific features to get access to the file system of the managed system.
Log Viewer `tc~webadministrator~standlogviewer`	Use the operating system's remote access features to retrieve the log files from the managed system and analyze them on your local machine.
Thread Dump Analysis `tc~webadministrator~tda`	Use the operating system's remote access features to execute the thread dump creation command. Retrieve the thread dump file from the managed system and analyze them on your local machine. See also Note 2671374 - How to generate Thread dumps using SAP JVM Eclipse plug-in Note 1020246 - Thread Dump Viewer for SAP Java Engine

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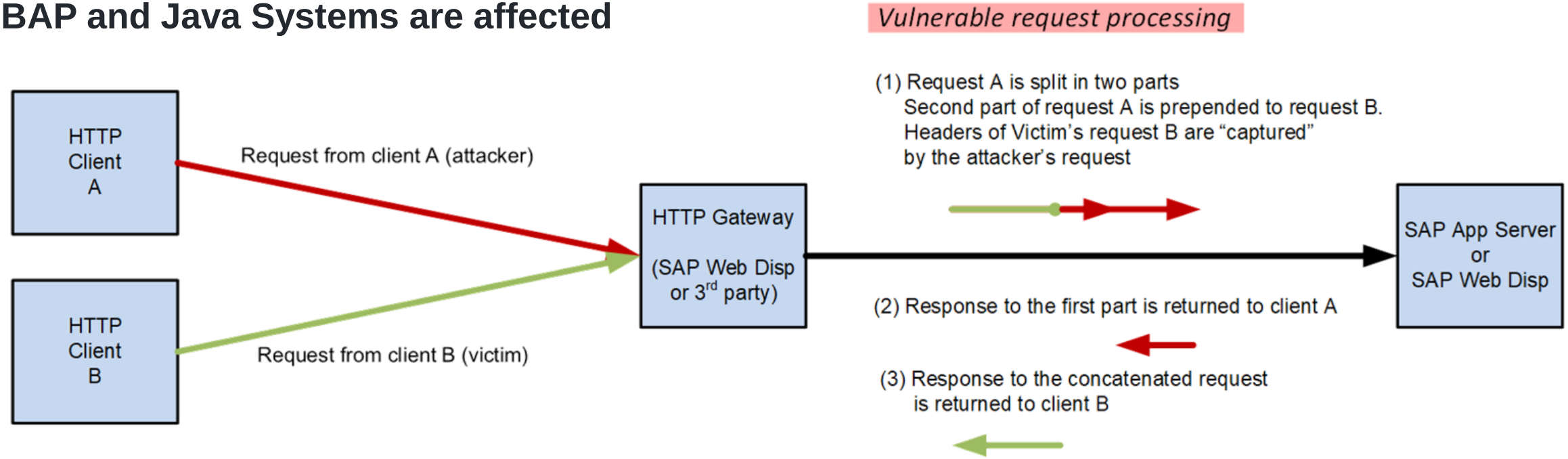
Note 3123396 - Request smuggling and request concatenation in SAP NetWeaver, SAP Content Server and SAP Web Dispatcher

ABAP and Java Systems are affected



Vulnerability assessment for CVE-2022-22536

https://github.com/Onapsis/onapsis_icmad_scanner

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Note 3123396 - Request smuggling and request concatenation in SAP NetWeaver, SAP Content Server and SAP Web Dispatcher

Suggestion for efficient patching:

a) **Consider the Workaround (if you cannot update ABAP and Java systems in short time)**

1. Update Web Dispatcher installations according to note 3138881 and set the parameter `wdisp/additional_conn_close=TRUE` respective
2. Define rewrite rules for the ICM according to note 3137885

b) **Update ABAP (`dw.sar`) and Java Systems which use a Web Dispatcher, Load Balancer or 3rd party proxy according note 3123396**

c) **Update all other ABAP and Java Systems**

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Note 3123396 - Request smuggling and request concatenation in SAP NetWeaver, SAP Content Server and SAP Web Dispatcher

The solution also covers the vulnerability described in related note 3123427 - HTTP Request Smuggling in SAP NetWeaver Application Server Java

Caution:
see https://wiki.scn.sap.com/wiki/display/SI/SAP+Kernel%3A+Important+News):

After implementing the SAP Web Dispatcher patch of
Note 3138881 ”`wdisp/additional_conn_close` workaround for security note 3123396”
a severe issue may occur with AS Java backend systems.

The following SAP Web Dispatcher releases are affected starting with the patch levels:
753#920, 777#433, 781#231, 785#073.

For details and correction see Note 3147927 ”`wdisp/additional_conn_close` causes errors for SAP NetWeaver AS Java servers”.

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Note 3123396 - Request smuggling and request concatenation in SAP NetWeaver, SAP Content Server and SAP Web Dispatcher

Application System Recommendation might fail to show Kernel related notes if the LMDB is not up to date.

Use application Change Reporting respective transaction `CCDB` in the SAP Solution Manager to inspect the Configuration Stores `SAP_KERNEL` und `CRYPTOLIB`.

Caution: All these tools know about the version defined in the main manifest file which gets updated as part of a stack Kernel update. If you just update `dw.sar` like in this case, then these tools do not get new information and continue showing the note.

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Note 3123396 - Request smuggling and request concatenation in SAP NetWeaver, SAP Content Server and SAP Web Dispatcher

e using
CDB

Store Filters

Category: *

Type: *

Name: SAP_J2EEClusterNode

Configuration Validation Filters

Validation System List:

Element Filters

Element Pattern: SAPJStartVersion

Reset | Display | Display Elements

Element Viewer

Element Value Width: Unlimited(60) Height: Single row

View: * [Standard View] | Print Version | Export | Store Details

Landscape	Component Version	Store Name	Element Status	Element Class	Element Name	Element Value
Java Server Node (FBJ~JAVA~41933150)	J2EE ENGINE SERVERCORE 7.50	SAP_J2EEClusterNode	Updated (Current)	Table Row	[KEY1]=SystemProperties [KEY2]=SAPJStartVersion [KEY3]=_ [KEY4]=_ [KEY5]=_	[VALUE]=753, patch 900, changelist 2094654, linuxx86_64, opt ...
Java Server Node (FBJ~JAVA~48248050)	J2EE ENGINE SERVERCORE 7.50	SAP_J2EEClusterNode	Updated (Current) Outdated days: 3	Table Row	[KEY1]=SystemProperties [KEY2]=SAPJStartVersion [KEY3]=_ [KEY4]=_ [KEY5]=_	[VALUE]=753, patch 800, changelist 2055784, linuxx86_64, opt ...
Java Server Node (PO1~JAVA~3455551)	J2EE ENGINE SERVERCORE 7.31	SAP_J2EEClusterNode	Updated (Current)	Table Row	[KEY1]=SystemProperties [KEY2]=SAPJStartVersion [KEY3]=_ [KEY4]=_ [KEY5]=_	[VALUE]=722, patch 1000 changelist 2001883, NTAMD64, optU (...

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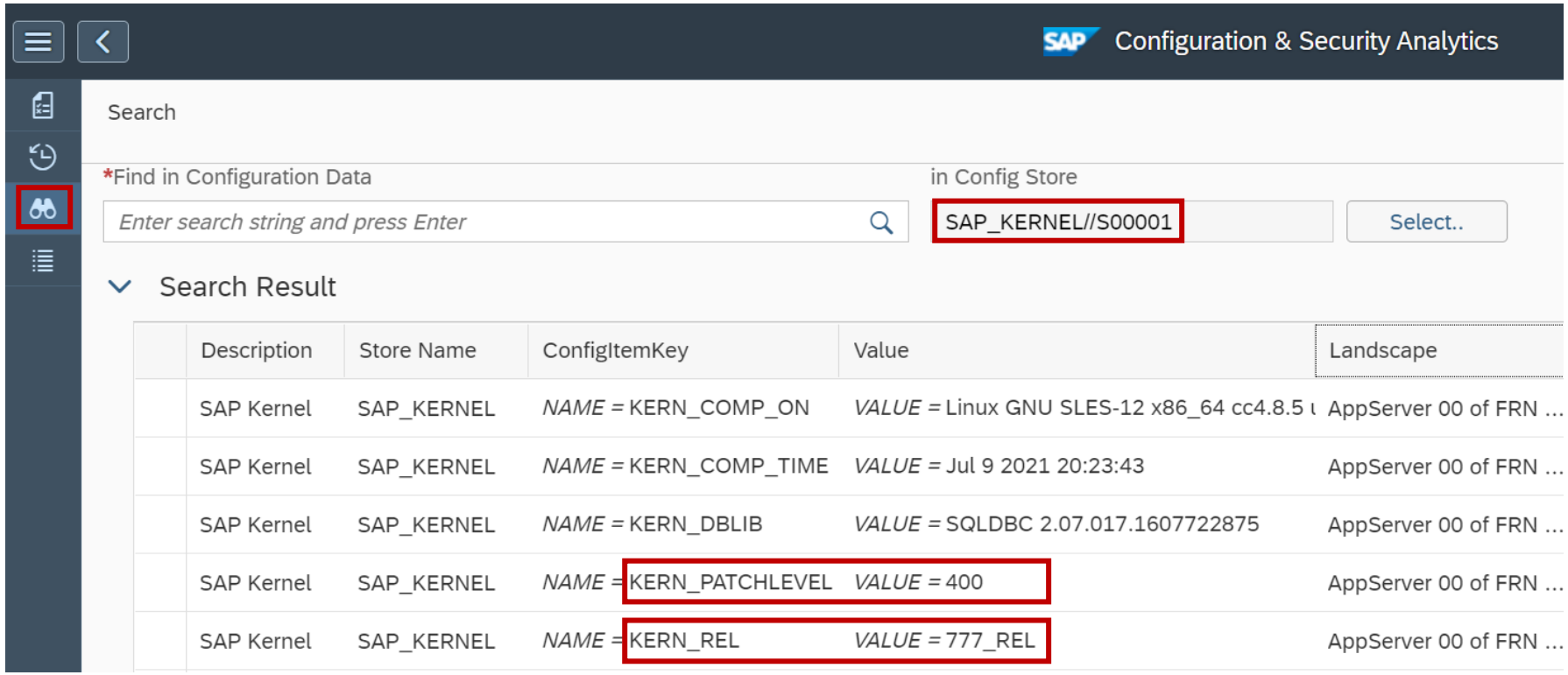
Note 3123396 - Request smuggling and request concatenation in SAP NetWeaver, SAP Content Server and SAP Web Dispatcher

Check ABAP Kernel release using FRUN Configuration & Security Analysis

FRUN Internet Demo System

Configuration Store: `SAP_KERNEL`
Configuration Items: `KERN_REL` and `KERN_PATCHLEVEL`



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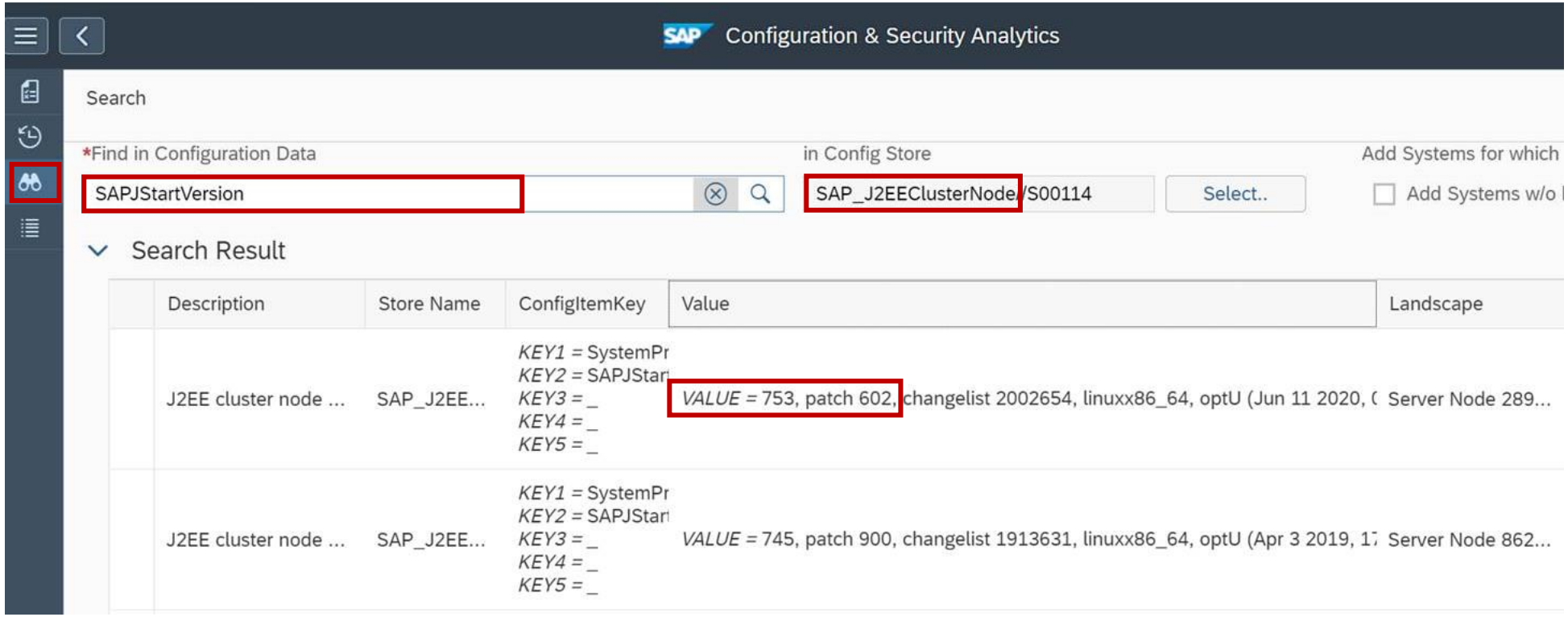
Note 3123396 - Request smuggling and request concatenation in SAP NetWeaver, SAP Content Server and SAP Web Dispatcher

Check Java Kernel release using FRUN Configuration & Security Analysis

FRUN Internet Demo System

Configuration Store: `SAP_J2EEClusterNode`
Configuration Item: `SAPJStartVersion`



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January 2022

Topics January 2022

https://wiki.scn.sap.com/wiki/display/Security/Security+Notes+Webinar+-+2022-01

Note 3131047 Central Security Note for Apache Log4j 2 component
Critical vulnerabilities CVE-2021-44228, CVE-2021-45046, CVE-2021-44832, CVE-2021-45105

How to remove Log4j notes from System Recommendations

Note 3112928 - Multiple vulnerabilities in F0743 Create Single Payment application of SAP S/4HANA

Note 3117350 - SCM Optimizer run terminates with "CALLBACK_REJECTED_BY_WHITELIST“

Note 3112710 - Information Disclosure vulnerability in SAP NetWeaver Application Server for ABAP and ABAP Platform

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Note 3131047 Critical vulnerabilities in log4j v2

CVE-2021-44228, CVE-2021-45046, CVE-2021-44832, CVE-2021-45105

Critical vulnerabilities in log4j v2
https://logging.apache.org/log4j/2.x/security.html

155 Notes as of 13.12.2021
(166 notes combined)

CVE-2021-44228 **Remote Code Execution**
Base CVSS Score 10.0 AV:N/AC:L/PR:N/UI:N/S:C/C:H/I:H/A:H
Fixed in Log4j 2.15.0 (Java 8)

133 Notes
Priority: very high

CVE-2021-45046 **Remote Code Execution**
Base CVSS Score 9.0 AV:N/AC:H/PR:N/UI:N/S:C/C:H/I:H/A:H
Fixed in Log4j 2.16.0 (Java 8) and Log4j 2.12.2 (Java 7)

49 Notes
Priority: very high

CVE-2021-45105 **Denial of Service**
Base CVSS Score 5.9 AV:N/AC:H/PR:N/UI:N/S:U/C:N/I:N/A:H
Fixed in Log4j 2.17.0 (Java 8), 2.12.3 (Java 7) and 2.3.1 (Java 6)

36 Notes
Priority: medium

CVE-2021-44832 **Remote Code Execution**
Base CVSS Score 6.6 AV:N/AC:H/PR:H/UI:N/S:U/C:H/I:H/A:H
Fixed in Log4j 2.17.1 (Java 8), 2.12.4 (Java 7) and 2.3.2 (Java 6)

13 Notes
Priority: medium

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Note 3131047 Critical vulnerabilities in log4j v2

CVE-2021-44228, CVE-2021-45046, CVE-2021-44832, CVE-2021-45105

CVE	Vulnerability	Correction	CVSS Score	CVSS Vector	SAP Priority	Count of SAP notes
Critical vulnerabilities in log4j v2						155
CVE-2021-44228	Remote Code Execution	**Log4j 2.15.0 (Java 8)**	10.0	AV:N/AC:L/PR:N/UI:N/S:C/C:H/I:H/A:H	very high	133
CVE-2021-45046	Remote Code Execution	**Log4j 2.16.0 (Java 8)** Log4j 2.12.2 (Java 7)	9.0	AV:N/AC:H/PR:N/UI:N/S:C/C:H/I:H/A:H	very high	49
CVE-2021-45105	Denial of Service	**Log4j 2.17.0 (Java 8)** Log4j 2.12.3 (Java 7) Log4j 2.3.1 (Java 6)	5.9	AV:N/AC:H/PR:N/UI:N/S:U/C:N/I:N/A:H	medium	36
CVE-2021-44832	Remote Code Execution	**Log4j 2.17.1 (Java 8)** Log4j 2.12.4 (Java 7) Log4j 2.3.2 (Java 6)	6.6	AV:N/AC:H/PR:H/UI:N/S:U/C:H/I:H/A:H	medium	13

Combined you find 166 distinct notes

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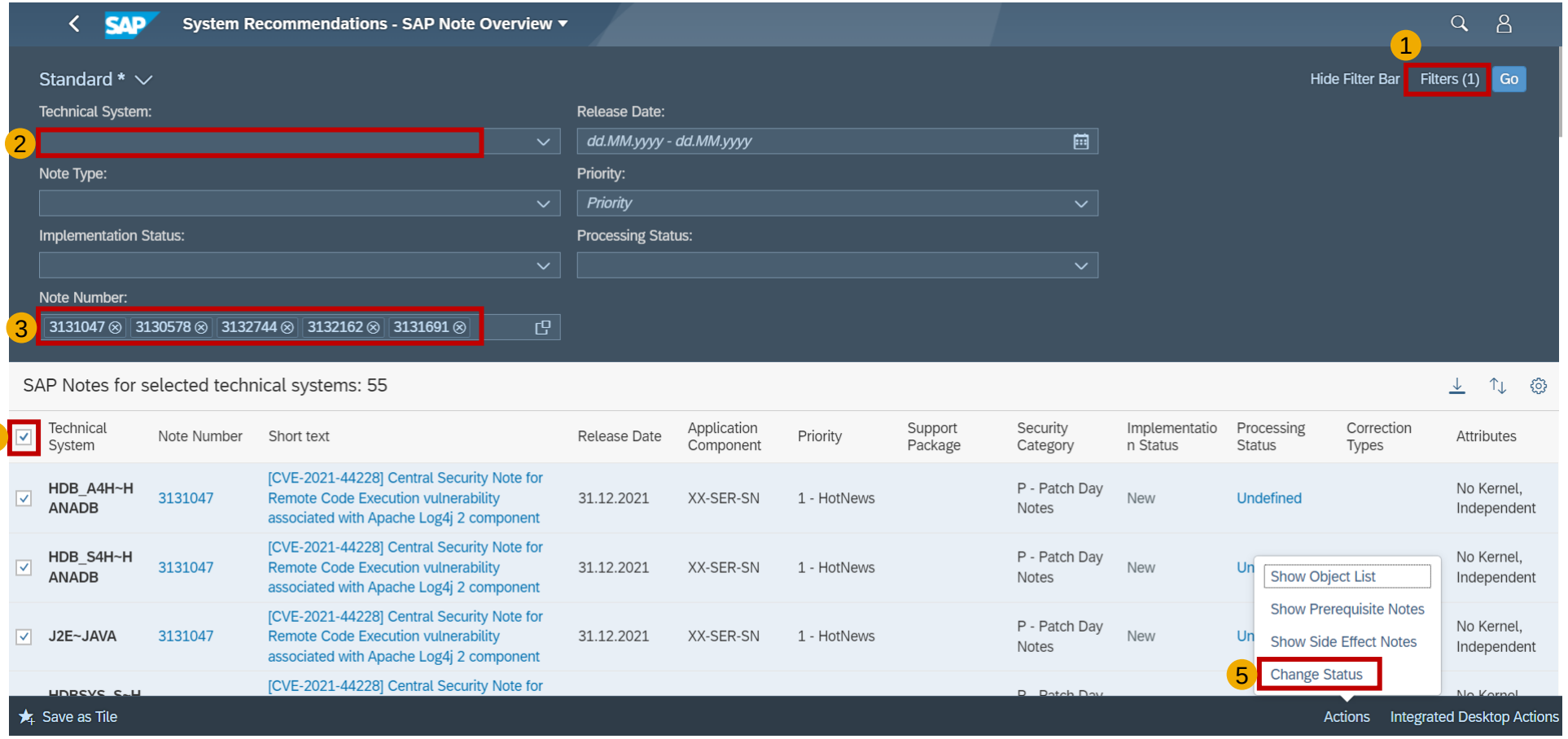
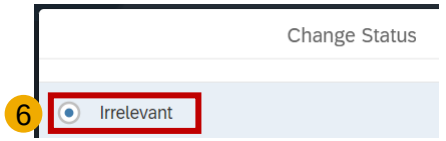
How to remove Log4j notes from System Recommendations





How to get rid of irrelevant notes

1. **Extend filters to show the notes filter**
2. **Remove any other filter value**
3. **Enter note numbers, e.g.**
   3131047
   3130578
   3132744
   3132162
   3131691
4. **Select all entries**
5. **Call Actions → Change Status**
6. Choose Status „Irrelevant“

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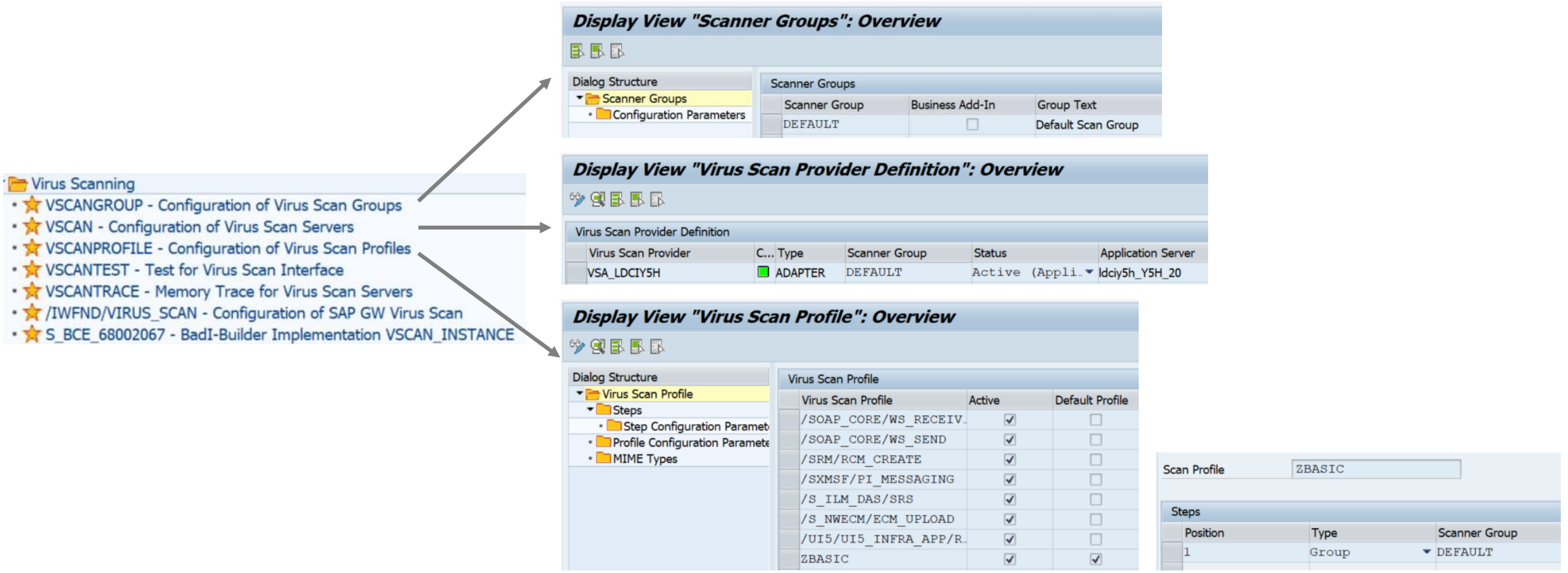
Note 3112928 - Multiple vulnerabilities in F0743 Create Single Payment application of SAP S/4HANA

The solution enables to use a virus scanner on the server (not the client) to validate uploaded attachments. The application uses the default profile (according to transaction `VSCANPROFILE`).



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Note 3117350 - SCM Optimizer run terminates with "CALLBACK_REJECTED_BY_WHITELIST"

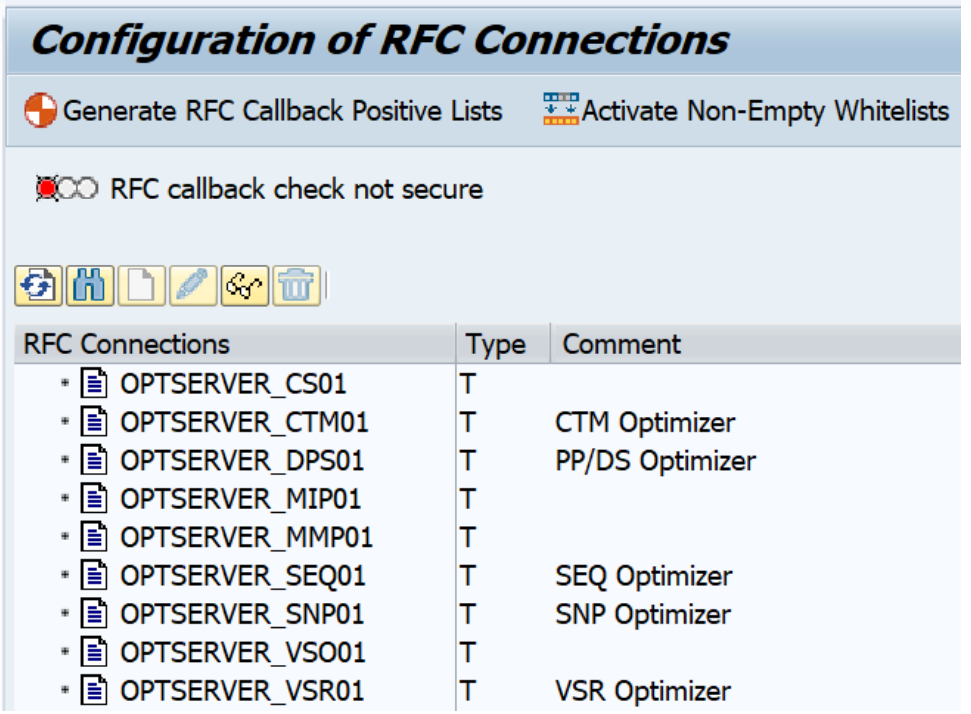
Recommended setting: profile parameter `rfc/callback_security_method = 3`

Components: CA-EPT-RCC, TM-BF-OPT, …

The SCM Optimizer is an external RFC server program. The ABAP systems connects to it via a TCP/IP Destination (a typical name of the destination is `OPTSERVER_xyz01`). For more information, see notes 1686826 and 2644038 and the installation guide

Recommended entries for these destinations (at least):

Called function module	Callback function module
RCC_ENGINE_START	/SCMTMS/PLN_OPT_*
RCC_ENGINE_START	RCCF_COMM_*
RCC_ENGINE_START	RCCF_GET_*



More entries might be required!

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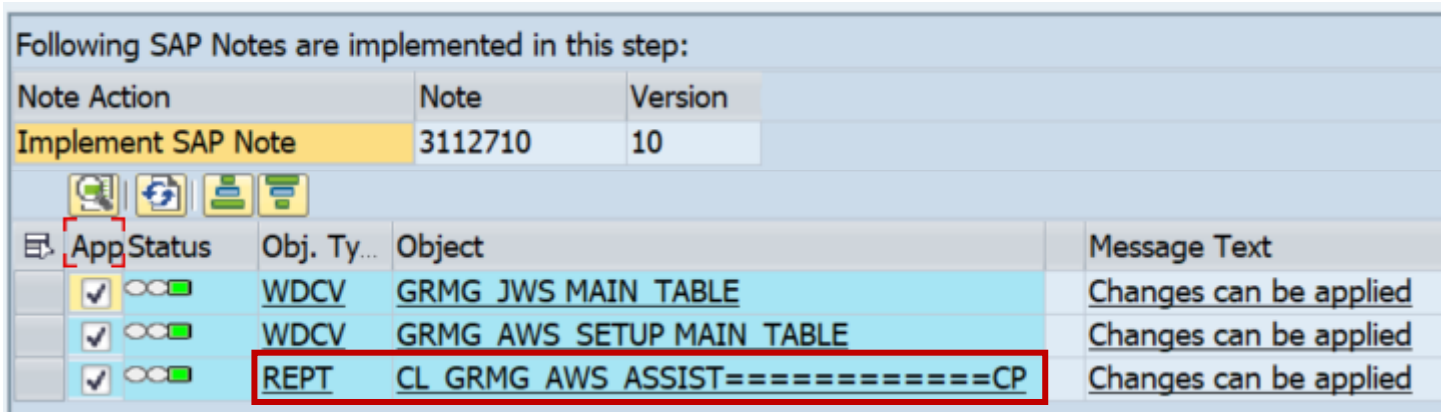
Note 3112710 - Information Disclosure vulnerability in SAP NetWeaver Application Server for ABAP and ABAP Platform

After the corrections, an administrator requires authorizations for `S_RZL_ADM` to execute the WebDynpro applications of Generic Request and Message Generation:

You can skip the manual activity if the text (in German) is already part of the automatic correction instruction:



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December 2021

Topics December 2021

Critical vulnerability in log4j v2 CVE-2021-44228 (plus CVE-2021-45046)
Note 3131047 - Central Security Note for Remote Code Execution vulnerability associated with Apache Log4j 2 component

Note 3119365 - Code Injection vulnerability in SAP ABAP Server & ABAP Platform (SAP internal translation tools)

Note 3102769 - Cross-Site Scripting (XSS) vulnerability in SAP Knowledge Warehouse

SAP Secure By Default for S/4HANA on Premise 2021
Note 2926224 New security settings for SAP S/4HANA & SAP BW/4HANA using SL Toolset/SUM

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Critical vulnerability in log4j CVE-2021-44228 (plus CVE-2021-45046)

CVE-2021-44228: Apache Log4j2 <= 2.14.1 JNDI (Java Naming and Directory Interface) features used in configuration, log messages, and parameters do not protect against attacker controlled LDAP and other JNDI related endpoints. An attacker who can control log messages or log message parameters can execute arbitrary code loaded from LDAP servers when message lookup substitution is enabled.

From log4j 2.15.0, this behavior has been disabled by default. A less important issue is solved in 2.16.0

In previous releases (>= 2.10 checked on GitHub**) this behavior can be mitigated by setting system property "`log4j2.formatMsgNoLookups`" to "`true`"**

or it can be mitigated in prior releases (< 2.10) by removing the `JndiLookup` class from the classpath (example: `zip -q -d log4j-core-*.jar org/apache/logging/log4j/core/lookup/JndiLookup.class`).

Older releases 1.x are not affected by this specific vulnerability checked on GitHub
(but could be on risk depending on the configuration of the application which uses it and may suffer from another vulnerability)

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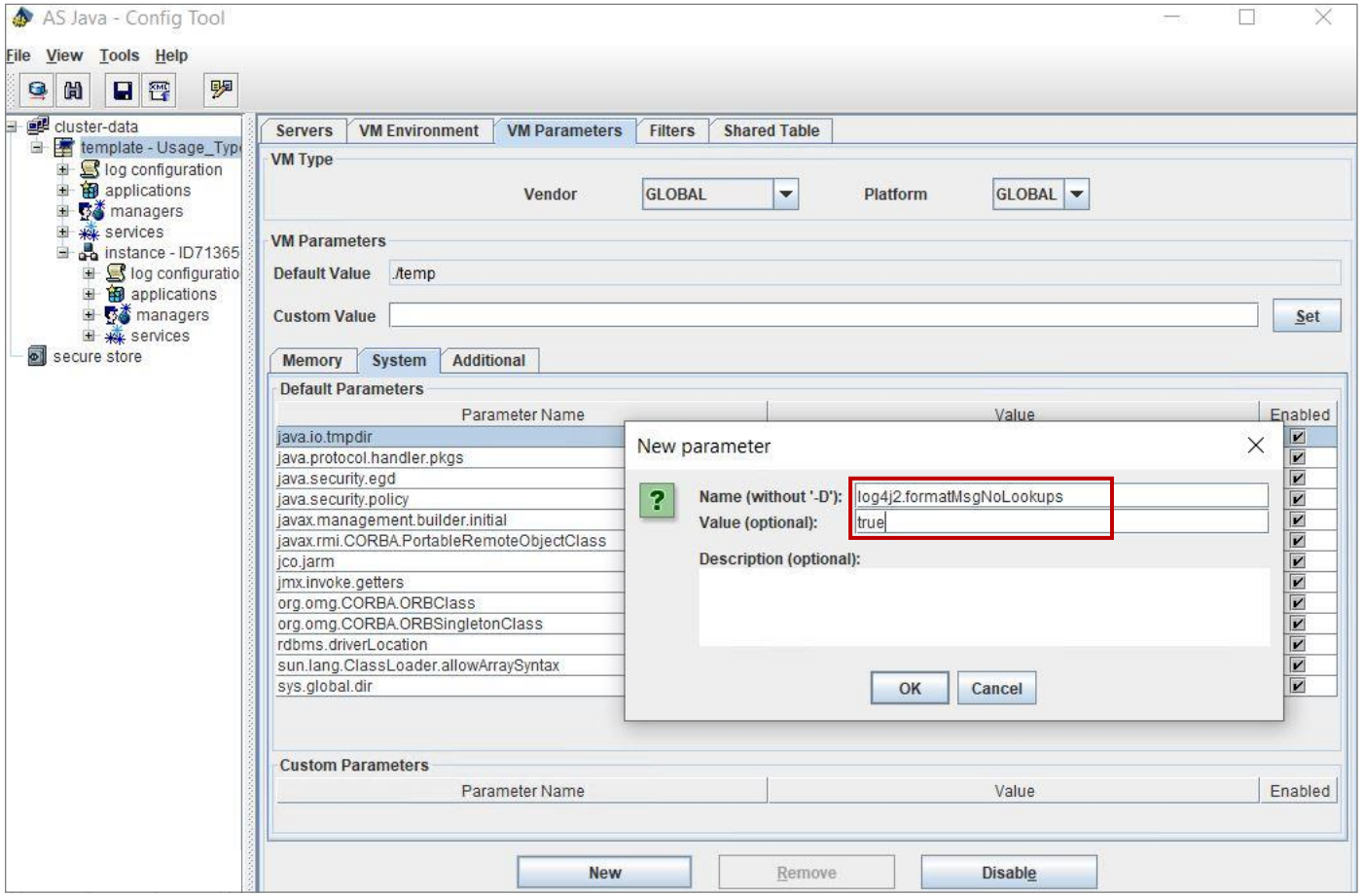
Critical vulnerability in log4j CVE-2021-44228

In releases (>= 2.10) this behavior can be mitigated by setting system property "`log4j2.formatMsgNoLookups`" to "`true`"

Example from note 3129883 - **AS Java**

Take care if the library is installed for custom code as well. Check the version and the option to set this property.

You should find this parameter (if set) in the CCDB Configuration Store `SAP_J2EEClusterNode`



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Critical vulnerability in log4j CVE-2021-44228

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Example from note 3129883 - **AS Java**

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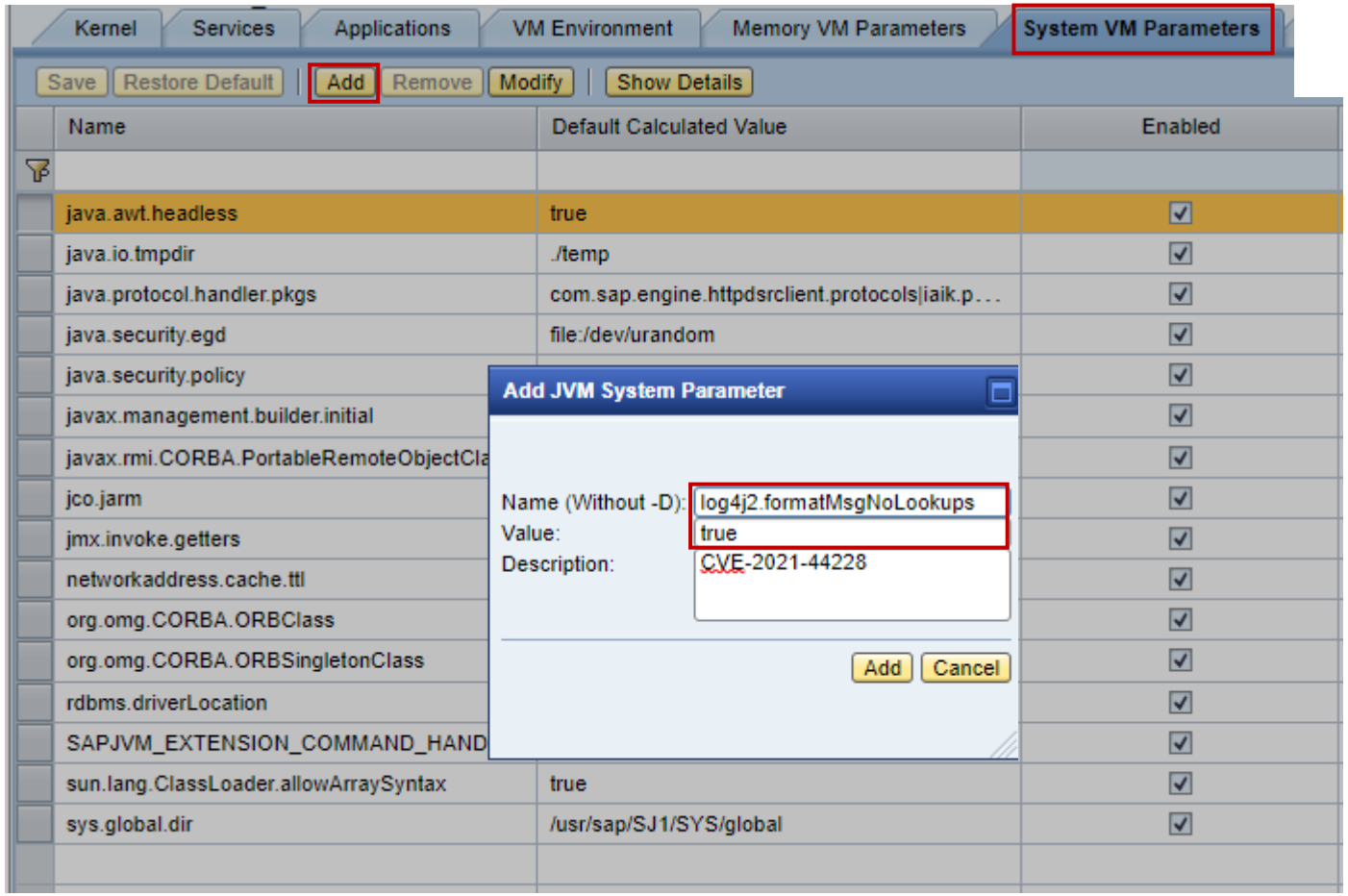

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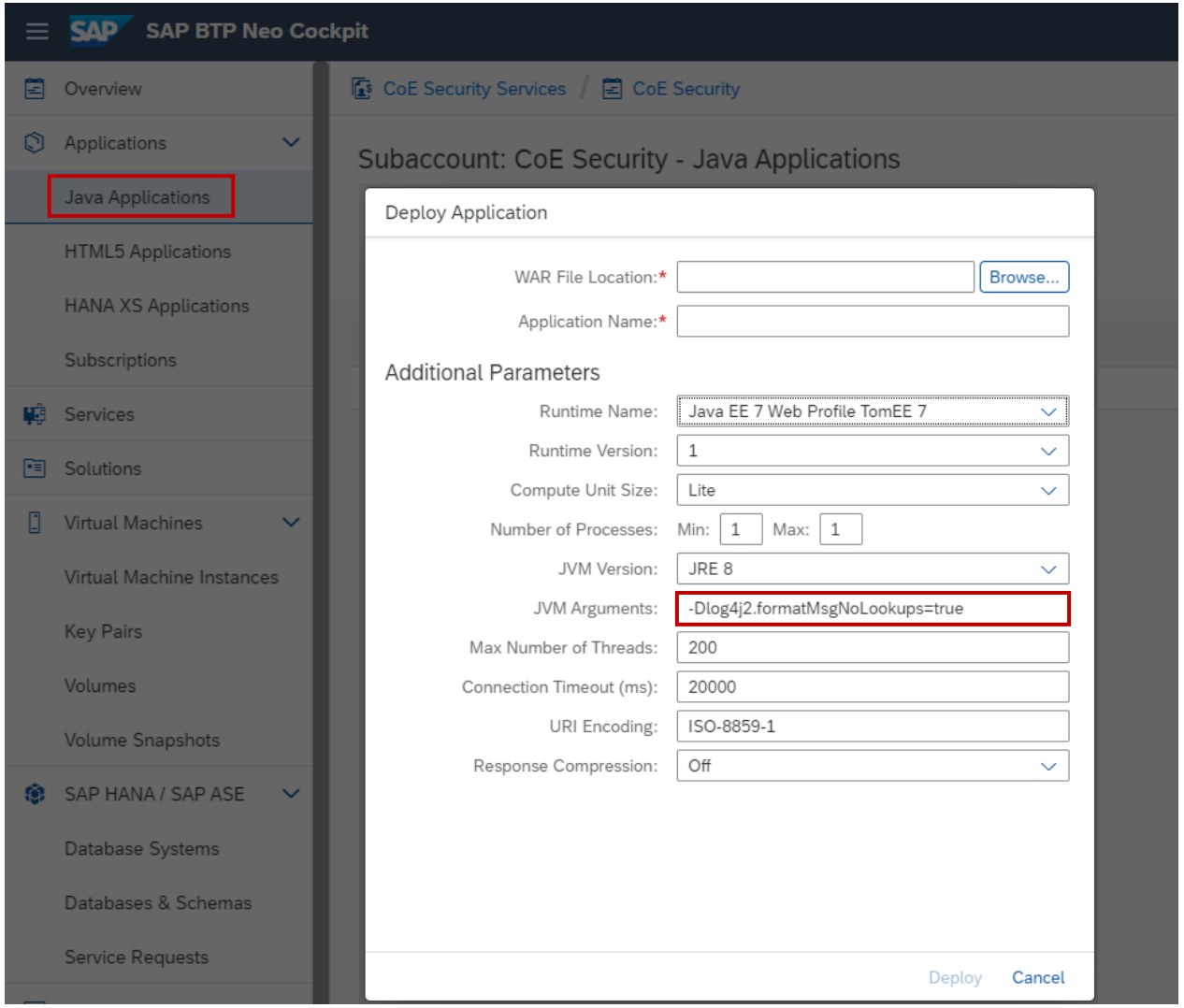
Critical vulnerability in log4j CVE-2021-44228

In releases (>= 2.10) this behavior can be mitigated by setting system property "`log4j2.formatMsgNoLookups`" to "`true`"

Example similar to note 3130476 - Detecting and remediating log4j CVE-2021-44228 vulnerabilities in **BTP Cloud Foundry** applications
"You have to check the dependencies in the code of your application."



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Critical vulnerability in log4j CVE-2021-44228

Official statement, list of affected and not affected products and links to configuration notes:

https://support.sap.com/content/dam/support/en_us/library/ssp/my-support/trust-center/sap-tc-01-5025.pdf

No Known Impact	At the time of publication (time stamped above), the following non-exhaustive list of SAP products do not contain components affected by this CVE.
Current Patch Application	At the time of publication, the following products have been identified as using Log4J. Appropriate patching, or recommended temporary fixes, were applied.
Patch Pending	At the time of publication, the following products are pending patch development. The available workarounds are found in the links provided below.

Please know that the products listed across these three categories is not an exhaustive list of all SAP products.

Customers are encouraged to contact SAP's support portal for more information if they have a question about a non-listed product.

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Critical vulnerability in log4j CVE-2021-44228

You find the component specific notes describing the workaround or the solution (as soon as it's available) here:

Note 3131047 - Central Security Note for Remote Code Execution vulnerability associated with Apache Log4j 2 component

Search terms to find all notes or blogs:

CVE-2021-44228
https://launchpad.support.sap.com/#/solutions/notes/?sortBy=date&sortOrder=desc&q=CVE-2021-44228
(Caution: not all notes and KBAs show the CVE entry)

Therefore, search for „Log4J" and add an restriction by date >= 10.12.2021
https://launchpad.support.sap.com/#/solutions/notes/?sortBy=date&sortOrder=desc&q=Log4J

Limitation:

EWA, SOS, System Recommendations, CCDB or Configuration Validation do not show affected systems.

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Note 3119365 - Code Injection vulnerability in SAP ABAP Server & ABAP Platform (SAP internal translation tools)

The note deactivates/deletes several SAP internal translation tool reports:

```
RS_LXE_EXTRACT_LXELOG2CSV
RS_LXE_EXTRACT_OL2CSV
RS_LXE_EXTRACT_WORK_LIST2CSV
```

A correction instruction for SAP_BASIS 7.01 might be missing, do it manually.
Delete the reports or add an `EXIT.` or `RETURN.` as first statement after `START-OF-SELECTION.`

It seems that no correction is required on SAP_BASIS 7.02 – 7.31

In any case, you can verify if these reports either do not exist or have commented coding.

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Note 3102769 - Cross-Site Scripting (XSS) vulnerability in SAP Knowledge Warehouse

This component displays only these documents, which were created and/or modified using SAP Knowledge Warehouse.
No other applications use the component.

Workaround to switch off the application (if you are not using it):

Option 1: Disable the vulnerable application following the documentation in Config Tool Adding Filters. Parameters 'Component Name Mask' = `tc~km_tc*`, 'Vendor Mask' = `sap.com`

Option 2: In case the requests are routed via SAP Web Dispatcher you may add a rewrite rule to SAP Web Dispatcher to prevent from redirects.

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Introduction

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SAP Secure By Default for S/4HANA on-premise

Status

Products in scope

- SAP S/4HANA on Premise 2021 (settings were partially shipped since SAP S/4HANA 1909)
- SAP BW/4HANA 2021
- Products based on S/4HANA Foundation 2021, e.g.
  - SAP Focused Run 3.0
  - SAP Access Control
  - SAP Customer Activity Repository

Customer documentation

- SAP Notes 2926224 is a collection note including attachment
- SAP Blog https://blogs.sap.com/2021/10/20/the-story-resumes-secure-by-default-for-sap-s-4hana-2021/

Status

- First shipment done with SAP S/4HANA on premise 1909
- Additional security topics shipped with SAP S/4HANA on premise 2020 and 2021
- Further improvements planned with SAP S/4HANA on premise 2022

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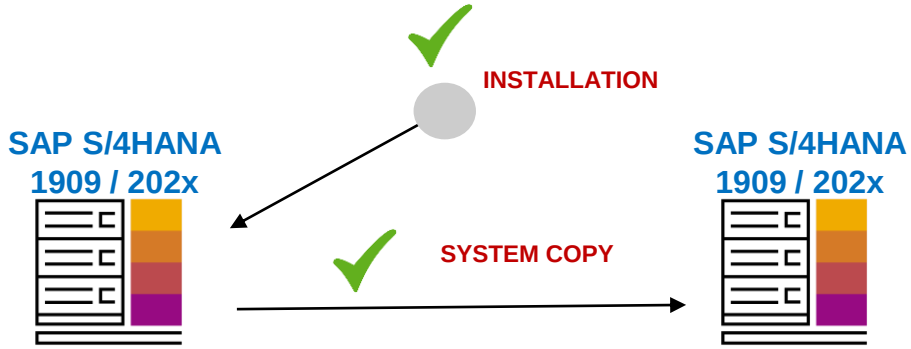
SAP Secure By Default for S/4HANA on-premise

How can customers get the improvements?

Secure by default in SAP S/4HANA
(Note 2926224) is shipped and enabled for:

New installations and system copies



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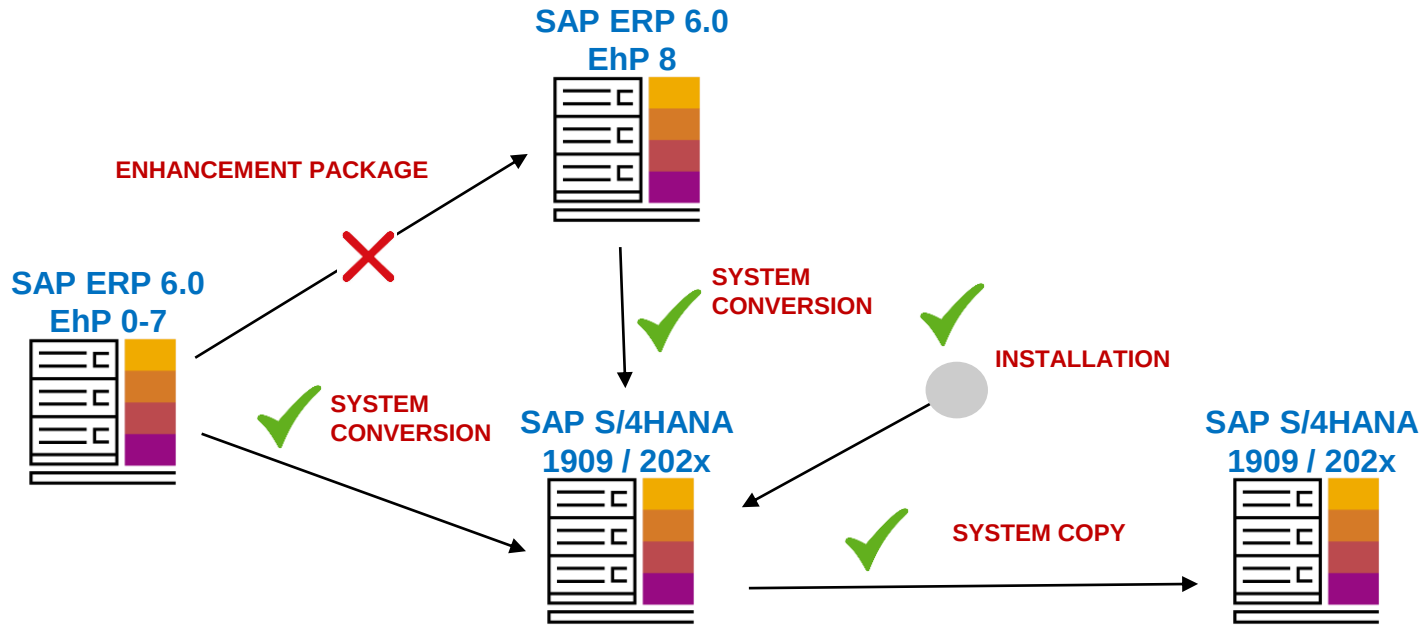
SAP Secure By Default for S/4HANA on-premise

How can customers get the improvements?

Secure by default in SAP S/4HANA
(Note 2926224) is shipped and enabled for:

New installations and system copies

Conversions from ERP to SAP S/4HANA



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SAP Secure By Default for S/4HANA on-premise

How can customers get the improvements?

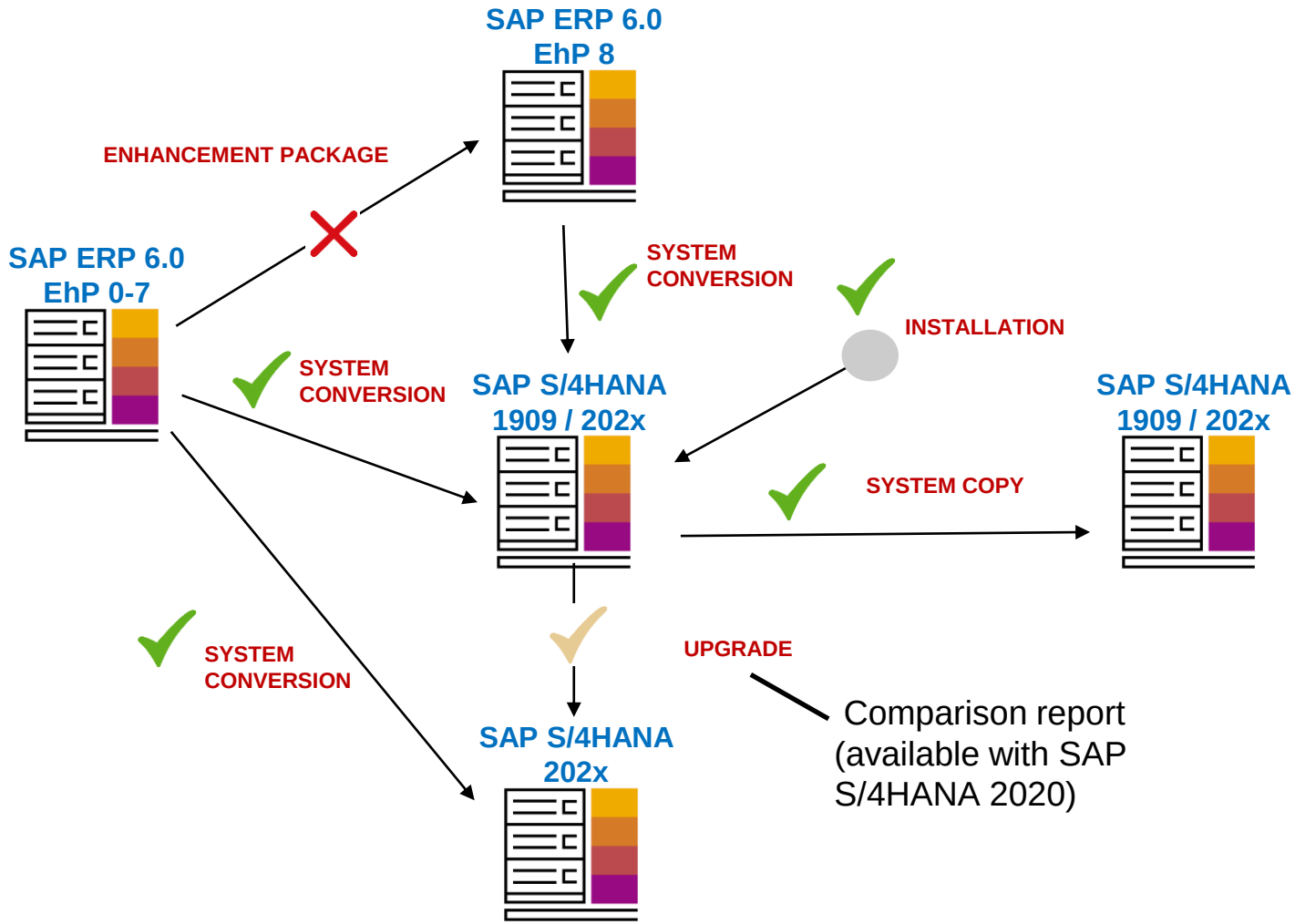
Secure by default in SAP S/4HANA
(Note 2926224) is shipped and enabled for:

New installations and system copies

Conversions from ERP to SAP S/4HANA

Upgrades within the SAP S/4HANA product

- **No automated changes**
- Report can be used to compare recommended SAP kernel parameters with configured parameters
- In addition, refer to SAP-provided tools and services for security checks (e.g. EWA, SOS, Config Validation)



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SAP Secure By Default for S/4HANA on-premise 1909 / 2020
Technical view

Profile parameters are set to secure values for SAP S/4HANA 1909 / 2020

- 17 recommended values
- 27 parameters default values were changed in the SAP S/4HANA 2020 (SAP Kernel 7.81)

Security Audit Log (SAL) (shipped with 1909)

Automatic configuration of the security audit log
(if not already set up by the customer)

Switchable Authorization Framework (SACF) (shipped with 2020)

Automatic activation of all SACF scenarios to enable additional business authorization checks (if not already set up by the customer)

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SAP Secure By Default for S/4HANA on-premise 2021
Technical view

HANA Audit Policies for S/4HANA

- Activation of SAP HANA auditing in the SAP HANA database
- Activation of basic SAP HANA audit policies (tradeoff between log volume and traceability)

Table logging

Activation of ABAP table logging for business-critical tables

Security improvements for transport management

Set three transport profile parameters to secure values

Security configurations

- Activation of “start authorization checks” for Web Dynpro
- Enablement of the UCON HTTP Allowlist framework for increased protection of HTTP traffic
- Activation of all defined SLDW scenarios

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SAP Secure By Default for S/4HANA on-premise 2021

Central Documentation

Secure by default in SAP S/4HANA (Note 2926224)

Area	Type of setting	Name	Storage	Description	Relevant SAP Note	SAP Note URL	New recommended value
Authorizations	Profile parameter	auth/check/calltransaction	DEFAULT.PFL	Behavior of authority check during call transaction: Controls how CALL TRANSACTION statements in all programs react regarding missing entries in SE97 / table TCDCOUPLES. If not set to 3, authorization checks are not properly enforced.	515130	515130	3
Authorizations	Profile parameter	auth/object_disabling_active	DEFAULT.PFL	Enables to globally switch off authorization checks for selected authorization objects (prerequisite for transaction AUTH_SWITCH_OBJECTS). If not set to "N", a global deactivation would be possible.	2926224	2926224	N
Authorizations	Profile parameter	auth/rfc_authority_check	DEFAULT.PFL	Execution option for the RFC authority check: Controls the behavior of enforced authentication and authorization checks when RFC function modules are called from remote. If not set to 6, an information disclosure vulnerability exists for unauthenticated users.	2216306	2216306	6
Server infrastructure	Profile parameter	gw/reg_no_conn_info	DEFAULT.PFL	Specific security-related additional functions for the RFC gateway are activated depending on which bits are set in this bitmask. If not set to 255, not all security checks may be properly enforced in the RFC gateway.	2776748 1444282	2776748	255
Server infrastructure	Profile parameter	gw/rem_start	DEFAULT.PFL	This setting specifies with which method an RFC server might be started on OS level from an external endpoint. If not set to "DISABLED", attempts to utilize an improper or even insecure OS logon method (like RSH) might be possible.	2776748 1520096	2776748	DISABLED
Logon & SSO	Profile parameter	icf/reject_expired_passwd	DEFAULT.PFL	Controls whether logon with expired or initial password via HTTP/S is allowed or not. If not set to 1, users with an expired password are able to remotely call SICF services.	1042274	1042274	1
Logon & SSO	Profile parameter	icf/set_HTTPonly_flag_on_cookies	DEFAULT.PFL	This parameter is used to set the attribute HTTPonly for ICF cookies. If not set to 0, javascript code running in the browser may inappropriately access sensitive cookies.	1277022	1277022	0

S4HANA 2021 | S4HANA 2020 | S4HANA 1909 | Info

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Detailed review of Secure By Default

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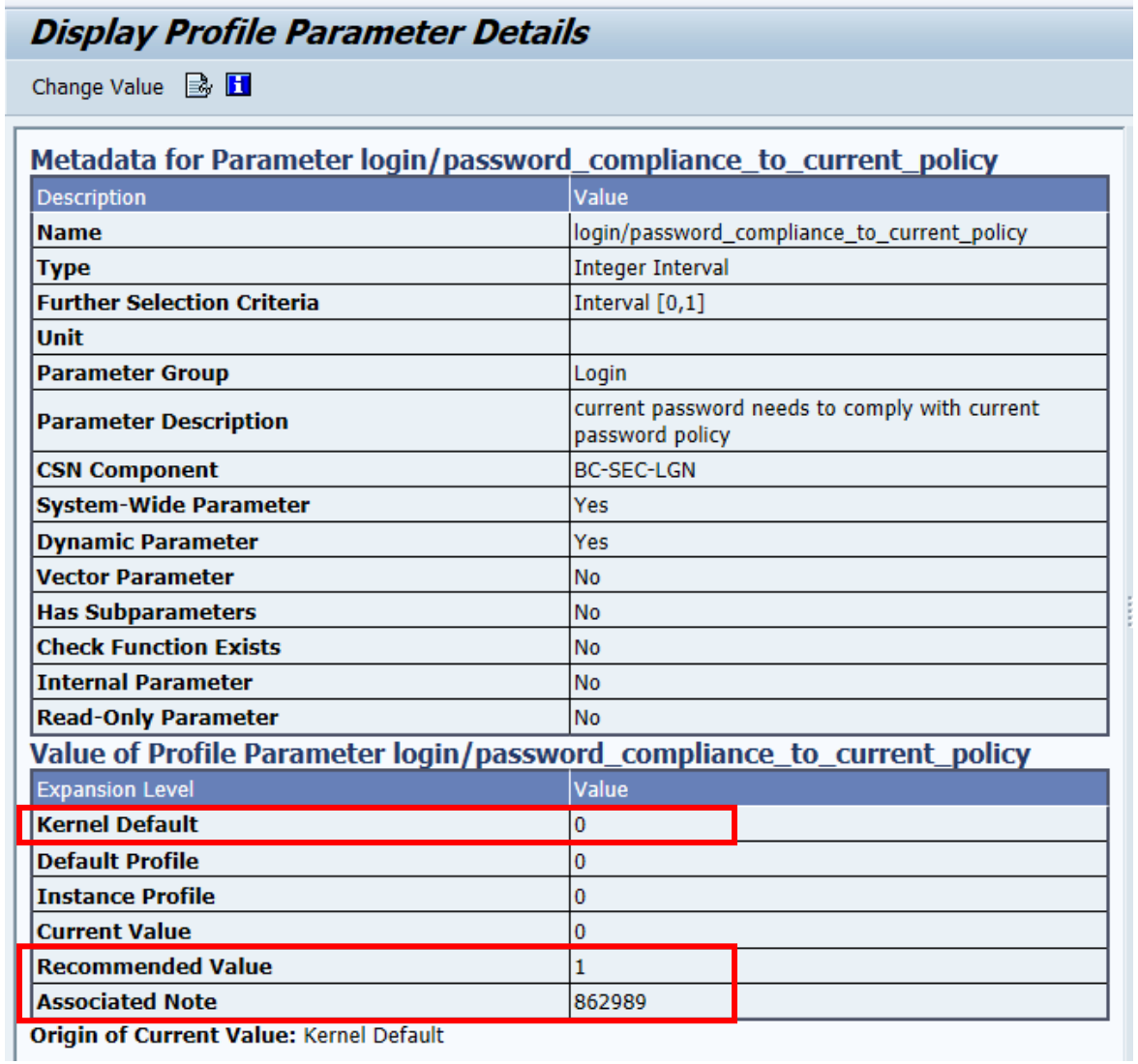
SAP Secure By Default for S/4HANA on-premise

Technical view – recommended values for profile parameters

Difference between recommended values and kernel defaults

- SAP kernel defaults are values stored in the kernel and will be activated with a kernel upgrade.
- Recommended values are additionally stored in kernel binaries and are used by SAP lifecycle tools (e.g., SWPM, SUM) to set values in new installations, system copies, and conversions.



Display Profile Parameter Details

Change Value

Metadata for Parameter login/password_compliance_to_current_policy

Description	Value
Name	login/password_compliance_to_current_policy
Type	Integer Interval
Further Selection Criteria	Interval [0,1]
Unit	
Parameter Group	Login
Parameter Description	current password needs to comply with current password policy
CSN Component	BC-SEC-LGN
System-Wide Parameter	Yes
Dynamic Parameter	Yes
Vector Parameter	No
Has Subparameters	No
Check Function Exists	No
Internal Parameter	No
Read-Only Parameter	No

Value of Profile Parameter login/password_compliance_to_current_policy

Expansion Level	Value
Kernel Default	0
Default Profile	0
Instance Profile	0
Current Value	0
Recommended Value	1
Associated Note	862989

Origin of Current Value: Kernel Default

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SAP Secure By Default for S/4HANA on-premise
Recommended Profile Parameters

Same important examples

`login/password_downwards_compatibility` = `0`

- Enables the usage of secure password hash algorithm
- Prevents storage of password hash in an outdated, obsolete format that can be cracked easily

`rfc/callback_security_method` = `3`

- Denies callbacks via RFC which are executed with the authorization of the calling user

`system/secure_communication` = `ON`

- Enables the TLS encryption and mTLS authentication for the internal communication of the ABAP application server

But also all the others have been set to a secure value for good reasons

Compare the current values with the recommended values using report `RSPFRECOMMENDED`

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SAP Secure By Default for S/4HANA on-premise

Recommended Profile Parameters - ICM Logging

`icm/HTTP/logging` and `icm/HTTP/logging_client`

- Enable WebDispatcher and ICM logging and define an improved default format
- 1909: As Recommended Profile Parameter

```
PREFIX=/,LOGFILE=http_%y_%m.log,MAXFILES=2,MAXSIZEKB=50000,SWITCHTF=month,
LOGFORMAT=%t %a %u1 \"%r\" %s %b %Lms %{Host}i %w1 %w2
```

- 2020 and later: Change in the Kernel Default

```
PREFIX=/,LOGFILE=$(DIR_LOGGING)$(DIR_SEP)http-%y-%m-%d.log%z,
MAXFILES=7,MAXSIZEKB=100000, SWITCHTF=day,LOGFORMAT=DEFAULT
```

with

```
DEFAULT = %t2 %s %u1 %b1 %b %L %P %w1 %w2 %{X-Forwarded-For}i1 %a %y1 %R2 %R1
%{Host}i %p0
```

More details on the log format can be found in SAP Help

- https://help.sap.com/viewer/bd78479f4da741a59f5e2a418bd37908/latest/en-US/d1ab8a5b7d3140fe803d004e9a5518db.html
- https://help.sap.com/viewer/bd78479f4da741a59f5e2a418bd37908/latest/en-US/58601269a62d4493aea63a9584f6ae26.html

Customers need to decide and configure log retention !

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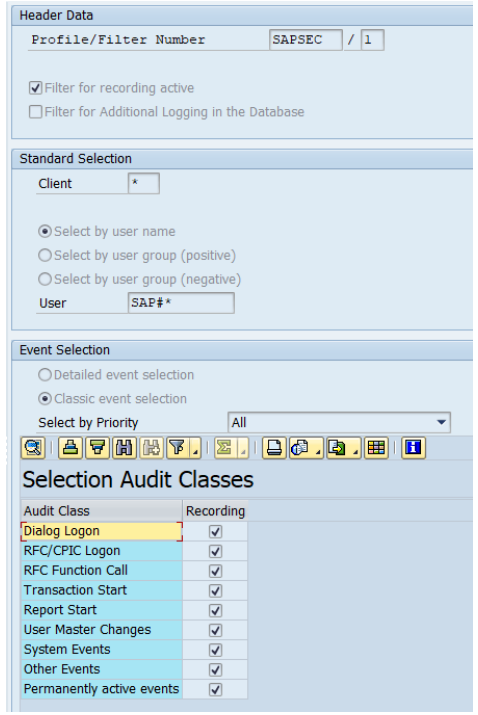
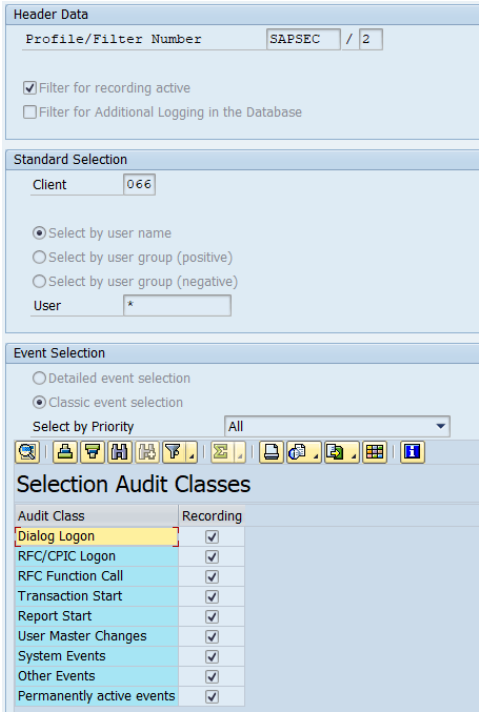
SAP Secure By Default for S/4HANA on-premise

SAP Security Audit Log – SecureByDefault Filter Configuration

Full log of SAP*



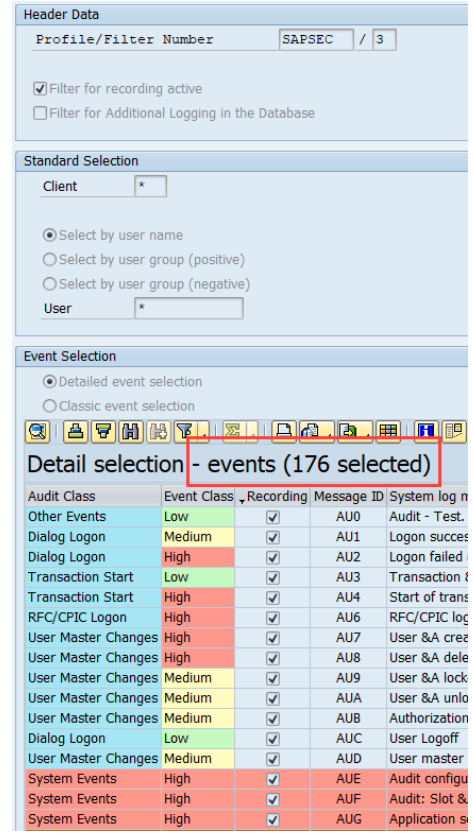
Full log of client 066



Almost full log of all users in all clients (except 6 high volume events)

Following events are not logged

- AU5
  RFC/CPIC logon successful (type=&A, method=&C)
- AUK
  Successful RFC call &C (function group = &A)
- AUW
  Report &A started
- CUV
  Successful WS Call (service = &A, operation &B)
- DUR
  JSON RPC call of function module &A succeeded
- EUE
  RFC function module &A called successfully



Customers need to decide and configure log retention !

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SAP Secure By Default for S/4HANA on-premise
Switchable Authorization Framework (SACF)

Automatic activation of all SACF scenarios to enable additional business authorization checks (if not already set up by the customer)

Some SACF scenarios you should be aware:

```
FI_DOC_POST
FI_DOC_*
SWO_PROXY_ACCESS
SWO_REMOTE_ACCESS
```

Mass update for production header data

Report Environment:

Release/System ID/Client:	755 / S4H / 000
Executed On:	24.09.2021/16:39:07
Executed By:	D048453

Scenario Name	Short Text for Check Scenario	Status	SAL Mode
/CCEE/HR_FISC_BSPACE	FISC: Authorization check for business space in fiscalization	A	N
/CCEE/HR_FISC_INVOICE	FISC: Authorization check when sending invoices for fiscalization	A	N
/DSD/ES_1	DSD Authorization Scenario for Printing Electronic Signature	A	N
/DSD/GS_1	DSD Authorization Scenario for Statistics	A	N
/DSD/HH_1	DSD Authorization Scenario for Handheld	A	N
/DSD/ME_1	DSD Authorization Scenario for Mobile Engine	A	N
/DSD/OC_1	DSD Authorization Scenario for Occasional Connected Scenario	A	N
/DSD/PR_1	DSD Authorization Scenario for Promotion	A	N
/DSD/ST_1	DSD Authorization Scenario for Tour Status	A	N
/DSD/SV_1	DSD Authorization Scenario for Stock Visibility	A	N
/DSD/SV_2	DSD Authorization Scenario for Stock Visibility of Reload	A	N
/DSD/VC_1	DSD Authorization Scenario for Transferring Visit Control Data	A	N
/PM0/BP_01	Switchable Authorization Checks for RFCs in FS-PM-IT-BP (BP Integration)	A	N
/PM0/CLAIMS_01	Switchable Authorization Checks for RFCs in FS-PM-IT-CM (FS-CM Integration)	A	N
/PM0/CORRESPOND_01	Switchable Authorization Checks for RFCs in FS-PM-BT-CD (Correspondence)	A	N
/PM0/EXT_DATES_01	Switchable Authorization Checks for RFCs in FS-PM-TL-TM (Related Dates)	A	N
/PM0/FPP_01	FPP Mass Activities (External Start)	A	N
/PM0/INDEX_01	Switchable Authorization Checks for RFCs in FS-PM (Index Component)	A	N
/PM0/INFO_CONT_01	Switchable Authorization Checks for RFCs in FS-PM-IT-CD (FS-CD Integration)	A	N
/PM0/MIGRATION_01	Switchable Authorization Checks for RFCs in FS-PM-TL-MR (Migration)	A	N
/PM0/MODELCALC_01	Switchable Authorization Checks for RFC in FS-PM: Model Calculation	A	N
/PM0/NOTIFICATION_01	Switchable Authorization Checks for RFCs in FS-PM (Notifications)	A	N
/PM0/PREM_01	Switchable Authorization Checks for RFCs in FS-PM-TL-TM (Time Model)	A	N

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Detailed review of SecureByDefault
News with SAP S/4HANA 2021

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SAP Secure By Default for S/4HANA on-premise 2021

HANA Audit Policies for S/4HANA

- Activation of SAP HANA auditing in the SAP HANA database
- Activation of basic SAP HANA audit policies (tradeoff between log volume and traceability)
- SAP HANA audit policies are aligned to the audit policies recommended by SAP HANA
- HANA audit logs are configured with log retention

Customers need to decide and configure log retention !

Audit Policy	Policy Status	Audited Actions	Audited Action Status
_SAP_authentication provider	Enabled	ALTER JWT PROVIDER, AL...	All events
_SAP_authorizations	Enabled	GRANT ANY, REVOKE ANY	All events
_SAP_certificates	Enabled	ALTER PSE, CREATE CER...	All events
_SAP_clientside encryption	Enabled	ALTER CLIENTSIDE ENCR...	All events
_SAP_configuration changes	Enabled	STOP SERVICE, SYSTEM ...	All events
_SAP_designtime privileges	Enabled	EXECUTE	Successful events
_SAP_license addition	Enabled	SET SYSTEM LICENSE	All events
_SAP_license deletion	Enabled	UNSET SYSTEM LICENSE	All events
_SAP_recover database	Enabled	BACKUP CATALOG DELET...	All events
_SAP_session connect	Enabled	CONNECT	Unsuccessful events
_SAP_session validate	Enabled	VALIDATE USER	All events
_SAP_structured privileges	Enabled	ALTER STRUCTURED PRI...	Successful events
_SAP_user administration	Enabled	ALTER ROLE, ALTER USE...	Successful events

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SAP Secure By Default for S/4HANA on-premise 2021

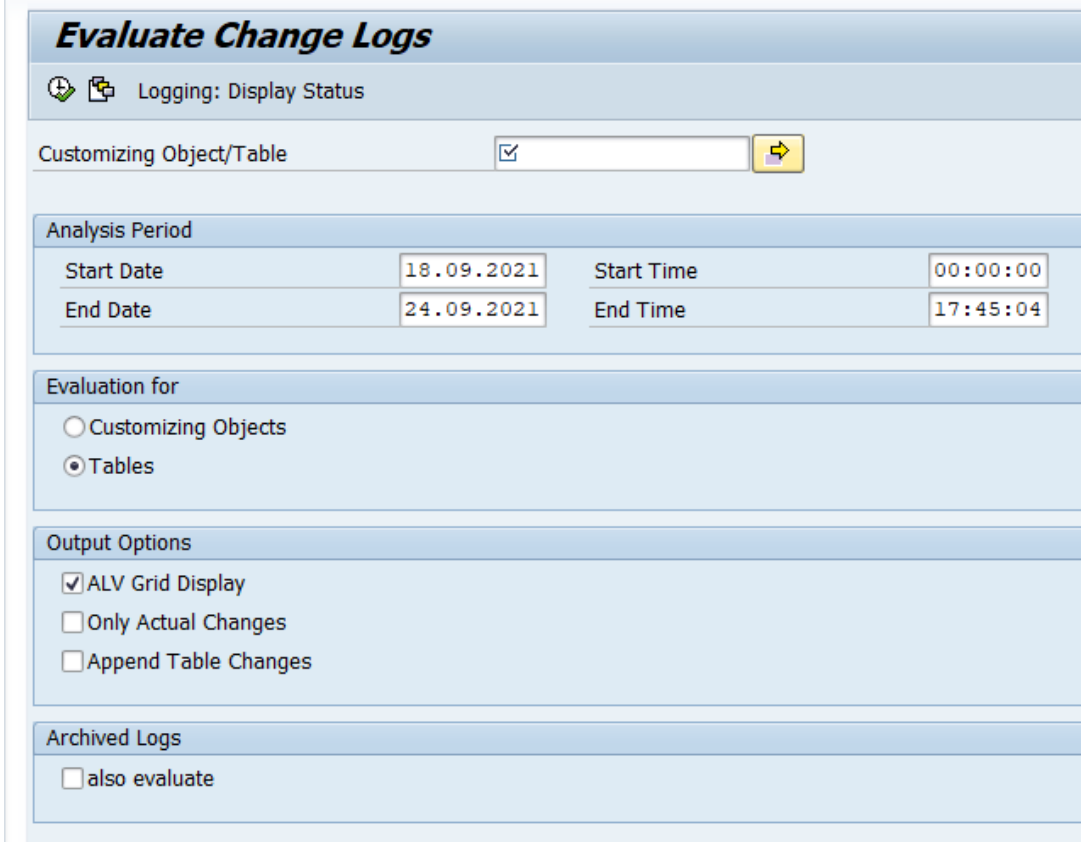
Table Logging (`rec/client` = `ALL`)

Activation of ABAP table logging for business-critical tables for direct table changes and table changes caused by Customer transports

Required by Year End Auditors on production systems

ABAP table logging is only enabled for a defined set of business-critical tables which contain configurations relevant for the business processes (table `DD09L`)

Changes to tables can be reviewed using transaction `SCU3`



Customers need to decide and configure log retention !

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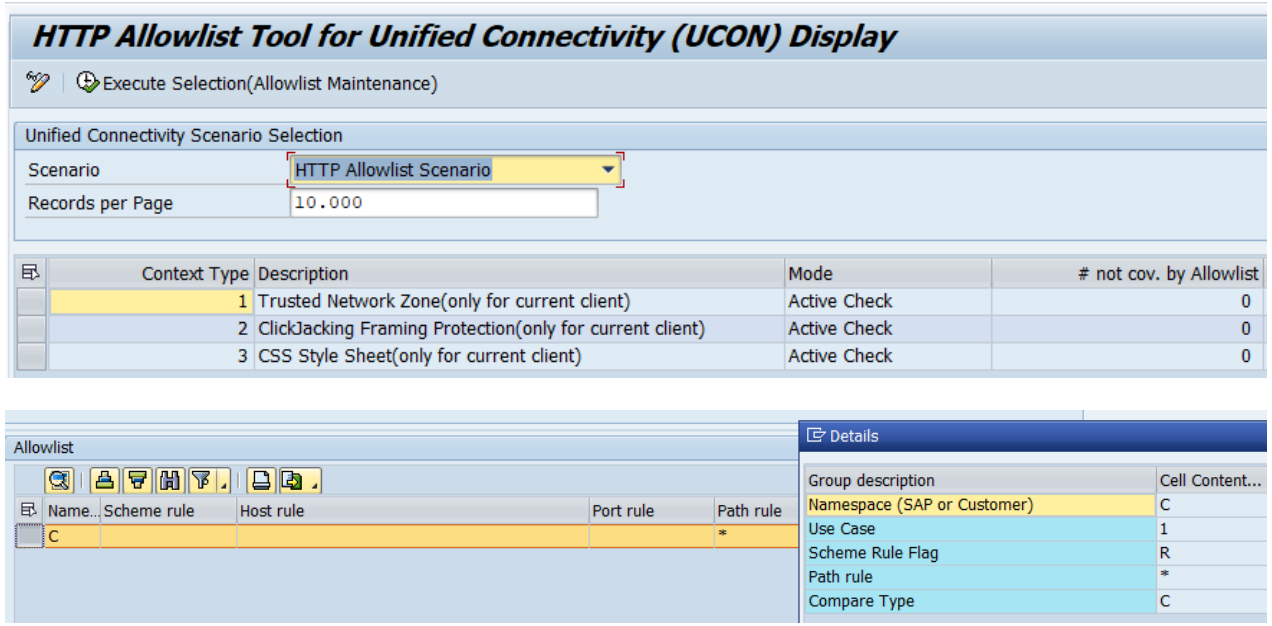
SAP Secure By Default for S/4HANA on-premise 2021

Enablement of the UCON HTTP Allowlist framework

UCON HTTP Allowlist framework can be enabled for increased protection of HTTP traffic

- Context Type `01` - Trusted Network Zone
  - Active Check
  - 1 entry is automatically added to the allowlist to allow all relative path names
- Context Type `02` - Clickjacking Framing Protection
  - Active Check
  - No entries are added to the allowlist
- Context Type `03` - CSS Style Sheet
  - Active Check
  - 1 entry is automatically added to the allowlist to allow all relative path names.
- Context Type `04` - Cross-origin Resource Sharing
  - Not enabled
  - CORS should only be enabled and configured in case necessary as CORS relaxes the same origin policy of browsers



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SAP Secure By Default for S/4HANA on-premise 2021

Some changes to authorizations

Additional authorization checks require adjustment of customer authorization concept

Profile Parameter **`auth/check/calltransaction` = `3`**

- Controls how `CALL TRANSACTION` statements in all programs react regarding missing entries in `SE97` / table `TCDCOUPLES`. If not set to `3`, authorization checks are not properly enforced.
- This only affects `CALL TRANSACTION` statements. They should be replaced with `CALL TRANSACTION WITH` / `WITHOUT AUTHORITY-CHECK`

Profile Parameter **`auth/object_disabling_active` = `N`**

- Enables to globally switch off authorization checks for selected authorization objects. If not set to "`N`", a global deactivation of specific authorization objects would be possible (using transaction `AUTH_SWITCH_OBJECTS`)

WebDynpro start authorization checks are enabled

- Controls whether the authorization object `S_START` is checked while starting a WebDynpro application. If not configured, `S_START` is not validated for WebDynpro applications.

… and do not forget about **SACF**

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SAP Secure By Default for S/4HANA on-premise 2021

Transport Management Parameters

Security relevant Transport Management Parameters have been changed to secure defaults (controlled via table `TPSYSTEMDEFAULTS`)

`VERS_AT_IMP = ALWAYS`

- This parameter enables creation of new versions during transport imports. If `VERS_AT_IMP` is not set, versioning in the version database is deactivated upon import (repository object, e.g. report lacks version history in the production system).

`TLOGOCHECK = TRUE`

- Controls whether certain consistency checks for transport object definitions are done. This check prevents the import of table entries that do not belong to the object definition in the target system.

`RECCLIENT = ALL`

- Controls whether write operations on certain tables (flagged appropriately in their technical settings in ABAP Dictionary) are logged if changes are imported using transports. If not set to `ALL`, table auditing is disabled for all clients for transports.

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What about Upgrades?

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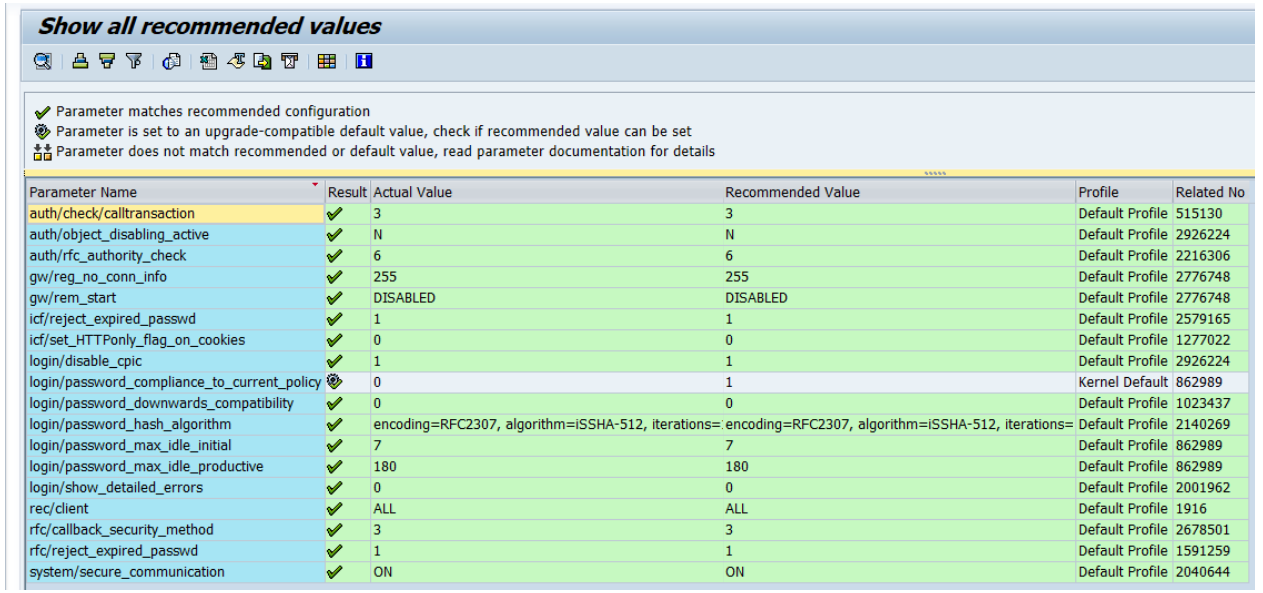
SAP Secure By Default for S/4HANA on-premise
Upgrade Scenarios

No automated changes during upgrade

Support of S/4HANA 2020 / 2021 upgrade scenario

- Comparison report `RSPFRECOMMENDED` shows actual system values vs recommended security profile parameters



Parameter Name	Result	Actual Value	Recommended Value	Profile	Related No
auth/check/calltransaction	✓	3	3	Default Profile	515130
auth/object_disabling_active	✓	N	N	Default Profile	2926224
auth/rfc_authority_check	✓	6	6	Default Profile	2216306
gw/reg_no_conn_info	✓	255	255	Default Profile	2776748
gw/rem_start	✓	DISABLED	DISABLED	Default Profile	2776748
icf/reject_expired_passwd	✓	1	1	Default Profile	2579165
icf/set_HTTPonly_flag_on_cookies	✓	0	0	Default Profile	1277022
login/disable_cpic	✓	1	1	Default Profile	2926224
login/password_compliance_to_current_policy	◎	0	1	Kernel Default	862989
login/password_downwards_compatibility	✓	0	0	Default Profile	1023437
login/password_hash_algorithm	✓	encoding=RFC2307, algorithm=iSSHA-512, iterations=	encoding=RFC2307, algorithm=iSSHA-512, iterations=	Default Profile	2140269
login/password_max_idle_initial	✓	7	7	Default Profile	862989
login/password_max_idle_productive	✓	180	180	Default Profile	862989
login/show_detailed_errors	✓	0	0	Default Profile	2001962
rec/client	✓	ALL	ALL	Default Profile	1916
rfc/callback_security_method	✓	3	3	Default Profile	2678501
rfc/reject_expired_passwd	✓	1	1	Default Profile	1591259
system/secure_communication	✓	ON	ON	Default Profile	2040644

What about the Secure By Default configuration items?

- Customers can use the SAP-provided tools and services to identify gaps in the security configurations (e.g. EWA, SOS, Configuration Validation, FRUN)

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SAP Secure By Default for S/4HANA on-premise

Is Secure By Default enough Security?

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SAP Secure By Default for S/4HANA on-premise
Is this enough security?

Is secure by default enough security?

- Secure by default settings cannot and will not cover all aspects of security settings in systems running SAP S/4HANA.
- SAP highly recommends that customers perform additional reviews and improvements of their security settings.

Where can customers find more information on SAP security?

Use the SAP-provided tools and services (https://support.sap.com/sos). These inform you about gaps in a cost-efficient way.

- SAP EarlyWatch Alert (alert on most critical topics)
- Configuration validation (check security configurations) or FRUN
- System recommendations (display missing security patches)

Review SAP security white papers (https://support.sap.com/securitywp)

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November 2021

Topics November 2021

Security Guide for SAP S/4HANA (new version)

SAP Secure By Default for S/4HANA on Premise 2021 Status - October 2021
Note 2926224 New security settings for SAP S/4HANA & SAP BW/4HANA using SL Toolset/SUM

Security Baseline Template 2.3

Note 3099776 - Missing Authorization check in ABAP Platform Kernel

Note 3105728 - Leverage of Permission in SAP NetWeaver Application Server for ABAP

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Security Guide for SAP S/4HANA (new version)

Security Guide for SAP S/4HANA 2020
Document Version: 4.0 – 2021-11-03
https://help.sap.com/doc/d7c2c95f2ed2402c9efa2f58f7c233ec/2020/en-US/SEC_OP2020.pdf

Security Guide for SAP S/4HANA 2021
Document Version: 1.0 – 2021-10-13
https://help.sap.com/doc/d7c2c95f2ed2402c9efa2f58f7c233ec/2021/en-US/SEC_OP2021.pdf

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SAP Secure By Default for S/4HANA on Premise 2021

Status - October 2021

Bjoern Brencher, S/4HANA Security

THE BEST RUN SAP

Note 2926224 New security settings for SAP S/4HANA and SAP BW/4HANA using SL Toolset and SUM

New installations (with SWPM), system copies (with SWPM) and system conversions from SAP ERP to SAP S/4HANA (with SUM) will automatically receive the recommended security settings.

Upgrades (with SUM) to not adjust security settings automatically.

Though it's recommended to also apply the updated security settings in system which have been upgraded from older SAP S/4HANA and BW/4HANA releases.

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Note 2926224 New security settings for SAP S/4HANA and SAP BW/4HANA using SL Toolset and SUM

New settings in S/4HANA 2021:

- ✓ **Profile parameter `rec/client` = `ALL` and transport parameter `RECCLIENT` = `ALL`** Note 3093760
- ✓ **Transport parameter `TLOGOCHECK` = `TRUE`** Note 2671160 ➡
- ✓ **Transport parameter `VERS_AT_IMP` = `ALWAYS`** Note 1784800
- ✓ **UCON HTTP allowlist for all relative path for `01` Trusted Network Zone and `03` CSS Style Sheet Active Check `02` Clickjacking Framing Protection** Note 3083852
- ✓ **Enable authorization object `S_START` checks for Web Dynpro Application Configuration (`WDCA`) and Web Dynpro Applications (`WDYA`)** Note 1413011 Note 3064888
- ✓ **All `SLDW` scenarios are set to productive scenario as shipped by SAP. In certain cases, additional activation of allowlist checks might be necessary (status of check is not active)** Note 1922712 ➡
- ✓ **HANA auditing is enabled in TenantDB and a recommended set of HANA audit policies is configured in TenantDB** Note 3016478 ➡

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Note 2926224 New security settings for SAP S/4HANA and SAP BW/4HANA using SL Toolset and SUM

Secure by default settings about logging require well defined data retention processes.

ABAP Security Audit Log	Note 2676384	as of **S/4HANA 1909**
Message Server logging	Note 2794817	as of **S/4HANA 1909**
Repository versioning	Note 1784800	as of **S/4HANA 2021**
Customizing change logging	Notes 3093760 and 84052	as of **S/4HANA 2021**
ICM logging	Note 2788140	as of **S/4HANA 1909**
HANA auditing	Note 3016478	as of **S/4HANA 2021**

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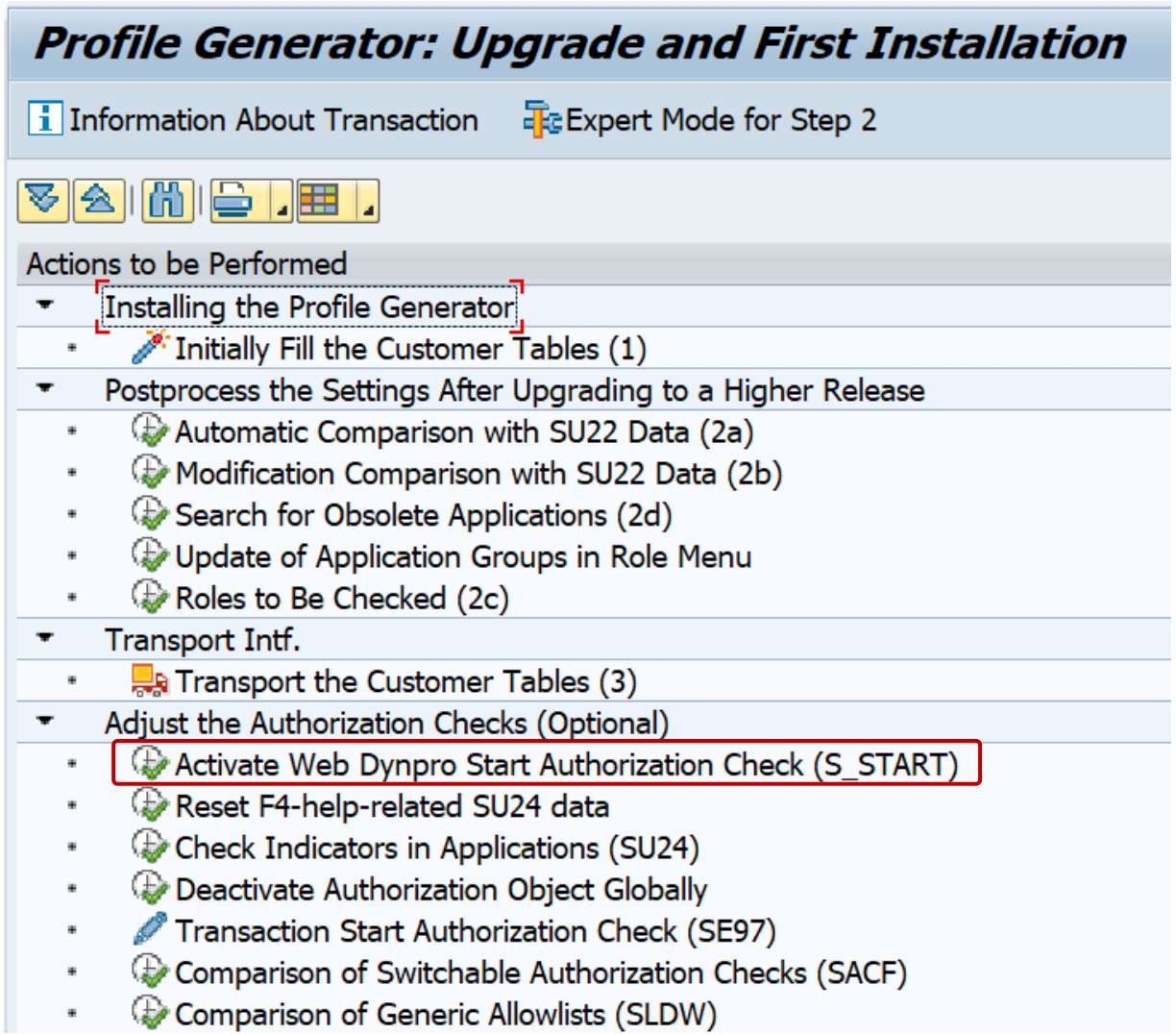
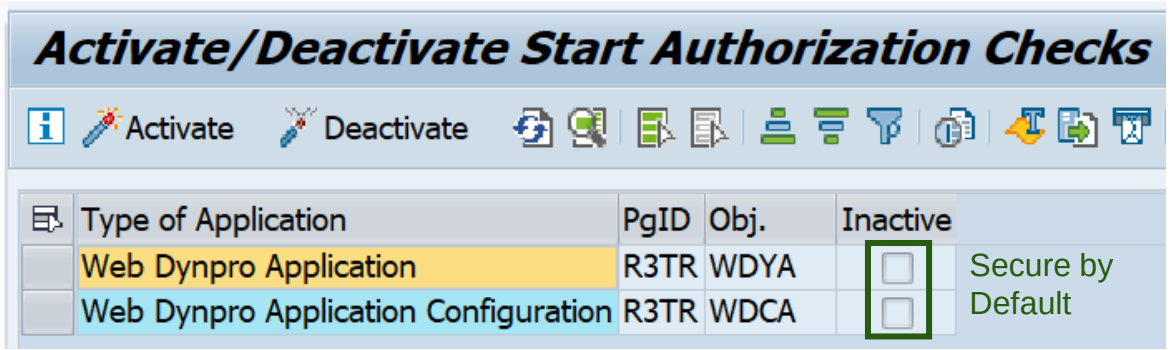
Note 3064888 - Start authorization check for Web Dynpro applications and Web Dynpro application configurations in SAP S/4HANA



The authorization check for `S_START` for WebDynpro Apps is deactive by default.

If you want to use is (similar like using `S_TCODE` for transactions), you have to activate it.

In higher releases, call transaction `SU25`. Under "Adjust the Authorization Checks (Optional)", start "Activate Web Dynpro Start Authorization Check (`S_START`)"



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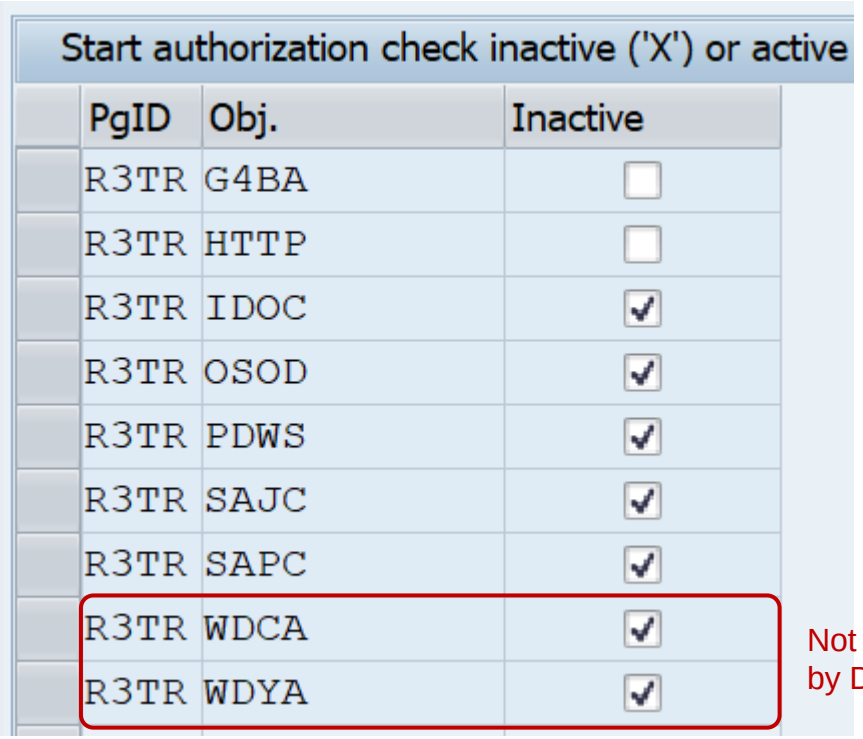
Note 1413011 - New start authorization check for Web Dynpro ABAP

The authorization check for `S_START` for WebDynpro Apps is deactive by default.

If you want to use is (similar like using `S_TCODE` for transactions), you have to activate it.

In lower releases use `SM30` for client independent customizing table `USOBAUTHINACTIVE`



PGMID	OBJID	Default Status	Description / Topic
R3TR	G4BA	active	(unknown)
R3TR	HTTP	active	(unknown)
R3TR	IDOC	inactive	Inbound Processing of Idocs Used in report RBDAPP01 (and related) (only for tracing)
R3TR	OSOD	inactive	(unknown)
R3TR	PDWS	inactive	Workflow, (only for tracing)
R3TR	SAJC	inactive	Application Job Starter Used in report RSBTCPT6 (and related)
R3TR	SAPC	inactive	ABAP Channels - APC Security Features
R3TR	WDCA **WDYA**	inactive	Starting Web Dynpro ABAP Applications
R3TR	SADT	(no entry = active)	Used in ADT REST Framework

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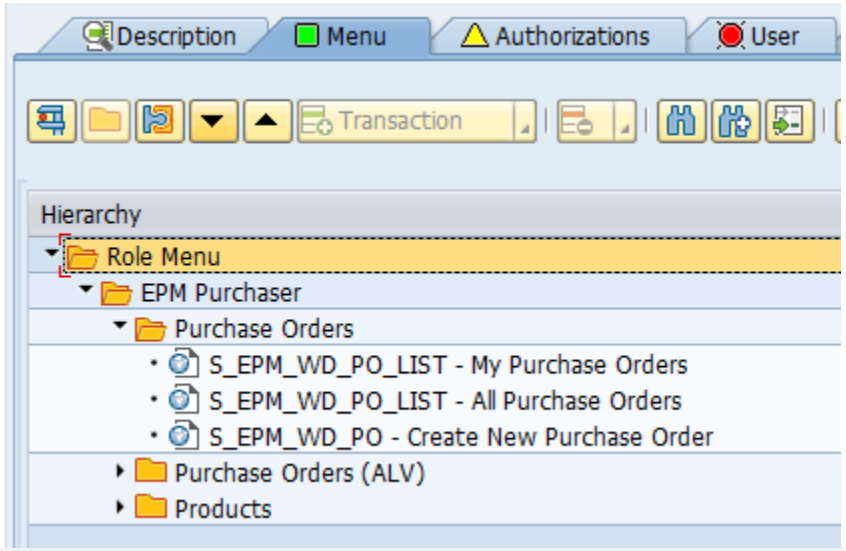
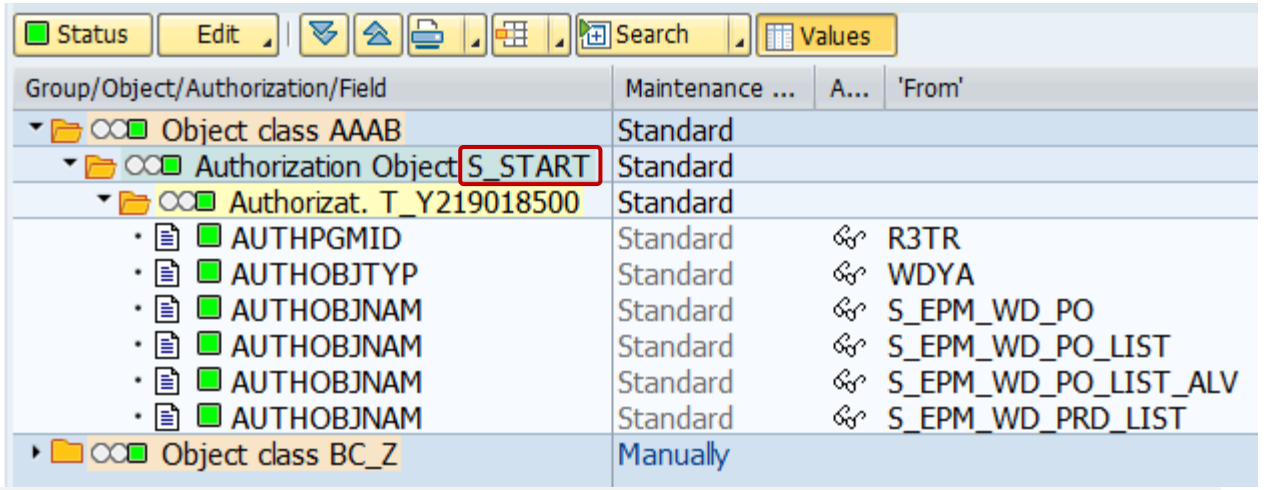
Note 1413011 - New start authorization check for Web Dynpro ABAP

Good news:

Transaction PFCG adds authorizations for S_START automatically if you add WebDynpro Apps to the role menu

- **Independent from setting of the main switch**
- **Independent from settings in SU24**
  (if fact you should not add proposals for S_START in SU24)





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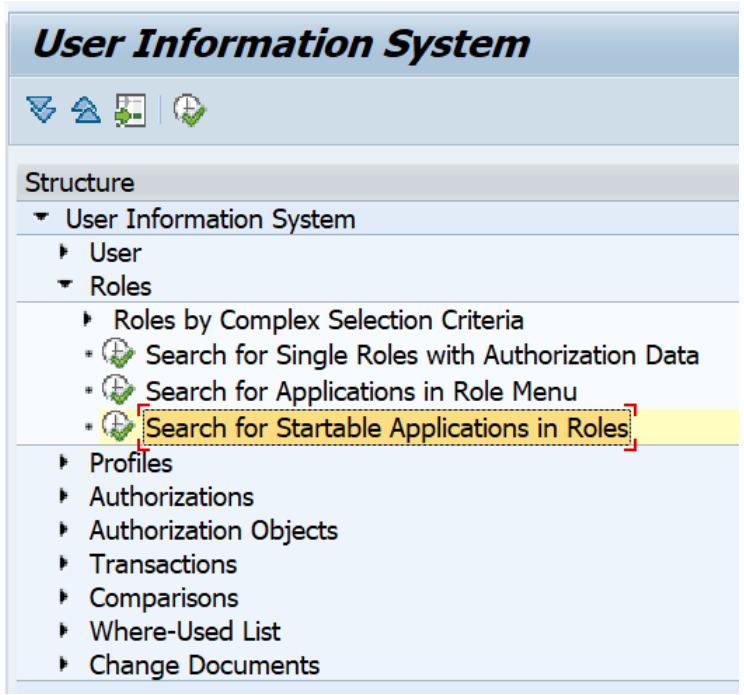
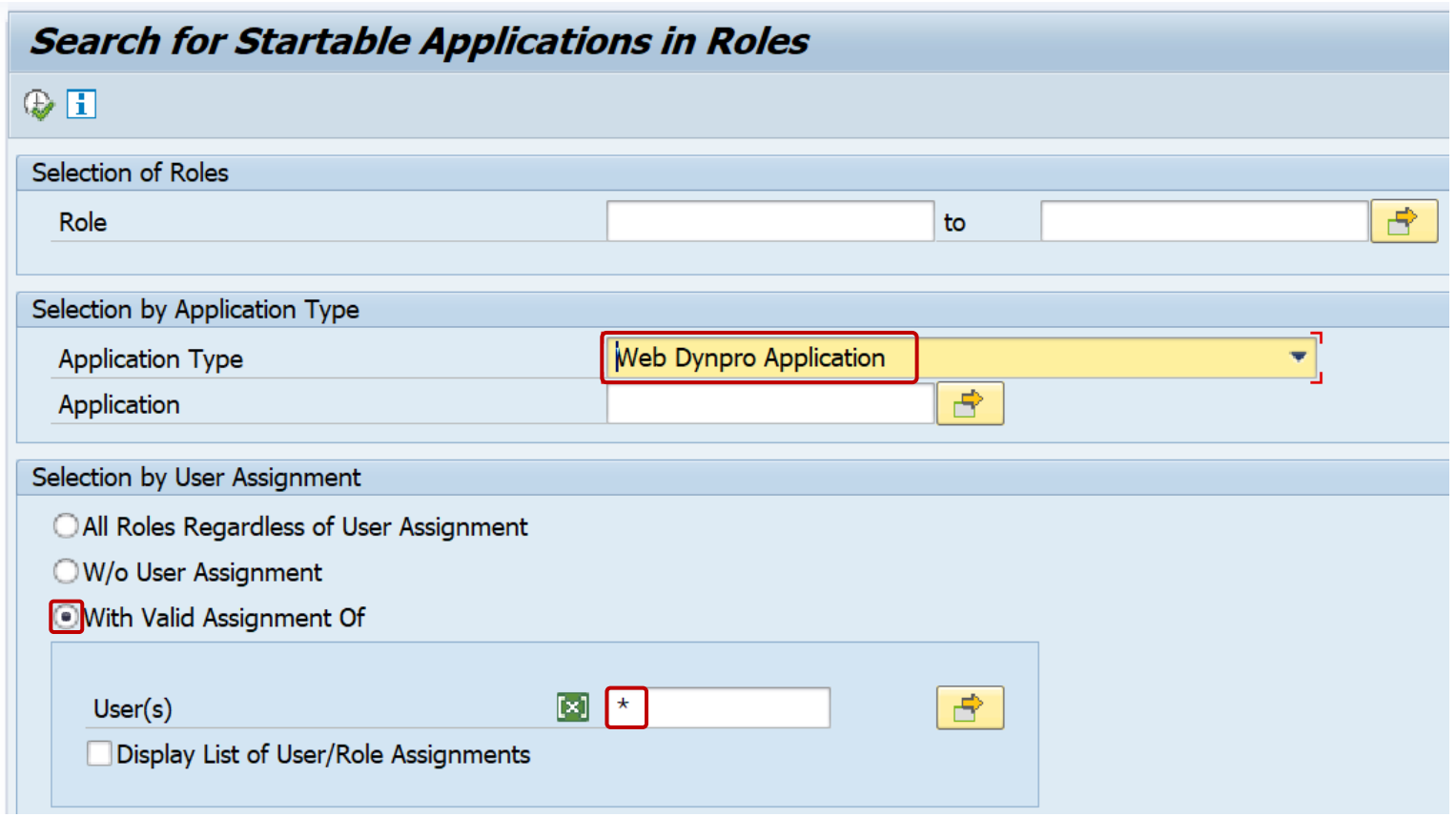
Show active roles containing WebDynpro ABAP applications
Report RSUSR_START_APPL



Search for WebDynpro applications in assigned roles



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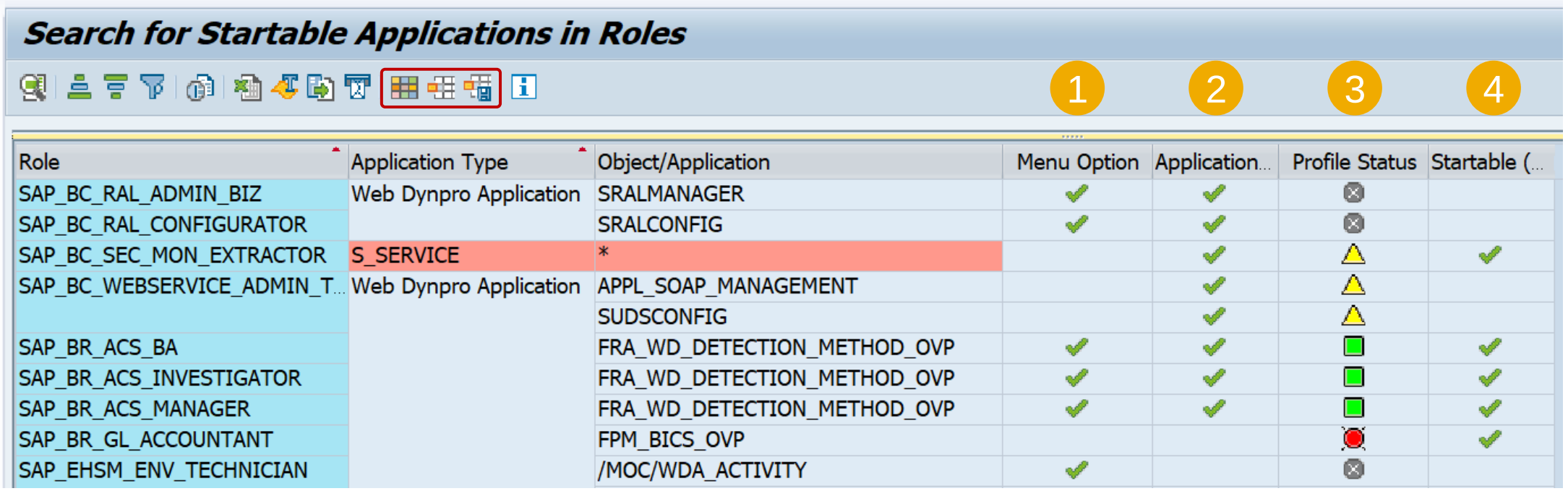
Show active roles containing WebDynpro ABAP applications
Report RSUSR_START_APPL

The list shows roles and the status of the selected applications

1) **If the app is part of the role menu**
2) **If the app is contained in role authorizations**
3) **If the authorization profile is active**
4) **If the app is contained in current authorization profile**



Role	Application Type	Object/Application	Menu Option	Application...	Profile Status	Startable (...
SAP_BC_RAL_ADMIN_BIZ	Web Dynpro Application	SRALMANAGER	✓	✓	⊗	
SAP_BC_RAL_CONFIGURATOR		SRALCONFIG	✓	✓	⊗	
SAP_BC_SEC_MON_EXTRACTOR	S_SERVICE	*		✓	△	✓
SAP_BC_WEBSERVICE_ADMIN_T...	Web Dynpro Application	APPL_SOAP_MANAGEMENT		✓	△	
		SUDSCONFIG		✓	△	
SAP_BR_ACS_BA		FRA_WD_DETECTION_METHOD_OVP	✓	✓	■	✓
SAP_BR_ACS_INVESTIGATOR		FRA_WD_DETECTION_METHOD_OVP	✓	✓	■	✓
SAP_BR_ACS_MANAGER		FRA_WD_DETECTION_METHOD_OVP	✓	✓	■	✓
SAP_BR_GL_ACCOUNTANT		FPM_BICS_OVP			●	✓
SAP_EHSM_ENV_TECHNICIAN		/MOC/WDA_ACTIVITY	✓		⊗	

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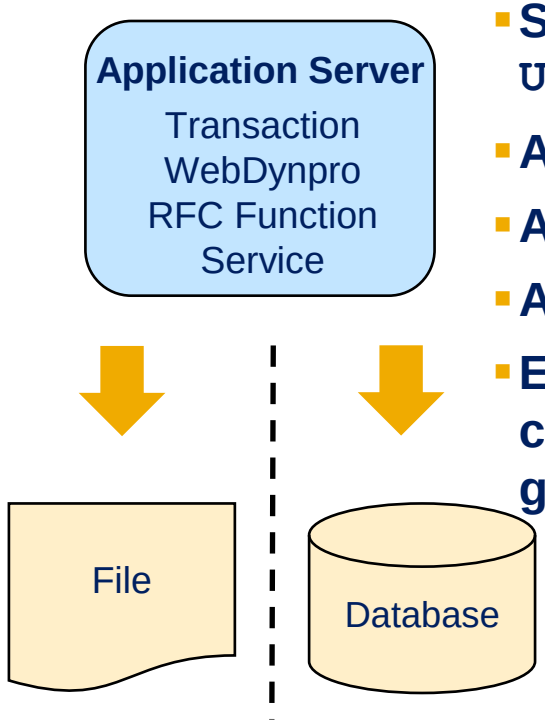
How to trace usage of WebDynpro applications

Transaction

STAUTHTRACE

Systemtrace

- **Storage in file**
- **Current application server or all servers**
- **Client specific**
- **User specific**
- **Every authorization check gets logged with time stamp**



Transaction

STUSOBTRACE

Authorization trace

- **Storage in table USOB_AUTHVALTRC**
- **All servers**
- **All clients**
- **All users**
- **Every authorization check in program gets logged once**

Transaction

STUSERTRACE

Authorization trace

- **Storage in table SUAUTHVALTRC**
- **All servers**
- **Client specific**
- **User specific**
- **Every authorization check in program gets logged with time stamp once per client and user**

Transaction

STRFCTRACE

Analysis of statistic records for RFC

- **All servers**
- **Client specific**
- **User specific**
- **Logging of external RFC calls**

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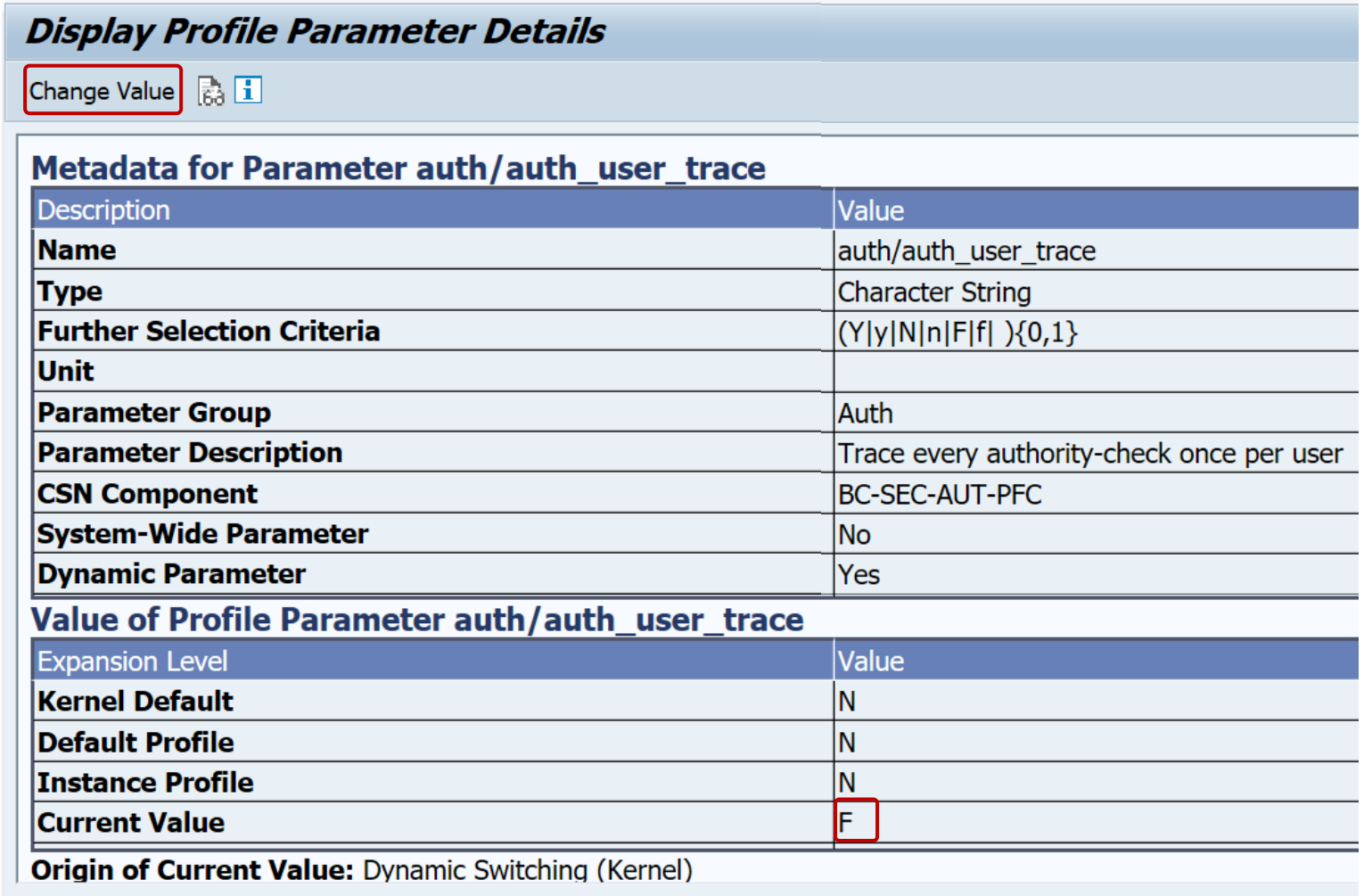
Authorization trace for WebDynpro ABAP start authorization Profile parameter `auth/auth_user_trace`

Prerequisite:

Activate the dynamic profile parameter `auth/auth_user_trace`



Display Profile Parameter Details

Change Value

Metadata for Parameter auth/auth_user_trace

Description	Value
Name	auth/auth_user_trace
Type	Character String
Further Selection Criteria	(Y|y|N|n|F|f|){0,1}
Unit	
Parameter Group	Auth
Parameter Description	Trace every authority-check once per user
CSN Component	BC-SEC-AUT-PFC
System-Wide Parameter	No
Dynamic Parameter	Yes

Value of Profile Parameter auth/auth_user_trace

Expansion Level	Value
Kernel Default	N
Default Profile	N
Instance Profile	N
Current Value	F

Origin of Current Value: Dynamic Switching (Kernel)

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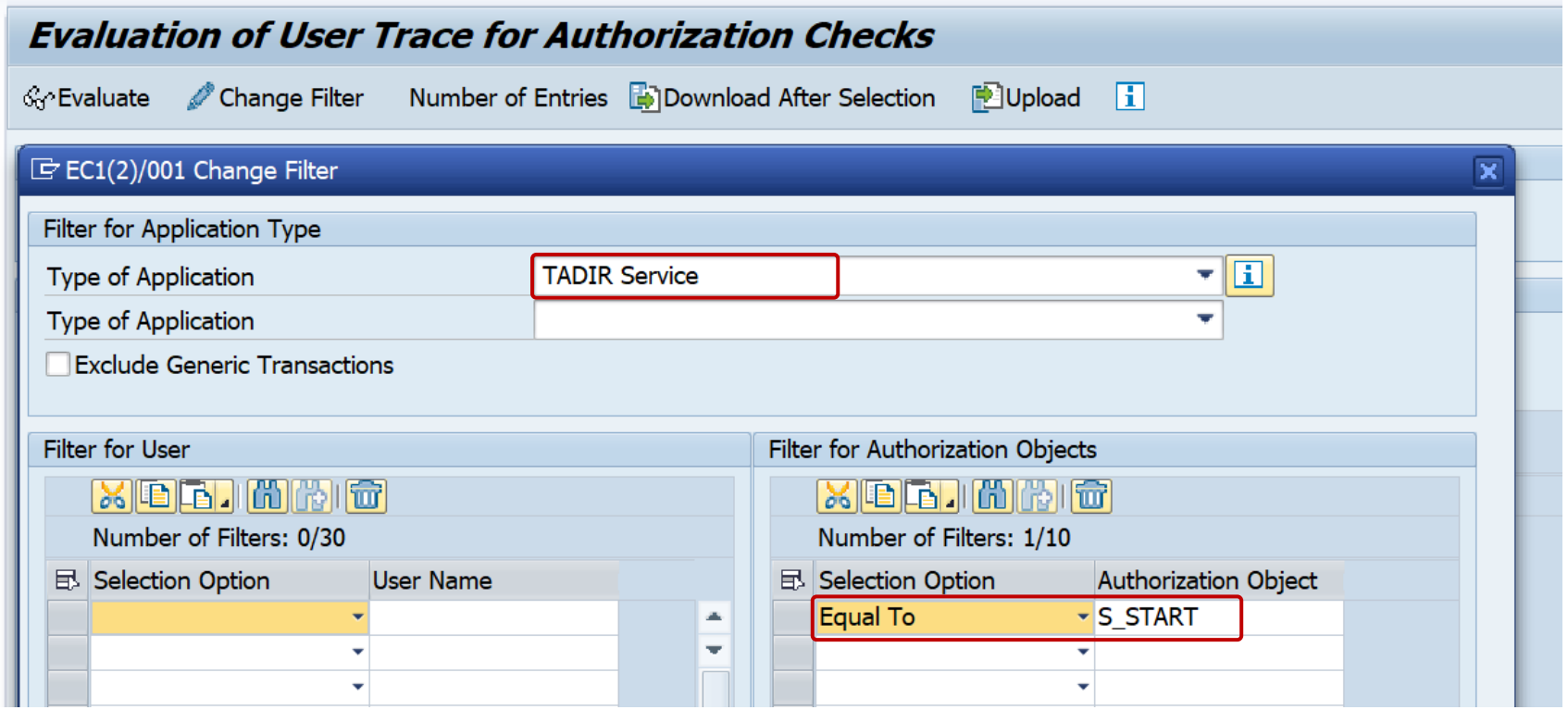
Authorization trace for WebDynpro ABAP start authorization Transaction STUSERTRACE

Activate the trace using transaction STUSERTRACE with filter for application type "TADIR Service" and for authorization object S_START



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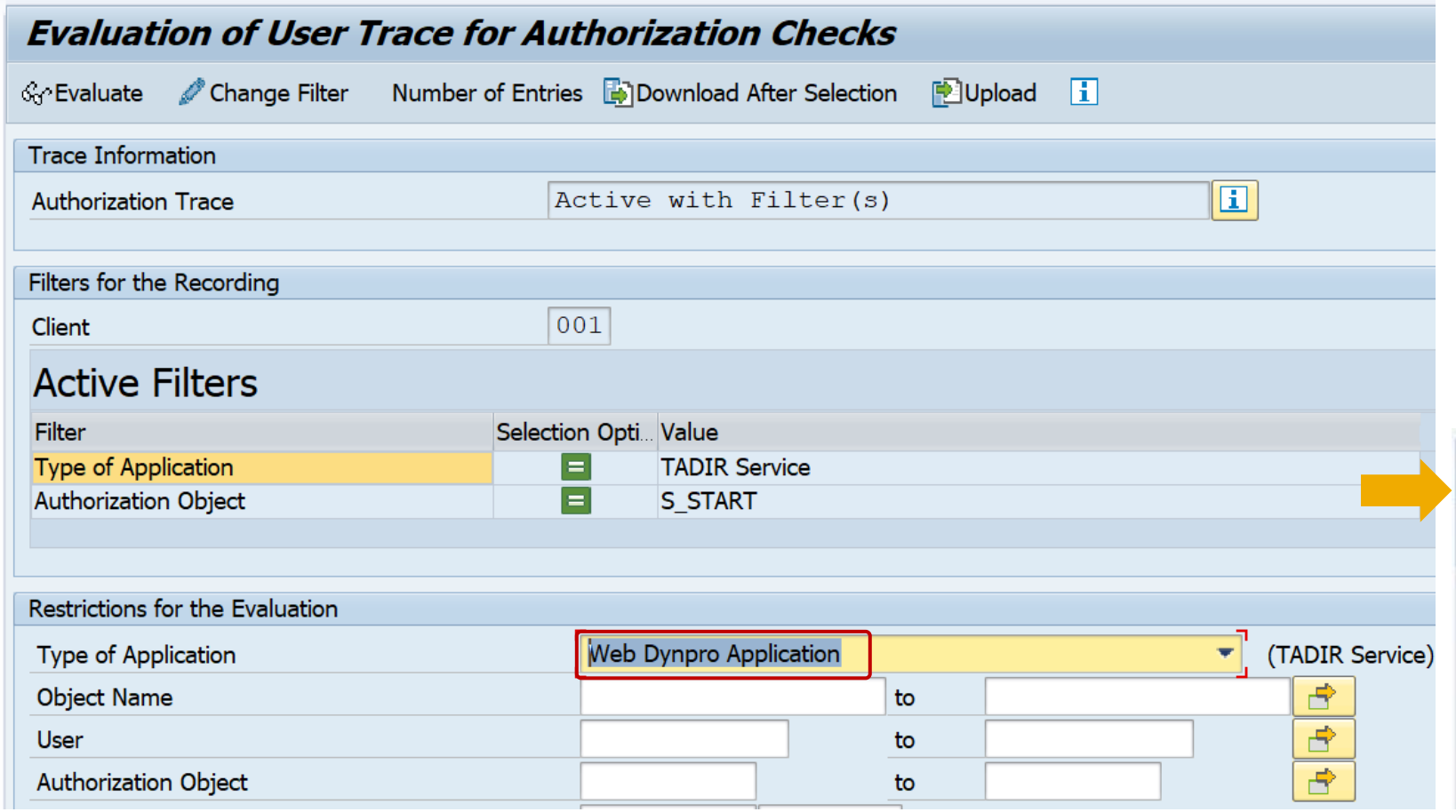
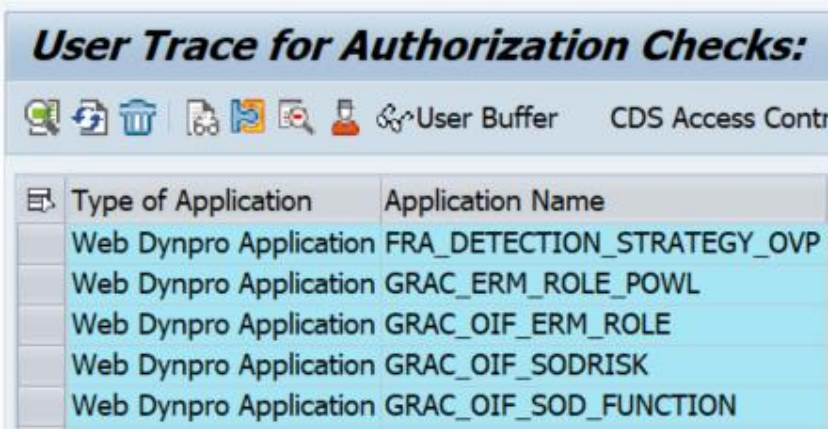
Authorization trace for WebDynpro ABAP start authorization Transaction STUSERTRACE

For reporting you can filter for “Web Dynpro Application” and authorization object S_START





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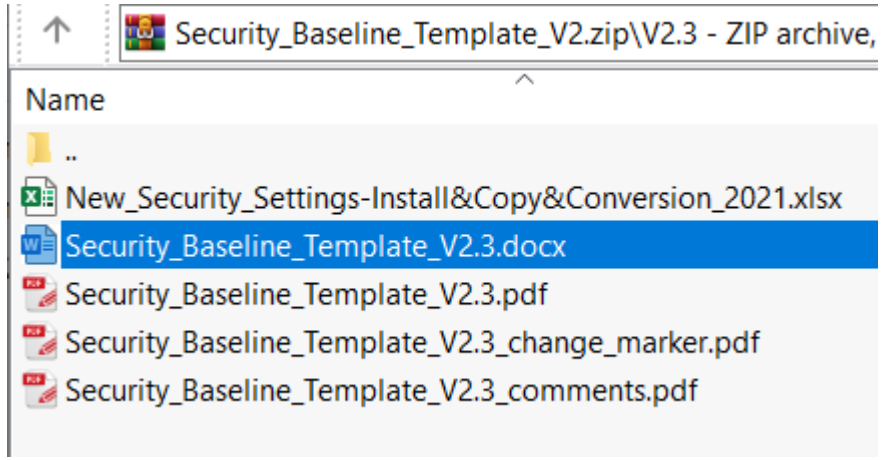
Security Baseline Template 2.3

New version available on https://support.sap.com/sos

- **Requirements extended and aligned with Secure-by-Default 2021**
- **New requirements for BTP (Cloud)**



The corresponding package 2.3_CV-1 for application Configuration Validation will be published soon (for ABAP, Java, Hana but no content for BTP).

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Note 3099776 - Missing Authorization check in ABAP Kernel

„Under certain conditions, Trusted Trusting allows an attacker to elevate their privileges within RFC or HTTP communication and execute application specific logic in another system."

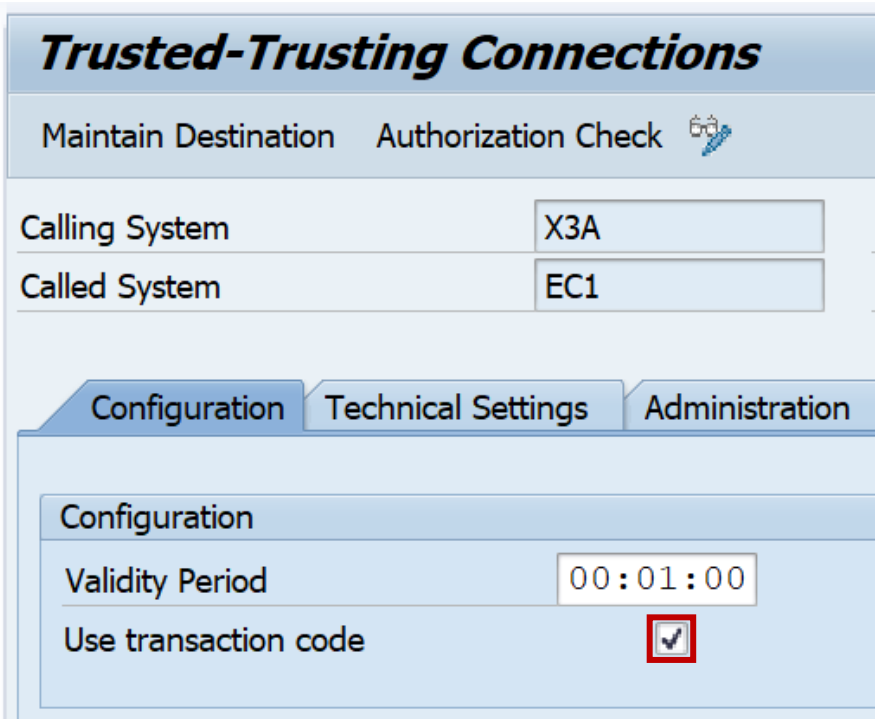
"If an application in trusted-trusting connections uses TCODE for authorization, this check is implemented by the correction."

→ This note is about Trusted-RFC and the authorization object `S_RFCACL`, which is checked in the target system.

Especially it's about authorization field `RFC_TCODE`.

Prerequisite to make use of this field:
Activate the use of the transaction code for Trusted-RFC in transaction `SMT1`.

Lower Kernel versions below 7.77 are not affected
Patches for 7.77 and 7.81 will be published soon.



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Note 3099776 - Missing Authorization check in ABAP Kernel

General rules for the fields of the authorization object S_RFCACL:

RFC_SYSID	SID of the calling system. Do not enter a * value!
RFC_CLIENT	Client of the calling system. Do not enter a * value!
RFC_USER	User ID of the calling users – these are the users which calls the RFC destination. Usually the full authorization * is used for this field in case of RFC_EQUSER = N, because it is too costly to determine the list of calling users and to keep is up to date.
RFC_EQUSER	Flag that indicates whether the user can be called by a user with the same ID (Y = Yes, N = No). Do not enter a * value!
RFC_TCODE	Calling transaction code – the transaction in the calling system which triggers the RFC connection. Do not enter a * value! Prerequisite: Activate the use of the transaction code for S_RFCACL in transaction SMT1.
RFC_INFO	Installation number of the calling system (as of SAP_BASIS release 7.02). The installation number is shown in the calling system in transaction SMT1. If there is no value here, then RFC_INFO is not used to check the authorization. You already have field RFC_SYSID, therefore you can treat this field as less important. You can use the field but you could decide to accept a * here.
ACTVT	Activity. Currently, this field can take the value 16 (Execute) only.

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Note 3099776 - Missing Authorization check in ABAP Kernel

In the target systems, use transaction `SUIM` to search for users or roles having critical access based on `S_RFCACL`.

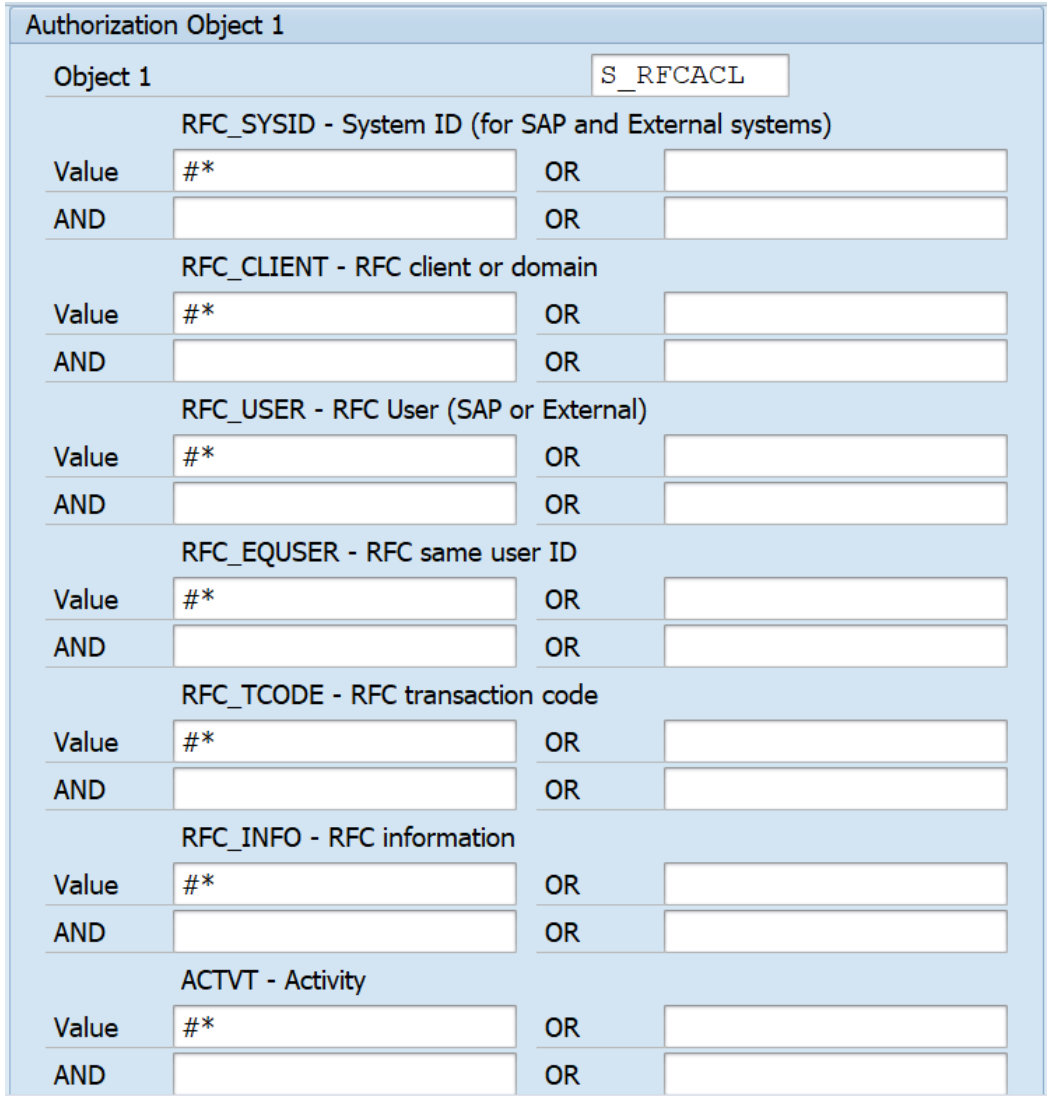
Tipp: You have to mask the pattern character by searching for `#*`

Caution: Multiple select options are combined using “and”. Therefore, the example shows users or roles which have a * value for all fields. Such a selection would be too tight.

To find the most critical authorizations search for

```
RFC_SYSID  = #*
RFC_CLIENT = #*
RFC_USER   = #*
RFC_EQUSER = N
```

and omit the other fields.



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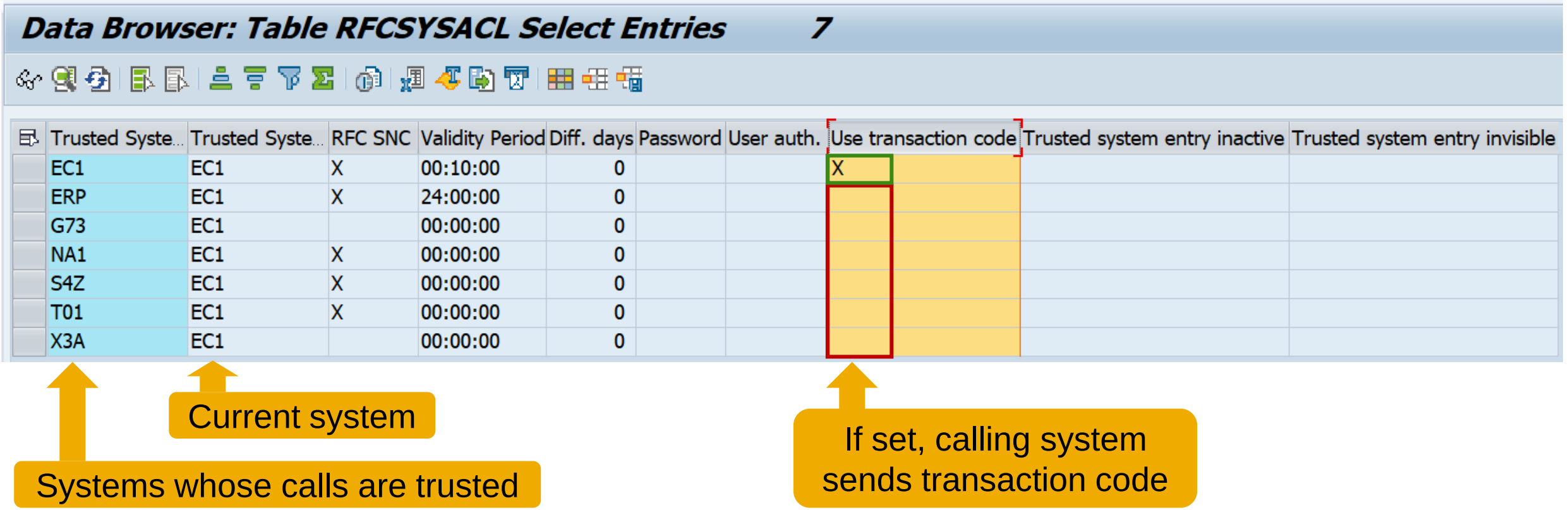
Note 3099776 - Missing Authorization check in ABAP Kernel

In the target systems use transaction `SE16` to validate the relevant settings.

Show table `RFCSYSACL` and check if field `RFCTCDCHK` is set:



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Note 3099776 - Missing Authorization check in ABAP Kernel

In the CCDB and application Configuration Validation you can use same field `RFCTCDCHK` of Configuration Store `RFCSYSACL` to validate if the transaction flag is active for Trusted RFC definitions.

RFCSYSID	TLICENSE_NR	RFCTRUSTSY	RFCDEST	RFCTCDCHK	RFCSNC	RFCSLOPT
FQ7	0020270862	FA7	SM_FQ7_TRUSTED_BACK		X	
FT7		FA7	SM_FT7_TRUSTED_BACK		X	
HF2		FA7	CWBADM_HF2_200		X	2

Configuration Items

SAP System ID	ConfigStore Name	Config. Item	Compliance	Compliant (1=Yes, -1=No, ' '=Not valuated)
Q78	RFCSYSACL	RFCSYSID:FA7/TLICENSE_NR	Yes	1
		RFCSYSID:FBT/TLICENSE_NR	Yes	1
		RFCSYSID:FL7/TLICENSE_NR	Yes	1
		RFCSYSID:FLQ/TLICENSE_NR	Yes	1
QE4	RFCSYSACL	RFCSYSID:ABA/TLICENSE	Yes	1
		RFCSYSID:ERF/TLICENSE_NR	No	-1
		RFCSYSID:ERZ/TLICENSE_NR	No	-1
		RFCSYSID:FBT/TLICENSE_NR	No	-1
		RFCSYSID:FL7/TLICENSE_NR	No	-1
		RFCSYSID:FLQ/TLICENSE_NR	No	-1

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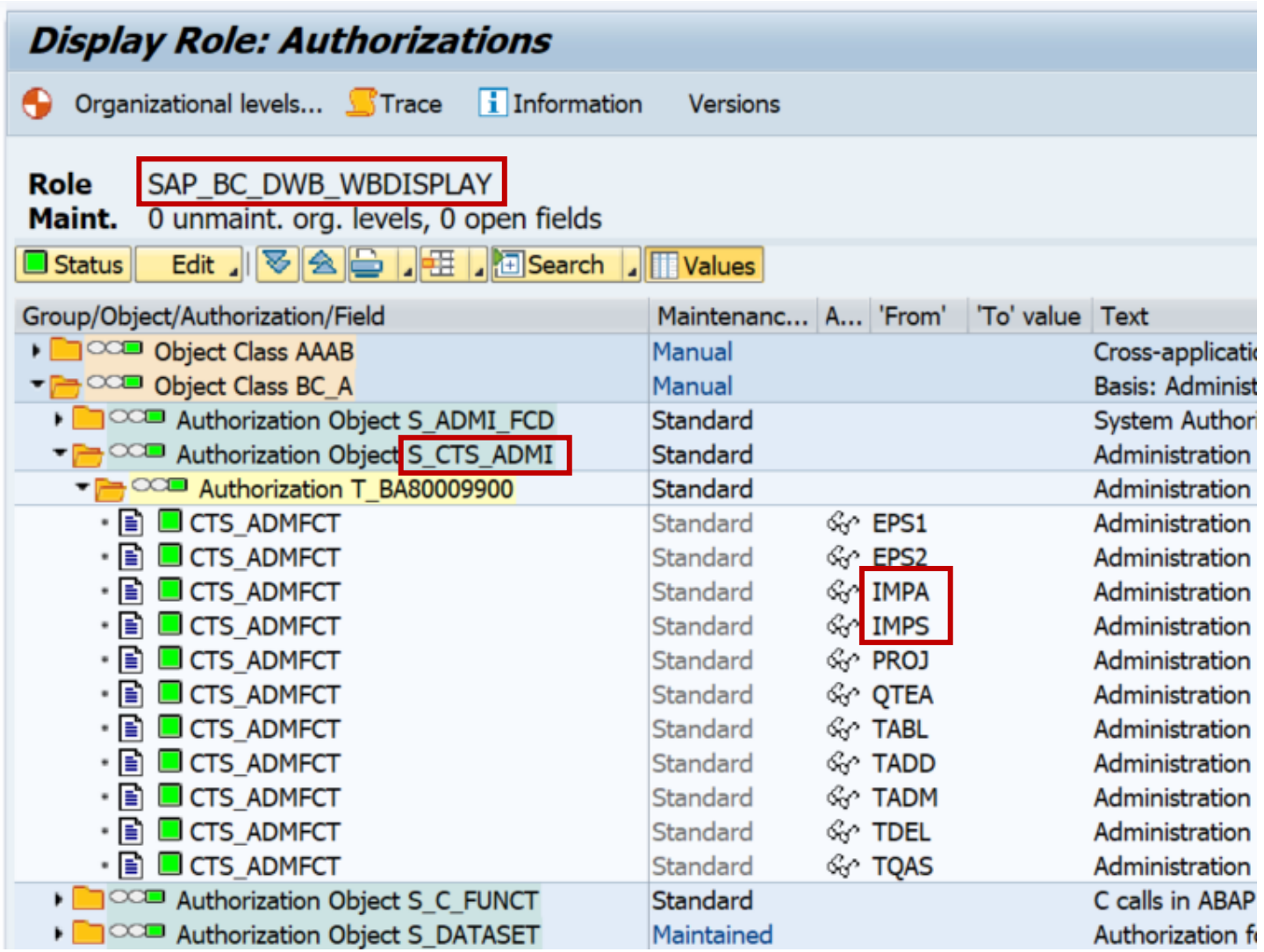
Note 3105728 - Leverage of Permission in SAP NetWeaver Application Server for ABAP

Issue: The display role `SAP_BC_DWB_WBDISPLAY` contains change authorizations, too.

Adjust this role as well as any copy in the customer name range:

1. **Copy the authorization**
   (automatically done in higher releases)
2. **Deactivate one of the 'standard' authorizations**
   (automatically done in higher releases)
3. **Remove the critical values from the other authorization producing 'changed' status**



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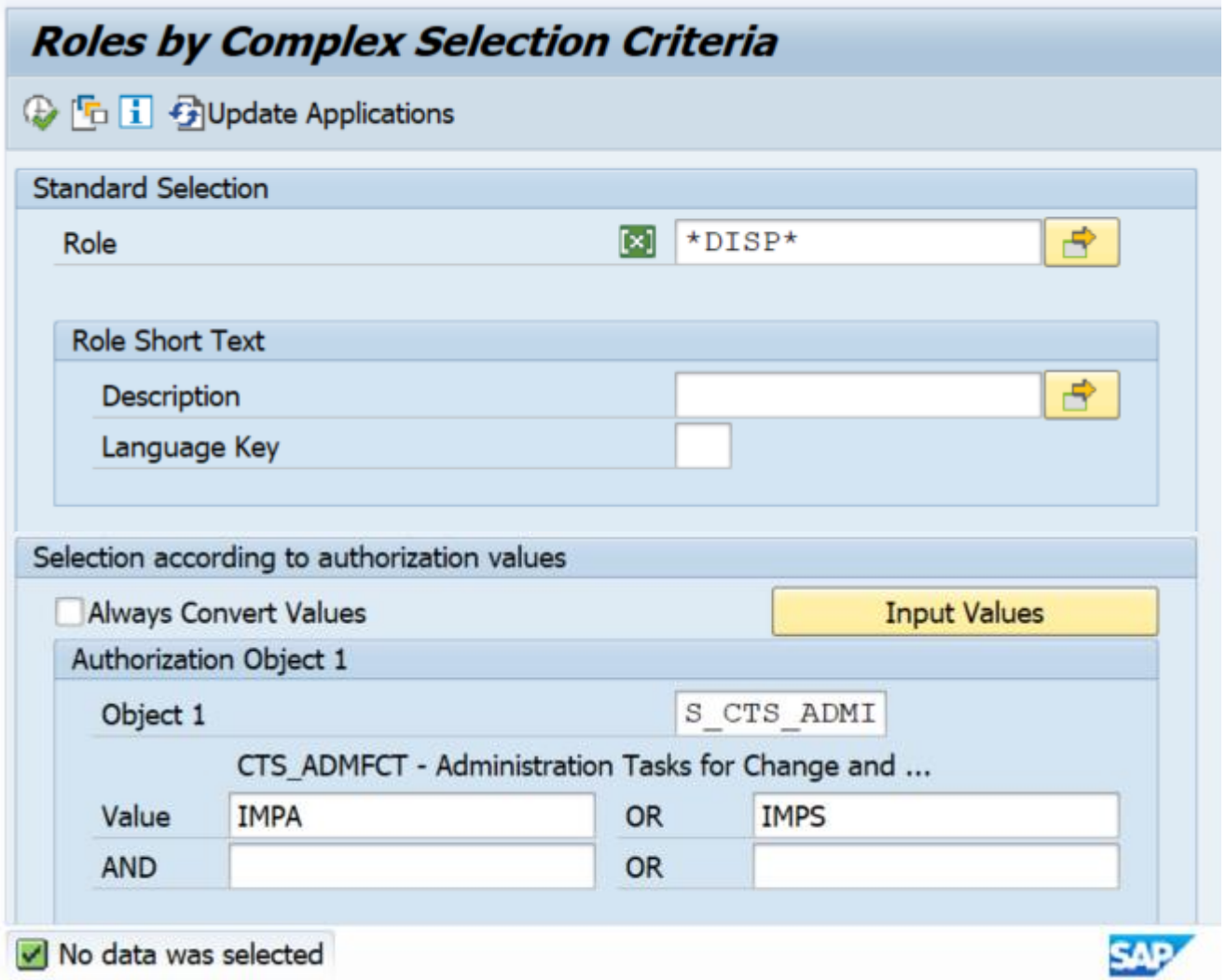
Note 3105728 - Leverage of Permission in SAP NetWeaver Application Server for ABAP

In SUIM, you do not find this role unless you have generated the authorization profile.
(SUIM searches in generated authorizations but not in authorization data of roles.)



In PFCG You can call Goto→Find.. and inspect standard activity field ACTVT for activity values. Because of S_DEVELOP the role allows for Debug-Display.

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October 2021

Topics October 2021

Security @ Devtoberfest
Security @ Teched 2021

Note 3078609 - Missing Authorization check in SAP NetWeaver Application Server for Java (JMS Connector Service)

Note 3097887 - Improper Authorization in SAP NetWeaver AS ABAP and ABAP Platform

Notes 2988956 and 2988962 - Cross-Site Request Forgery (CSRF) vulnerability in S/4HANA OP2020, OP1909 in Import Financial Plan Data

Note 3077635 - Denial of service (DOS) in the SAP SuccessFactors Mobile Application for Android devices

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Security @ Devtoberfest

Devtoberfest
https://developers.sap.com/devtoberfest.html

Week 4: What about Security?

Hackers Want Passwords
Monday, October 25 17:00 CEST / 23:00 SGT / 11:00 EDT Join us live on YouTube

Security Round Table
Michele Chubirka, Torsten Dangel, Helen Oakley, Sachar Paulus, Ralf Wigand
Tuesday, October 26 16:00 CEST / 22:00 SGT / 10:00 EDT Join us live on YouTube

Security Aspects of SAP Cloud Application Programming Model
Wednesday, October 27 17:00 CEST / 23:00 SGT / 11:00 EDT Join us live on YouTube

Container Security: It's All About the Supply Chain
Thursday, October 28 17:00 CEST / 23:00 SGT / 11:00 EDT Join us live on YouTube

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Security @ TechEd 2021

SAP TechEd 2021

https://www.sap.com/about/events/teched.html

Sessions related to Security

Make Trust Matter: Security for Intelligent Enterprises [CH020]

Examine Perspectives on Security in SAP HANA Cloud [DAT202]

Discover Enterprise Security Services: It's All About Identity [DEV107]

Strengthen Cybersecurity and Data Protection with SAP Solutions [IIS100]

Achieve Security by Design and by Default [IIS102]

Establish Identity Lifecycle Management for SAP S/4HANA Cloud [IIS109]

Protect the Intelligent Enterprise with SAP Enterprise Threat Detection [IIS161]

Learn What's New in Customer Identity and Access Management Around Security [ISP205]

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Note 3078609 - Missing Authorization check in SAP NetWeaver Application Server for Java (JMS Connector Service)

Central frameworks like J2EE-FRMW / J2EE ENGINE FRAMEWORK usually have strong prerequisites concerning other software components

→ Use Software Update Manager (SUM) to run a full update but do not try to update just this component.

Alternatively, use the temporary workaround as described in SAP Note 3093977.
The workaround avoids the immediate system restart as it is an online deployment.

In addition you can block / restrict the JMS port

TCP/IP Ports of All SAP Products
https://help.sap.com/viewer/ports

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Note 3078609 - Missing Authorization check in SAP NetWeaver Application Server for Java (JMS Connector Service)

JMS Connector Service (SAP NetWeaver 7.03)

https://help.sap.com/viewer/bf50bce7870d4d66b1a6515825d4585e/7.03.29/en-US/22cf4e71c46cdb4da31153be96c5389f.html

Developer Guide

- **JMS Overview**
  https://help.sap.com/viewer/c591e2679e104fcdb8dc8e77771ff524/7.5.22/en-US/4b1d0fe7218d74fee10000000a421937.html
  The Java Message Service (JMS) is an enterprise messaging system that provides a way for business applications to exchange data without needing to be directly connected to each other.

- **Defining Security in JMS**
  https://help.sap.com/viewer/c591e2679e104fcdb8dc8e77771ff524/7.5.22/en-US/0554e14a42634e76a602584cc892a0c7.html

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Note 3078609 - Missing Authorization check in SAP NetWeaver Application Server for Java (JMS Connector Service)

TCP/IP Ports of All SAP Products https://help.sap.com/viewer/ports

In addition you can block / restrict the JMS port on the firewall.

Take care about other critical ports like P4 or Telnet, too!

Product Name	Port Name	Service in etc/services	Default	Range	Rule	External	Fixed
Application Server Java	P4	None	50004	50004-59904	5<*NN*>04	Yes	No
Application Server Java	P4 over HTTP tunneling	None	50005	50005-59905	5<*NN*>05	Yes	No
Application Server Java	P4 over SSL	None	50006	50006-59906	5<*NN*>06	Yes	No
Application Server Java	IIOP	None	50007	50007-59907	5<*NN*>07	Yes	No
Application Server Java	Telnet	None	50008	50008-59908	5<*NN*>08	Yes	No
Application Server Java	**JMS**	**None**	**50010**	**50010-59910**	**5<*NN*>10**	**Yes**	**No**
Application Server Java	HTTP	sapctrl<*NN*>	50013	50013-59913	5<*NN*>13	Yes	Yes
Application Server Java	HTTPS	sapctrls<*NN*>	50014	50014-59914	5<*NN*>14	Yes	Yes

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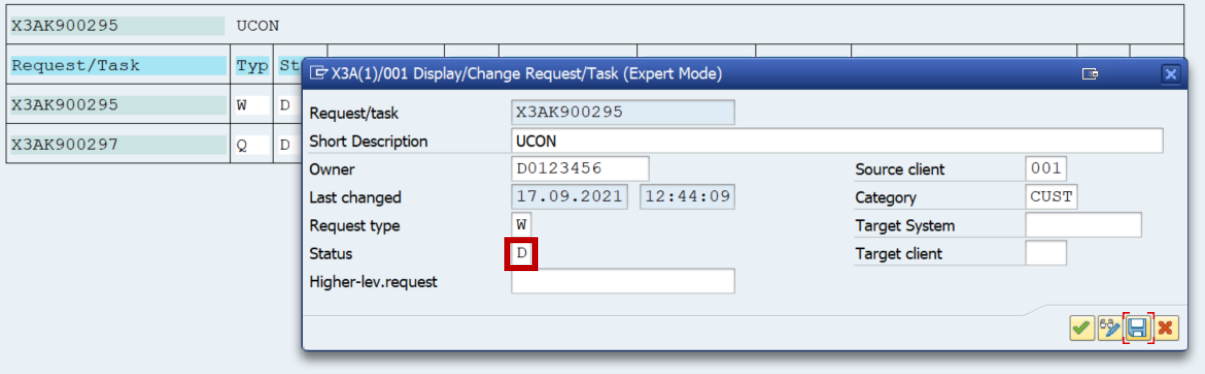
Note 3097887 - Improper Authorization in SAP NetWeaver AS ABAP and ABAP Platform

Deactivation of critical report `RDDIT076`

This quite old report allows to modify transport attributes even after releasing it:



Mitigation: an authorization for `S_CTS_ADMI` with value `CTS_ADMFCT` = `TABL` is required to execute this report.

The deactivation has no impact to production systems → no test required

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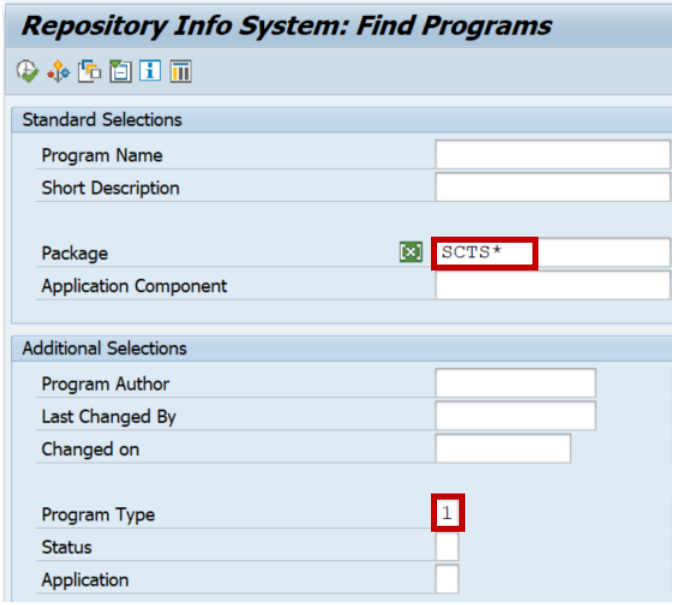
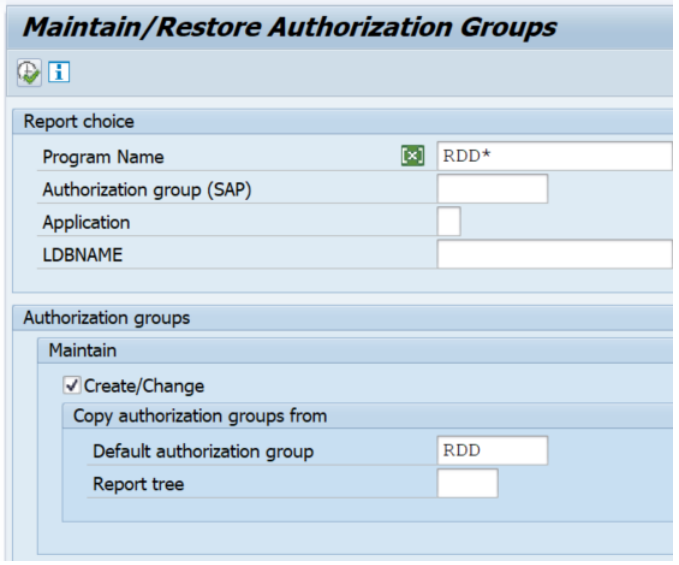
Note 3097887 - Improper Authorization in SAP NetWeaver AS ABAP and ABAP Platform

What about other `RDD*` reports respective reports of packages `SCTS*` ?





You can secure these reports by assigning them to a specific report authorization group (like `RDD` or `SCTS`) using report `RSCSAUTH`.

This way you get an additional authorization check for `S_PROGRAM` with these group values whenever such a report is submitted.

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Notes 2988956 and 2988962 - Cross-Site Request Forgery (CSRF) vulnerability in Import Financial Plan Data

You see 2 notes referring to the same issue because 2 different software components are affected:

Note 2988956

- Software Component `UIAPFI70`
- Support Packages SAPK-70004INUIAPFI70 or SAPK-80001INUIAPFI70 respective automatic correction instruction for transaction SNOTE

Note 2988962

- Software Component `S4CORE`
- Support Packages SAPK-10404INS4CORE or SAPK-10501INS4CORE respective manual correction instruction as described in the note

If you only apply one of them you get an error in the application!

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Note 2988962 - Cross-Site Request Forgery (CSRF) vulnerability for S/4HANA OP2020, OP1909 in Import Financial Plan Data

Manual correction:

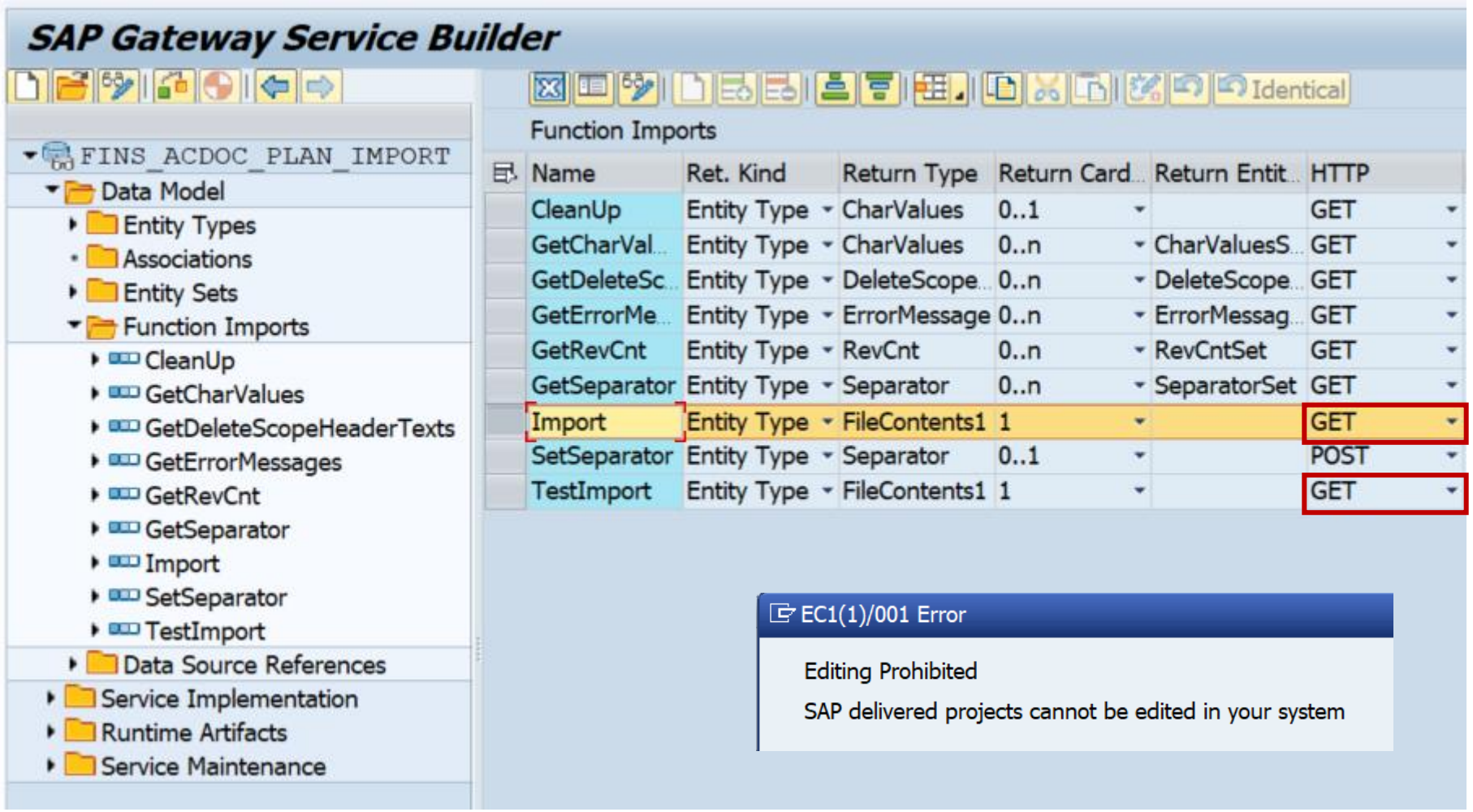
Transaction `SEGW`

Find project
`FINS_ACDOC_PLAN_IMPORT`

Open "Function Imports"

For function imports "Import" and "TestImport" change "HTTP Method Type" from "GET" to "POST"

Click on Button "Generate Run Time Objects"



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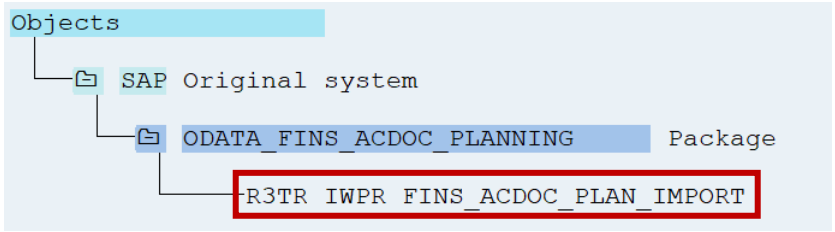
Note 2988962 - Cross-Site Request Forgery (CSRF) vulnerability for S/4HANA OP2020, OP1909 in Import Financial Plan Data

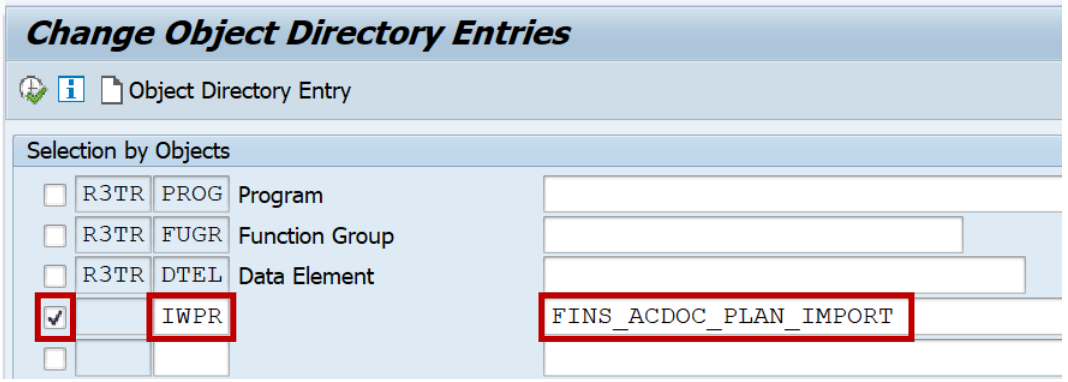
Manual correction to solve the issue 'Editing of standard SEGW projects for customers is blocked' is the same way as described in note 3022546:

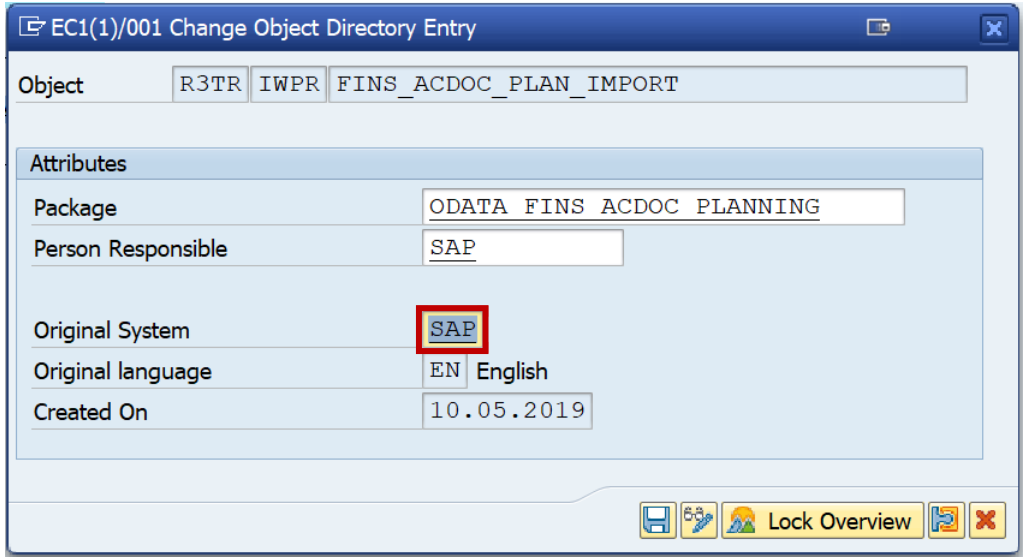
Transaction `SE03` → Change Object Directory Entries

Select checkbox in empty line, and enter object type `IWPR` and name `FINS_ACDOC_PLAN_IMPORT`



Choose the entry and change the original system to be the current system





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Note 3077635 - Denial of service (DOS) in the SAP SuccessFactors Mobile Application for Android devices

The issue is solved in version 6.32.1 (= version 2108 as described in the note)

Take care to update your corporate app store for corporate devices.

SAP SuccessFactors Mobile
https://play.google.com/store/apps/details?id=com.successfactors.successfactors

Version history (taken from PlayStore and from apkpure.com):

…

(~ 29.09.2021)	**6.32.1**	BUG FIXES • Fixed unexpected crashes that occurred after app was last updated
06.10.2021	**6.32.2**	BUG FIXES • Improved stability
15.10.2021	**6.33**	NEW FEATURES • The app no longer shows a redirection error after SSO authentication. • The app now properly loads the Employee Profile landing screen.

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Note 3101406 - Potential XML External Entity Injection Vulnerability in SAP Environmental Compliance 3.0

Application Component XAP-EM
Product SAP Environmental Compliance 3.0

→

Note 1139005 - SAP Environmental Compliance 3.0 Central Note

Note 2565066 - SAP Environmental Compliance 3.0 SP24 Installation Note

SAP Environmental Compliance
https://help.sap.com/ec
https://help.sap.com/viewer/product/SAP_ENVIRONMENTAL_COMPLIANCE/3.0/

SAP Environmental Compliance 3.0 is part of SAP Environment, Health, and Safety Management (SAP EHS Management) You install it on a SAP NetWeaver CE installation using JSPM (Java Support Pack Manager).

→

Conclusion: This is a very specific component. It's not surprising if you do not find it in your system landscape.

By the way: this solves the functional note 3079992, too.

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September 2021

Topics September 2021

Note 3087258 - Service Content Update is not Used for EarlyWatch Alert (or SOS)

Note 3080567 - HTTP Request Smuggling in SAP Web Dispatcher

Note 3089831 - SQL Injection vulnerability in SAP NZDT Mapping Table Framework
Note 3078312 - SQL Injection vulnerability in SAP NZDT Row Count Reconciliation

Note 2308378 - Missing Authorization check in Financial Accounting

Note 3068582 - Missing Authorization check in Financial Accounting / RFOPENPOSTING_FR

Note 3051787 - Null Pointer Dereference vulnerability in SAP CommonCryptoLib

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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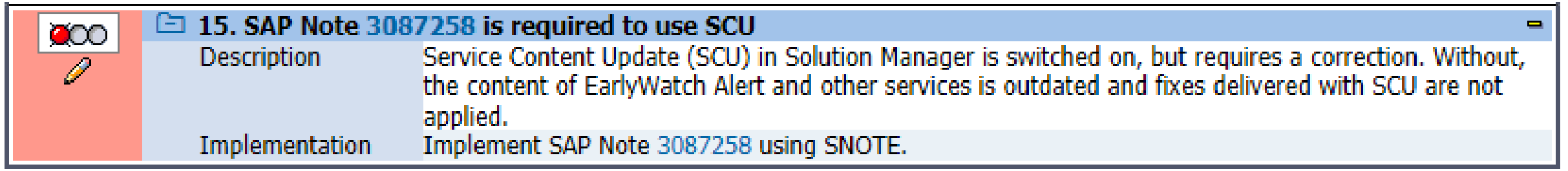
Note 3087258 - Service Content Update is not Used for EarlyWatch Alert

The note is only relevant for SAP Solution Manager on ST 7.20 SP 13

All services which are activated for Service Content Update (SCU) are affected (see transaction `AGS_UPDATE`). This usually includes the Security Optimization Service, too.

The Service Preparation Check in report `RTCCTOOL` verifies if the note is installed:



Do not implement note 3008883 on SAP Solution Manager 7.2 SP 9 – 12

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Note 3080567 - HTTP Request Smuggling in SAP Web Dispatcher

Mitigation: SAP Web Dispatcher is only vulnerable

- **if the patch referenced in SAP Note 3000663 has been applied to SAP Web Dispatcher**
- **but has not been applied to the SAP back-end systems (ABAP, Java, HANA).**

Solution:

SAP WEB DISPATCHER 7.22	**-**	**use package from Kernel 7.22 patch 1111 instead**
SAP WEB DISPATCHER 7.49	**-**	**use package from Kernel 7.49 patch 1019 instead**
SAP WEB DISPATCHER 7.53	**patch 827**	
SAP WEB DISPATCHER 7.77	**patch 410**	
SAP WEB DISPATCHER 7.81	**patch 200**	
SAP WEB DISPATCHER 7.84	**or higher**	

(respective the Kernel patch if the embedded WebDispatcher is used on an application server)

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Note 3080567 - HTTP Request Smuggling in SAP Web Dispatcher

The rule described in the workaround simply blocks requests (giving http status code `403`) if it contains invalid header values:

```
if %{HEADER:transfer-encoding} !strcmp "" [AND]
if %{HEADER:content-length} !strcmp ""
begin
# block
RegIForbiddenUrl ^(.*) -
end
```

Instead of blocking using `RegIForbiddenUrl` you can remove the invalid header variable and continue processing the request:

```
# remove critical header (case insensitive)
RemoveHeader content-length
```

In this case you could add another header to allow logging for this detected critical event:

```
# add custom header to document the critical event
SetHeader X-critical-header-content-length-removed "true"
```

Manipulating URLs
https://help.sap.com/doc/saphelp_nw73ehp1/7.31.19/en-US/48/92688baa6b17cee10000000a421937/frameset.htm

Filtering Requests
https://help.sap.com/doc/saphelp_nw73ehp1/7.31.19/en-US/48/92670eaa6b17cee10000000a421937/frameset.htm

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Note 3089831 - SQL Injection vulnerability in SAP NZDT Mapping Table Framework
Note 3078312 - SQL Injection vulnerability in SAP NZDT Row Count Reconciliation

Affected basis applications:

- **Near Zero Downtime Technology (restricted)**
  Note 693168 - Minimized Downtime Service (MDS)
  Blog: NZDT Downtime Approach for SAP S/4HANA Conversion - Customer Case

- **SAP Test Data Migration Server (deactivated)**
  Online help: SAP TDMS

Workaround using UCON:

- **Deactivate the remote capability for all `IUUC_REMOTE`, and the listed `IUUC*` and `DMC*` functions**

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Note 3089831 - SQL Injection vulnerability in SAP NZDT Mapping Table Framework
Note 3078312 - SQL Injection vulnerability in SAP NZDT Row Count Reconciliation

In older systems where neither the ABAP correction instruction nor UCON is available you can implement the correction manually:

As indicated in the security note simply insert the required `ASSERT` statement at the beginning of the function.

Deactivation of the critical function:

```
DMC_GENERIC_CLUSTERFILL              ASSERT 1 = 0.
DMC_GENERIC_CLUSTERFILL_ROWID        ASSERT 1 = 0.
DMC_GENERIC_READER                   ASSERT 1 = 0.
DMC_GENERIC_WRITER                   ASSERT 1 = 0.
DMC_GENERIC_WRITER_FLAT              ASSERT 1 = 0.
DMC_GENERIC_WRITER_MODULE            ASSERT 1 = 0.
IUUC_GENERATE_ACPLAN_DELIMITER       ASSERT 1 = 0.
IUUC_GENERATE_LOGTAB_CLEANUP         ASSERT 1 = 0.
IUUC_GENERIC_READ                    ASSERT 1 = 0.
```

Deactivation of the critical input parameter:

```
IUUC_CRE_ACT_ADBC_TRIGGER            ASSERT it_trigger_cond IS INITIAL.
IUUC_S4_DELETE_INVAL_REC_AUSP        ASSERT iv_where IS INITIAL.
IUUC_S4_FILL_MAPTAB_OF_AEOI          ASSERT iv_where IS INITIAL.
IUUC_S4_FILL_MAPTAB_OF_IBINOBS       ASSERT iv_where IS INITIAL.
IUUC_S4_FILL_MAPTAB_OF_IBINOWN       ASSERT iv_where IS INITIAL.
IUUC_S4_FILL_MAPTAB_OF_KALA          ASSERT iv_where IS INITIAL.
IUUC_S4_FILL_MAPTAB_OF_VBFA          ASSERT iv_where IS INITIAL.
IUUC_S4_FILL_MAPTAB_OF_WBASSOC       ASSERT iv_where IS INITIAL.
IUUC_S4_FILL_MAPTAB_OF_WBRFN         ASSERT iv_where IS INITIAL.
IUUC_S4_FILL_MAPTAB_RMCRP            ASSERT iv_where IS INITIAL.
IUUC_S4_GUID_UPD_MAPTA_WBASSOC       ASSERT iv_where IS INITIAL.
IUUC_S4_GUID_UPD_MAPTAB_VBFA         ASSERT iv_where IS INITIAL.
IUUC_S4_GUID_UPD_MAPTAB_WBRFN        ASSERT iv_where IS INITIAL.
IUUC_S4_REFC_FILL_TABS_INITIAL       ASSERT iv_where IS INITIAL.
IUUC_S4_UPD_MAPTAB_OF_KALA           ASSERT iv_where IS INITIAL.
IUUC_S4_UPD_MAPTAB_RMCRP             ASSERT iv_where IS INITIAL.
```

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Note 2308378 - Missing Authorization check in Financial Accounting

Correction from 2016 - Most likely nothing to do now

Standard authorization checks for `S_TCODE` added in case of `CALL TRANSACTION`

→ ok, we do not expect that roles have to be changed.
In case users need new authorizations they get an error message.

```
*>>>> START OF DELETION <<<<<
  CALL TRANSACTION p_tcode USING gt_bdcdata
                   OPTIONS  FROM gv_options
                   MESSAGES INTO gt_messtab.
*>>>> END OF DELETION <<<<<<<

*>>>> START OF INSERTION <<<<<

  CALL FUNCTION 'AUTHORITY_CHECK_TCODE' " Note 2308378
  EXPORTING
    tcode  = p_tcode
  EXCEPTIONS
    ok     = 1
    not_ok = 2
    OTHERS = 3.
  IF sy-subrc <> 1.
    MESSAGE e172(00) WITH p_tcode.
  ELSE.

    CALL TRANSACTION p_tcode USING gt_bdcdata
          OPTIONS  FROM gv_options
          MESSAGES INTO gt_messtab.
  ENDIF.
*>>>> END OF INSERTION <<<<<<
```

Check custom code, too: Either call function `AUTHORITY_CHECK_TCODE` as shown, maintain table `TCDCOUPLES` or use the extended variant of the `CALL TRANSACTION` statement.

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Note 2308378 - Missing Authorization check in Financial Accounting

The addition `WITH AUTHORITY-CHECK` is the recommended method of checking the authorizations of the current user as of basis 7.40.

It replaces checks using the statement `AUTHORITY-CHECK`, the function module `AUTHORITY_CHECK_TCODE`, and checks associated with the content of the database table `TCDCOUPLES`.

If this addition is specified, the authorization of the current user to execute the called transaction is checked using the following authorization objects before the transaction is called:

- ✓ **The authorization object `S_TCODE`**
- ✓ **Any authorization object entered in the definition of the transaction code (transaction `SE93`). Fields of the authorization object for which no value is specified here are not checked.**

The use of the statement `CALL TRANSACTION` without one of the additions `WITH AUTHORITY-CHECK` or `WITHOUT AUTHORITY-CHECK` is now obsolete.

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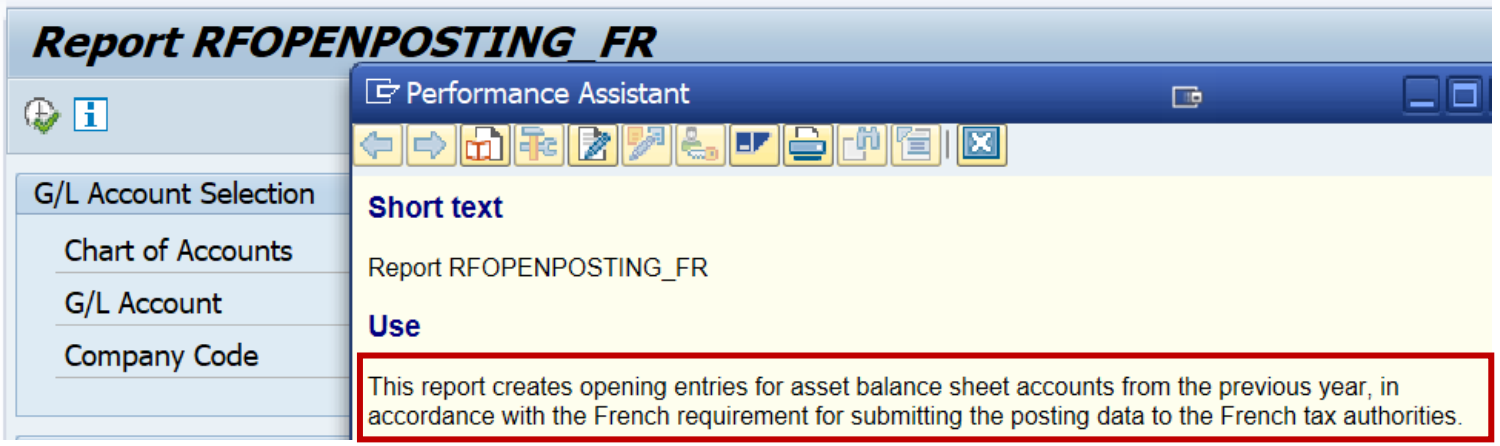
Note 3068582 - Missing Authorization check in Financial Accounting / RFOPENPOSTING_FR (France)

Transaction FAGL_FR_03 = report RFOPENPOSTING_FR now checks for the authority objects F_BKPF_BLA, F_BKPF_BUK, F_FAGL_LDR

In case users are not allowed anymore to execute the report, you need to adjust the user's roles. Use transaction SUIM to search for roles having transaction FAGL_FR_03 (none found) or authorization object F_SKA1_BUK (multiple found) to get candidates for updates.

In transaction SU22 (SAP) for transaction FAGL_FR_03, the authority Default Values (SAP) are maintained but only in the Support Package. Reuse this data for transaction SU24 (customer).



Caution: Most likely this is not a pure "France" report, therefore it can be misused against any country in Financial Accounting.

→ Implement the note in any case

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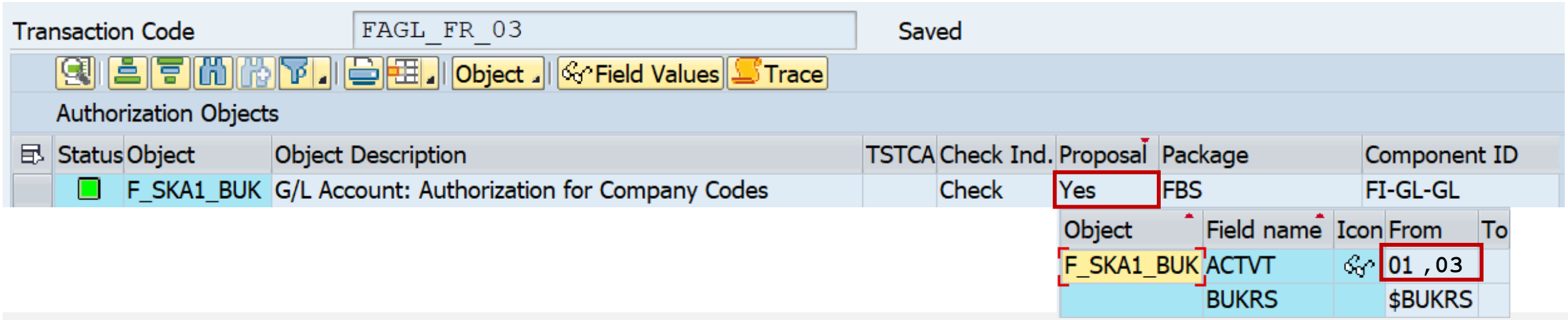
Note 3068582 - Missing Authorization check in Financial Accounting / RFOPENPOSTING_FR (France)

You only need to maintain transaction `SU24` (customer) if you use or plan to use this data as authorization default values in roles, i.e. if you have or plan to have transaction `FAGL_FR_03` in a role menu. (An additional customizing transport is required.)

Authorization Object	Field	Added values
`F_BKPF_BLA`	`ACTVT`	`03` (display), `10` (post)
`F_BKPF_BUK`	`ACTVT`	`03` (display), `10` (post)
`F_FAGL_LDR`	`ACTVT`	`03` (display)
`F_SKA1_BUK`	`ACTVT`	`03` (display)



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Note 3051787 - Null Pointer Dereference vulnerability in SAP CommonCryptoLib

The CommonCryptoLib gets updates regularly, most cases it is about features and fixes and sometimes about security vulnerabilities:

Version	Patch note	Patch level	Date	
…				
8.5.10	2427966	8510	23.02.2017	Missing certificate verification, security note 2444321
…				
8.5.30	2854158	8530	25.10.2019	Support for cipher suite SNC_KERBEROS_AES256_SHA256, etc.
8.5.31	2906430	8531	24.03.2020	All provided credentials are checked for accessing a PSE, etc.
8.5.32	2918317	8532	23.04.2020	Outbound HTTPS connections use SNI by default
8.5.33	2929890	8533	26.05.2020	Segmentation fault fixed, improved tracing
8.5.34	2934971	8534	12.08.2020	Memory leak fixed
8.5.35	2960999	8535	08.09.2020	Extended Master Secret is supported, avoid lock contentions
8.5.36	2980293	8536	03.11.2020	Memory leak fixed, improved error messages
…				
8.5.37	3032936	8539	10.06.2021	TLS client authentication with CSP is fixed
8.5.38	3038590	8539	10.06.2021	RSA-OAEP mode in SAPJCE is supported
8.5.39	3051811	8539	10.06.2021	Segmentation fault fixed
8.5.40	3089882	8540	24.08.2021	Denial of Service, null pointer dereferences, security note 3051787

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Note 3051787 - Null Pointer Dereference vulnerability in SAP CommonCryptoLib

You can think about updating just the CommonCryptoLib, however, we recommend to use the bundles instead.

For SAP NetWeaver **AS ABAP, AS Java** and **ABAP Platform** implement the SP Stack Kernel or the patch via file `dw_utils.sar`

For **SAP SSO**, the correction is included in `SAPSSOEXT`. There is no separate “Support Package Patches” entry.

The **SAP Web Dispatcher**, **SAP Host Agent**, and **SAP Content Server** require an update.

For **SAP HANA** and **SAP XSA** you need an revision update as it is not possible to update just the (multiple) cryptolibs.

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August 2021

Topics August 2021

Note 3058553 - Multiple Vulnerabilities in SAP Cloud Connector

Note 3078312 - SQL Injection vulnerability in SAP NZDT Row Count Reconciliation

Link List UCON

Note 3072920 - Cross-Site Scripting (XSS) vulnerability in SAP NetWeaver Enterprise Portal

Note 3057378 - Missing Authentication check in SAP Web Dispatcher

Note 3016478 - HANA Audit Policies for S/4HANA (Management via HANA Cockpit)

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Note 3058553 - Multiple Vulnerabilities in SAP Cloud Connector

This security note covers multiple vulnerabilities in SAP Cloud Connector,

- **Improper Certificate Validation**
- **Cross Site Scripting**
- **Code Injection via Backup Restore**
- **Code Injection via Zip Slip in Backup Import**

Solution: Fixes are available as of SAP Cloud Connector 2.13.2. Upgrade your existing Cloud Connector installation to fixed version.

Description provided in
https://help.sap.com/viewer/cca91383641e40ffbe03bdc78f00f681/Cloud/en-US/7a7cc373019b4b6eaab39b5ab7082b09.html

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Note 3058553 - Multiple Vulnerabilities in SAP Cloud Connector

How to get the installation files of SAP Cloud Connector

Download the latest Cloud Connector version 2.13.2 from
https://tools.hana.ondemand.com/#cloud

- **Cloud Connector upgrade is specific to the operating system**
- **Use the installer version for productive use (mainly because of automatic start after reboot), and the portable version only for testing (manual start required)**
- **Recommendation is to use an up-to-date Java 8 installation for Cloud Connector**

SAP Development Tools

HOME ABAP BW **CLOUD** CLOUD INTEGRATION HANA

Cloud Connector

The Cloud Connector is an optional on-premise component that is needed to integrate on-de
For more information, see the Cloud Connector documentation.
Note: The Portable archives for Cloud Connector are meant for non-productive scenarios on

Available Cloud Connectors

Operating System*	Architecture	Version
Linux	ppc64le	2.13.2
Linux	x86_64	2.13.2
Linux (Portable)	ppc64le	2.13.2
Linux (Portable)	x86_64	2.13.2
Mac OS X (Portable)	x86_64	2.13.2
Windows	x86_64	2.13.2
Windows (Portable)	x86_64	2.13.2

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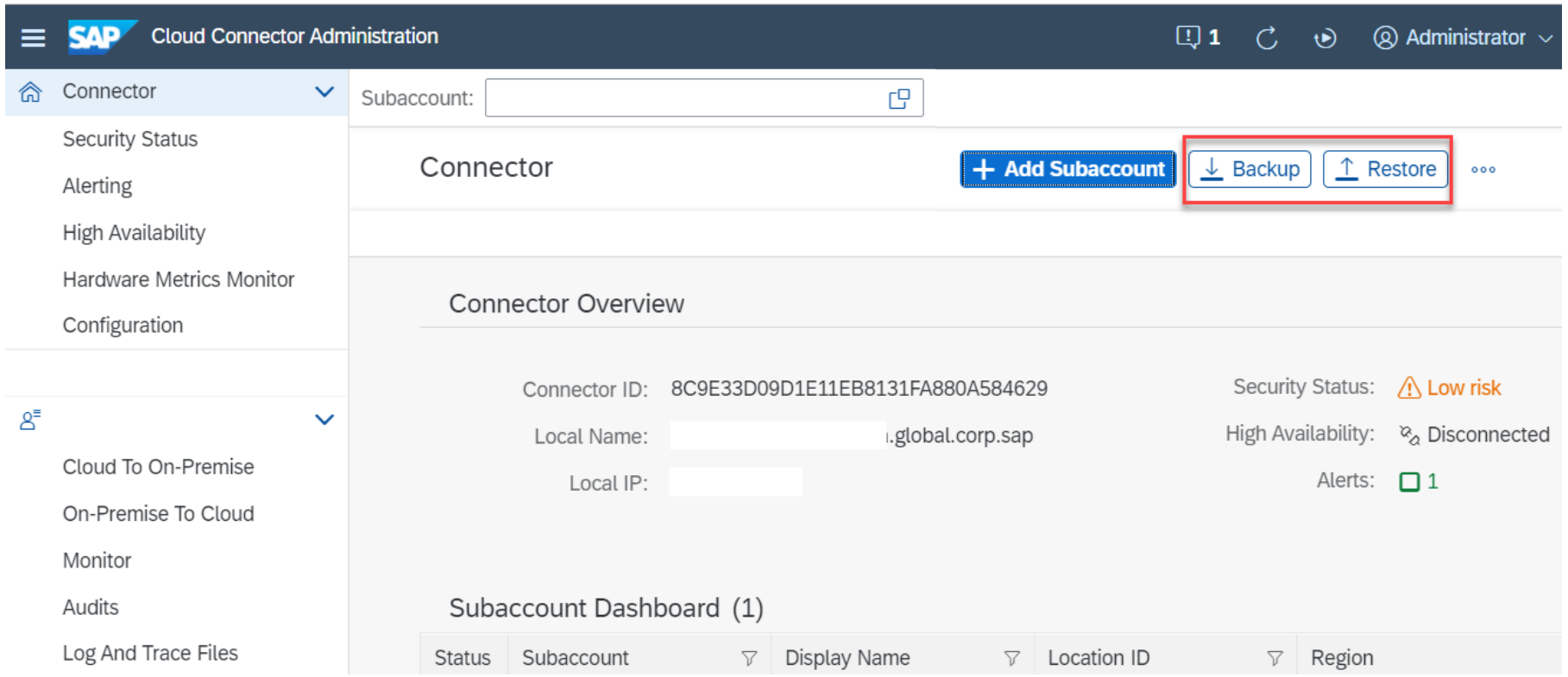
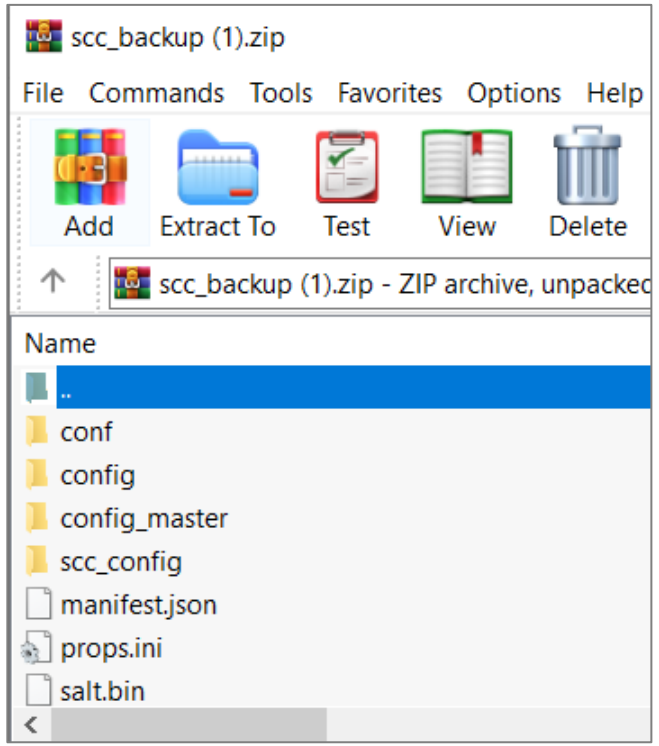
Note 3058553 - Multiple Vulnerabilities in SAP Cloud Connector

How to update SAP Cloud Connector

Previous settings and configurations are automatically preserved, however, make sure to have the configuration as backup.





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Note 3058553 - Multiple Vulnerabilities in SAP Cloud Connector

How to update SAP Cloud Connector

Follow the SAP Help documentation for upgrade procedure:
https://help.sap.com/viewer/cca91383641e40ffbe03bdc78f00f681/Cloud/en-US/7a7cc373019b4b6eaab39b5ab7082b09.html

- **Plan the downtime for single-machine Cloud Connector installation. Single-machine installations should get a shadow-instance first to avoid downtime in the future**
- **For portable version, remove the current version and recreate it with the fixed version (make sure you choose the previous installation directory again).**
  Consider to replace the portable version with an installed version for productive use.
- **Update SAP Java Virtual Machine (JVM) to the latest version**

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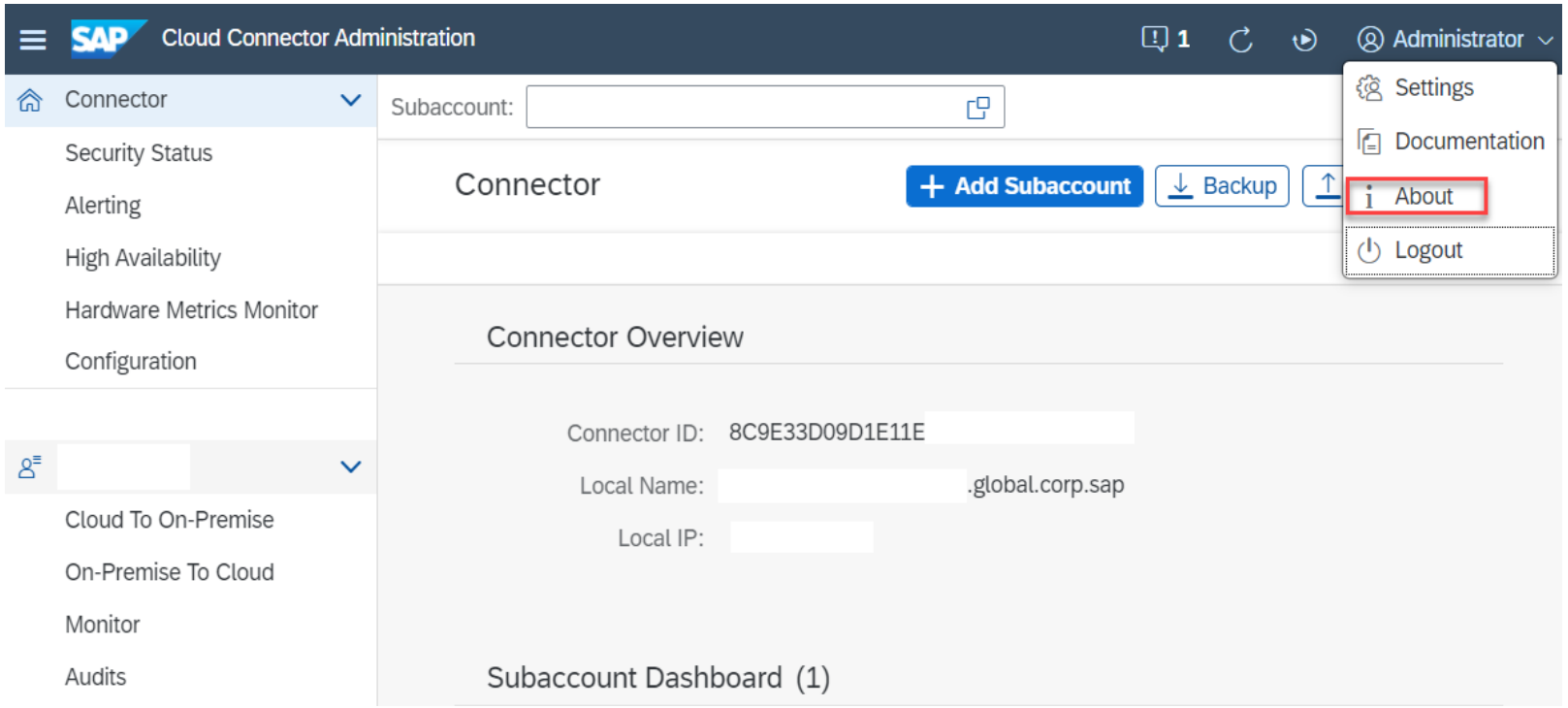
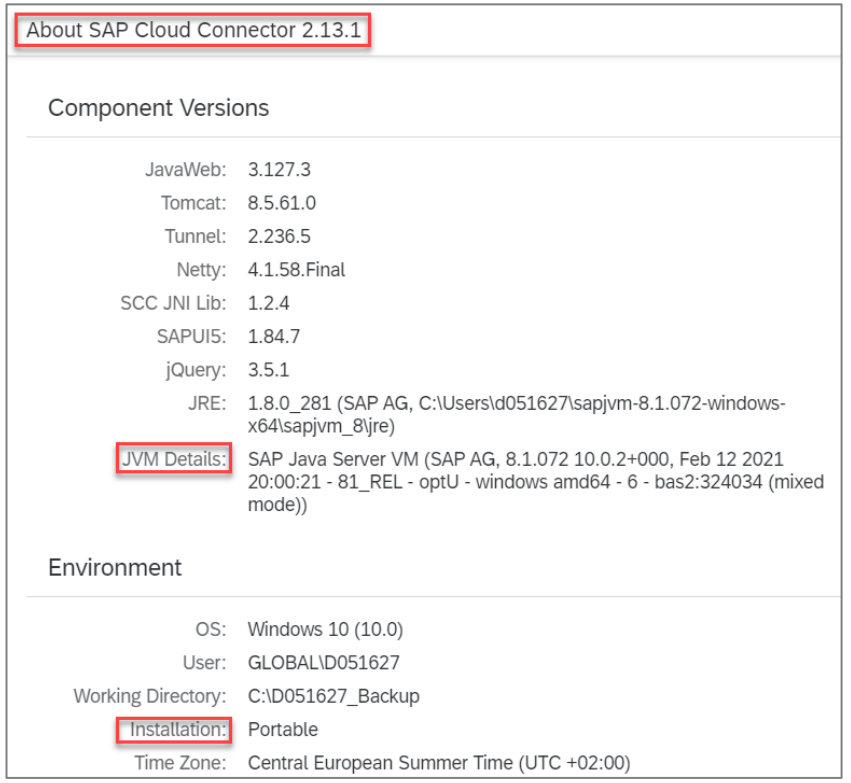
Note 3058553 - Multiple Vulnerabilities in SAP Cloud Connector

How to find the current Cloud Connector version in your environment

a) Locally per installation:
Identify the current version of Cloud Connector using cloud connector administration WebGui

- **Access cloud connector via web browser, https://hostname:8443 (respective custom port)**





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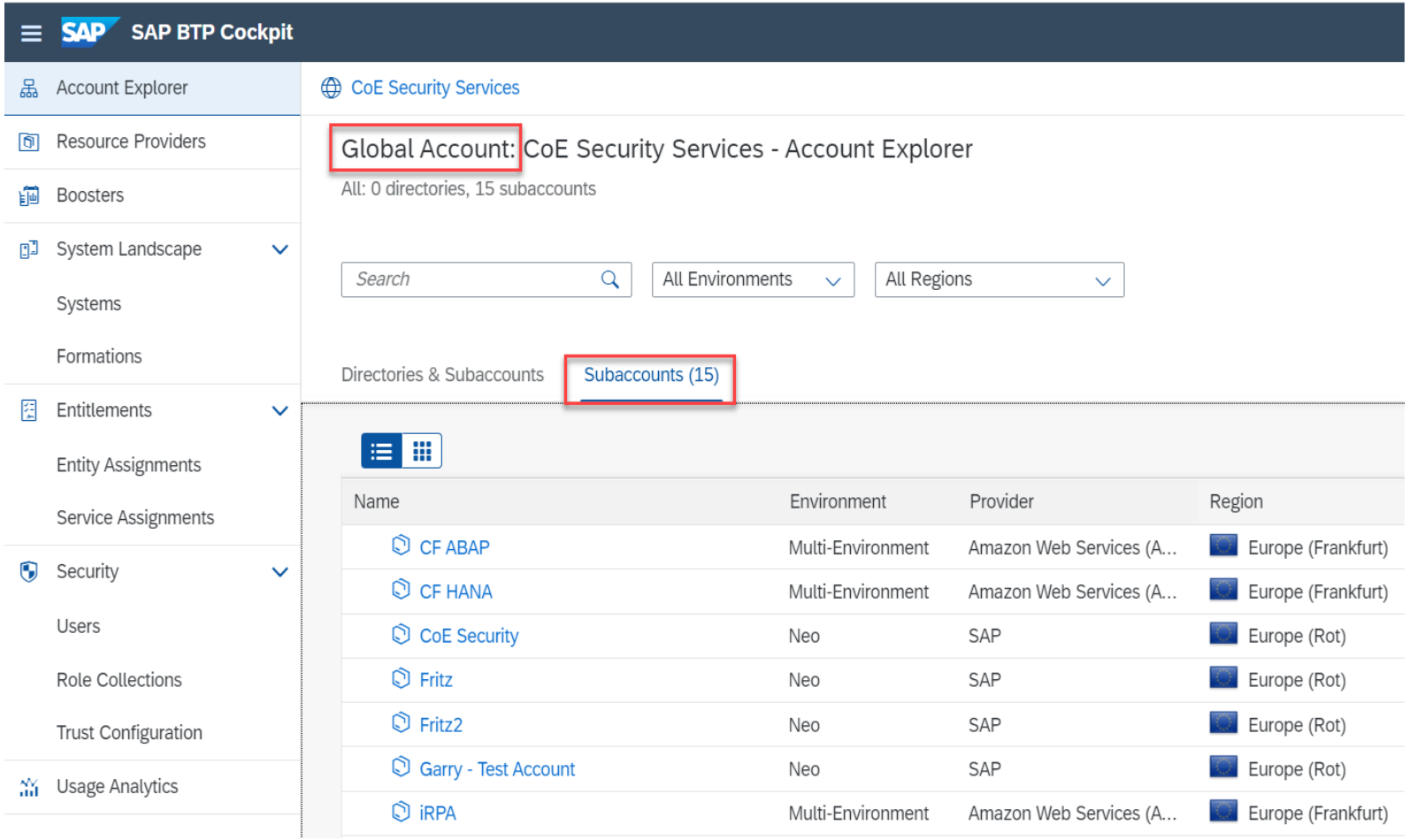
Note 3058553 - Multiple Vulnerabilities in SAP Cloud Connector

How to find the current Cloud Connector version in your environment

b) Centrally:
Identify the Cloud Connector version using SAP BTP Cockpit

- **Launch SAP BTP Cockpit**
- **View all listed subaccounts**



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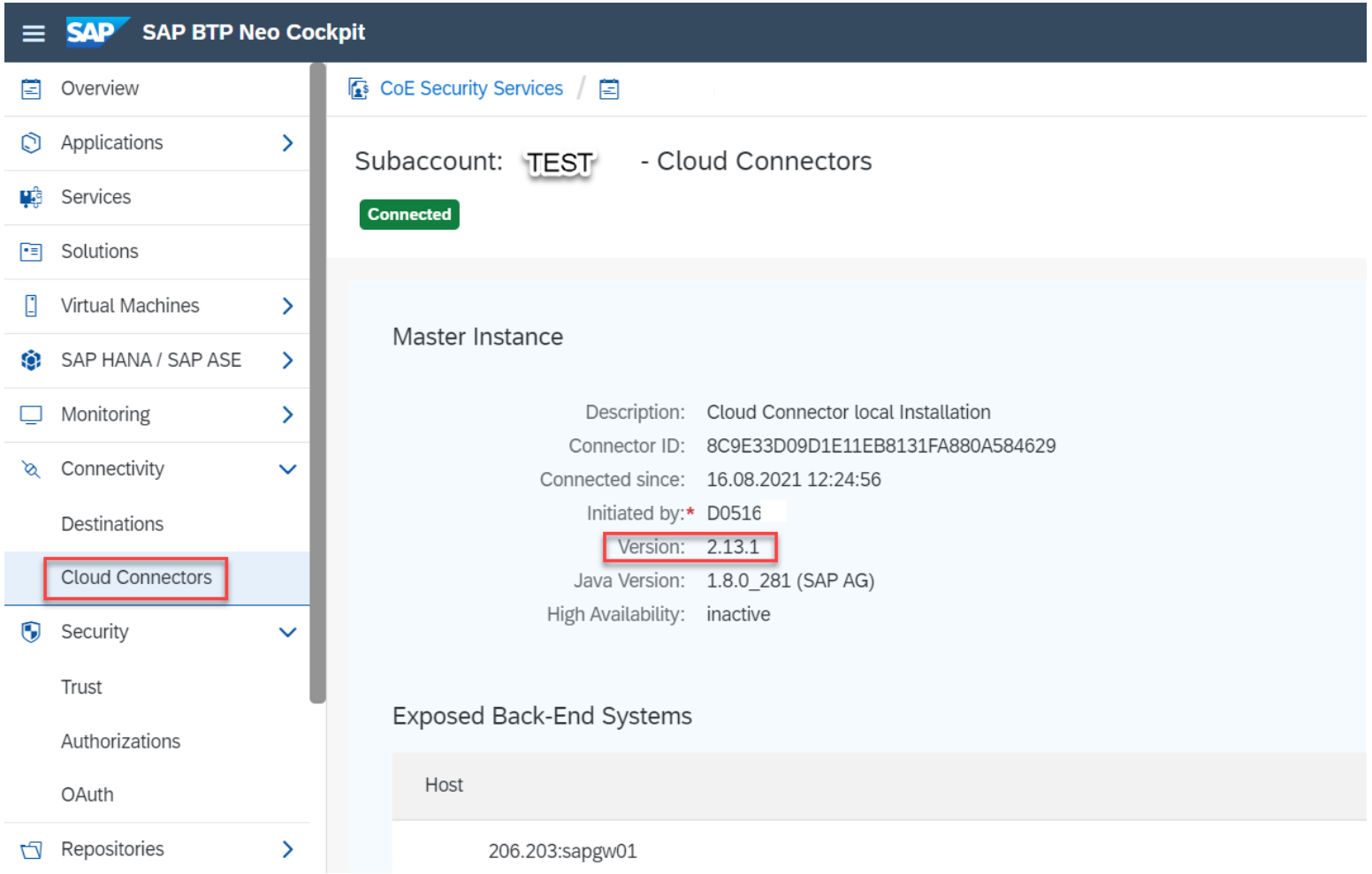
Note 3058553 - Multiple Vulnerabilities in SAP Cloud Connector

How to find the current Cloud Connector version in your environment

b) Centrally:
Identify the Cloud Connector version using SAP BTP Cockpit

- **Launch SAP BTP Cockpit**
- **View all listed subaccounts**
- **Select the each subaccount to view the Cloud Connector connection details:**



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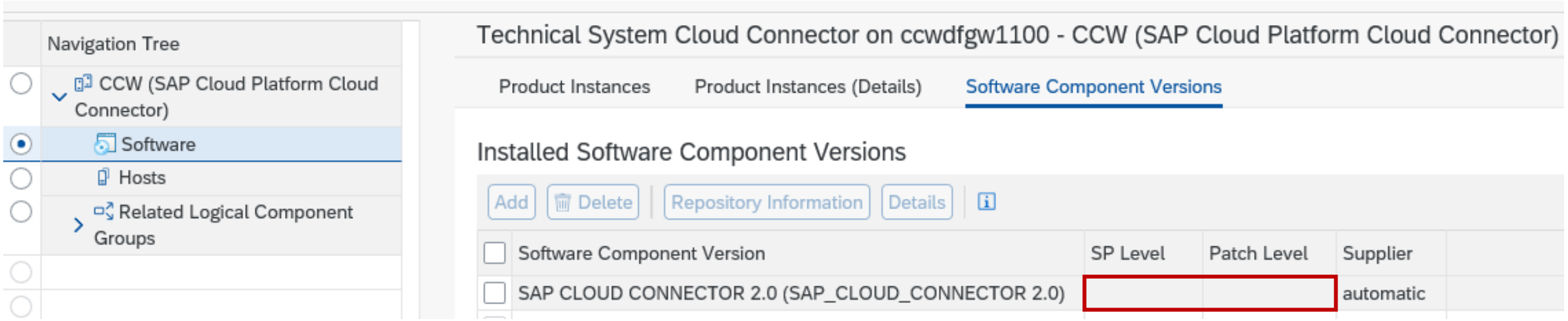
Note 3058553 - Multiple Vulnerabilities in SAP Cloud Connector

How to find the current Cloud Connector version in your environment

c) Centrally in LMDB:
Searching for “cloud connector” or system type `CLOUD_CONN` you find registered installations easily, but you do not get information about the installed version:



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Note 3058553 - Multiple Vulnerabilities in SAP Cloud Connector

How to find the current Cloud Connector version in your environment

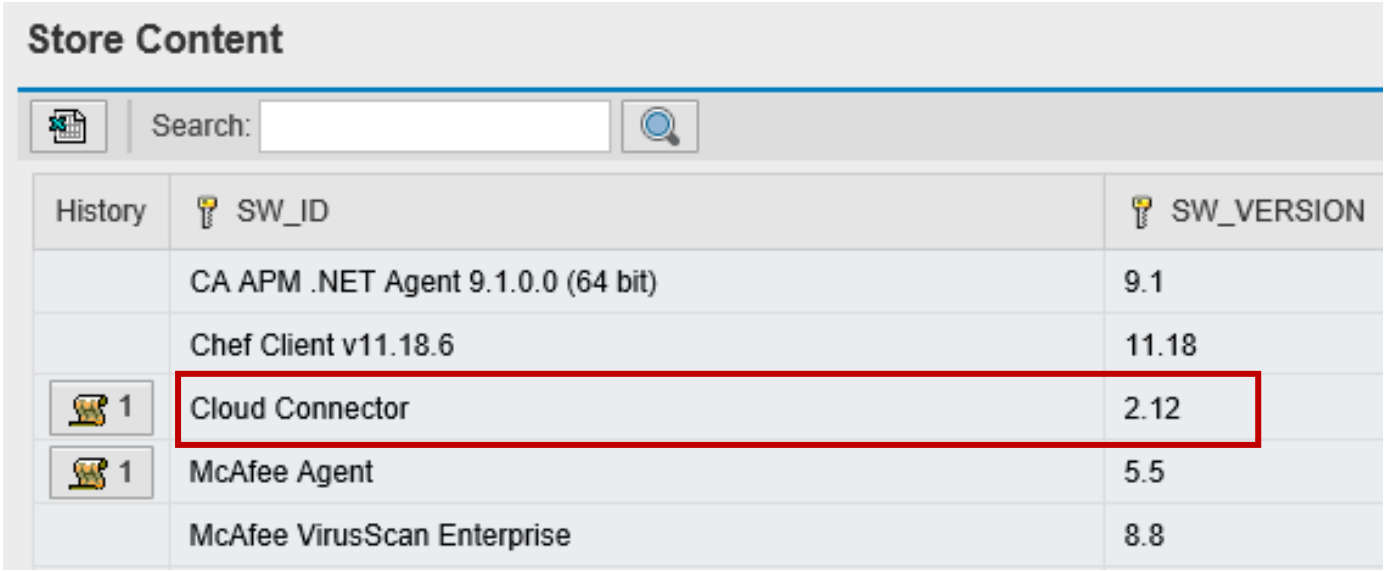
d) Centrally in Configuration and Change Database (CCDB):

You could find information about the installed version with filter for

Group Source = `SapOSCol`

Store Name = `HOST_SOFTWARE_PACKAGES`

Configuration Item = "`Cloud Connector`"



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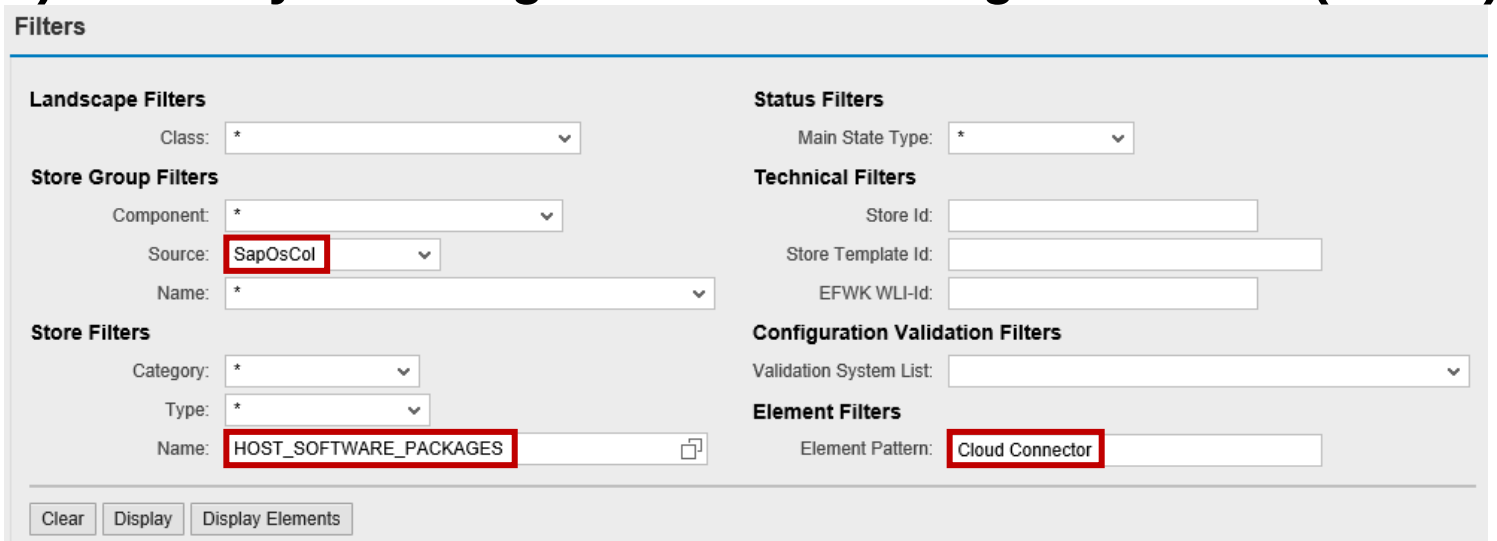
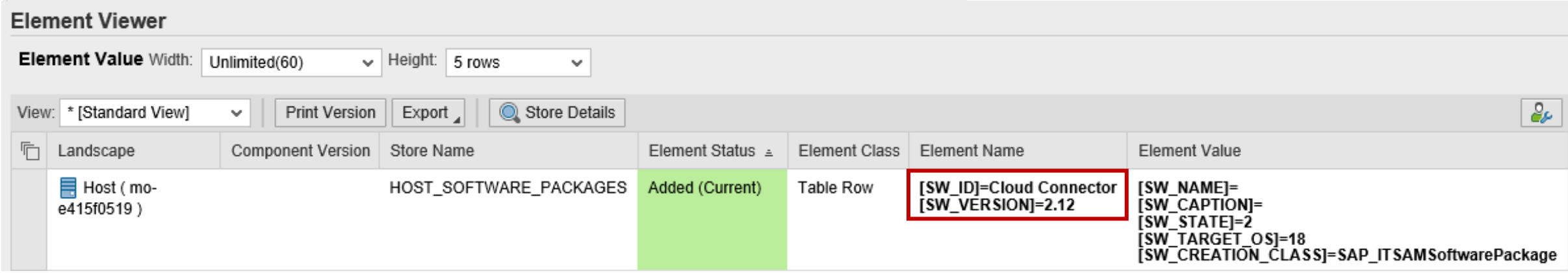
Note 3058553 - Multiple Vulnerabilities in SAP Cloud Connector

How to find the current Cloud Connector version in your environment

d) Centrally in Configuration and Change Database (CCDB):





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Note 3078312 - SQL Injection vulnerability in SAP NZDT Row Count Reconciliation

The note corrects the RFC-enables function `IUUC_RECON_RC_COUNT_TABLE_BIG`

Mitigation options (for this and other RFC-enabled functions of this function group `IUUC_REMOTE`):

- **Strict control for authorization object `S_RFC` for this function or the function group**
- **Strict control for authorization object `S_DIMS` for area=`SLOP`, level=`PACKAGE` and activity `03`=display (old code) respective `02`=change (new code). Check other activities, too!**
- **Deactivate RFC-capability for this/these function/s using UCON (as described in the note)**

```
*&---------------------------------------------------------------------*
*& Object          FUNC IUUC_RECON_RC_COUNT_TABLE_BIG
*& Object Header   FUGR IUUC_REMOTE
*&---------------------------------------------------------------------*
*& FUNCTION IUUC_RECON_RC_COUNT_TABLE_BIG
*&---------------------------------------------------------------------*
...

  CALL METHOD cl_iuuc_authority_remote=>check_change.

*>>>> START OF DELETION <<<<<
* adjust tabclass from local DB (potentially depooled/decluste
*>>>> END OF DELETION <<<<<<<

*>>>> START OF INSERTION <<<<<
  ASSERT it_where_clause[] IS INITIAL. "Parameter is obsolete

* adjust tabclass from local DB (potentially depooled/decluste
*>>>> END OF INSERTION <<<<<<
```

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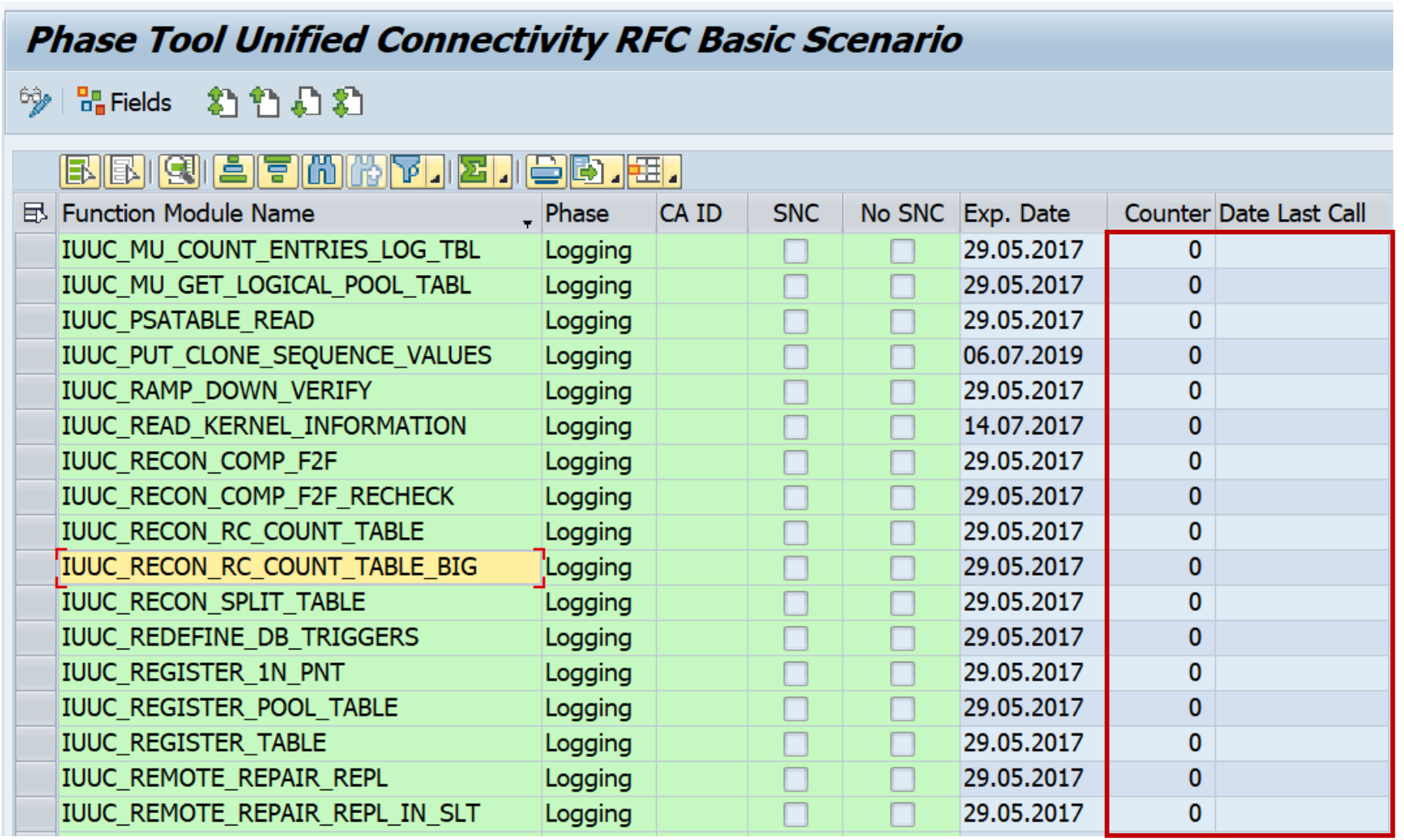
Note 3078312 - SQL Injection vulnerability in SAP NZDT Row Count Reconciliation

UCON Statistics for IUUC* functions:

Not used at all but still vulnerable



Phase Tool Unified Connectivity RFC Basic Scenario

Fields

Function Module Name	Phase	CA ID	SNC	No SNC	Exp. Date	Counter	Date Last Call
IUUC_MU_COUNT_ENTRIES_LOG_TBL	Logging				29.05.2017	0	
IUUC_MU_GET_LOGICAL_POOL_TABL	Logging				29.05.2017	0	
IUUC_PSATABLE_READ	Logging				29.05.2017	0	
IUUC_PUT_CLONE_SEQUENCE_VALUES	Logging				06.07.2019	0	
IUUC_RAMP_DOWN_VERIFY	Logging				29.05.2017	0	
IUUC_READ_KERNEL_INFORMATION	Logging				14.07.2017	0	
IUUC_RECON_COMP_F2F	Logging				29.05.2017	0	
IUUC_RECON_COMP_F2F_RECHECK	Logging				29.05.2017	0	
IUUC_RECON_RC_COUNT_TABLE	Logging				29.05.2017	0	
IUUC_RECON_RC_COUNT_TABLE_BIG	Logging				29.05.2017	0	
IUUC_RECON_SPLIT_TABLE	Logging				29.05.2017	0	
IUUC_REDEFINE_DB_TRIGGERS	Logging				29.05.2017	0	
IUUC_REGISTER_1N_PNT	Logging				29.05.2017	0	
IUUC_REGISTER_POOL_TABLE	Logging				29.05.2017	0	
IUUC_REGISTER_TABLE	Logging				29.05.2017	0	
IUUC_REMOTE_REPAIR_REPL	Logging				29.05.2017	0	
IUUC_REMOTE_REPAIR_REPL_IN_SLT	Logging				29.05.2017	0	

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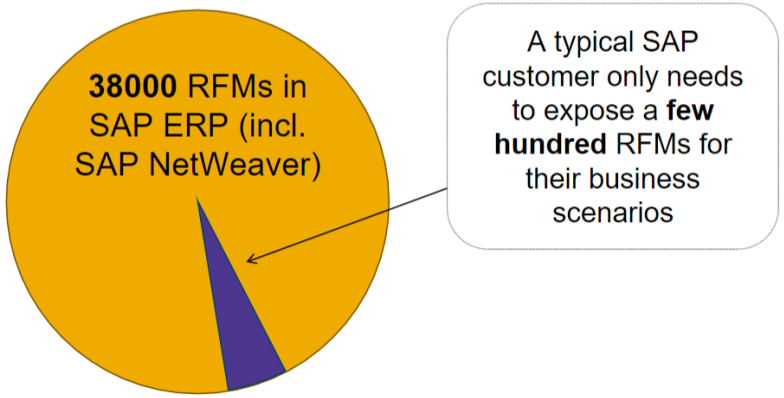
Link list UCON



Presentation

Unified Connectivity Overview (updated in June 2021)
https://archive.sap.com/documents/docs/DOC-57032
https://www.sap.com/documents/2015/07/ccf7ed8e-5b7c-0010-82c7-eda71af511fa.html

Blogs

UCON RFC Basic Scenario - Guide to Setup and Operations (updated in 2021)
https://archive.sap.com/documents/docs/DOC-57565
https://www.sap.com/documents/2015/07/a494b08e-5b7c-0010-82c7-eda71af511fa.html

Articles

SAP Insider: Secure Your System Communications with Unified Connectivity (2014)
https://archive.sap.com/documents/docs/DOC-51003
https://www.sap.com/documents/2015/07/94c4cb8f-5b7c-0010-82c7-eda71af511fa.html

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Link list UCON

Online Help - Unified Connectivity: Tools

https://help.sap.com/viewer/1ca554ffe75a4d44a7bb882b5454236f/7.40.26/en-US/ec3b480f69de447c899bcc12da6b33dd.html
https://help.sap.com/viewer/1ca554ffe75a4d44a7bb882b5454236f/7.5.21/en-US/ec3b480f69de447c899bcc12da6b33dd.html
https://help.sap.com/viewer/1ca554ffe75a4d44a7bb882b5454236f/7.52.8/en-US/ec3b480f69de447c899bcc12da6b33dd.html

Consulting Notes (Application component BC-MID-RFC)

Note 2044302 - Scheduling standard job SAP_UCON_MANAGEMENT on 7.40 (March 2019)
Note 2190119 - Background information about SAP S/4HANA technical job repository as of 7.50

Note 2687602 - AUTHORITY_CHECK_RFC checks differently than RFC
(Relevant only for own development of remote scenarios)

Note 2521222 - Protokollierungspflichtige Tabellen im RFC / UCON

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Link list UCON

Correction Notes (Application component BC-MID-RFC or BC-MID-UCO)

Note 2802262 - RFC Server Side UCON Blocklist check is not executed (March 2021)
Kernel patch for 7.77

Note 2755791 - Client-side UCON blocklist check active by default (March 2021)
Kernel patch for 7.74 or higher
Apply the kernel patch or change the profile parameter `ucon/rfc/check_blacklist` from 3 to 1.

Note 2532437 - External calls are slow when UCON/Blocklist is active (March 2021)
Kernel patch for 7.49 or higher
Apply Kernel patch to get better performance or deactivate the client side blocklist check by setting `ucon/rfc/check_blacklist` to 1.

Note 3010862 - UCON - RFC Callback SNC not detected (January 2021)
Kernel patch for 7.49 or higher

Note 2370910 - Blocklist/UCON-Checking don't allow local remote function calls (January 2021)
Kernel patch for 7.49 or higher

Note 2993452 - t/qRFC UCON Check is performed without SNC even if called with SNC (November 2020)
Kernel patch for 7.49 or higher

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UCON setup

Profile parameters:

`ucon/rfc/active` = `1`	**Activate RFC Service Runtime Checks**
`ucon/rfc/check_blacklist` = `1` (inbound)	**Activate blacklist check for RFC-call**
`ucon/websocketrfc/active` = `1`	**Activate RFC over WebSocket Runtime Checks (in new releases only)**

Run the setup and customizing in transaction `UCONCOCKPIT` (= transaction `UCONPHTL`)

Choose a suitable duration of the logging and evaluation phase.

Schedule the batch job `SAP_UCON_MANAGEMENT` that selects and persists the RFC statistic records required by the UCON phase tool on the database (see note 2044302 in 7.40 respective note 2190119 as of 7.50).

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Note 3072920 - Cross-Site Scripting (XSS) vulnerability in SAP NetWeaver Enterprise Portal

Support Package Patches

EP APPLICATION EXTENSIONS 7.30	SP021	000001	RTC SP 21: 30.11.2020	age: 10 month

No patches for older versions because of “end of mainstream maintenance” on 31.12.2020

EP APPLICATION EXTENSIONS 7.31	SP028	000001	RTC SP 28: 16.12.2020	age: 9 month

No patches for older versions because of “end of mainstream maintenance” on 31.12.2020

EP APPLICATION EXTENSIONS 7.40	SP023	000001	RTC SP 23: 16.12.2020	age: 9 month

No patches for older versions because of “end of mainstream maintenance” on 31.12.2020

EP APPLICATION EXTENSIONS 7.50	SP016	000001	RTC SP 16: 18.09.2019	age: 23 month
EP APPLICATION EXTENSIONS 7.50	SP017	000001	RTC SP 17: 28.02.2020	age: 18 month
EP APPLICATION EXTENSIONS 7.50	SP018	000001	RTC SP 18: 18.05.2020	age: 15 month
EP APPLICATION EXTENSIONS 7.50	SP019	000009	RTC SP 19: 04.09.2020	age: 11 month
EP APPLICATION EXTENSIONS 7.50	SP020	000004	RTC SP 20: 02.03.2021	age: 5 month
EP APPLICATION EXTENSIONS 7.50	SP021	000003	RTC SP 21: 02.06.2021	age: 2 month
EP APPLICATION EXTENSIONS 7.50	SP022	000000		
EP APPLICATION EXTENSIONS 7.50	SP023	000000		

End of maintenance 31.12.2027

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Note 3072920 - Cross-Site Scripting (XSS) vulnerability in SAP NetWeaver Enterprise Portal

You find the dates for "end of mainstream maintenance" in the Product Availability Matrix (PAM)
https://support.sap.com/pam

This component EP APPLICATION EXTENSIONS is part of SAP NetWeaver:

Product Version	Restricted available (productive use not allowed)	Restricted available (productive use allowed)	Unrestricted available	End of mainstream maintenance
SAP NETWEAVER 7.3	20.04.2010	29.11.2010	30.05.2011	31.12.2020
SAP EHP1 FOR SAP NETWEAVER 7.3	19.09.2011	21.11.2011	16.05.2012	31.12.2020
SAP NETWEAVER 7.4	14.12.2012	10.05.2013	10.05.2013	31.12.2020
SAP NETWEAVER 7.5		12.10.2015	20.10.2015	31.12.2027

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Note 3072920 - Cross-Site Scripting (XSS) vulnerability in SAP NetWeaver Enterprise Portal

Other references:

https://support.sap.com/securitynotes
“for all new SAP Security Notes with high or very high severity we deliver fix for Support Packages shipped within the last 24 months* for the versions under Mainstream Maintenance and Extended Maintenance.”

Note 1811708 - What is Product & Production Management System (PPMS)?

The PPMS is SAP internal, therefore you use the Product Availability Matrix (PAM) instead:
https://support.sap.com/pam

Note 52505 - Support after end of mainstream maintenance or extended maintenance
→
SAP Release and Maintenance Strategy (latest version from 27.01.2021)
https://support.sap.com/content/dam/support/en_us/library/ssp/release-upgrade-maintenance/maintenance-strategy/sap-release-and-maintenance-strategy-new.pdf
(No special treatment for security related maintenance)

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Note 3057378 - Missing Authentication check in SAP Web Dispatcher

Update WebDispatcher, i.e. if you are using Client Certificates for authentication:

Forward SSL Certificates for X.509 Authentication
https://help.sap.com/viewer/683d6a1797a34730a6e005d1e8de6f22/202009.002/en-US/2a6cec67c50842aab1444f7dfd0257e1.html

Web Dispatcher
https://wiki.scn.sap.com/wiki/pages/viewpage.action?pageId=414089394
→
How to Configure SAP Web Dispatcher to Forward SSL Certificates for X.509 Authentication
https://wiki.scn.sap.com/wiki/x/IiaKGw

- **Update separate installations of the Web Dispatcher**
- **Update Kernel of ABAP and Java – a Web Dispatcher is part of DW.SAR (disp+work)**
- **Update SAP HANA with XS, classic model or SAP HANA XS advanced model on the whole**
  It is not possible to update just the SAP Web Dispatcher inside such systems

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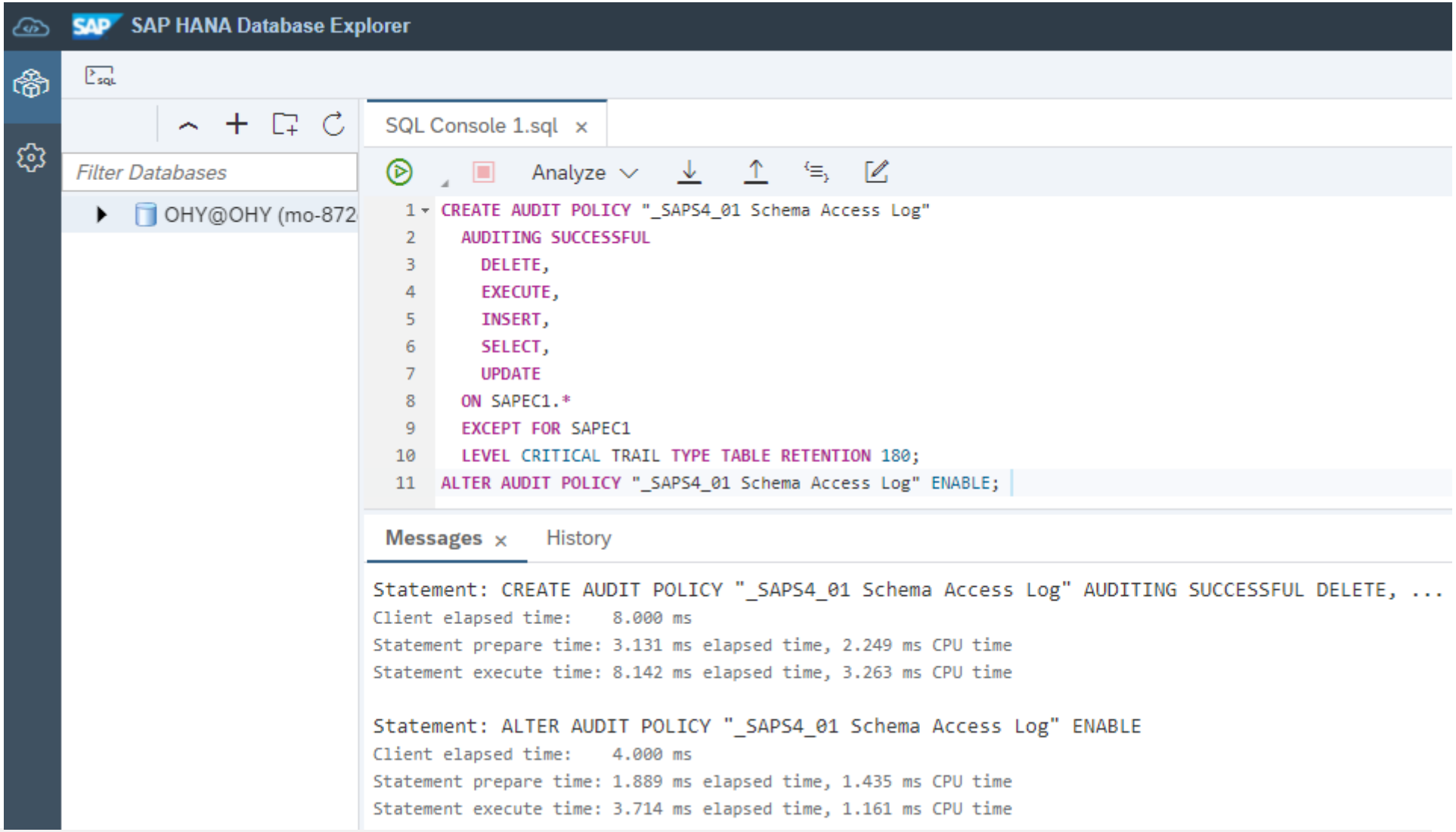
Note 3016478 - HANA Audit Policies for S/4HANA
Management via HANA Cockpit

Get familiar with the HANA Cockpit:



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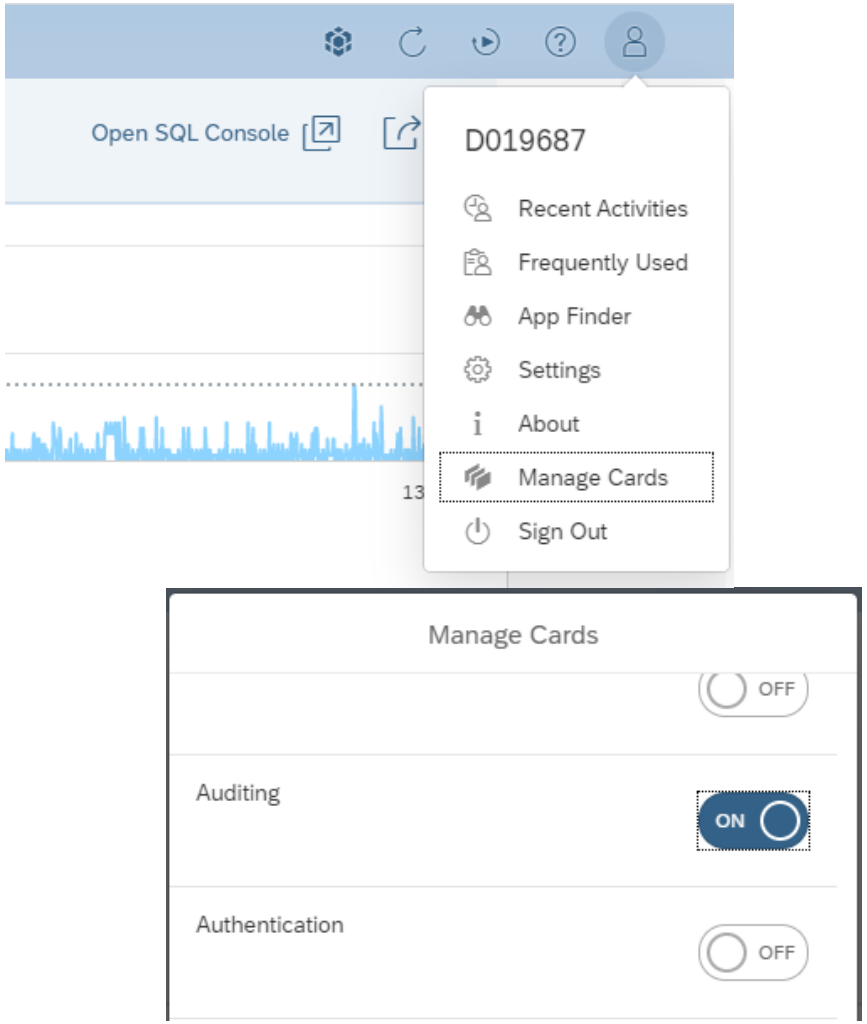
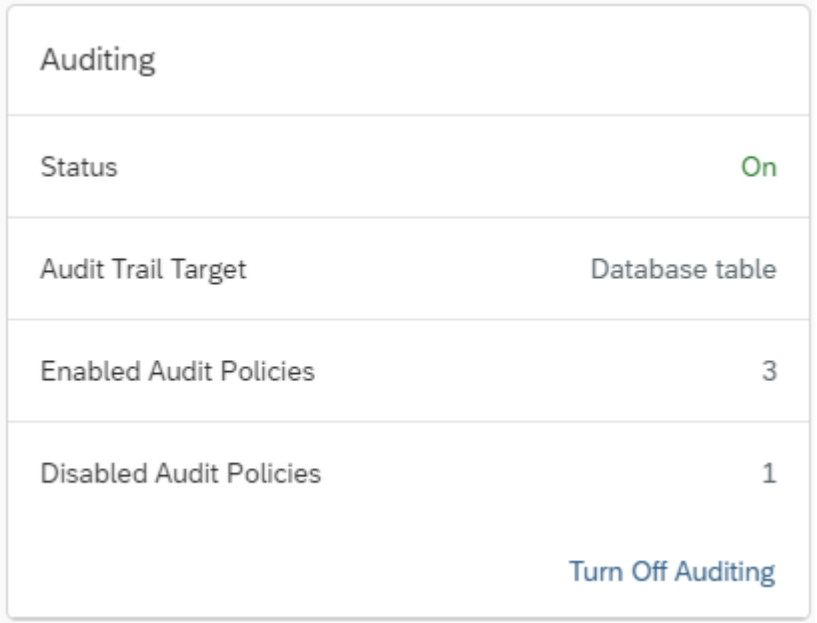
Note 3016478 - HANA Audit Policies for S/4HANA

Management via HANA Cockpit





You may need to activate the Auditing card

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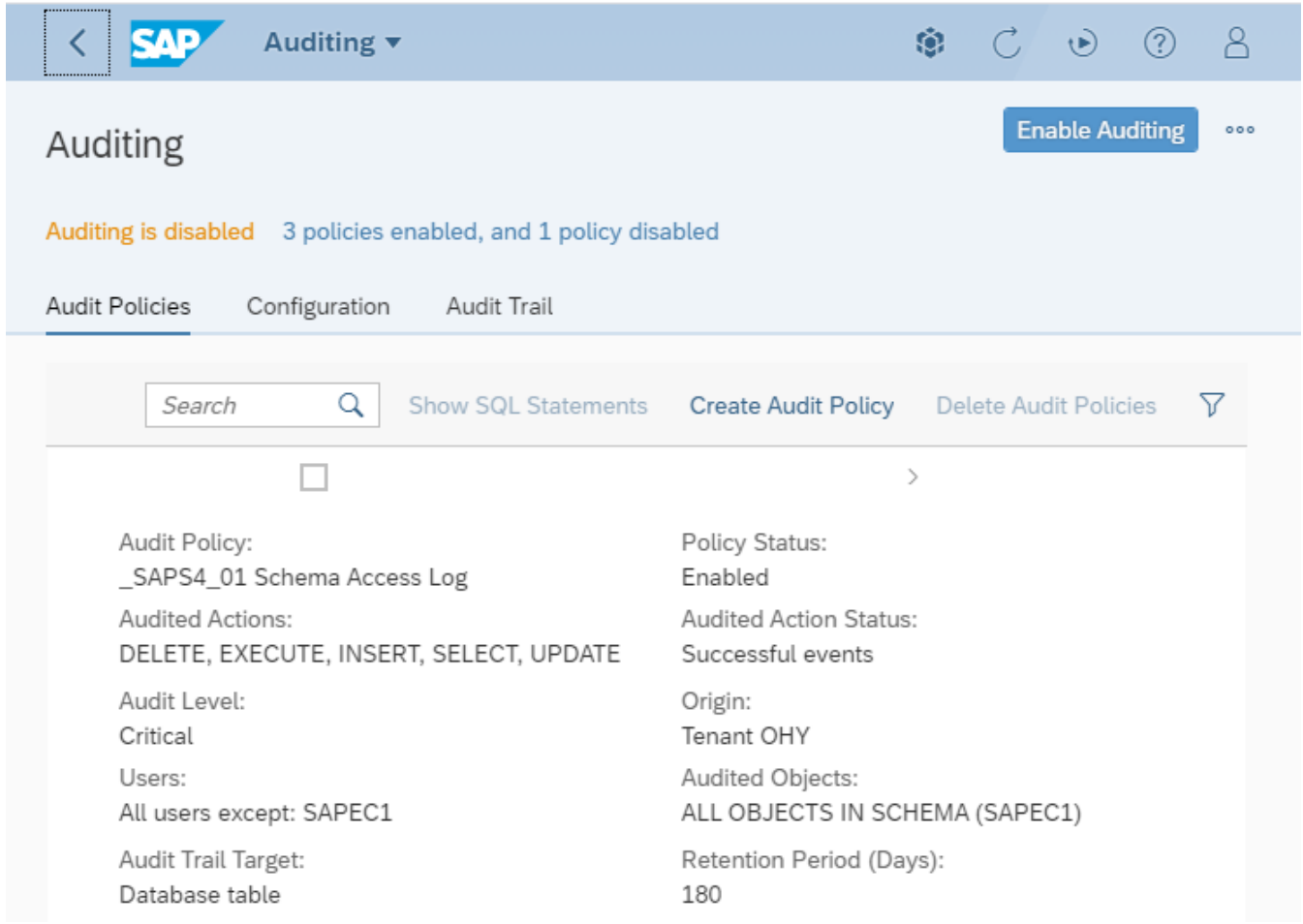
Note 3016478 - HANA Audit Policies for S/4HANA
Management via HANA Cockpit

You can view or update the audit policies in the Auditing app as well:



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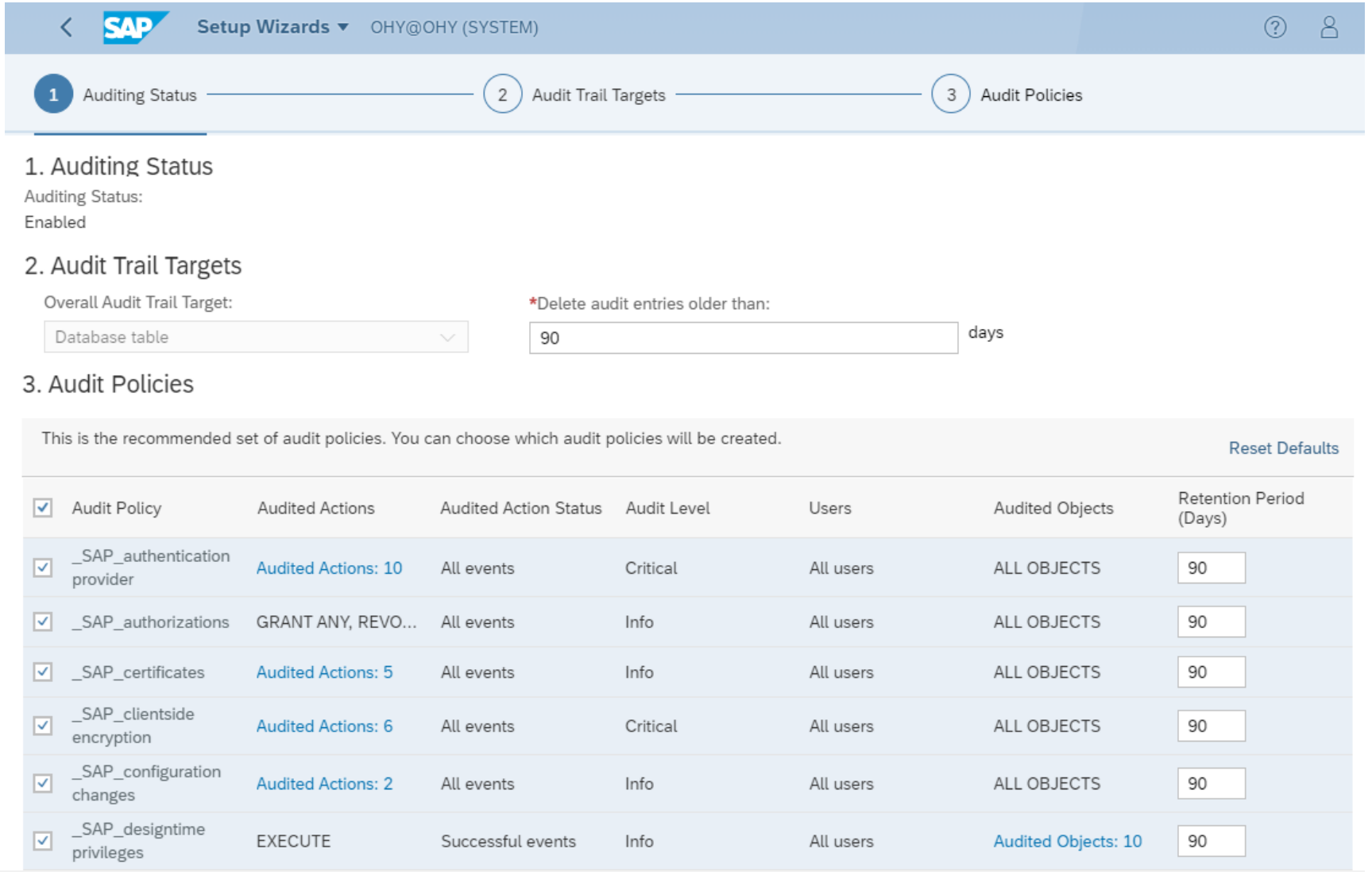
Note 3016478 - HANA Audit Policies for S/4HANA

Setup Wizard

The Setup Wizard activated the audit log together with the mandatory policies



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July 2021

Topics July 2021

SAP Insider: The Power of Prevention

Note 3066437 - SAP Support Package Stack Kernel 7.53 Patch Level 801

Note 3000663 - HTTP Request Smuggling in SAP Web Dispatcher and Internet Communication Manager

Note 3066316 - Missing authorization check in SAP CRM ABAP

Note 3016478 - HANA Audit Policies for S/4HANA

Note 3053829 - SOS: No or wrong check results about profile parameters for combined ABAP/HANADB systems

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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SAP Insider: The Power of Prevention

The Power of Prevention
How Patching and Awareness Can Fortify SAP Systems Against Hacks
By Aditi Kulkarni, Product Security Senior Specialist, SAP Labs India
https://www.sap.com/documents/2021/05/845d9eaa-de7d-0010-bca6-c68f7e60039b.html

In our new normal of remote and cloud environments and rising cyber risk from more sophisticated threat actors, it is more critical than ever for organizations to prioritize their patching strategy. This article explains how patching and awareness can fortify SAP systems against hacks.

Download the Document

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Note 3066437 - SAP Support Package Stack Kernel 7.53 Patch 801

SP Stack Kernel 753 PL 801 (release note 3066437) **replaces the SP Stack Kernel 753 PL 800** (release note 3017467) **in order to enable the customers to apply the priority very high Security Note 3007182 with an SP Stack Kernel.**

Limitation: You cannot use the Rolling Kernel Switch procedure (see Note 3046390)

Further corrections within this patch:

- Note 3032624 - Memory Corruption in SAP NetWeaver AS ABAP and ABAP Platform
- Note 3000663 - HTTP Request Smuggling in SAP Web Dispatcher and Internet Communication Manager
- CommonCryptoLib was updated to version 8.5.39. For details see Note 3051811
- Several corrections for kernel regressions. For details see Note 3066437

You can use SP Stack Kernel 753 PL 801 plus dw824+ to implement additional corrections.

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Note 3000663 - HTTP Request Smuggling in SAP Web Dispatcher and Internet Communication Manager

HANA

Support Package Patches

Software Component	Support Package	Patch Level
SAP EXTENDED APP SERVICES 1	SP000	000133
SAP HANA DATABASE 2.0	SP048	000006
	SP056	000000
XS RUNTIME 1	SP000	000133

Fixed versions of SAP Web Dispatcher are included in:

SAP HANA XSA 1.0.133

SAP HANA 2.0 SPS 04 Revision 48.06

SAP HANA 2.0 SPS 05 Revision 56

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Note 3000663 - HTTP Request Smuggling in SAP Web Dispatcher and Internet Communication Manager

WebDispatcher

The solution was published in Dec 2020 - March 2021 depending on the release

SAP WEB DISPATCHER 7.49	**no security patch → patch 946**	
SAP WEB DISPATCHER 7.53	**patch (724), 810**	
SAP WEB DISPATCHER 7.73	**patch 328**	**→ 334**
SAP WEB DISPATCHER 7.77	**patch (318), 323**	**→ 328**
SAP WEB DISPATCHER 7.81	**patch (29), 110**	

(insufficient patch level), patch level of solution → including side effect solving note 3027971

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Note 3000663 - HTTP Request Smuggling in SAP Web Dispatcher and Internet Communication Manager

Kernel (ICM)

SAP KERNEL 7.22 patch (1021), 1022		**or stack kernel 1100**	**09.07.2021**
SAP KERNEL 7.49 patch (938), 941	**→ 946**	**or stack kernel 1000**	**25.05.2021**
SAP KERNEL 7.53 patch (724), 810		**or stack kernel 801 plus dw824+**	
SAP KERNEL 7.73 patch 331	**→ 334**	**or stack kernel 400**	**06.04.2021**
SAP KERNEL 7.77 patch (318), 323	**→ 328**	**or stack kernel 400 in July/August**	
SAP KERNEL 7.81 patch (29), 110		**or stack kernel 200 in August/September**	
SAP KERNEL 7.82 patch (17), 21	**→ 23**		
SAP KERNEL 7.83 patch (6), 11	**→ 14**		
SAP KERNEL 7.84 no security patch	**→ 13**		

(insufficient patch level), patch level of solution → including side effect solving note 3027971

Medium probity Kernel security note 3032624 for disp+work requires slightly higher patch levels.

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Note 3000663 - HTTP Request Smuggling in SAP Web Dispatcher and Internet Communication Manager

ICM is part of disp+work

You find the side effect solving note 3027971 in “Content Info” file (but not the security note.)

Example for Kernel 7.77:

dw_343-80004393.sar

CONTENT DETAIL FCMS PROPERTIES

Webgui: trace cleanup, removed some unimportant warnings	3025985	327
"Error in HTTP response: Invalid header field" caused by missing name	3027971	328
Conversation ID is not deleted from internal table	3031464	328
DP: No functional changes	3019319	328
DP: support for mutex wait or deadlock situations	3025345	328
Wrong trace entry "INVALID SAPGUI CONNECT DATA: TOOLBAR_HEIGHT"	2946456	328

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Note 3066316 - Missing authorization check in SAP CRM ABAP

Deactivation of obsolete function `CRM_MKTTGGRP_FE_WRITE_FILE` implies deactivation of obsolete calling function `CRM_MKTTGGRP_FILE_EXPORT`

The feature for data export was introduced with note 672599 and secured using the logical file name (directory) `MARKETING_FILES` with note 1504416

Note 3066316

```
FUNCTION crm_mkttggrp_fe_write_file.

*>>>> START OF DELETION <<<<<
  DATA:
    lv_file        TYPE  string,
    lv_line        TYPE  string.

* set file name
  lv_file = iv_file.

* check if file is in directory (or below) of logical directory
  CALL FUNCTION 'FILE_VALIDATE_NAME'
    EXPORTING
      logical_filename          = gc_fec_logical_file_name
    CHANGING
      physical_filename         = lv_file
```

Note 1504416

```
*>>>> START OF INSERTION <<<<<

* directory, files, etc.
CONSTANTS:
      gc_fec_logical_file_name TYPE fileintern VALUE 'MARKETING_FILES'.
*>>>> END OF INSERTION <<<<<<
```

```
*>>>> START OF INSERTION <<<<<

* check if file is in directory (or below) of logical directory
  CALL FUNCTION 'FILE_VALIDATE_NAME'
    EXPORTING
      logical_filename          = cl_crm_mktccm_pcpg_exe_util=>gc_logical_file_name
    CHANGING
      physical_filename         = lv_filename
```

This class attribute shows the same name

Keep in mind: This logical file name (directory) `MARKETING_FILES` is still in use by background report `CRM_MKTTGGRP_EXPORT_BATCH` which you can use to export campaign data.

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Note 3016478 - HANA Audit Policies for S/4HANA

Blog: Security by Default – HANA Audit Policies for S/4HANA
https://blogs.sap.com/2021/06/08/security-by-default-hana-audit-policies-for-s-4hana/

- **Catch events related to security configuration and log actions related to security**
- **Log changes for users and authorizations**
- **Log unusual events**
- **No unnecessary redundancies**
- **Avoid non-meaningful entries in the audit log**

Source: GitHub https://github.com/SAP-samples/s4hana-hana-audit-policies

(The documentation and another external Blog shows similar principles.)

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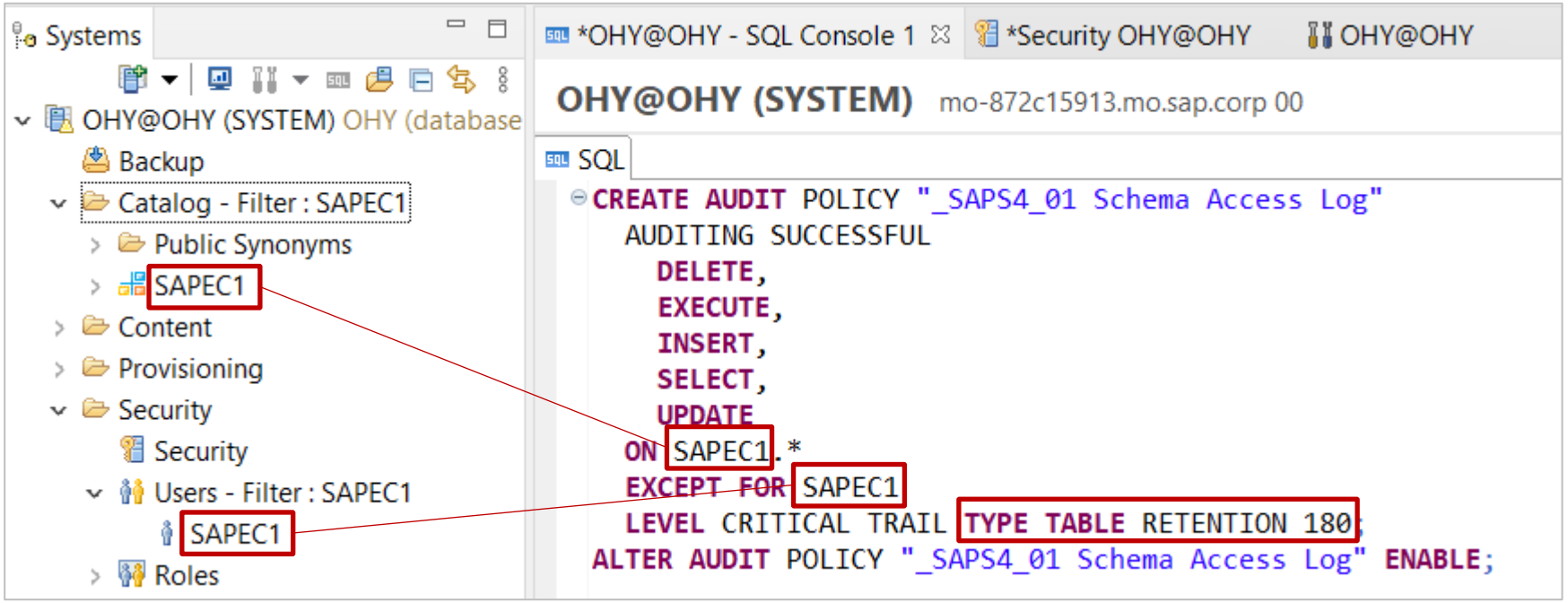
Note 3016478 - HANA Audit Policies for S/4HANA

All policy templates use audit trail type TABLE and have specific retention times for this target.

Adjust these settings according to your requirements.

Some policy templates contain placeholders which you have to adjust, too.



Result on the Security tab:

Audit Policies

Policy	Policy Status	Audited Actions	Audited Action ...	Audit Level	Users	Target Object
_SAP_session connect	Enabled	CONNECT	UNSUCCESSFUL	ALERT		
_SAP_recover database	Enabled	BACKUP DATA, BACKUP CATALOG DELETE, R...	ALL	INFO		
_SAPS4_01 Schema Access...	Enabled	SELECT, INSERT, EXECUTE, UPDATE, DELETE	SUCCESSFUL	CRITICAL	All except:SAPEC1	SAPEC1

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Note 3016478 - HANA Audit Policies for S/4HANA

Mandatory HANA Audit Policies (File: `1_hana_audit_policy_mandatory.sql`)
A first set of policies defined as mandatory ensure traceability of security relevant changes. These have the prefix “_SAP_".

They are identical to the audit policies provided by "SAP HANA Cockpit Audit Policy Wizard" (starting with SAP HANA Cockpit 2.0 SP13).

No system specific content. No system specific adjustment necessary.

These policies are useful and recommended in any case. For new installations or for conversion (but not for updates) you get these Security-by-Default settings if no audit policy is defined yet.

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Note 3016478 - HANA Audit Policies for S/4HANA

S/4HANA Schema Access Log HANA Audit Policies
(File: `2_s4hana_hana_audit_policy_recommended.sql`)
The second set of policies define "recommended" policies for S/4 systems. These have the prefix "_SAPS4_".

These policies vary with the usage of the SAP HANA DB and cannot be defined identical for all systems (i.e. replace placeholder <SAPABAP1> with list of real names).

Example: "_SAPS4_01 Schema Access Log" (This is an important policy!):

```
CREATE AUDIT POLICY "_SAPS4_01 Schema Access Log"
  ...
  ON <SAPABAP1>.*
  EXCEPT FOR <SAPABAP1>
```

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Note 3016478 - HANA Audit Policies for S/4HANA

S/4HANA Optional HANA Audit Policies (File: `3_s4hana_hana_audit_policy_optional.sql`)
The third set called “optional” suggests policy definition for extended system changelog and monitoring. These have the prefix “_SAPS4_Opt_".

Example: "_SAPS4_Opt_01 Repository"
In a development system you get many results so this policy might not be useful (and you find versions of repository objects elsewhere)

Example: "_SAPS4_Opt_02 Data Definition"
An audit for DDL statements is only workload relevant.
In case HANA is not exclusively used for S/4HANA (respective for ABAP-on-HANA in general) the policy will cause a huge amount of not relevant entries and a negative impact on performance is expected.

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Note 3053829 - SOS: No or wrong check results about profile parameters for combined ABAP/HANADB systems

Solved

The guided self-service SOS did not used current values for profile parameters in case of a combined ABAP-on-HANA installation.

As a result, several checks showed

- **wrong (false-negative) results in the individual chapters,**
- **wrong (false-positive) ratings in the rating overview table, and**
- **the checks about the password policy even vanish from the report.**

Solution: Implement note 3053829
or use the automated content update

5.1.1.1 Secure System Internal Communication (BA091)

Parameter: system/secure_communication

Rating	Instance	Current Value	Recommended Value
!	All instances		ON

Profile parameter system/secure_communication is not set to ON. System-internal communication is not protected and may allow intruders to access your system.

5.1.1.3.1 Separation of Internal and External Message Server Communication (BA084)

Parameters: rdisp/msserv rdisp/msserv_internal

Rating	Instance	Error Condition	Value of rdisp/msserv	Value of rdisp/msserv_internal
!	All instances	rdisp/msserv_internal is not defined		

Profile parameter rdisp/msserv_internal is not defined or points to the same port as profile parameter rdisp/msserv_internal.

Main Chapter	Chapter	Check	Rating
Special Focus Checks	Special Focus Checks	Additional Super User Accounts Found (0022)	
Authentication	General Authentication	Users Who Have Not Logged On for an Extended Period of Time (0010)	!
		Security Critical Events for End Users Are Not Logged in the Security Audit Log (0136)	!
		Interval After Which Inactive Users Are Logged Off Is Too Long (0137)	✓
		Multiple Logons Using the Same User ID Is Not Prevented (0138)	✓

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Note 3053829 - SOS: No or wrong check results about profile parameters for combined ABAP/HANADB systems

Solved

Samples about affected checks:

- Password Logon is at Least Partly Allowed (0139)
- Password Policy (+ sub checks 0009, 0127, ...)
  (These chapters are suppressed as well if no password logon is allowed according to check 0139)
- Multiple Logons Using the Same User ID Is Not Prevented (0138)
- SSO Ticket Can Be Sent via an Unsecured Connection (0608)
- Secure System Internal Communication (BA091)
- RFC Gateway Security Properties (BA079)
- Enabling an Initial Security Environment (BA080)
- RFC Gateway Access Control Lists (BA081)
- Separation of Internal and External Message Server Communication (BA084)
- Message Server Access Control List (BA086)
- Sending Trace Data to Remote Client (0169)
- Security Audit Log is not active (0170)
  (This check still shows another issue if you are using the new ‘Kernel Parameters’ as of SAP_BASIS 7.50 instead of the profile parameters to configure the Security Audit Log)

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June 2021

Topics June 2021

Notes 3020104 3020209 3021197 - Memory Corruption vulnerability in SAP NetWeaver ABAP

Note 3007182 - Improper Authentication in SAP NetWeaver ABAP Server and ABAP Platform

Note 3026990 - RFC Logon - New Internal Logon Ticket - Increased Compatibility Level

How to patch the Kernel

Kernel version vs. CommonCryptoLib version

CCDB-Read-API

Configuration Reporting for Kernel version and CryptoLib version

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Notes 3020104 3020209 3021197 - Memory Corruption vulnerability in SAP NetWeaver ABAP

All these notes solve similar vulnerabilities in different components of the Kernel:

Component	Note 3020104 Enqueue Server	Note 3020209 + RFC Gateway	Note 3031464 RFC Gateway	Note 3021197 disp+work
SAP KERNEL 7.21				
SAP KERNEL 7.22	SP1022	SP1022		SP1022
SAP KERNEL 7.49	SP945	SP946		SP944
SAP KERNEL 7.53	SP810	SP810		SP810
SAP KERNEL 7.73	SP333	SP334		SP333
SAP KERNEL 7.77		SP328	SP328	SP326
SAP KERNEL 7.81		SP111		SP110
SAP KERNEL 7.82		SP024		SP023
SAP KERNEL 7.83		SP015		SP013
SAP KERNEL 7.84				SP000
SAP KERNEL 8.04	SP196	SP196		SP196

Update → complete kernel

↓

Minimal patch level

(but check next slide, too)

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Note 3007182 - Improper Authentication in SAP NetWeaver ABAP Server and ABAP Platform

Another HotNews targets SAP_BASIS and Kernel:

Component	Note 3020104 Enqueue Server	Note 3020209 + RFC Gateway	Note 3031464 RFC Gateway	Note 3021197 disp+work	Note 3007182 ABAP & disp+work
SAP KERNEL 7.21					SP1410
SAP KERNEL 7.22	SP1022	SP1022		SP1022	SP1022
SAP KERNEL 7.49	SP945	SP946		SP944	SP948
SAP KERNEL 7.53	SP810	SP810		SP810	SP810
SAP KERNEL 7.73	SP333	SP334		SP333	SP335
SAP KERNEL 7.77		SP328	SP328	SP326	SP330
SAP KERNEL 7.81		SP111		SP110	SP113
SAP KERNEL 7.82		SP024		SP023	
SAP KERNEL 7.83		SP015		SP013	
SAP KERNEL 7.84				SP000	SP001
SAP KERNEL 8.04	SP196	SP196		SP196	SP197

↓

Minimal patch level

(but check next slide, too)

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Note 3007182 - Improper Authentication in SAP NetWeaver ABAP Server and ABAP Platform

Another HotNews targets SAP_BASIS and Kernel:

Component	Note 3020104 Enqueue Server	Note 3020209 + RFC Gateway	Note 3031464 RFC Gateway	Note 3021197 disp+work	Note 3007182 ABAP & disp+work	+ Side effect notes + Note 3030604
SAP KERNEL 7.21					SP1410	SP1411 (*)
SAP KERNEL 7.22	SP1022	SP1022		SP1022	SP1022	SP1024
SAP KERNEL 7.49	SP945	SP946		SP944	SP948	SP1000 (stack)
SAP KERNEL 7.53	SP810	SP810		SP810	SP810	SP816 (SP801**)
SAP KERNEL 7.73	SP333	SP334		SP333	SP335	SP410 (*)
SAP KERNEL 7.77		SP328	SP328	SP326	SP330	SP336
SAP KERNEL 7.81		SP111		SP110	SP113	SP119
SAP KERNEL 7.82		SP024		SP023		SP025
SAP KERNEL 7.83		SP015		SP013		SP016
SAP KERNEL 7.84				SP000	SP001	SP009
SAP KERNEL 8.04	SP196	SP196		SP196	SP197	SP202

(*) Instead of patching Kernel 7.21 or 7.73 consider upgrading to newer Kernel release.

(**) SAP Kernel News 14.06.2021: SP Stack Kernel 753 PL#801 to be delivered in a few weeks (01.07.2021). It will contain the priority very high SAP Security Note 3007182

↓ **Minimal patch level to solve all issues**

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Note 3007182 - Improper Authentication in SAP NetWeaver ABAP Server and ABAP Platform

New dynamic profile parameters as described in related note 3026990:

`rfc/intticket/mode`	**Mode of the internal ticket for RFC respective http**
`http/intticket/mode`	**0** Old ticket (fallback, in case of troubleshooting)
	1 New ticket without IP address comparison (used if not all application servers are in the same address space)
	2 New ticket (default)
`rfc/intticket/validity`	**Validity of the internal ticket in seconds**
`http/intticket/validity`	**0** No restrictions (as a temporary fallback until the clocks are synchronized)
	300 (default)
	The value must be greater than the time difference between the application servers and with the time difference with the database server and the maximum time for the first RFC call.

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Note 3026990 - RFC Logon - New Internal Logon Ticket - Increased Compatibility Level

Side-effect solving notes:

Note 3039802 - WebSocket RFC with Alias User in Same System
Relevant as of kernel 7.77

Note 3045515 - RFC_WITHIN_SAME_SYSTEM - Wrong Result
Relevant for kernel 8.04 on ByD

Note 3046390 - Incorrect SAP compatibility level for SAP executables on Windows prevents rolling kernel switch (RKS)
Relevant for kernel 7.49 and higher

Note 3050126 - Internal RFC fails due to time difference between database and application server
Relevant for all kernel releases, no support for kernel 7.73 anymore, therefore go for a release update to kernel 7.77

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How to patch the Kernel

- Apply the latest SP Stack Kernel if it already contains the correction. For the list of current SP Stack Kernels, see Note 2083594 (Kernel Versions and Kernel Patch Levels).
- Apply the hotfix only if you are experiencing a serious error that is not yet corrected by the latest SP Stack Kernel. Yes, this is the case in case of serious security vulnerabilities!
- Review the regression note for the required patch level before installing the kernel patch. For details, see Note 1802333 (Finding information about regressions in the Kernel using search term KRNL<release>PL).
- For instructions on how to download and install kernel patches, see Note 19466 (Downloading SAP kernel patches).
- The paper Update Strategy for the Kernel of the Application Server ABAP in On Premise Landscapes provides detailed information on the SAP recommendations.
- Rolling Kernel Switch (RKS)
  https://help.sap.com/viewer/1ba3197c1aa7489882770103e3a610dc/7.40.18/en-US
  "The rolling kernel switch (RKS) is an automated procedure that enables the kernel in an ABAP system to be exchanged without any system downtime. RKS can also be used to make parameter changes while the system is running. Usually, RKS only causes minimal restrictions for users of the system."
  The RKS is available as of Kernel release 7.41 and SAP_BASIS 7.40 SP 5
  Limitation see notes 953653 and 2576697 → Restart is required

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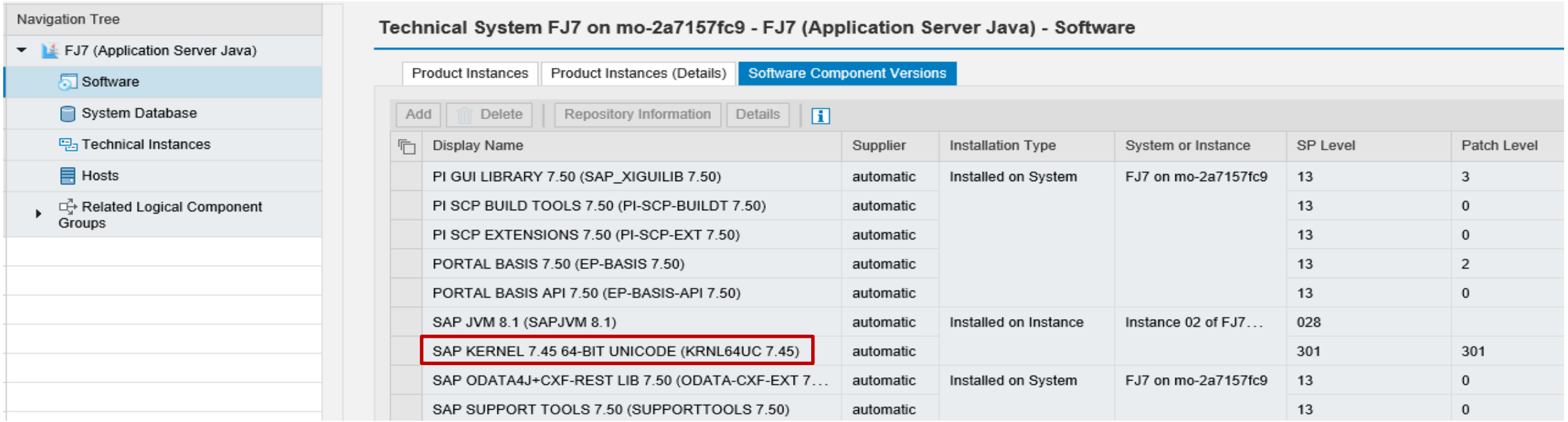
System Recommendations shows Kernel notes for Java systems

Parts of the Kernel are part of an Java Application Server too, e.g. the message server or the RFC gateway but not disp+work. Therefore you find the Kernel in the LMDB (and PPMS) for Java systems, too:



Display Name	Supplier	Installation Type	System or Instance	SP Level	Patch Level
PI GUI LIBRARY 7.50 (SAP_XIGUILIB 7.50)	automatic	Installed on System	FJ7 on mo-2a7157fc9	13	3
PI SCP BUILD TOOLS 7.50 (PI-SCP-BUILDT 7.50)	automatic			13	0
PI SCP EXTENSIONS 7.50 (PI-SCP-EXT 7.50)	automatic			13	0
PORTAL BASIS 7.50 (EP-BASIS 7.50)	automatic			13	2
PORTAL BASIS API 7.50 (EP-BASIS-API 7.50)	automatic			13	0
SAP JVM 8.1 (SAPJVM 8.1)	automatic	Installed on Instance	Instance 02 of FJ7...	028	
SAP KERNEL 7.45 64-BIT UNICODE (KRNL64UC 7.45)	automatic			301	301
SAP ODATA4J+CXF-REST LIB 7.50 (ODATA-CXF-EXT 7...	automatic	Installed on System	FJ7 on mo-2a7157fc9	13	0
SAP SUPPORT TOOLS 7.50 (SUPPORTTOOLS 7.50)	automatic			13	0

In such a case you will see these notes in application System Recommendations for Java systems, too.

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Kernel version vs. CommonCryptoLib version

The CommonCryptoLib is installed everywhere. It is part of the Kernel bundle as well, however, it is somehow loosely coupled with the Kernel and it might have happened that you have missed updating the CommonCryptoLib.

Whenever you plan Kernel updates for you complete system landscape you inspect the installed version of the Kernel beforehand.

You should have a look to the installed version of the CommonCryptoLib, too.

Use application Change Reporting respective transaction `CCDB` in the SAP Solution Manager to inspect the Configuration Stores `SAP_KERNEL` und `CRYPTOLIB`.

This is the view from report
ZSHOW_KERNEL_STORES

You can find this report on the wiki
SAP CoE Security Services – Tools

> You need an authorization for `AI_CCDB_SC` with `CONT_AUTH=SECURITY` and `ACTVT=03` to access configuration store `CRYPTOLIB`.

See next page for a view based on standard BW reporting using application Configuration Validation respective Change Reporting

Short SID	Full ...	ABAP release	Kernel release	patch	Comp.date	CCL Version	CCL Date
FA7	ldcifa...	SAP BASIS 7.40	749_REL	936	07.12.2020	8.5.32	24.04.2020
FQ7	ldcif...	SAP BASIS 7.40	749_REL	910	06.06.2020	8.5.32	24.04.2020
FT7	ldcift...	SAP BASIS 7.40	749_REL	936	07.12.2020	8.5.32	24.04.2020
HHA	ldcih...	SAP BASIS 7.40	749_REL	312	12.08.2017	8.5.14	27.07.2017
IWH	spwd...	SAP BASIS 7.50	753_REL	601	17.03.2020	8.5.30	30.10.2019
OQL	atgv...	SAP BASIS 7.40	753_REL	422	03.06.2019	8.5.28	08.05.2019
Q5K	ldai1...	SAP BASIS 7.02	722_EXT_REL	1000	07.06.2020	8.5.33	26.05.2020
	ldciq...	SAP BASIS 7.02	722_EXT_REL	1000	07.06.2020	8.5.33	26.05.2020
Q8J	ldai1...	SAP BASIS 7.50	753_REL	718	07.11.2020	8.5.35	08.09.2020
	ldai2...	SAP BASIS 7.50	753_REL	718	07.11.2020	8.5.35	08.09.2020
	ldai3...	SAP BASIS 7.50	753_REL	718	07.11.2020	8.5.35	08.09.2020
	ldciq...	SAP BASIS 7.50	753_REL	718	07.11.2020	8.5.35	08.09.2020
QO5	ldciq...	SAP BASIS 7.50	745_REL	500	12.05.2017	8.5.12	12.04.2017
QO6	ldciq...	SAP BASIS 7.51	749_REL	800	24.10.2019	8.5.29	22.08.2019

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CCDB-Read-API

Report `ZSHOW_KERNEL_STORES` uses the API functions of function group `DIAGST_CCDB_READ` to access configuration data from the SAP Solution Manager

You can call the API locally in the SolMan or remotely from an external system.
You can test the functions in transaction `SE37` by activating `DISPLAY=X`.
The RFC functions return either ABAP table structures or XML documents.

Get technical systems having stores

DIAGST_GET_TECH_SYSTEMS	DIAGST_GET_TECH_SYSTEMS_RFC

Get store directory

DIAGST_GET_STORES	DIAGST_GET_STORES_RFC	stores for systems
DIAGST_GET_STORES_HOSTS	DIAGST_GET_STORES_HOSTS_RFC	stores for hosts

Get store content for table stores, ini stores and property stores (`STORE_TYPE = TABLE, INI , PROPERTY`)

DIAGST_TABLE_SNAPSHOT	DIAGST_TABLE_SNAPSHOT_RFC	get snapshot
DIAGST_TABLE_TIMERANGE	DIAGST_TABLE_TIMERANGE_RFC	get history generic search
DIAGST_TABLE_PARAMETERS	DIAGST_TABLE_PARAMETERS_RFC	get history specific search

Get store content for text stores (`STORE_TYPE = TEXT`)

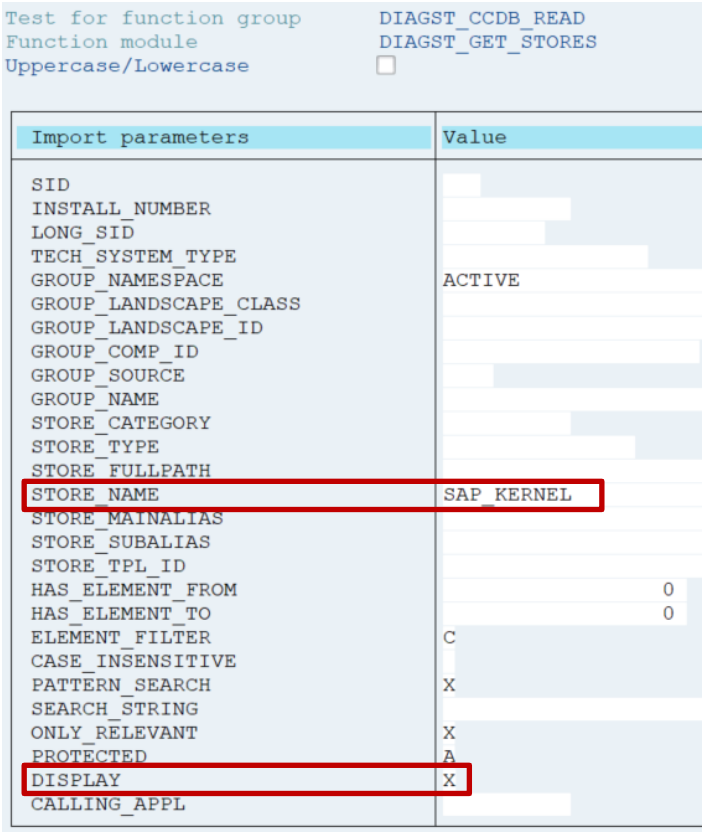
DIAGST_TEXT_SNAPSHOT	DIAGST_TEXT_SNAPSHOT_RFC	get snapshot
DIAGST_TEXT_TIMERANGE	DIAGST_TEXT_TIMERANGE_RFC	get history

Get store content for xml stores (`STORE_TYPE = XML`)

DIAGST_XML_SNAPSHOT	DIAGST_XML_SNAPSHOT_RFC	get snapshot
DIAGST_XML_TIMERANGE	DIAGST_XML_TIMERANGE_RFC	get history

Get store content for event stores (`STORE_TYPE = EVENT`)

DIAGST_EVENT_PARAMETERS	DIAGST_EVENT_PARAMETERS_RFC	get snapshot
DIAGST_EVENT_TIMERANGE	DIAGST_EVENT_TIMERANGE_RFC	get history



Test for function group DIAGST_CCDB_READ
Function module DIAGST_GET_STORES
Uppercase/Lowercase ☐

Import parameters	Value
SID	
INSTALL_NUMBER	
LONG_SID	
TECH_SYSTEM_TYPE	
GROUP_NAMESPACE	ACTIVE
GROUP_LANDSCAPE_CLASS	
GROUP_LANDSCAPE_ID	
GROUP_COMP_ID	
GROUP_SOURCE	
GROUP_NAME	
STORE_CATEGORY	
STORE_TYPE	
STORE_FULLPATH	
STORE_NAME	SAP_KERNEL
STORE_MAINALIAS	
STORE_SUBALIAS	
STORE_TPL_ID	
HAS_ELEMENT_FROM	0
HAS_ELEMENT_TO	0
ELEMENT_FILTER	C
CASE_INSENSITIVE	
PATTERN_SEARCH	X
SEARCH_STRING	
ONLY_RELEVANT	X
PROTECTED	A
DISPLAY	X
CALLING_APPL	

The API documentation is available on request.

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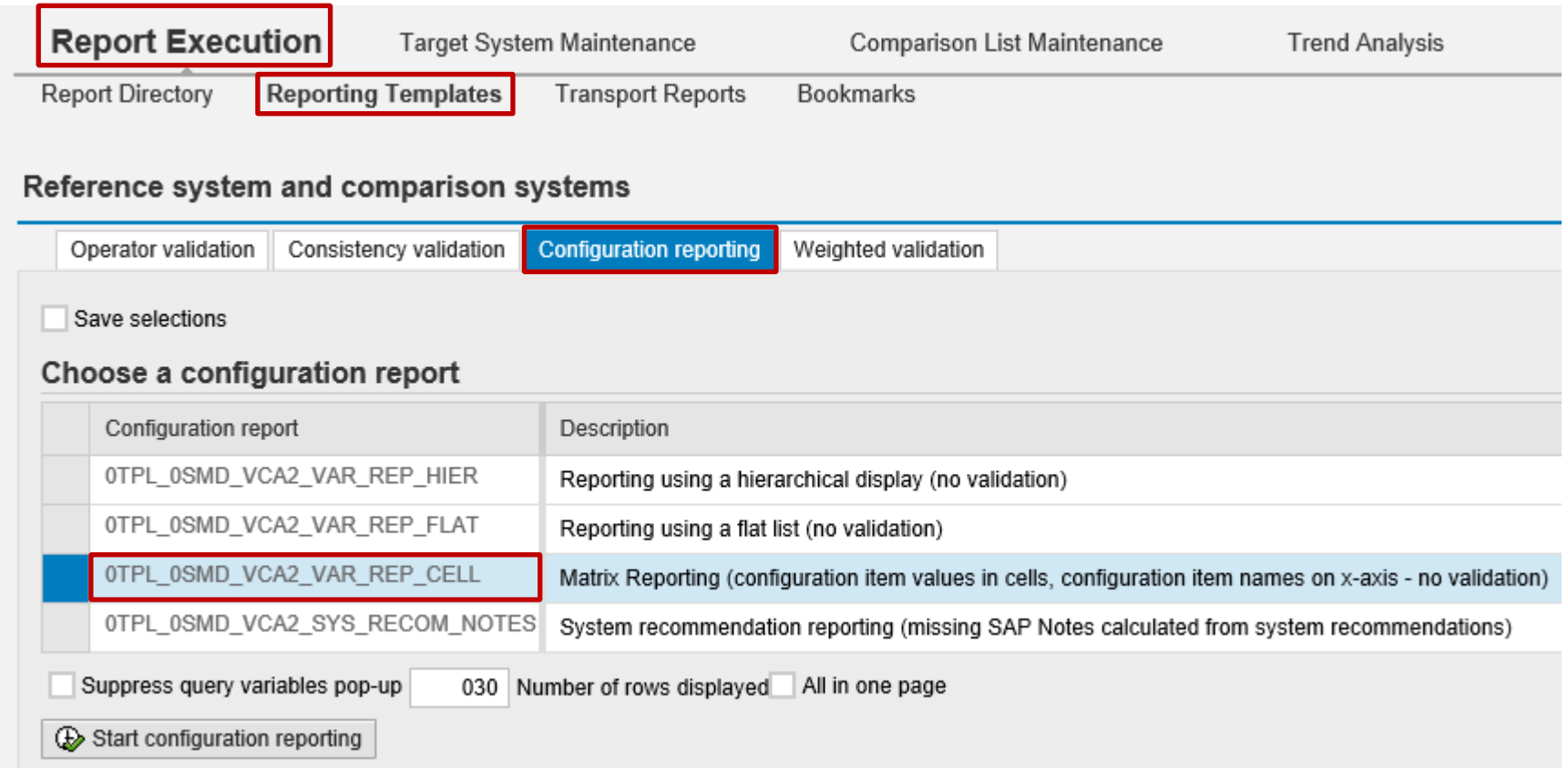
Configuration Reporting for Kernel version and CryptoLib version

Use Configuration Reporting `0TPL_0SMD_VCA2_VAR_REP_CELL` to show configuration items in cells and configuration item names on the x-axis.



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Configuration Reporting for Kernel version and CryptoLib version

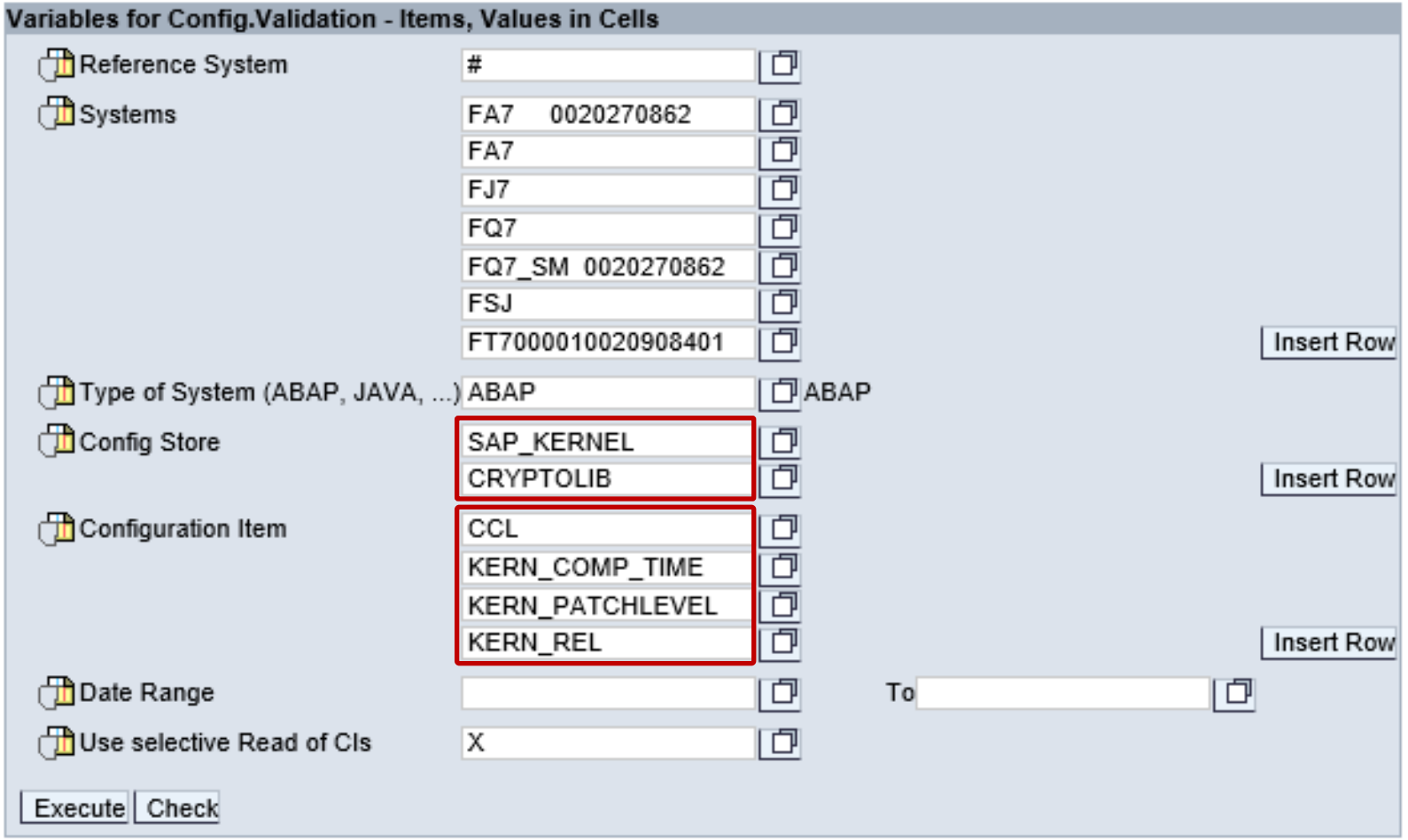
Choose a comparison list containing the systems and start reporting.

Enter the required configuration stores on the variables screen:

SAP_KERNEL
CRYPTOLIB requires authorization for `AI_CCDB_SC`

Enter the required configuration items on the variables screen:

CCL
KERN_COMP_TIME
KERN_PATCHLEVEL
KERN_REL



(You could try to add `ABAP_COMP_RELEASE` as well but this produces a poor result.)

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Configuration Reporting for Kernel version and CryptoLib version

Configuration Items

System	ConfigStore	Host	Instance	Path	Configuration Item Checked [UTC]	CCL Value	KERN_COMP_TIME Value	KERN_PATCHLEVEL Value	KERN_REL Value
E73 0020187823	CRYPTOLIB	ld8201	ld8201_E73_03	#	20210614202421	8.5.33 May 26 2020			
	SAP_KERNEL	ld8201	ld8201_E73_03	#	20210614202421		Jun 7 2020 15:44:10	1000	722_EXT_REL
FA7 0020270862	CRYPTOLIB	ldcifa7	ldcifa7_FA7_00	#	20210614203129	8.5.32 Apr 24 2020			
	SAP_KERNEL	ldcifa7	ldcifa7_FA7_00	#	20210614203130		Dec 7 2020 12:39:35	936	749_REL
FBT 0020270862	CRYPTOLIB	ldai1fbt	ldai1fbt_FBT_00	#	20210614203138	8.5.36 Nov 5 2020			
		ldai2fbt	ldai2fbt_FBT_00	#	20210614203145	8.5.36 Nov 5 2020			
		ldcifbt	ldcifbt_FBT_00	#	20210614203149	8.5.36 Nov 5 2020			
	SAP_KERNEL	ldai1fbt	ldai1fbt_FBT_00	#	20210614203140		Mar 1		
		ldai2fbt	ldai2fbt_FBT_00	#	20210614203148		Mar 1		
		ldcifbt	ldcifbt_FBT_00	#	20210614203150		Mar 1		
FQ7 0020270862	CRYPTOLIB	ldcifq7	ldcifq7_FQ7_00	#	20210614203133	8.5.32 Apr 24 2020			
	SAP_KERNEL	ldcifq7	ldcifq7_FQ7_00	#	20210614203134		Jun		

Navigation Block:

Rows

- Checked [UTC]
- ConfigStore
- Host
- Instance
- Path
- System

Adjust the view to get a better result

Remove rows:

Checked [UTC]
ConfigStore
Host or Instance
Path

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Configuration Reporting for Kernel version and CryptoLib version

Configuration Items

		Configuration Item	CCL	KERN_COMP_TIME	KERN_PATCHLEVEL	KERN_REL
System	Host	Instance	Value	Value	Value	Value
E73 0020187823	ld8201	ld8201_E73_03	8.5.33 May 26 2020	Jun 7 2020 15:44:10	1000	722_EXT_REL
FA7 0020270862	ldcifa7	ldcifa7_FA7_00	8.5.32 Apr 24 2020	Dec 7 2020 12:39:35	936	749_REL
FBT 0020270862	ldai1fbt	ldai1fbt_FBT_00	8.5.36 Nov 5 2020	Mar 12 2021 22:58:52	800	753_REL
	ldai2fbt	ldai2fbt_FBT_00	8.5.36 Nov 5 2020	Mar 12 2021 22:58:52	800	753_REL
	ldcifbt	ldcifbt_FBT_00	8.5.36 Nov 5 2020	Mar 12 2021 22:58:52	800	753_REL
FQ7 0020270862	ldcifq7	ldcifq7_FQ7_00	8.5.32 Apr 24 2020	Jun 6 2020 19:33:49	910	749_REL
FT7 0020908401	ldcift7	ldcift7_FT7_00	8.5.32 Apr 24 2020	Dec 7 2020 12:39:35	936	749_REL

Store the result as a bookmark for later use

Limitations:

- **Filter values, which you choose later, are not part of the bookmark**
- **No export to Excel possible**

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May 2021

Topics May 2021

Use of Configuration Validation for stand-alone Web Dispatcher?

Note 2114798 - Unauthorized use of application functions in SAP GUI for HTML

Note 2745860 - Information Disclosure in Enterprise Services Repository of SAP Process Integration

Notes 3049661, 3049755 - Vulnerabilities in SAP Business One, version for SAP HANA (Business-One-Hana-Chef-Cookbook)

Note 2785547 - Introduction of the ICM LDAP Plug-In as Successor of the LDAP Connector

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Use of Configuration Validation for stand-alone Web Dispatcher?

Question/request from ASUG:

- We run a Web Dispatcher on the ASCS instance and want to validate the corresponding profile parameters in the ASCS profile files.
- Problem: It is not possible to validate the instance profile parameter values (i.e. using target systems `2ADISCL` and `2AAUDIT`).

Yes, that's true, stand-alone Web Dispatchers do not feed data into store `ABAP_INSTANCE_PAHI`

An incomplete workaround could be, to get and inspect the profile parameter text files in stores `DEFAULT.PFL` and `<SID>_<Instance>_<hostname>` of store group `WEBDISP-PROFILE`

Landscape	Group Source	Store Name	Group Name	Store Type
Web Dispatcher Installed Technical System (WEB_FA7~WEBDISP~ldcifa7)	File System	DEFAULT.PFL	WEBDISP-PROFILE	Text Store
Web Dispatcher Installed Technical System (WEB_FA7~WEBDISP~ldcifa7)	File System	WEB_W90_ldcifa7	WEBDISP-PROFILE	Text Store

Blog: How to monitor standalone (non-ABAP) Web Dispatcher Security in Solution Manager
https://blogs.sap.com/2021/02/10/how-to-monitor-standalone-non-abap-web-dispatcher-security-in-solution-manager/

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Use of Configuration Validation for stand-alone Web Dispatcher?

Caveats

- The configuration stores of the instance profiles have individual names. You cannot automatically address all of them within one target system
- The configuration stores have type “text”. Use special line content operators as described in the blog.

How-to get the configuration stores of store group `WEBDISP-PROFILE ?`

- Configuring Web Dispatcher for Root Cause Analysis in Solution Manager
  http://wiki.sdn.sap.com/wiki/x/4I-uDQ#MaintenanceofProductintheSystemLandscape-WebDispatcher
  and
  https://wiki.scn.sap.com/wiki/display/SMSETUP/Configuring+Web+Dispatcher+for+Root+Cause+Analysis+in+Solution+Manager

More information about profile parameters

- Blog: Checking profile parameter values in SAP NetWeaver and SAP HANA
  https://blogs.sap.com/2021/05/20/checking-profile-parameter-values-in-sap-netweaver-and-sap-hana/

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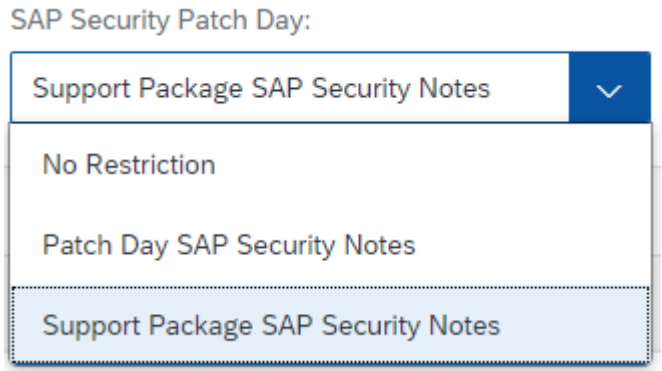
Note 2114798 - Unauthorized use of application functions in SAP GUI for HTML

Old “Support Package SAP Security note” from 2015



Correction Instruction:

```
*$ Valid for       :                                          $*
*$ Software Component   SAP_BASIS  SAP Basis component       $*
*$  Release 700          SAPKB70026 - SAPKB70032             $*
*$  Release 710          SAPKB71013 - SAPKB71019             $*
*$  Release 711          SAPKB71109 - SAPKB71114             $*
*$  Release 701          SAPKB70113 - SAPKB70117             $*
*$  Release 702          SAPKB70210 - SAPKB70217             $*
*$  Release 730          SAPKB73005 - SAPKB73013             $*
*$  Release 720          SAPKB72006 - SAPKB72007             $*
*$  Release 731          SAPKB73104 - SAPKB73116             $*
*$  Release 740          SAPKB74003 - SAPKB74011             $*
```

SAPKB74012

SAP_BASIS 740: SP 0012

Component Version: SAP_BASIS 740 Registered On: 14.08.2015

Package Level: 0012 EPS File Name: CSN0120061532009599 5PAT

→ Should already be solved via Support Package

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Note 2745860 - Information Disclosure in Enterprise Services Repository of SAP Process Integration

This note enables you to secure RFC connections from SAP PI to a backend system via SNC.

Implement this note i.e. if you want to encrypt all internal server-to-server connections, too.

The new option is available via Support Package (patch 0) only:

- **7.31 SP 28 16.12.2020**
- **7.40 SP 23 16.12.2020**
- **7.50 SP 20 02.03.2021**

Documentation:
Importing IDocs and RFCs
https://help.sap.com/viewer/0b9668e854374d8fa3fc8ec327ff3693/7.5.20/en-US/2ba48f3c685bc358e10000000a11405a.html

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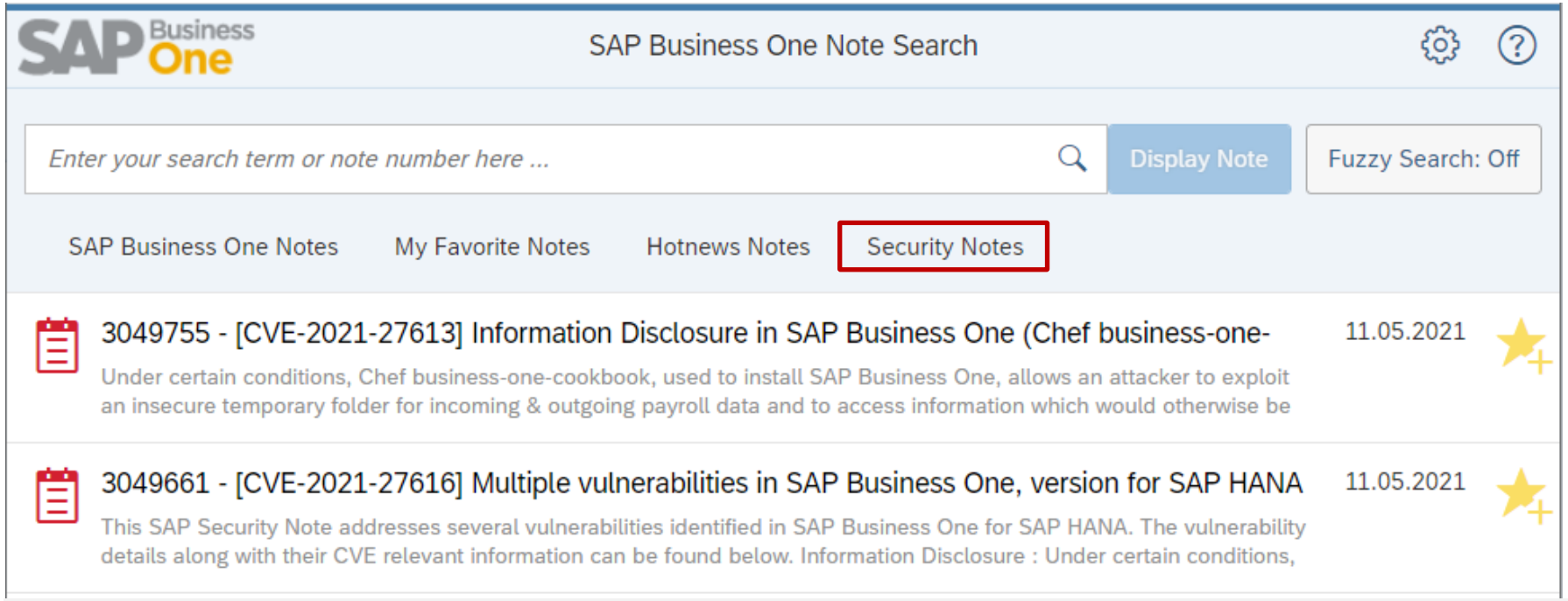
Notes 3049661, 3049755 - Vulnerabilities in SAP Business One, version for SAP HANA (Business-One-Hana-Chef-Cookbook)

SAP Business One Product Support
https://partneredge.sap.com/en/products/business-one/support.html
https://community.sap.com/topics/business-one

Note Search
https://apps.support.sap.com/sap/bc/ui5_ui5/svt/sbos_notesearch/index.html



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Notes 3049661, 3049755 - Vulnerabilities in SAP Business One, version for SAP HANA (Business-One-Hana-Chef-Cookbook)

Solution: Update the cookbook to latest version 0.1.20 from 06.05.2021 and then reinstall the system using this updated cookbook to get tightened file permissions

Install SAP Business One version of HANA automatically using Chef
https://github.com/SAP-archive/business-one-hana-chef-cookbook

Commits on May 6, 2021

Tighten permissions
SAPAurelien committed 12 days ago

Commits on Apr 21, 2021

Change pesmissions to files/folders in a more secure manner
SAPAurelien committed 27 days ago

Version bump
SAPAurelien committed 27 days ago

Change the temporary backup path to a more secure location
SAPAurelien committed 27 days ago

12 recipes/server.rb

```
@@ -126,7 +126,7 @@
126 126   directory "#{v_installerlocalfolder}" do
127 127     owner "root"
128 128     group "root"
129       -   mode 0777
    129   +   mode 0744
130 130     recursive true
131 131     not_if { ::File.exist?("#{v_installerlocalfolder}") }
132 132   end
```

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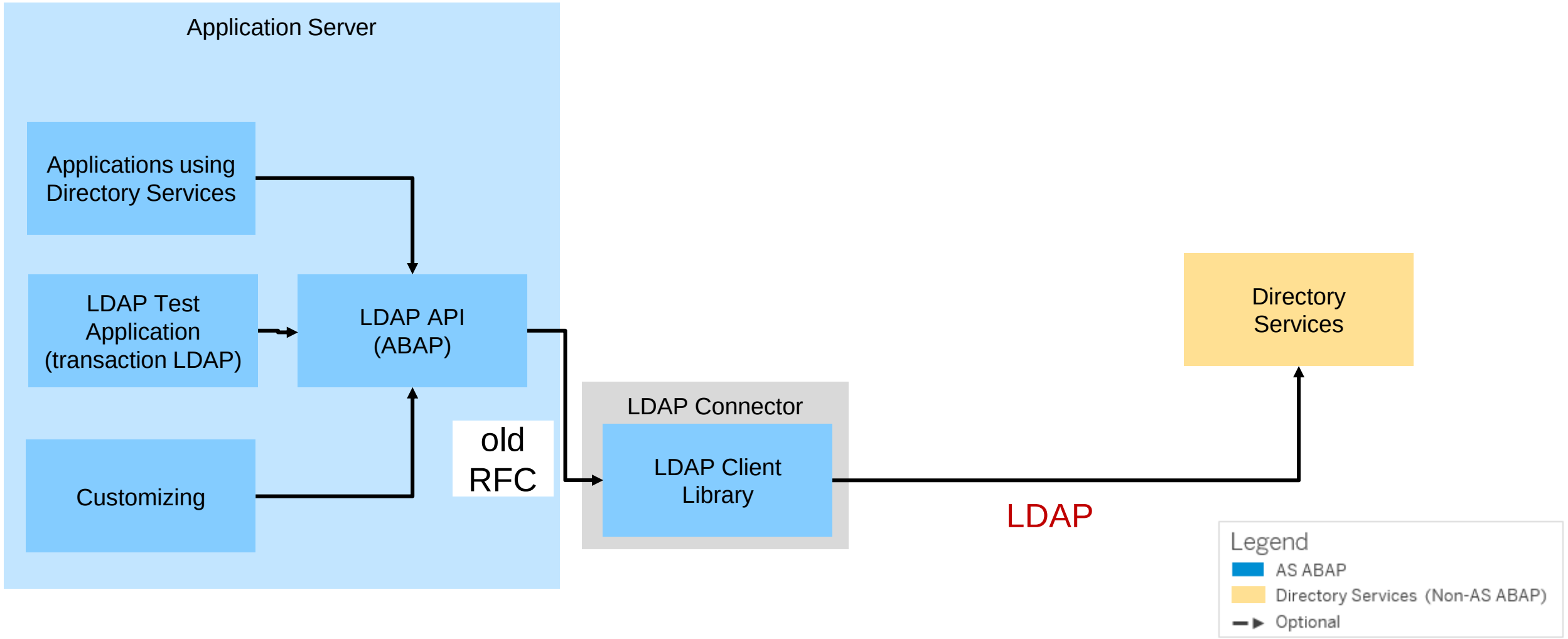
Secure LDAP connection via ICM

Note 2785547 - Introduction of the ICM LDAP Plug-In



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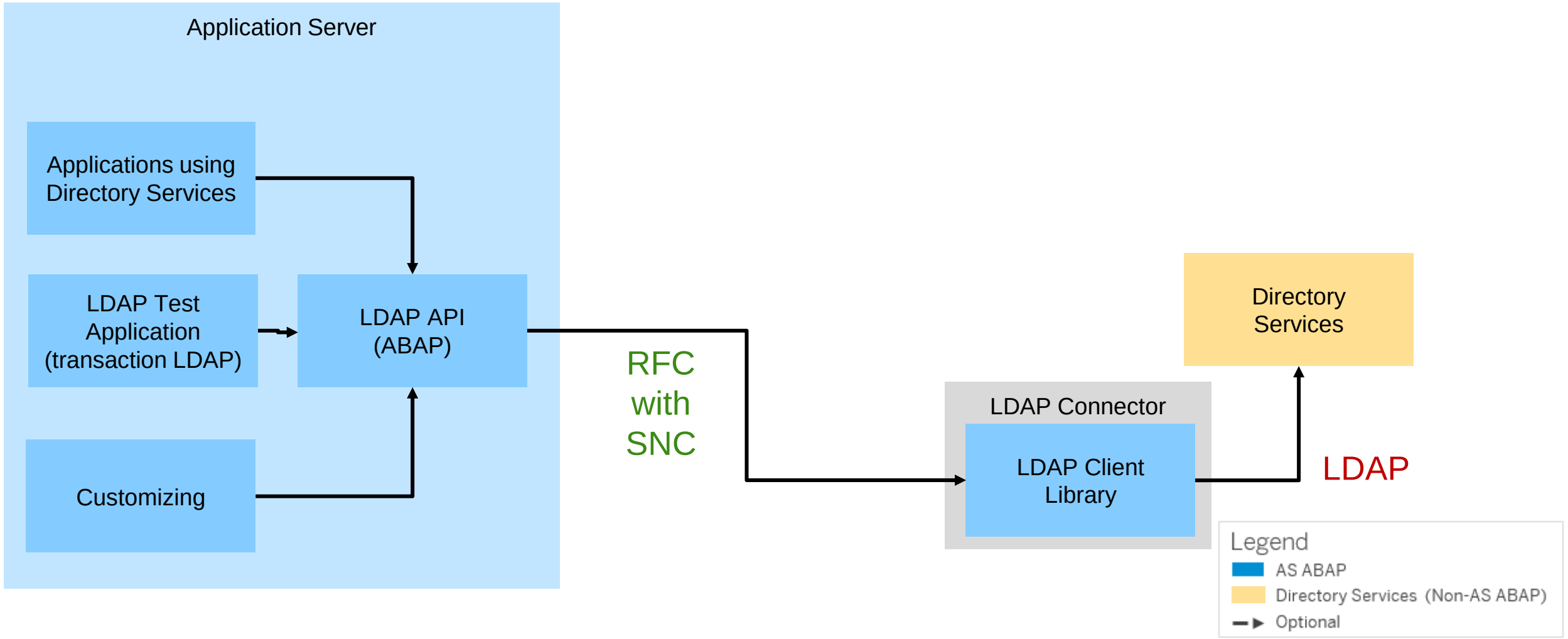
Secure LDAP connection via ICM

Note 2785547 - Introduction of the ICM LDAP Plug-In



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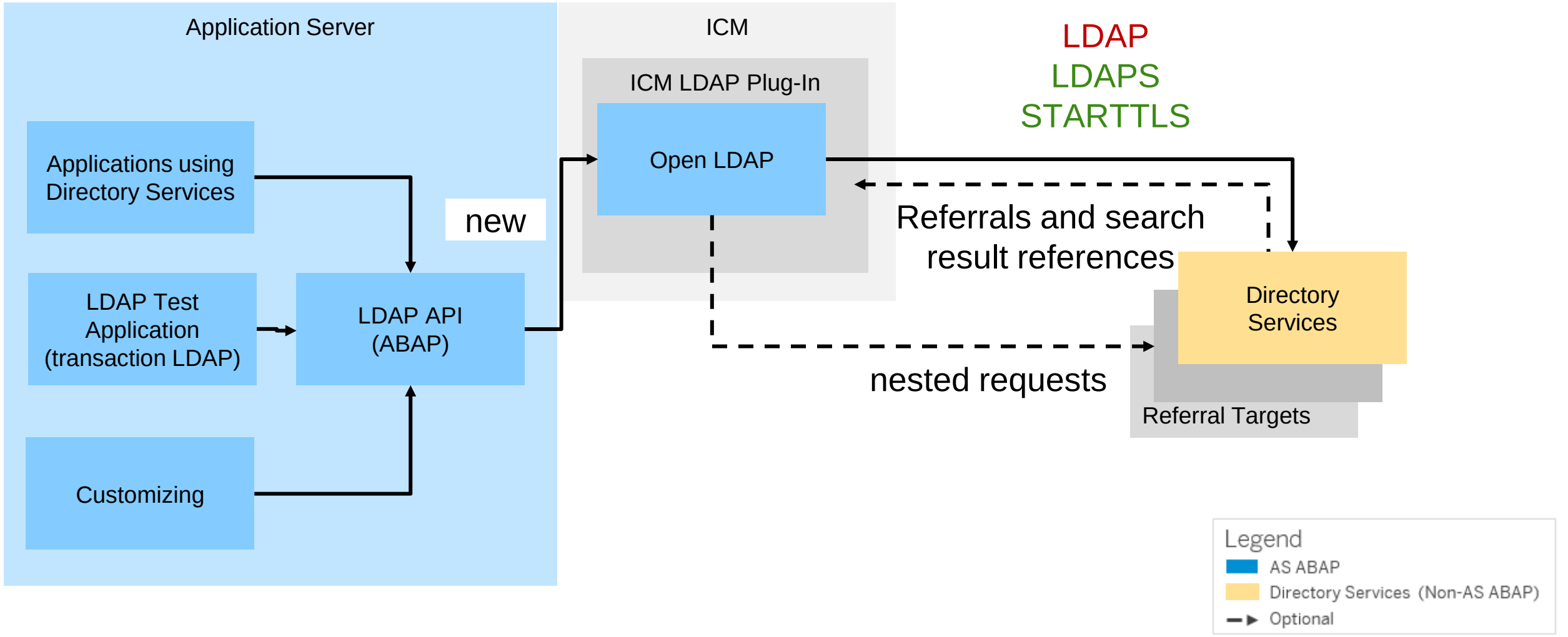
Secure LDAP connection via ICM

Note 2785547 - Introduction of the ICM LDAP Plug-In



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Secure LDAP connection via ICM

Note 2785547 - Introduction of the ICM LDAP Plug-In

You can replace old LDAP connector with “LDAP connection via ICM” as of SAP_BASIS 7.50 SP 16, 7.51 SP 9, 7.52 SP 5, 7.53 SP 3 with Kernel 7.53 patch 510 or higher

No other changes in configuration needed, however, just using the new connection via ICM does not give you an encrypted communication channel: you have to secure the connection using STARTTLS or LDAPS, too

Note 2844331 - Product Assistance on ICM LDAP Plug-In for ABAP Platform 7.53 SP03

Online Help – Directory Services
https://help.sap.com/viewer/c6e6d078ab99452db94ed7b3b7bbcccf/201909.000/en-US/4874337175bb501ae10000000a42189b.html

Note 2820255 - ICM LDAP RZ11 parameter documentation

Note 2801455 - ICM LDAP: Fix STARTTLS memory leak (only relevant for Kernel 7.77)

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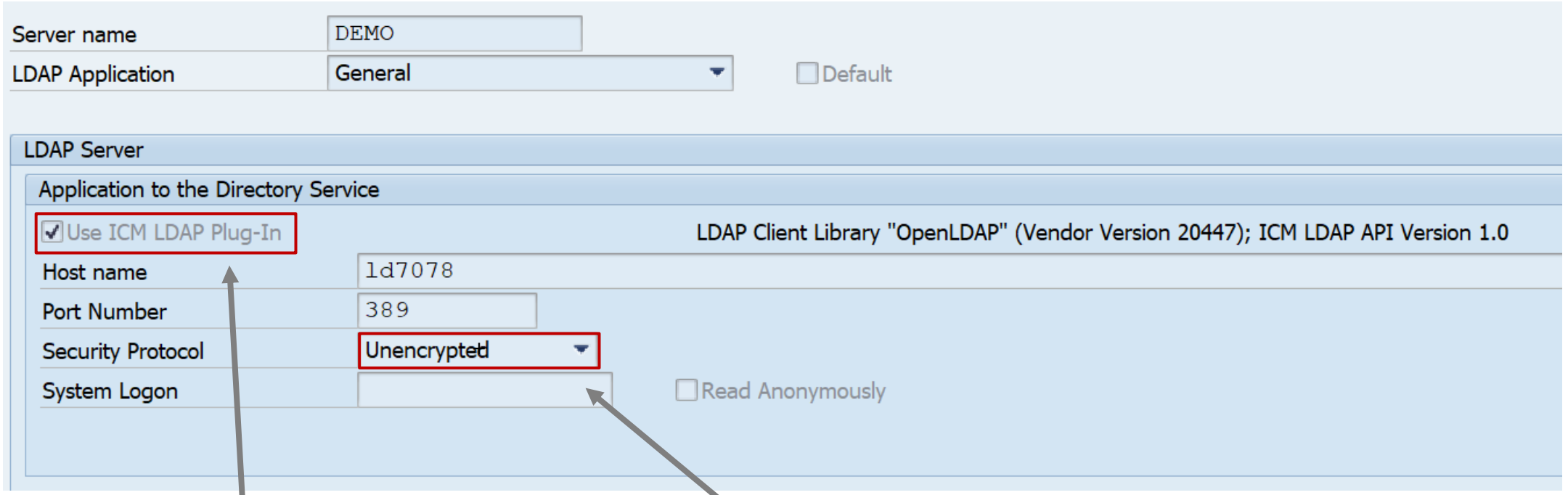
Secure LDAP connection via ICM
Transaction LDAP → Server



Use LDAP via ICM instead of old LDAP connector

Without any other changes you still get an unencrypted connection

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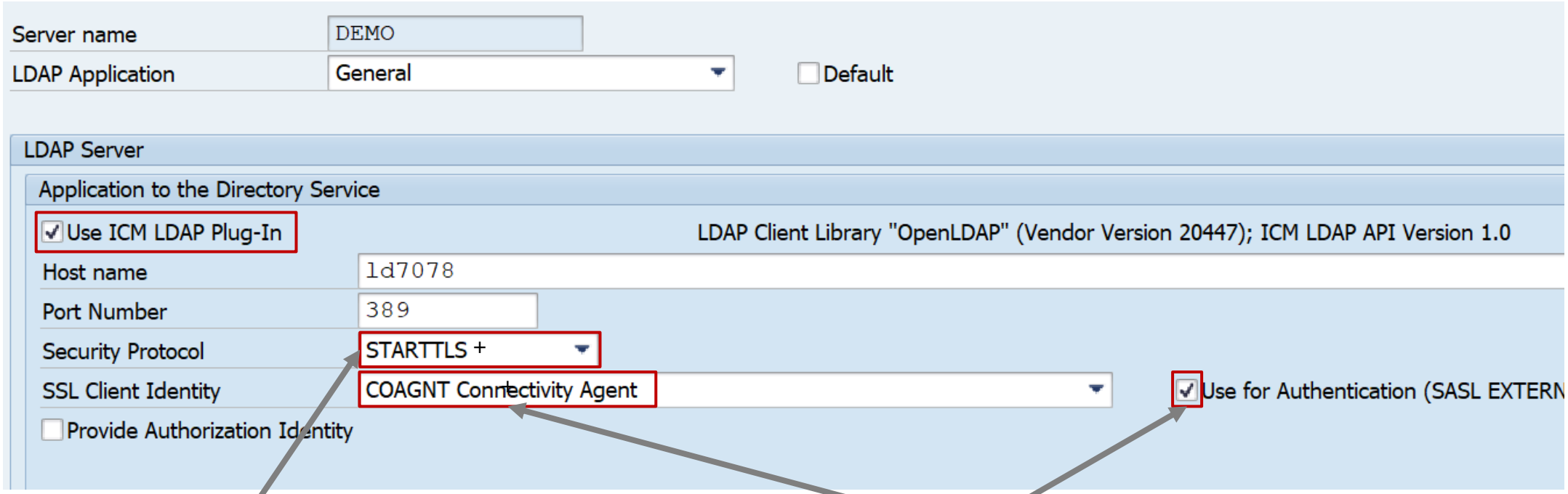
Secure LDAP connection via ICM
Transaction LDAP → Server



Available security protocols:
port 389 STARTTLS
port 636 LDAPS

Available authentication options:
user + password
anonymous PSE
PSE with client certificate

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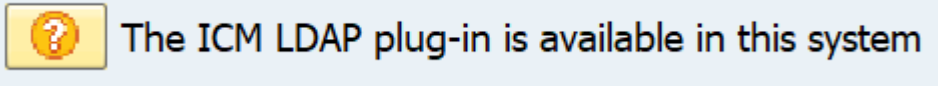
LDAP Connection though ICM



Use

When this indicator is set, connections to this directory server are established through the ICM LDAP plug-in.

When this indicator is not set, the connection will be established through the middleware component "LDAP Connector", which needs to be configured and managed separately.

SAP recommends using the ICM LDAP plug-in for all LDAP server connections.

When activating this setting for an already existing directory server entry, test that the connection to the directory server still works afterwards for the following reasons:

- Although LDAP Connectors are regularly started on application server instances, you might have configured a detached LDAP Connector to mitigate network routing limitations from the network in which the application server resides and the network where the directory server resides. Switching from LDAP Connector to ICM LDAP plug-in then might then cause the connection to fail.
- You might use an LDAP Connector on Microsoft Windows using the implicit creation of a secure connection based on port 636 and having the server certificate in the trust store of the operating system. The ICM LDAP plug-in uses SAP standard technology to maintain trust (SSL client identities in transaction STRUST) and therefore you might need to add the directory server certificate to the SSL client identity you choose for usage by the ICM LDAP plug-in for this connection.
- The LDAP Connector, as using the LDAP client libraries of the operating system platform where it resides, might have implicit behavior which is not documented, and which is not present in the ICM LDAP plug-in.

Dependencies

- When all LDAP servers are configured to use the ICM LDAP plug-in, you can remove all LDAP Connectors.
- The LDAP Connector is considered deprecated with the existence of the ICM LDAP plug-in. It will not receive further feature updates and might be removed completely in future.
- Documentation of any type or source which asks you to create LDAP Connectors (and does not explicitly provide reasons why the ICM LDAP plug-in shall not be used) has been created before the ICM LDAP plug-in was developed and shall be ignored regarding this activity.
- The ICM LDAP plug-in only supports LDAP protocol version "LDAPv3".
- The ICM LDAP plug-in is not available on all platforms. When you have a system with heterogenous application servers (different operating systems or character byte widths), verify that the ICM LDAP plug-in is available on all of them before activating this setting. You can use this LDAP Servers maintenance view to review the state. It is shown next to the "Use ICM LDAP Plug-In" checkbox.

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LDAP Connection though ICM

The LDAP Plug-in of the ICM requires the HTTP plug-in up to Kernel 7.81.

As of Kernel 7.82 you can enable (default) or disable specific outbound protocols for the ICM using new dynamic boolean profile parameters:

`icm/LDAP/enable_client`	**Enable LDAP as client (used for STARTTLS as well)**
`icm/LDAPS/enable_client`	**Enable LDAPS as client**
and	
`icm/TCP/enable_client`	**Enable TCP as client**
`icm/TCPS/enable_client`	**Enable TCPS as client**

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April 2021

Topics April 2021

Active Cyberattacks on Mission-Critical SAP Applications – Report from Onapsis

Note 3017823 - Information Disclosure in SAP Solution Manager

Note 3040210 - Remote Code Execution vulnerability in Source Rules of SAP Commerce

Note 3036436 - Potential XXE Vulnerability in SAP Process Integration (ESR Java Mappings)

Note 3039649 - Unquoted Search Path in SAPSetup

Note 3036679 - Update 1 to Security Note 1576763: Potential information disclosure relating to usernames

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Active Cyberattacks on Mission-Critical SAP Applications

https://onapsis.com/active-cyberattacks-mission-critical-sap-applications

Note 1445998 - Disabling invoker servlet CVE-2010-5326 Critical Jul 20, 2011

Note 2234971 - Directory traversal in AS Java Monitoring CVE-2016-3976 High Mar 8, 2016

Note 2258786 - Potential information disclosure relating to SAP Web Administration Interface
CWE-200 Medium Mar 07, 2016

Note 2296909 - Denial of service (DOS) vulnerability in BPM CVE-2016-9563 Medium Aug 08, 2016

Note 2547431 - Directory Traversal vulnerability in Internet Sales CVE-2018-2380 Medium Feb 13, 2018

Note 2890213 - Missing Authentication Check in SAP Solution Manager CVE-2020-6207 Critical Mar 10, 2020

Note 2934135 - Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard)
CVE-2020-6287 Critical Jul 14, 2020

Note 2939665 - Disable/Enable LM Configuration Wizard | Critical API's in LM Configuration Wizard

Protecting Standard Users CWE-307 Critical
https://help.sap.com/viewer/12a2bc096c53101493cef874af478673/7.0.37/en-US/3ecdaccbedc411d3a6510000e835363f.html
about CTB_ADMIN see also:
Troopers 2016: An easy way into your multi-million dollar SAP systems: An unknown default SAP account
https://troopers.de/events/troopers16/603_an_easy_way_into_your_multi-million_dollar_sap_systems_an_unknown_default_sap_account/

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Note 1445998 - Disabling invoker servlet

2016-05

2015-10

Solution from 2010

Good news: The Invoker Servlet has been disabled by default as of release 7.20.

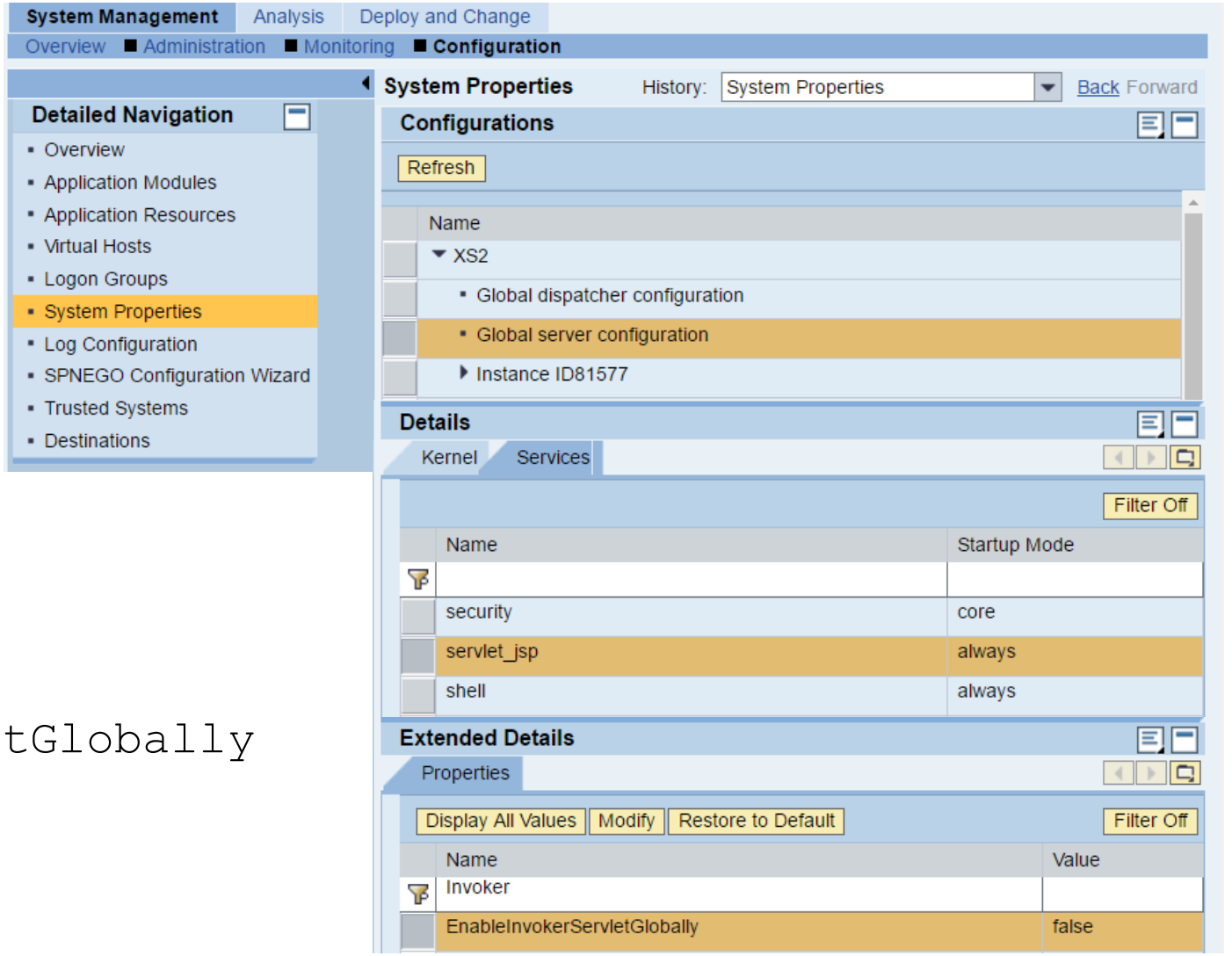
But: In case of older systems – including some double stack systems – you have to disable the vulnerable feature manually.

Check via Configuration Validation

Configuration Item: `EnableInvokerServletGlobally`
Configuration Store: `servlet_jsp`

Baseline Target System: `1JNOTEST`

FRUN Policy: `BL2_SYSTEM-J.xml`



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Note 2234971 - Directory traversal in AS Java Monitoring

Solution via Support Package

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Note 2258786 - Potential information disclosure relating to SAP Web Administration Interface

2016-03

Configuration:

Deactivate support of public monitoring information in the web administration interface.
Using transaction **SCICM** set the subparameter **ALLOWPUB** of the profile parameter **icm/HTTP/admin_<xx>** to **FALSE**.
Then, access to administration pages without a logon is deactivated completely.

Check via Configuration Validation

Configuration Store: `ABAP_INSTANCE_PAHI` respective `ABAP_INSTANCE_PAHI_ENH`
Configuration Item: `icm/HTTP/admin*`
Check value to contain sub-parameter `ALLOWPUB=FALSE`

Baseline Target System (but not for this sub-parameter): `2ADISCL`

FRUN Policy (but not for this sub-parameter): `BL2_DISCL-A.xml`

Related Notes:

Note 870127 - Security note for SAP Web Dispatcher

Note 2260323 - Internet Communication Manager (ICM) 7.20 security settings

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Note 2296909 - Denial of service (DOS) vulnerability in BPM

Solution via Support Package

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Note 2547431 - Directory Traversal vulnerability in Internet Sales

Solution via Support Package

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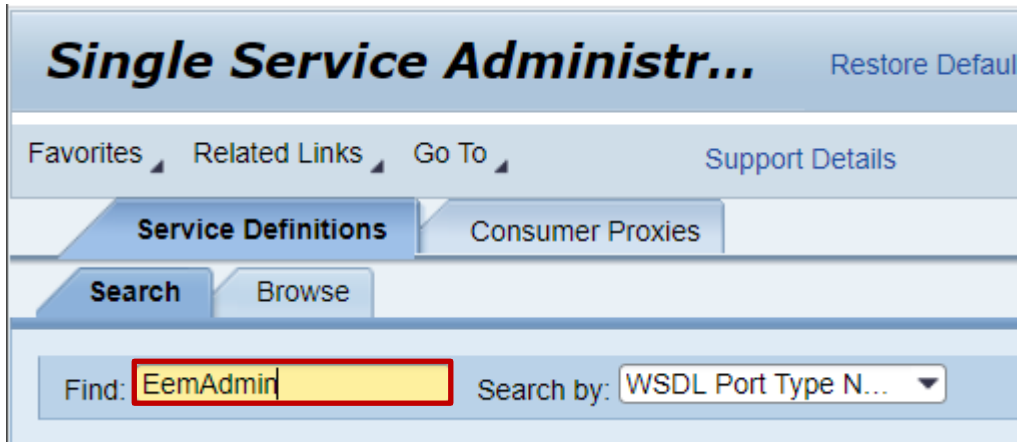
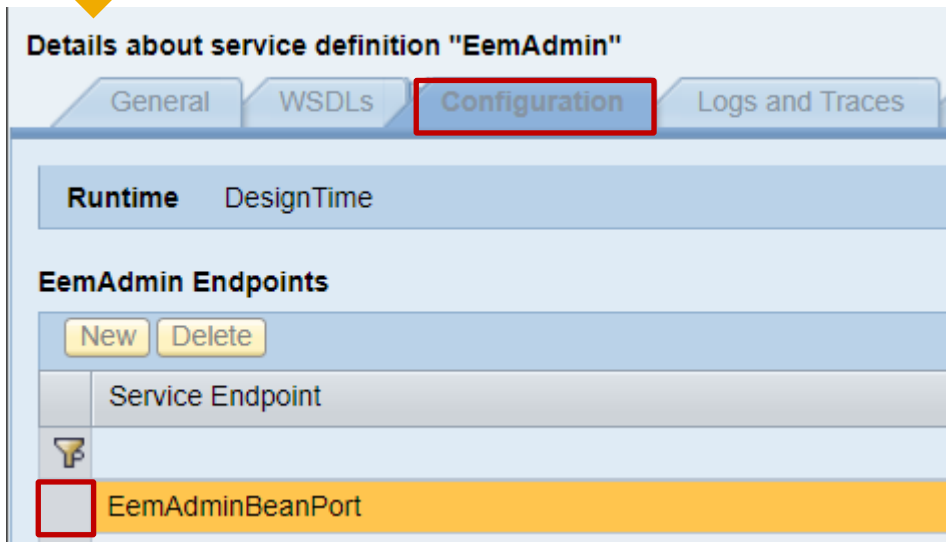
Note 2890213 - Missing Authentication Check in SAP Solution Manager

2020-11

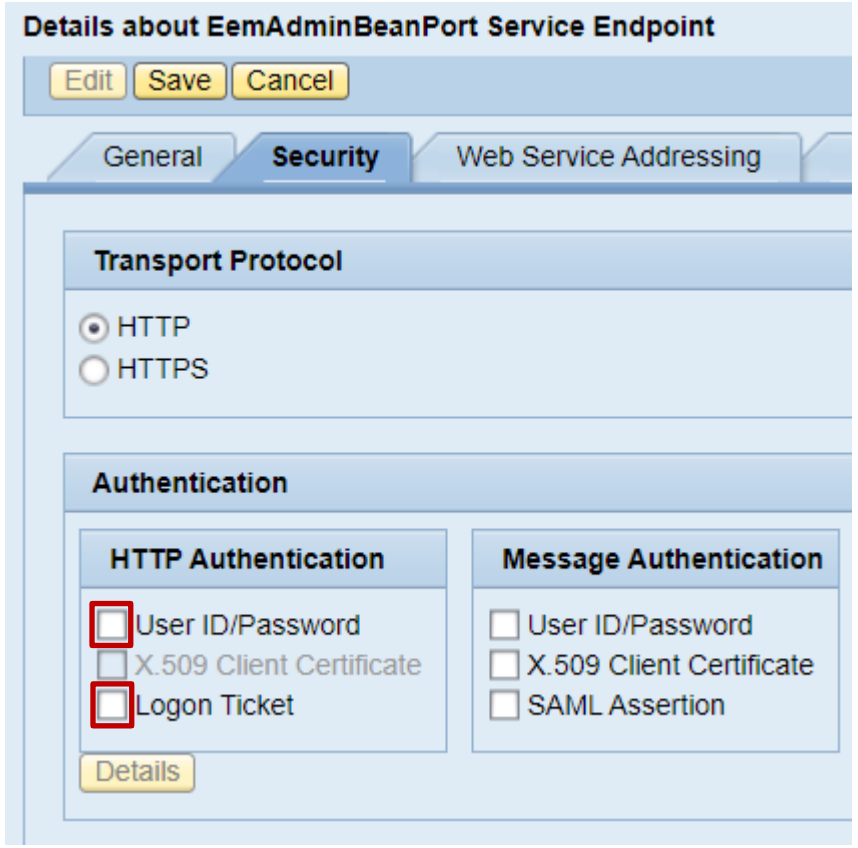
2020-03





Solution via Support Package

Workaround: Manual activation of `EemAdmin` authentication as a partial fix.



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Note 2934135 - Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard)

2020-09

2020-08

2020-07

At once: Deactivate on all application servers the aliases `CTCWebService ctc/core ctcprotocol` respective application `tc~lm~ctc~cul~startup_app` and validate that service `CTCWebService` is offline as described in KBA 2939665

In addition: Implement firewall rules for URL blocking as described in note 1589525 or develop filter rules for administrative requests according to note 451753

Short time: Implement the patch for Software Component LMCTC as described in the note.

The patch does not depend on any other component and you can it deploy online (without downtime or restart) using telnet (see KBA 1715441) **or if possible SUM** (see Blog and Note 1641062)**.**
Software Download Example:
https://launchpad.support.sap.com/#/softwarecenter/search/LM%2520CONFIGURATION%2520WIZARD%25207.50

Scheduled: Schedule a combined update of all Java components. You can take the time for preparation, if you have deactivated the vulnerability described by this note.

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Protecting Standard Users

EarlyWatch Alert Solution Finder in Support Portal Launchpad

https://launchpad.support.sap.com/#/ewasolutionfinder

6 Systems **Default Passwords of Standard Users (Security → ABAP Stack)**
Standard users including `SAP*` or `DDIC` have default password

Report `RSUSR003`

Prof.Param
login/no_automatic_user_sapstar 1

Client	User	Lock	Password Status	Reason
000	DDIC		Exists; Password not trivial.	
	SAP*		Exists; Password not trivial.	Locked
	SAPCPIC		Does not exist.	
	TMSADM		Exists; Password not trivial.	
001	DDIC		Exists; Password not trivial.	
	SAP*		Does not exit. Logon not possible. See SAP Note 2383	
	SAPCPIC		Does not exist.	
	TMSADM		Does not exist.	

Check via Configuration Validation

Configuration Store: `STANDARD_USERS`

Baseline Target System: `1ASTDUSR`

FRUN Policy: `BL2_STDUSR-A.xml`

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Note 3017823 - Information Disclosure in SAP Solution Manager

The ABAP correction instruction already solves the vulnerability of the RFC enabled function modules by clearing the critical data.

In addition you find references to normal, functional corrections for software component LM-SERVICE.
These corrections are not directly linked to the security issue.

```
*&---------------------------------------------------------------------*
*& FUNCTION FM_GET_ISEMS
*&---------------------------------------------------------------------*
...
    CALL METHOD CL_DIAGSTP_WILYEM_UTILS=>GET_ISEMS
       IMPORTING
          EX_EMS          =  EX_ISEMS.

*>>>> START OF DELETION <<<<<

*>>>> END OF DELETION <<<<<<<

*>>>> START OF INSERTION <<<<<
    LOOP AT ex_isems ASSIGNING FIELD-SYMBOL(<fs_isem>).
      CLEAR <fs_isem>-users.
    ENDLOOP.

*>>>> END OF INSERTION <<<<<<
```

Referenced notes	LM-SERVICE 7.20 SP 8 Patch 27	LM-SERVICE 7.20 SP 9 Patch 21	LM-SERVICE 7.20 SP 10 Patch 13	LM-SERVICE 7.20 SP 11 Patch 7	LM-SERVICE 7.20 SP 12 Patch 1
3028401 - Improve Logging for SMDA Connection Issues	X	X	X	X	X
3023350 - Solution Manager Introscope Integration Change	X	X	X	X	X
3010560 - Entries at HostAgentMonitoring Webservice are Missing	patch 26	X	X	X	X
3009666 - Solution Manager Corrections	X	X	X	X	
2997708 - Support Solution Manager Java Servers Without a P4S Port	-	-	patch 11	X	
2979821 - Protect Webservices Defined by .wsdef Files	-	X	X	X	

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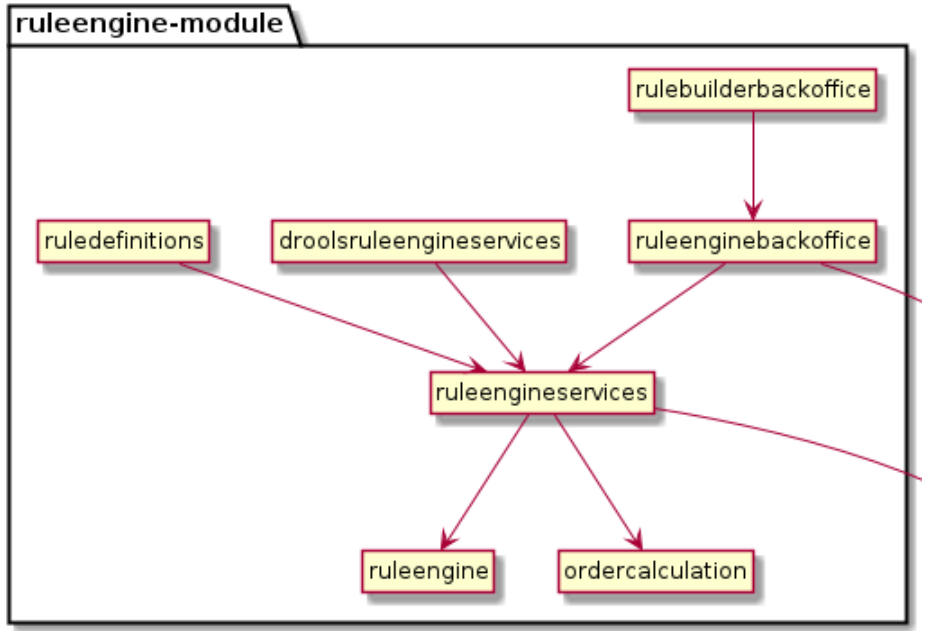
Note 3040210 - Remote Code Execution vulnerability in Source Rules of SAP Commerce

Version 17 from 13.04.2021 is the first published version.

SAP Commerce installations that do **not** include any extensions from the Rule Engine module are **not** affected.
An installation **is** directly affected if you grant write privileges on such Source Rules to employees, who shall not be able to execute script code in SAP Commerce. But of course you always should keep installed software up to date.



The patch itself was publish on 15.04.2021:

Name	Patch Level	File Type	File Size	Release Date	Change Date	Related Info
CXCOMM201100P_5-70005693.ZIP Patch for CX COMMERCE 2011 SP00	5	ZIP	1520342 KB	15.04.2021	15.04.2021	
CXCOMM201100P_4-70005693.ZIP Patch for CX COMMERCE 2011 SP00	4	ZIP	1493390 KB	09.03.2021	09.03.2021	

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Note 3036436 - Potential XXE Vulnerability in SAP Process Integration (ESR Java Mappings)

This is a knowlege-sharing note about securing custom-made Java mappings for XML documents by disabling DTD:

```
setFeature("http://apache.org/xml/features/disallow-doctype-decl", true)
```

The topic is relevant for any kind of Java programs using XML, e.g. in products like SAP PO, MII Workbench, etc.

Java mapping
https://help.sap.com/viewer/0b9668e854374d8fa3fc8ec327ff3693/7.5.20/en-US/4bf40fddc0c33de4e10000000a42189e.html

Securing parsers, schema validation and transformer
https://help.sap.com/viewer/c591e2679e104fcdb8dc8e77771ff524/7.5.20/en-US/4c839c4dc19c4872990439d2945ee238.html

Related note about securing against XXE in SAP standard content:
Note 2932473 - Information Disclosure in SAP NetWeaver (XMLToolkit for Java)

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Note 3036436 - Potential XXE Vulnerability in SAP Process Integration (ESR Java Mappings)

Applications might require relaxed rules:

- **KBA 2879503 - AS Java is not getting started with exit code 2150 - DOCTYPE is disallowed (Issue during upgrade)**

Other applications work fine but show unnecessary log entries:

- **KBA 2629349 - How to stop the message generated from org.apache.tomcat.util.digester.Digester in SMP server log**

- **KBA 2440311 - Error message DOCTYPE is disallowed**

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Note 2818965 - Clickjacking vulnerability in Runtime Workbench of SAP Process Integration

The correction of the note enables a specific application of SAP Process Integration to use the general Clickjacking Protection for JSP on the Application Server Java

Related Notes:
Note 2286679 - Clickjacking Framing Protection in JAVA
Note 2170590 - Central Whitelist maintenance & activation
Note 2263656 - HTMLB
Note 2290783 - Java Server Pages

Check configuration using Transaction `CCDB`
Configuration Store: `Clickjacking`
Configuration Item: `ClickjackingProtectionService`

Landscape	Component Version	Store Name	Element Status	Element Class	Element Name	Element Value
Java Instance (FBJ~JAVA~ldcifbj_FBJ_04)	J2EE ENGINE SERVERCORE 7.50	Clickjacking	Initial (Current)	Table Row	ClickjackingProtectionService	true
Java Instance (PO1~JAVA~nced60229921a_PO1_00)	J2EE ENGINE SERVERCORE 7.31	Clickjacking	Initial (Current)	Table Row	ClickjackingProtectionService	false
Java Technical System (PO1~JAVA)	J2EE ENGINE SERVERCORE 7.31	Clickjacking	Initial (Current)	Table Row	ClickjackingProtectionService	false

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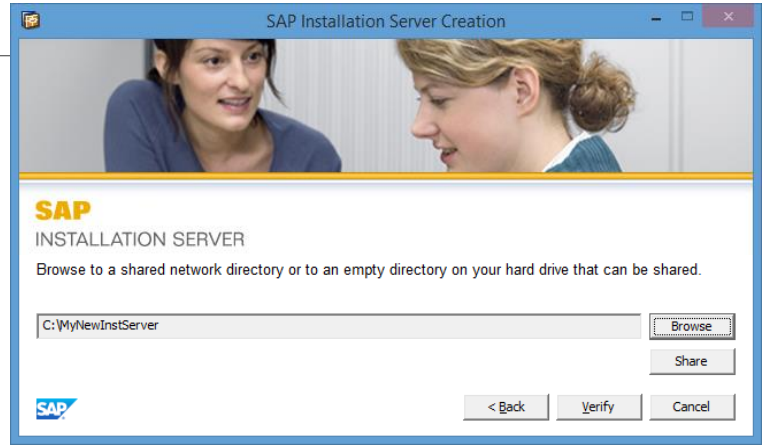
Note 3039649 - Unquoted Search Path in SAPSetup



Application Component BC-FES-INS

→

Setup and Administration of the central Installation Server

SAP GUI Packaging and Installation

https://wiki.scn.sap.com/wiki/display/Basis/SAP+GUI+Packaging+and+Installation

SAP Frontend Installation Guide

https://help.sap.com/doc/2e5792a2569b403da415080f35f8bbf6/760.05/en-US/sap_frontend_inst_guide.pdf

SAPSetup Guide

https://help.sap.com/doc/1b770fc9e71e4062851ffe7de158007d/9.0.105.0/en-US/SAPSetup_Guide.pdf

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Note 3036679 - Update 1 to Security Note 1576763: Potential information disclosure relating to usernames

This is a secure-by-default story:

Note 1576763 introduced a switched authorization check for `TH_USER_LIST` in Oct. 2011

- **Release 4.6C – 7.20:** **Off by default but you can activate the new check**
- **Release 7.30:** **Off by default but you couldn't activate the new check**
  This is now solved with Note 3036679
- **Release 7.31:** **On by default but you can de-activate the new check**
- **Higher releases:** **Always on (the switch was removed)**

More interesting question: Who is still running systems on 7.30?
End of Mainstream Maintenance: 31.12.2020

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March 2021

Topics March 2021

Blogs: Java Parameter service/protectedwebmethods

Blogs: RFC Gateway security

Note 3017378 - Possible authentication bypass in SAP HANA LDAP scenarios

Note 3022622 - Code injection vulnerability in SAP Manufacturing Integration and Intelligence

Note 3022422 - Missing Authorization Check in SAP NetWeaver AS JAVA (MigrationService)

How to secure P4 on AS Java

Note 2574394 - Configure Diagnostics Agents with check for Client Certificate

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Blogs: Java Parameter service/protectedwebmethods

Blogs by Johannes Goerlich:

Go for `service/protectedwebmethods = ALL` first

Protecting web methods offered by SAP Instance Agent
https://blogs.sap.com/2021/02/22/protecting-web-methods-offered-by-sap-instance-agent

Protecting web methods offered by SAP Host Agent
https://blogs.sap.com/2021/02/22/protecting-web-methods-offered-by-sap-host-agent

Profile Parameters:

```
service/protectedwebmethods
service/hostname          service/http/hostname       service/https/hostname
service/http/acl_file     service/https/acl_file
service/admin_users       service/admin_group         service/sso_admin_user_<xx>
```

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Blogs: RFC Gateway security

Blogs by Johannes Goerlich:

RFC Gateway security

Part 1: General questions about the RFC Gateway security

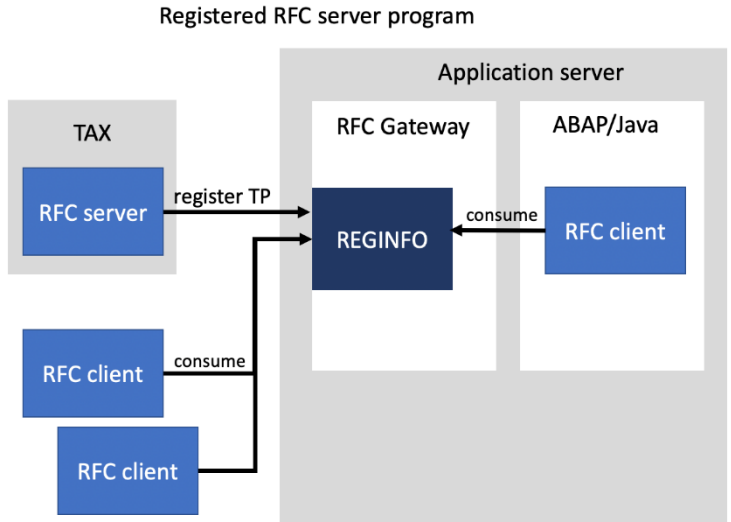
Part 2: reginfo ACL in detail

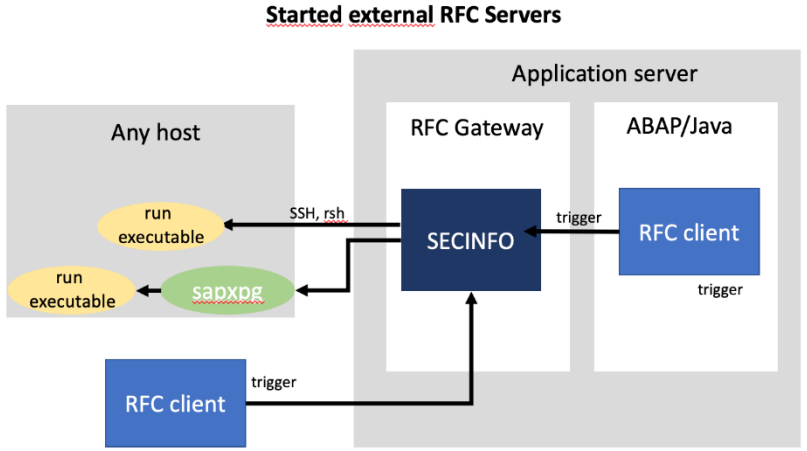
Part 3: secinfo ACL in detail

Part 4: prxyinfo ACL in detail

Part 5: ACLs and the RFC Gateway security

Part 6: RFC Gateway Logging





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Note 3017378 - Possible authentication bypass in SAP HANA LDAP scenarios

LDAP Servers used for authentication should not allow unauthenticated authentication

Overview (Dec 2018)

Product	Can be disabled	Disabled by default
Red Hat Directory Server	Yes	Yes
OpenLDAP	Yes	Yes
Novell eDirectory	Yes	No
Oracle/Sun Directory Server	Yes	Yes
Microsoft AD LDS/ADAM	Yes* (Server 2019+)	No
Microsoft Active Directory	Yes* (Server 2019+)	No

Apache is not affected
https://directory.apache.org/apacheds/advanced-ug/4.1.1.3-unauthenticated-authn.html

LDAP: Disable Unauthenticated Auth, but keep Anonymous Auth (May 2015)
https://community.microfocus.com/t5/eDirectory-User-Discussions/LDAP-Disable-Unauthenticated-Auth-but-keep-Anonymous-Auth/td-p/2200547

AD, LDS and LDAP unauthenticated binds: A series of unfortunate security events (Jan 2017)
https://blog.lithnet.io/2017/01/ad-lds-and-ldap-unauthenticated-binds.html

Disabling Unauthenticated Binds in Active Directory (Dec 2018)
https://blog.lithnet.io/2018/12/disabling-unauthenticated-binds-in.html

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Note 3022622 - Code injection vulnerability in SAP Manufacturing Integration and Intelligence

SAP MII allows developer users having at least role `SAP_XMII_Developer` to create dashboards (which is a kind of limited development activity).
Such a developer could attack the system by injecting malicious JSP leading e.g. to remote OS code execution on the server.

- **Use strict separation between development and production systems**
- **Reduce assignments to role `SAP_XMII_Developer`, `SAP_XMII_Administrator`, and `SAP_XMII_Super_Administrator` in production systems**

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Note 3022622 - Code injection vulnerability in SAP Manufacturing Integration and Intelligence

SAP MII - Security Guide

Authorizations

https://help.sap.com/viewer/9e5b0e960a9f49828522215c3fa14e71/15.4/en-US/c1eb0758e9219244e10000000a4450e5.html
Roles **`SAP_XMII_Developer`**, **`SAP_XMII_Administrator`**, **and** **`SAP_XMII_Super_Administrator`**

Actions for Permissions

https://help.sap.com/viewer/d70c3ac3566b41dd896cd7cecc94e14a/15.4/en-US/4c9768bdc14d60c3e10000000a15822d.html
Actions **`XMII_SSCE_ALL`**, **`XMII_SSCE_CHANGE`**, …

SAP MII Self Service Composition Environment

„Create dashboards using any SAP MII content (Query Templates, Display Templates, MDO/KPI Objects, and Resource Files), UI elements, and tags from Plant Information Catalog."

"The **Source Code** tab (html, css, and client-side Javascript) is hidden by default. Only users assigned with action **`XMII_SSCE_DEVELOPER`** can edit the source code."

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Note 3022622 - Code injection vulnerability in SAP Manufacturing Integration and Intelligence

What else? Here is a sample from the guideline:

Connections (remote calls)
https://help.sap.com/viewer/d70c3ac3566b41dd896cd7cecc94e14a/15.4/en-US/4c72e07ce631469ee10000000a15822d.html

and

MDO Lifecycle (jobs)
https://help.sap.com/viewer/d70c3ac3566b41dd896cd7cecc94e14a/15.4/en-US/4cc8daa98e9b60c5e10000000a15822d.html

use the

Credential Store
https://help.sap.com/viewer/d70c3ac3566b41dd896cd7cecc94e14a/15.4/en-US/4c983ef0311160c4e10000000a15822d.html

- You can verify role assignments and usage of these technical users with stored credentials. (There exist a special “Usage” tab.)

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Note 3022422 - Missing Authorization Check in SAP NetWeaver AS JAVA (MigrationService)

Do you need to run a full Support Package update via SUM or is it sufficient just to apply patches?

„As a final solution, you have to patch your systems with a new version of the J2EE-APPS.SCA,. ... NOTE: This solution is an offline deployment that requires a restart of your systems.”

Note 2886099 - FAQ for SAP Note 3022422

“3. Is it possible to upgrade J2EE-APPS only or should the whole stack be upgraded?
J2EE-APPS should be applied together with all its dependencies according to "SCA Dependency Analysis" tool.”

You find the "SCA Dependency Analysis" in the SAP Support Portal when you navigate to the download page for Java packages.

See Note 1974464 - Information on SCA Dependency Analysis for Java download objects

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Note 3022422 - Missing Authorization Check in SAP NetWeaver AS JAVA (MigrationService)

https://apps.support.sap.com/sap(bD1lbiZjPTAwMQ==)/support/swdc/notes/index.do?cvnr=73554900100200001504&support_package=SP015&patch_level=000014

J2EE ENGINE APPLICATIONS 7.50 - SP015: Select Files for Download

Add to Download Basket | Maintain Download Basket | Select All | Deselect All

	File type	Instantiation	Download Object	Title	Info File	File Size (KB)	Last Changed	SCA Dependency
☐	SCA	# OS independent	J2EEAPPS15P_15-80000576.SCA	SP15 Patch15 for J2EE ENGINE APPLICATIONS 7.50	Info	7268	10.03.2021	

The following objects are recommended with minimum patch level due to potential dependencies for the download request:

Software Component Version	Support Package	Min. Patch Level	Download
J2EE ENGINE BASE TABLES 7.50	SP015	000002	
J2EE ENGINE FACADE 7.50	SP015	000002	
J2EE ENGINE SERVERCORE 7.50	SP015	000034	
MESSAGING SYSTEM SERVICE 7.50	SP015	000032	

The following objects are recommended with minimum patch level due to potential dependencies for the download request:

Software Component Version	Support Package	Min. Patch Level	Download
ESR 7.50	SP015	000010	
J2EE ENGINE APPLICATIONS 7.50	SP015	000013	
NW DEVELOPER STUDIO 7.50	SP015	000016	
PI GUI LIBRARY 7.50	SP015	000003	
SOA MONITORS BASIC 7.50	SP015	000004	
XI ADAPTER FRAMEWORK 7.50	SP015	000057	
XI CONNECTIVITY SE 7.50	SP015	000003	
XI TOOLS 7.50	SP015	000017	

…

Example for J2EE ENGINE APPLICATIONS 7.50 SP 15

Several other packages are required (if installed)

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Note 3022422 - Missing Authorization Check in SAP NetWeaver AS JAVA (MigrationService)

What about the workaround?

The workaround within SAP note 3030298 is sufficiently protecting the system till the next system restart, but during the next startup of the system the system becomes vulnerable again for the time until the deployed service is running.

That is why you should apply the permanent solution as per SAP note 3022422 the latest during the next system restart.

You can use Maintenance Planner to download only the required patches for your system without generating a stack xml file.

You can also use 'SAP NW Java Support Tool' to calculate dependencies as per KBA 2352717.
see KBA1715441 - Deploy/Undeploy/Force Redeploy EAR/SDA/SCA files on SAP AS JAVA

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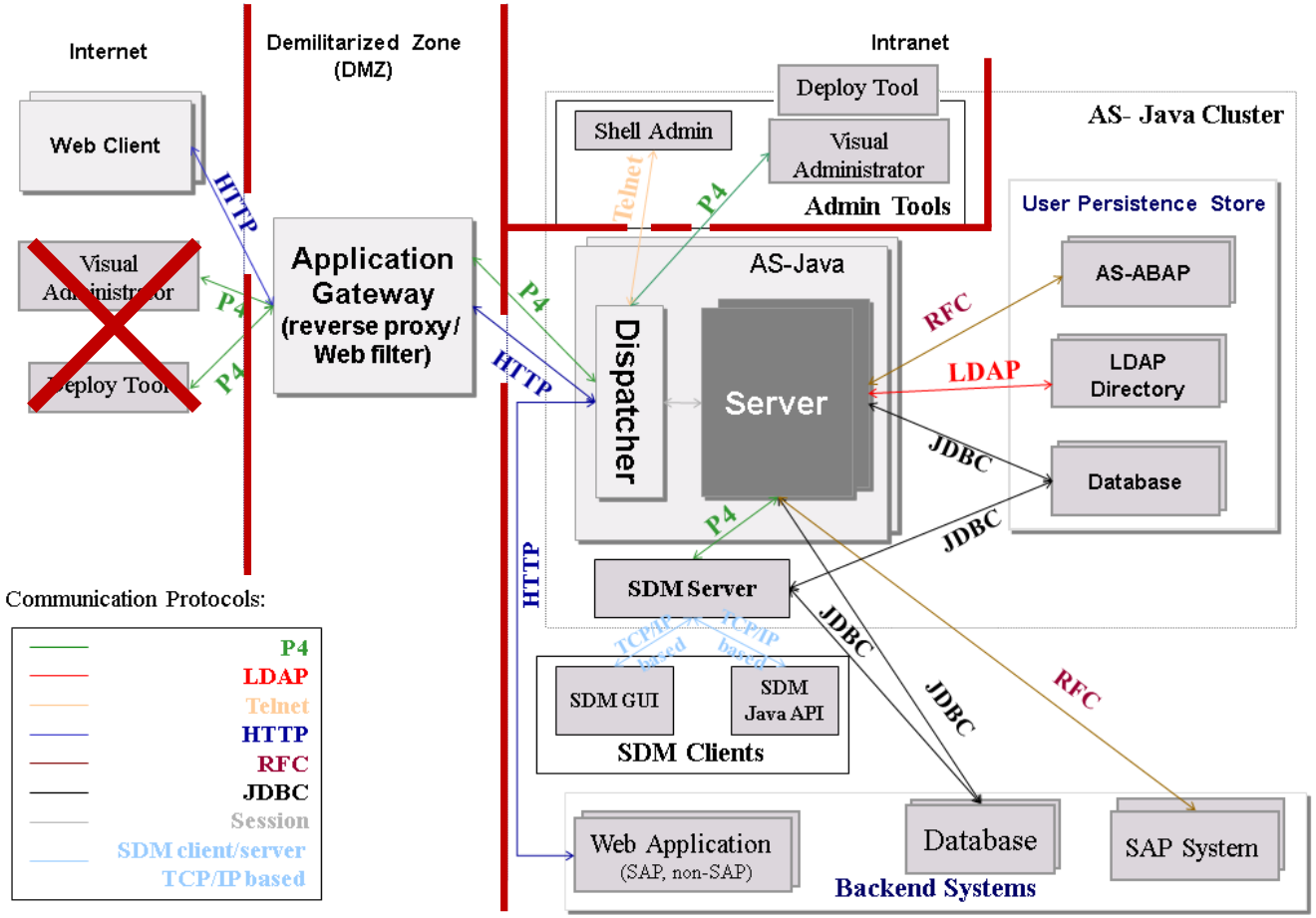
How to secure P4 on AS Java

TCP/IP Ports of All SAP Products: https://help.sap.com/viewer/ports

P4 / P4S is only required locally on the Java server respective in Visual Administrator and Deploy Tools

- **Do not expose P4 and P4S on internet**
- **Block or restrict P4 and P4S on network level between user zone and server zone**



Transport Layer Security

https://help.sap.com/viewer/2f8b1599655d4544a3d9c6d1a9b6546b/7.03.28/en-US/46875b4243fadc54e10000000a155106.html

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How to secure P4 on AS Java

TCP/IP Ports of All SAP Products: https://help.sap.com/viewer/ports

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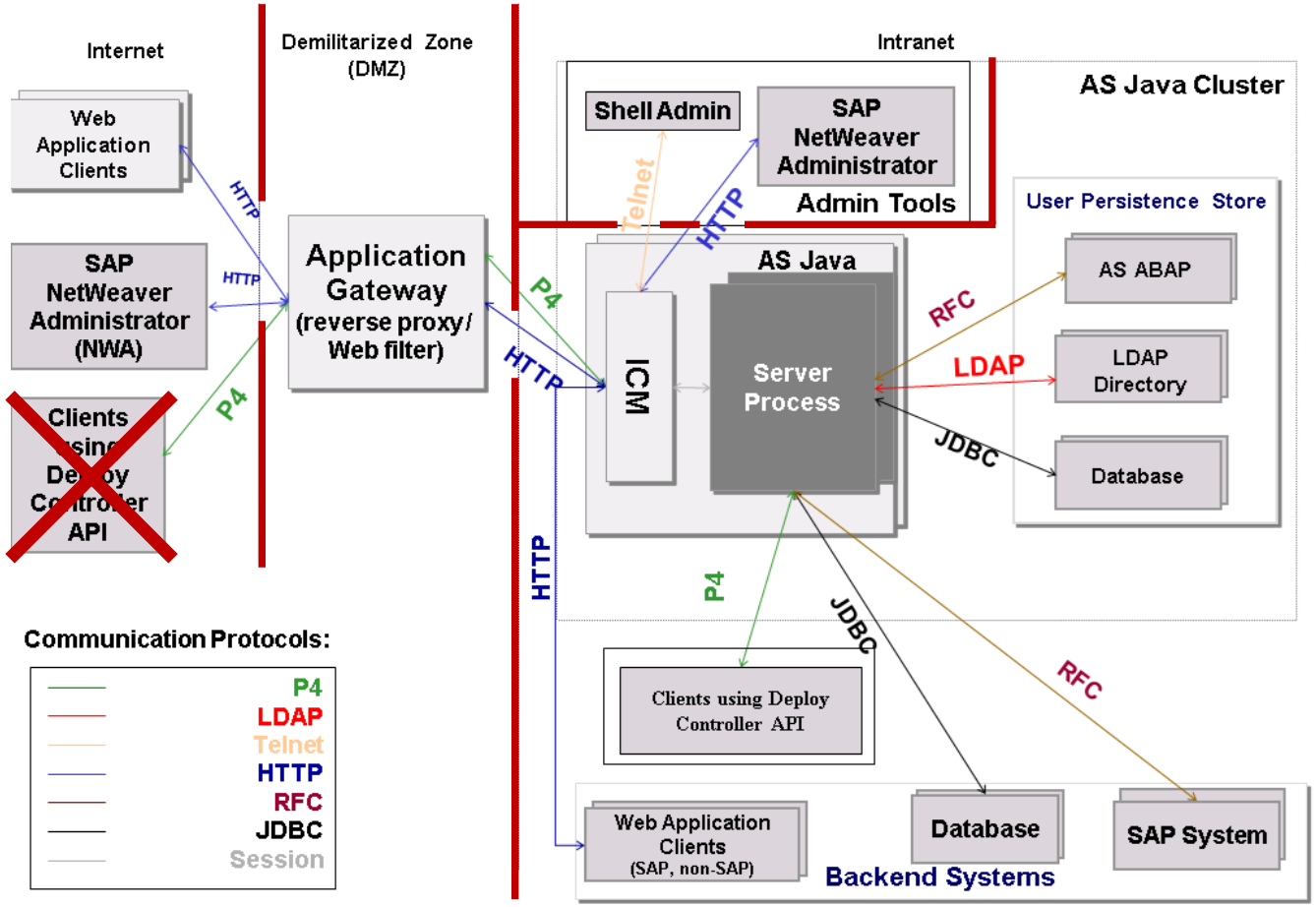

Transport Layer Security

https://help.sap.com/viewer/2f8b1599655d4544a3d9c6d1a9b6546b/7.5.19/en-US/46875b4243fadc54e10000000a155106.html

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How to secure P4 on AS Java

KBA 1770585 - How to configure SSL on the AS Java

KBA 2268643 - How to configure the P4S port with Solution Manager 7.2

KBA 2267534 - How to remove the P4 P4S properties in the Java stack of Solution Manager 7.2

Note 2322555 - Connect the Diagnostics Agent to Solution Manager 7.2 using SSL

KBA 2419031 - How to configure the P4S port for the J2ee NetWeaver Application Server

Note 2458281 - Diagnostics Agent P4S via SAProuter

KBA 2511578 - How to configure the P4S in the AS Java 7.0X

Security Note 2574394 - Configure Diagnostics Agents to Check the Solution Manager Server Certificate

Diagnostics Agent Connectivity in Solution Manager 7.2
https://wiki.scn.sap.com/wiki/x/r4htGw

Diagnostics Agent 7.2 Troubleshooting
https://wiki.scn.sap.com/wiki/x/5sviGg

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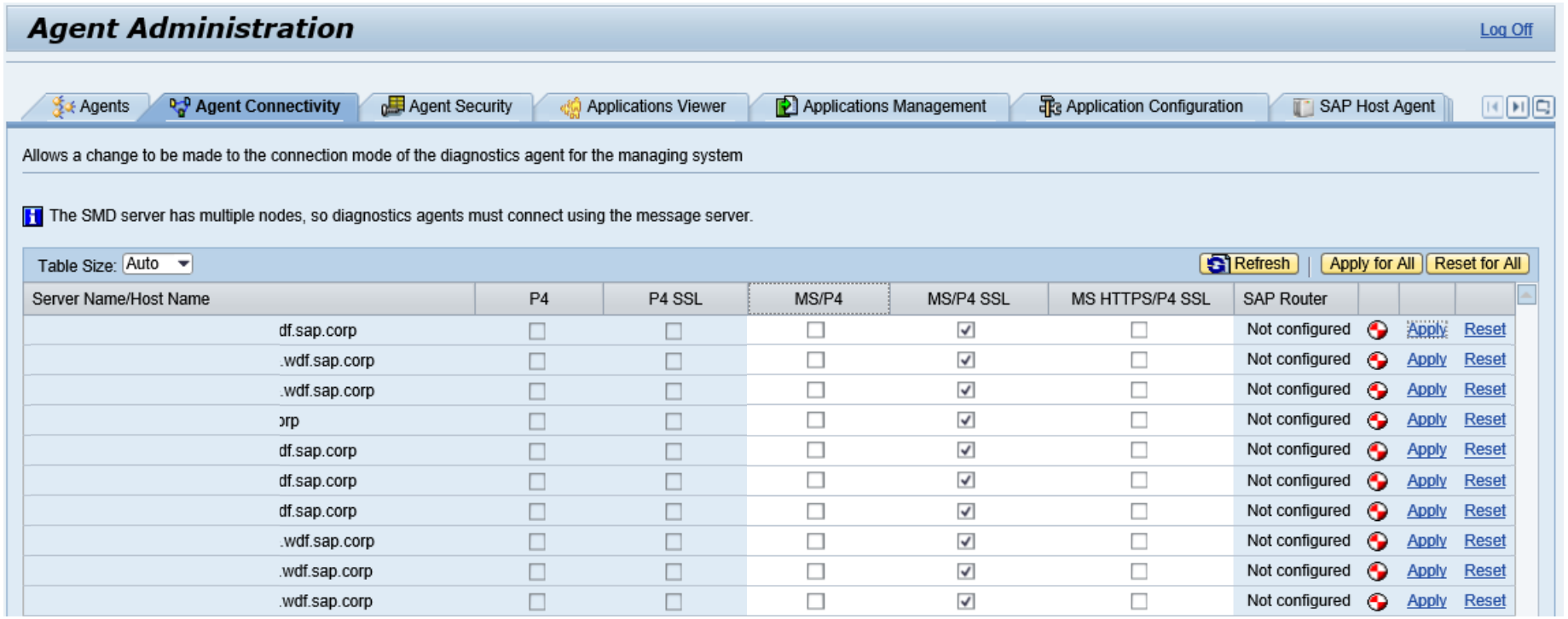
Note 2574394 - Configure Diagnostics Agents with check for Client Certificate

Solution Manager Workcenter “SAP Solution Manager Administration”

→ Agents Administration

→ Agent Admin



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Note 2622660 - Security updates for the browser control Google Chromium delivered with SAP Business Client

Note Version	SAP Business Client Release	Chromium Stable Release	highest CVSS rating of contained security corrections
Version 54 from 09.03.2021	SAP Business Client 7.0 PL17 SAP Business Client 7.70 PL1	Chromium 88.0.4324.150	Base Score: 9.6 (Priority Hot News) AV:N/AC:L/PR:N/UI:R/S:C/C:H/I:H/A:H
Version 49 from 26.01.2021	SAP Business Client 7.0 PL16 SAP Business Client 7.70 PL0	Chromium 87.0.4280.141	Base Score: 9.6 (Priority Hot News) AV:N/AC:L/PR:N/UI:R/S:C/C:H/I:H/A:H
Version 47 from 22.12.2020	SAP Business Client 7.0 PL15	Chromium 87.0.4280.66	Base Score: 7.5 (Priority High) AV:N/AC:L/PR:N/UI:N/S:U/C:H/I:N/A:N
Version 46 from 10.11.2020	SAP Business Client 7.0 PL14	Chromium 86.0.4240.183	Base Score: 10.0 (Priority Hot News) AV:N/AC:L/PR:N/UI:N/S:C/C:H/I:H/A:H
Version 44 from 13.10.2020	SAP Business Client 7.0 PL13	Chromium 85.0.4183.102	Base Score: 9.6 (Priority Hot News) AV:N/AC:L/PR:N/UI:R/S:C/C:H/I:H/A:H
Version 42 from 25.08.2020	SAP Business Client 7.0 PL12	Chromium 84.0.4147.105	Base Score: 9.6 (Priority Hot News) AV:N/AC:L/PR:N/UI:R/S:C/C:H/I:H/A:H
Version 41 from 14.07.2020	SAP Business Client 7.0 PL11	Chromium 83.0.4103.97	Base Score: 9.6 (Priority Hot News) AV:N/AC:L/PR:N/UI:R/S:C/C:H/I:H/A:H
Version 40 from 28.04.2020	SAP Business Client 7.0 PL10	Chromium 81.0.4044.92	Base Score: 8.8 (Priority High) AV:N/AC:L/PR:N/UI:R/S:U/C:H/I:H/A:H
Version 39 from 10.03.2020	SAP Business Client 6.5 PL22 SAP Business Client 7.0 PL9	Chromium 80.0.3987.122	Base Score: 8.8 (Priority High) AV:N/AC:L/PR:N/UI:R/S:U/C:H/I:H/A:H

Security Note Priority	CVSS v3 Base score
Low	0.1 - 3.9
Medium	4.0 - 6.9
High	7.0 - 8.9
Hot News	9.0 - 10.0

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February 2021

Topics February 2021

Note 2897141 - CVE-2020-1938 'Ghostcat' Tomcat AJP Vulnerability

Note 2992154 - SAML Assertion Signature MD5 Digest Algorithm Vulnerability in SAP HANA Database

Java Parameter service/protectedwebmethods

Note 3014875 - Reverse Tabnabbing attack in SAP Netweaver AS ABAP, AS Java and SAP UI5 applications on multiple platforms

Note 3014121 - Remote Code Execution vulnerability in SAP Commerce (cloud & on-prem)

SAP GUI for Windows 7.70

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Note 2897141 - CVE-2020-1938 'Ghostcat' Tomcat AJP Vulnerability

This note is not classified as a Security Note, even if it describes a possible security vulnerability in Component BI-BIP-DEP

SAP BusinessObjects Business Intelligence Platform product does NOT require the use of AJP connector, so the product itself is not affected by this vulnerability.

However, you could configure AJP on your own depending on their usage like split deployment, reverse proxy or load balancing.

To fix this vulnerability, upgrade Apache Tomcat to a non-vulnerable version as per Apache Tomcat documentation. If you don't use AJP and you can't upgrade Tomcat, you can disable AJP connector.

Other applications using Tomcat might be affected / not affected:

Note 2498770 - Tomcat vulnerabilities (CVE-*) NOT impacting SAP BusinessObjects Business Intelligence Platform XI 3.1 /4.0 /4.1 /4.2 /4.3

Note 2909840 - Apache Tomcat vulnerability aka GHOSTCAT
Note 2928570 - 'Ghostcat' Apache Tomcat AJP Vulnerability in SAP Liquidity Management for Banking
Note 2941645 - Apache JServ Protocol Vulnerability in SAP Commerce

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Note 2992154 - SAML Assertion Signature MD5 Digest Algorithm Vulnerability in SAP HANA Database

MD5 digest support in SAML assertions has been removed from SAP HANA 2 with the following revisions:

- **HANA 2.0 SPS04 revision 48.03**
- **HANA 2.0 SPS05 revision 53**

With SAP HANA 1.0 revision 122.34, you can disable MD5 using a new parameter `saml_signature_hash_types = 'sha1,sha256'` in `global.ini`

You can verify whether your SAML Identity Provider (IdP) still uses the MD5 algorithm by activating the "authentication trace" on "debug" level as described in note 3024481.

SAP HANA: Troubleshooting Problems with User Authentication and SSO
https://help.sap.com/viewer/bed8c14f9f024763b0777aa72b5436f6/2.0.05/en-US/c6ddbbb6d97610148b5ba05d69f58528.html

- Remember: After completing troubleshooting, reduce the authentication trace level back to default.

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Java Parameter service/protectedwebmethods

SAP Start Service (sapstartsrv) security
https://wiki.scn.sap.com/wiki/display/SI/SAP+Start+Service+%28sapstartsrv%29+security

sapstartsrv service parameters
https://wiki.scn.sap.com/wiki/display/SI/sapstartsrv+service+parameters

Protected web methods of sapstartsrv
https://wiki.scn.sap.com/wiki/display/SI/Protected+web+methods+of+sapstartsrv

Note 927637 - Web service authentication in sapstartsrv as of Release 7.00

Note 2838788 - How to verify if service/protectedwebmethods is recognized by sapstartsrv

Protected web methods
https://blogs.sap.com/2018/10/24/protected-web-methods/

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Java Parameter service/protectedwebmethods

Just for discussion !

Default

```
SDEFAULT
```

Solman Monitoring

```
SDEFAULT   -ReadLogFile -ABAPReadSyslog -ListLogFilesError -J2EEGetProcessList2 -J2EEGetProcessList
```

JAVA NWA System Overview

```
SDEFAULT   -J2EEGetProcessList -PerfRead -MtGetTidByName
```

SUM

```
DEFAULT
```

Other Examples which I've seen:

```
SDEFAULT  -ListLogFiles -ReadLogFile -ListLogFilesError -J2EEGetProcessList -J2EEGetThreadList2
          -GetVersionInfo -ParameterValue -PerfRead -MtGetTidByName -getTidsByName
          -GetAccessPointList -GetAccessPointList2 -UtilSnglmsgReadRawdata -GWGetConnectionList
          -GWGetClientList

SDEFAULT -GetProcessList -J2EEGetProcessList -J2EEGetThreadList -GetEnvironment -GetStartProfile
          -GetInstanceProperties -GetVersionInfo -ABAPGetWPTable -GetAlertTree

SDEFAULT -ReadLogFile -ListLogFiles -J2EEGetProcessList -GetVersionInfo -ParameterValue

SDEFAULT -ReadLogFile -ListLogFiles -GetAlertTree -GetCIMObject
```

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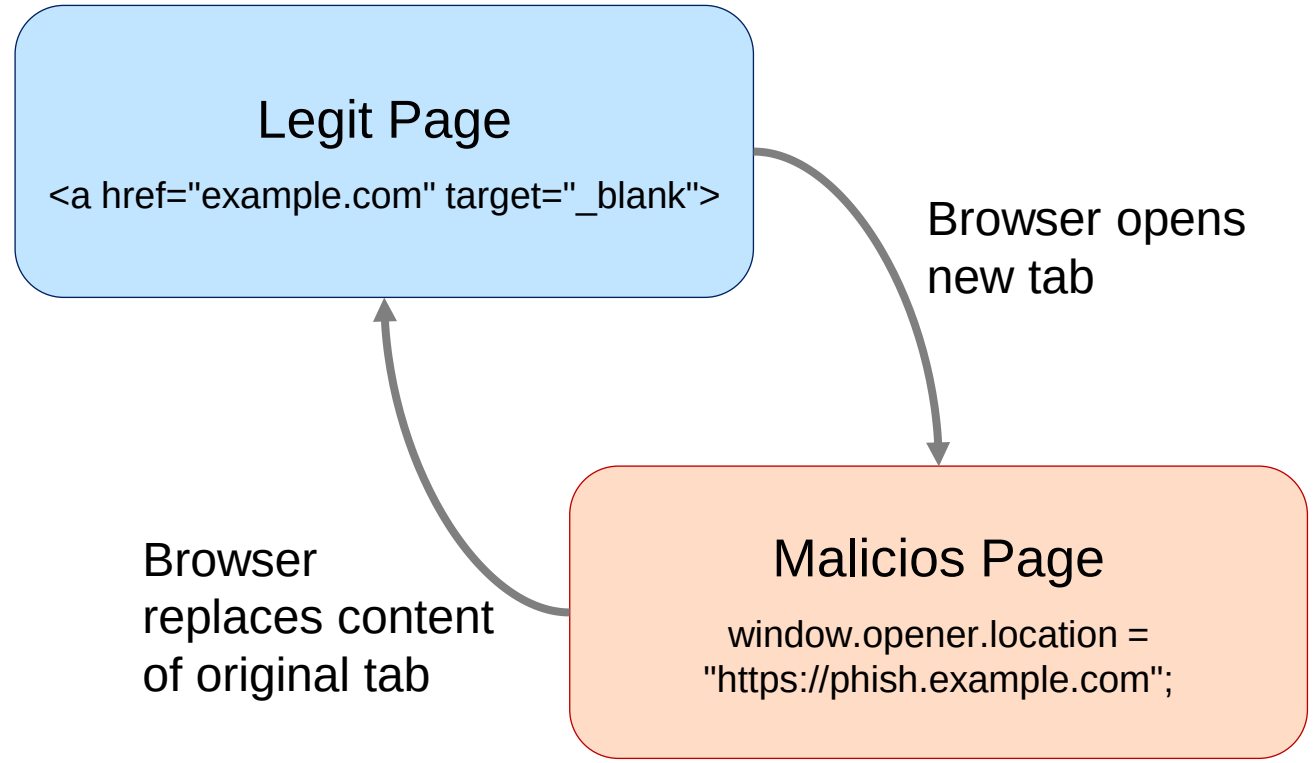
Note 3014875 - Reverse Tabnabbing attack in SAP Netweaver AS ABAP, AS Java and SAP UI5 applications on multiple platforms

Reverse Tabnabbing vulnerabilities are attacks, where an page linked from the target page uses the opener browsing context to redirect the target page to a phishing site.

SAP UI5 and Fiori Launchpad	Note 3014303
Web Dynpro ABAP	Note 2974582
SAP GUI for HTML	Note 2973428
Business Server Pages	Note 2972275
WebCUIF	Note 2994289
Unified Rendering (March 2021)	Note 2978151
Web Dynpro Java (March 2021)	Note 2976947
HTMLB for Java (March 2021)	Note 2977001
AS Java Start Page	Note 2965315



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SAP UI5 and Fiori Launchpad	Note 3014303
Web Dynpro ABAP	Note 2974582
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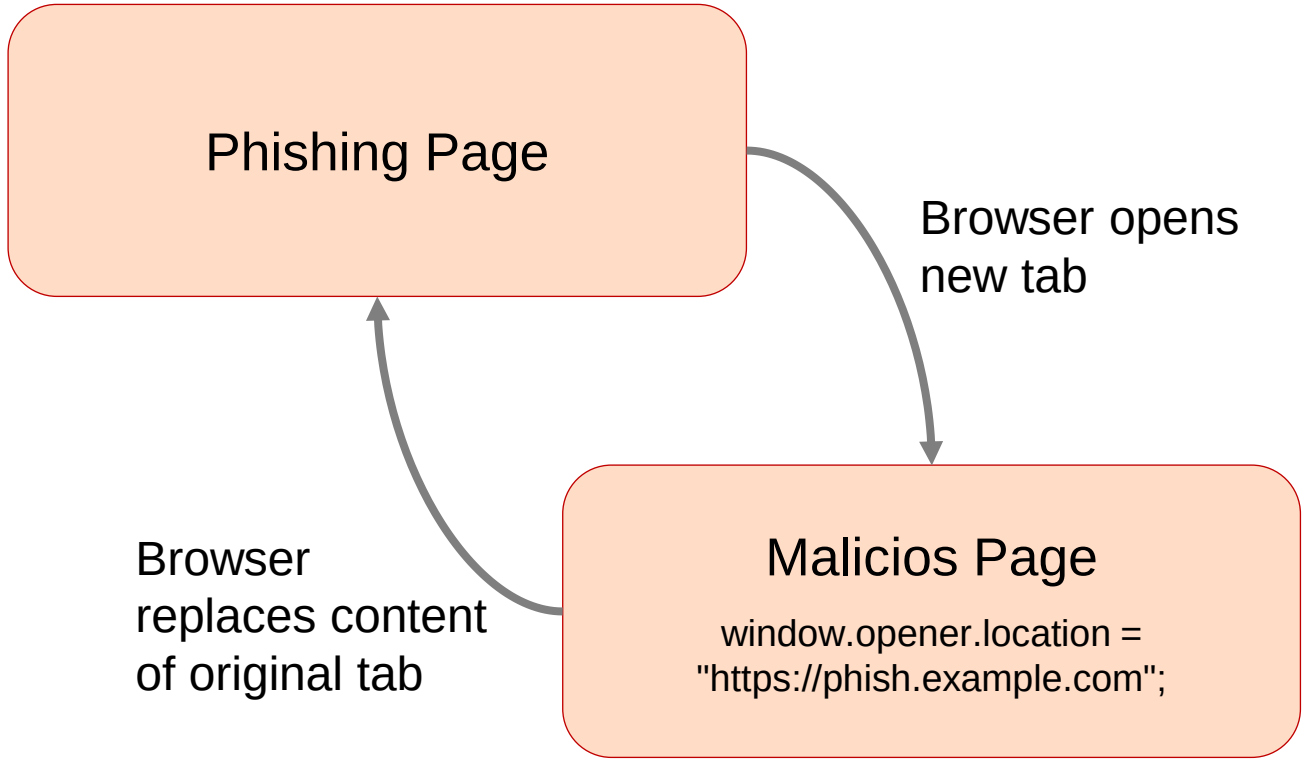
Business Server Pages	Note 2972275
WebCUIF	Note 2994289
Unified Rendering	
Web Dynpro Java	
HTMLB for Java	
AS Java Start Page	Note 2965315



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Note 3014121 - Remote Code Execution vulnerability in SAP Commerce (cloud & on-prem)

Note 3020726 - Remote Code Execution vulnerability in SAP Commerce: FAQ

- **Q1: Which customers are affected?**

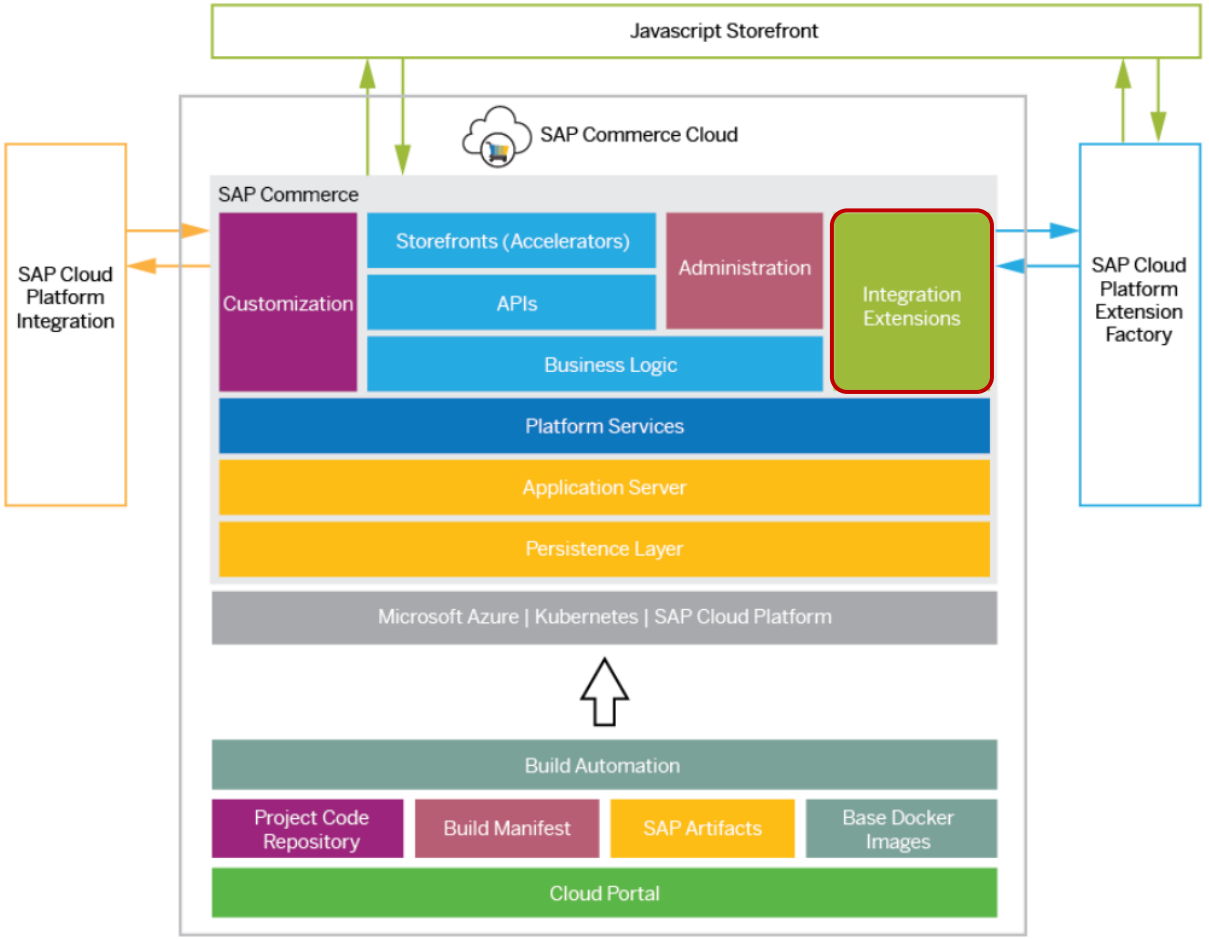
  All customers who have the SAP Commerce ruleengine extension installed are very likely affected. Another precondition is that customers are making use of default user accounts and user groups of SAP Commerce, or have custom user accounts or user groups that have permissions to change or create DroolsRule items.

- **Q2: Are customers who host SAP Commerce on premise affected?**

  Yes.

- **Q3: Are customers of SAP Commerce Cloud affected?**

  Yes, customers of SAP Commerce Cloud (both CCv1 and CCv2) are affected. They need to take the same measures as on premise customers, as described in the SAP Security Note.



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Note 3014121 - Remote Code Execution vulnerability in SAP Commerce (cloud & on-prem)

SAP Commerce - Installing and Upgrading – System Requirements
https://help.sap.com/viewer/a74589c3a81a4a95bf51d87258c0ab15/2011/en-US/8c6b9a8186691014bd8dd9635cabfaff.html

SAP Commerce Cloud Architecture
https://help.sap.com/viewer/20125f0eca6340dba918bda360e3cdfa/v2011/en-US/8b5588d8866910149d4eb5f99c75b6b4.html

"You manage your SAP Commerce Cloud deployments in the Cloud Portal, which enables you to control and monitor all aspects of your SAP Commerce Cloud instances. Builds are fully automated. They are packaged as Docker nodes, orchestrated by Kubernetes, and deployed on Microsoft Azure public cloud infrastructure. You have full control over build configuration using build manifest files, and can connect your own GitHub repository to pull in any custom code for your project at build time."

Infrastructure Considerations for On-Prem SAP Commerce
https://www.sap.com/cxworks/article/432591793/infrastructure_considerations_for_on_prem_sap_commerce

Migrate to SAP Commerce Cloud
https://www.sap.com/cxworks/article/435949091/migrate_to_sap_commerce_cloud

Older security notes:

Note 2786035 - Code Injection vulnerabilities in SAP Commerce Cloud
Note 2697573 - Cross-Site Scripting (XSS) vulnerability in SAP Commerce / SAP Hybris

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SAP GUI for Windows 7.70

SAP GUI for Windows 7.70
https://help.sap.com/viewer/product/sap_gui_for_windows/770.00/en-US

What's New in SAP GUI for Windows
https://help.sap.com/viewer/e8f03b91f99d45f4ae9d90ddf6e44b70/770.00/en-US

Note 2796898 - New and changed features in SAP GUI for Windows 7.70
https://launchpad.support.sap.com/#/notes/2796898

SAP GUI Security Module
https://help.sap.com/viewer/ca5169c2f72448eeb608cd09564ccf90/770.00/en-US

No major updates concerning security features – but a strong opportunity to review existing security settings:

- Check installed version (→ slides from 2016-01)
- Security Configuration (→ slides from 2017-04)
- Enable SNC Client Encryption (→ slides from 2017-05)
- Log unencrypted GUI /RFC (→ slides from 2015-07)

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SAP GUI for Windows 7.70 - Chromium Edge for HTML Control

Up to Release 7.60, the SAP GUI HTML control always uses the control for Microsoft Internet Explorer. As a result, SAP GUI may launch an Internet Explorer window.

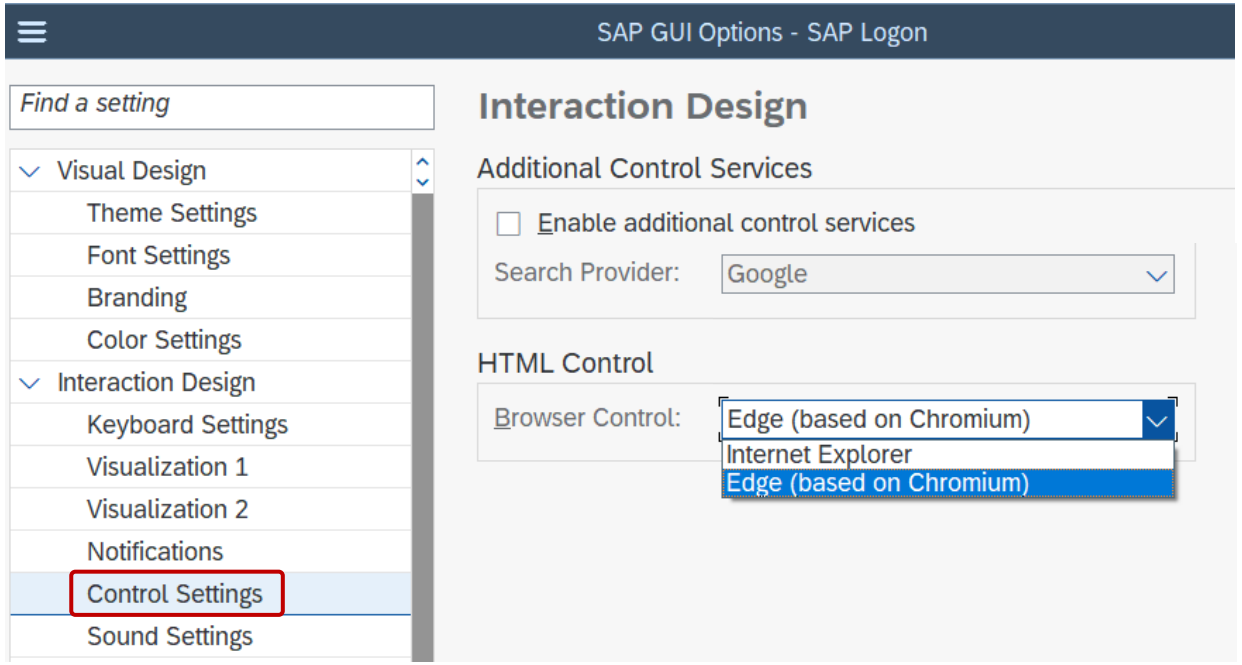
As of Release 7.70, SAP GUI for Windows offers to embed the Microsoft WebView2 control (Edge based on Chrome) https://docs.microsoft.com/en-us/microsoft-edge/webview2

- **Installation required**

  Microsoft Edge WebView2 Runtime 12.02.2021

- **Local activation in SAP Logon required**

(This is not related to the Chromium plugin of the SAP Business Client.)



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January 2021

Topics January 2021

Q&A Notes for Security HotNews

Note 2622660 - Security updates for the browser control Google Chromium delivered with SAP Business Client

Note 2983367 - Code Injection vulnerability in SAP Business Warehouse (Master Data Management) and SAP BW4HANA (reloaded)

Note 2986980 - Multiple vulnerabilities in SAP Business Warehouse (Database Interface)

Note 2999854 - Code Injection in SAP Business Warehouse and SAP BW/4HANA

Note 2945581 - Cross-Site Scripting (XSS) vulnerability in SAP CRM WebClient UI

Note 3001373 - Information Disclosure in Central Order on Cloud Foundry

Note 2911103 - SE16N: Alternative edit mode

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Q&A Notes for Security HotNews

December 2020

Note 2989075 - Missing XML Validation in SAP BusinessObjects Business Intelligence Platform (Crystal Report)
- -

Note 2974774 - Missing Authentication Check In SAP NetWeaver AS JAVA (P2P Cluster Communication)
- Note 2997167 - Missing Authentication Check In NW AS Java P2P Cluster Communication - Frequently asked questions and answers

Note 2973735 - Code Injection in SAP AS ABAP and S/4 HANA (DMIS)
- Note 2985806 - FAQ for SAP Note 2973735 - Code Injection vulnerability in S/4 HANA

January 2021

Note 2999854 - Code Injection in SAP Business Warehouse and SAP BW/4HANA
- Note 3006112 - Q&A for SAP Security Note 2999854

Note 2986980 - Multiple vulnerabilities in SAP Business Warehouse (Database Interface)
- Note 3005196 - Q&A for SAP Security Note 2986980

Note 2983367 - Code Injection vulnerability in SAP Business Warehouse (Master Data Management) and SAP BW4HANA
- Note 2999167 - Q&A for SAP Security Note 2983367

Note 2979062 - Privilege escalation in SAP NetWeaver Application Server for Java (UDDI Server)
- Note 2989299 - Frequently asked questions and answers

Note 2622660 - Security updates for the browser control Google Chromium delivered with SAP Business Client
- (Exception, old note which gets updated regularly.)

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Note 2622660 - Security updates for the browser control Google Chromium delivered with SAP Business Client

Note Version	SAP Business Client Release	Chromium Stable Release	highest CVSS rating of contained security corrections
Version 47 from 22.12.2020	SAP Business Client 7.0 PL15	Chromium 87.0.4280.66	Base Score: 7.5 (Priority High) AV:N/AC:L/PR:N/UI:N/S:U/C:H/I:N/A:N
Version 46 from 10.11.2020	SAP Business Client 7.0 PL14	Chromium 86.0.4240.183	Base Score: 10.0 (Priority Hot News) AV:N/AC:L/PR:N/UI:N/S:C/C:H/I:H/A:H
Version 44 from 13.10.2020	SAP Business Client 7.0 PL13	Chromium 85.0.4183.102	Base Score: 9.6 (Priority Hot News) AV:N/AC:L/PR:N/UI:R/S:C/C:H/I:H/A:H
Version 42 from 25.08.2020	SAP Business Client 7.0 PL12	Chromium 84.0.4147.105	Base Score: 9.6 (Priority Hot News) AV:N/AC:L/PR:N/UI:R/S:C/C:H/I:H/A:H
Version 41 from 14.07.2020	SAP Business Client 7.0 PL11	Chromium 83.0.4103.97	Base Score: 9.6 (Priority Hot News) AV:N/AC:L/PR:N/UI:R/S:C/C:H/I:H/A:H
Version 40 from 28.04.2020	SAP Business Client 7.0 PL10	Chromium 81.0.4044.92	Base Score: 8.8 (Priority High) AV:N/AC:L/PR:N/UI:R/S:U/C:H/I:H/A:H
Version 39 from 10.03.2020	SAP Business Client 6.5 PL22 SAP Business Client 7.0 PL9	Chromium 80.0.3987.122	Base Score: 8.8 (Priority High) AV:N/AC:L/PR:N/UI:R/S:U/C:H/I:H/A:H
-	SAP Business Client 6.5 PL21 SAP Business Client 7.0 PL8	Chromium 79.0.3945	Base Score: 8.8 (Priority High) AV:N/AC:L/PR:N/UI:R/S:U/C:H/I:H/A:H
Version 37 from 28.01.2020	SAP Business Client 6.5 PL20 SAP Business Client 7.0 PL7	Chromium 79.0.3945	Base Score: 8.8 (Priority High) AV:N/AC:L/PR:N/UI:R/S:U/C:H/I:H/A:H

Security Note Priority	CVSS v3 Base score
Low	0.1 - 3.9
Medium	4.0 - 6.9
High	7.0 - 8.9
Hot News	9.0 - 10.0

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Note 2983367 - Code Injection vulnerability in SAP Business Warehouse (Master Data Management) and SAP BW4HANA

Q&A Note 2999167

The validity of the correction instructions now covers all relevant SP levels

Software Component	Release	from SP	to SP
SAP_BW	700	SAPKW70018	SAPKW70040
SAP_BW	701	SAPKW70107	SAPKW70123
SAP_BW	702	SAPKW70207	SAPKW70223
SAP_BW	730	SAPKW73006	ALL SUPP. PACKAGES
SAP_BW	731	SAPKW73107	SAPKW73128
SAP_BW	740	SAPKW74002	SAPKW74024
SAP_BW	750	750	SAPK-75019INSAPBW
SAP_BW	751	751	SAPK-75111INSAPBW
SAP_BW	752	752	SAPK-75207INSAPBW
SAP_BW	753	753	SAPK-75305INSAPBW
SAP_BW	754	754	SAPK-75403INSAPBW
SAP_BW	755	755	755
DW4CORE	100	100	SAPK-10018INDW4CORE
DW4CORE	200	200	SAPK-20006INDW4CORE

Support Packages

Software Component	Release	Support Package
SAP_BW	700	SAPKW70041
	701	SAPKW70124
	702	SAPKW70224
	731	SAPKW73129
	740	SAPKW74025
	750	SAPK-75020INSAPBW
	751	SAPK-75112INSAPBW
	752	SAPK-75208INSAPBW
	753	SAPK-75306INSAPBW
	754	SAPK-75404INSAPBW
	755	SAPK-75501INSAPBW
	782	SAPK-78202INSAPBW
DW4CORE	100	SAPK-10019INDW4CORE
	200	SAPK-20007INDW4CORE

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Note 2986980 - Multiple vulnerabilities in SAP Business Warehouse (Database Interface)

Q&A Note 3005196

Deactivation of critical, obsolete RFC-function `RSDL_DB_GET_DATA_BWS` in software component `SAP_BW` which exists on all ABAP systems.

- **No test required, just do it**
- **Detection:**
  Inspect Workload Statistics or Security Audit Log or use ETD to verify that the RFC function is not called
- **Manual workaround with modification:**
  Deactivate the function by yourself
- **Manual workaround without modification:**
  Check authorizations for authorization object `S_RFC` for function `RSDL_DB_GET_DATA_BWS` as well as for function group `RSDL`

```
*&---------------------------------------------------------------------*
*& Object          FUNC RSDL_DB_GET_DATA_BWS
*& Object Header   FUGR RSDL
*&---------------------------------------------------------------------*
*& FUNCTION RSDL_DB_GET_DATA_BWS
*&---------------------------------------------------------------------*
...
FUNCTION rsdl_db_get_data_bws.

*>>>> START OF DELETION <<<<<
* Local field symbol definition
*>>>> END OF DELETION <<<<<<
*>>>> START OF INSERTION <<<<<
 MESSAGE x001(rsdl).
* security issue

* Local field symbol definition
*>>>> END OF INSERTION <<<<<<
```

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Note 2999854 - Code Injection in SAP Business Warehouse and SAP BW/4HANA

Q&A Note 3006112

Normal function `RSDRC_ITAB_LOGGING` gets secured in software component `SAP_BW` which exists on all ABAP systems. This function is called by RFC function `RSDRI_DF_TEXT_READ`

- **No test required, just do it**
- **Generated report `Z_RSDRI_DF_TXT_*` is only useful for debugging purpose.**
- **Detection:**
  Inspect Workload Statistics or Security Audit Log or use ETD to verify that the RFC function respective the report is not called.

```
*&---------------------------------------------------------------------*
*& Object          FUNC RSDRC_ITAB_LOGGING
*& Object Header   FUGR RSDRC_SERVICES
*&---------------------------------------------------------------------*
*& FUNCTION RSDRC_ITAB_LOGGING
*&---------------------------------------------------------------------*
...
      l_s_code2-line = <l_comp>.

*     --- cope with quotes
*>>>> START OF DELETION <<<<<
      IF <l_s_component>-type_kind = 'C'.
        REPLACE ALL OCCURRENCES OF '''' IN l_s_code2-line WITH ''''''.
*>>>> END OF DELETION <<<<<<
*>>>> START OF INSERTION <<<<<
      IF <l_s_component>-type_kind = cl_abap_typedescr=>typekind_char
         OR <l_s_component>-type_kind = cl_abap_typedescr=>typekind_string.
        l_s_code2-line = cl_abap_dyn_prg=>escape_quotes( l_s_code2-line ).
*>>>> END OF INSERTION <<<<<<
```

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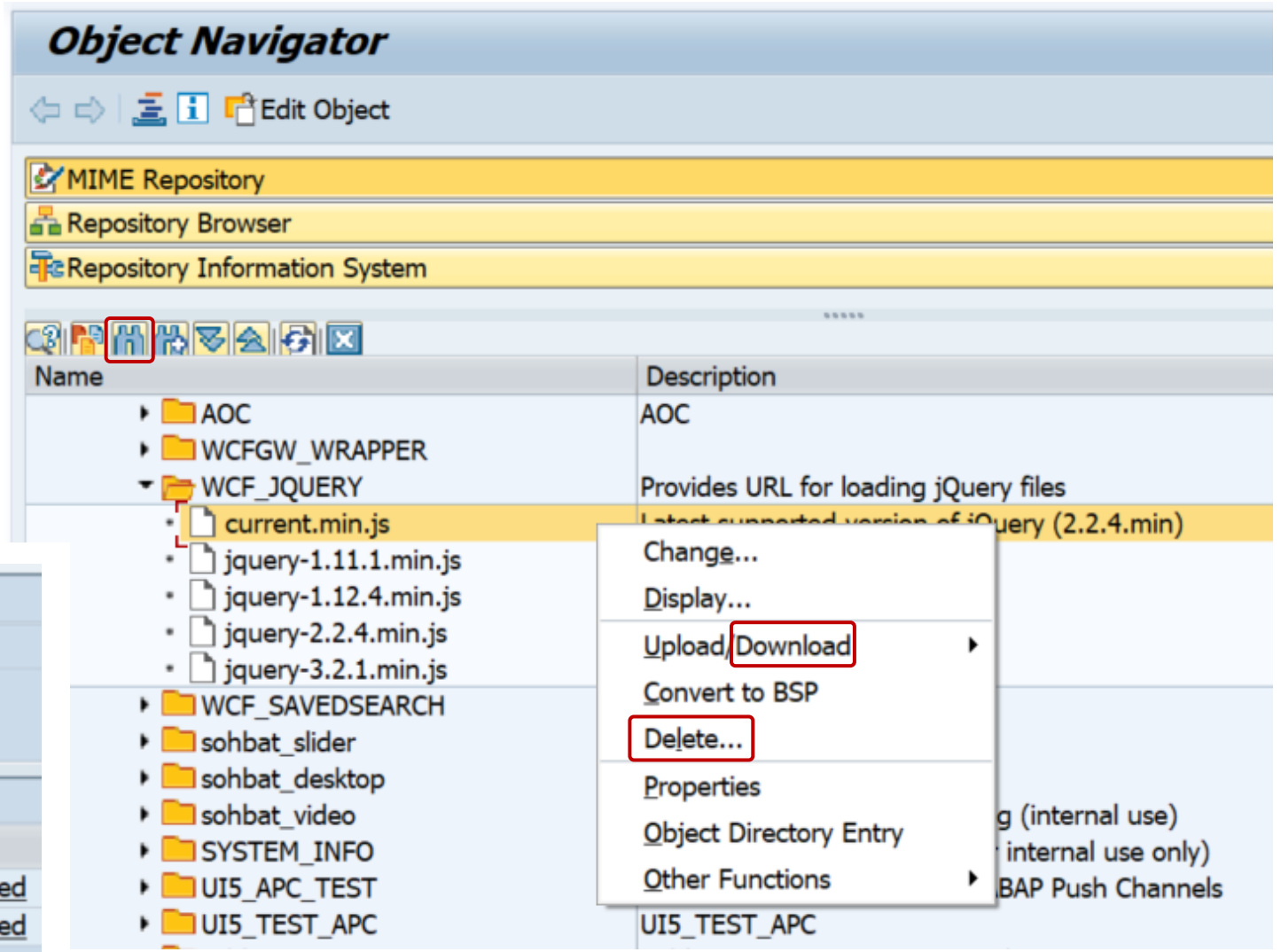
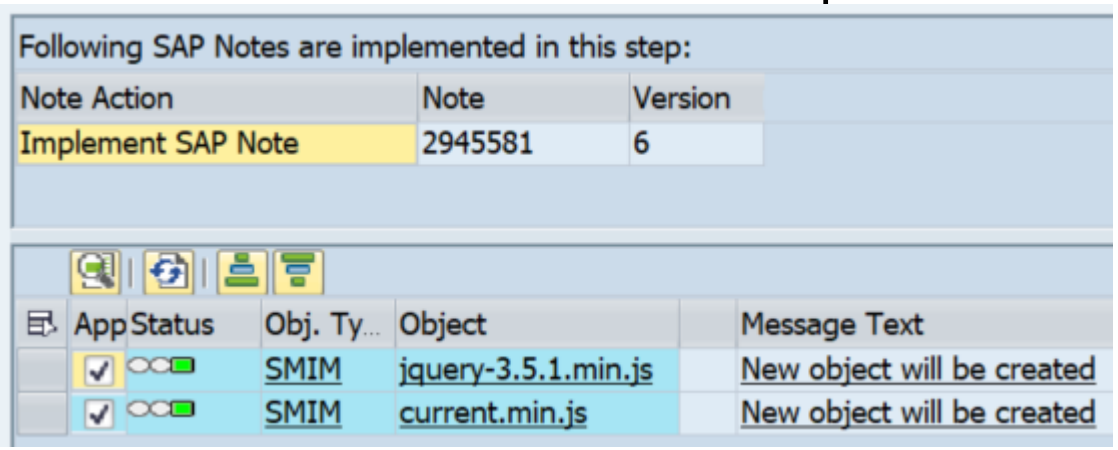
Note 2945581 - Cross-Site Scripting (XSS) vulnerability in SAP CRM WebClient UI

Software component `WEBCUIF` exists in various ABAP system types.

Manual instruction to delete a MIME object before implementation via SNOTE in the development system

Navigate to path SAP → BC → BSP → SAP and use the search function, download the file to have a backup until





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Note 3001373 - Information Disclosure in Central Order on Cloud Foundry

Central Order service for SAP Customer Experience solutions
Purpose: Consolidate and manage your order-related data in a central cloud-based service.
This service runs in the **Cloud Foundry** environment.

Manual instruction to recreate binding credentials if you have created them before 04.12.2020.

Online Documentation - Central Order Service Guide – Initial Setup
https://help.sap.com/viewer/d91676a7fa624c31b7b1c526d7787e2f/Beta/en-US/227cf2f493d74fd6a996a88f29c82bee.html

Online Documentation - Central Order Service Guide – Creating Service Keys
https://help.sap.com/viewer/65de2977205c403bbc107264b8eccf4b/Cloud/en-US/4514a14ab6424d9f84f1b8650df609ce.html

You can use service keys to generate credentials to communicate directly with a service instance. The service key contains the URL that you use to call the APIs of the service, the client ID, and the client secret. Note this information, as you need it in follow-on procedures.
Service keys contain authentication- and authorization-related content and have to be handled securely.

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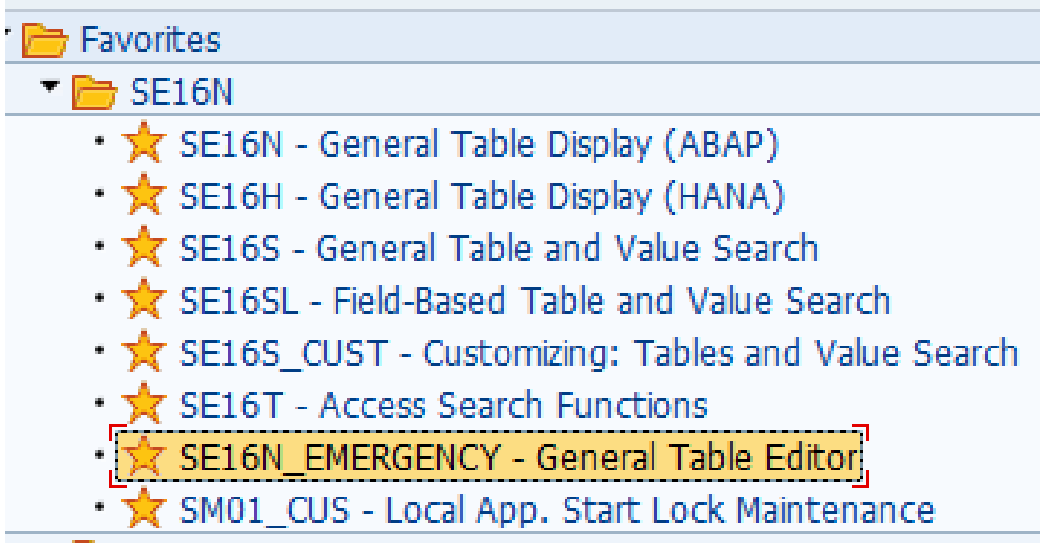
Note 2911103 - SE16N: Alternative edit mode

Transaction `SE16N` does not offer change mode via command `&SAP_EDIT` anymore.

New transaction `SE16N_EMERGENCY` can be used instead.

- **Several required notes with additional manual implementation steps**
- **The transaction gets locked by default**
- **You can unlock it via transaction `SM01_CUS`**
- **Authorizations for `S_TABU_DIS` / `S_TABU_NAM` with activity `02`=change is required**
- **Usage get logged, view logs via report `RKSE16N_CD_DISPLAY`**



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Note 2911103 - SE16N: Alternative edit mode

Several required notes, e.g. 2787892, 2848972, 2863410, 2867757, 2879630, 2880334, 2886898, 2905486, 2911103 with additional manual implementation steps

Note	Version	Short text	Component	Proc. Status	Implementation State	
2787892	5	CO-OM tools: Change to text table selection	CO-OM	Not Relevant	Cannot be implemented	
2848972	1	CO-OM tools: SE16N: Text tables T000 and T002	CO-OM	In Process	Can be implemented	
2863410	3	SE16N: Hiding empty columns	CO-OM	In Process	Can be implemented	+ manual steps
2867757	3	SE16N: FAQ: Conversion of inputs and outputs	CO-OM	In Process	Can be implemented	+ manual steps
2879630	3	SE16H: Outer join definition improvement	CO-OM	In Process	Can be implemented	
2880334	4	SE16N: Display of selection condition	CO-OM	In Process	Can be implemented	+ manual steps
2886898	17	SE16H: Enhancements to join conditions	CO-OM	In Process	Can be implemented	+ manual steps
2905486	2	SE16N: Change documents for fields of type STRING	CO-OM	In Process	Can be implemented	+ manual steps
2911103	6	SE16N: Alternative edit mode	CO-OM	In Process	Can be implemented	+ manual steps

However, on higher releases give `SNOTE` a try first – depending on the version of `SNOTE` it can perform most or all of the manual steps automatically!

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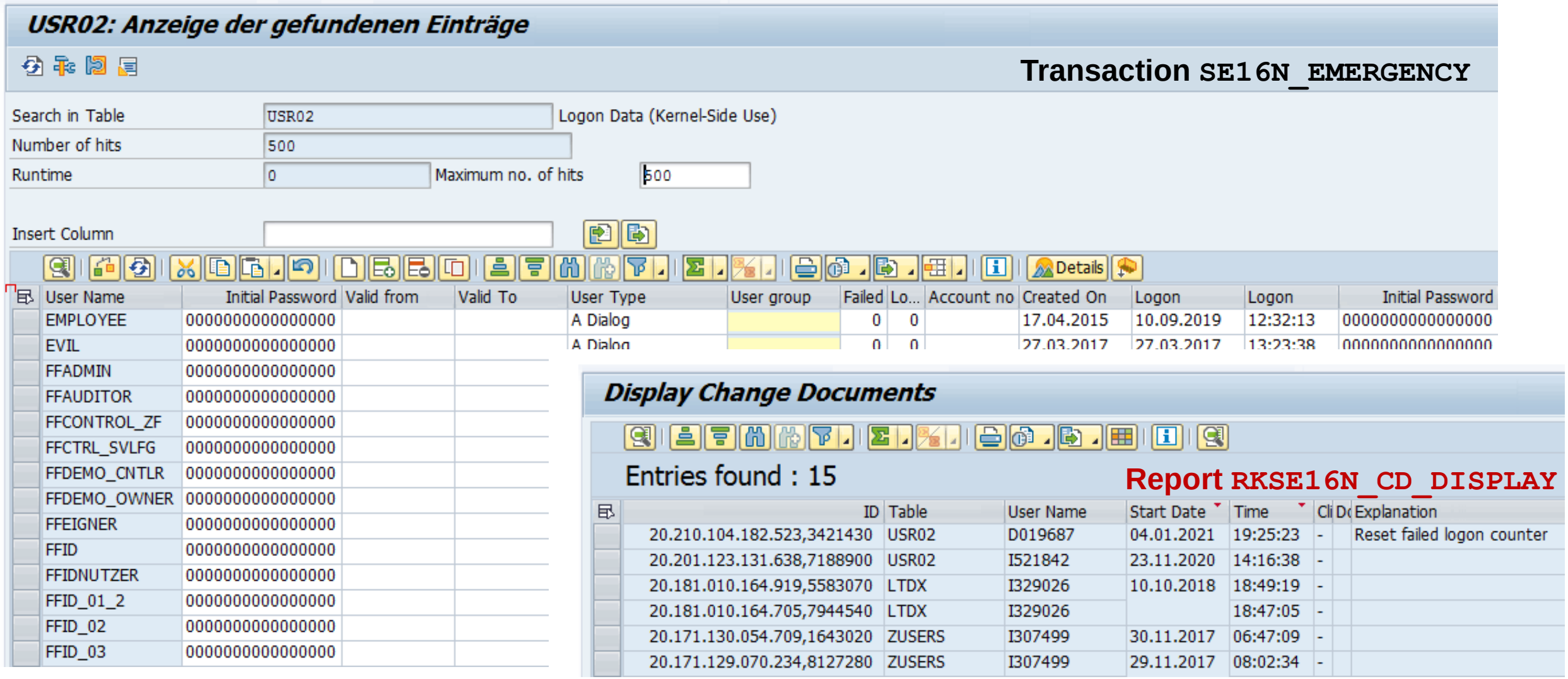
Note 2911103 - SE16N: Alternative edit mode



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Note 2911103 - SE16N: Alternative edit mode

Related notes / correction notes of component CO-OM

Note 2002588 - CO-OM Tools: Documentation for SE16S, SE16SL, and SE16S_CUST

...

Note 2906317 - SE16N: Access to CDS views

Note 2968176 - SE16H: Improvements for outer joins and having

Note 2978713 - SE16N Selection Screen does not show separators

Note 2985178 - SE16N_EMERGENCY: Explanation popup occurs even with no change of data

Note 3007467 - SE16H: Authorization check for execution of Join-Selections

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December 2020

Topics December 2020

Configuration & Security Analytics (CSA) in FocusedRun

Note 2890213 - Missing Authentication Check in SAP Solution Manager (reloaded)

Note 2985866 - Missing Authentication Check in SAP Solution Manager (JAVA stack)

Note 2983204 - Multiple Vulnerabilities in SAP Solution Manager 7.2 (User Experience Monitoring)

Note 2974330 - Unrestricted File Upload vulnerability in Java (Process Integration Monitoring)

Note 2974774 - Missing Authentication Check In SAP NetWeaver AS JAVA (P2P Cluster Communication)

Note 2983367 - Code Injection vulnerability in SAP Business Warehouse (Master Data Management) and SAP BW4HANA

Note 2670851 - Authority check in RSSG_BROWSER

Note 2978768 - Inproper authentication in SAP HANA database

System Recommendations – Recalculation for some notes

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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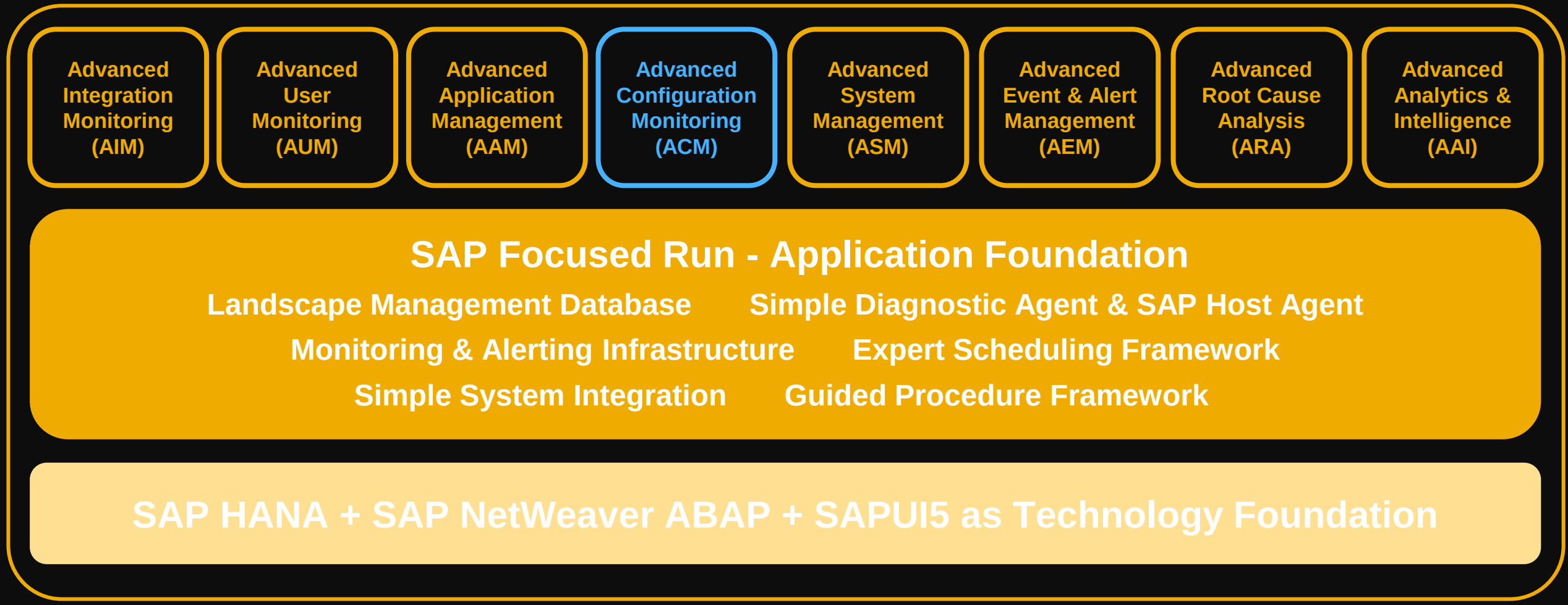
SAP Focused Run – Use Cases & High Level Architecture



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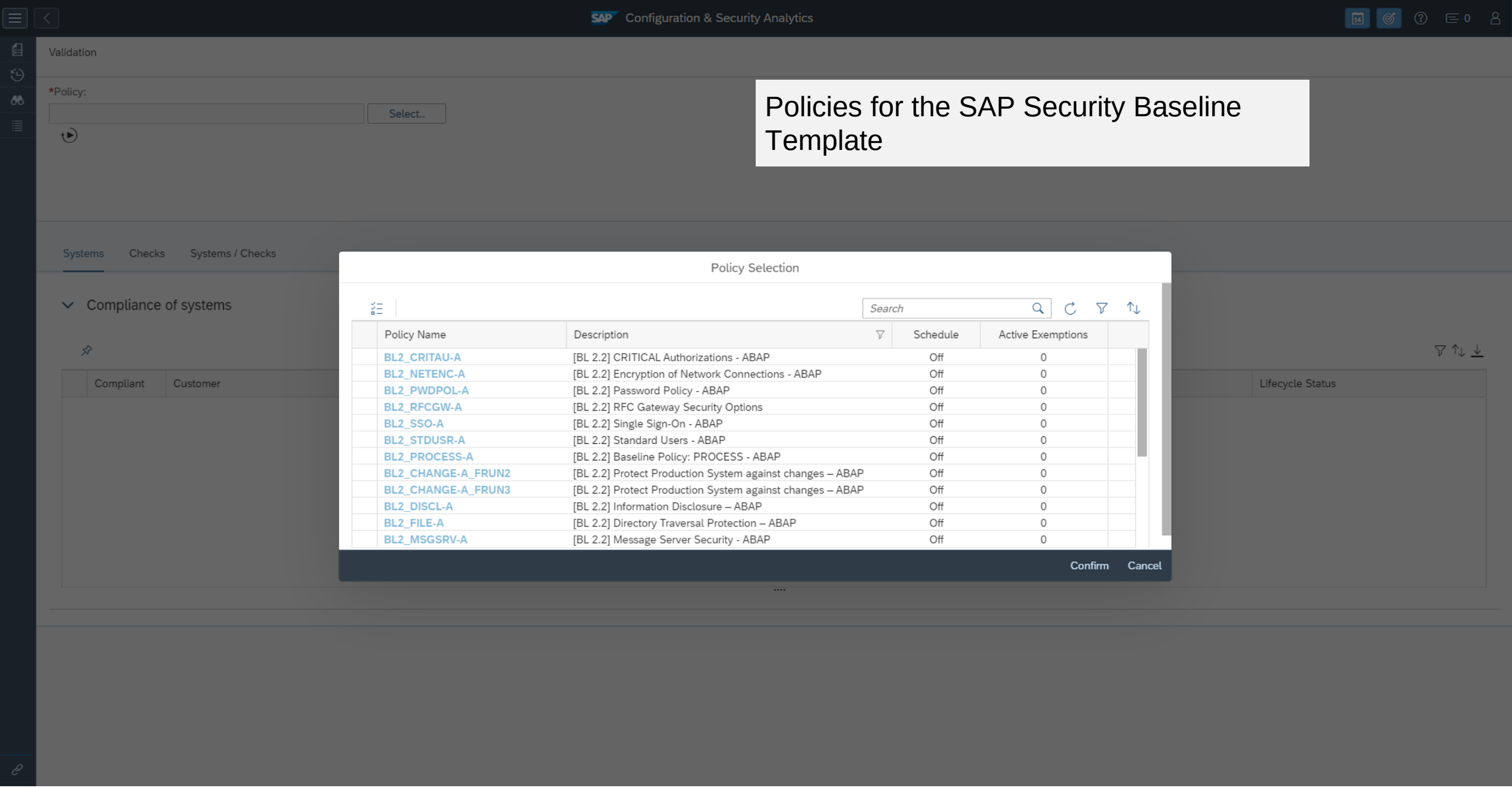
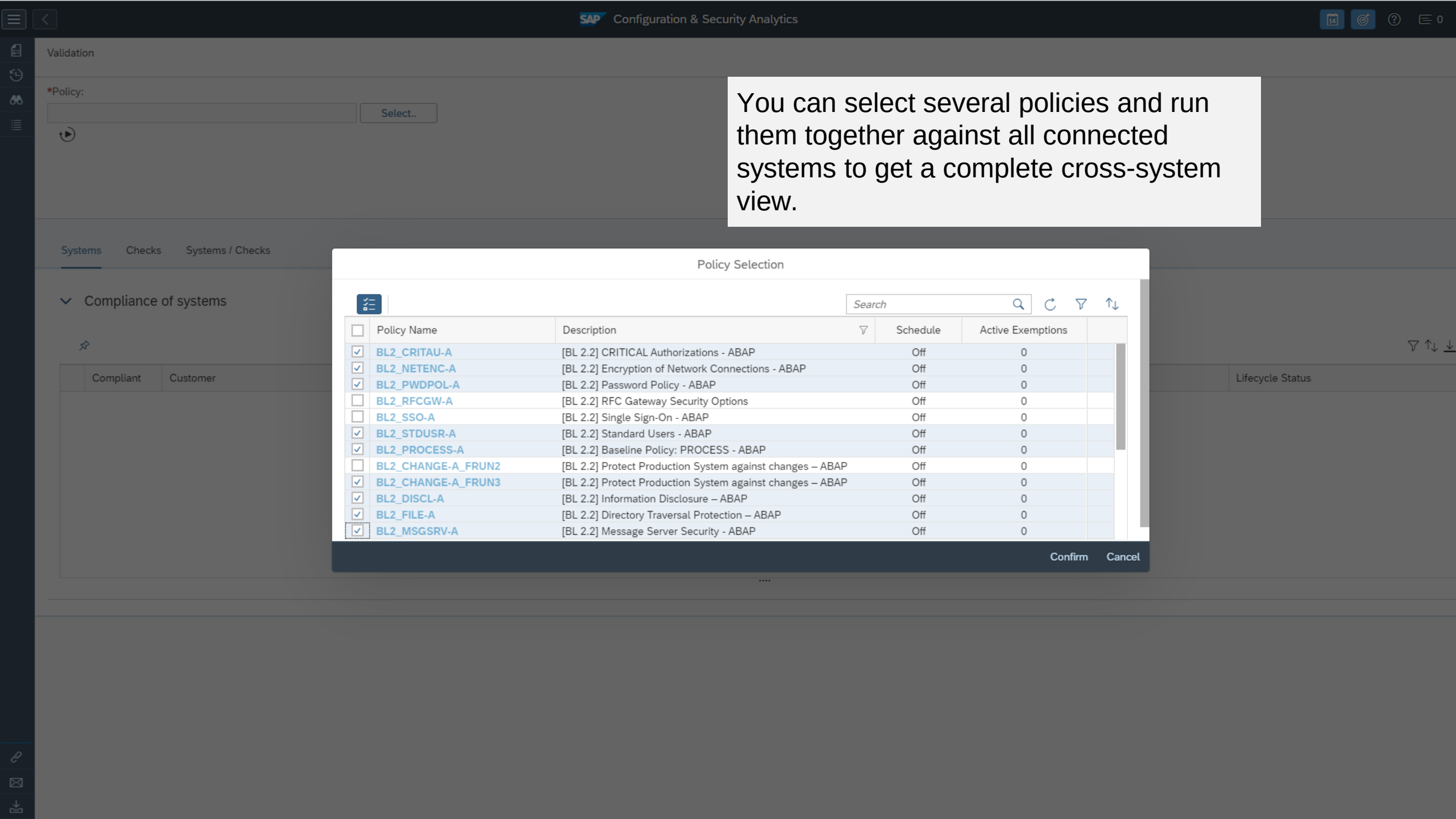
Policies for the SAP Security Baseline Template




Configuration & Security Analytics
Validation
*Policy:
Select..
You can select several policies and run them together against all connected systems to get a complete cross-system view.
Systems
Checks
Systems / Checks
Compliance of systems
Compliant
Customer
Lifecycle Status
Policy Selection
Search
Policy Name
Description
Schedule
Active Exemptions
BL2_CRITAU-A [BL 2.2] CRITICAL Authorizations - ABAP Off 0
BL2_NETENC-A [BL 2.2] Encryption of Network Connections - ABAP Off 0
BL2_PWDPOL-A [BL 2.2] Password Policy - ABAP Off 0
BL2_RFCGW-A [BL 2.2] RFC Gateway Security Options Off 0
BL2_SSO-A [BL 2.2] Single Sign-On - ABAP Off 0
BL2_STDUSR-A [BL 2.2] Standard Users - ABAP Off 0
BL2_PROCESS-A [BL 2.2] Baseline Policy: PROCESS - ABAP Off 0
BL2_CHANGE-A_FRUN2 [BL 2.2] Protect Production System against changes – ABAP Off 0
BL2_CHANGE-A_FRUN3 [BL 2.2] Protect Production System against changes – ABAP Off 0
BL2_DISCL-A [BL 2.2] Information Disclosure – ABAP Off 0
BL2_FILE-A [BL 2.2] Directory Traversal Protection – ABAP Off 0
BL2_MSGSRV-A [BL 2.2] Message Server Security - ABAP Off 0
Confirm
Cancel

Validation

*Policy:

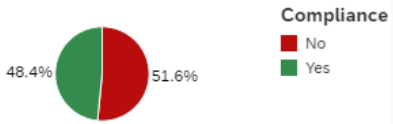
[BL 2.2] CRITICAL Authorizations - ABAP
[BL 2.2] Encryption of Network Connections - ABAP
[BL 2.2] Password Policy - ABAP
[BL 2.2] Standard Users - ABAP

Select..

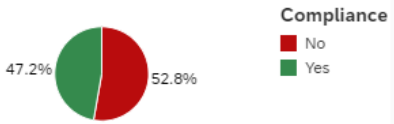
Validated at 12/16/2020, 3:17:21 PM - 3 hours ago

Systems

Check Items



Systems / Checks



Systems | Checks | Systems / Checks

Compliance

Aggregated view per Policy

Checks - Items: 119 - displayed: 119

Display Check Filter Area

Compliant	Policy	Check	Check Description	% Non Compliant	# Non Compliant	# Compliant	Compliance Rule
No	BL2_PROCESS-A	AUDIT-A_a.3p	[p2-STANDARD] Audit Log IP address loggin...	100	10	0	No: (NAME = 'rsau/log_peer_address' and NOT (VALUE = '1')) No: no item matches compliant or n...
No	BL2_PROCESS-A	AUDIT-A_a.4	[p2-STANDARD] Audit Log number of selecti...	100	8	0	No: (NAME = 'SlotCount' and not (lpad(VALUE, 4, '0') >= '0010'))
No	BL2_PROCESS-A	AUDIT-A_b1.1	[p2-STANDARD] Audit Slot for SAP* user exi...	100	7	0	No: EXIST:(SLOTINDEX like '%' and STATUS = 'X' and UNAME = 'SAP#*')
No	BL2_PROCESS-A	AUDIT-A_b1.3	[p2-STANDARD] Audit Slot for DDIC user ex...	100	7	0	No: EXIST:(SLOTINDEX like '%' and STATUS = 'X' and UNAME = 'DDIC')
No	BL2_PROCESS-A	AUDIT-A_b1.5	[p2-STANDARD] Audit Slot for SAPCPIC use...	100	7	0	No: EXIST:(SLOTINDEX like '%' and STATUS = 'X' and UNAME = 'SAPCPIC')
No	BL2_PROCESS-A	AUDIT-A_b2.1	[p2-STANDARD] Audit Slot for CRITICAL US...	100	7	0	No: EXIST:(SLOTINDEX like '%' and STATUS = 'X' and (UNAME != 'SAP#*' and UNAME != 'DDIC' a...
No	BL2_PROCESS-A	AUDIT-A_b2.1a	[p2-STANDARD] Audit Slot for SUPPORT or ...	100	7	0	No: EXIST:(SLOTINDEX like '%' and STATUS = 'X' and (UNAME like 'SAPSUPPORT%' or UNAME li...
No	BL2_CHANGE-A_...	CHANGE-A_e.2	[p3-EXTENDED] Transport Parameter VERS...	100	1	0	No: (NAME = 'VERS_AT_IMP' and VALUE != 'ALWAYS')
No	BL2_CHANGE-A_...	CHANGE-A_f	[p2-STANDARD] Transport Parameter TLOG...	100	2	0	No: (NAME = 'TLOGOCHECK' and VALUE != 'TRUE')
No	BL2_CHANGE-A_...	CHANGE-A_g.2	[p3-EXTENDED] Transport Parameter TP_V...	100	2	0	No: (NAME = 'TP_VERSION' and VALUE < '380')

Validation

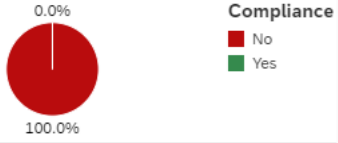
*Policy:

[BL 2.2] CRITICAL Authorizations - ABAP
[BL 2.2] Encryption of Network Connections - ABAP
[BL 2.2] Password Policy - ABAP
[BL 2.2] Standard Users - ABAP

Select..

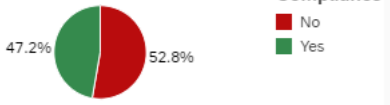
Validated at 12/16/2020, 3:17:21 PM - 3 hours ago

Systems



Check Items

Systems / Checks



Systems | Checks | Systems / Checks

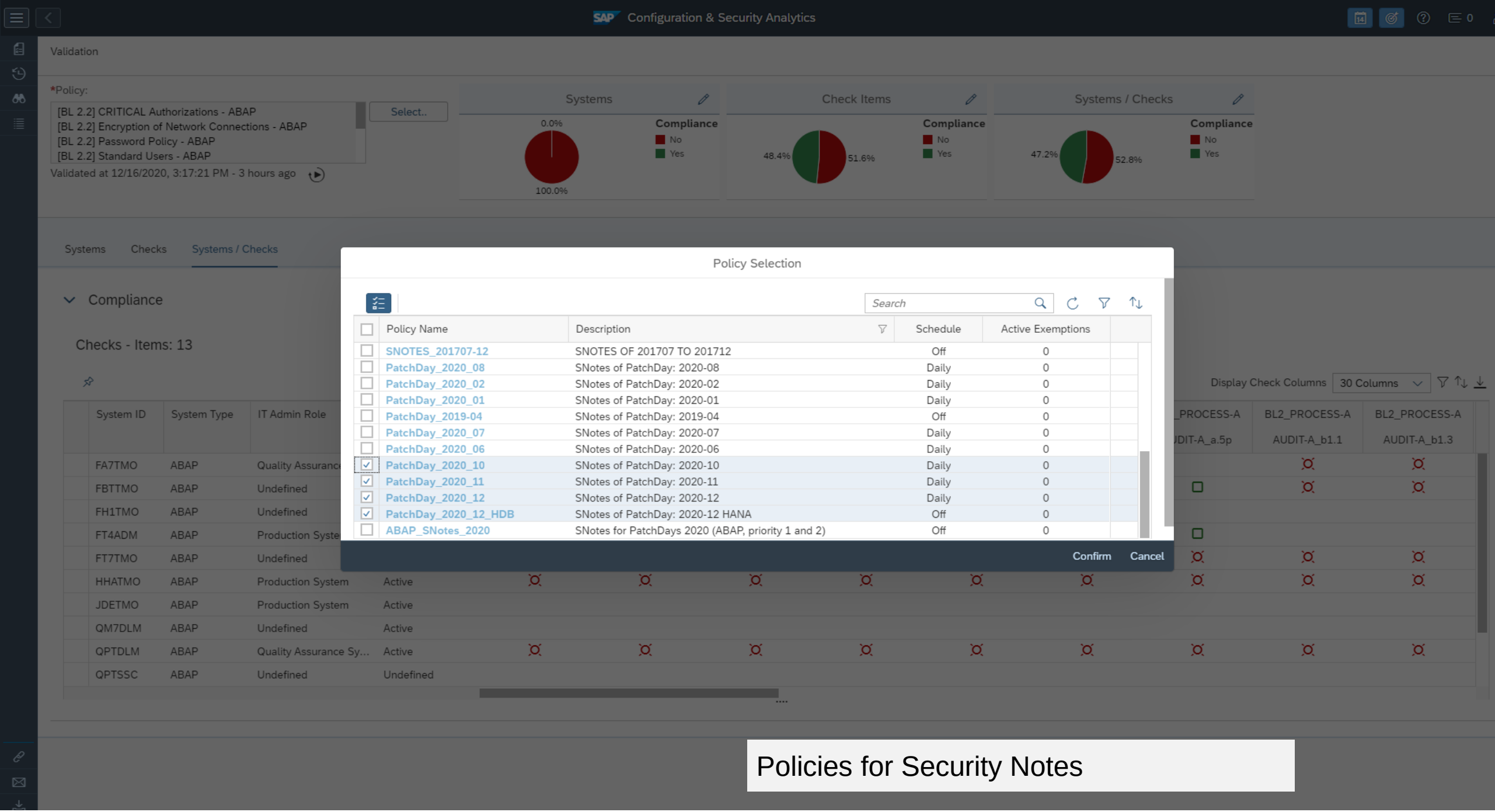
Compliance

System Overview

Checks - Items: 13

Previous Next Display Check Columns 30 Columns

System ID	System Type	IT Admin Role	Lifecycle Status	BL2_PROCESS-A AUDIT-A_a.1	BL2_PROCESS-A AUDIT-A_a.1p	BL2_PROCESS-A AUDIT-A_a.2p	BL2_PROCESS-A AUDIT-A_a.3p	BL2_PROCESS-A AUDIT-A_a.4	BL2_PROCESS-A AUDIT-A_a.4p	BL2_PROCESS-A AUDIT-A_a.5p	BL2_PROCESS-A AUDIT-A_b1.1	BL2_PROCESS-A AUDIT-A_b1.3
FA7TMO	ABAP	Quality Assurance Sy...	Active	☒				☒			☒	☒
FBTTMO	ABAP	Undefined	Active	☐	☐	☒	☒	☒	☐	☐	☒	☒
FH1TMO	ABAP	Undefined	Active									
FT4ADM	ABAP	Production System	Active	☐	☐	☐	☒	☒	☐	☐		
FT7TMO	ABAP	Undefined	Active	☒	☒	☒	☒	☒	☒	☒	☒	☒
HHATMO	ABAP	Production System	Active	☒	☒	☒	☒	☒	☒	☒	☒	☒
JDETMO	ABAP	Production System	Active									
QM7DLM	ABAP	Undefined	Active									
QPTDLM	ABAP	Quality Assurance Sy...	Active	☒	☒	☒	☒	☒	☒	☒	☒	☒
QPTSSC	ABAP	Undefined	Undefined									



Policies for Security Notes

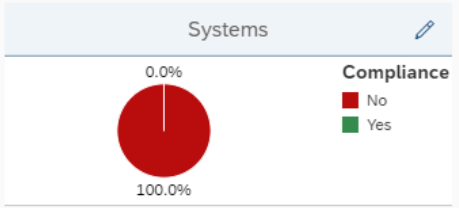
Validation

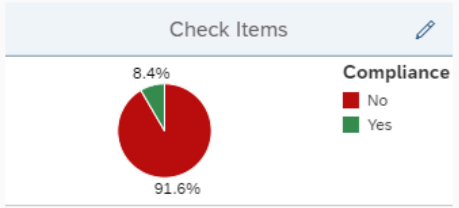
*Policy:

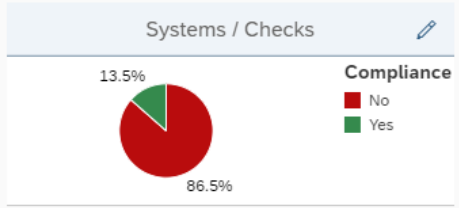
SNotes of PatchDay: 2020-10
SNotes of PatchDay: 2020-11
SNotes of PatchDay: 2020-12
SNotes of PatchDay: 2020-12 HANA

Select..

Validated at 12/16/2020, 10:04:57 AM - 8 hours ago







Systems | Checks | Systems / Checks

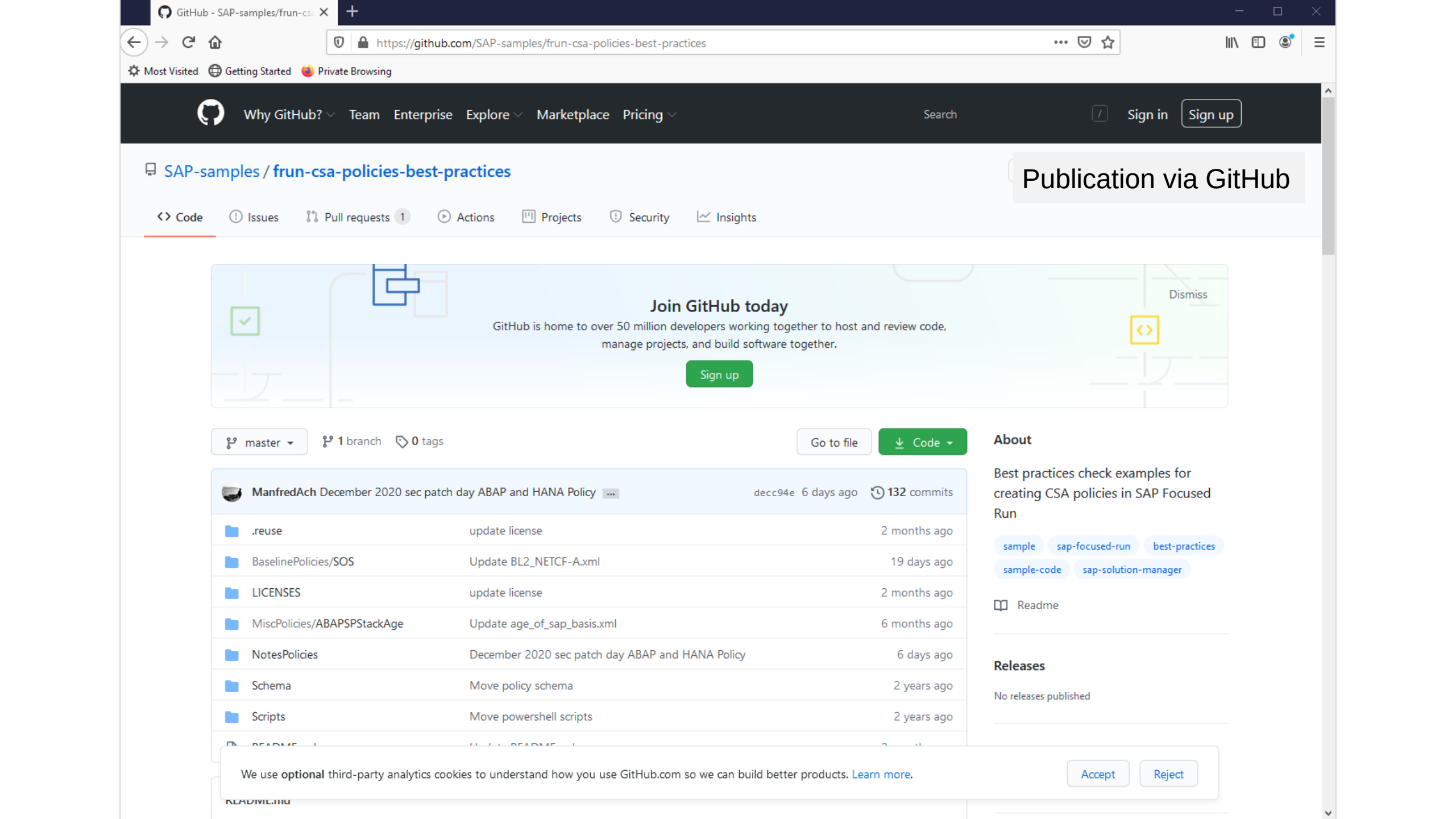
Compliance

Aggregated view per Policy (PatchDay)

Checks - Items: 21 - displayed: 21

Display Check Filter Area

Compliant	Policy	Check	Check Description	% Non Compliant	# Non Compliant	# Compliant	Compliance Rule
No	PatchDay_2020_12	0002973735	[p1-CVSS 9.1] Note 0002973735 missing an...	100	4	0	No: (((COMPONENT = 'DMIS' and VERSION = '2011_1_620' and lpad(SP,4,'0') between '0000' an...
No	PatchDay_2020_12	0002983367	[p1-CVSS 9.1] Note 0002983367 missing an...	100	15	0	No: (((COMPONENT = 'DW4CORE' and VERSION = '100' and lpad(SP,4,'0') between '0010' and '0...
No	PatchDay_2020_12	0002993132	[p2-CVSS 7.6] Note 0002993132 missing an...	100	4	0	No: (((COMPONENT = 'DMIS' and VERSION = '2011_1_620' and lpad(SP,4,'0') between '0000' an...
No	PatchDay_2020_11	0002984627	[p2-CVSS 8.6] Note 0002984627 missing an...	100	7	0	No: (((COMPONENT = 'SAP_BASIS' and VERSION = '782' and (lpad(SP,4,'0')) < '0003') or (COM...
No	PatchDay_2020_...	0002978768	[p3-CVSS 4.2] Note 0002978768 exists	100	11	0	No: (((NAME = 'VERSION' AND substring(VALUE,0,6) = '1.00.0') OR (NAME = 'VERSION' AND subs...
No	PatchDay_2020_12	0002843016	[p3-CVSS 4.3] Note 0002843016 missing an...	57	4	3	No: (((COMPONENT = 'SAP_UI' and VERSION = '750' and (lpad(SP,4,'0')) < '0016') or (COMPON...
No	PatchDay_2020_11	0002944188	[p3-CVSS 4.3] Note 0002944188 missing an...	100	6	0	No: (((COMPONENT = 'S4CORE' and VERSION = '100' and (lpad(SP,4,'0')) < '0011') or (COMPO...
No	PatchDay_2020_12	0002945581	[p3-CVSS 4.7] Note 0002945581 missing an...	100	10	0	No: (((COMPONENT = 'S4FND' and VERSION = '102' and lpad(SP,4,'0') between '0000' and '0006'...
No	PatchDay_2020_12	0002996479	[p3-CVSS 5.3] Note 0002996479 missing an...	100	16	0	No: (((COMPONENT = 'SAP_BASIS' and VERSION = '740' and (lpad(SP,4,'0')) < '0026') or (COM...
No	PatchDay_2020_11	0002264508	[p3-CVSS 5.4] Note 0002264508 missing an...	50	2	2	No: (((COMPONENT = 'FI-CA' and VERSION = '600' and lpad(SP,4,'0') between '0001' and '0027') ...
No	PatchDay_2020_11	0002319577	[p3-CVSS 5.4] Note 0002319577 missing an...	50	2	2	No: (((COMPONENT = 'FI-CA' and VERSION = '600' and (lpad(SP,4,'0')) < '0029') or (COMPONE...
No	PatchDay_2020_12	0002989719	[p3-CVSS 6.3] Note 0002989719 missing an...	100	4	0	No: (((COMPONENT = 'SAP_APPL' and VERSION = '600' and lpad(SP,4,'0') between '0001' and '0...
No	PatchDay_2020_11	0002971954	[p3-CVSS 6.5] Note 0002971954 missing an...	100	13	0	No: (((COMPONENT = 'SAP_BW' and VERSION = '731' and (lpad(SP,4,'0')) < '0028') or (COMPO...
No	PatchDay_2020_12	0002938650	[p4-CVSS 3.4] Note 0002938650 missing an...	33	1	2	No: (((COMPONENT = 'ST' and VERSION = '720' and (lpad(SP,4,'0')) < '0012'))) Yes: (((COMPO...
No	PatchDay_2020_10	0002429274	Note 0002429274 missing and solution with...	50	2	2	No: (((COMPONENT = 'S4CORE' and VERSION = '101' and to_integer(REPLACE_REGEXPR('\.' I...
No	PatchDay_2020_10	0002606194	Note 0002606194 missing and solution with...	50	2	2	No: (((COMPONENT = 'S4CRM' and VERSION = '100' and to_integer(REPLACE_REGEXPR('\.' IN ...
No	PatchDay_2020_10	0002941667	Note 0002941667 missing and solution with...	96	22	1	No: (((COMPONENT = 'SAP_BASIS' and VERSION = '700' and to_integer(REPLACE_REGEXPR('\...


GitHub - SAP-samples/frun-csa
https://github.com/SAP-samples/frun-csa-policies-best-practices
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0 tags
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Code
ManfredAch December 2020 sec patch day ABAP and HANA Policy ...
decc94e 6 days ago
132 commits
.reuse update license 2 months ago
BaselinePolicies/SOS Update BL2_NETCF-A.xml 19 days ago
LICENSES update license 2 months ago
MiscPolicies/ABAPSPStackAge Update age_of_sap_basis.xml 6 months ago
NotesPolicies December 2020 sec patch day ABAP and HANA Policy 6 days ago
Schema Move policy schema 2 years ago
Scripts Move powershell scripts 2 years ago
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Best practices check examples for creating CSA policies in SAP Focused Run
sample
sap-focused-run
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ManfredAch December 2020 sec patch day ABAP and HANA Policy ... decc94e 6 days ago History

..

ABAP	December 2020 sec patch day ABAP and HANA Policy	6 days ago
HANA	December 2020 sec patch day ABAP and HANA Policy	6 days ago

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Policies for Security Notes

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..		
ABAP_snotes_patchday_2020-01.xml	SecNotesPD-01_2019 -- 01_2020	last month
ABAP_snotes_patchday_2020-02.xml	Create ABAP_snotes_patchday_2020-02.xml	10 months ago
ABAP_snotes_patchday_2020-03.xml	Create ABAP_snotes_patchday_2020-03.xml	9 months ago
ABAP_snotes_patchday_2020-04.xml	Create ABAP_snotes_patchday_2020-04.xml	8 months ago
ABAP_snotes_patchday_2020-05.xml	Create ABAP_snotes_patchday_2020-05.xml	7 months ago
ABAP_snotes_patchday_2020-06.xml	Create ABAP_snotes_patchday_2020-06.xml	6 months ago
ABAP_snotes_patchday_2020-07.xml	Create ABAP_snotes_patchday_2020-07.xml	5 months ago
ABAP_snotes_patchday_2020-08.xml	Create ABAP_snotes_patchday_2020-08.xml	4 months ago
ABAP_snotes_patchday_2020-09.xml	Update ABAP_snotes_patchday_2020-09.xml	last month
ABAP_snotes_patchday_2020-10.xml	Create ABAP_snotes_patchday_2020-10.xml	2 months ago
ABAP_snotes_patchday_2020-11.xml	Create ABAP_snotes_patchday_2020-11.xml	last month
ABAP_snotes_patchday_2020-12.xml	December 2020 sec patch day ABAP and HANA Policy	6 days ago

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Policies for Security Notes

437 lines (414 sloc) | 38.1 KB

Raw Blame

Example for a Policy

```
<?xml version="1.0" encoding="utf-8"?>
<!--
This FRUN CSA policy contains rules to check the following ABAP Security Notes:

[p3-CVSS 5.3] 0002996479 BC-ABA-LA - [CVE-2020-26835] Cross-Site Scripting (XSS) vulnerability in SAP NetWeaver AS AB
[p1-CVSS 9.1] 0002983367 BW-WHM-DBA-MD - [CVE-2020-26838] Code Injection vulnerability in SAP Business Warehouse (Master
[p2-CVSS 7.6] 0002993132 CA-DT-CNV - [CVE-2020-26832] Missing Authorization check in SAP NetWeaver AS ABAP and SAP S4
[p1-CVSS 9.1] 0002973735 CA-LT-PCL - [CVE-2020-26808] Code Injection in SAP AS ABAP and S/4 HANA (DMIS)
[p3-CVSS 4.3] 0002843016 CA-UI5-DLV - [CVE-2019-0388] Content spoofing vulnerability in UI5 HTTP Handler
                              + manual activity
                                version 9 "...few minor textual changes in the note..."
[p3-CVSS 4.7] 0002945581 CA-WUI-UI - Cross-Site Scripting (XSS) vulnerability in SAP CRM WebClient UI
                              + manual activity
                                version 6 "...added prerequisite note 2542223 in the correction instruction."
[p3-CVSS 6.3] 0002989719 FI-CF-INF - Missing Authorization check in S/4HANA (Central Finance)
[p4-CVSS 3.4]  0002938650 SV-SMG-DIA-APP-TA - [CVE-2020-26836] Open Redirect in SAP Solution Manager (Trace Analysis)



The policy does not check the following Security Notes:

[p1-CVSS 10.0]  0002974774 BC-JAS-COR-CLS - [CVE-2020-26829] Missing Authentication Check In SAP NetWeaver AS JAVA (P2P Clus
[p3-CVSS 5.4]  0002971163 BC-JAS-SEC - [CVE-2020-26816] Missing Encryption in SAP NetWeaver AS Java (Key Storage Servic
[p3-CVSS 6.5]  0002974330 BC-NWA-XPI - [CVE-2020-26826] Unrestricted File Upload vulnerability in SAP NetWeaver Applica
[p1-CVSS 9.6]  0002989075 BI-RA-CR-VW - [CVE-2020-26831] Missing XML Validation in SAP BusinessObjects Business Intellig
[p3-CVSS 5.4]  0002971180 EPM-DSM-GEN - [CVE-2020-26828] Formula Injection in SAP Disclosure Management
[p2-CVSS 8.5]  0002983204 SV-SMG-MON-EEM - [CVE-2020-26837] Multiple Vulnerabilities in SAP Solution Manager 7.2 (User Expe
[p3-CVSS 4.2]  0002978768 HAN-DB-SEC - [CVE-2020-26834 ] Improper authentication in SAP HANA database

SAP Security: PatchDay_2020-12
Version: 001
Date:    09.12.2020
-->

<targetsystem desc="SNotes of PatchDay: 2020-12" id="PatchDay_2020-12" multisql="Yes">

  <!-- [p3-CVSS 5.3]  BC-ABA-LA 0002996479 - [CVE-2020-26835] Cross-Site Scripting (XSS) vulnerability in SAP NetWeaver AS AB (Version 0004)  -->
  <configstore name="ABAP_NOTES">
    <checkitem desc="[p3-CVSS 5.3] Note 0002996479 exists" id="0002996479" operator="check_note">
      <compliant>NOTE = '0002996479' and PRSTATUS = 'E'</compliant>
      <noncompliant/>
    </checkitem>
  </configstore>
  <configstore name="COMP_LEVEL">
  <checkitem desc="[p3-CVSS 5.3] Note 0002996479 missing and solution with SP available" id="0002996479" operator="check_note:0002996479">
     <compliant>(
      ( COMPONENT = 'SAP_BASIS' and VERSION = '740' and not( (lpad(SP,4,'0'))  &lt; '0026' )   ) <!-- SAP_BASIS 740 SAPKB74026 --> or
      ( COMPONENT = 'SAP_BASIS' and VERSION = '750' and not( (lpad(SP,4,'0'))  &lt; '0020' )   ) <!-- SAP_BASIS 750 SAPK-75020INSAPBASIS -->  or
      ( COMPONENT = 'SAP_BASIS' and VERSION = '751' and not( (lpad(SP,4,'0'))  &lt; '0012' )   ) <!-- SAP_BASIS 751 SAPK-75112INSAPBASIS -->  or
```

Policy Catalog

Upload Catalog XML | Upload Catalog XML remotely

Catalog Policy

Name: /Default/PatchDay_2020-12

Check Items:

- [p3-CVSS 5.3] Note 0002996479 exists (0002996479)
- [p3-CVSS 5.3] Note 0002996479 missing and solution with SP available (0002996479)
- [p3-CVSS 5.3] Note 0002996479 missing and applicable using Correction Instruction (0002996479)
- [p-CVSS] Note 0002983367 exists (0002983367)
- [p1-CVSS 9.1] Note 0002983367 missing and solution with SP available (0002983367)
- [p1-CVSS 9.1] Note 0002983367 missing and applicable using Correction Instruction (0002983367)
- [p2-CVSS 7.6] Note 0002993132 exists (0002993132)
- [p2-CVSS 7.6] Note 0002993132 missing and solution with SP available (0002993132)
- [p2-CVSS 7.6] Note 0002993132 missing and applicable using Correction Instruction (0002993132)
- [p1-CVSS 9.1] Note 0002973735 exists (0002973735)
- [p1-CVSS 9.1] Note 0002973735 missing and solution with SP available (0002973735)
- [p1-CVSS 9.1] Note 0002973735 missing and applicable using Correction Instruction (0002973735)
- [p3-CVSS 4.3] Note 0002843016 exists (0002843016)
- [p3-CVSS 4.3] Note 0002843016 missing and solution with SP available (0002843016)
- [p3-CVSS 4.3] Note 0002843016 missing and applicable using Correction Instruction (0002843016)
- [p3-CVSS] Note 0002945581 exists (0002945581)
- [p3-CVSS 4.7] Note 0002945581 missing and solution with SP available (0002945581)
- [p3-CVSS 4.7] Note 0002945581 missing and applicable using Correction Instruction (0002945581)
- [p3-CVSS 6.3] Note 0002989719 exists (0002989719)

Active Policy

Name: SNotes for PatchDays 2020 (ABAP, priority 1 and 2) [ABAP_SNotes_2020] Select..

Check Items:

- [p1-CVSS 9.1] Note 0002983367 missing and solution with SP available (0002983367)
- [p1-CVSS 9.1] Note 0002983367 missing and applicable using Correction Instruction (0002983367)
- [p2-CVSS 7.6] Note 0002993132 exists (0002993132)
- [p2-CVSS 7.6] Note 0002993132 missing and solution with SP available (0002993132)
- [p2-CVSS 7.6] Note 0002993132 missing and applicable using Correction Instruction (0002993132)
- [p1-CVSS 9.1] Note 0002973735 exists (0002973735)
- [p1-CVSS 9.1] Note 0002973735 missing and solution with SP available (0002973735)
- [p1-CVSS 9.1] Note 0002973735 missing and applicable using Correction Instruction (0002973735)
- [p-CVSS] Note 0002983367 exists (0002983367)

Manage Catalog of Policies
and active Policies

Upload Policy from GitHub

Copy&Paste raw-link

Search or jump to... / Pulls Issues Marketplace Explore

SAP-samples / frun-csa-policies-best-practices

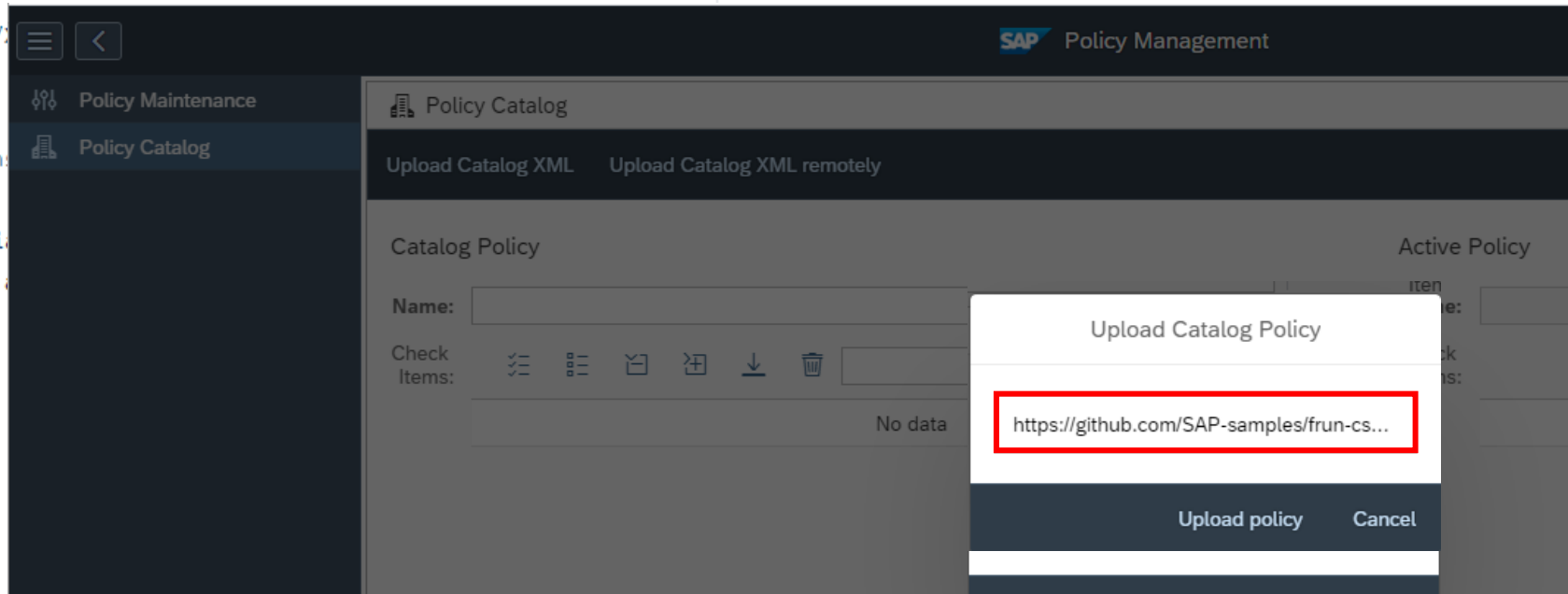
Unwatch 15 | Unstar 8 | Fork 10

Code | Issues | Pull requests 1 | Actions | Projects | Wiki | ...

master | frun-csa-policies-best-practices / BaselinePolicies / SOS / v2.2 / ABAP_SYSTEM / BL2_CHANGE-A_frun2.0.xml | Go to file | ...

168 lines (168 sloc) | 10 KB | Raw | Blame

```
1  <?xml version="1.0" encoding="utf-8"?>
2  <targetsystem xmlns:xsi="http://www.w3.org/2001/
3    <!--
4  -->
5    <!-- CHANGE-A: Protect Production System again
6    <configstore name="GLOBAL">
7      <checkitem desc="[p1-CRITICAL] Global Modifi
8        <compliant>    ((NAME = 'GLOBAL_SETTING'
```



Configuration & Security Analytics (CSA) in FocusedRun

FRUN
https://support.sap.com/en/alm/focused-solutions/focused-run-expert-portal.html

Advanced Configuration Monitoring (ACM)
Configuration & Security Analytics (CSA)
https://support.sap.com/en/alm/focused-solutions/focused-run-expert-portal/configuration-and-security-analytics.html

CSA Best Practices
https://support.sap.com/en/alm/sap-focused-run/expert-portal/configuration-and-security-analytics/csa-best-practices.html

Github SAP samples
https://github.com/SAP-samples/frun-csa-policies-best-practices

Security Baseline Template Policies
https://github.com/SAP-samples/frun-csa-policies-best-practices/tree/master/BaselinePolicies/SOS/v2.2

Security Notes Policies
https://github.com/SAP-samples/frun-csa-policies-best-practices/tree/master/NotesPolicies

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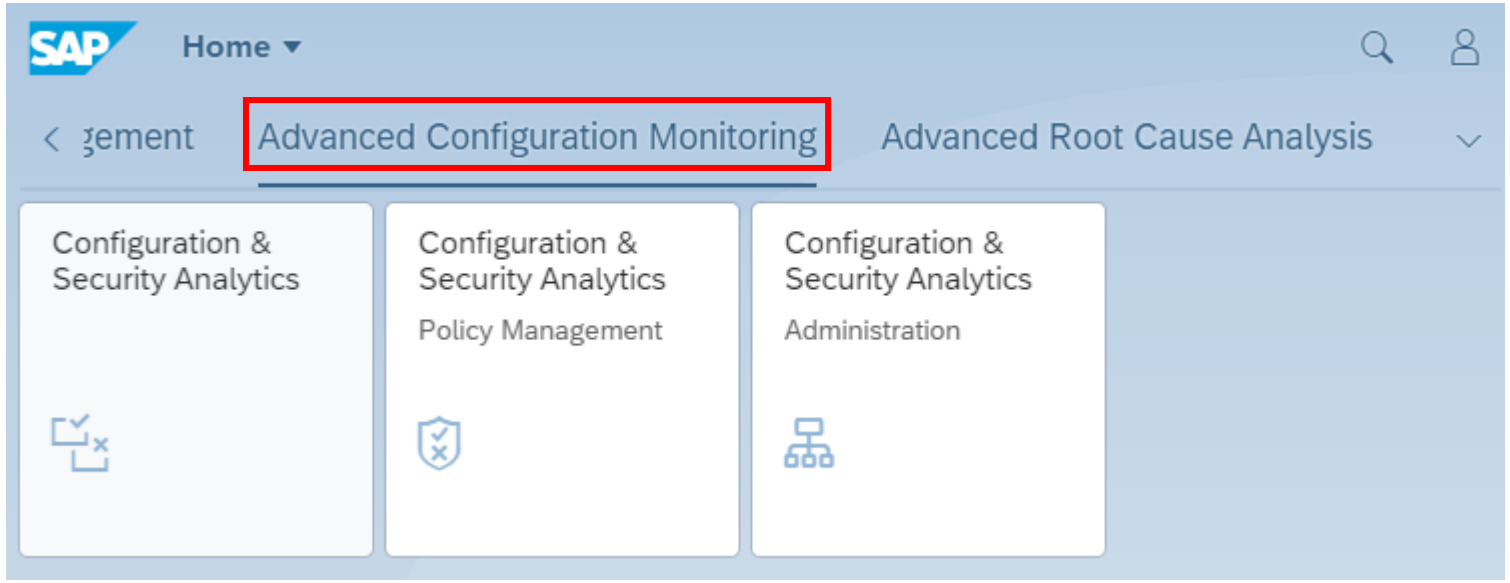
Configuration & Security Analytics (CSA) in FocusedRun

FRUN Internet Demo System

Landing Page
https://support.sap.com/en/alm/sap-focused-run/internet-demo-system.html

Demo System
https://frun.almdemo.com/sap/bc/ui2/flp?sap-client=100&sap-language=EN#Shell-home



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Note 2890213 - Missing Authentication Check in SAP Solution Manager
Note 2985866 - Missing Authentication Check in SAP Solution Manager

corrected

HotNews note (re)-published on 10.11.2020

These issues are relevant for all customers using SAP Solution Manager 7.2 on Support Package SP11 and lower. No additional activities are required after applying the patch.

In NetWeaver Administrator go to *System Information: Components Info*
Find LM-SERVICE and check the version; the format looks like: 1000.7.20.[SP].[Patch].[Creation Date]

Patches containing this particular correction:				What you get on 18.11.2020:	
SOLMANDIAG 720	**SP004**	**000012**		**SP04 patch 17**	**12.11.2020**
SOLMANDIAG 720	**SP005**	**000013**		**SP05 patch 18**	**06.10.2020**
SOLMANDIAG 720	**SP006**	**000014**		**SP06 patch 19**	**12.11.2020**
SOLMANDIAG 720	**SP007**	**000020**	March	**SP07 patch 26**	**04.11.2020**
SOLMANDIAG 720	**SP008**	**000016**		**SP08 patch 24**	**04.11.2020**
SOLMANDIAG 720	**SP009**	**000008**		**SP09 patch 18**	**04.11.2020**
SOLMANDIAG 720	**SP010**	**000002**		**SP10 patch 9**	**04.11.2020**
SOLMANDIAG 720	**SP011**	**000004**	November	**SP11 patch 4 / 5**	**22.10.2020 / 04.11.2020**

For this component you always install the latest patch of a specific Support Package.

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Note 2983204 - Multiple Vulnerabilities in SAP Solution Manager 7.2 (User Experience Monitoring)

Related note:

- **Note 2890213 - Missing Authentication Check in SAP Solution Manager (User-Experience Monitoring)**

Make sure *Single Sign-On Automatic Activity* in SAP Solution Manager Configuration has been executed:
Transaction `SOLMAN_SETUP` → Cross Scenario Configuration → Mandatory Configuration
→ Infrastructure Preparation → (2) Setup Connectivity → (2.2) Enable Connectivity → Set Up Single Sign-On

Patches containing this particular correction:			Published on
SOLMANDIAG 720	**SP003**	**000008**	**12.11.2020**
SOLMANDIAG 720	**SP004**	**000017**	**12.11.2020**
SOLMANDIAG 720	**SP005**	**000019**	**19.11.2020**
SOLMANDIAG 720	**SP006**	**000019**	**12.11.2020**
SOLMANDIAG 720	**SP007**	**000026**	**04.11.2020**
SOLMANDIAG 720	**SP008**	**000024**	**04.11.2020**
SOLMANDIAG 720	**SP009**	**000018**	**28.10.2020**
SOLMANDIAG 720	**SP010**	**000009**	**28.10.2020**
SOLMANDIAG 720	**SP011**	**000005**	**04.11.2020**

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Note 2974330 - Unrestricted File Upload vulnerability in Java (Process Integration Monitoring)

Vulnerability:

Deny of Service (DoS) for Java system in application „Send test message“ of Process Integration Monitoring

Mitigation:

Action `NWA_SUPERADMIN_NWA_SENDTESTMSG` is required to call the function. The action is part of most PI administrator roles.

Configuration:

NWA → Configuration → Infrastructure → Java System Properties

Select the Applications tab and filter for application `tc~lm~itsam~co~ui~nwacompmon~wd`

`sndTestMessage.monitor.payload.filesize.limit`	`5`	default [MB]
`sndTestMessage.monitor.payload.file.extensions`	`txt,xml`	default

Logs:

If the uploaded file size is larger than the configured filesize limit property or the file extension is not listed in the allowed extensions property an error occurs in UI and Developer Traces log:

NWA → Log Viewer (select Developer Traces view)

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Note 2974774 - Missing Authentication Check In SAP NetWeaver AS JAVA (P2P Cluster Communication)

KBA 2997167 - Missing Authentication Check In NW AS Java P2P Cluster Communication - Frequently asked questions and answers

Question: “Assuming that the network is not isolated: If the MS Access Control List is configured, than any connect attempt from another server via the join port is blocked. Correct?“

- **Yes, if the IP or FQDN of the remote client (who wants to make a p2p connection to the join port of some server node) is not allowed from the MS ACL, then the connection will be refused from the accepting server node.**

Workaround / extended settings:

a) Configure Message Server ACL to allow **P2P connections** only from trusted IP addresses according to this topic: Security Settings for the SAP Message Server.

b) Make sure that the **Join Port**, opened by the P2P Server Socket, is protected on network level via network segmentation, with firewall, or both. Furthermore, the communication between the cluster elements must be secured via the IPsec protocol suite. For more information about cluster communication, see: Configuring Cluster Communication Ports.

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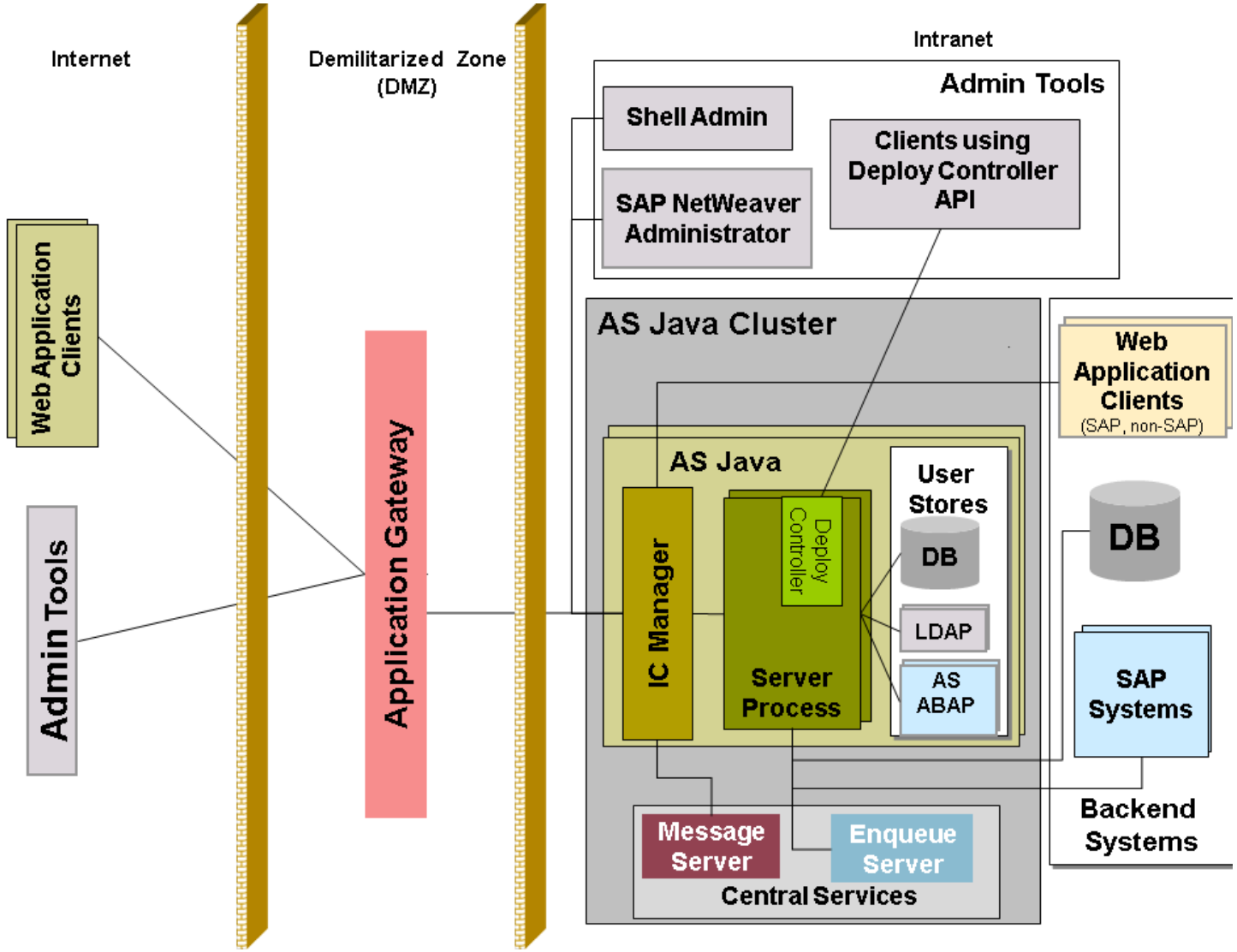
Note 2974774 - Missing Authentication Check In SAP NetWeaver AS JAVA (P2P Cluster Communication)

Online Help
Technical System Landscape

Use an Application Gateway, e.g. the SAP Web Dispatcher



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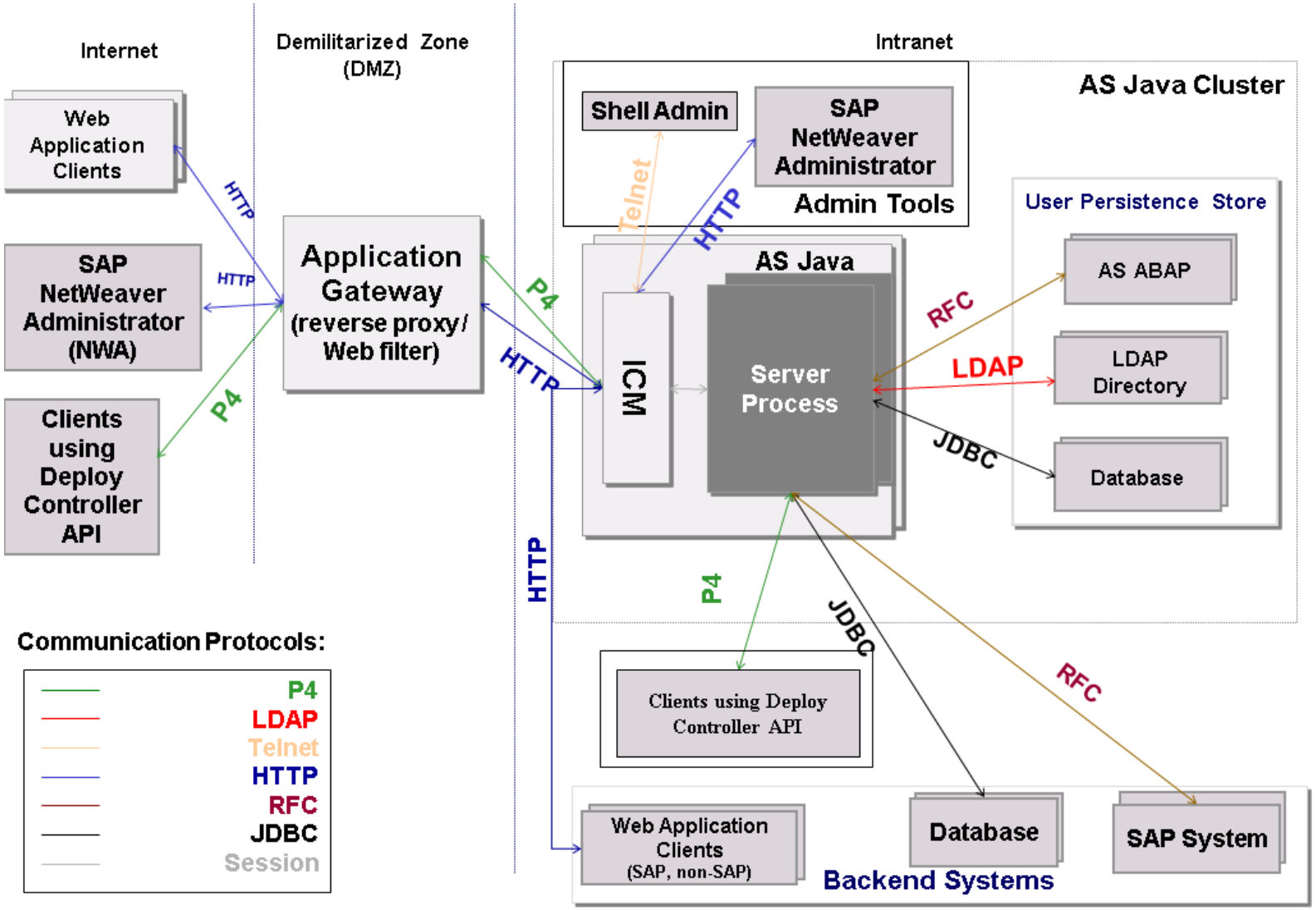
Note 2974774 - Missing Authentication Check In SAP NetWeaver AS JAVA (P2P Cluster Communication)

Online Help
Transport Layer Security

Use an Application Gateway, e.g. the SAP Web Dispatcher



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Note 2974774 - Missing Authentication Check In SAP NetWeaver AS JAVA (P2P Cluster Communication)

Online Help - AS Java Ports → AS Java Server Ports

Internal Port	Value	s0, s1, s2,…, s15 is the number of the server process NN is the instance number
Server Join Port	For s0 = 5NN20; for s1 = 5NN25; for s2 = 5NN30; etc. for s15 = 5NN95	
Server Debug Port	For s0 = 5NN21; for s1 = 5NN26; for s2 = 5NN31; etc. for s15 = 5NN96	
DSR Infrastructure	For s0 = 5NN22; for s1 = 5NN27; for s2 = 5NN32; etc. for s15 = 5NN97	

TCP/IP Ports of All SAP Products: https://help.sap.com/viewer/ports

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Note 2974774 - Missing Authentication Check In SAP NetWeaver AS JAVA (P2P Cluster Communication)

Online Help - Security Settings for the SAP Message Server

Parameter	Port
ms/acl_file_admin	Administration port on the message server. This port is set with parameter ms/admin_port.
ms/acl_file_ext	External port on the message server, which all clients can use. This port is set with parameter rdisp/msserv.
ms/acl_file_extbnd	Port number under which an external binding program (icmbnd) has to log on to in order to bind a port. This port is set with parameter rdisp/extbnd_port.
ms/acl_file_int	External port on the message server This port is set with parameter rdisp/msserv_internal.
ms/server_port_<xx>	This parameter identifies the message server port at which HTTP(S) requests can arrive.

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Note 2983367 - Code Injection vulnerability in SAP Business Warehouse (Master Data Management) and SAP BW4HANA

Unvalidated input parameter allows ABAP code injection via `GENERATE SUBROUTINE POOL`

Replaced by fixed value in old systems

Deactivation of obsolete function in higher support package levels

Solved

Caution: The validity ranges of the correction instructions are quite small: Open a ticket if you need the note for a (quite) old system.

```
*$ Correction Inst.          0020751258 0000841263                          $*
*$--------------------------------------------------------------------------$*
*$ Valid for       :                                                        $*
*$ Software Component   SAP_BW     Business Information Warehouse          $*
*$  Release 700          SAPKW70038 - SAPKW70040                           $*
*$  Release 701          SAPKW70121 - SAPKW70123                           $*
*$  Release 702          SAPKW70221 - SAPKW70223                           $*
*$  Release 731          SAPKW73121 - SAPKW73128                           $*
*$  Release 730          Fm SAPKW73019                                     $*
*$*$--------------------------------------------------------------------$*$*
*&---------------------------------------------------------------------*
*& Object          FUNC RSDMD_BATCH_CALL
*& Object Header   FUGR RSDMD
*&---------------------------------------------------------------------*
*& FUNCTION RSDMD_BATCH_CALL
*&---------------------------------------------------------------------*
...
    L_T_ABAP = '  USING                                    '. APPEND L_T_ABAP.
    L_T_ABAP = '    I_JOBNAME  LIKE TBTCJOB-JOBNAME  '. APPEND L_T_ABAP.
    L_T_ABAP = '    I_JOBCOUNT LIKE TBTCJOB-JOBCOUNT.'. APPEND L_T_ABAP.

*>>>> START OF DELETION <<<<<
    CONCATENATE 'SUBMIT' I_REPID INTO L_T_ABAP SEPARATED BY SPACE.
*>>>> END OF DELETION <<<<<<<

*>>>> START OF INSERTION <<<<<
  "  CONCATENATE 'SUBMIT' I_REPID INTO L_T_ABAP SEPARATED BY SPACE.
    CONCATENATE 'SUBMIT' 'RSDMD_DEL_BACKGROUND' INTO L_T_ABAP SEPARATED BY SPACE.
*>>>> END OF INSERTION <<<<<<
```

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Note 2670851 - Authority check in RSSG_BROWSER

Transaction / report `RSSG_BROWSER` is a simple table viewer (similar like `SE16`).

It generates a program based on template `RSSG_BROWSER_TEMPLATE`

Authorizations for `S_DEVELOP DEBUG 02` and `S_TABU_DIS` / `S_TABU_NAM` are required.

Do not use it in production systems!

In addition you should implement
Note 2999035 - Authority check S_TABU_DIS in RSSG_BROWSER

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Note 2978768 - Inproper authentication in SAP HANA database

Search Term: *Enter search term*

Components (Start with): HAN-DB

Components (Exact): *No Restriction*

Excluded Components (Exact): *No Restriction*

Released On (Free): *MMM d, y - MMM d, y*

Soft.Comp.: *No Restriction*

Support Package (Equal): *No Restriction*

Product: *No Restriction*

Priority: *No Restriction*

Category: *No Restriction*

Release Status: No Restriction

Document Type: SAP Security Notes

32 document(s) found

1st Security Note for the HANA database since more than a year

Sort: Released On | Export List as CSV File | Add to Worklist

SAP Component	Number	Version	Title	Category	Priority	Released On
HAN-DB-SEC	2978768	8	SAML authentication user name validation flaw in SAP HANA database	Program error	Correction with medium priority	08.12.2020
HAN-DB	2829681	3	[CVE-2019-0357] Privilege escalation in SAP HANA database	Program error	Correction with medium priority	10.09.2019
HAN-DB	2798243	3	[CVE-2019-0350] Denial of service (DOS) in SAP HANA database	Program error	Correction with high priority	13.08.2019
HAN-DB	2772376	2	[CVE-2019-0284] XML External Entity vulnerability in SAP HANA sldreg	Program error	Correction with medium priority	09.04.2019
HAN-DB-SEC	2704878	3	[CVE-2018-2497] Event not logged in SAP HANA database audit log	Program error	Correction with low priority	11.12.2018
HAN-DB-SEC	2572940	6	[CVE-2018-2369] Information Disclosure in authentication function of SAP HANA	Program error	Correction with medium priority	27.02.2018

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System Recommendations – Recalculation for some notes

Unfortunately due to a bug several non ABAP security notes released on 08.12.2020 have incorrect patch level. We have fixed the bug and corrected the data on backbone.

To re-pushing them to customer, we modified the released date of affected notes in backbone to 10.12.2020. The corrected notes have been recalculated automatically, i.e. if the background job is scheduled daily basis (no extra action is required).

Number	System type	Title
2971163	JAVA	Missing Encryption in SAP NetWeaver AS Java (Key Storage Service)
2971180	DISCMGMS	Formula Injection in SAP Disclosure Management
2974330	JAVA	Unrestricted File Upload vulnerability in SAP NetWeaver Application Server for Java (Process Integration Monitoring)
2974774	JAVA	Missing Authentication Check In SAP NetWeaver AS JAVA (P2P Cluster Communication)
2978768	HANABD	Improper authentication in SAP HANA database
2983204	JAVA	Multiple Vulnerabilities in SAP Solution Manager 7.2 (User Experience Monitoring)
2989075	BOBJ	Missing XML Validation in SAP BusinessObjects Business Intelligence Platform (Crystal Report)

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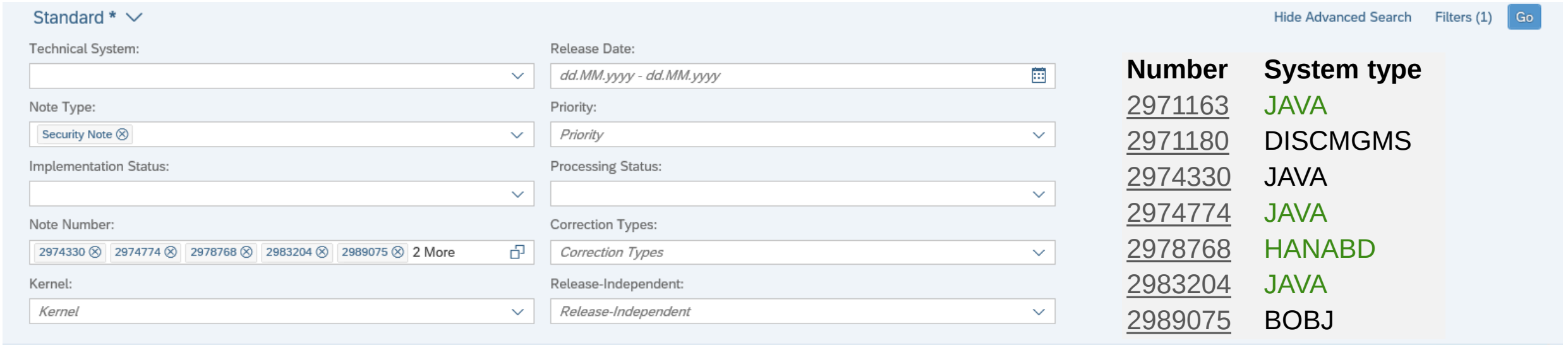
System Recommendations – Recalculation for some notes



Number	System type
2971163	JAVA
2971180	DISCMGMS
2974330	JAVA
2974774	JAVA
2978768	HANABD
2983204	JAVA
2989075	BOBJ

SAP Notes for selected technical systems: 4

Technical System	Note Number	Note Version	Short text	Release Date	Application Component	Priority ID	Support Package	Implementation Status	Processing Status
X3J~JAVA	2974774	14	[CVE-2020-26829] Missing Authentication Check In SAP NetWeaver AS JAVA (P2P Cluster Communication)	12/12/2020	BC-JAS-COR-CLS	1	SP015	New	Undefined
X3J~JAVA	2983204	14	[CVE-2020-26837] Multiple Vulnerabilities in SAP Solution Manager 7.2 (User Experience Monitoring)	12/10/2020	SV-SMG-MON-EEM	2	SP010	New	Undefined
OHY~HANADB	2978768	8	[CVE-2020-26834] Improper authentication in SAP HANA database	12/10/2020	HAN-DB-SEC	3		New	Undefined
X3J~JAVA	2971163	7	[CVE-2020-26816] Missing Encryption in SAP NetWeaver AS Java (Key Storage Service)	12/10/2020	BC-JAS-SEC	3	SP015	New	Undefined

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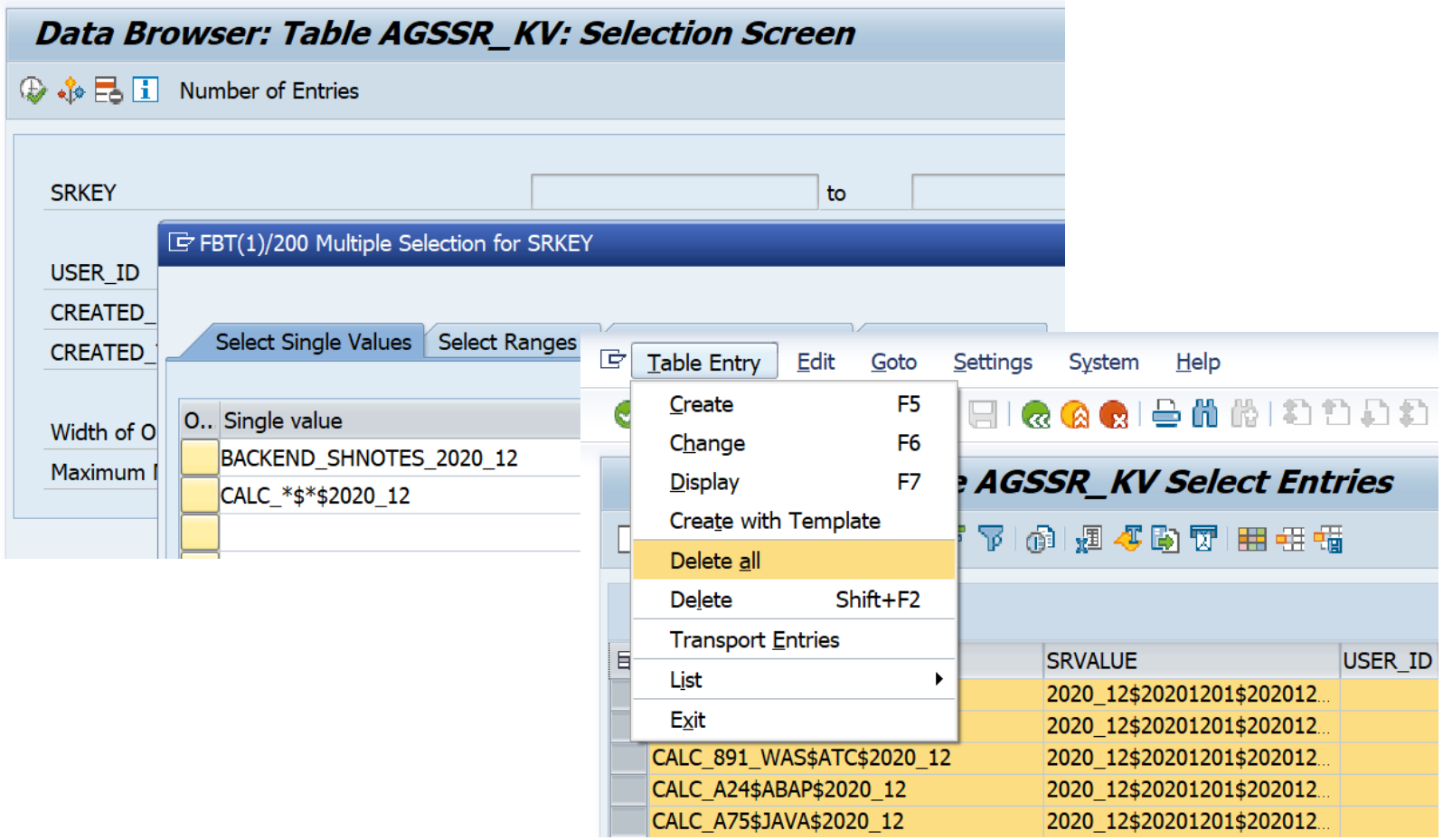
System Recommendations – Recalculation for some notes

How to trigger recalculation:
Use transaction `SE16` for table `AGSSR_KV` to delete following entries for field SRKEY:

```
BACKEND_SHNOTES_2020_12
CALC_*$*$2020_12
```

Maybe better:

```
CALC_*$JAVA$2020_12
CALC_*$HANADB$2020_12
CALC_*$BOBJ$2020_12
```



Then copy and re-release job
`SM:SYSTEM RECOMMENDATIONS`

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November 2020

Topics November 2020

Note 2952084 - Information Disclosure in SAP Process Integration (PGP Module – Business-to-Business Add On)

Note 2963592 - Cross-Site Scripting (XSS) vulnerability in SAP NetWeaver (Knowledge Management)

Note 2971112 - Incorrect Default Permissions in SAP ERP Client for E-Bilanz 1.

Note 2890213 - Missing Authentication Check in SAP Solution Manager
Note 2985866 - Missing Authentication Check in SAP Solution Manager (JAVA stack)

Scenarios for Using the Security Audit Log

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Note 2952084 - Information Disclosure in SAP Process Integration (PGP Module – Business-to-Business Add On)

PGP Secure Store (New)

https://help.sap.com/saphelp_nw-secure-connect103/helpdata/en/da/33e33a47d14419bd51829f3ab53a94/frameset.htm

Maintaining PGP Keys

https://help.sap.com/saphelp_nw-secure-connect103/helpdata/en/8b/11483856d04f6b9c7bf378ecd1670c/frameset.htm

SFTP Adapter – Configuring PGP Secure Store

https://blogs.sap.com/2017/10/31/sftp-adapter-configuring-pgp-secure-store/

Use Configuration Store `J2EE_COMP_SPLEVEL` and search for element `PIB2BPGP` to show systemes and installed versions of that component:

Landscape	Component Version	Store Name	Element Status	Element Class	Element Name	Element Value
Java Technical System (JW5~JAVA)	J2EE ENGINE SERVERCORE 7.50	J2EE_COMP_SPLEVEL	Initial (Current)	Table Row	**[COMPONENT]=PIB2BPGP [RELEASE]=1.0**	**[EXTRELEASE]=5 [PATCH_LEVEL]=0 [DESCRIPTION]=PGP MODULE**
Java Technical System (PO1~JAVA)	J2EE ENGINE SERVERCORE 7.31	J2EE_COMP_SPLEVEL	Updated (Current)	Table Row	**[COMPONENT]=PIB2BPGP [RELEASE]=1.0**	**[EXTRELEASE]=4 [PATCH_LEVEL]=3 [DESCRIPTION]=PGP MODULE**
Java Technical System (PJ2~JAVA)	J2EE ENGINE SERVERCORE 7.31	J2EE_COMP_SPLEVEL	Initial (Current)	Table Row	**[COMPONENT]=PIB2BPGP [RELEASE]=1.0**	**[EXTRELEASE]=5 [PATCH_LEVEL]=0 [DESCRIPTION]=PGP MODULE**

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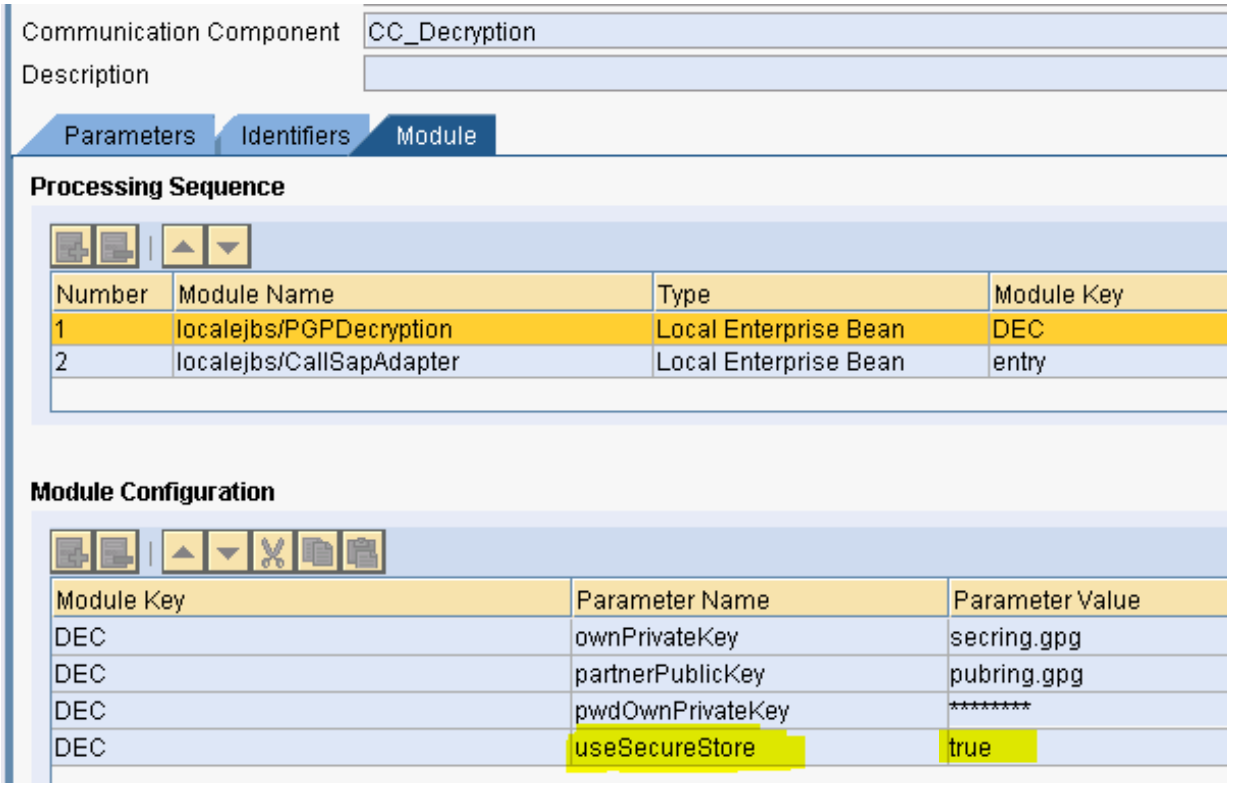
Note 2952084 - Information Disclosure in SAP Process Integration (PGP Module – Business-to-Business Add On)

App /SecureStore

Module parameter `useSecureStore` of related Communication Components (PGPEncryption and PGPDecryption)



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Note 2952084 - Information Disclosure in SAP Process Integration (PGP Module – Business-to-Business Add On)

By default the modules PGPEncryption and PGPDecryption access the keys form this location:
`usr/sap/<System ID>/<Instance ID>/sec`

If you want to store the PGP keys in some other location, use module parameter `keyRootPath` and specify the path.

If you do not want to store the PGP keys on a file system, use PGP Secure Store functionality using module parameter `useSecureStore=true`

If you import a new PGP key to PGP Secure Store, it will be stored with encryption.

Manual activity is required only for existing PGP keys.

If some unencrypted keys exist, the new button Update Keys is enabled.

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Note 2963592 - Cross-Site Scripting (XSS) vulnerability in SAP NetWeaver (Knowledge Management)

Informational note:

Malicious resource execution in Knowledge Management cannot be achieved when using HTML Editor with "Always Use Secure HTML Editor" and "Allow Only Basic Formatting" enabled.

These settings are enabled by default as of NetWeaver version 7.11.

Review the configuration in the Portal:
System Administration → System Configuration → Knowledge Management → Content Management → Utilities → Editing → HTML Editing

https://help.sap.com/viewer/96e4ea277c104112bc0237851eecb13e/7.5.19/en-US/444cd511c6233f8ee10000000a1553f7.html
(The documentation still claims, that the settings are deactivated by default.)

This is another topic compared with notes 2928635, 2957979 and KBA 2932212 about "Force Text Download"

- ✓ **Always Use Secure HTML Editor**
- ✓ **Allow Only Basic Formatting**
- ❖ **Allow Links**
- ❖ **Activate Clipboard Buttons**
- ❖ **Allow Preview**
- ❖ **Allow Indenting**
- ❖ **Allow Tables**
- ❖ **Allow Bullets and Numbering**
- ❖ **Allow Images**
- ❖ **Allow Text Size and Font Setting**
- ❖ **Allow Color Settings**

Caution: The deactivation of editing functions can affect existing documents.

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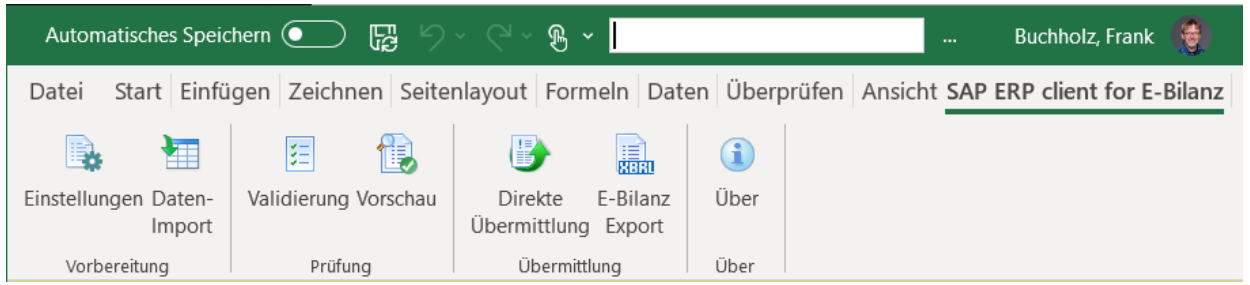
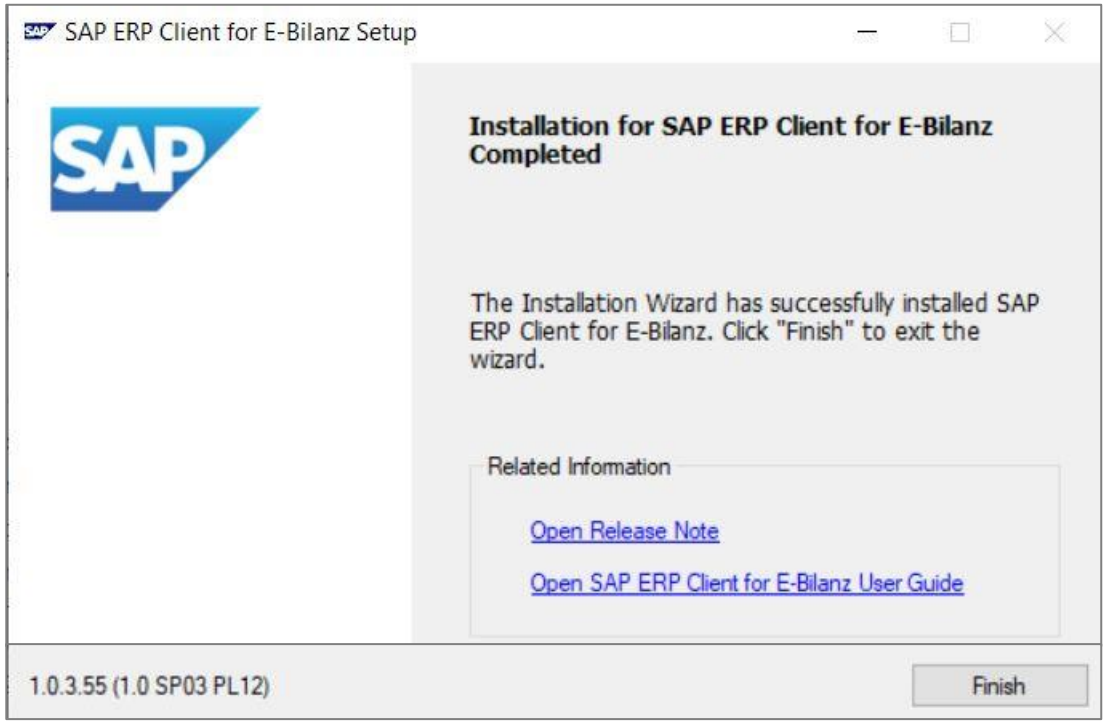
Note 2971112 - Incorrect Default Permissions in SAP ERP Client for E-Bilanz 1.0

Relevant for German Tax only: http://www.esteuer.de/

The note describes an add-on for Excel





Administration and User Guide (German)
https://help.sap.com/boebilanz10/

Note 2906774 – Installation Guide

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Note 2890213 - Missing Authentication Check in SAP Solution Manager
Note 2985866 - Missing Authentication Check in SAP Solution Manager

corrected

HotNews note (re)-published on 10.11.2020

These issues are relevant for all customers using SAP Solution Manager 7.2 on Support Package SP11 and lower. No additional activities are required after applying the patch.

In NetWeaver Administrator go to *System Information: Components Info*
Find LM-SERVICE and check the version; the format looks like: 1000.7.20.[SP].[Patch].[Creation Date]

Patches containing this particular correction:				What you get on 18.11.2020:	
SOLMANDIAG 720	**SP004**	**000012**		**SP04 patch 17**	**12.11.2020**
SOLMANDIAG 720	**SP005**	**000013**		**SP05 patch 18**	**06.10.2020**
SOLMANDIAG 720	**SP006**	**000014**		**SP06 patch 19**	**12.11.2020**
SOLMANDIAG 720	**SP007**	**000020**	March	**SP07 patch 26**	**04.11.2020**
SOLMANDIAG 720	**SP008**	**000016**		**SP08 patch 24**	**04.11.2020**
SOLMANDIAG 720	**SP009**	**000008**		**SP09 patch 18**	**04.11.2020**
SOLMANDIAG 720	**SP010**	**000002**		**SP10 patch 9**	**04.11.2020**
SOLMANDIAG 720	**SP011**	**000004**	November	**SP11 patch 4 / 5**	**22.10.2020 / 04.11.2020**

For this component you always install the latest patch of a specific Support Package.

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Note 2890213 - Missing Authentication Check in SAP Solution Manager
Note 2985866 - Missing Authentication Check in SAP Solution Manager

Related notes:

[...]
Note 2898858 - LM-SERVICE 7.20 SP 10 Patch 2 → Solution for Webservice Security
Note 2908684 - LM-SERVICE 7.20 SP 10 Patch 4 → Solution for Missing authentication check
[...]

Note 2898818 - WebService Security
(created in March 2020, not published but listed in patch info)

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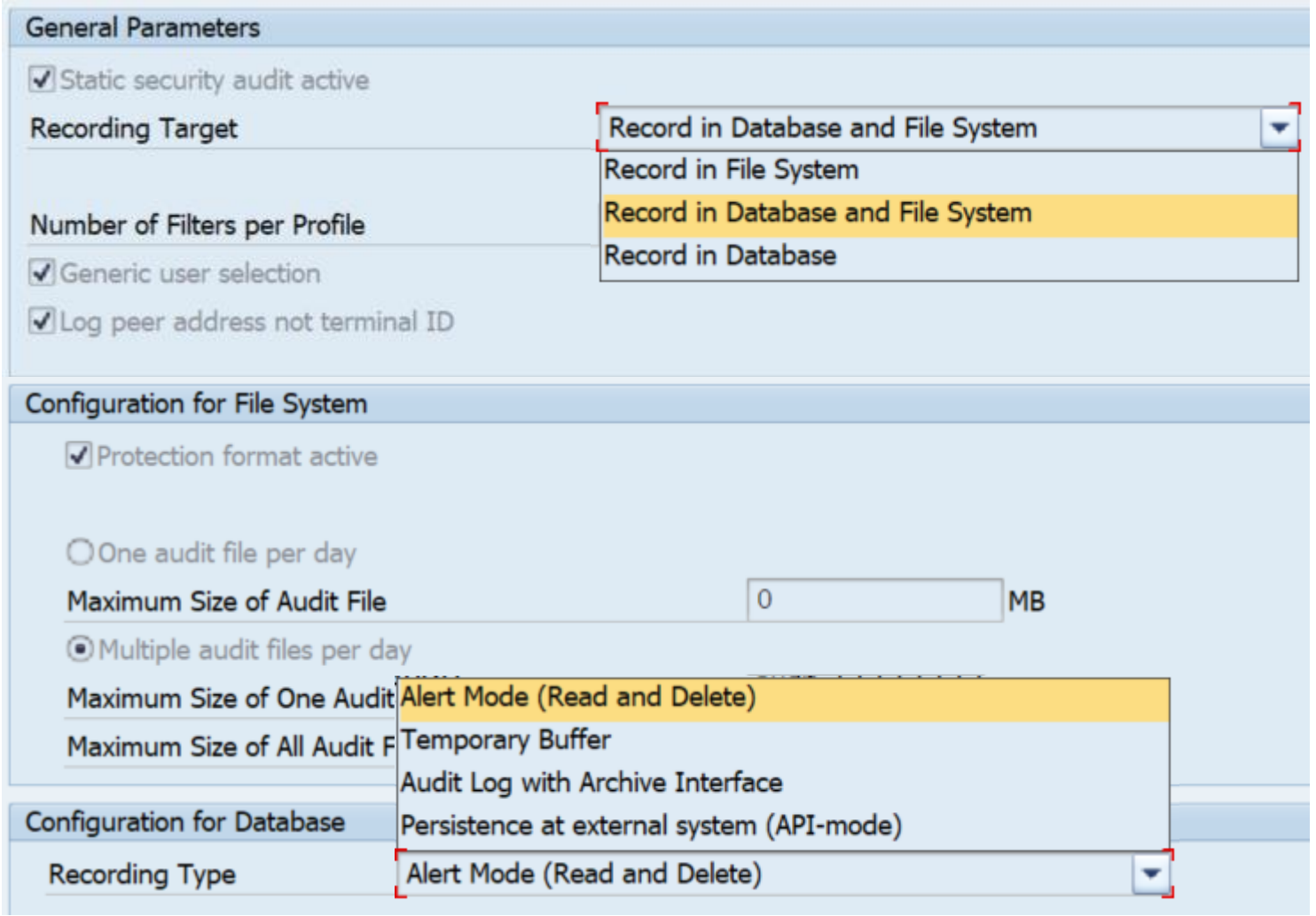
Scenarios for Using the Security Audit Log

Transaction `RSAU_CONFIG` offers several scenarios how to store events in files and/or in the database.

- **See documentation for NW 7.50**

What is the purpose of these variants?

- **See documentation for S/4HANA 1909 or S/4HANA 2020 which explain these scenarios**



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Scenarios for Using the Security Audit Log

Different teams have quite different access patterns and requirements

- **IT operations team and intrusion detection teams want to get alerts in realtime.**
  They require to log unsuccessful as well as successful events to strengthen the sharpness of alerts.
- **Emergency access monitoring teams inspect logs after a couple of days.**
  They rely on extensive logs for emergency users.
- **IT administration teams who run infrastructure projects access logs within a couple of weeks**
  They need to activate/deactivate specific events to support their projects.
- **Audit teams validate logs month after the events**
  They rely on the integrity of the logging system and the log data.
- **Data protection teams have to ensure that personal data is only stored and processed with dedicated purpose**
  They define archiving requirements and data retention times

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Scenarios for Using the Security Audit Log

	Recording Type
Only Logging in the File System (Classic Approach) Local system audit approaches with a few events and few requirements for the protection of personal data during the evaluation of logs	-
Logging in the File System and Database with Alert Monitoring Local system audit approaches, but adds the ability to display selected events in a timely fashion as alerts in a central system	Alert Mode (Read and Delete)
Logging in the File System and Database as Temporary Buffer Local system audit approaches, but adds the ability to for administrators to regularly evaluate large datasets of log data. No archiving possible.	Temporary Buffer
Only Logging in the Database Recommended for an average number of events and high requirements regarding the protection of personal data during the evaluation of log data. Archiving object `BC_SAL`	Audit Log with Archive Interface
Logging in the Database with External Evaluation and Storage Global audit approach, where events are moved to a central system for evaluation and long-term storage.	Persistence in ext. System (API)

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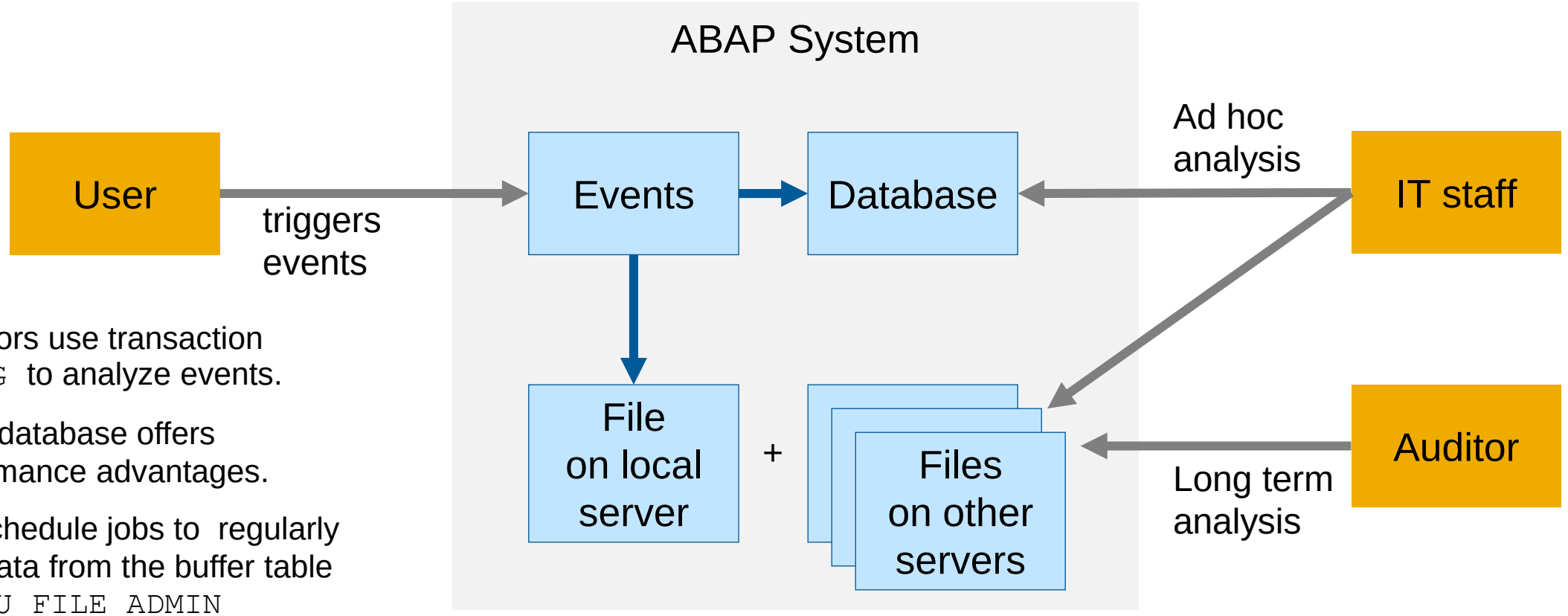
Scenarios for Using the Security Audit Log

Example: Logging in the File System and Database with Temporary Buffer

Local system audit approaches, but adds the ability to for administrators to regularly evaluate large datasets of log data



IT staff and auditors use transaction `RSAU_READ_LOG` to analyze events.

Searching in the database offers significant performance advantages.

Administrators schedule jobs to regularly purge obsolete data from the buffer table using report `RSAU_FILE_ADMIN` (= transaction `RSAU_ADMIN`)

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October 2020

Topics October 2020

SAP Secure By Default for S/4HANA on Premise 2020 Status - October 2020

Note 2971638 - Hard-coded Credentials in CA Introscope Enterprise Manager
Note 2969828 - OS Command Injection Vulnerability in CA Introscope Enterprise Manager

Note 2941667 - Code Injection Vulnerability in SAP NetWeaver (ABAP) (reloaded)

Note 887164 - BSP Test Applications in Production Systems

Note 2973497 - Multiple Vulnerabilities in SAP 3D Visual Enterprise Viewer

Note 2883638 - Information Disclosure in Supplier Relationship Management

Note 2973100 - Missing Authorization check in Manage Substitutions - Products and Manage Exclusions - Product

Security Baseline Template 2.1 incl. Configuration Validation Package 2.1-CV-1

Important Notes for System Recommendations and Configuration Validation

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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SAP Secure By Default for S/4HANA on Premise 2020

Status - October 2020

Bjoern Brencher, S/4HANA Security

THE BEST RUN SAP

SAP Secure By Default for S/4HANA on Premise 2020

Motivation

- After installation of an S/4HANA on-premise system, customers need to invest significant time and resources to apply various security settings and configurations.
- With this project, we aim to switch security settings directly after installation, system copies or conversions to secure defaults.
- This will decrease the effort required by customers to apply security settings and further will ensure that customer systems have a reasonable security status directly after installation.

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SAP Secure By Default for S/4HANA on Premise 2020
Status

Products in Scope

- S/4HANA on Premise 2020
- Products based on S/4HANA Foundation, e.g.
  - SAP Focused Run 3.0
  - SAP Access Control

Customer Documentation

- SAP Note 2926224 is a collection note including attachment
- SAP Blog https://blogs.sap.com/2020/10/07/secure-by-default-for-s-4hana-2020/

Status

- First shipment done with S/4HANA on Premise 1909
- Additional security topics shipped with S/4HANA on Premise 2020
- Further improvements planned with S/4HANA on Premise 2021

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SAP Secure By Default for S/4HANA on Premise 2020
Technical View

Profile Parameters are set to secure values for S/4 HANA 2020

- 17 recommended values
- 27 parameters default values were changed in the SAP Kernel 7.81

Switchable Authorization Framework (SACF)

- Automatic activation of all SACF scenarios to enable additional business authorization checks (if not already set up by the customer)

Security Audit Log (SAL) (shipped with 1909)

- Automatic configuration of the Security Audit Log (if not already set up by the customer)

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SAP Secure By Default for S/4HANA on Premise 2020

How can I get the Improvements?

Secure by Default in S/4HANA 2020 (SAP Note 2926224) is shipped for

New installations and system copies

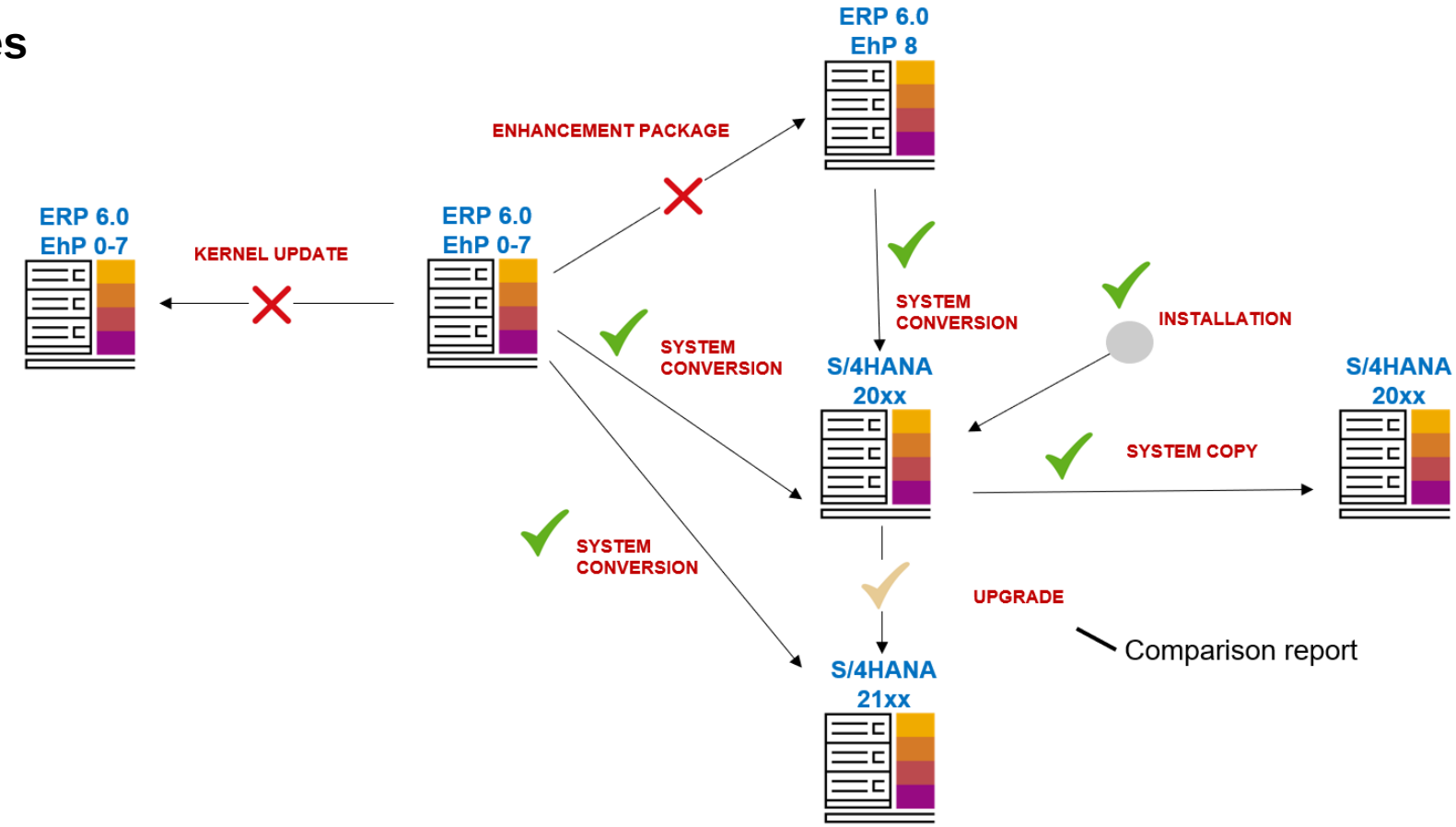
- SWPM 2.0 SP07
- Target: S/4HANA 2020

Conversions

- SUM 2.0 SP09
- Target: S/4HANA 2020

Upgrades

- No automated changes
- Comparison report can be used



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SAP Secure By Default for S/4HANA on Premise 2020

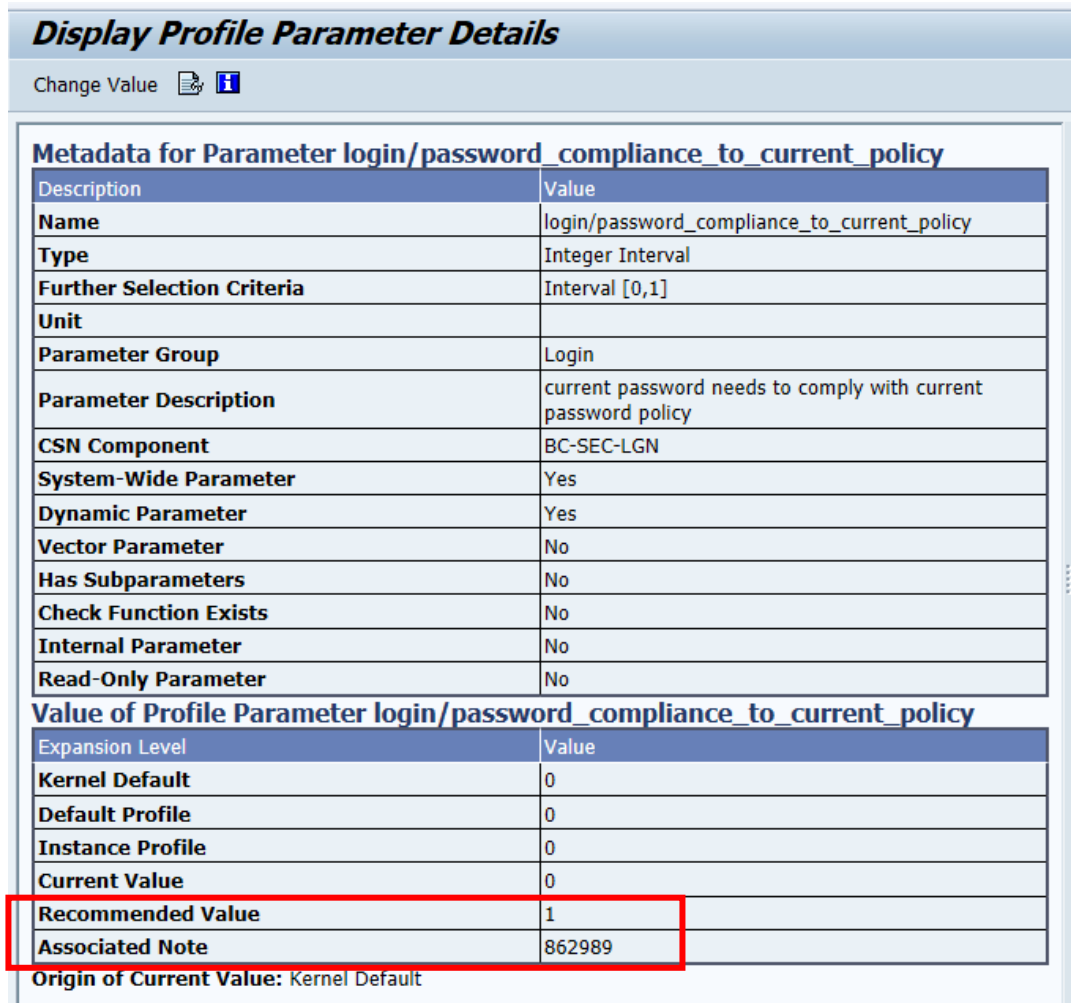
Technical View – Recommended Value for Profile Parameter

Difference between recommended values and kernel defaults

- SAP kernel defaults are values stored in the kernel and will be activated with a kernel upgrade
- Recommended values are additionally stored in kernel binaries and are used by SAP lifecycle tools (e.g. SWPM, SUM) to set values in new installations, system copies and conversions

Why are some recommended values not enabled?

- Some recommended values are added to the `DEFAULT.PFL` as comments (disabled)
- Disabled recommended values need to be enabled after SAP lifecycle tools are finished



Display Profile Parameter Details

Change Value

Metadata for Parameter login/password_compliance_to_current_policy

Description	Value
Name	login/password_compliance_to_current_policy
Type	Integer Interval
Further Selection Criteria	Interval [0,1]
Unit	
Parameter Group	Login
Parameter Description	current password needs to comply with current password policy
CSN Component	BC-SEC-LGN
System-Wide Parameter	Yes
Dynamic Parameter	Yes
Vector Parameter	No
Has Subparameters	No
Check Function Exists	No
Internal Parameter	No
Read-Only Parameter	No

Value of Profile Parameter login/password_compliance_to_current_policy

Expansion Level	Value
Kernel Default	0
Default Profile	0
Instance Profile	0
Current Value	0
Recommended Value	1
Associated Note	862989

Origin of Current Value: Kernel Default

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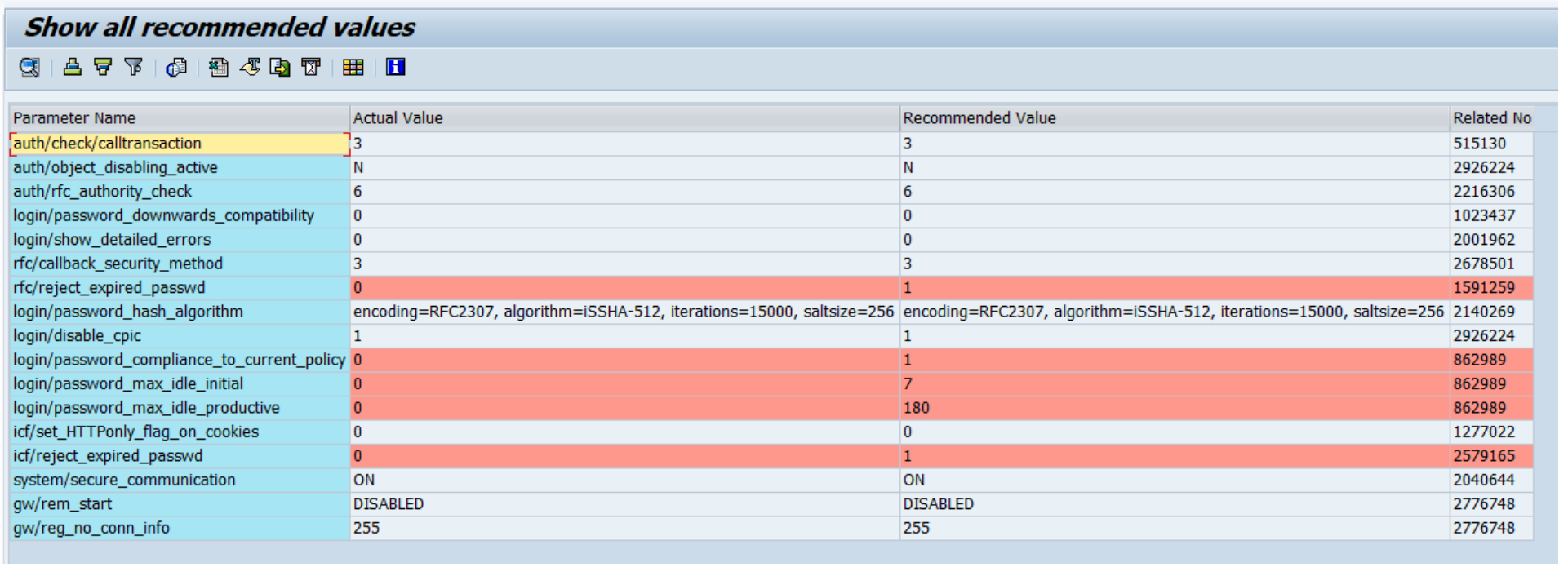
SAP Secure By Default for S/4HANA on Premise 2020

Upgrade Scenarios

Support of S/4HANA 2020 upgrade scenario

- No automated changes during upgrade
- Enhanced comparison report `RSPFRECOMMENDED` shows actual system values vs recommended security profile parameters



Show all recommended values

Parameter Name	Actual Value	Recommended Value	Related No
auth/check/calltransaction	3	3	515130
auth/object_disabling_active	N	N	2926224
auth/rfc_authority_check	6	6	2216306
login/password_downwards_compatibility	0	0	1023437
login/show_detailed_errors	0	0	2001962
rfc/callback_security_method	3	3	2678501
rfc/reject_expired_passwd	0	1	1591259
login/password_hash_algorithm	encoding=RFC2307, algorithm=iSSHA-512, iterations=15000, saltsize=256	encoding=RFC2307, algorithm=iSSHA-512, iterations=15000, saltsize=256	2140269
login/disable_cpic	1	1	2926224
login/password_compliance_to_current_policy	0	1	862989
login/password_max_idle_initial	0	7	862989
login/password_max_idle_productive	0	180	862989
icf/set_HTTPonly_flag_on_cookies	0	0	1277022
icf/reject_expired_passwd	0	1	2579165
system/secure_communication	ON	ON	2040644
gw/rem_start	DISABLED	DISABLED	2776748
gw/reg_no_conn_info	255	255	2776748

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SAP Secure By Default for S/4HANA on Premise 2020
Is this enough Security?

Is Secure By Default enough Security?

- Secure by default settings cannot and will not cover all aspects of security settings in S/4HANA systems
- SAP highly recommends customers to perform additional reviews and improvements of their security settings

Where can I find more information on SAP Security?

- Use the SAP-provided tools and services (https://support.sap.com/sos). These inform you about gaps in a cost efficient way.
  - EarlyWatch Alert (alert on most critical topics)
  - Configuration Validation (check security configurations)
  - System Recommendations (display missing security patches)

- Review SAP Security Whitepapers (https://support.sap.com/securitywp)

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SAP Secure By Default for S/4HANA on Premise 2020

Management Summary

Technical View

- Secure By Default with S/4HANA on Premise covers Profile Parameters (extended with 2020), Switchable Authorization Framework (SACF) (new with 2020), Security Audit Log (shipped with 1909)

Supported Scenarios

- Settings are automatically applied as part of new installations, system copies and conversions
- Tooling is provided to support customers in S/4HANA upgrade scenarios (as settings are not applied directly)

Products in Scope

- S/4HANA
- Products running on S/4HANA Foundation (e.g. Focused Run)

Implement more Security

- Use the SAP provided tools, like EWA, Configuration Validation, System Recommendation

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Thank you

Contact information

Bjoern Brencher
S/4HANA Security
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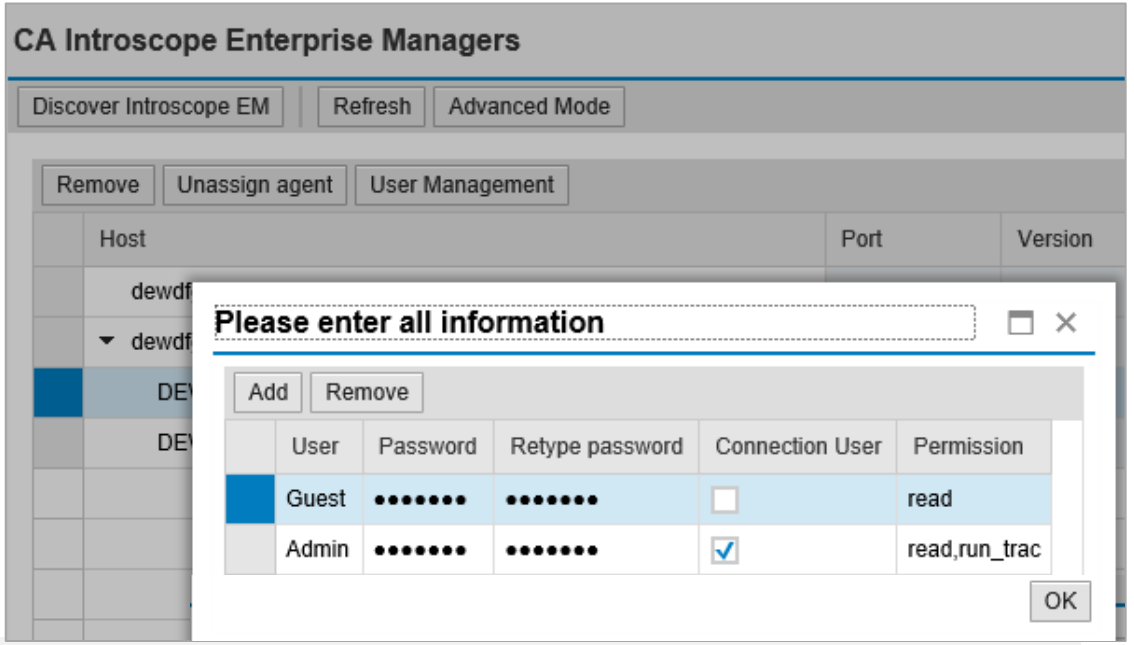
Note 2971638 - Hard-coded Credentials in CA Introscope Enterprise Manager

Affected Products:
Third Party add-on delivered as OEM for SAP Solution Manager and SAP Focused Run
https://support.sap.com/en/alm/solution-manager/expert-portal/introscope-enterprise-manager.html

The important part of the note is to change the default passwords of the users `Admin` and `Guest`. Use SAP Solution Manager, configuration step 4 "Define CA Introscope" in “Infrastructure Preparation” to set Introscope credentials. This updates the credentials on Introscope side as well as in the SAP Solution Manager.
See Note 2310713 / KBA 2512694

After that and in addition you can implement the patch provided by the note:

“The solution is to deploy an additional Enterprise Manager plugin that blocks the passwords for the pre-defined users Admin and Guest if they still have default values.”



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Note 2971638 - Hard-coded Credentials in CA Introscope Enterprise Manager

Default installation location is `/usr/sap/ccms/apmintroscope`, but you may have chosen a different location during installation. This folder is called `<EM_HOME>` in some of the notes.

Transaction `AL11` (view only) → `DIR_CCMS` → `apmintroscope` → `config` → `users.xml`

```
Directory:    /usr/sap/ccms/apmintroscope/config
Name:         users.xml
```

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<principals xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" version="0.3" plainTextPasswords="false" xsi:noNamespaceSchemaLocation="users0.3.xsd">
    <users>
        <user password="cf25f327d28e3476c61fb03e3266b1fc41b9b35cf07051625bc47abd7fb82fe4" name="Admin"/>
        <user password="e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca495991b7852b855" name="Guest"/>
    </users>
    <groups>
        <group name="CEM System Administrator" description="CEM System Administrator Group">
            <user name="Admin"/>
        </group>
        <group name="Admin" description="Administrator Group">
            <user name="Admin"/>
        </group>
        <group name="CEM Analyst" description="CEM Analyst Group"/>
        <group name="CEM Configuration Administrator" description="CEM Configuration Administrator Group"/>
        <group name="CEM Incident Analyst" description="CEM Incident Analyst Group"/>
    </groups>
</principals>
```

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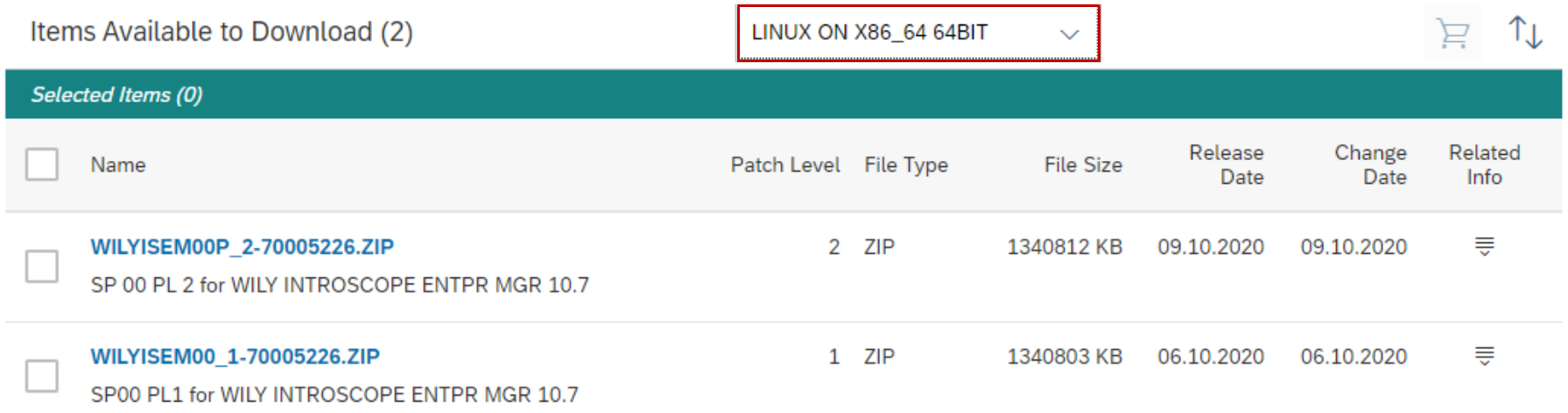
Note 2969828 - OS Command Injection Vulnerability in CA Introscope Enterprise Manager

Affected Products:
Third Party add-on delivered as OEM for SAP Solution Manager and SAP Focused Run
https://support.sap.com/en/alm/solution-manager/expert-portal/introscope-enterprise-manager.html

It might be the case that you run a quite old version even if you have updated the SAP Solution Manager recently as it‘s not part of the SUM package. All old versions are assumed to be vulnerable.

On SAP Solution Manager 7.2, instead of installing a patch (if available for the installed version), you could consider to install to latest version in any case:



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Note 2969828 - OS Command Injection Vulnerability in CA Introscope Enterprise Manager

How-to verify the installed version:

a) via the Introscope log file as described in the note

This gives you the exact patch number, e.g. 10.1.0.15 or 10.5.2.113 (vulnerable) or 10.7.0.304 (new)

Transaction `AL11` (view only) → `DIR_CCMS` → `apmintroscope` → `logs` → `IntroscopeEnterpriseManager.log`

```
Directory:    /usr/sap/ccms/apmintroscope/logs
Name:         IntroscopeEnterpriseManager.log
```

```
Feb 05, 2017 6:06:58 PM org.springframework.osgi.extender.internal.activator.ContextLoaderListener start
INFO: Starting [org.springframework.osgi.extender] bundle v.[1.2.1]
Feb 05, 2017 6:06:58 PM org.springframework.osgi.extender.internal.support.ExtenderConfiguration <init>
INFO: No custom extender configuration detected; using defaults...
Feb 05, 2017 6:06:58 PM org.springframework.scheduling.timer.TimerTaskExecutor afterPropertiesSet
INFO: Initializing Timer
2/05/17 06:07:01.137 PM UTC [INFO] [main] [Manager] Introscope Enterprise Manager Release 10.1.0.15 (Build 990014)
2/05/17 06:07:01.138 PM UTC [INFO] [main] [Manager] Using Java VM version "Java HotSpot(TM) 64-Bit Server VM 1.8.0_45" from Oracle Corporation
2/05/17 06:07:01.138 PM UTC [INFO] [main] [Manager] Using Introscope installation at: /usr/sap/ccms/apmintroscope/.
2/05/17 06:07:01.139 PM UTC [INFO] [main] [Manager] CA Wily Introscope(R) Version 10.1.0
2/05/17 06:07:01.139 PM UTC [INFO] [main] [Manager] Copyright (c) 2015 CA. All Rights Reserved.
2/05/17 06:07:01.139 PM UTC [INFO] [main] [Manager] Introscope(R) is a registered trademark of CA.
2/05/17 06:07:01.139 PM UTC [INFO] [main] [Manager] Starting Introscope Enterprise Manager...
2/05/17 06:07:01.140 PM UTC [INFO] [main] [Manager] This Enterprise Manager is license free.
2/05/17 06:07:01.249 PM UTC [INFO] [main] [Manager] Found valid license file: /usr/sap/ccms/apmintroscope/./license/SAP.em.lic
```

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Note 2969828 - OS Command Injection Vulnerability in CA Introscope Enterprise Manager

How-to verify the installed version:

b) via the software component list of the Java part of the SAP Solution Manager
Caveat: This shows the version of the "agent", which might differ from the version of the "enterprise manager".

https:// [hostname]:5xx00 → System Information

or

https:// [hostname]:5xx00/nwa → Configuration Management → Infrastructure → System Information

or

https://[hostname]:5xx00/monitoring/SystemInfo

Notes:

Note 1757810 – How to get the complete list of software components on your NetWeaver Application Server Java
Note 1771843 – How to identify and search the latest patch level for a Netweaver Java Component [VIDEO]
Note 1752501 – Retrieving the Java version information offline
Note 2181113 – Getting the Versions of Deployed Units on AS Java from a Command Prompt

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Note 2969828 - OS Command Injection Vulnerability in CA Introscope Enterprise Manager

How-to verify the installed version :

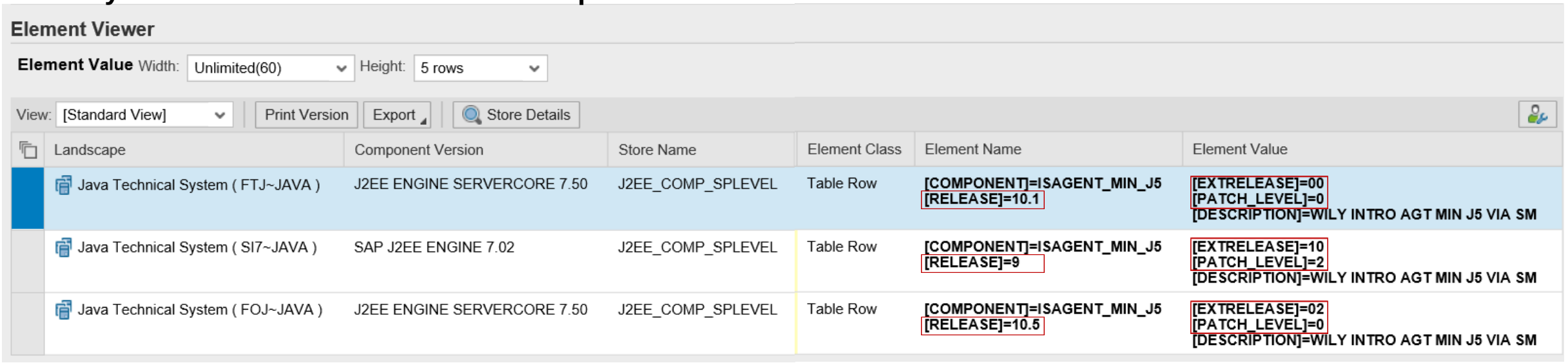
c) via application Configuration and Change Database (CCDB).
Caveat: This shows the version of the "agent", which might differ from the version of the "enterprise manager".

Transaction `CCDB` **→ Status → Cross Selection**

Filter for Store Name = `J2EE_COMP_SPLEVEL`

Filter for Element Pattern = `WILY*`

Result:
Cross-system list of installed Software Component Versions



Landscape	Component Version	Store Name	Element Class	Element Name	Element Value
Java Technical System (FTJ~JAVA)	J2EE ENGINE SERVERCORE 7.50	J2EE_COMP_SPLEVEL	Table Row	[COMPONENT]=ISAGENT_MIN_J5 [RELEASE]=10.1	[EXTRELEASE]=00 [PATCH_LEVEL]=0 [DESCRIPTION]=WILY INTRO AGT MIN J5 VIA SM
Java Technical System (SI7~JAVA)	SAP J2EE ENGINE 7.02	J2EE_COMP_SPLEVEL	Table Row	[COMPONENT]=ISAGENT_MIN_J5 [RELEASE]=9	[EXTRELEASE]=10 [PATCH_LEVEL]=2 [DESCRIPTION]=WILY INTRO AGT MIN J5 VIA SM
Java Technical System (FOJ~JAVA)	J2EE ENGINE SERVERCORE 7.50	J2EE_COMP_SPLEVEL	Table Row	[COMPONENT]=ISAGENT_MIN_J5 [RELEASE]=10.5	[EXTRELEASE]=02 [PATCH_LEVEL]=0 [DESCRIPTION]=WILY INTRO AGT MIN J5 VIA SM

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Note 2969828 - OS Command Injection Vulnerability in CA Introscope Enterprise Manager

Tipps:

- **SAP Solution Manager 7.2 SP 11 requires CA Introscope Enterprise Manager 10.7**
  This version is required to be able to configure the application in
  SolMan Setup → Infrastructure Preparation → Step 4 “Define CA Introscope”

- **Do not forget to update the SAP Management Modules**
  https://support.sap.com/en/alm/solution-manager/expert-portal/introscope-enterprise-manager.html
  → SAP Setup Guide for Introscope 10.7
  and Note 1579474 - Management Modules for Introscope delivered by SAP

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Note 2941667 - Code Injection Vulnerability in SAP NetWeaver (ABAP) (reloaded)

Prerequisite note on 7.40 up to Support Package 8:

Note 1979454 - Missing authorization check in Batch Input Recorder
This note introduces function `BDC_RECORD_AUTH_CHECK`
Support Package SAPKB74009
Correction instruction for 740 - SAPKB74008

```
*>>>> START OF INSERTION <<<<<
FUNCTION BDC_RECORD_AUTH_CHECK.
*
  data: begin of apqi_info.
          include structure apqi.
  data: end of apqi_info.
  data: o_aktivity(4).
  data: par_value(5) type c.
*
  clear: auth_rc.
*
* check only authority with profile value bdc/shdb/auth_check = true
  call 'C_SAPGPARAM' id 'NAME'  field 'bdc/shdb/auth_check'
                     id 'VALUE' field par_value.        "#EC CI_CCALL
  translate par_value to upper case.
  check par_value eq 'TRUE'.
```

Caveat: Depending on the release / installed notes

- **you have to set Profile Parameter `bdc/shdb/auth_check = TRUE` to activate the authority check for `S_BDC_MONI`,**
- **you can set `bdc/shdb/auth_check = FALSE` to switch off the authority check, or**
- **the authority check is mandatory (Note 2966249 as of SAP_BASIS 7.55).**

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Note 887164 - BSP Test Applications in Production Systems

Deactivate test services according to note 887164:

```
/sap/bc/bsp/sap/bsp_model
/sap/bc/bsp/sap/htmlb_samples
/sap/bc/bsp/sap/it00
/sap/bc/bsp/sap/it01
/sap/bc/bsp/sap/it02
/sap/bc/bsp/sap/it03
/sap/bc/bsp/sap/it04
/sap/bc/bsp/sap/it05
/sap/bc/bsp/sap/itmvc2
/sap/bc/bsp/sap/itsm
/sap/bc/bsp/sap/sbspext_htmlb
/sap/bc/bsp/sap/sbspext_phtmlb
/sap/bc/bsp/sap/sbspext_table
/sap/bc/bsp/sap/sbspext_xhtmlb
/sap/bc/bsp/sap/system_private
/sap/bc/bsp/sap/system_public
```

Note 2948239

Deactivate test services of ABAP Channels (APC):

```
/sap/bc/apc_test/*
/sap/bc/webdynpro/sap/ABAP_ONLINE_COMMUNITY
/sap/bc/apc/sap/abap_online_community
```

Deactivate more test services:

```
/sap/bc/echo/redirect

/sap/bc/gui/sap/its/test/*

/sap/bc/kw/skwr
```

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Note 2973497 - Multiple Vulnerabilities in SAP 3D Visual Enterprise Viewer

SAP 3D Visual Enterprise Viewer is a part of the SAP Front-End installation.

More issues solved about some file types (.cgm, .jt, .pdf, .rh)

Solution with VE_VIEWER_COMPLETE 9.0 SP 9 patch 3

Previous Note 2960815 - Improper Input Validation in SAP 3D Visual Enterprise Viewer
File types: .bmp , .cgm, .dib, .eps, .fbx, .gif, .hdr, .hpg, .hpgl, .plt, **.pdf**, .pcx, **.rh**, .rle, .tga

Solution with VE_VIEWER_COMPLETE 9.0 SP 9 patch 2

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Note 2883638 - Information Disclosure in Supplier Relationship Management

“Pre-requisite for this vulnerability is `BYPASS_OUTB_HANDLER` is not set to true in Standard Call Structure configuration for the particular Catalog in `SPRO`.”

See:
Define External Web-Services - Parameters and values in the Call Structure
https://wiki.scn.sap.com/wiki/display/SRM/Define+External+Web-Services+-+Parameters+and+values+in+the+Call+Structure

`BYPASS_OUTB_HANDLER`: The Outbound Handler service creates a link called "Back To SRM Application" on the top of the catalog view. This parameter disables the service, usually for performance reasons. Adding the Parameter value 'X' turns off the handler.

The SRM-MDM Catalog already has a "back" link rendered by the Search UI, so set this to avoid duplicate links.

See SAP Notes 1249846, 1489343, 1405908, 1474056 and 1887020.

See more information and debugging hints about inbound and outbound handler here.

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Note 2973100 - Missing Authorization check in Manage Substitutions - Products and Manage Exclusions - Product

```
    IF substituteproduct IS NOT INITIAL.
      IF substitute_data-authorizationgroup IS NOT INITIAL.
        AUTHORITY-CHECK OBJECT 'M_MATE_MAT'
          ID 'BEGRU' FIELD substitute_data-authorizationgroup
          ID 'ACTVT' FIELD '03'.

        IF sy-subrc <> 0.
          allowed = abap_false.
          RETURN.
        ENDIF.
      ENDIF.

      IF substitute_data-type_begru IS NOT INITIAL.
        AUTHORITY-CHECK OBJECT 'M_MATE_MAR'
          ID 'BEGRU' FIELD substitute_data-type_begru
*>>>> END OF DELETION <<<<<<<
```

The existing authorization checks for authorization objects `M_MATE_WGR`, `M_MATE_MAT`, and `M_MATE_MAR` are rearranged in the code.

→

No adjustments of roles required

```
        SORT authorized_products BY product.

        LOOP AT unique_products INTO DATA(product_range).
          READ TABLE authorized_products INTO DATA(authorized_product) WITH KEY product = product_range-low BINARY SEARCH.
          IF sy-subrc = 0.
            AUTHORITY-CHECK OBJECT 'M_MATE_MAT'
              ID 'BEGRU' FIELD authorized_product-authorizationgroup
              ID 'ACTVT' FIELD '03'.

            IF sy-subrc = 0.
              DATA(type_is_authorized) = abap_true.
              DATA(group_is_authorized) = abap_true.

              IF authorized_product-type_begru IS NOT INITIAL.
                AUTHORITY-CHECK OBJECT 'M_MATE_MAR'
                  ID 'BEGRU' FIELD authorized_product-type_begru
*>>>> END OF INSERTION <<<<<<
```

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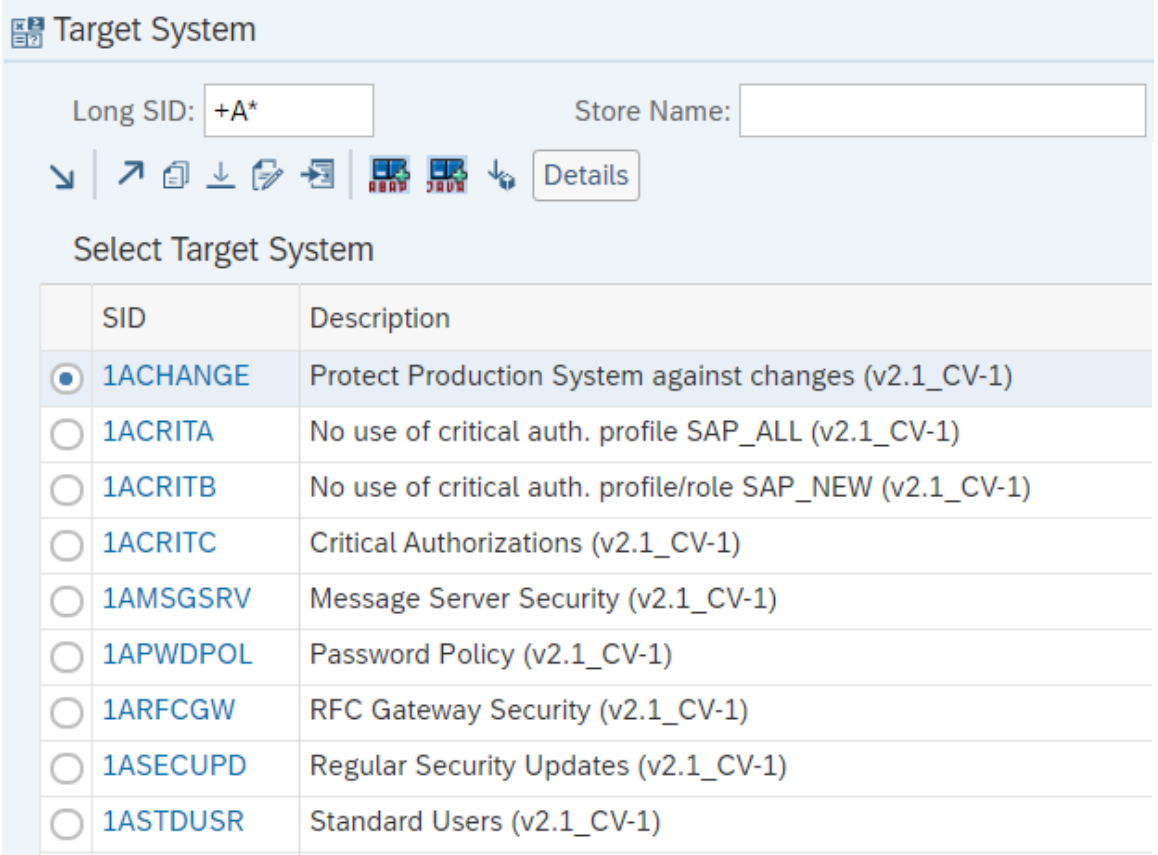
Security Baseline Template 2.1 incl. ConfVal Package 2.1-CV-1

New version on https://support.sap.com/sos

→ SAP CoE Security Services - Security Baseline Template Version 2.1 (with ConfigVal Package)

Title	Type	Changed
_SAP Security Notes Advisory	ZIP	2020-09
_Security Notes Webinar	PDF	2020-09
RFC Gateway and Message Server Security	PDF	2019-06
SAP CoE Security Services - Check Configuration & Authorization	PDF	2020-01
SAP CoE Security Services - Overview	PDF	2020-01
SAP CoE Security Services - Secure Operations Map	PDF	2020-01
SAP CoE Security Services - Security Patch Process	PDF	2019-07
SAP CoE Security Services - Security Baseline Template Version 1.9 (including ConfigVal Package version 1.9_CV-5)	ZIP	2018-08
SAP CoE Security Services - Security Baseline Template Version 2.1 (including ConfigVal Package CV-1)	ZIP	2020-10



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Security Baseline Template 2.1 incl. ConfVal Package 2.1-CV-1

[Critical] Target System

1ACHANGE	Protect Production System against changes
1ACRITA	No use of critical auth. profile SAP_ALL
1ACRITB	No use of critical auth. profile/role SAP_NEW
1ACRITC	Critical Authorizations
1AMSGSRV	Message Server Security
1APWDPOL	Password Policy
1ARFCGW	RFC Gateway Security
1ASECUPD	Regular Security Updates
1ASTDUSR	Standard Users
1HAUDIT	Audit Settings
1HNETCF	Secure Network Configuration
1HPWDPOL	Password Policy
1HSECUPD	Regular Security Updates
1HTRACES	Critical Data in trace files
1JMSGSRV	Message Server Security
1JNOTEST	No Testing Functionality in Production
1JPWDPOL	Password Policy
1JSECUPD	Regular Security Updates
1JRFCGW	RFC Gateway Security

[Standard] Target System

2AAUDIT	Audit Settings
2ACHANGE	Protect Production System against changes
2ACRITD	Protection of Password Hashes
2ADISCL	Information Disclosure
2AFILE	Directory Traversal Protection
2AMSGSRV	Message Server Security
2ANETCF	Secure Network Configuration
2ANETENC	Encryption of Network Connections
2AOBSCNT	Obsolete Clients
2APWDPOL	Password Policy
2ASSO	Single Sign-On
2AUSRCTR	User Control of Action
2HAUDIT	Audit Settings
2HPWDPOL	Password Policy
2HSTDUSR	Standard Users
2JDISCL	Information Disclosure
2JMSGSRV	Message Server Security
2JSELFRG	No Self-Registration of Users
2JSESS	Session Protection

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Security Baseline Template 2.1 incl. ConfVal Package 2.1-CV-1

[Extended] Target System

3ACHANGE	Protect Production System against changes
3AFILE	Directory Traversal Protection
3ANETENC	Encryption of Network Connections
3APWDPOL	Password Policy
3ARFCGW	RFC Gateway Security
3ASCRIPT	Scripting Protection
3JAUDIT	Audit Settings
3JPWDPOL	Password Policy
3JSSO	Single Sign-On
3JRFCGW	RFC Gateway Security

[Notes] Target System

N0510007	Note 510007 - Setting up SSL on AS ABAP
N1322944	Note 1322944 - ABAP: HTTP security session
N2065596	Note 2065596 - Restricting logons to server
N2288631	Note 2288631 - CommonCryptoLib
N2449757	Note 2449757 - Add.auth.check in Trusted RFC
N2562089	Note 2562089 - Directory Traversal vulnerability
N2562127	Note 2562127 - Support Connection SNC / SSO
N2671160	Note 2671160 - Missing input validation in CTS
N2934135	Note 2934135 - LM Configuration Wizard

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Important Notes for System Recommendations and Configuration Validation

Note 2729269 -	CCDB: Config store GLOBAL_CHANGE_LOG, COMPONENTS_CHANGE_LOG, NAMESPACES_CHANGE_LOG	06.02.2019
Note 2764556 -	ST 7.20 CV Dashboard Builder using function DIAGCPL_CV_DSH with database related configuration stores	05.03.2019
Note 2772002 -	Warning in the store CLIENTS_CHANGE_LOG - Extractor not available [EXTR_NOT_FOUND]	24.04.2019
Note 2843018 -	ST 7.20 SP07-09 CV exceptions accept _ in extSID	25.09.2019
Note 2870159 -	ST 7.20 CV for SysMon - add client information	05.12.2019
Note 2891758 -	ST 7.20 SP08/09/10 CV table store * item not found	12.02.2020
Note 2943967 -	ST 7.20 SP10/11 Target ABAP_NOTES fill from System Recommendations	03.07.2020
Note 2747922 -	SysRec: Corrections for Solution Manager 720 SP08 Fiori UI	15.09.2020
Note 2854704 -	SysRec: Collective Corrections for Solution Manager 720 SP09 Fiori UI	15.09.2020
Note 2857899 -	SysRec: Collective Corrections for Solution Manager 720 SP10 Fiori UI	15.09.2020
Note 2458890 -	SysRec: Support SAP GUI Notes	17.09.2020

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September 2020

Topics September 2020

Note 2961991 - Improper Access Control in SAP Marketing (Mobile Channel Servlet)

Note 2960815 - Improper Input Validation in SAP 3D Visual Enterprise Viewer

Note 2958563 - Code Injection vulnerability in SAP NetWeaver ABAP

Note 2951325 - Improper Authorization Checks in Banking services from SAP Bank Analyzer and SAP S/4HANA Financial Products

Note 2934135 - Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard) – reloaded (Configuration Validation)

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Note 2961991 - Improper Access Control in SAP Marketing (Mobile Channel Servlet)

The Mobile Channel Servlet is an integral part of SAP Hybris Marketing Cloud which you install on SAP Cloud Platform.

Additional information:

Note 2963056 - FAQ - for SAP Note 2961991 - Improper Access Control in SAP Marketing (Mobile Channel Servlet)

Workaround:

Note 2962970 - Disable the SAP Cloud Platform Servlet Used by the SAP Marketing Mobile SDK

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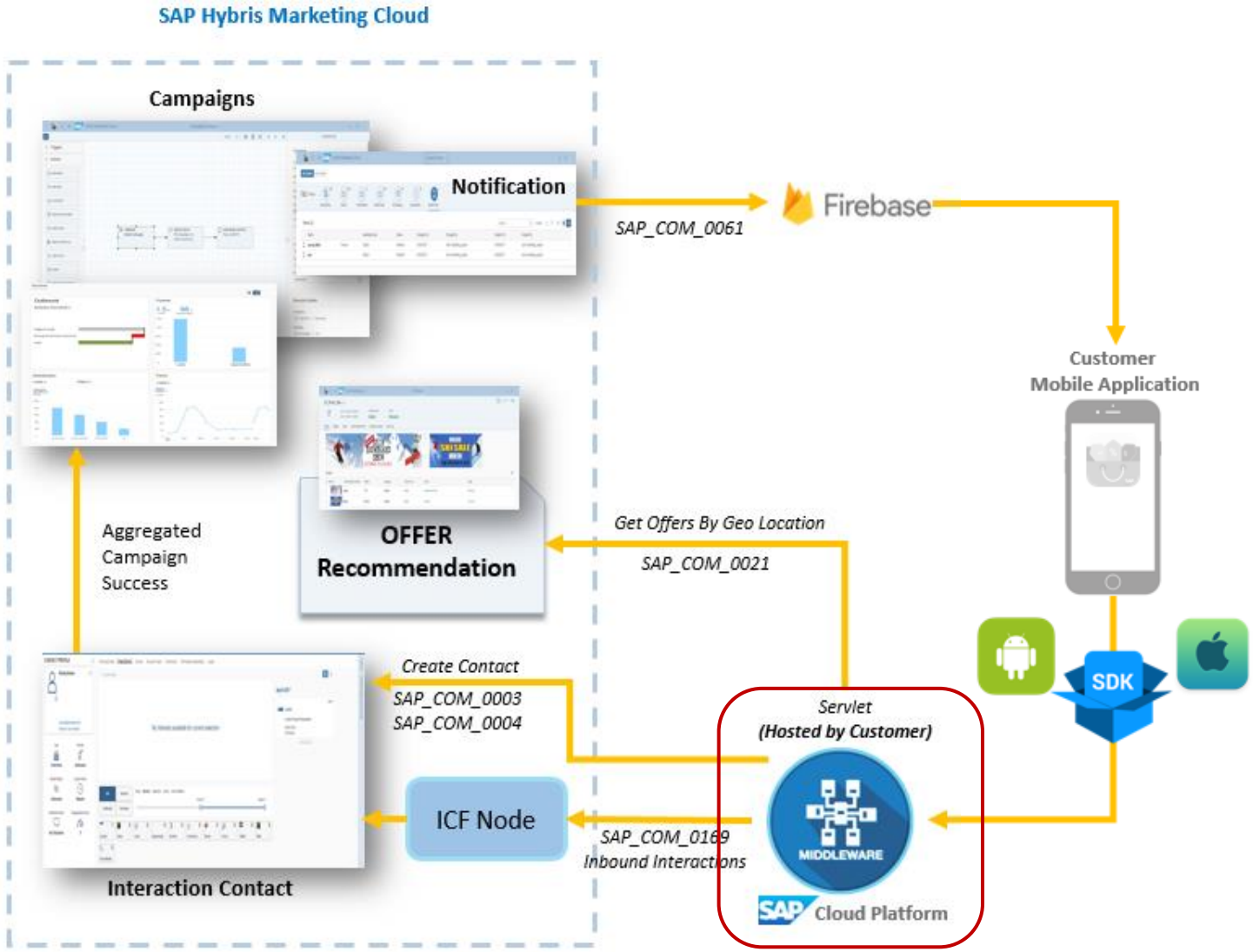
Note 2961991 - Improper Access Control in SAP Marketing (Mobile Channel Servlet)

The note solves a vulnerability in the servlet used to integrate between Mobile Applications and the SAP Hybris Marketing Cloud.

You install this servlet on SAP Cloud Platform.

See Blog "Mobile Engagement using SAP Hybris Marketing" (2017)
https://blogs.sap.com/2017/08/23/mobile-engagement-using-sap-hybris-marketing/



Tipp: *The mobile SDK and servlet will be deprecated in future release 2011.*

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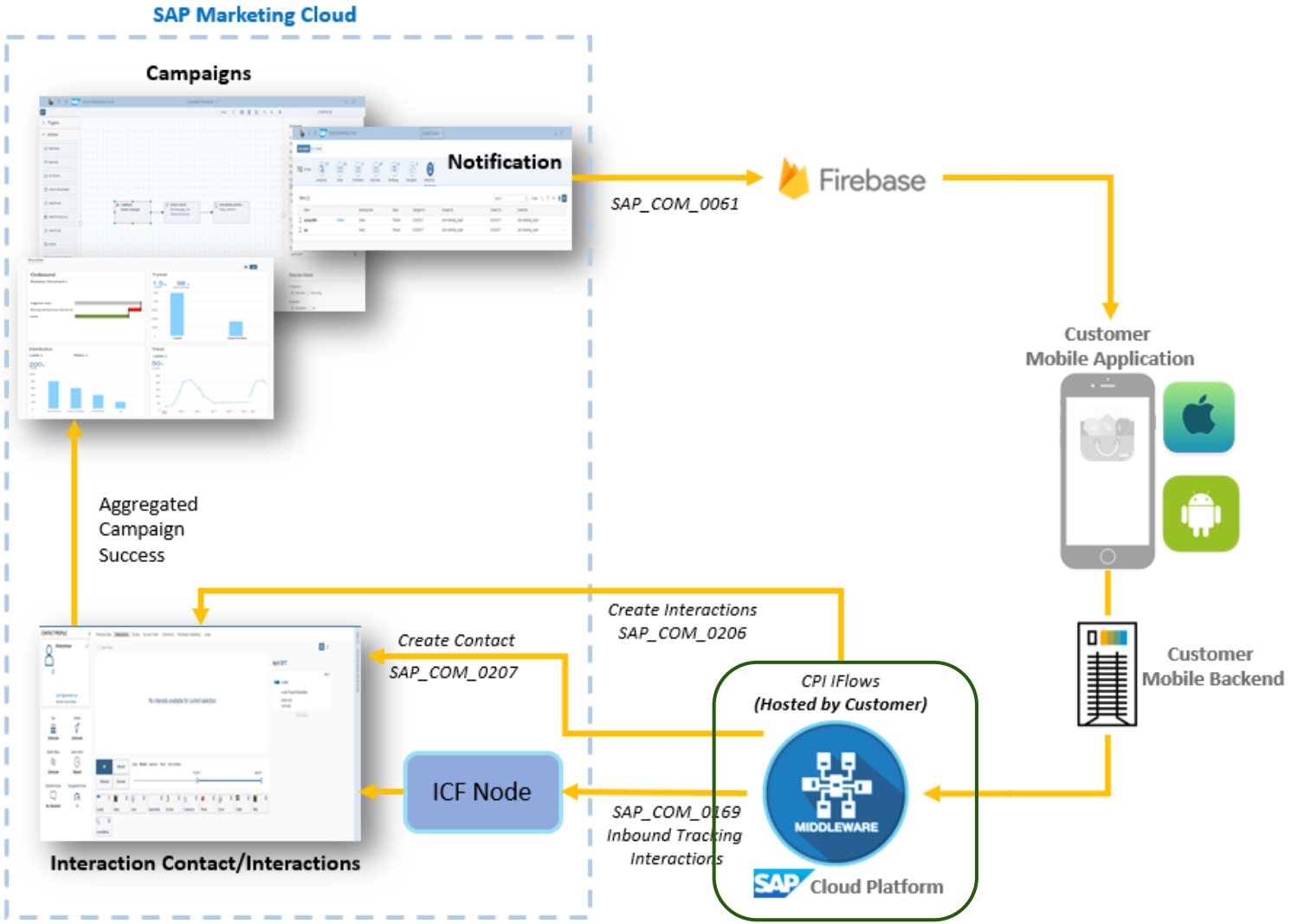
Note 2961991 - Improper Access Control in SAP Marketing (Mobile Channel Servlet)

You can use the new Integration Flows instead to connect your mobile app with SAP Marketing Cloud.

This version is not affected by the vulnerability.

Mobile App Integration with Google Firebase
https://help.sap.com/viewer/fd4e354968fd432db74bff1992c3a1fb/2005.500/en-US/712c1edf8ae945df84012a6c84213556.html



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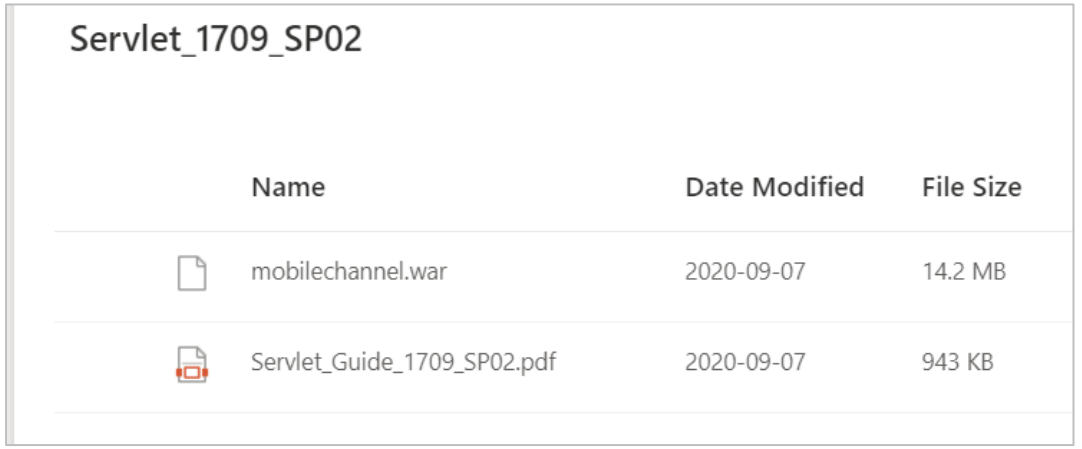
Note 2961991 - Improper Access Control in SAP Marketing (Mobile Channel Servlet)

The servlet is available on OneDrive. You find the installation and configuration guideline for a specific release within the zip archive:



You re-deploy it centrally on SAP Cloud Platform.

You just need to re-deploy the servlet as described in chapter 2.2 “Deploying the .war File”

You do not need to touch any configuration.

You can inspect the application URL to learn about the account ID and the app name:
https://mobilechannelab1234567.hana.ondemand.com/mobilechannel/sap/opu/odata/sap/API_MKT_LOCATION_SRV/

Caveat: There is no way to inspect or validate the version of the current installation.

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Note 2960815 - Improper Input Validation in SAP 3D Visual Enterprise Viewer

SAP 3D Visual Enterprise Viewer is a part of the SAP Front-End installation.

The solution is part of SAP 3D Visual Enterprise Author 9.0 FP09 MP2

References:

https://help.sap.com/ve

https://help.sap.com/viewer/68649624a1bd101496efce73094bb411/9.0.0.9/en-US/bedf68d83eae430f892ed29522bf6744.html

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Note 2958563 - Code Injection vulnerability in SAP NetWeaver ABAP

The correction deactivates an obsolete critical function.

The software component SAP-BW is part of every ABAP system but the vulnerability only exist for specific databases: *„Note that the vulnerability is platform specific, that is only ABAP Servers on DB4 or Sybase are vulnerable.”*

Function `RSDU_LIST_DB_TABLE_DB4`

```
IF con_ref->get_dbms( ) <> 'DB4'.
  RAISE dbms_not_supported.
ENDIF.
```

Function `RSDU_LIST_DB_TABLE_SYB`

```
IF sy-dbsys <> 'SYBASE'.
  RAISE dbms_not_supported.
ENDIF.
```

→ You may skip this note on systems running other databases.

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Note 2951325 - Improper Authorization Checks in Banking services from SAP Bank Analyzer and SAP S/4HANA Financial Products

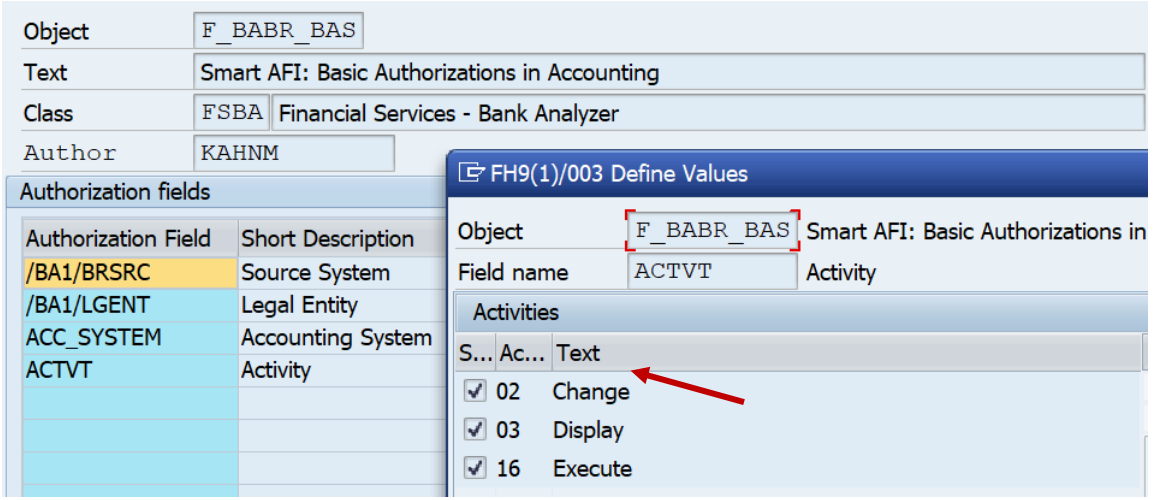
Only relevant for software components FSAPPL 500 and S4FPSL 100

Updated authorization object `F_BABR_BAS`

Manual instruction: It might be required to add allowed activity `01`=create in both cases to be able to maintain authorizations in `PFCG`.

In any case you should validate roles which you have created similar to these ones:

```
SAP_FPS_CUSTOMIZER
SAP_FPS_EXP_FINANCIAL_ACCTNT
SAP_FPS_EXP_FINANCIAL_PLANNER
SAP_FPS_EXP_PLANNER
SAP_FPS_EXP_VDM_REPORTING
```



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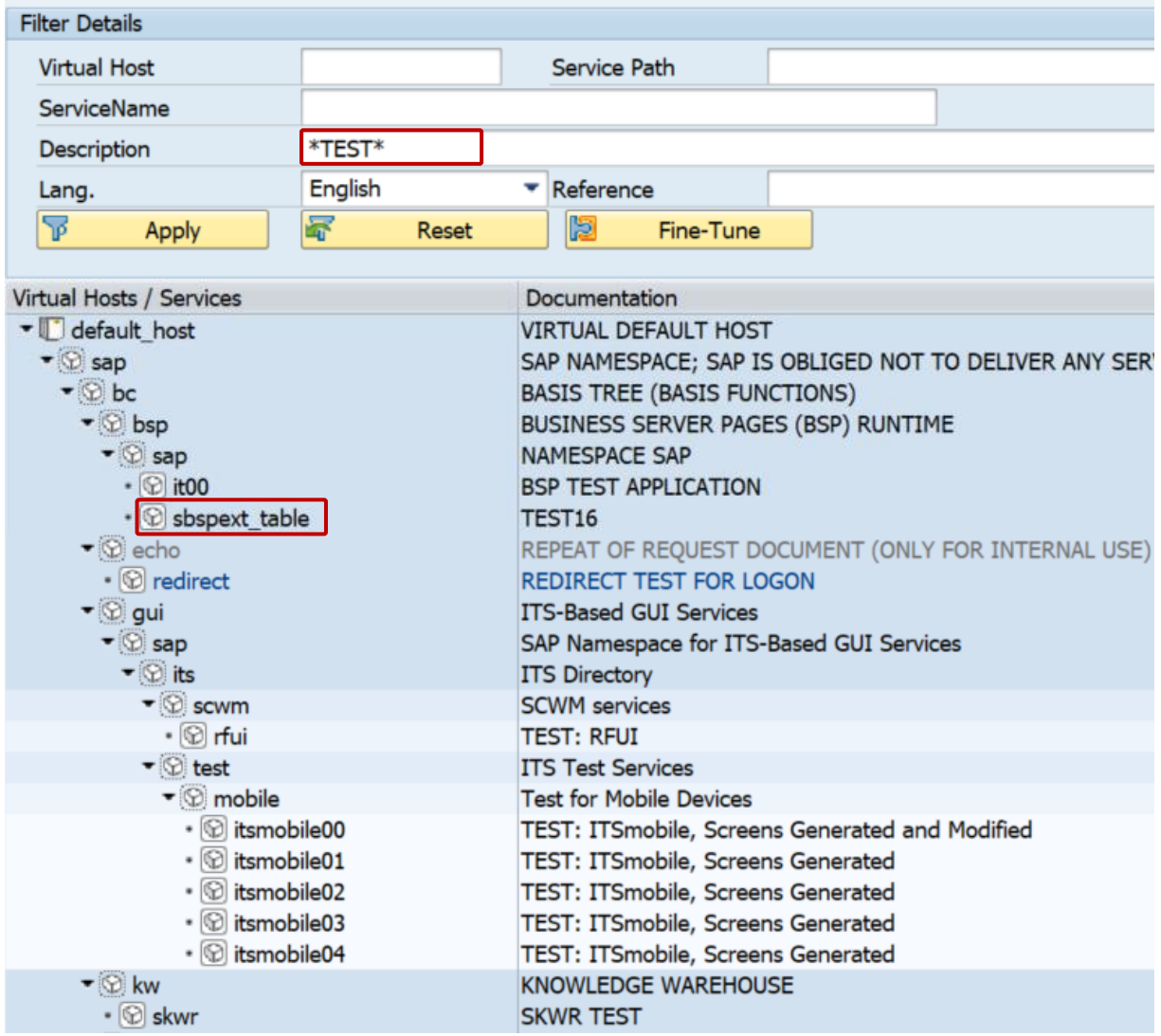
Note 2948239 - Cross-Site Scripting (XSS) vulnerability in SAP NetWeaver AS ABAP (BSP Test Application)

In addition to implement the note to secure the `SICF` service `sbspext_table` you should deactivate this and other test applications in production systems.



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Note 2934135 - Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard) - reloaded (Configuration Validation)

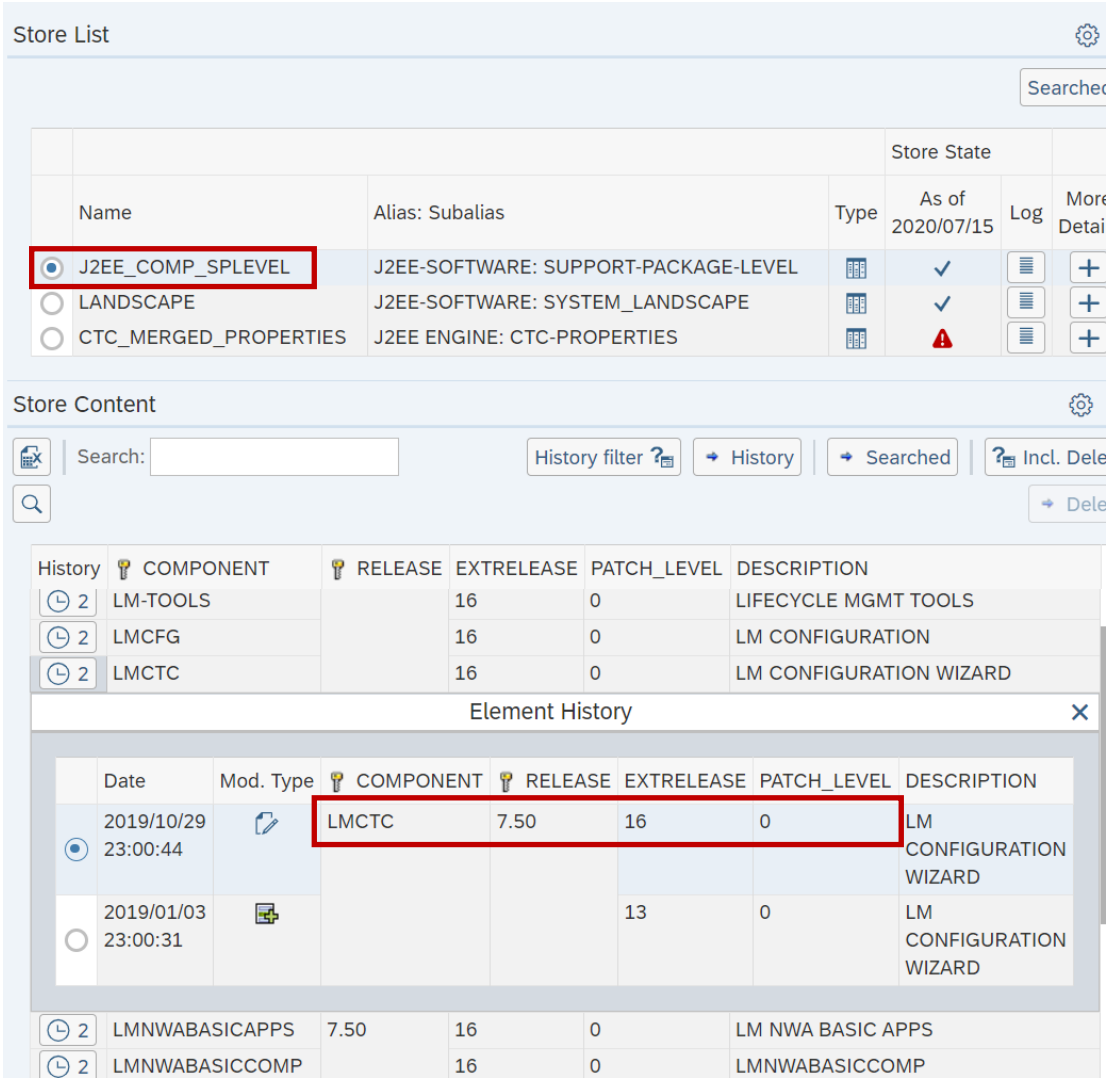
Cross system verification of installed patches

Application ChangeReporting or CCDB in the SAP Solution Manager
(Configuration Validation requires a trick)

Configuration Store: `J2EE_COMP_SPLEVEL`

Component: `LMCTC`

Validation is possible in application Configuration & Security Analytics (CSA) in FRUN



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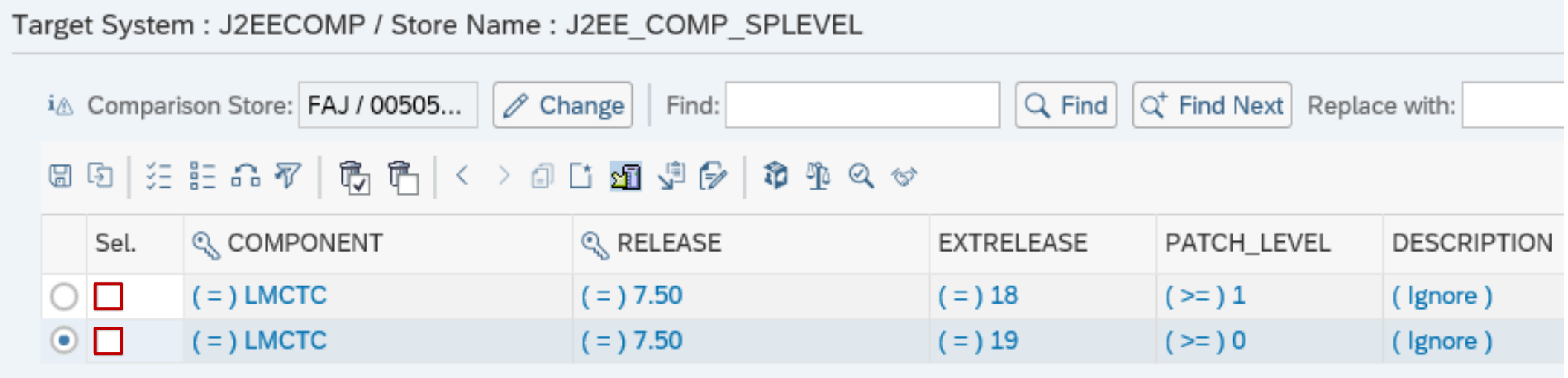
Note 2934135 - Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard) - reloaded (Configuration Validation)

The Configuration Store `J2EE_COMP_SPLEVEL` has key fields `COMPONENT` and `RELEASE` (few filter operators, no duplicates allowed) and data fields `EXTRELEASE`, `PATCH_LEVEL`, `DESCRIPTION` (many filter operators available).

You want to define conditions like these:



However, this leads to the error "Duplicate entry".

➢ **You have to enter distinct values for key fields.**

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Note 2934135 - Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard) - reloaded (Configuration Validation)

We need a trick: The condition has to look different but still addresses the same configuration items.

Solution: Use a regular expression which includes a different but irrelevant part.

The regular expression
`(something)?`
catches zero or one occurrences of `something`.

COMPONENT	RELEASE	EXTRELEASE	PATCH_LEVEL	DESCRIPTION
(Regex) LMCTC(7.10)?	(=) 7.10	(Ignore)	(Ignore)	(Ignore)
(Regex) LMCTC(7.11)?	(=) 7.11	(Ignore)	(Ignore)	(Ignore)
(Regex) LMCTC(7.20)?	(=) 7.20	(Ignore)	(Ignore)	(Ignore)
(Regex) LMCTC(7.30 19)?	(=) 7.30	(=) 19	(>=) 1	(Ignore)
(Regex) LMCTC(7.30 20)?	(=) 7.30	(=) 20	(>=) 1	(Ignore)
(Regex) LMCTC(7.30 21)?	(=) 7.30	(>=) 21	(Ignore)	(Ignore)
(Regex) LMCTC(7.31 23)?	(=) 7.31	(=) 23	(>=) 1	(Ignore)
(Regex) LMCTC(7.31 24)?	(=) 7.31	(=) 24	(>=) 1	(Ignore)
(Regex) LMCTC(7.31 25)?	(=) 7.31	(=) 25	(>=) 1	(Ignore)
(Regex) LMCTC(7.31 26)?	(=) 7.31	(=) 26	(>=) 1	(Ignore)
(Regex) LMCTC(7.31 27)?	(=) 7.31	(=) 27	(>=) 0	(Ignore)
(Regex) LMCTC(7.31 28)?	(=) 7.31	(>=) 28	(Ignore)	(Ignore)
(Regex) LMCTC(7.40 18)?	(=) 7.40	(=) 18	(>=) 1	(Ignore)
(Regex) LMCTC(7.40 19)?	(=) 7.40	(=) 19	(>=) 1	(Ignore)
(Regex) LMCTC(7.40 20)?	(=) 7.40	(=) 20	(>=) 1	(Ignore)
(Regex) LMCTC(7.40 21)?	(=) 7.40	(=) 21	(>=) 1	(Ignore)
(Regex) LMCTC(7.40 22)?	(=) 7.40	(=) 22	(>=) 0	(Ignore)
(Regex) LMCTC(7.40 23)?	(=) 7.40	(>=) 23	(Ignore)	(Ignore)
(Regex) LMCTC(7.50 12)?	(=) 7.50	(=) 12	(>=) 2	(Ignore)
(Regex) LMCTC(7.50 13)?	(=) 7.50	(=) 13	(>=) 3	(Ignore)
(Regex) LMCTC(7.50 14)?	(=) 7.50	(=) 14	(>=) 2	(Ignore)
(Regex) LMCTC(7.50 15)?	(=) 7.50	(=) 15	(>=) 2	(Ignore)
(Regex) LMCTC(7.50 16)?	(=) 7.50	(=) 16	(>=) 2	(Ignore)
(Regex) LMCTC(7.50 17)?	(=) 7.50	(=) 17	(>=) 2	(Ignore)
(Regex) LMCTC(7.50 18)?	(=) 7.50	(=) 18	(>=) 1	(Ignore)
(Regex) LMCTC(7.50 19)?	(=) 7.50	(=) 19	(>=) 0	(Ignore)
(Regex) LMCTC(7.50 20)?	(=) 7.50	(>=) 20	(Ignore)	(Ignore)

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Note 2934135 - Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard) - reloaded (Configuration Validation)

Result:

Konfigurationselemente

SAP-Systemkennung	Konfigurationselement	Wert des ConfigItems	KonfValid: Datenoper	Compliance	Konform (1=ja, -1=nein, " "=nicht bewertet)	
A75	COMPONENT:LMCTC/RELEASE 7.50/	EXTRELEASE:3/PATCH_LEVEL 0	>=EXTRELEASE:20/IgnorePATCH_LEVEL:	No	-1	Support Package too old
A8Z	COMPONENT:LMCTC/RELEASE 7.50/	EXTRELEASE 10/PATCH_LEVEL 0	>=EXTRELEASE:20/IgnorePATCH_LEVEL:	No	-1	Support Package too old
BE4	COMPONENT:LMCTC/RELEASE 7.31/	EXTRELEASE:1/PATCH_LEVEL 0	>=EXTRELEASE:28/IgnorePATCH_LEVEL:	No	-1	Support Package too old
BEB	COMPONENT:LMCTC/RELEASE 7.50/	EXTRELEASE:0/PATCH_LEVEL 0	>=EXTRELEASE:20/IgnorePATCH_LEVEL:	No	-1	Support Package too old
BED	COMPONENT:LMCTC/RELEASE 7.50/	EXTRELEASE:0/PATCH_LEVEL 0	>=EXTRELEASE:20/IgnorePATCH_LEVEL:	No	-1	Support Package too old
BEF	COMPONENT:LMCTC/RELEASE 7.50/	EXTRELEASE:0/PATCH_LEVEL 0	>=EXTRELEASE:20/IgnorePATCH_LEVEL:	No	-1	Support Package too old
BEH	COMPONENT:LMCTC/RELEASE 7.50/	EXTRELEASE:0/PATCH_LEVEL 0	>=EXTRELEASE:20/IgnorePATCH_LEVEL:	No	-1	Support Package too old
BQ1	COMPONENT:LMCTC/RELEASE 7.31/	EXTRELEASE:7/PATCH_LEVEL 1	>=EXTRELEASE:28/IgnorePATCH_LEVEL:	No	-1	Support Package too old
EIB	COMPONENT:LMCTC/RELEASE 7.40/	EXTRELEASE:8/PATCH_LEVEL 0	>=EXTRELEASE:23/IgnorePATCH_LEVEL:	No	-1	Support Package too old
FAJ	COMPONENT:LMCTC/RELEASE 7.50/	EXTRELEASE 18/PATCH_LEVEL 1	=EXTRELEASE:18/>=PATCH_LEVEL:1	Yes	1	Patch installed
FBJ	COMPONENT:LMCTC/RELEASE 7.50/	EXTRELEASE 15/PATCH_LEVEL 0	>=EXTRELEASE:20/IgnorePATCH_LEVEL:	No	-1	Patch missing
FOJ	COMPONENT:LMCTC/RELEASE 7.50/	EXTRELEASE 18/PATCH_LEVEL 1	=EXTRELEASE:18/>=PATCH_LEVEL:1	Yes	1	Patch installed
FTJ	COMPONENT:LMCTC/RELEASE 7.50/	EXTRELEASE 18/PATCH_LEVEL 1	=EXTRELEASE:18/>=PATCH_LEVEL:1	Yes	1	Patch installed
GEA	COMPONENT:LMCTC/RELEASE 7.31/	EXTRELEASE 10/PATCH_LEVEL 0	>=EXTRELEASE:28/IgnorePATCH_LEVEL:	No	-1	Support Package too old
JC3	COMPONENT:LMCTC/RELEASE 7.40/	EXTRELEASE 10/PATCH_LEVEL 0	>=EXTRELEASE:23/IgnorePATCH_LEVEL:	No	-1	Support Package too old
JE7	COMPONENT:LMCTC/RELEASE 7.10/	EXTRELEASE 19/PATCH_LEVEL 0	IgnoreEXTRELEASE:/IgnorePATCH_LEVEL:	Yes	1	Release not affected
JW5	COMPONENT:LMCTC/RELEASE 7.50/	EXTRELEASE 20/PATCH_LEVEL 0	>=EXTRELEASE:20/IgnorePATCH_LEVEL:	Yes	1	Support Package installed
N4Q	COMPONENT:LMCTC/RELEASE 7.10/	EXTRELEASE 21/PATCH_LEVEL 0	IgnoreEXTRELEASE:/IgnorePATCH_LEVEL:	Yes	1	Release not affected
N75	COMPONENT:LMCTC/RELEASE 7.50/	EXTRELEASE:3/PATCH_LEVEL 0	>=EXTRELEASE:20/IgnorePATCH_LEVEL:	No	-1	Support Package too old
PJ2	COMPONENT:LMCTC/RELEASE 7.31/	EXTRELEASE 21/PATCH_LEVEL 0	>=EXTRELEASE:28/IgnorePATCH_LEVEL:	No	-1	Support Package too old
PJ4	COMPONENT:LMCTC/RELEASE 7.31/	EXTRELEASE 14/PATCH_LEVEL 0	>=EXTRELEASE:28/IgnorePATCH_LEVEL:	No	-1	Support Package too old
PO1	COMPONENT:LMCTC/RELEASE 7.31/	EXTRELEASE 22/PATCH_LEVEL 0	>=EXTRELEASE:28/IgnorePATCH_LEVEL:	No	-1	Support Package too old
U3S	COMPONENT:LMCTC/RELEASE 7.31/	EXTRELEASE 20/PATCH_LEVEL 0	>=EXTRELEASE:28/IgnorePATCH_LEVEL:	No	-1	Support Package too old
XI2	COMPONENT:LMCTC/RELEASE 7.40/	EXTRELEASE:9/PATCH_LEVEL 0	>=EXTRELEASE:23/IgnorePATCH_LEVEL:	No	-1	Support Package too old

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August 2020

Topics August 2020

Note 2835979 - Code Injection vulnerability in Service Data Download (reloaded)

Note 2928635 - Cross-Site Scripting (XSS) in SAP NetWeaver (Knowledge Management)
Note 2932212 - Security measures to protect malicious file uploading and opening in KM
Note 2957979 - Q&A for SAP Security Note 2928635

Note 2948106 - FAQ - for SAP Note 2934135 - LM Configuration Wizard
11. How to verify if the vulnerability is mitigated after applying the patch or deactivating the application aliases?

KBA 2953257 - Check implementation of Note 2934135 based on data from SLD

Note 2754546 - Potential information disclosure in Lumira Designer

Note 2921615 - BI Platform stores SAP BW Authentication Password as clear text

Note 2941667 - Code Injection Vulnerability in SAP NetWeaver (ABAP)

Note 2452425 - Collective Note - SAP SSO Certificate Lifecycle Management

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Note 2835979 - Code Injection vulnerability in Service Data Download (reloaded)

Solution available since December 2019

HotNews published in May 2020

Proof-of-Concept Exploit published in August 2020
https://www.theregister.com/2020/08/12/sap_netweaver_abap_bug/
https://sec-consult.com/en/blog/2020/08/code-injection-in-sap-application-server-abap-solution-tools-plugin-st-pi/

Did you have updated the corresponding Support Package of Software Component ST-PI?
(You can update software component ST-PI independently from any other maintenance activities.)

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Note 2928635 - Cross-Site Scripting (XSS) in SAP NetWeaver (KM)
Note 2932212 - Security measures to protect KM

- **Activate the Virus Scanner Service on AS Java**
  https://help.sap.com/doc/saphelp_nw74/7.4.16/en-us/b8/f5af401efd8f2ae10000000a155106/frameset.htm
  Example: https://archive.sap.com/documents/docs/DOC-30967

- **Activate Force Text Download in any case**
  (This setting is part of “SAP Secure by Default” guidance for latest releases in case of new installations)
  Parameters of the WebDAV Protocol incl. Force Text Download
  https://help.sap.com/doc/saphelp_nw74/7.4.16/en-us/95/c3744f7143426e8f99c362244e0b55/frameset.htm

In addition you might want to maintain additional filter options:

- **Malicious Script Filter**
  https://help.sap.com/doc/saphelp_nw74/7.4.16/en-us/84/4da32a99254685aa62aedf6f132429/frameset.htm
  Note: If a malicious script filter is activated for the repository containing the file with executable script, the Force Text Download parameter is ignored.

- **File Extension and Size Filter**
  https://help.sap.com/doc/saphelp_nw74/7.4.16/en-us/84/4da32a99254685aa62aedf6f132429/frameset.htm

- **Note 599425 - Permissions for KM repositories**

Older releases are not affected.

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What about deactivating WebDAV instead of securing it?

If you do not use Knowledge Management in the Portal, e.g. if you use the Portal only to integrate user interfaces into a central server, you can deactivate WebDAV as well:

Parameter "Enable WebDAV Server" determines if support of the WebDAV protocol as specified in RFC 2518 is enabled. If it is disabled, only http standard methods GET, HEAD, PUT, DELETE, and OPTIONS calls are processed whereas the WebDAV specific methods to lock, release, create, copy, move, or delete resources are blocked.

By default, this parameter is activated.

However, KBA 2957979 states the following:

Q9. Is this vulnerability exploitable if WebDAV has been disabled?

A. Yes, it is. This setting affects the standard UI. You need to apply the SAP Security Note 2928635.

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Note 2948106 - FAQ - for SAP Note 2934135 - LM Configuration Wizard

11. How to verify if the vulnerability is mitigated after applying the patch or deactivating the application aliases?

Make an http call using method `HEAD` in command line or in `REST` clients to
`http(s)://<host>:<port>/CTCWebService/CTCWebServiceBean`

Tipps for using command line tool “`curl`” to submit the call:

- Use the option `--head` (respective the shortcut option `-I` which is an upper case "`i`") to trigger a `HEAD` request. This option omits possible error conditions which you might get if you would use the http method `GET` or `POST` instead.
- You may add option `--location` (respective the shortcut option `-L`) to follow automatically a redirect location provided by the server together with http response code `307`.
- You may add option `--verbose` (respective the shortcut option `-v`) to make the operation more talkative.

Example:
`curl --head --location http://<host>:<port>/CTCWebService/CTCWebServiceBean/`

The response code should be:

✓ `401` “Unauthorized" or an authentication pop-up after applying the patch according to SAP Note 2934135

✓ `404` “Not Found" after deactivating the application aliases according to SAP Note 2939665

In a SAP Solution Manager system you can use the report provided by KBA 2953257 to run this verification for all Application Server Java systems which are registered in the Software Lifecycle Directory (SLD).

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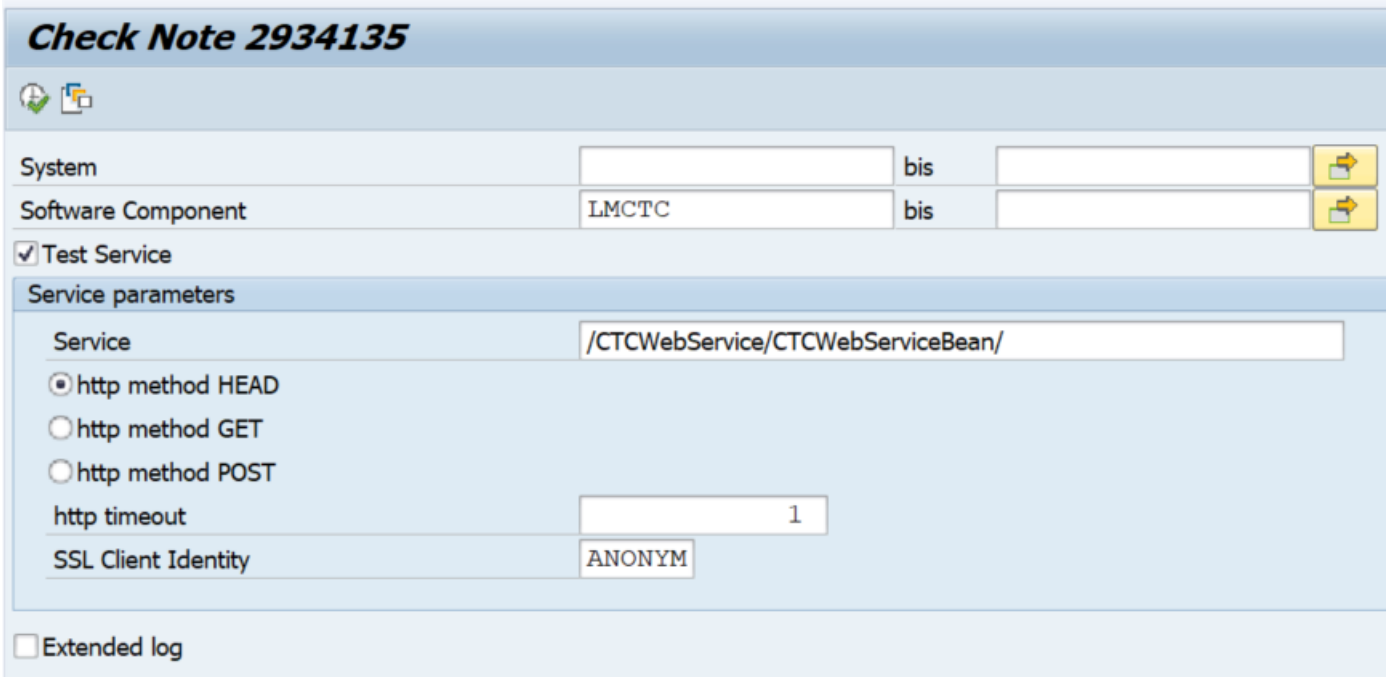
KBA 2953257 - Check implementation of Note 2934135 based on data from SLD

The report checks if the software component LMCTC has as least on of the patch levels which are listed in Note 2934135.

In addition you get a list of URLs pointing to the critical servlet described in that note and you can test if these URLs are working (which is critical) or are blocked (which is secure).



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Note 2754546 - Potential information disclosure in Lumira Designer

New feature in Lumira 2.3 from march 2019 with manual settings

Administrator Guide - General Security Recommendations
https://help.sap.com/viewer/b2ab3c5d05314085985c4b78aa17db2d/2.4.0.0/en-US/3ba5253372bc1014ae0faa81b0e91070.html

Disabling Java VM Arguments in SAP Lumira Designer (available as of release 2.3)
https://help.sap.com/viewer/3dbb00422a214e39970963651f8a3094/2.3.0.0/en-US/509293b300c44e7f9cb45af7427ebdcd.html

„You can now prevent the use of unsupported security-relevant Java VM arguments in SAP Lumira Designer centrally on every user's machine by adding a setting to a branch in the Windows registry to which the users don't have write access."

```
[HKEY_LOCAL_MACHINE\SOFTWARE\JavaSoft\Prefs\com\sap\lumira\designer]
"disable_insecure_vm_args"="true"
```

Related note about same setting:
Note 2762504 - Disable predefined user/password authentication for OLAP connections by default

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Note 2921615 - BI Platform stores SAP BW Authentication Password as clear text

Before you can import roles or publish BW content to the **BI platform**, you must provide information about the **SAP Entitlement Systems** to which you want to integrate. The BI platform uses this information to connect to the target SAP system when it determines role memberships and authenticates SAP users.

Connection data for an authentication plugin was stored including user with password in clear text.

Business Intelligence Platform Administrator Guide – How to add an SAP entitlement system
https://help.sap.com/viewer/DRAFT/2e167338c1b24da9b2a94e68efd79c42/4.3.1/en-US/468134a16e041014910aba7db0e91070.html

To solve this issue:

1. **Update the software**
2. **Change the password of this user in the SAP BW and update the connection data in the CMC of the BI platform**

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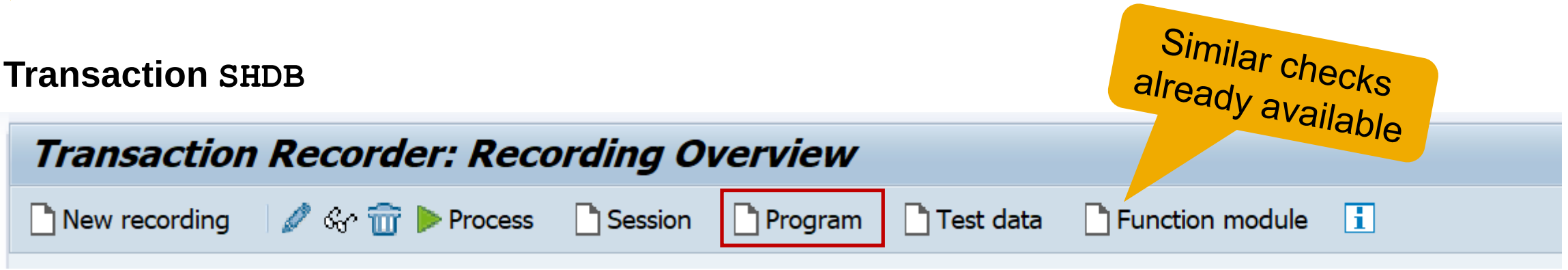
Note 2941667 - Code Injection Vulnerability in SAP NetWeaver (ABAP) and ABAP Platform

Transaction SHDB



The batch input recorder report RSBDCREC is changed from local implementation to central API.

Beside various repository checks, the API function RPY_PROGRAM_INSERT requires that user has authorization S_DEVELOP.

The minimal authorization required is S_DEVELOP with parameters OBJTYPE=PROG, OBJNAME=<name>, and ACTVT=01.

- **You cannot use this report (or this operation) in production systems anymore**

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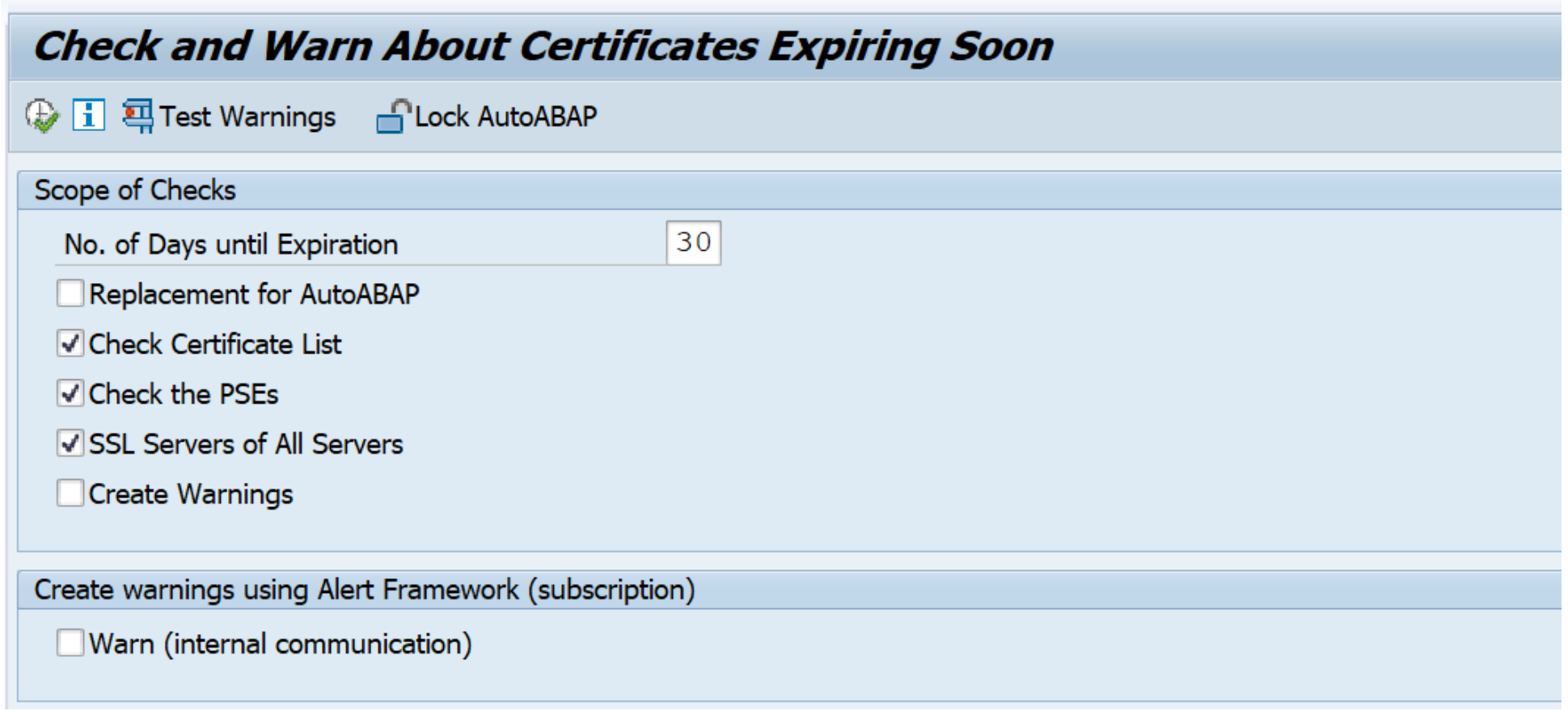
Note 2452425 - Collective Note - SAP SSO Certificate Lifecycle Management for ABAP

Report `SSF_ALERT_CERTEXPIRE` alerts on expiring certificates (MTE class R3SyslogSecurity) **or AutoABAP report `SSFALRTEXP`, see note** 572035

Alerts only, no renewal



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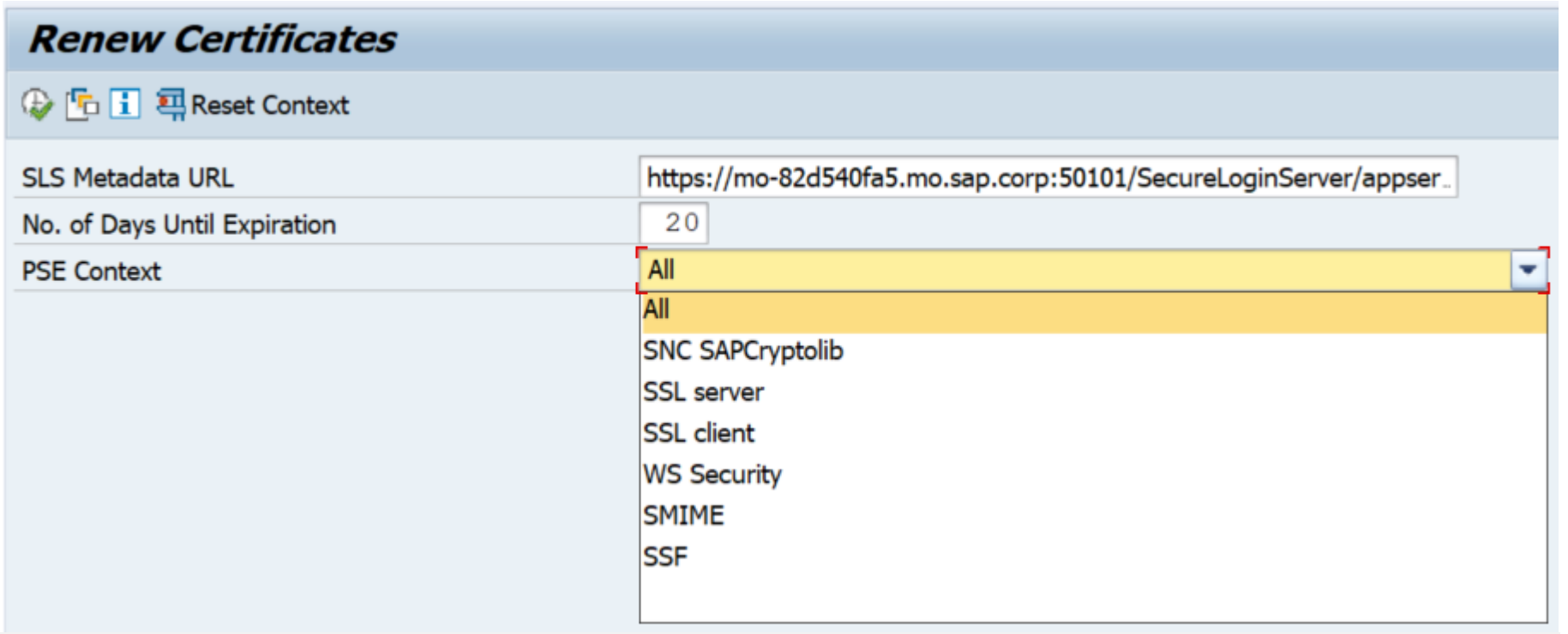
Note 2452425 - Collective Note - SAP SSO Certificate Lifecycle Management for ABAP

The configuration of the SLS, ABAP systems and Java Systems is described here:

Configuring Certificate Lifecycle Management based on Secure Login Server (SLS)
https://blogs.sap.com/2020/07/09/configuring-certificate-lifecycle-management/



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July 2020

Topics July 2020

Note 2934135 - Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard)

Note 2774489 - Code Injection vulnerability in ABAP Tests Modules of SAP NetWeaver Process Integration

Note 2932473 - Information Disclosure in SAP NetWeaver (XMLToolkit for Java)

Note 2923117 - How to address problems with old TLS protocol versions in clients accessing SAP Cloud Platform NEO (reloaded)

Note 2923799 - Final Shutdown of RFC Connections From Customer Systems to SAP
Note 2928592 - Download digitally signed Notes using HTTP in SAP_BASIS 700 to 731
Note 2934203 - ST-A/PI 01T* SP01 - 01U SP00: SAP backbone connectivity for RTCCTOOL

KBA 2911301 / Note 2946444 - SAP Support Portal - Renew client certificate

Recommended Notes for System Recommendations

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Note 2934135 - Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard)

All Java systems on all releases as of 7.30 are affected - standalone Java as well as the Java part of dual stack systems.
Be aware that such Java systems often serve as internet facing User Interface systems.

ABAP systems are not affected.

This Java application is used by few SAP Lifecycle procedures only, such as the initial technical setup, and it is not needed in day-to-day operations.

Related notes:

KBA 2948106 - FAQ - for SAP Note 2934135

Note 2939665 - Disable LM Configuration Wizard

Note 1589525 (describing firewall URL filter rules)

Note 1451753 (describing filtering of administration requests)

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Note 2934135 - Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard)

At once: Deactivate on all application servers the aliases `CTCWebService ctc/core ctcprotocol` respective application `tc~lm~ctc~cul~startup_app` and validate that service `CTCWebService` is offline as described in KBA 2939665

In addition: Implement firewall rules for URL blocking as described in note 1589525 or develop filter rules for administrative requests according to note 451753

Short time: Implement the patch for Software Component LMCTC as described in the note.

The patch does not depend on any other component and you can it deploy online (without downtime or restart) using telnet (see KBA 1715441) **or if possible SUM** (see Blog and Note 1641062)**.**
Software Download Example:
https://launchpad.support.sap.com/#/softwarecenter/search/LM%2520CONFIGURATION%2520WIZARD%25207.50

Scheduled: This month you find multiple notes about Java, therefore, schedule a combined update of all Java components. You can take the time for preparation, if you have deactivated the vulnerability described by this note.

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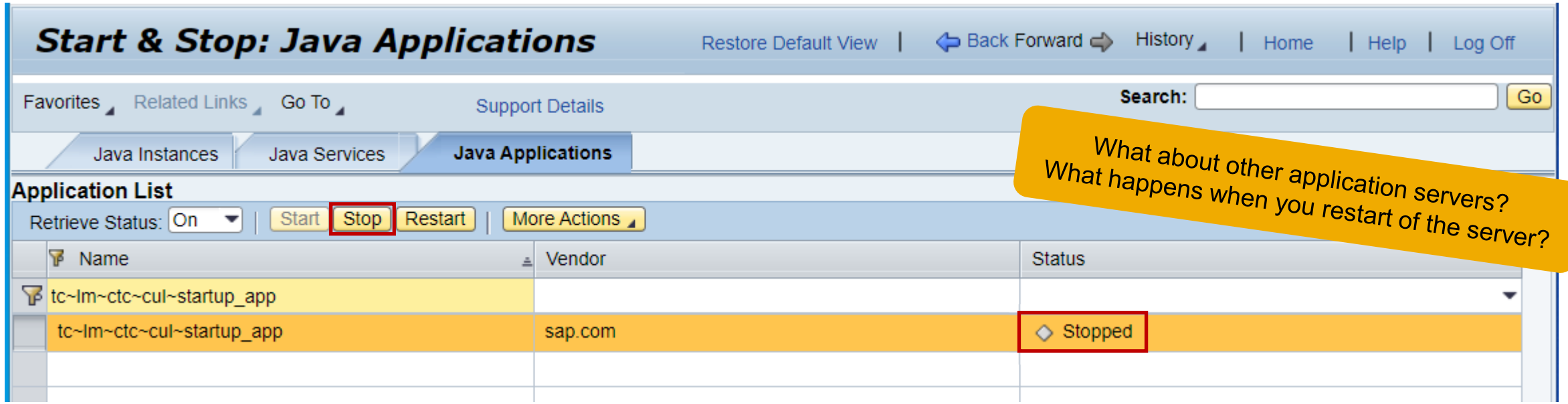
Note 2934135 - Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard)

View current status:

Call the NetWeaver Administrator at **http(s)://<host>:<port>/nwa** and login with admin user
→ **Operations**
→ **Start and Stop** (you can cancel any additional logon popup for OS credentials)
→ **JAVA Applications**
→ **Filter for `tc~lm~ctc~cul~startup_app`**



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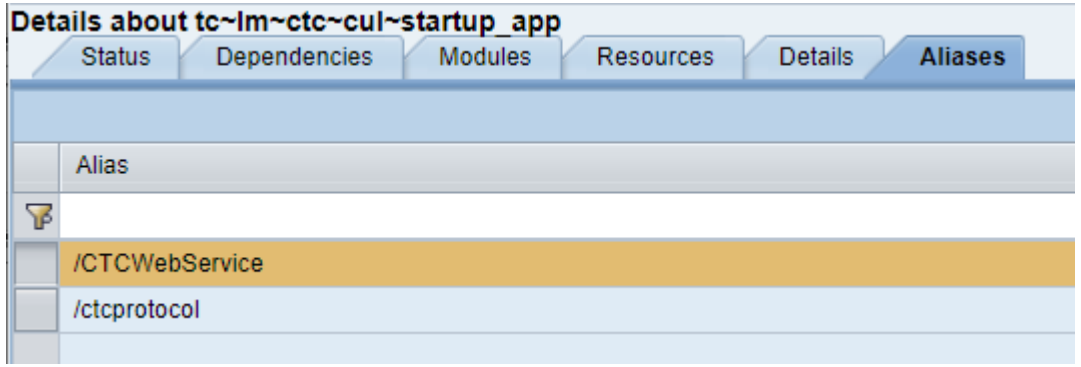
Note 2934135 - Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard)

View current status (continued):

In the lower part you can view the application aliases which are associated with this application.

These are the aliases which you should deactivate according to **Note 2939665**



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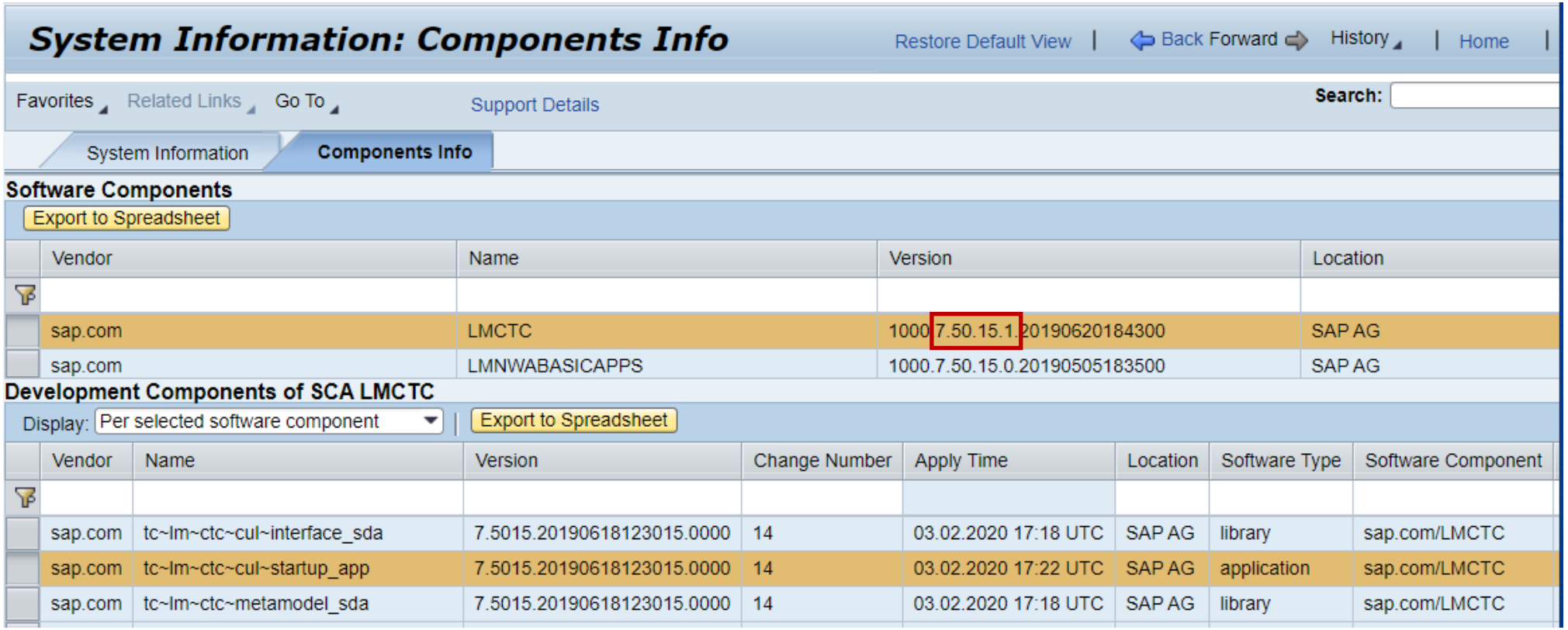
Note 2934135 - Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard)

View current status (continued):

→ **More Actions** (or NWA → Configuration → System Information)
→ **View Application Component Info** and compare it with the patch list of the note



7.10 not affected
7.11 not affected
7.20 not affected

7.30 SP 19 patch 1
7.30 SP 20 patch 1
7.30 SP 21 patch 0

7.31 SP 23 patch 1
7.31 SP 24 patch 1
7.31 SP 25 patch 1
7.31 SP 26 patch 1
7.31 SP 27 patch 0
7.31 SP 28 patch 0

7.40 SP 18 patch 1
7.40 SP 19 patch 1
7.40 SP 20 patch 1
7.40 SP 21 patch 1
7.40 SP 22 patch 0
7.40 SP 23 patch 0

7.50 SP 12 patch 2
7.50 SP 13 patch 3
7.50 SP 14 patch 2
7.50 SP 15 patch 2
7.50 SP 16 patch 2
7.50 SP 17 patch 2
7.50 SP 18 patch 1
7.50 SP 19 patch 0
7.50 SP 20 patch 0

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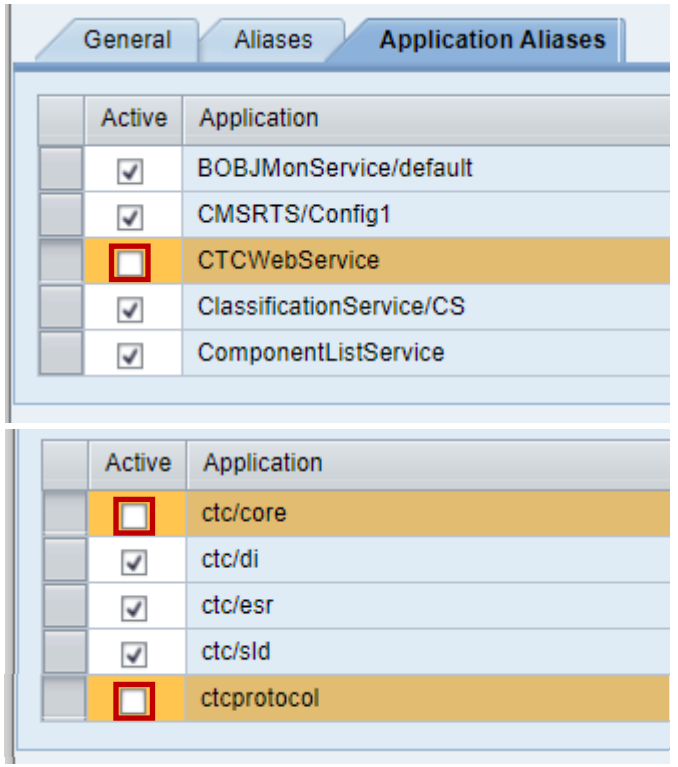
Note 2934135 - Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard)

Disable Service:

Call the NetWeaver Administrator at **http(s)://<host>:<port>/nwa** and login with admin user
→ **Configuration**
→ **Infrastructure**
→ **JAVA HTTP Provider Configuration**
→ **Application Aliases**



Scroll down and deactivate

```
CTCWebService
ctc/core
ctcprotocol
```

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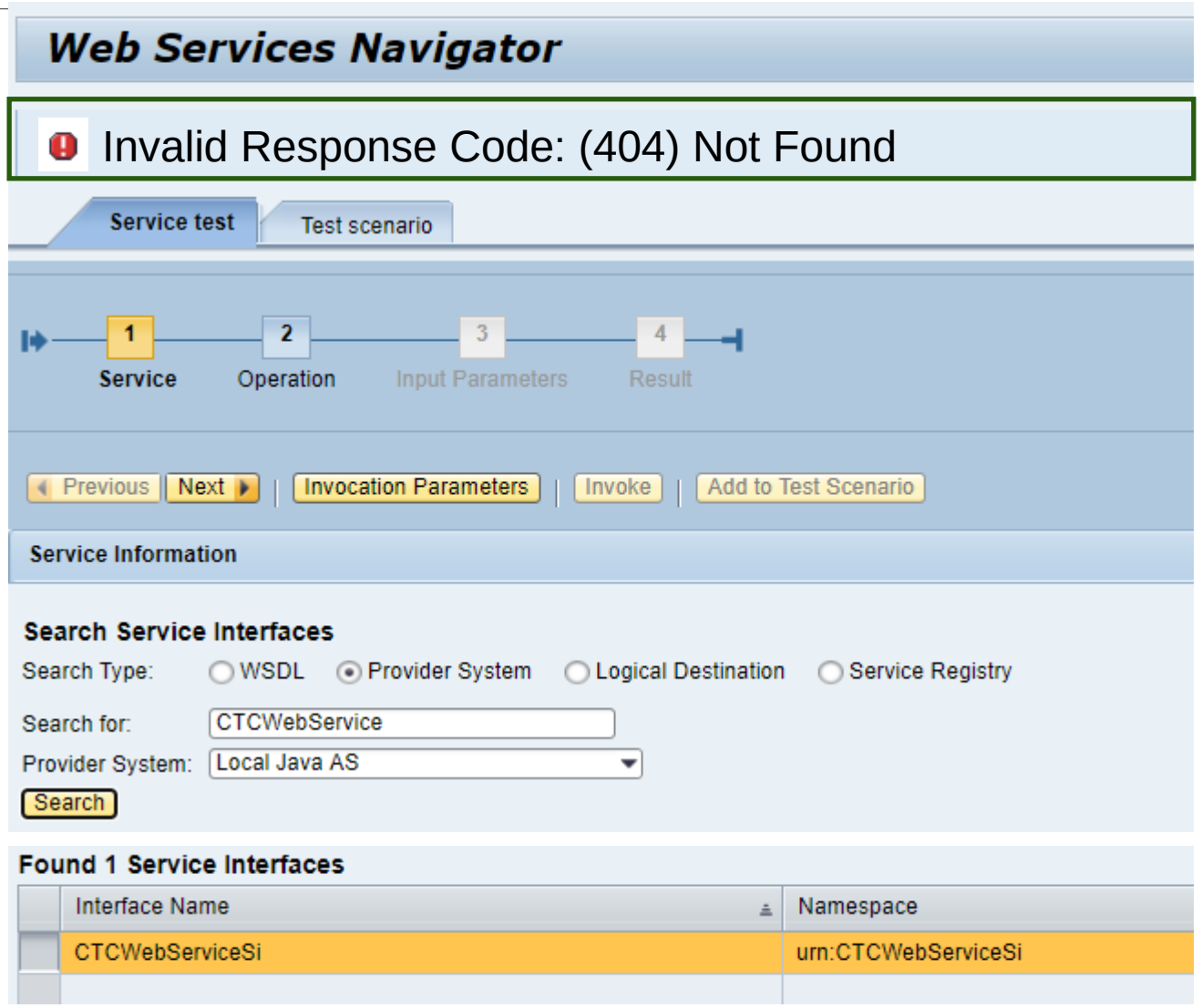
Note 2934135 - Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard)

Verify deactivation:

Call the Web Service Navigator at **http(s)://<host>:<port>/wsnavigator** and login with admin user

Choose Search Type „Provider System“ and search for `CTCWebService`

You should get an error message which indicates that the service is offline.



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Note 2934135 - Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard)

Verify deactivation:

Call the services using a HEAD request and check the http return code:	vulnerable	ok
http(s)://<host>:<port>/CTCWebService/CTCWebServiceBean	**200 / 405**	**404 / 401**
http(s)://<host>:<port>/CTCWebService/CTCWebServiceBean?wsdl	**200+xml**	**404 / 401**

()

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
▼<wsdl:definitions xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/" xmlns:tns="urn:CTCWebServiceSi" targetNamespace="urn:CTCWebServiceSi">
  ▼<wsdl:types>
    ▼<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" targetNamespace="urn:CTCWebServiceSi" version="1.0">
       <xs:element name="CTCManagementException" type="tns:CTCManagementException"/>
       <xs:element name="RemoteException" type="tns:RemoteException"/>
       <xs:element name="cancelExecution" type="tns:cancelExecution"/>
       <xs:element name="cancelExecutionResponse" type="tns:cancelExecutionResponse"/>
       <xs:element name="endOfExecution" type="tns:endOfExecution"/>
       <xs:element name="endOfExecutionResponse" type="tns:endOfExecutionResponse"/>
       <xs:element name="eventsAvailable" type="tns:eventsAvailable"/>
       <xs:element name="eventsAvailableResponse" type="tns:eventsAvailableResponse"/>
       <xs:element name="execute" type="tns:execute"/>
       <xs:element name="executeResponse" type="tns:executeResponse"/>
       <xs:element name="executeSynchronious" type="tns:executeSynchronious"/>
       <xs:element name="executeSynchroniousResponse" type="tns:executeSynchroniousResponse"/>
```

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Note 2934135 - Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard)

Alternative option to deactivate the application

Disable application:

Call the NetWeaver Administrator at http(s)://<host>:<port>/nwa and login with admin user
→ Operations
→ Start and Stop (you can cancel any additional logon popup for OS credentials)
→ JAVA Applications
→ **More Actions**
→ **Edit Startup Filters**

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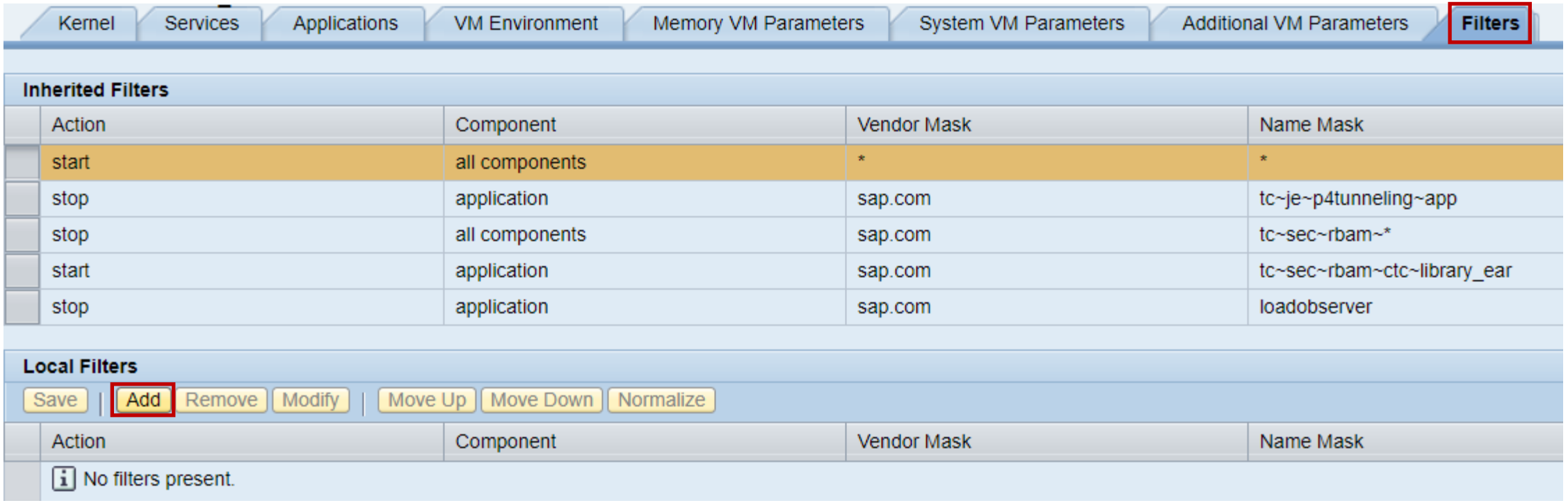
Note 2934135 - Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard)

Alternative option to deactivate the application

Disable application (continued):

→ **Filters**
→ **Add**



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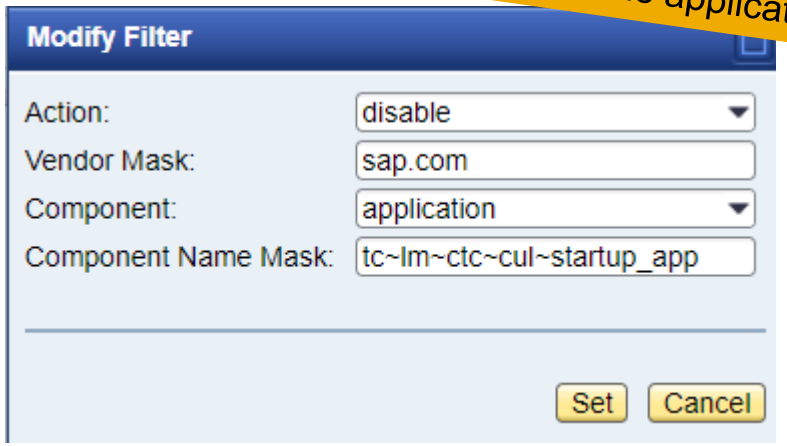
Note 2934135 - Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard)

Alternative option to deactivate the application

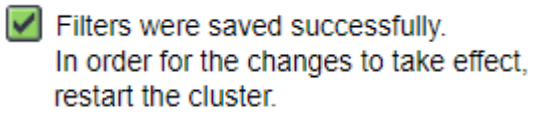
Disable application (continued):

Enter Filter:

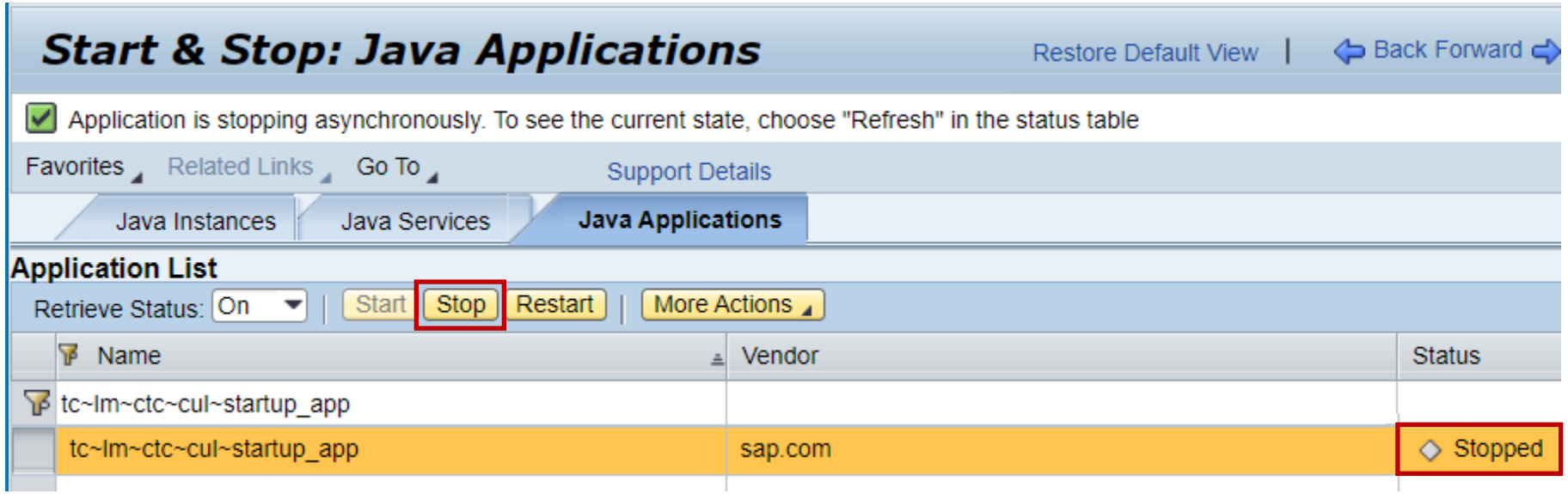
Action: `disable`
Vendor mask: `sap.com`
Component: `application`
Component Name mask: `tc~lm~ctc~cul~startup_app`



Set and Save the Filter



You can stop the application manually as well:



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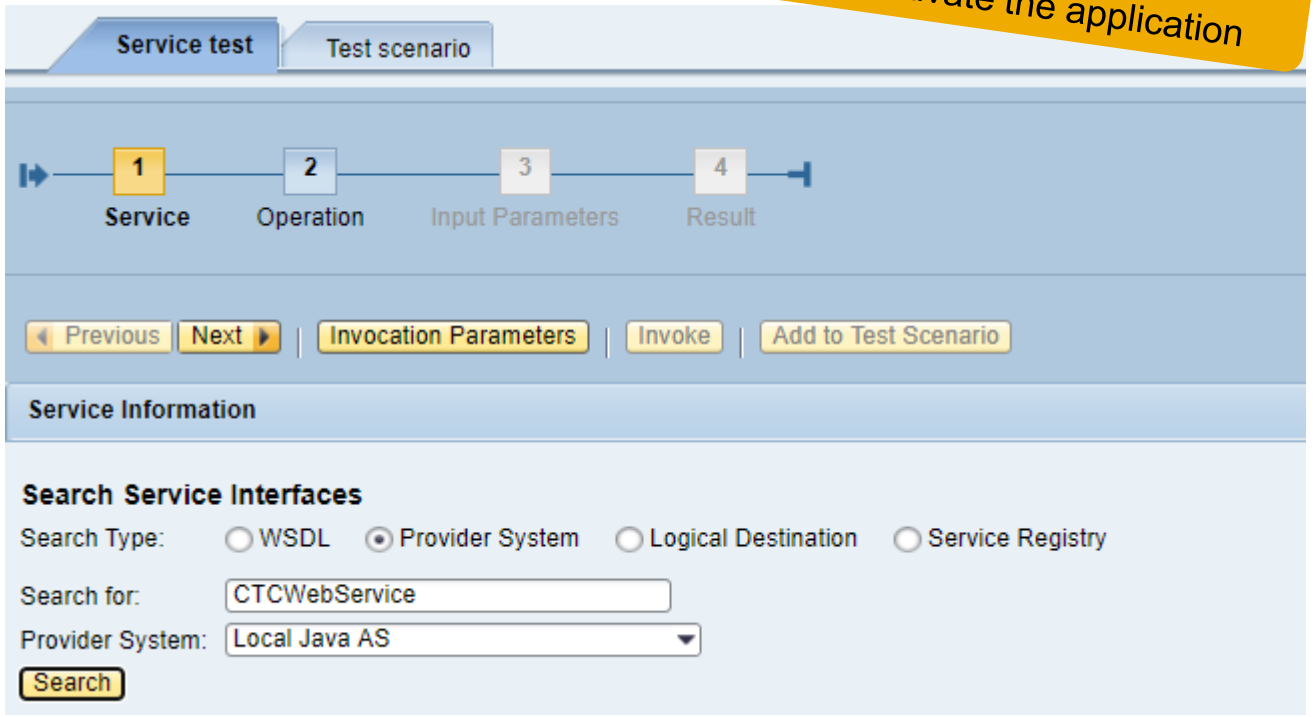
Note 2934135 - Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard)

Alternative option to deactivate the application

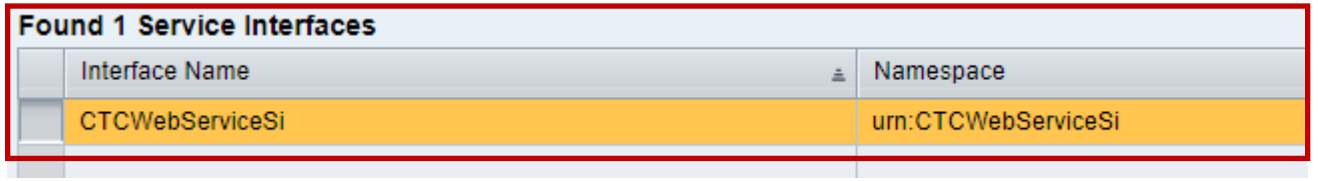
Verify deactivation:

Call the Web Service Navigator at **http(s)://<host>:<port>/wsnavigator** and login with admin user

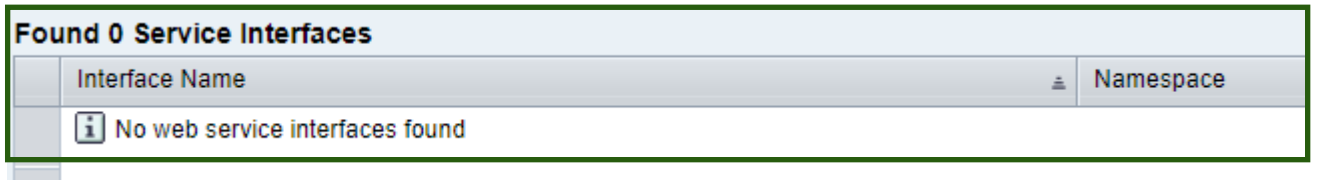
Choose Search Type „Provider System“ and search for `CTCWebService`



If you find the service, then the system might still be vulnerable (if not patched):



You should get an error message which indicates that the service is offline:



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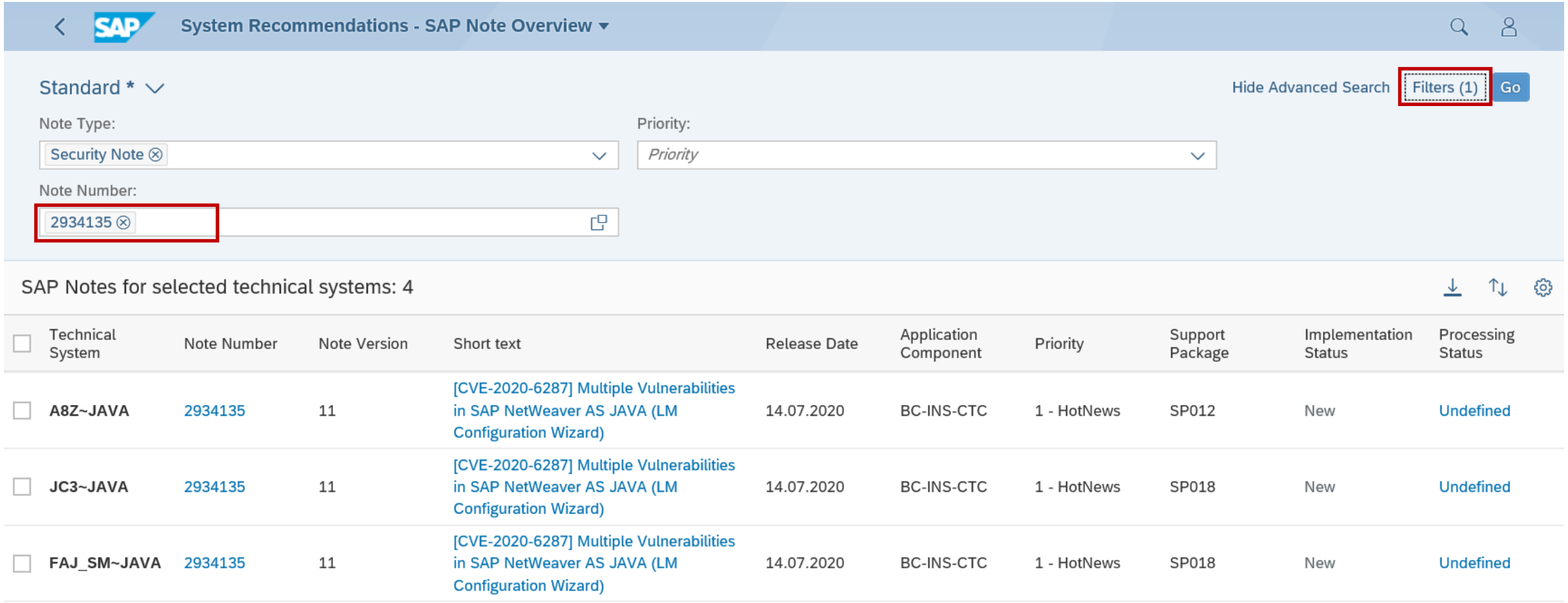
Note 2934135 - Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard)



Technical System	Note Number	Note Version	Short text	Release Date	Application Component	Priority	Support Package	Implementation Status	Processing Status
A8Z~JAVA	2934135	11	[CVE-2020-6287] Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard)	14.07.2020	BC-INS-CTC	1 - HotNews	SP012	New	Undefined
JC3~JAVA	2934135	11	[CVE-2020-6287] Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard)	14.07.2020	BC-INS-CTC	1 - HotNews	SP018	New	Undefined
FAJ_SM~JAVA	2934135	11	[CVE-2020-6287] Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard)	14.07.2020	BC-INS-CTC	1 - HotNews	SP018	New	Undefined

https://<host>:<port>/sap/bc/ui2/flp?sap-client=<client>&sap-language=EN#Action-UISMMySAPNotes&/NoteOverview/sapnote=2934135

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Note 2934135 - Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard)

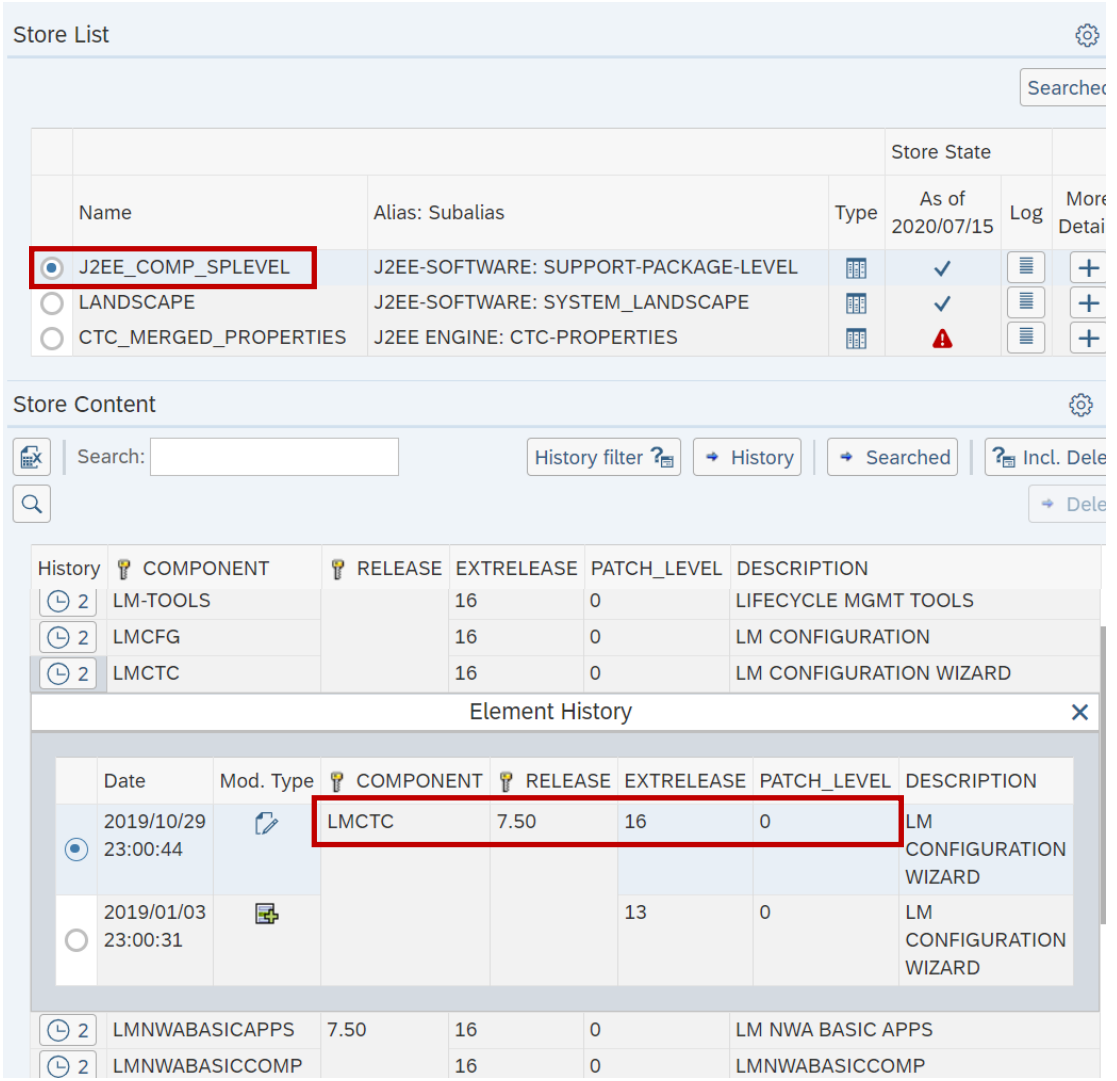
Cross system verification of installed patches

Application ChangeReporting or CCDB in the SAP Solution Manager
(Configuration Validation requires a trick)

Configuration Store: `J2EE_COMP_SPLEVEL`

Component: `LMCTC`

Validation is possible in application Configuration & Security Analytics (CSA) in FRUN



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Note 2774489 - Code Injection vulnerability in ABAP Tests Modules of SAP NetWeaver Process Integration

Easy to implement ABAP correction from July 2019

Did you have solved it in the meantime?

Now you can find an exploit on the internet: Search for CVE-2019-0328

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Note 2932473 - Information Disclosure in SAP NetWeaver (XMLToolkit for Java)

Reported by a customer via secure channel:

https://support.sap.com/securitynotes
→
Report a Vulnerability
→

a) **Normal incident**
b) **Web form**
c) **Email to secure@sap.com**
   Get the public PGP key

SAP creates and process a special “Security incident” (restricted access and supervision)

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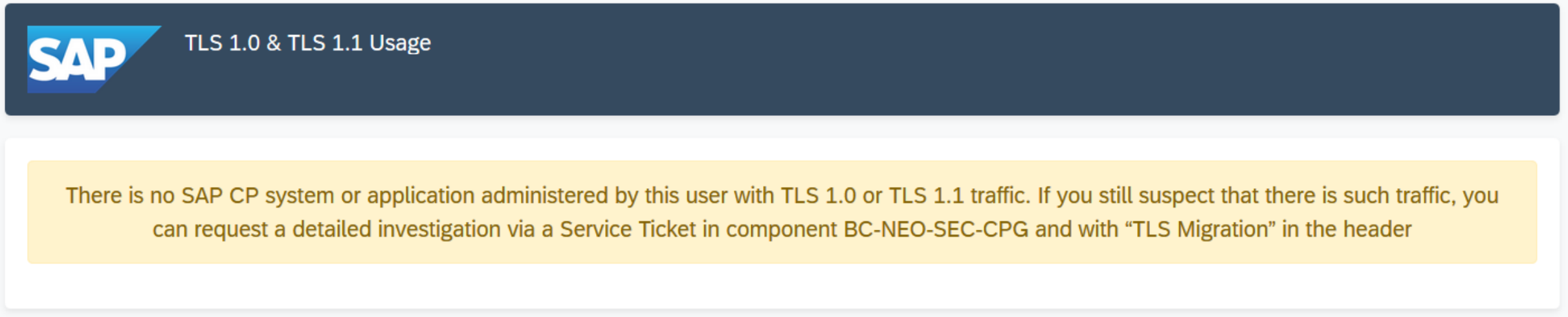
Note 2923117 - How to address problems with old TLS protocol versions in clients accessing SAP Cloud Platform NEO

TLS 1.0 / 1.1 Traffic Analysis

As an admin of an SAP Cloud Platform Neo (sub-)account, you can directly access the logs of the traffic reaching your account using the following applications. It will show you the TLS 1.0 / 1.1 traffic reaching your account for a selected time range.

https://tlsusagea621a4188.hana.ondemand.com/

The authentication for the self-service application is using the SAP ID Service, the usual user ID and credentials as used for the SAP Cloud Platform Cockpit and other admin tools.



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Note 2923117 - How to address problems with old TLS protocol versions in clients accessing SAP Cloud Platform NEO

TLS 1.0 / 1.1 Traffic Analysis

LOG_SOURCE = 'CPI'	**→ Cloud Platform Integration in general**
USER_AGENT = 'SAP NetWeaver Application Server%'	**→ NetWeaver Application Server**
USER_AGENT = 'SAP Web Application Server%'	**→ ABAP Application Server**
Sum("REQUESTS") < DAYS	**→ Suspected false-positive**
Sum("REQUESTS") without USER_AGENT > DAYS	**→ Non-Browser Client**
USER_AGENT that is no Web Browser	**→ Non-Browser Client**
Old Browser/Device	**→ Update Browser or Device**
Recent Browser/Device	**→ Check Network Devices**
Many different Browser/Devices	**→ External User-Facing Website**

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Note 2923117 - How to address problems with old TLS protocol versions in clients accessing SAP Cloud Platform NEO

ABAP systems up to and including ABAP 752 (=S4/HANA 1709) require explicit opt-in configuration to enable TLSv1.2-Support for outgoing TLS-protected communication, see the list of recommended profile parameters in section 7 of Note 510007:

`DIR_EXECUTABLE`	`$(DIR_INSTANCE)$(DIR_SEP)exe`
`DIR_LIBRARY`	`$(DIR_EXECUTABLE)`
`SAPCRYPTOLIB`	`$(DIR_LIBRARY)$(DIR_SEP)libsapcrypto.so`
`sec/libsapsecu`	`$(SAPCRYPTOLIB)`
`ssf/ssfapi_lib`	`$(SAPCRYPTOLIB)`
`ssl/ssl_lib`	`$(SAPCRYPTOLIB)`
`ssl/ciphersuites`	`135:PFS:HIGH::EC_P256:EC_HIGH`
`ssl/client_ciphersuites`	`150:PFS:HIGH::EC_P256:EC_HIGH`
`icm/HTTPS/client_sni_enabled`	`TRUE`
`ssl/client_sni_enabled`	`TRUE`

Please ensure that you are not loading an old Cryptolib from a location other than `$(DIR_EXECUTABLE)` with custom values for profile parameters `ssl/ssl_lib`, `ssf/ssfapi_lib`, `sec/libsapsecu`. see also section 2 of SAP Note 510007.

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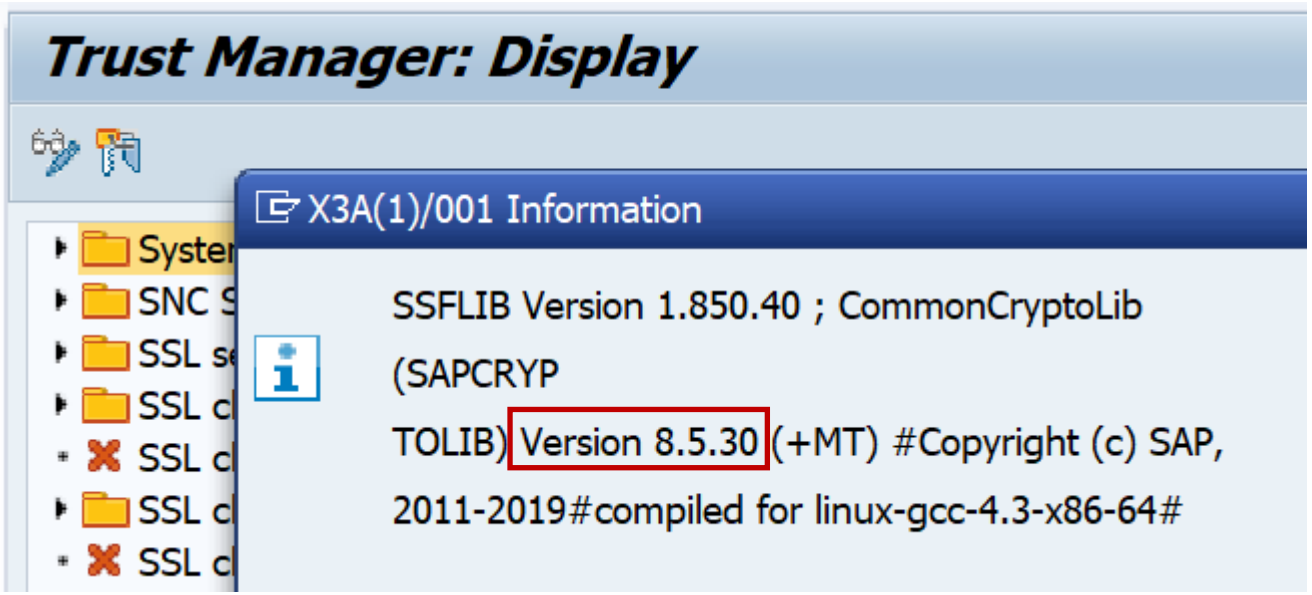
Note 2923117 - How to address problems with old TLS protocol versions in clients accessing SAP Cloud Platform NEO

ABAP systems require a minimum version of CommonCryptoLib 8 which implements TLSv1.2. If your version of CommonCryptoLib is older than version 8.4.48, then you should upgrade your library.
See also SAP Note 1848999.

You can use transaction `STRUST` → "Environment" → "Display SSF Version" to display the version of your CryptoLib. If you are still on ABAP 7.0x or 7.1x, then you need at minimum Kernel 720 patch 88.

Kernel patches produced after mid-2014 include the most recent version CommonCryptoLib 8 at the time when this Kernel patch was produced. See SAP Note 2083594 on Downward Compatible Kernels (DCK) for all Netweaver 7.xx Releases.

In case of problems, please open an incident on BC-NEO-SEC-CPG with "TLS Migration" in header.



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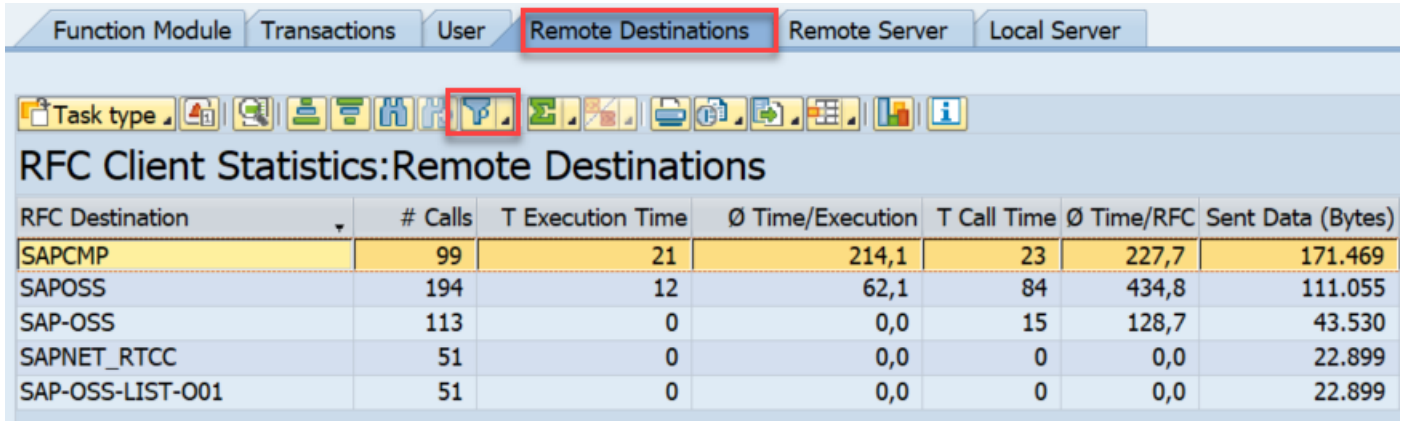
Note 2923799 - Final Shutdown of RFC Connections From Customer Systems to SAP

On Monday November 30, 2020 all RFC communications from customer systems to SAP will cease permanently and irreversibly. Applications which still might use RFC:

- **Notes Download**
- **EWA**
- **RTCCTOOL**
- **SAP Solution Manager functions**

Transaction `ST03N` shows the usage of RFC Destinations
Ensure that none of these destinations are still in use:

```
SAPCMP
SAPOSS
SAP-OSS
SAPNET_RTCC
SAP-OSS-LIST-O01
```



RFC Destination	# Calls	T Execution Time	Ø Time/Execution	T Call Time	Ø Time/RFC	Sent Data (Bytes)
SAPCMP	99	21	214,1	23	227,7	171.469
SAPOSS	194	12	62,1	84	434,8	111.055
SAP-OSS	113	0	0,0	15	128,7	43.530
SAPNET_RTCC	51	0	0,0	0	0,0	22.899
SAP-OSS-LIST-O01	51	0	0,0	0	0,0	22.899

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Note 2928592 - Download digitally signed Notes using HTTP in SAP_BASIS 700 to 731

The note downports for SAP_BASIS 700 to 731 the option to download digitally signed Notes using HTTP procedure (in addition to existing method to use a central Download Service system).

You find a new version of the pdf document about “Enabling and Using SNOTE for Digitally Signed SAP Notes”, too.

Related notes:

Note 2934203 - ST-A/PI 01T* SP01 - 01U SP00: SAP backbone connectivity for RTCCTOOL
Note 2837310 - Connecting Legacy Systems with https to SAP Support Backbone

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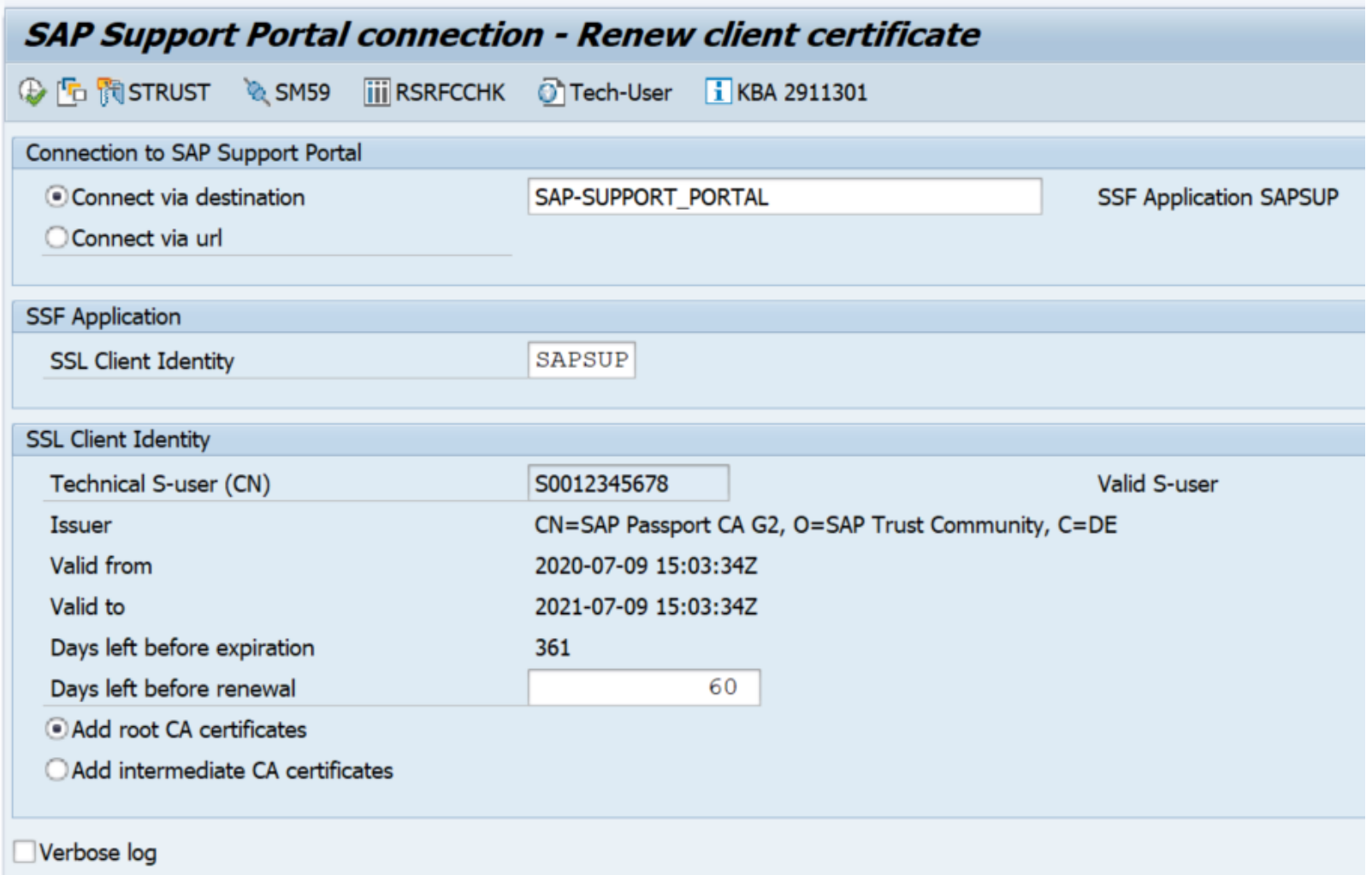
KBA 2911301 / Note 2946444 - SAP Support Portal connection - Renew client certificate

You have enabled client certificate authentication for technical communication users according to KBA 2805811.

You realize that the validity of these client certificates is limited to 1 year and you want to renew these client certificates efficiently.

Schedule new report `RSUPPORT_HUB_CERT_RENEWAL` as a monthly background job to renew the client certificate used in destinations for the SAP Support Portal



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Recommended Notes for System Recommendations

Note 2950184 - SyRec: JAVA Note is missing due to too low support package level
(if this note is required, request access to pilot release)

Note 2938632 - SysRec: Not all prerequisite notes are displayed

Note 2933596 - SysRec:7.2: Note for SAP HANA Database is not presented

Note 2930024 - SysRec: validity of note does not match system status

Note 2913837 - SYSREC: System recommendation reports the already implemented notes

Note 2747922 - SysRec: Collective Corrections for Solution Manager 720 SP08 Fiori UI
Note 2854704 - SysRec: Collective Corrections for Solution Manager 720 SP09 Fiori UI
Note 2857899 - SysRec: Collective Corrections for Solution Manager 720 SP10 Fiori UI

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June 2020

Topics June 2020

Note 2761608 - RFC Callback rejected: Analysis

Note 2912939 - Server Side Request Forgery vulnerability in SAP NetWeaver AS ABAP

Note 2918924 - Use of Hard-coded Credentials in SAP Commerce and SAP Commerce Datahub

Note 2933282 - Missing Authorization Check in SAP SuccessFactors Recruiting

Note 2541823 - Switchable authorization checks for RFC in SAP CRM (external billing)

Note 2878935 - Cross-Site Scripting (XSS) vulnerability in SAP NetWeaver AS ABAP (BSP Test Application SBSPEXT_TABLE)

Note 2423576 - SAIS | Generic audit report about system changes

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Note 2761608 - RFC Callback rejected: Analysis

In addition to the Security Audit Log messages `DUI`, `DUJ`, `DUK` you can inspect the workprocess trace in transaction `SM50` to analyze missing RFC callback entries:

```
L  RFC-CALLBACK:: <param> <dest> <func> <cbfunc> result = <r>
```

`<param>`	Current value of profile parameter rfc/callback_security_method (0,1,2,3)
`<dest>`	RFC destination used for original call
`<func>`	Original function called
`<cbfunc>`	Function called back
`<r>`	Result of evaluation (`X`=allowed, `A`=allowed but will be rejected with param=3, SPACE=rejected)

Limitation: Currently this option is only valid for SAP_BASIS 7.40 SP 6-21 (via this note)

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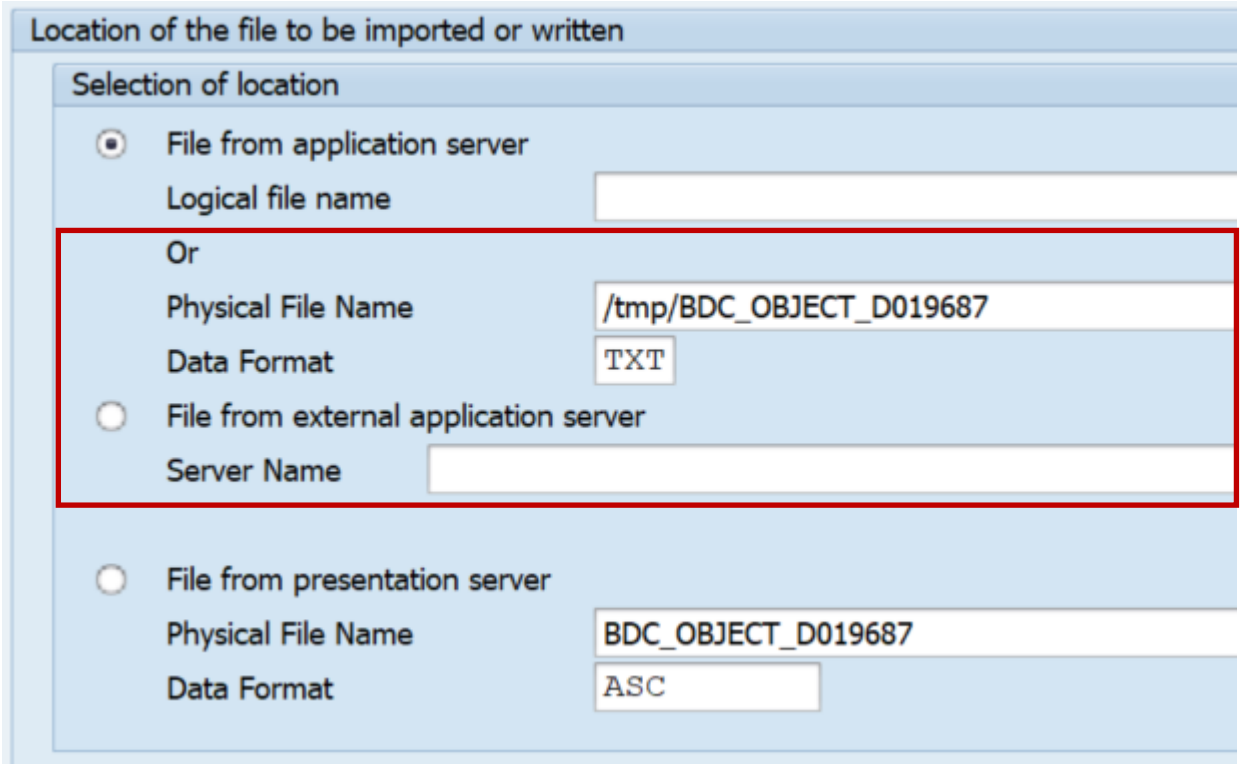
Note 2912939 - Server Side Request Forgery vulnerability in SAP NetWeaver AS ABAP

Report `RSBDCDAT` offers an input field for a physical file name on local or remote server to be imported or written.

This is already critical on any operation system.

The note removes these input fields.

- **Implement the note in any case**



Mitigation: The report checks authorizations for `S_BDC_MONI`

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Note 2918924 - Use of Hard-coded Credentials in SAP Commerce and SAP Commerce Datahub

Manual instruction for existing installations:

The patch releases ensure that new installations of SAP Commerce will not accept default credentials anymore. However, they do not remove default credentials from existing installations of SAP Commerce.

Follow the instructions in the Disabling All Default Passwords for Users guide by making use of the scripts provided in Note 2922193.

These scripts contain lists about standard users and standard passwords. You must treat them as publicly known.

Result:

Users included in essential, project, and sample data that previously had default passwords have now random passwords. Non-administrative users with default passwords are disabled.

The administrator user is not touched, therefore, set the administrator password manually

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Note 2933282 - Missing Authorization Check in SAP SuccessFactors Recruiting

SAP SuccessFactors is a cloud application → no software update required by customer

The note describes mandatory configuration instructions, i.e. an authorization change, as soon as version *SAP SuccessFactors Recruitment Management 2005 release* is used:

“Customers have to provide Read/Write permissions for the `JobApplicationInterview` entity to the user who is going to access the fields like Resume… This has to be only done while doing API operations…”

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Note 2541823 - Switchable authorization checks for RFC in SAP CRM (external billing)

SACF Note:

- **Implementation via SNOTE or via SP update does not improve security because it produces inactive software**
- **Analyze if (technical) users would require new authorizations and adjust roles if neccessary**
- **Use transaction SACF to create the productive SACF scenario and to activate the corresponding authorization check**

Caveat: If you plan to implement the note via SNOTE you have to follow the manual instruction, to upload the scenario definition via the attachment of the note.

- **Note version 2 from 09.06.2020: The attachment is missing**

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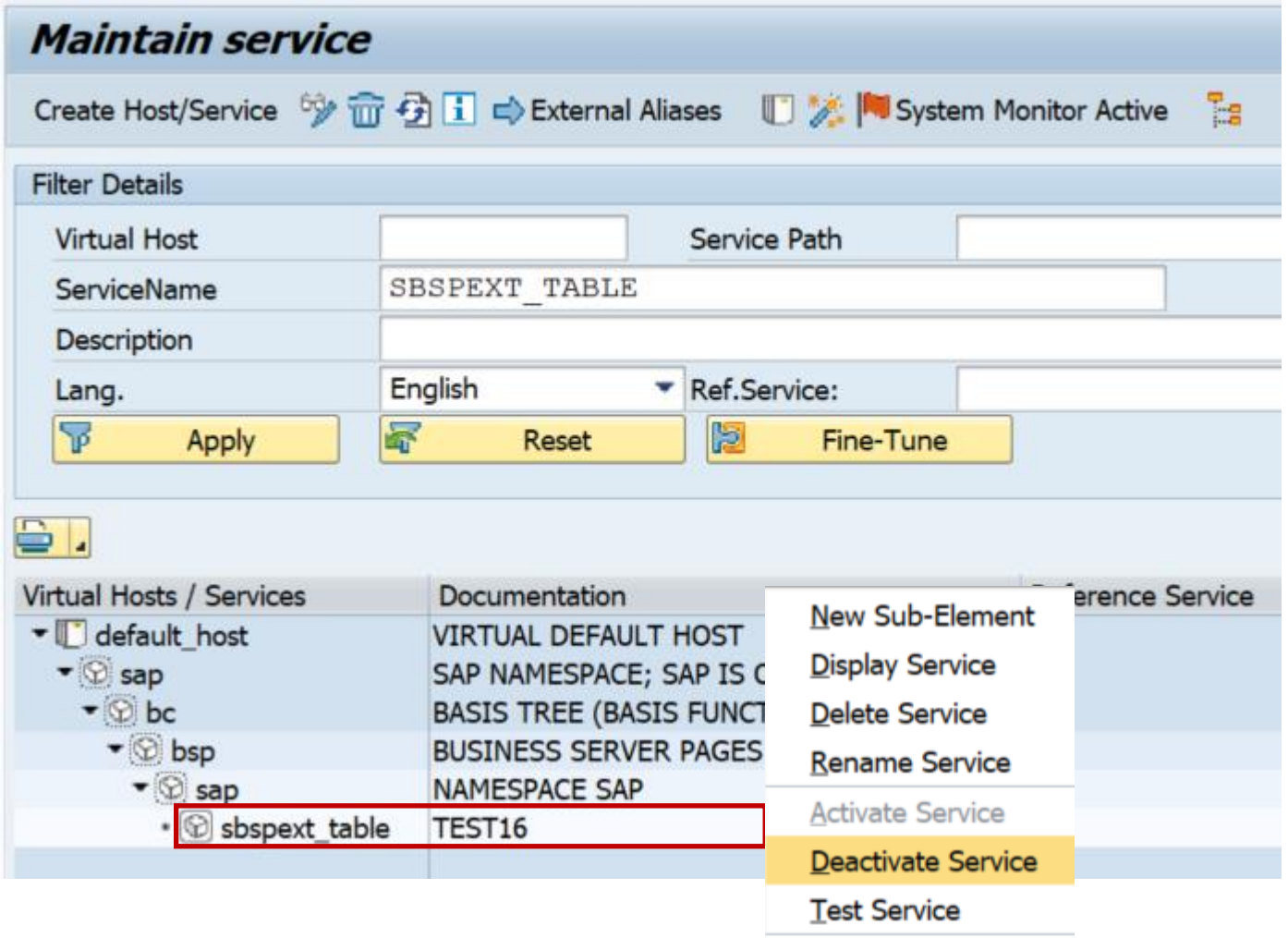
Note 2878935 - Cross-Site Scripting (XSS) vulnerability in SAP NetWeaver AS ABAP (BSP Test Application SBSPEXT_TABLE)

Do not only implement the note via `SNOTE` but verify in transaction `SICF` that the BSP test service `SBSPEXT_TABLE` is not active either:



Is that the only service which should get deactivated?

What about the environment?

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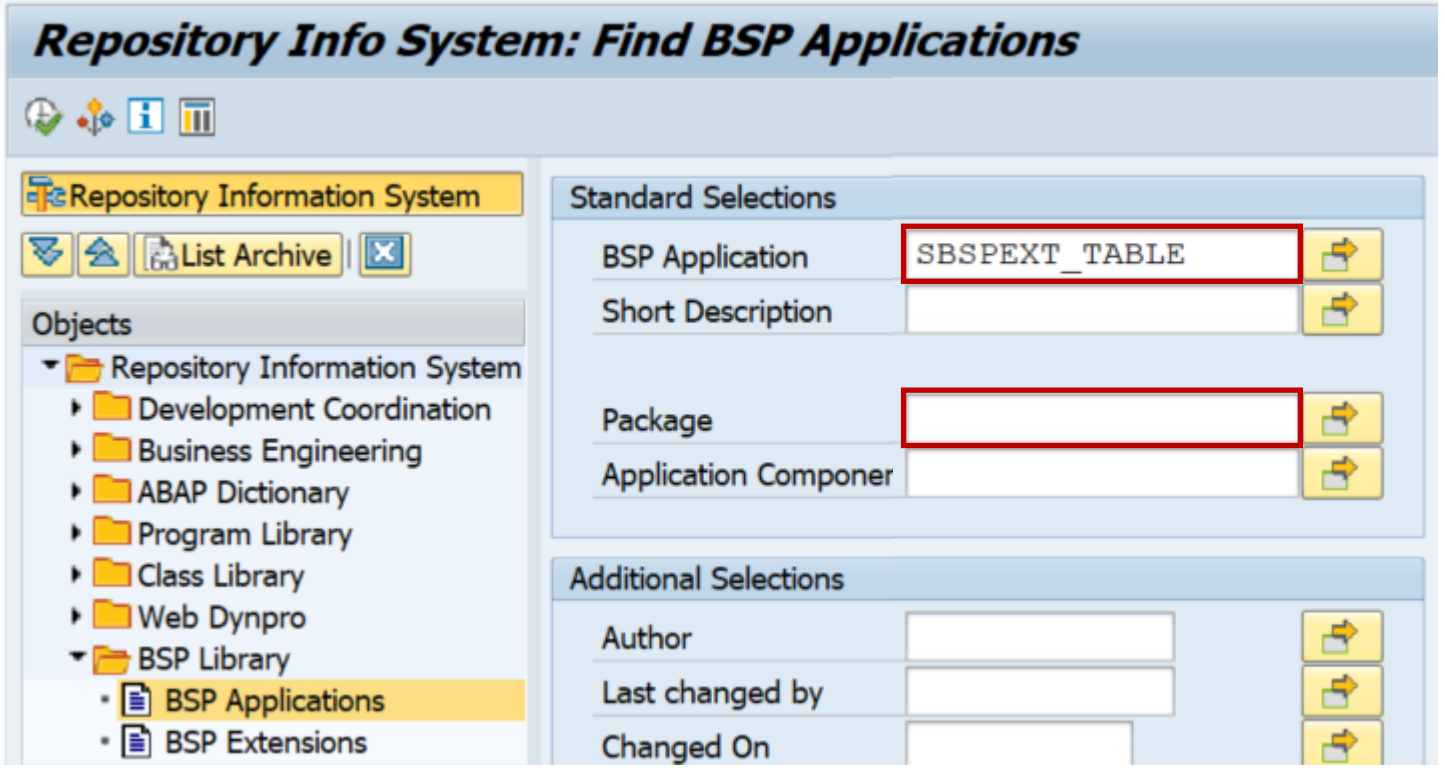
Note 2878935 - Cross-Site Scripting (XSS) vulnerability in SAP NetWeaver AS ABAP (BSP Test Application SBSPEXT_TABLE)

Use transaction `SE84` to view the properties of service `SBSPEXT_TABLE`

Identify the package `SBSPEXT_HTMLB` and search again using this package

Ensure that all BSP test applications are deactivated in `SICF`:

```
HTMLB_samples
SBSPEXT_HTMLB
sbspext_table
```



BSP Application	Short Description
HTMLB_samples	
SBSPEXT_HTMLB	Test Pages for HTMLB BSP Extension
sbspext_table	<htmlb:tableView> Example (Design2002+)

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Note 2423576 - SAIS | Generic audit report about system changes
Availability

Transaction / Report `SAIS_MONI` is available via Support Package:

SAP_BASIS

7.50 SP 18 (or 19)
7.51 SP 11
7.52 SP 07
7.53 SP 05
7.54 SP 03

Now you can use `SNOTE` as well.

AG Datenzugriff im AK Revision - Treffen/22.03.2017/SAP St. Leon - Rot/W3

10:00 Begrüßung und Vorstellungsrunde
Christoph Kuhn, DSAG

10:45 Das vereinfachte Sperren und Löschen personenbezogener Daten in der Business Suite
- Notwendigkeit
- Konzept
- Umsetzung

Volker Lehnert, SAP SE

11:30 Datenschutzfunktionen in der Business Suite
- Prozesse und Kontrollen dokumentieren
- Ausführung von Kontrollmaßnahmen nachweisen
- Unterstützung für Verzeichnisse

Volker Lehnert, SAP

12:15 Auditfunktionen im AIS
- SAIS: Cockpit als Ersatz für SECR und rollenbasiertes Audit
- SAIS_Moni Prototyp für „Was ist passiert“ Infosystem (bspw. In der Zugangszeit eines SuperUsers)
- Änderungsbelegarchivierung für Berechtigungsvorschlagswerte
- Schaltbare Berechtigungsszenarien im Fokus eines Systemaudit
- Generischer Tabellenzugriff: Neues Datenmodell für Berechtigungsgruppen
- Directory File Traversal – Neue Transaktion SFILE mit Audiotorsicht (bspw. Auf Daten, die im Root-Bereich liegen)

Dieter Goedel, SAP

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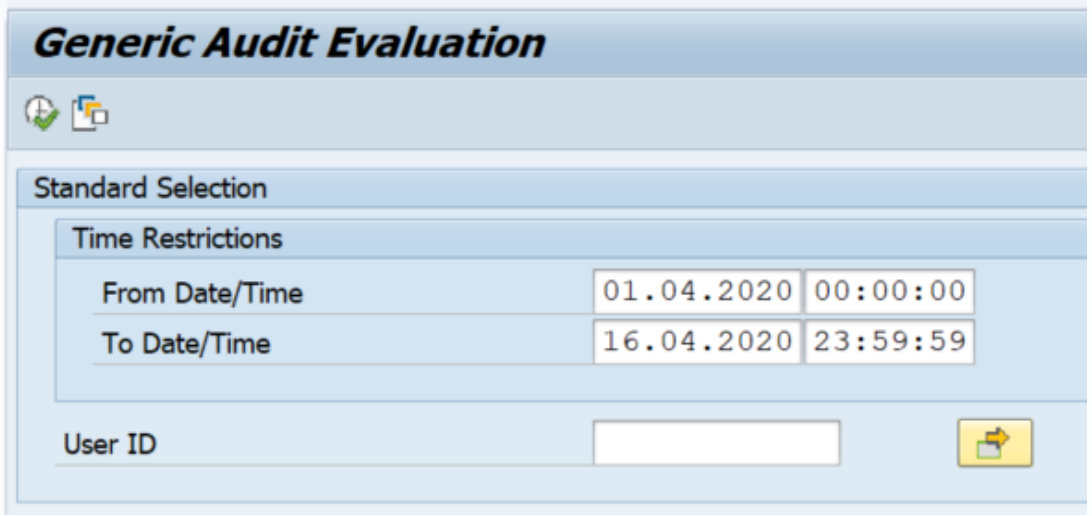
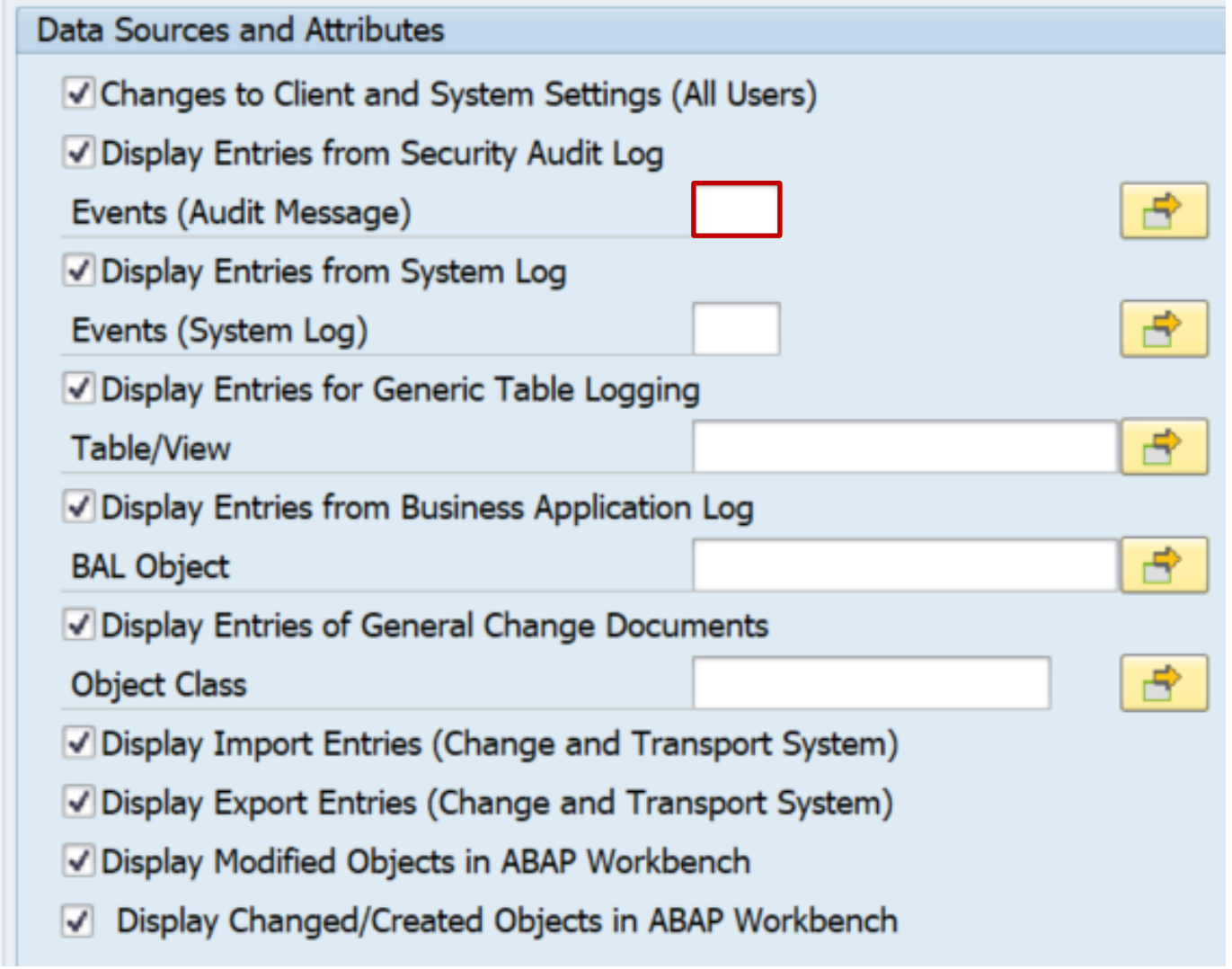
Note 2423576 - SAIS | Generic audit report about system changes

Selection Screen



Transaction / Report `SAIS_MONI` collects events from various sources:



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Note 2423576 - SAIS | Generic audit report about system changes

Data Sources

Transaction / Report `SAIS_MONI` collects events:	Corresponding standard function:
Changes to Client and System Settings (All Users)	`SE06`
Display Entries from Security Audit Log	`RSAU_READ_LOG`
Display Entries from System Log	`SM21 / RSYSLOG`
Display Entries for Generic Table Logging	`RSTBHIST / RSVTPROT`
Display Entries from Business Application Log	`SLG1`
Display Entries of General Change Documents	`RSSCD100 / CHANGEDOCU_READ`
Display Import Entries (Change and Transport System)	`SE03 / RSWBOSSR`
Display Export Entries (Change and Transport System)	`SE03 / RSWBOSSR`
Display Modified Objects in ABAP Workbench	`SE95`
Display Changed/Created Objects in ABAP Workbench	`SE84`

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Note 2423576 - SAIS | Generic audit report about system changes

Example

Generic Audit Evaluation

Selektionskriterien

Runtime environment:

Release / System-ID / Client: 754 / EC1 / 001
Executed at: 17.06.2020 / 10:42:56
Executed by: D019687
Number of Selected Log Entries: 300
Selected Period: 17.06.2020 / 00:00:00 - 17.06.2020 / 23:59:59

Source	Date	Time	User	Clie...	Server	Instance	Termi...	TCode	Program Name	Event	Object	
BAL	17.06.2020	09:35:06	D019687	001				SE38	NOTE_2423576	SNOT...	Msg.: 000098 | Ext.No.: NOTE_2423576	
	17.06.2020	10:18:04	D019687	001				SE38	NOTE_2423576	SNOT...	Msg.: 000089 | Ext.No.: NOTE_2423576	
	17.06.2020	10:21:25	D019687	001				SE38	NOTE_2423576	SNOT...	Msg.: 000098 | Ext.No.: NOTE_2423576	
SAL	17.06.2020	10:32:45	D019687	001	EC1	mo-872c1591...	WDFN...	SMODI	SAPMSYST	AU4	Start of transaction SMODI	failed (Rea...
	17.06.2020	10:32:45	D019687	001	EC1	mo-872c1591...	WDFN...	SMODI	SAPMSYST	AU4	Start of transaction SMODI	failed (Rea...
TABLOG	17.06.2020	09:21:23	D019687			mo-872c15913		SNOTE	SCWN_NOTE_DOWNLOAD	Insert	TADIR : R3TRNOTE0002423576	
	17.06.2020	09:21:23	D019687			mo-872c15913		SNOTE	SCWN_NOTE_DOWNLOAD	Insert	TADIR : R3TRCINS002075125941	0000717035
	17.06.2020	09:21:23	D019687			mo-872c15913		SNOTE	SCWN_NOTE_DOWNLOAD	Insert	TADIR : R3TRCINS002075125941	0000717171
	17.06.2020	09:21:23	D019687			mo-872c15913		SNOTE	SCWN_NOTE_DOWNLOAD	Insert	TADIR : R3TRCINS002075125941	0000717260
	17.06.2020	09:21:23	D019687			mo-872c15913		SNOTE	SCWN_NOTE_DOWNLOAD	Insert	TADIR : R3TRCINS002075125941	0000717281
	17.06.2020	09:21:23	D019687			mo-872c15913		SNOTE	SCWN_NOTE_DOWNLOAD	Insert	TADIR : R3TRCINS002075125941	0000717316
	17.06.2020	09:21:23	D019687			mo-872c15913		SNOTE	SCWN_NOTE_DOWNLOAD	Insert	TADIR : R3TRCINS002075125941	0000717387
	17.06.2020	09:21:23	D019687			mo-872c15913		SNOTE	SCWN_NOTE_DOWNLOAD	Insert	TADIR : R3TRCINS002075125941	0000717388

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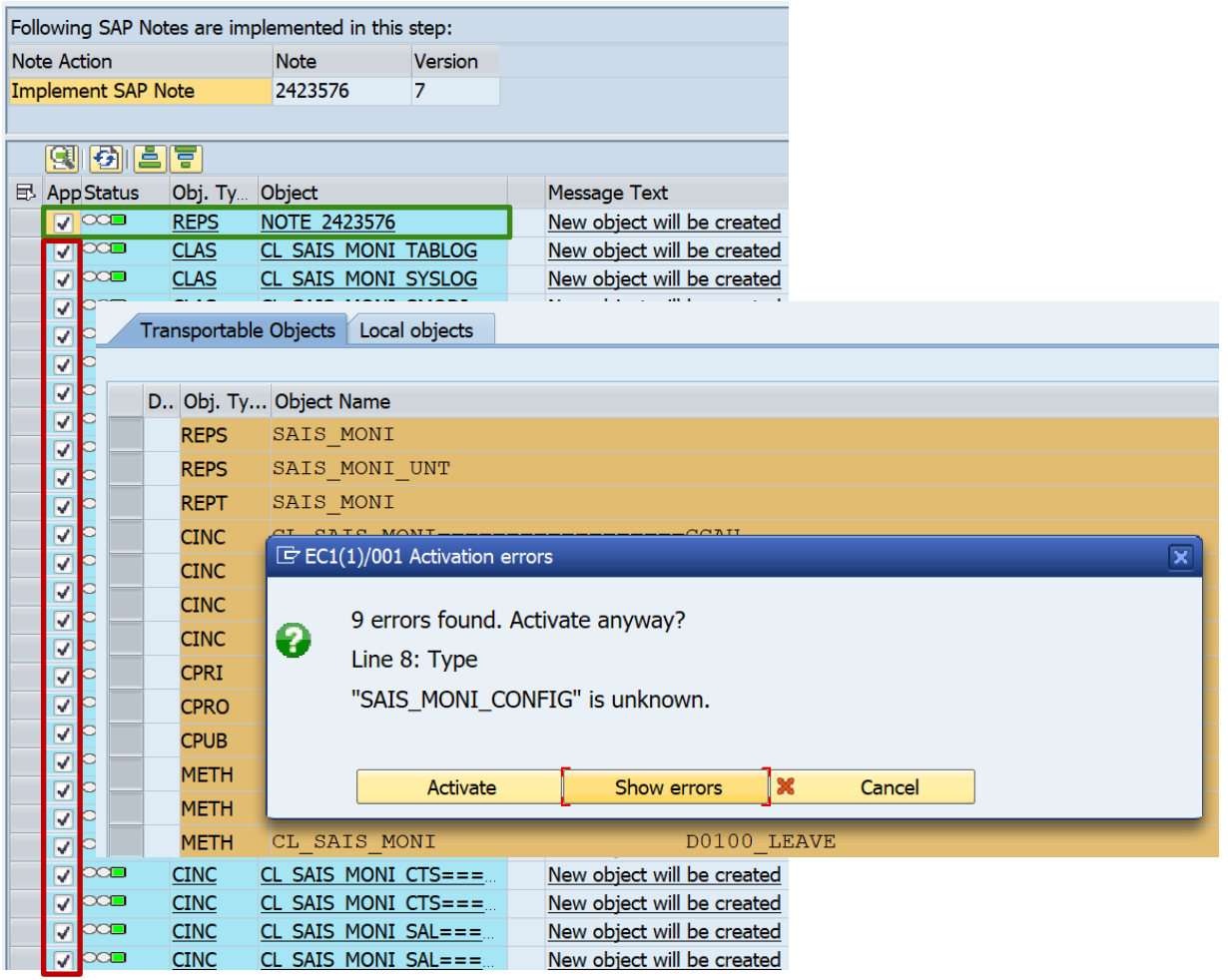
Note 2423576 - SAIS | Generic audit report about system changes
Implementation via SNOTE

SNOTE creates several new objects and fails if you try it in one step:

According to the manual correction instruction you should implement, activate and execute report NOTE_2423576 first.

https://launchpad.support.sap.com/#/notes/0002423576/D



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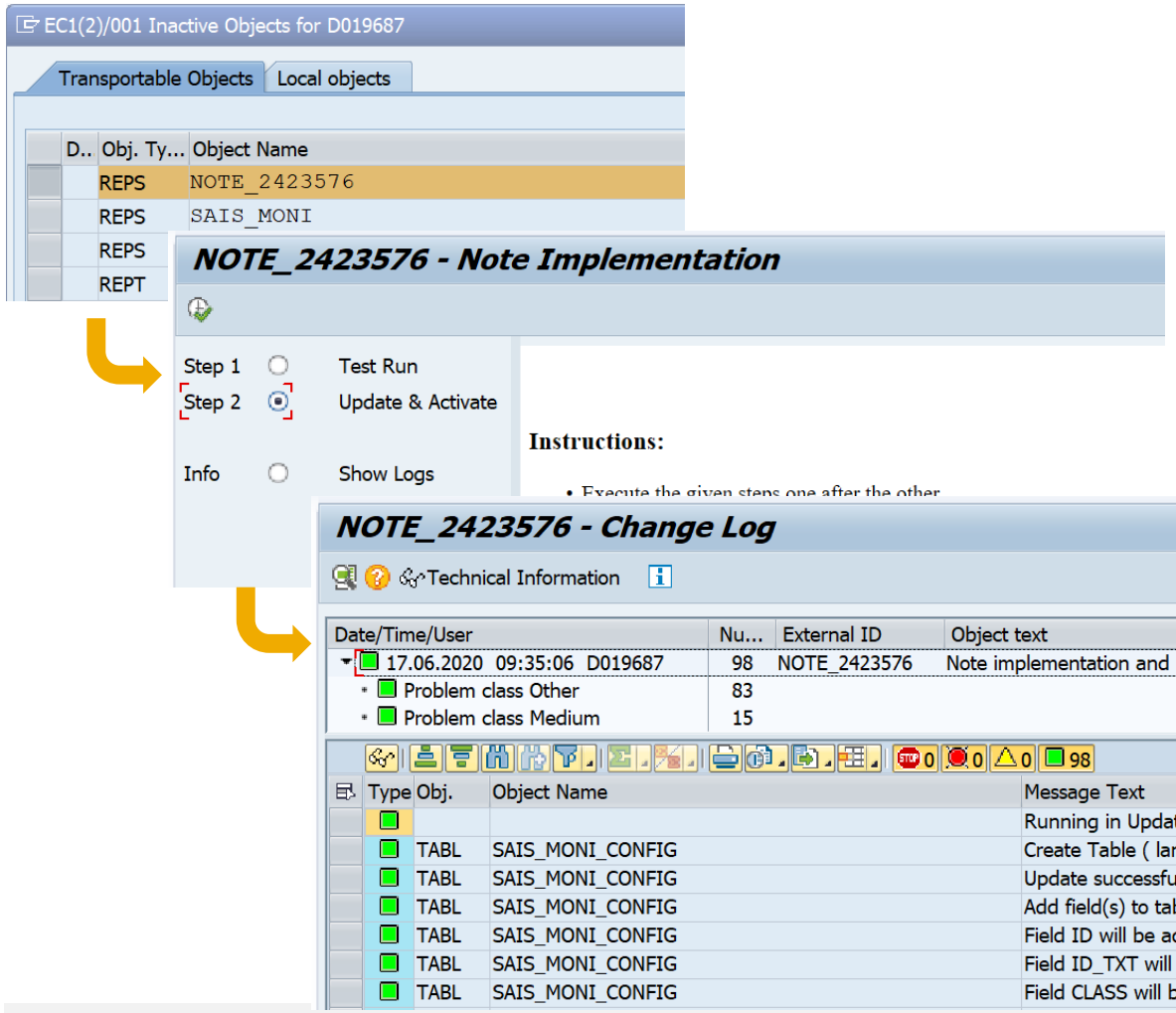
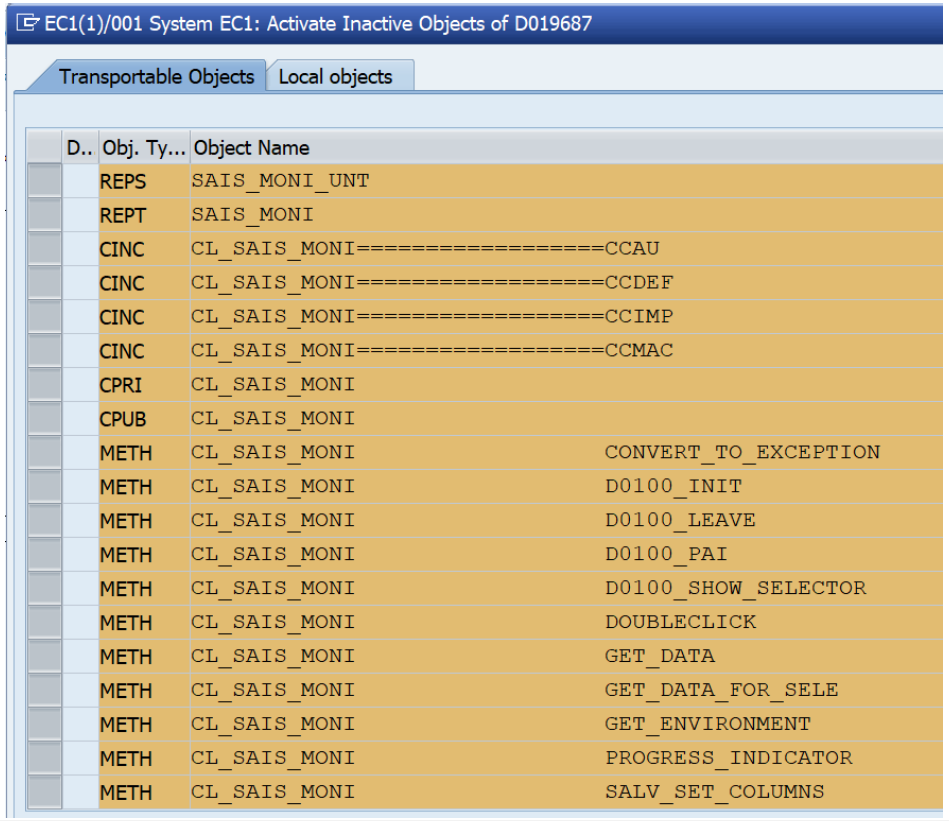
Note 2423576 - SAIS | Generic audit report about system changes
Implementation via SNOTE

If you missed that, activate and execute this report `NOTE_2423576` in `SE38`:



Than restart `SNOTE` and activate all remaining objects:



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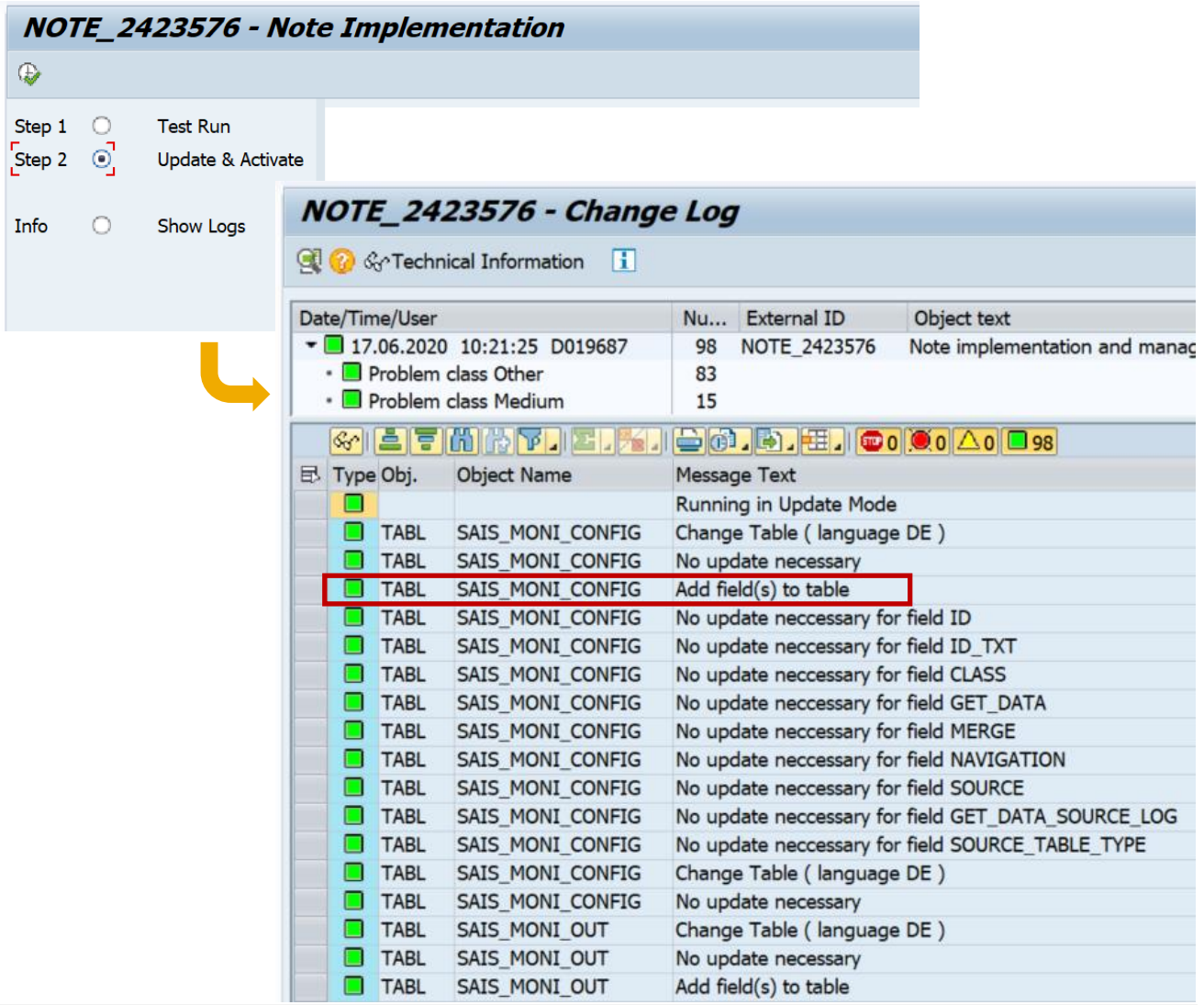
Note 2423576 - SAIS | Generic audit report about system changes
Implementation via SNOTE

Run report `NOTE_2423576` again!

This step extends some database tables and adds necessary table content entries to the transport order.

If you miss that step it might happen that you do not get any results in transaction `SAIS_MONI`



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May 2020

Topics May 2020

Note 2923117 - How to address problems with old TLS protocol versions in clients accessing SAP Cloud Platform NEO

Note 2917090 - Information Disclosure in SAP Adaptive Server Enterprise (Cockpit)
Note 2917275 - Code injection in SAP Adaptive Server Enterprise (Backup Server)

Note 2835979 - Code Injection vulnerability in Service Data Download

Note 2885244 - Missing Authentication check in SAP Business Objects Business Intelligence Platform (Live Data Connect)

Note 2734580 - Information Disclosure in SAP ABAP Server

Note 2911801 - Binary planting vulnerability in SAP Business Client

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Note 2923117 - How to address problems with old TLS protocol versions in clients accessing SAP Cloud Platform NEO

As of now (May 2020), SAP Cloud Platform NEO is still supporting TLS version 1.0 and 1.1 in addition to 1.2 in many regions. The support of TLS 1.0 and 1.1 will be completely stopped by end of June 2020. After that time, HTTPS clients not capable of using TLS 1.2 or higher will fail to connect to SAP Cloud Platform NEO.

Browser as a Client

- If a user is using a browser to connect to an application, this browser needs to be in a version supporting TLS 1.2 or higher – all recent versions of the major browsers support this.

SAP NetWeaver AS Java

- For an SAP NetWeaver AS Java, make sure TLS 1.2 is configured in the HTTP destination for the outbound connections to the SAP Cloud Platform NEO endpoint.
- Main Note 2417205
- Versions up to 7.02: Note 2503155
- Versions higher than 7.10: Note 2540433

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Note 2923117 - How to address problems with old TLS protocol versions in clients accessing SAP Cloud Platform NEO

SAP NetWeaver Process Integration as Client contacting SAP Cloud Platform

- TLSv1.2 support in REST adapter: Note 2295870
- TLSv1.2 support in Axis adapter: Note 2292139

ABAP Application Server contacting SAP Cloud Platform

- All SAP products based on NW ABAP Application Server need at least Kernel 7.20 patch 88
- Configuration: Note 510007
- SAP ABAP Application Servers in version 6.40 or older cannot support TLS 1.2.

Other Clients including Network Devices

- There is a plenty of other technology clients to access the SAP CP, including native clients of customer applications or clients of Cloud Platform Integration (CPI). These could be customer own or third-party products. All those need to enable TLS 1.2.

Technical contact

- In case of technical problems or question, raise a Service Ticket with “**TLS Migration**” in header.

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Note 2917090 - Information Disclosure in SAP Adaptive Server Enterprise (Cockpit)
Note 2917275 - Code injection in SAP Adaptive Server Enterprise (Backup Server)

Various notes about SAP ASE with different priorities, affected releases and solutions

→ Go for the highest version SAP ASE 16.0 SP 3 PL 8 HF1

	SAP ASE 15.7 SP 141 HF1	SAP ASE 15.7 SP 141 CE HF1	SAP ASE 16.0 SP 2 PL 9 HF1	**SAP ASE 16.0 SP 3 PL 8 HF1**
Note 2915585 - Missing validation in SAP Adaptive Server Enterprise (XP Server on Windows)	☑	☑	☑	☑
Note 2916927 - SQL Injection vulnerability in SAP Adaptive Server Enterprise	n.a.	n.a.	☑	☑
Note 2917022 - Information Disclosure in SAP Adaptive Server Enterprise	n.a.	n.a.	n.a.	☑
Note 2917090 - Information Disclosure in SAP Adaptive Server Enterprise (Cockpit)	n.a.	n.a.	☑	☑
Note 2917273 - SQL Injection vulnerability in SAP Adaptive Server Enterprise (Web Services)	☑	☑	☑	☑
Note 2917275 - Code injection in SAP Adaptive Server Enterprise (Backup Server)	n.a.	n.a.	n.a.	☑
Note 2920548 - Missing authorization check in SAP Adaptive Server Enterprise	☑	☑	☑	☑

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Note 2917090 - Information Disclosure in SAP Adaptive Server Enterprise (Cockpit)
Note 2917275 - Code injection in SAP Adaptive Server Enterprise (Backup Server)

Note 2917090

- **Increased criticality:**
  It's not about the access to the ASE Cockpit and no ASE database user is related. It's a general issue.

- **Mitigation:**
  Impacts only Windows platform

Note 2917275

- **Mitigation:**
  A potential attacker requires to be the Database Owner (dbo) or a user with dump/load database privilege.

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Note 2835979 - Code Injection vulnerability in Service Data Download

HotNews

Solution:
“Implement the note. The implementation of the note has no impact to any productive business process.”

→ Simply do it (if not done already)

… but you have to do it in all ABAP systems because the ST-PI plugin is installed in all ABAP systems which are connected to a SAP Solution Manager

Version	Maintenance	Solution	Publication of SP
2008_1_46C	Maintenance ended on 17.03.2014	Use Correction Instruction of note 2930680 instead.	
2008_1_620	Maintenance ended on 17.03.2014	Correction Instruction	
2008_1_640	Maintenance ended on 17.03.2014	Correction Instruction	
2008_1_700	In maintenance until 31.12.2025	Correction Instruction or Support Package 22 SAPKITLRDV	02.12.2019
2008_1_710	In maintenance until 31.12.2020	Correction Instruction or Support Package 22 SAPKITLREV	02.12.2019
740	In maintenance until 31.12.2025	Correction Instruction or Support Package 12 SAPK-74012INSTPI	02.12.2019

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Note 2885244 - Missing Authentication check in SAP Business Objects Business Intelligence Platform (Live Data Connect)

If you are using SAP BOE Live Data Connect 1.0., 2.0., 2.X., 2.1., 2.2., or 2.3., you need to upgrade to the latest available version 2.4, which you can get from SAP Software Downloads

Additional manual configuration:

1. Ensure that the authentication mode is set to saml

Activating trusted authentication in SAP BusinessObjects Live Data Connect
https://help.sap.com/viewer/6be6d1fc887046f7a5e5c1aa52505e86/latest/en-US/52b4494adda340ebb26407a260f5ba72.html

2. Retrieve the “shared secret” from the Central Management Console of your BIP system.

Activating trusted authentication in SAP BusinessObjects BI Platform
https://help.sap.com/viewer/6be6d1fc887046f7a5e5c1aa52505e86/latest/en-US/c2fba9beb34f4aabaef6b34f222969bc.html

3. Use the “shared secret” to set `lde.boe.sharedKey` in the Live Data Connect property file

Configuring SAP BusinessObjects Live Data Connect
https://help.sap.com/viewer/6be6d1fc887046f7a5e5c1aa52505e86/latest/en-US/14b7943431bb4fb08b73b6ef4f43ab88.html

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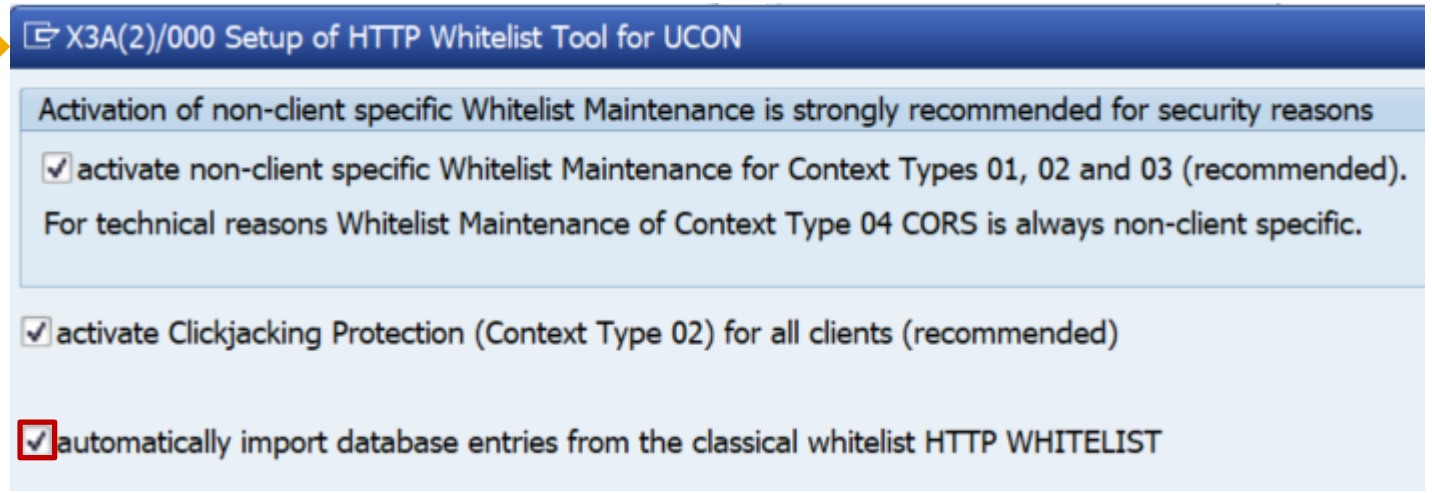
Note 2734580 - Information Disclosure in SAP ABAP Server

Manual configuration of allowlist is still needed!

Option a) If available (as of 7.40 SP 20, 7.50 SP 12, 7.51 SP 6, 7.52 SP 1)
use Transaction `UCON_CHW` in client `000` or configure it as "cross-client" (see Note 2189853)

UCON HTTP allowlist Scenario
https://help.sap.com/viewer/1ca554ffe75a4d44a7bb882b5454236f/7.51.10/en-US/91f9f84fe8a64ce59dc29b76e47078eb.html



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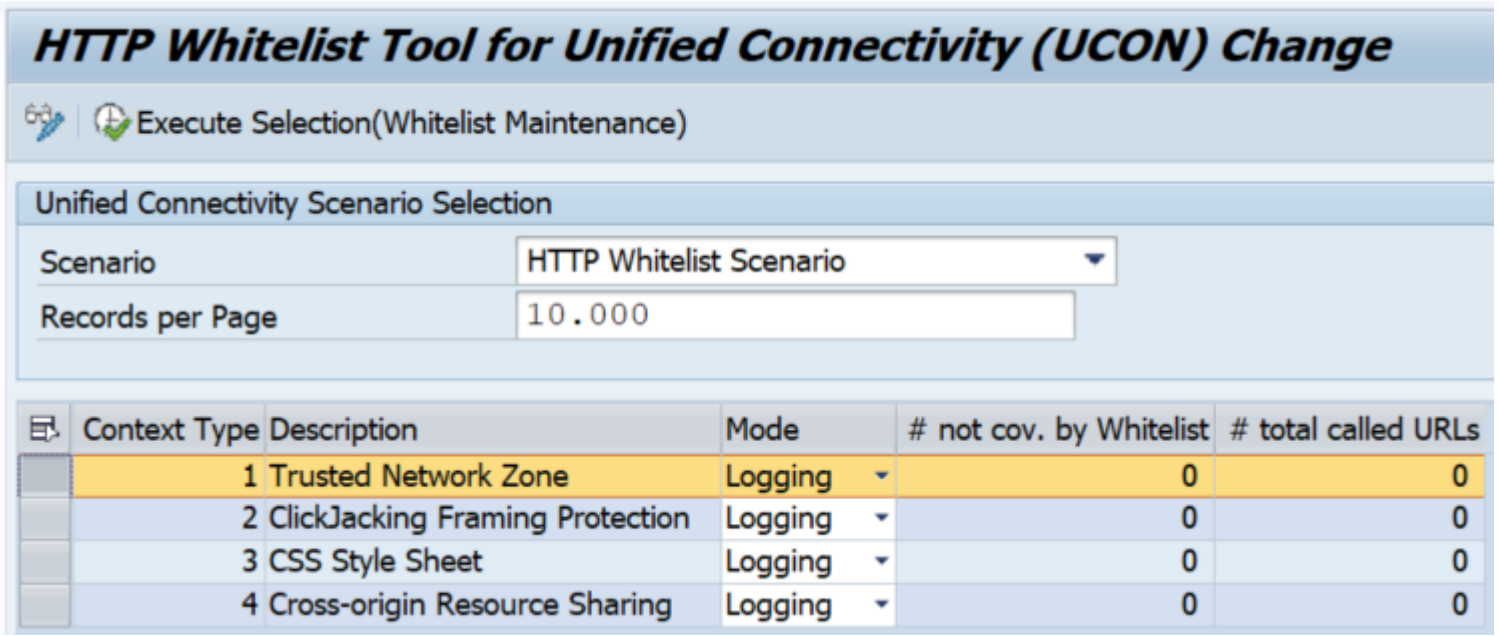
Note 2734580 - Information Disclosure in SAP ABAP Server



Available Modes:

1. **Logging**
   Activate this now to get data!
2. **Simulated Check**
   As soon as you have entered some entries, still insecure!
3. **Active Check**
   Secure mode
4. **Monitoring: Check log**

Context types:

1 Trusted Network Zone (former entry types `02`, `03`, `10`, `11`, `20`, `21`, `40` and `99`)

2 ClickJacking Framing Protection (former entry type `30`)

3 CSS Style Sheet (former entry type `01`)

4 Cross-origin Resource Sharing (entry type `50` only available with UCON HTTP allowlist, see Note 2547381)

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Note 2734580 - Information Disclosure in SAP ABAP Server

If the UCON HTTP allowlist is not available in the system (see Note 2573569) or it is not activated yet, the content of table `HTTP_WHITELIST` is used. If at least one record exists for an entry type, the check is active for that entry type. Entry type `30` (Clickjacking Framing Protection) is always active.

01	Portal CSS Theme-URL / HTTP Framework to filter for valid URLs (Note 853878)
02	Exit URL for parameter `sap-exiturl`
03	NWBC runtime
10	WebDynpro Resume URL (Note 2081029)
11	Web Dynpro Redirect URL (Note 2081029)
20	Redirect URL for SSO, parameter `sap-mysapred` of ICF (Note 612670)
21	Redirect URL for ICF Logoff, parameter `redirectURL` of ICF (Note 1509851)
30	Clickjacking Framing Protection (Note 2142551)
40	Suite Redirect
99	Redirect (generic)

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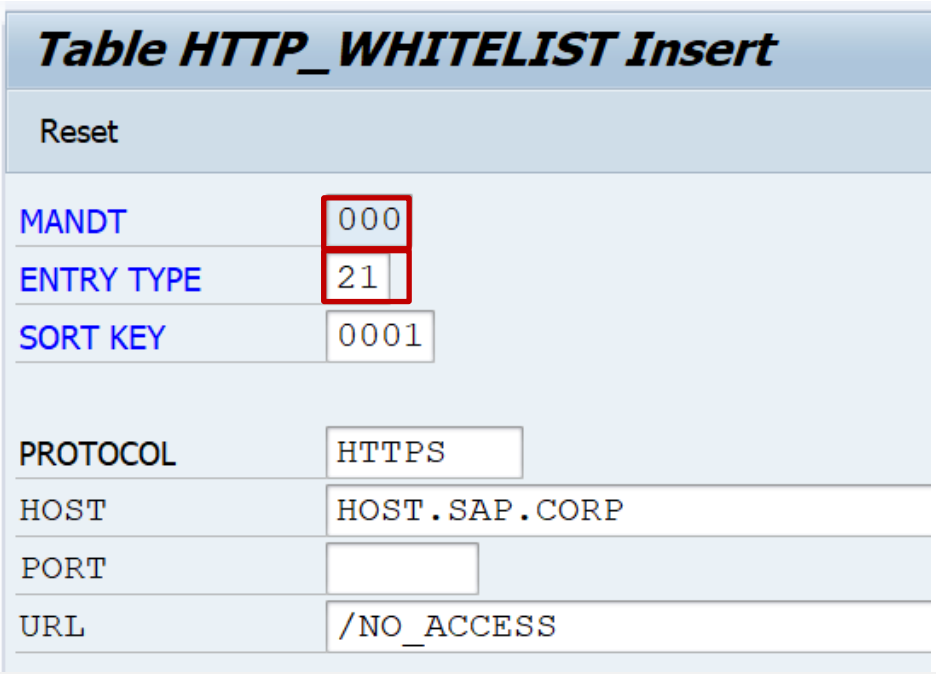
Note 2734580 - Information Disclosure in SAP ABAP Server

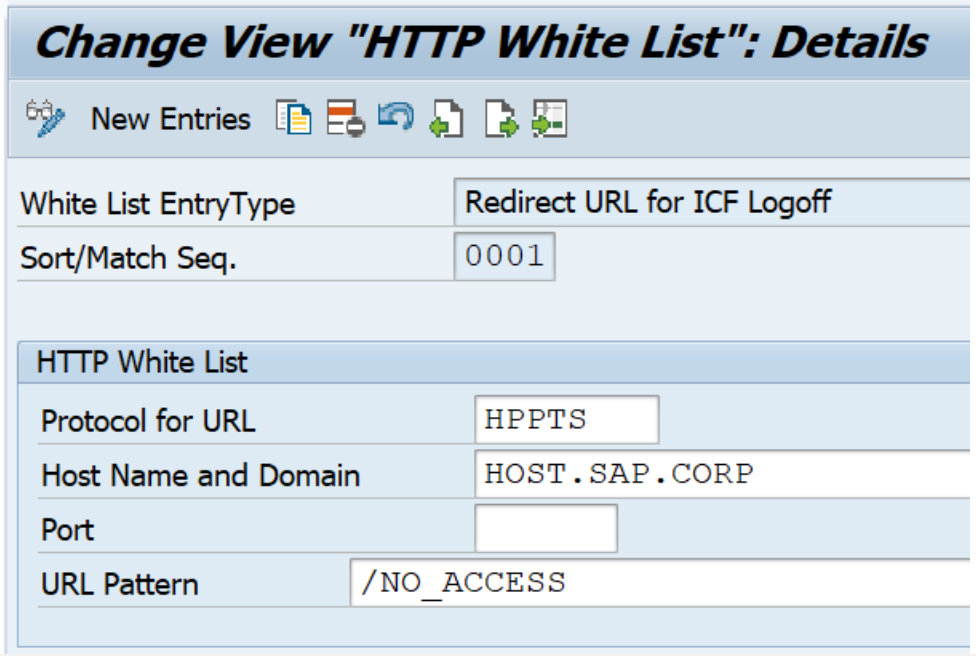
Option b) In client 000 maintain table HTTP_WHITELIST with entry type 21 to enable HTTP allowlist Protection

Transaction SE16 for table HTTP_WHITELIST



Report RS_HTTP_WHITELIST shows the value help for the entry type field, too:

(Caution: Ensure to go back to initial screen to copy the entries into table HTTP_WHITELIST)



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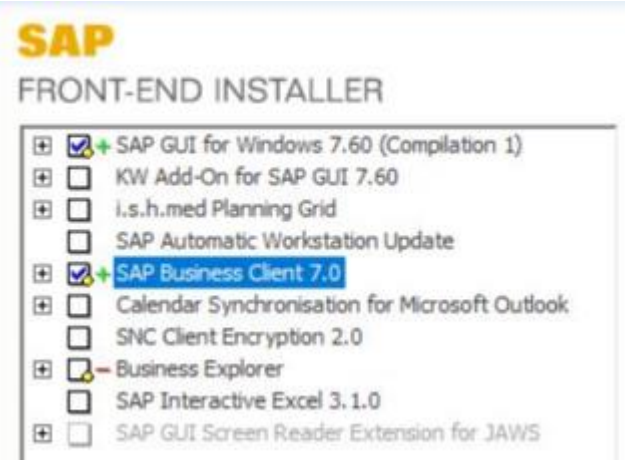
Note 2911801 - Binary planting vulnerability in SAP Business Client

Client-side configuration and installation of SAP Business Client for Desktop 7.0 together with SAP GUI for Windows 7.60

1. **Download SAP Business Client from SAP Software Download Center**
   NWBC700_10-70003080.EXE
2. **Create and distribute system connections (Fiori Launchpad connection, NWBC connection, SAP logon connection, and SAP shortcut) and client configuration**
3. **Create and distribute Security Settings for Browser Controls**



See:

Note 2714160 - SAP Business Client 7.0: Prerequisites and restrictions
Note 2622660 - Security updates for the browser control Google Chromium delivered with SAP Business Client

https://community.sap.com/topics/business-client → Install and Configure

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Note 2911801 - Binary planting vulnerability in SAP Business Client

Implement note 2920217 to enhance System Recommendations to show SAP Business Client Notes

It simply would show Business Client notes (BC-WD-CLT-BUS) for all ABAP systems.
That‘s similar like with SAPGUI notes (BC-FES-GUI).

Prerequisite: Ensure to have implemented the latest version of note 2458890

Limitation: System Recommendations cannot check the installed version on clients.

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April 2020

Topics April 2020

Security Notes Statistics

SOS Checks ABAP / HANA / Java

Note 2896682 - Directory Traversal vulnerability in SAP NetWeaver (Knowledge Management)

Note 2863731 - Deserialization of Untrusted Data in SAP Business Objects Business Intelligence Platform (CrystalReports WebForm Viewer)

Note 2900118 - Code Injection vulnerability in SAP OrientDB 3.0

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Security Notes Statistics

Q: Do you know if there is any general security finding, that is causing this multiple security patch fixing?

A: SAP got reports about multiple critical security vulnerabilities in the SAP Host Agent and the SAP Diagnostics Agents and other parts of the SAP Solution Manager which had been fixed step by step during the past month. Therefore we see notes for these components again and again.

You could download the list of Security Notes from https://support.sap.com/notes with filter for “Document Type = SAP Security Notes” to produce a statistics about publication month, however, it might be a little bit misleading as updated notes only show up when they are published the last time but not when they have been published initially. Therefore you would see less notes for previous month than expected.

The Security Notes Advisory on https://support.sap.com/sos shows snapshots from each month. Using this data we can construct a chart showing updated notes in every month when such a note was published.

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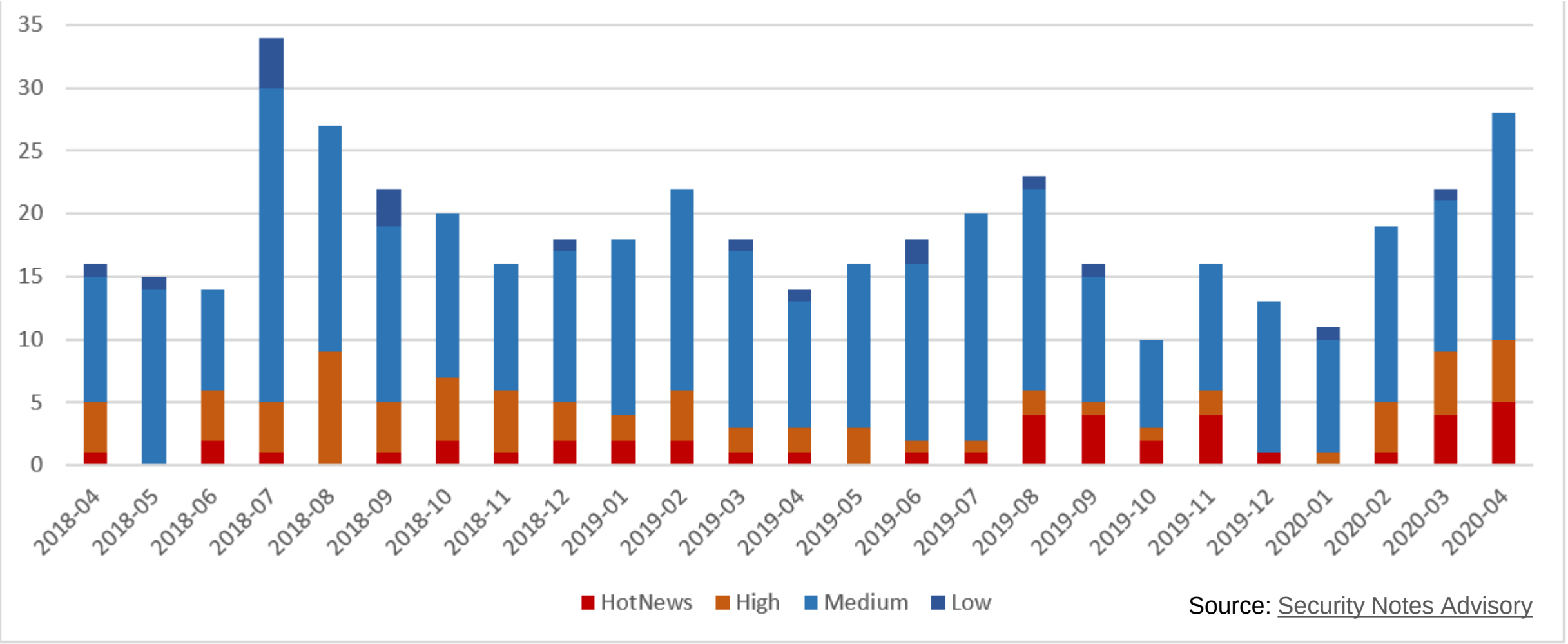
Security Notes Statistics



Source: Security Notes Advisory

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SOS Checks ABAP / HANA / Java

Updated versions published on https://support.sap.com/sos

Media Library

Search:

Title	Type	Changed
Security Optimization Service - ABAP Checks	PDF	2020-04
Security Optimization Service - HANA Checks	PDF	2020-04
Security Optimization Service - JAVA Checks	PDF	2020-04

See
Note 1969700 - SQL Statement Collection for SAP HANA
Note 1999993 - How-To: Interpreting SAP HANA Mini Check Results

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Note 2896682 - Directory Traversal vulnerability in SAP NetWeaver (Knowledge Management)

„allowing an attacker to …, delete, … arbitrary files on the remote server.“

→The whole server is at risk, therefore CVSS shows “Scope = Changed” which is the main driver for a high score and high priority.

CVSS Score:	9.1
Attack Vector (AV):	Network (N)
Attack Complexity (AC):	Low (L)
Privileges Required (PR):	Low (L)
User Interaction (UI):	None (N)
Scope (S):	Changed (C)
Confidentiality Impact (C):	High (H)
Integrity Impact (I):	Low (L)
Availability Impact (A):	Low (L)

Mitigation: The issue is about uploading files into the Portal which require authorizations for Portal Content administration. Therefore you should verify which users are assigned to role `pcd:portal_content/administrator/content_admin/content_admin_role`

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Note 2863731 - Deserialization of Untrusted Data in SAP Business Objects Business Intelligence Platform (CrystalReports Viewer)

"Do you need to update all clients (with CRYSTAL REPORTS FOR VS 2010) as well as the server (with SBOP BI PLATFORM SERVERS)?
What happens if you only update either the clients or the server?"

- **No, only the server side needs to be updated.**

"How can a customer checks if the solution is implemented completely?"

- **If customer applied the patches linked in the SAP note, it will be implemented completely.**

How is encryption established?
Is it necessary to configure something?

- **Both the encryption and decryption occurs at the server side,**
  The AES algorithm with random key and IV is applied to encrypt and decrypt the data, no configuration required.

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Note 2900118 - Code Injection vulnerability in SAP OrientDB 3.0

Open Source Package - used in SAP Hybris (part of Callidus Cloud)**:**
https://orientdb.org/
https://github.com/orientechnologies/orientdb

Server-side test case:
https://github.com/orientechnologies/orientdb/blob/develop/server/src/test/java/com/orientechnologies/orient/server/script/JSScriptServerTest.java

Client-side test case:
https://github.com/orientechnologies/orientdb/blob/develop/core/src/test/java/com/orientechnologies/orient/core/command/script/JSScriptTest.java

See
Note 2895241 - OrientDB: Information needed by Product/Development Support

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March 2020

Topics March 2020

Note 2890213 - Missing Authentication Check in SAP Solution Manager (User-Experience Monitoring)

Note 2892570 - Missing XML Validation vulnerability in ABAP Development Tools

Note 2826782 - Denial of service (DOS) in SAP BusinessObjects Mobile (MobileBIService)

Note 2859004 - Cross-Site Request Forgery in SAP Cloud Platform Integration for data services

Note 2871167 - Missing Authorization check in SAP ERP and S/4 HANA (MENA Certificate Management)

Note 2808169 - SAL | Archiving with BC_SAL / API for alert cockpits

Note 2730525 - ANST: Consuming the Note Search Webservice
Note 2818143 - ANST: SEARCH_NOTES- Implementing SOAP Based Note Search

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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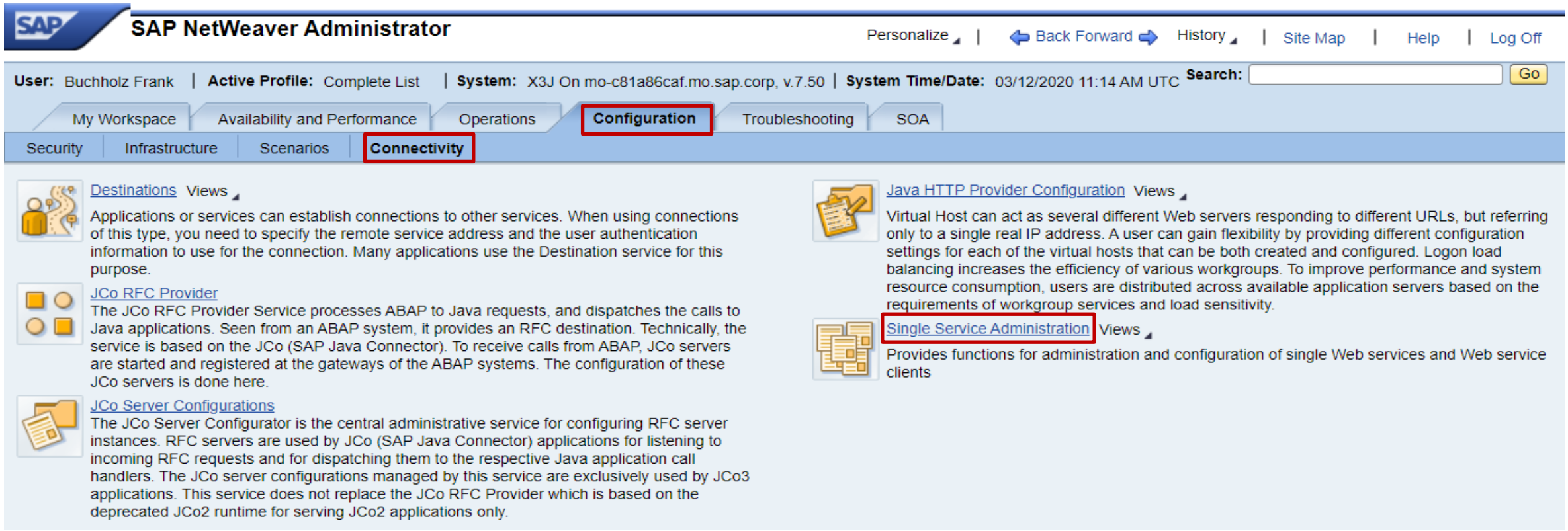
Note 2890213 - Missing Authentication Check in SAP Solution Manager (User-Experience Monitoring)



User-Experience Monitoring

https://support.sap.com/en/alm/solution-manager/expert-portal/user-experience-monitoring.html

https://wiki.scn.sap.com/wiki/display/EEM/Home

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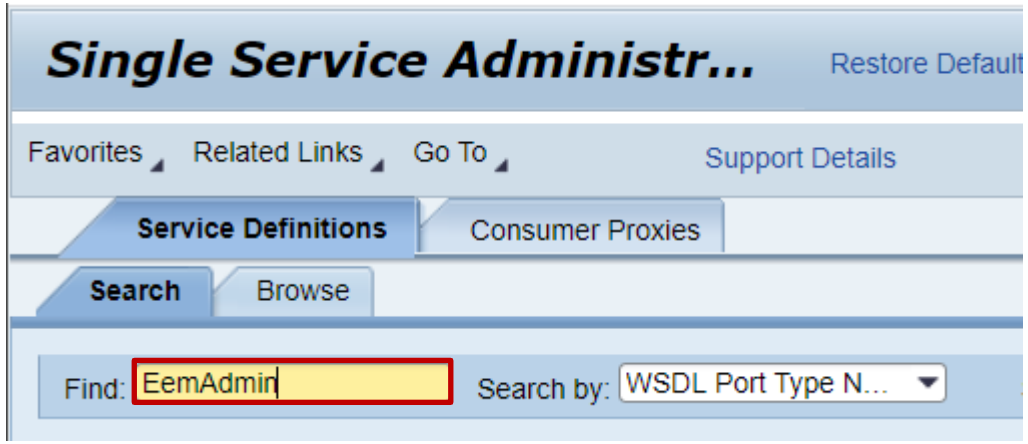
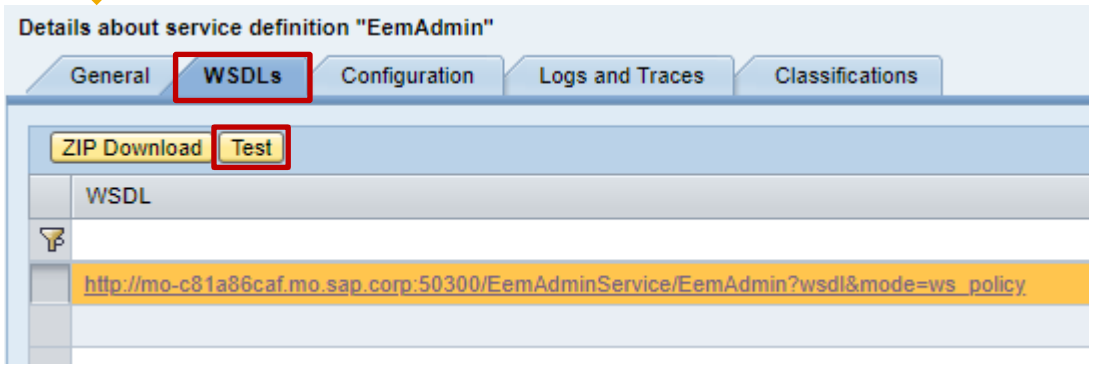
Note 2890213 - Missing Authentication Check in SAP Solution Manager (User-Experience Monitoring)

Critical, because `EemAdmin` is powerful:





Operation Name
checkRepository
deleteScript
downloadResource
getAgentConnectionStatus
getAgentInfo
getAllAgentInfo
getGlobalProperties
getLogsForExecution
getMatchingAgentInfo
reloadScripts
removeAgeletProperties
runScript
setAgeletProperties
setServerName
setTempConfig
startScript
stopScript
uploadResource
uploadResourceWithProperties

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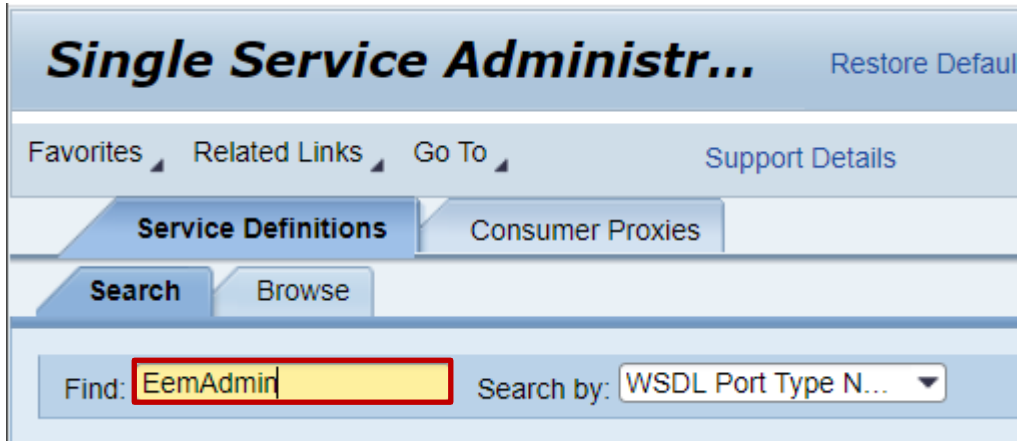
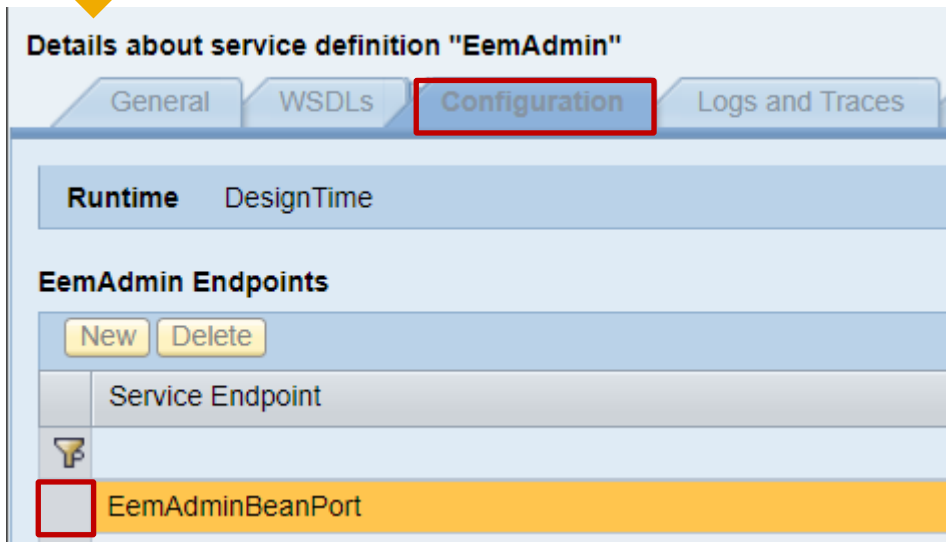
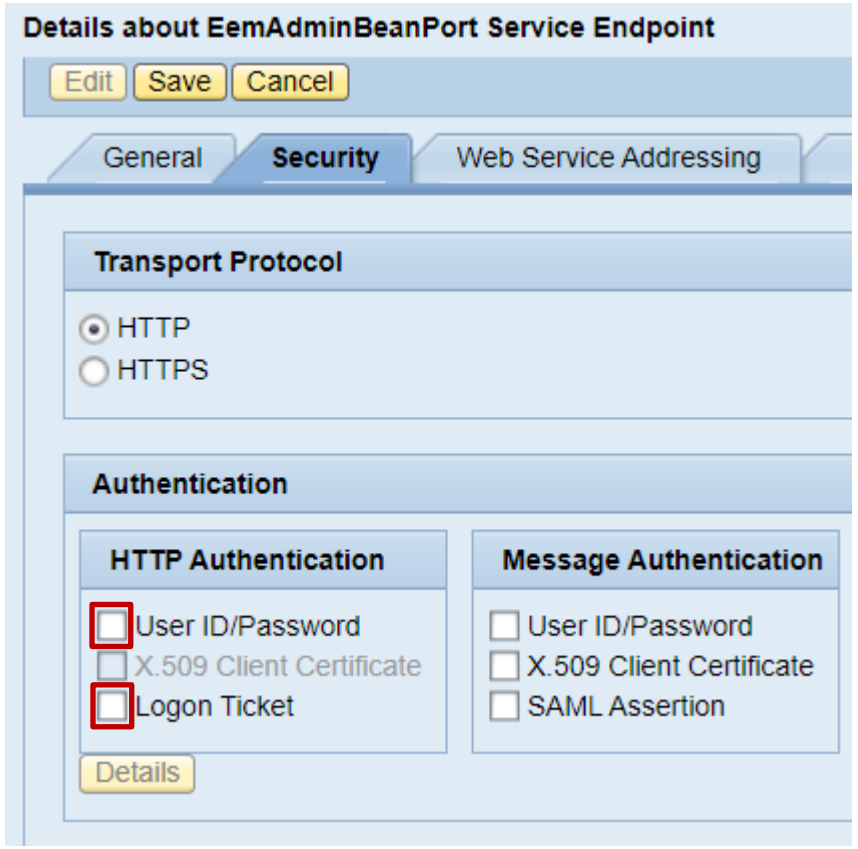
Note 2890213 - Missing Authentication Check in SAP Solution Manager (User-Experience Monitoring)





Workaround: Manual activation of `EemAdmin` authentication as a partial fix.



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Note 2892570 - Missing XML Validation vulnerability in ABAP Development Tools

The SAP ABAP in Eclipse client is affected by this vulnerability.

The code execution occurs on the computer where the ABAP Development Tools are installed and is done with the privileges of the logged on (frontend) user.

The easiest way to get the ABAP Development Tools is to use SAPs update sites described/linked on https://tools.hana.ondemand.com/#abap.
They host the latest available version of the tools.

Alternatively you can download from the SAP Software Download Center as described in the note.

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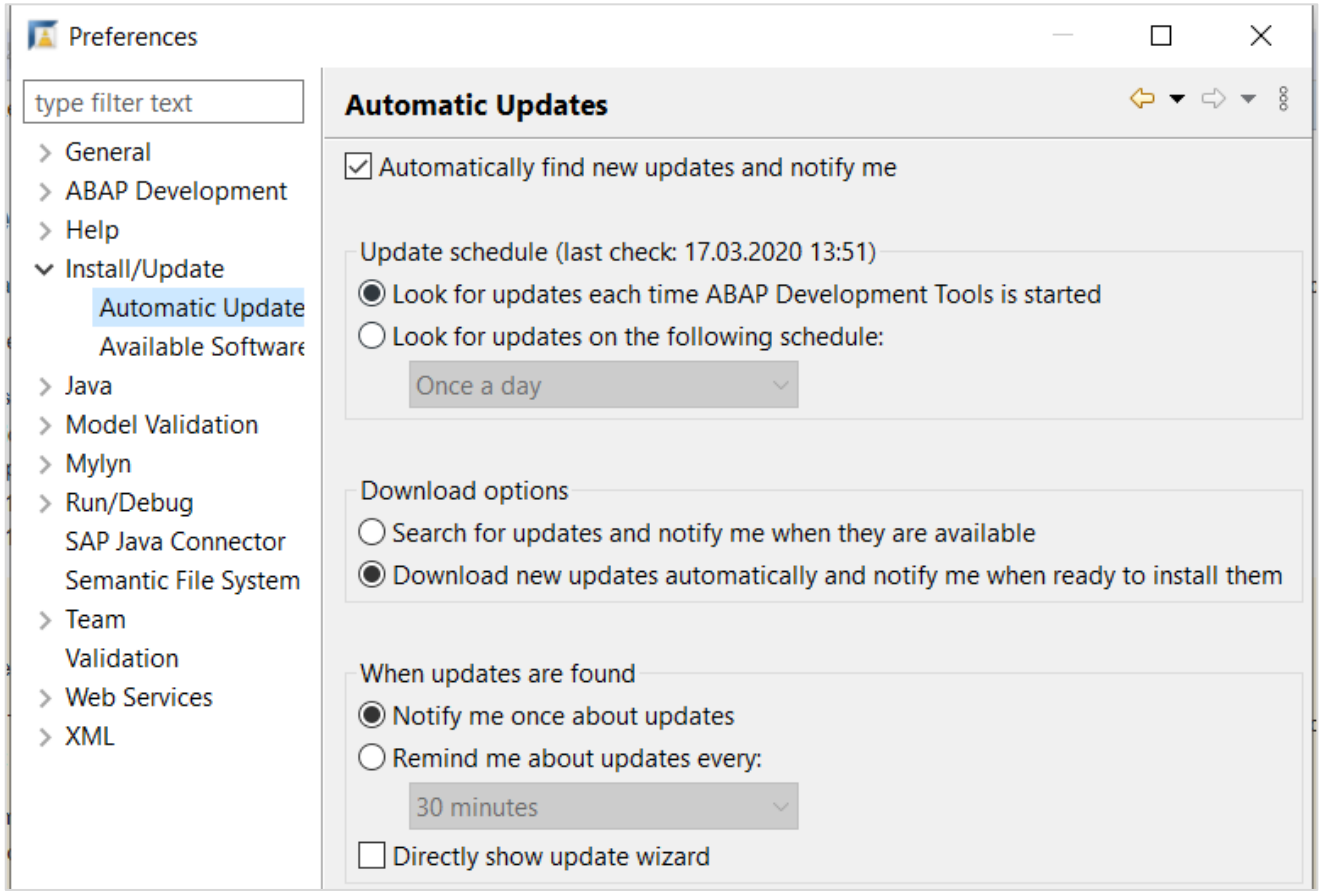
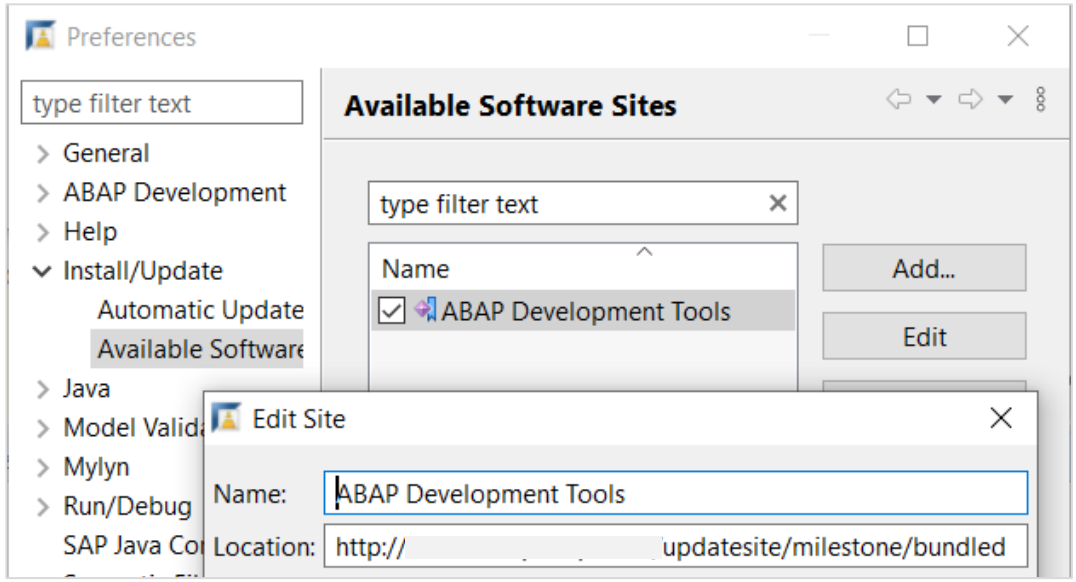
Note 2892570 - Missing XML Validation vulnerability in ABAP Development Tools

Ensure to distribute the package via Eclipse within your organization and that developers configure their installation to get it automatically:





What do you get using “Help → About”?

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Note 2826782 - Denial of service (DOS) in SAP BusinessObjects Mobile (MobileBIService)

Solution: Implement the patch for SBOP BI PLATFORM SERVERS 4.2 as described in the note

The reference to the deployment guide and to KBA 2824635 show how to configure MobileBIService in general. This is not related to the vulnerability.

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Note 2871167 - Missing Authorization check in SAP ERP and S/4 HANA (MENA Certificate Management)

The note is about assigning table authorization group `FC01` to view `FIMENAV_COMPCERT` as described in the manual instruction. The automatic instruction for `SNOTE` does not change anything.

What about other tables or views of that component?
You can use transaction `STDDAT` (or report `RDDPRCHK` or old report `RDDTDDAT_BCE`) to validate the settings for all tables and views of package `GLO_FIN_FI_GEN`. You will see that more tables and views are not assigned to table authorization group.

Anyway, if you run a sound authorization concept about `S_TABU_NAM` but to not use `S_TABU_DIS` at all, then this note is not important.
→ Go for utilizing `S_TABU_NAM` instead `S_TABU_DIS`

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Note 2859004 - Cross-Site Request Forgery in SAP Cloud Platform Integration for data services

Solved by SAP Cloud Platform, no action required

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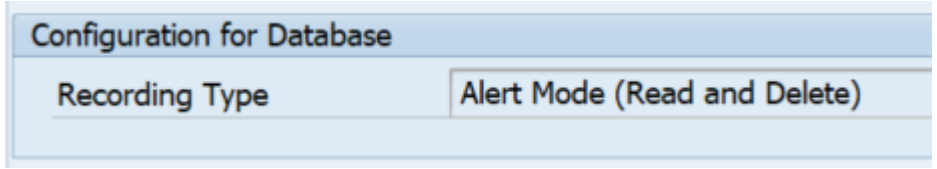
Note 2808169 - SAL | Archiving with BC_SAL / API for alert cockpits

RFC function module `RSAU_API_GET_ALERTS`
Available as of SAP_BASIS 7.50
Favorable call intervals lie between one and 10 minutes (depending on alert requirements).

The general idea is to read and delete log entries within one step.

Prerequisite: recording target "Record in Database“ in Alert Mode and archive connection



Required authorizations:
`S_SAL` with `SAL_ACTVT` = `SHOW_ALERT`

See report `RSAU_ALERT_DEMO`
See FAQ note 2191612 for further information

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Note 2730525 - ANST: Consuming the Note Search Webservice
Note 2818143 - ANST: Implementing SOAP Based Note Search

Enable ANST to use the new SAP Backbone connectivity.

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February 2020

Topics February 2020

Focus Insights: Go for it!

SAP Release and Maintenance Strategy (SAP HANA)

Secure Operations Map
Security Baseline Template 2.0

Note 2887651 - Issues with SameSite cookie handling

Note 2822074 - Missing Authorization check to access BOR object attributes remotely

Note 2880869 - Cross-Site Scripting (XSS) vulnerability in ABAP Online Community Application

Note 2836445 - Unprivileged Access to technical data using SAPOSCOL of SAP Host Agent
Note 2841053 - Denial of Service (DOS) Vulnerability in SAP Host Agent

SAP Support Portal - How to request access to "Display Security Alerts in SAP EarlyWatch Alert Workspace"

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Focus Insights: Go for it!

Focused Solutions for SAP Solution Manager
https://support.sap.com/en/alm/focused-solutions.html

„As of 2020, the usage rights of SAP Solution Manager include Focused Build and Insights – at no additional costs! No restriction of users or usage.”

References:

- **Focused Insight**
  https://support.sap.com/en/alm/focused-solutions/focused-insights.html
- **Installation Guide**
  https://help.sap.com/doc/2a5eebe6285b465eb7fb4a6e66b8ea2b/230/en-US/FINSIGHTS_InstallationGuide.pdf
- **User Guide – Tactical Dashboard**
  https://help.sap.com/doc/8a37845658d5409ca853d8999ecaebba/230/en-US/FINSIGHTS_TAC_Dashboard.pdf

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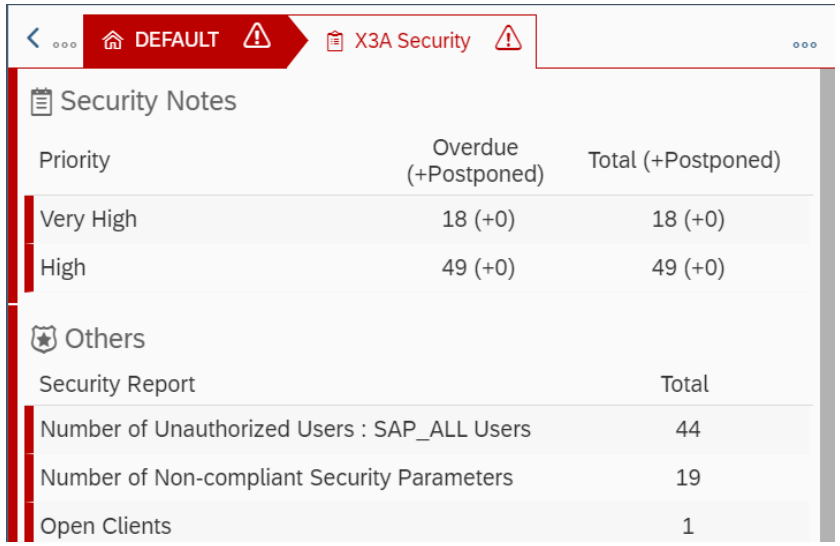
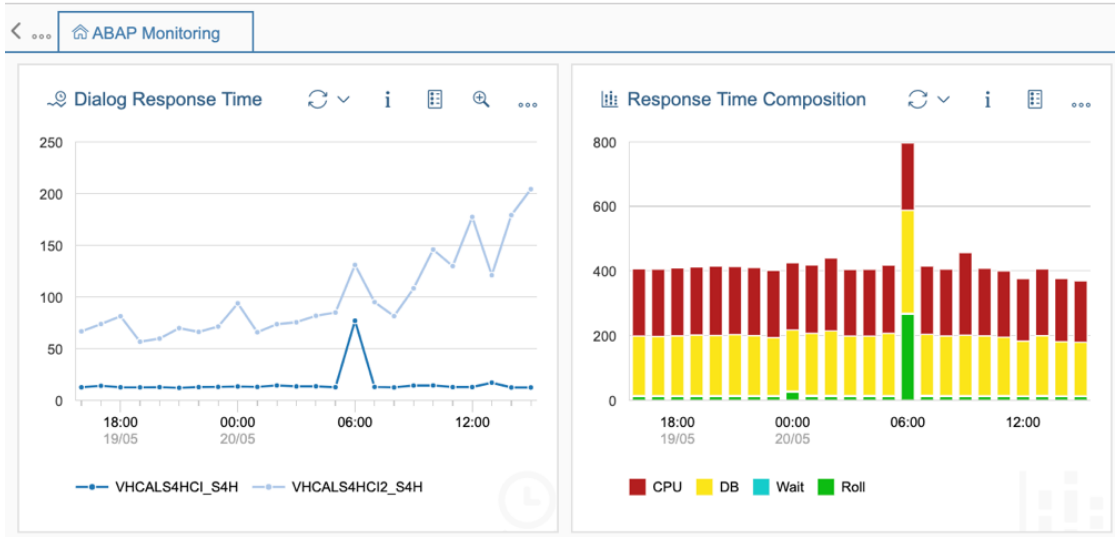
Focus Insights: Go for it!

Focused Insights: Public Online Demo
https://blogs.sap.com/2017/09/18/focused-insights-online-demo/

Examples:

- Operations Control Center
- Tactical Dashboard **(incl. Security Scenario)**





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SAP Release and Maintenance Strategy (SAP HANA)

SAP Release and Maintenance Strategy, February 4, 2020
https://support.sap.com/content/dam/support/en_us/library/ssp/release-upgrade-maintenance/maintenance-strategy/sap-release-and-maintenance-strategy-new.pdf

2.3.10.2 Revision strategy
„SAP plans to provide bug fixes and security patches for every support package stack either until the next but one support package stack is released or for about one year. Afterwards, customers must adopt regular more recent support package stack to receive further fixes."

Q: Is this related to the "24-month-rule" for Security Patches?

- **No, SAP HANA follows an exceptional rule anyway:**
  https://support.sap.com/en/my-support/knowledge-base/security-notes-news.html

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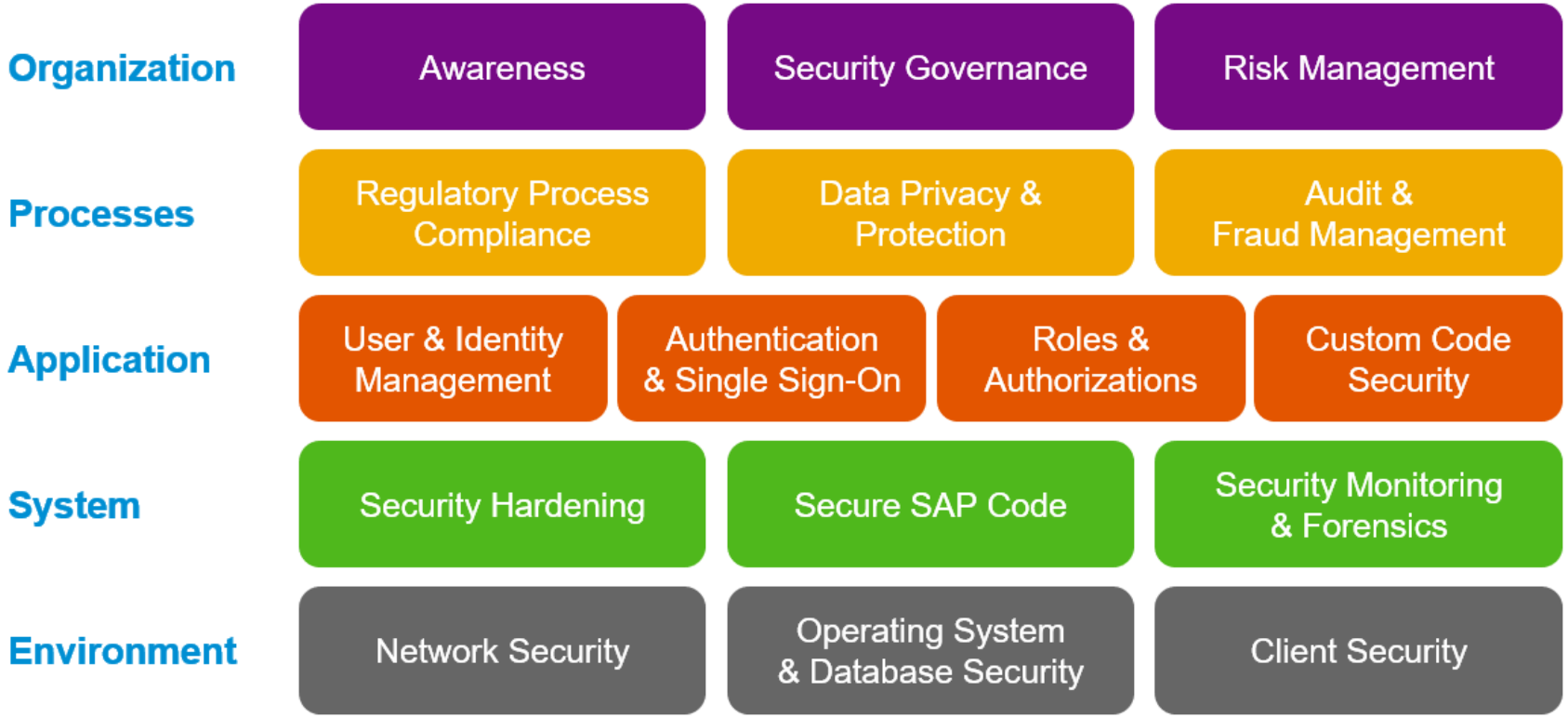
Secure Operations Map

New version on https://support.sap.com/sos

→ Secure Operations Map, v3 from January 2020



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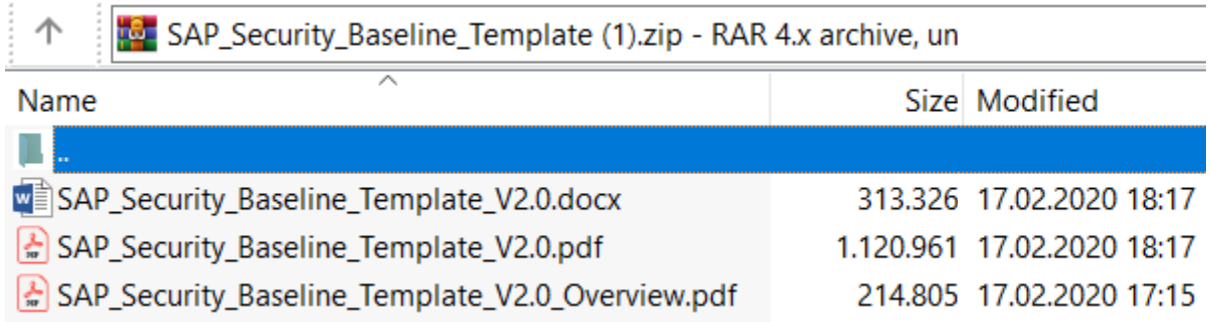
Security Baseline Template 2.0

New version on https://support.sap.com/sos

→ SAP CoE Security Services - Security Baseline Template Version 2.0 (without ConfigVal Package)

Title	Type	Changed
_SAP Security Notes Advisory (for January 2020)	ZIP	2020-02
_Security Notes Webinar	PDF	2020-01
RFC Gateway and Message Server Security	PDF	2019-06
SAP CoE Security Services - Check Configuration & Authorization	PDF	2020-01
SAP CoE Security Services - Overview	PDF	2020-01
SAP CoE Security Services - Secure Operations Map	PDF	2020-01
SAP CoE Security Services - Security Patch Process	PDF	2019-07
SAP CoE Security Services - Security Baseline Template Version 1.9 (including ConfigVal Package version 1.9_CV-5)	ZIP	2018-08
SAP CoE Security Services - Security Baseline Template Version 2.0 (without ConfigVal Package)	ZIP	2020-02

Currently you find the requirements document but not yet the corresponding template package for Configuration Validation



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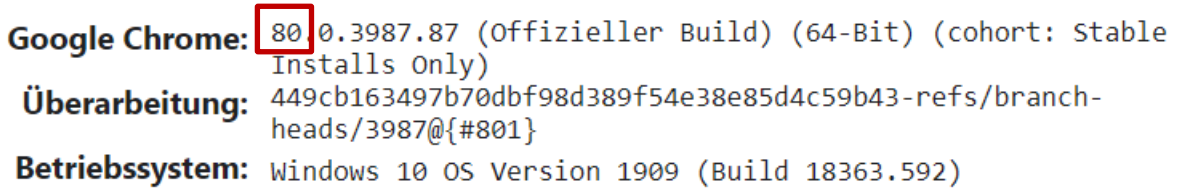
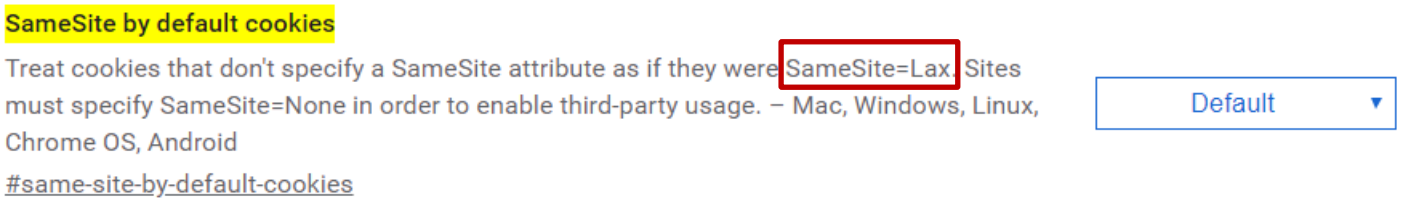
Note 2887651 - Issues with SameSite cookie handling
Chrome default settings

As of February, 2020, Google Chrome version 80 and higher implements the `SameSite=Lax` default.
https://www.chromestatus.com/feature/5088147346030592

chrome://version/



chrome://flags/#same-site-by-default-cookies



https://www.chromium.org/updates/same-site/test-debug

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Note 2887651 - Issues with SameSite cookie handling
Affected scenarios

Affected scenarios:

Currently, the following products based on the SAP Kernel do not set the `SameSite=None` attribute:

- SAP Application Server ABAP
- SAP Application Server Java, incl. SAP Enterprise Portal and SAML Identity Provider based on AS Java
- SAP HANA XS Classic
- SAP HANA XS Advanced

All scenarios that integrate these products with web services from **different registrable domains within a single browser window** are potentially affected.

Examples are scenarios that integrate with **SAP Analytics Cloud**, **Enterprise Portals**, **SAP CoPilot**, **SAP Enable Now Web Assistant** or that use **Logon using a SAML IdP**.

Pure intranet scenarios **within a corporate DNS domain** (e.g. *.acme.corp) **are not affected**.

Solution: Ensure to use HTTPS protocol and implement modification rule set on Web Dispatcher.

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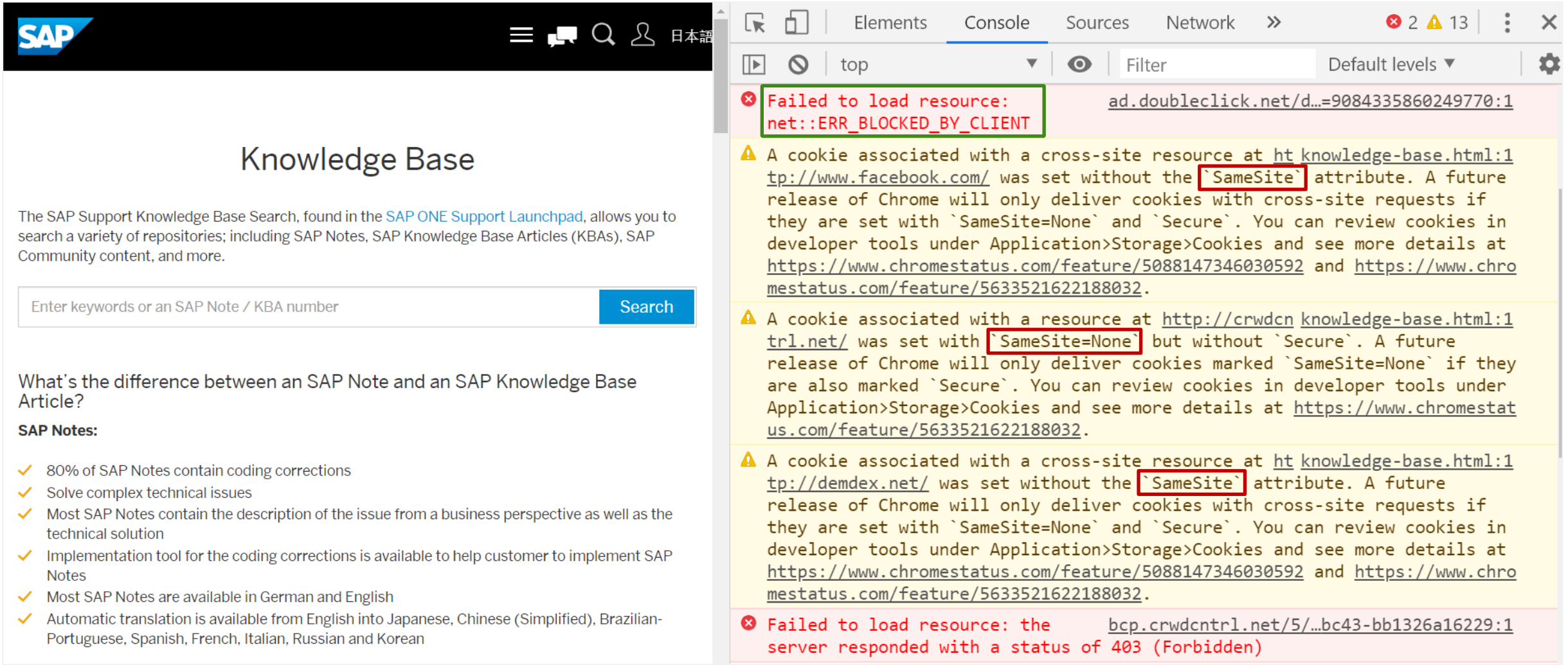
Note 2887651 - Issues with SameSite cookie handling

How to verify potential issues: F12 Show Developer Console



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Note 2822074 - Missing Authorization check for remote access BOR

Summary (as far as I see it):

- **Wait for the Support Package, then activate the SACF scenarios (see note 2845081 for details).**
- **Workflow BOR object attributes should not be accessed remotely. The functions are remote enabled to allow asynchronous execution. However, it might be the case that there exist exceptions: Remote access to BOR object instances is primarily used for UI integration. Partner products may also use this type of integration and use SAP connectors for this.**
- **Mitigation: Ensure that no user has authorizations for `S_RFC` for function group `SWOR` respective function modules `SWO_INVOKE` and `SWO_INVOKE_INTERNAL` of that group. (However, I do not know if some technical users require this authorizations.)**
- **An application which needs this kind of information should use the published APIs of the corresponding BOR object instead.**
- **After the implementation of the note and the activation via SACF framework the objects can't be instantiated anymore remotely (unless the user has authorizations for authorization object `S_BOR_RFC` respective `S_BOR_PRX`).**
- **Do not include Workflow BOR objects for authorization object `S_BOR_RFC` and `S_BOR_PRX` in any role (unless you know about a specific exception which forces you to add these authorizations).**
- **In upcoming releases it might be the case that this become standard (showing application exception `OL-926` "Object does not exist").**

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Note 2822074 - Missing Authorization check to access BOR

Correction Instructions + Manual Modifications

Before implementation via SNOTE:

- **Implement prerequisite note 2844646 (which loads notes 2775698 and 2447731, too). Restart SNOTE**
- **Mandatory: New field REMOTE_AUTH_CHECK_REQUIRED in structure SWOTRTIME**
- **This requires a registration key and you have to ignore the warning that modification of central basis DDIC objects is forbidden.**

Before or after implementation via SNOTE:

- **Mandatory: Create authorization objects S_BOR_RFC and S_BOR_PRX**
- **Mandatory: Create SACF scenario definitions SWO_REMOTE_ACCESS and SWO_PROXY_ACCESS**
- **Recommended: New messages 861, 868, 869, and 870 in message class OL**
- **Optional: Adapt the translations of the messages**

Mandatory activation for the production system:

- **Recommended: Do not add authorizations for authorization objects S_BOR_RFC and S_BOR_PRX into any roles**
- **Mandatory: Activate SACF scenarios SWO_REMOTE_ACCESS and SWO_PROXY_ACCESS**
- **Recommended: Verify successful activation via report SWO_RFC_AUTH_CHECK_STATE**

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Note 2822074 - Missing Authorization check to access BOR

Validity of Correction Instructions + Manual Modifications:

SAP_BASIS

700	SAPKB70029 - SAPKB70037
701	SAPKB70114 - SAPKB70122
702	SAPKB70214 - SAPKB70222
710	SAPKB71017 - SAPKB71024
711	SAPKB71112 - SAPKB71119
730	SAPKB73010 - SAPKB73019 (SP 20 might be incomplete → go for SP 21)
731	SAPKB73108 - SAPKB73125 (SP 26 might be incomplete → go for SP 27)
740	SAPKB74012 - SAPKB74022 (SP 23 might be incomplete → go for SP 24)
750	SAPK-75003INSAPBASIS - SAPK-75016INSAPBASIS (SP 17 might be incomplete → go for SP 18)
751	To SAPK-75109INSAPBASIS
752	To SAPK-75205INSAPBASIS
753	To SAPK-75303INSAPBASIS
754	w/o Support Packages

Solution via Support Packages:

Caution: you still have to activate the SACF scenarios manually!

SAP_BASIS 700	SAPKB70038
SAP_BASIS 701	SAPKB70123
SAP_BASIS 702	SAPKB70223
SAP_BASIS 710	SAPKB71025
SAP_BASIS 711	SAPKB71120
SAP_BASIS 730	SAPKB73021
SAP_BASIS 731	SAPKB73127
SAP_BASIS 740	SAPKB74024
SAP_BASIS 750	SAPK-75018INSAPBASIS
SAP_BASIS 751	SAPK-75110INSAPBASIS
SAP_BASIS 752	SAPK-75206INSAPBASIS
SAP_BASIS 753	SAPK-75304INSAPBASIS
SAP_BASIS 754	SAPK-75402INSAPBASIS

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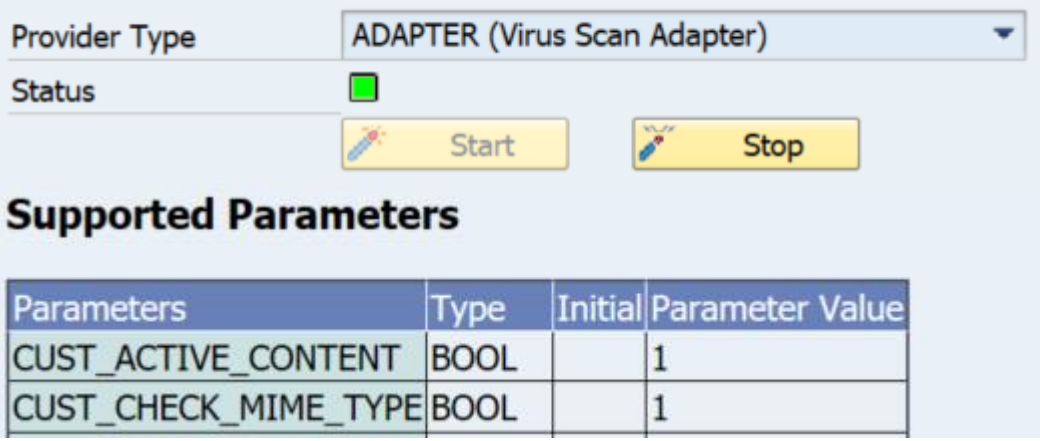
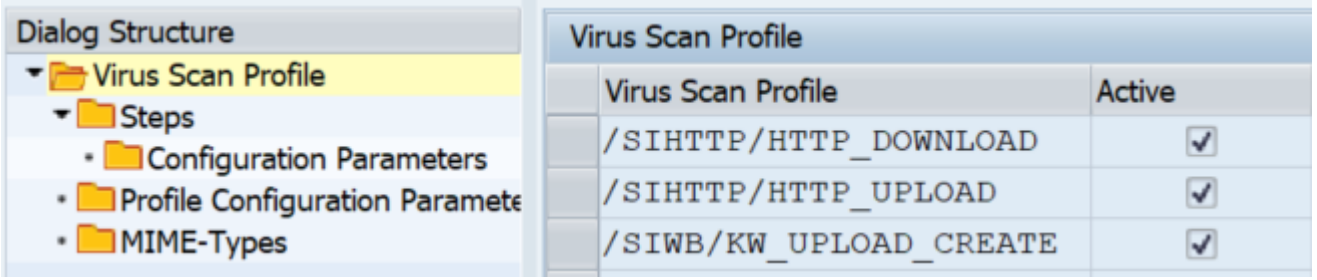
Note 2880869 - Cross-Site Scripting (XSS) vulnerability in ABAP Online Community Application

Multiple corrections partly requiring configuration

- **Escaping was corrected**
- **Input is validated to prevent from external entity (XXE) issue**
- **The mime content is checked using malware scanner**
  but only if you are using the Virus Scan Adapter, transactions `VSCAN` / `VSCANPROFILE` and an external Virus Scan Engine
  Application ABAP Online Community Application uses virus scan profile `/SIHTTP/HTTP_UPLOAD`





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Note 2836445 - Unprivileged Access to technical data using SAPOSCOL

Note 2836445 - Unprivileged Access to technical data using SAPOSCOL

HostAgent profile `/usr/sap/hostctrl/exe/host_profile`
Profile parameter `ipc/shm_permission_1002` = `0777`

For Linux: The solution is turned **on** by default.

For Unix: The solution is turned **off** by default as there might be negative impact to other consumers.

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Note 2841053 - Denial of Service (DOS) Vulnerability in SAP Host Agent

Restrict access to the ports 1128 and 1129 to the datacenter network – but SUM requires it … see next slide for potential issues

If you need to expose the SAP Host Agent to untrusted networks, you can disable default username/password-based authentication and only allow certificate-based authentication.

HostAgent profile /`usr/sap/hostctrl/exe/host_profile`
respective `%ProgramFiles%\SAP\hostctrl\exe\host_profile`

Profile parameter `saphostagent/authentication_method` = `disabled`

SSL Configuration for the SAP Host Agent
https://help.sap.com/viewer/6e1636d91ccc458c987094ee1fb864ae/HAG_CURRENT_VERSION/en-US/6aac42c2e742413da050eaecd57f785d.html

Blog: How to configure X.509 client certificate authentication for SAP host agents in LVM

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Note 2841053 - Denial of Service (DOS) Vulnerability in SAP Host Agent

The Software Update Manager (SUM) uses ports 1128 (http) respective 1129 (https), too:

Note 2284028 - SUM SL Common UI : Troubleshooting problems with the new SUM UI
Note 1826767 - 'Could not check credentials...Connection refused' when upgrading HANA using SUM

Therefore it might me necessary to open these ports during maintenance.

Other notes:

Note 2669791 / 2689366 - SAP host agent connectivity with certificate based authentication

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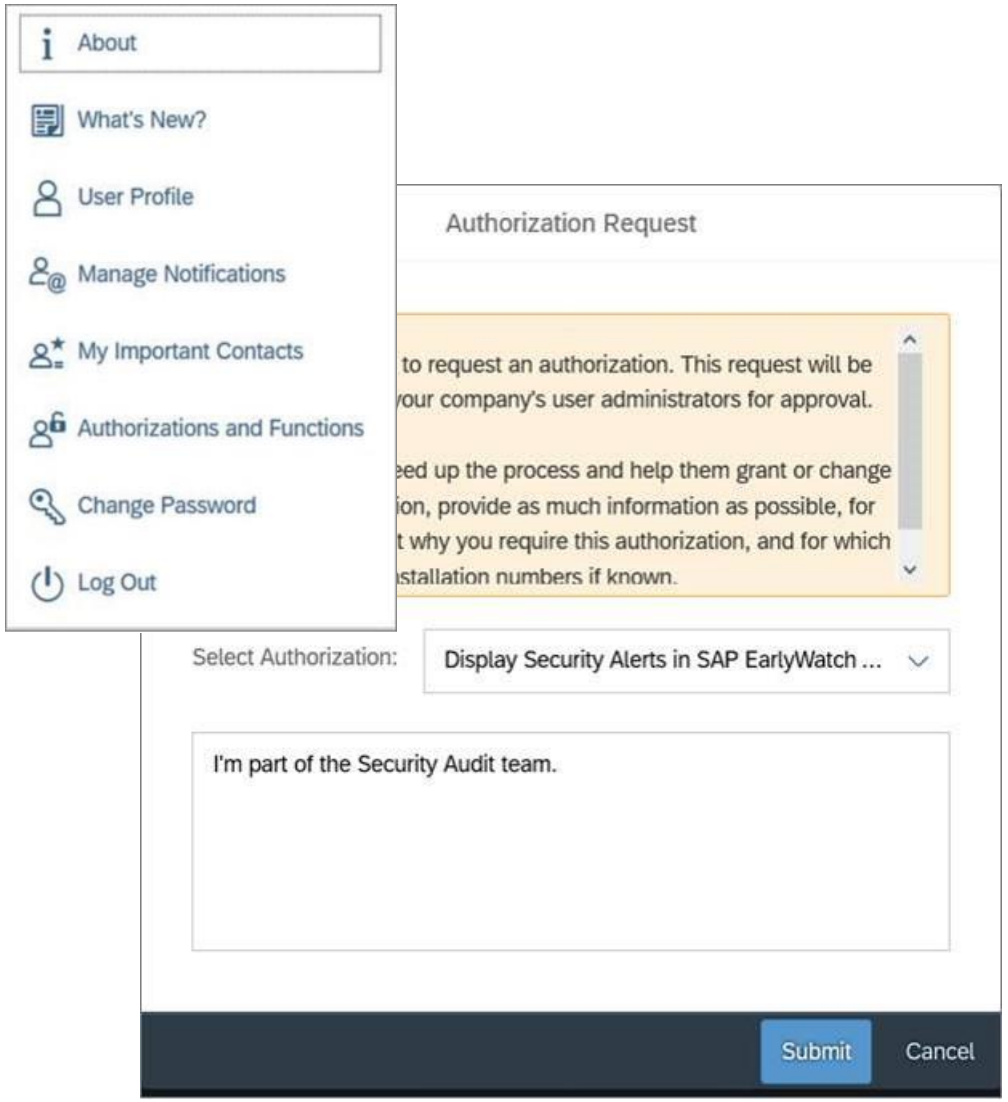
SAP Support Portal - How to request access to “Display Security Alerts in SAP EarlyWatch Alert Workspace”

See
SAP Support Portal Release Notes - February 2020
S-users who lack a particular authorization can now request it through a comfortable self-service. Requests can be made from within the tile catalog as well as from the list of all your authorizations (e.g. click on you user and choose menu item 'Authorizations and Functions').

Then call “Request Authorization”, scroll down and request **“Display Security Alerts in SAP EarlyWatch Alert Workspace”**.

Once submitted, a workflow is started:

1. The requestor can find this request – and previous ones – under “My Authorizations and Functions” in the user profile area.
2. For all user administrators, a new action item will be created in the new “Action Required” section of the User Management application.
3. They will be notified about this task through launchpad alerts and notification e-mails. These alerts can be customized in the launchpad’s Notification Center.
4. The requestor is informed about the change through launchpad and e-mail notifications.



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January 2020

Topics January 2020

Obsolete Workarounds for System Recommendations

Note 2845401 - Missing Authorization check in Realtech RTCISM 100

Note 2871877 - Multiple security vulnerabilities in SAP EAM, add-on for MRO 4.0 by HCL

Note 2822074 - Missing Authorization check in SAP NetWeaver (ABAP Server)

Note 2863397 - Missing Authorization Check in Automated Note Search Tool (ANST)
Short introduction for ANST

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Obsolete Workarounds for System Recommendations

Note 2686105 - [OBSOLETE] HTTP error 0 when sending data to SAP via destination SAP-SUPPORT_PORTAL
Note 2833610 - [OBSOLETE] Download large volume of note data from SAP support backbone via web service

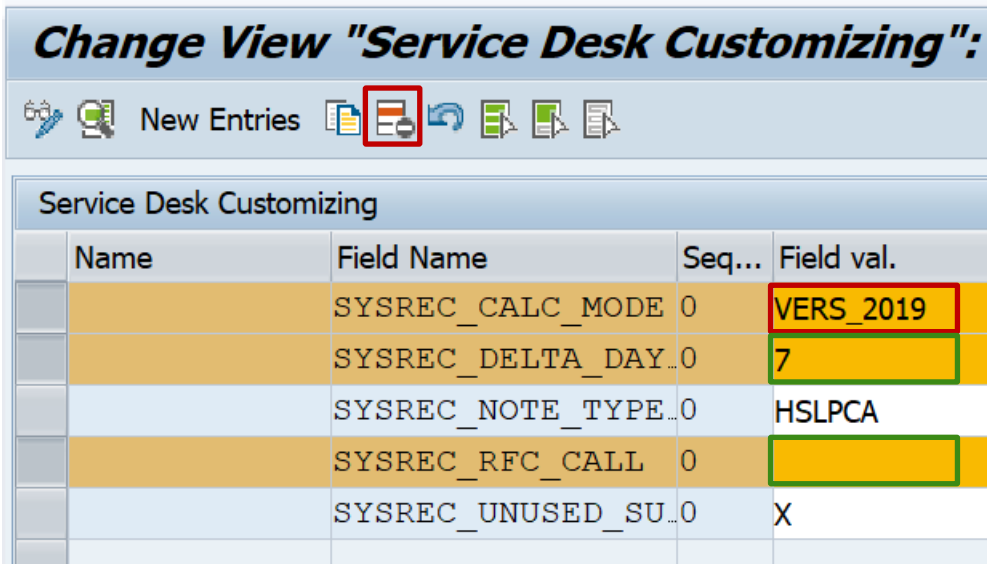
If you have used these notes, you should now remove workaround settings via transaction `SM30_DNOC_USERCFG_SR`
(or in transaction `DNO_CUST04` / table `DNOC_USERCFG`)

Remove following entries/values:

`SYSREC_CALC_MODE` = `VERS_2019`

`SYSREC_DELTA_DAYS` = `1` (ok: `7`)

`SYSREC_RFC_CALL` = `X`



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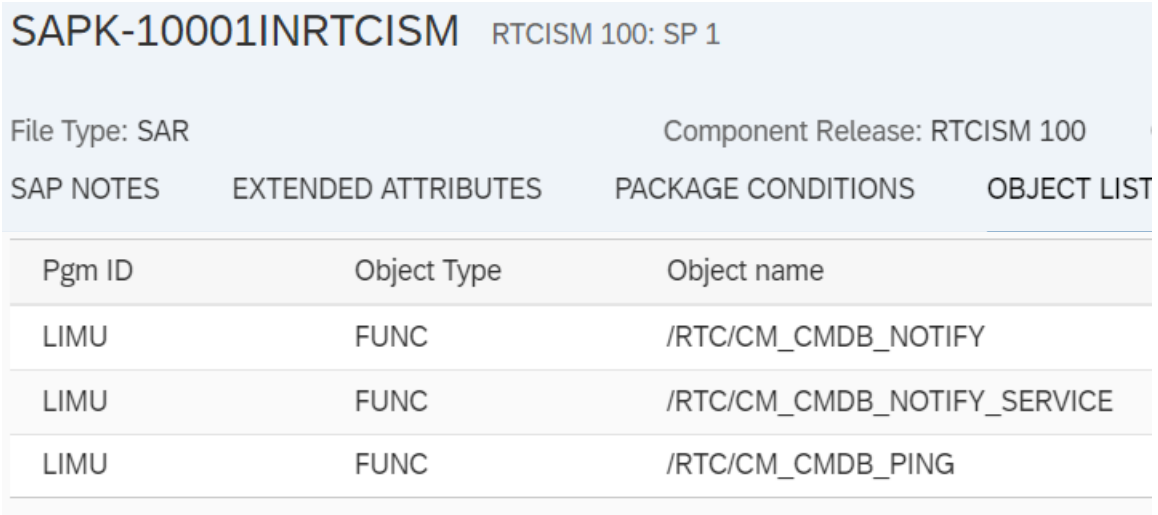
Note 2845401 - Missing Authorization check in Realtech RTCISM

The note refers to an Add-On of an SAP partner
https://www.realtech.com/

The note points to normal software packages for ABAP (but does not contain automatic correction instructions for SNOTE):
https://launchpad.support.sap.com/#/softwarecenter/search/RTCISM
https://launchpad.support.sap.com/#/softwarecenter/search/SAPK-10001INRTCISM

Software Component: `RTCISM`



SAPK-10001INRTCISM RTCISM 100: SP 1

File Type: SAR Component Release: RTCISM 100

SAP NOTES | EXTENDED ATTRIBUTES | PACKAGE CONDITIONS | OBJECT LIST

Pgm ID	Object Type	Object name
LIMU	FUNC	/RTC/CM_CMDB_NOTIFY
LIMU	FUNC	/RTC/CM_CMDB_NOTIFY_SERVICE
LIMU	FUNC	/RTC/CM_CMDB_PING

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Note 2871877 - Multiple security vulnerabilities in SAP EAM, add-on for MRO 4.0 by HCL for SAP S/4HANA 1809

The note refers to an Add-On of an SAP partner
https://www.hcltech.com/sap/sap-hcl-partnership/imro

The note contains transport files.
Import this transport only if you have installed this Add-On in version 4.0:

Software Component: `AXONLABS`
Transactions: `/AXONX/MBX`; `/AXONX/EBX`; `/AXONX/IBX`; `/AXONX/EWI`

This security note replaces KBA 2869792 “High priority security issue in the Add-On Product” which had contained the same transport files.

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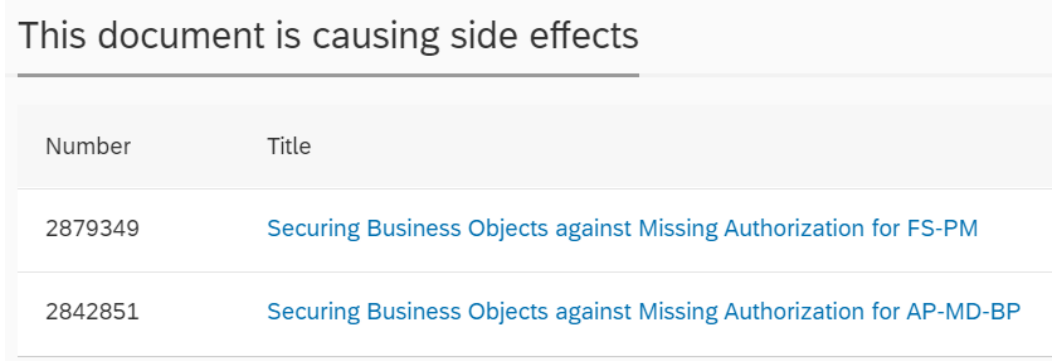
Note 2822074 - Missing Authorization check in SAP NetWeaver (ABAP Server)

- **Manual DDIC and repository object changes required!**

- **You can ignore the side-effect solving notes, which are not available anyway:**


This document is causing side effects

Number	Title
2879349	Securing Business Objects against Missing Authorization for FS-PM
2842851	Securing Business Objects against Missing Authorization for AP-MD-BP

- **A related note describes the SACF Scenarios:**
  Note 2845081 - Switchable authorization checks SWO_REMOTE_ACCESS and SUCD SWO_PROXY_ACCESS

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Note 2863397 - Missing Authorization Check in Automated Note Search Tool (ANST)

An application that makes it easier to find SAP Correction Notes

SAP Automated Note Search Tool: I'm loving it!

The power of tools - How ANST can help you to solve billing problems yourself!

KBA 1818192 - FAQ: Automated Note Search Tool

`ANST` is available as of

SAP Basis	700	SAPKB70028
	701	SAPKB70113
	702	SAPKB70213
	731	SAPKB73106
	740	all SP

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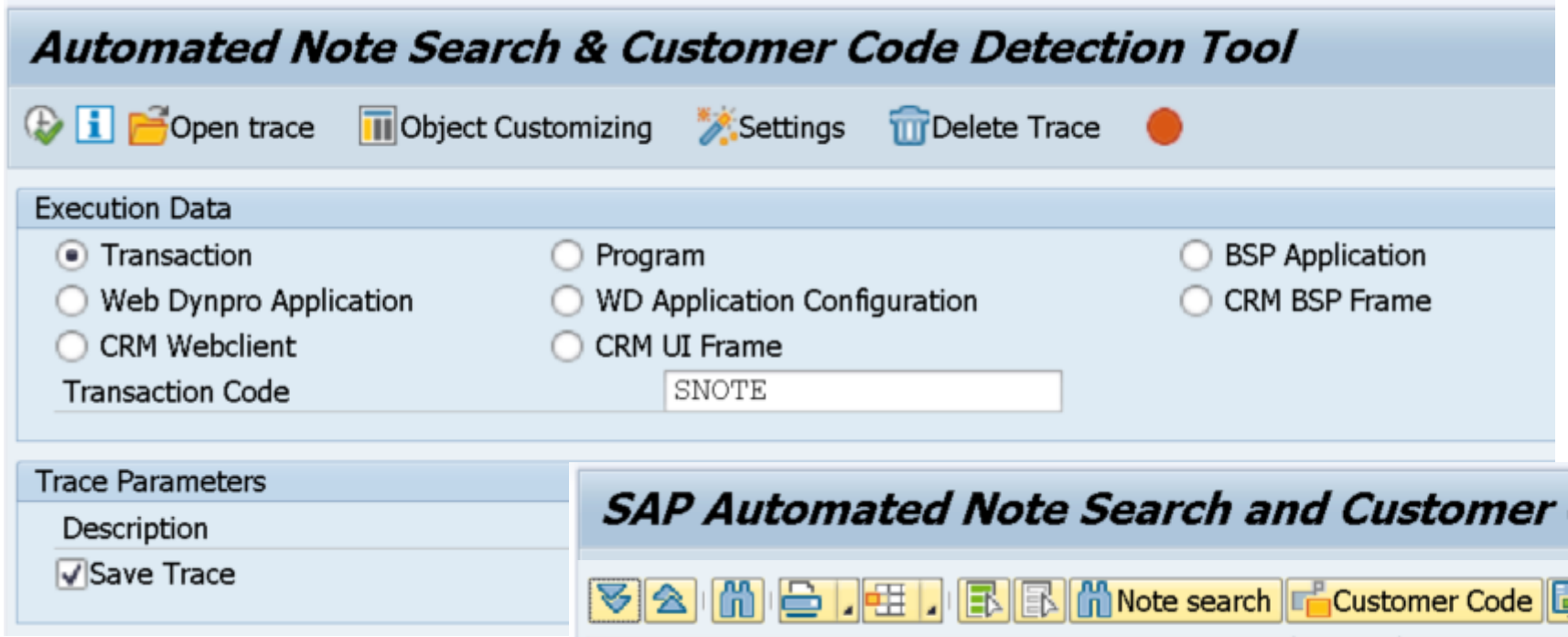
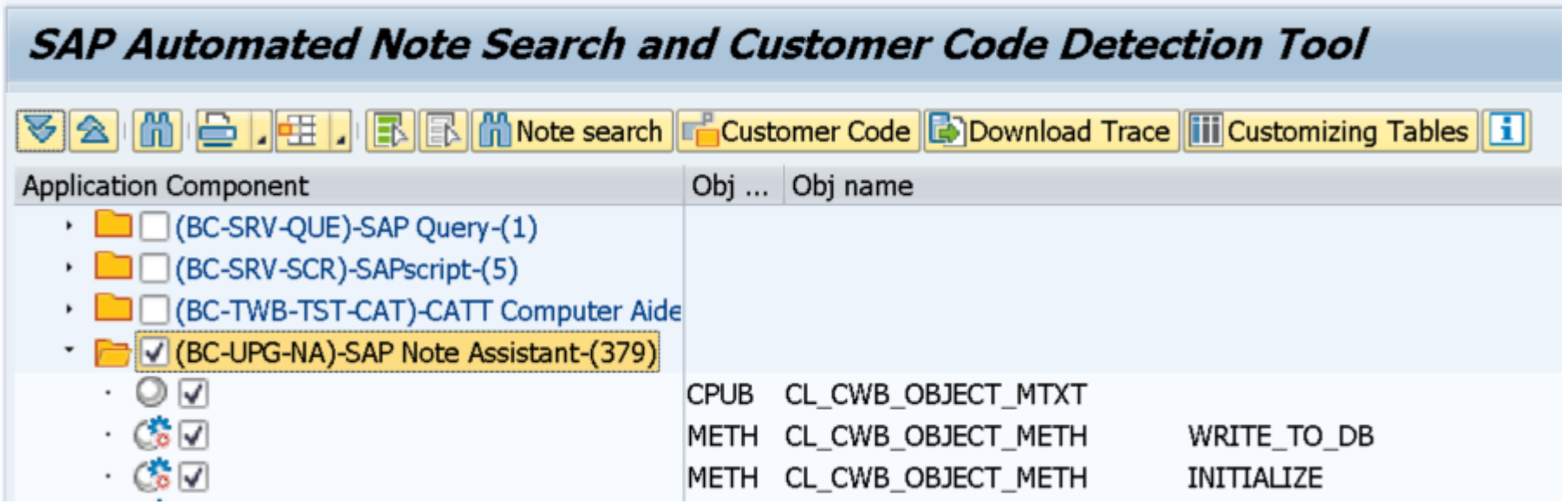
Automated Note Search & Customer Code Detection Tool (ANST)



Transaction ANST
= Report ANST_SEARCH_TOOL

Example: search notes for transaction SNOTE



Trace first then choose relevant application components

You always get some basic entries from tracing within ANST itself. Ignore these parts.

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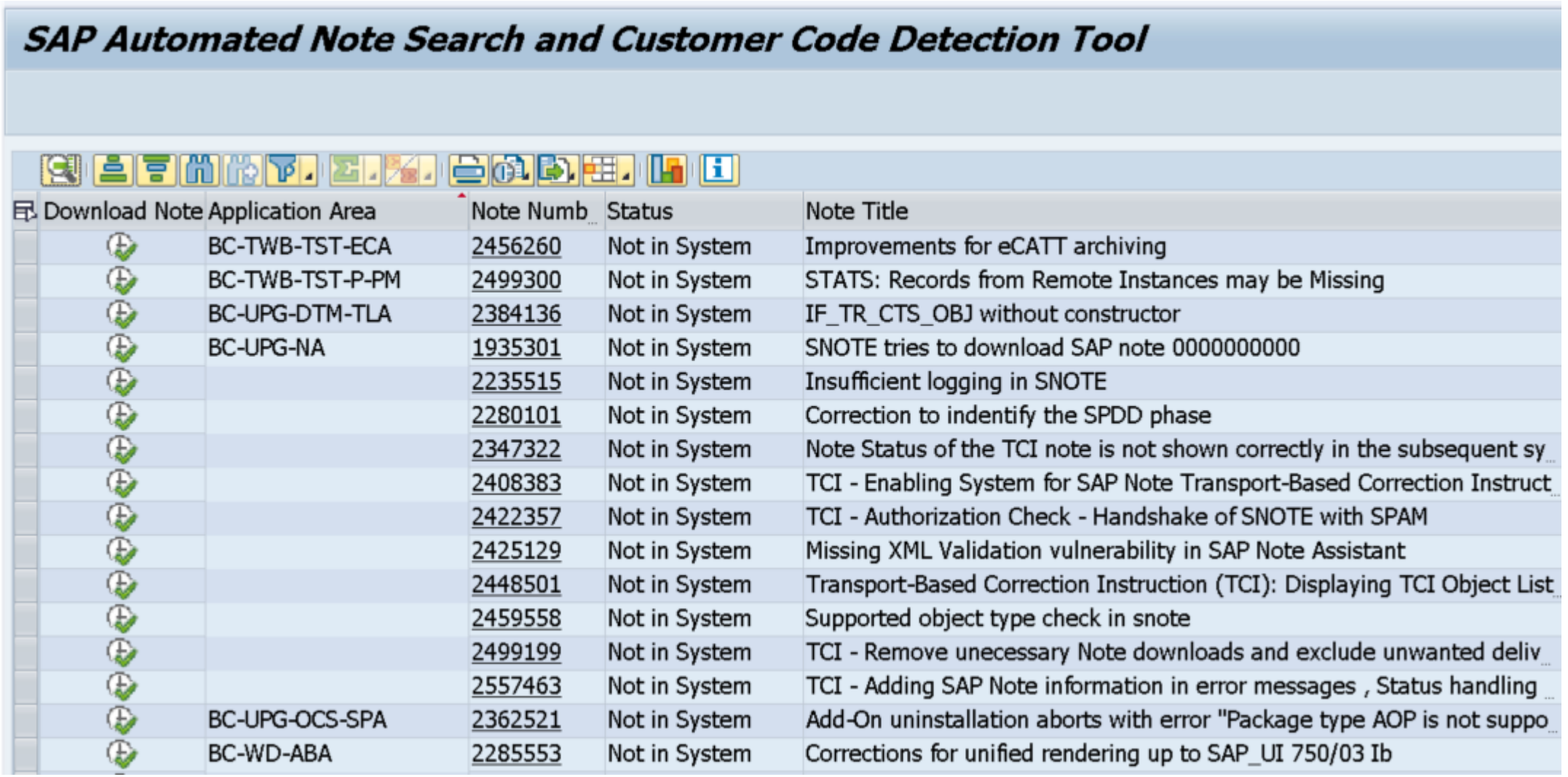
Automated Note Search & Customer Code Detection Tool (ANST)

Result



SAP Automated Note Search and Customer Code Detection Tool

Download Note	Application Area	Note Numb	Status	Note Title
	BC-TWB-TST-ECA	2456260	Not in System	Improvements for eCATT archiving
	BC-TWB-TST-P-PM	2499300	Not in System	STATS: Records from Remote Instances may be Missing
	BC-UPG-DTM-TLA	2384136	Not in System	IF_TR_CTS_OBJ without constructor
	BC-UPG-NA	1935301	Not in System	SNOTE tries to download SAP note 0000000000
		2235515	Not in System	Insufficient logging in SNOTE
		2280101	Not in System	Correction to indentify the SPDD phase
		2347322	Not in System	Note Status of the TCI note is not shown correctly in the subsequent sy
		2408383	Not in System	TCI - Enabling System for SAP Note Transport-Based Correction Instruct
		2422357	Not in System	TCI - Authorization Check - Handshake of SNOTE with SPAM
		2425129	Not in System	Missing XML Validation vulnerability in SAP Note Assistant
		2448501	Not in System	Transport-Based Correction Instruction (TCI): Displaying TCI Object List
		2459558	Not in System	Supported object type check in snote
		2499199	Not in System	TCI - Remove unecessary Note downloads and exclude unwanted deliv
		2557463	Not in System	TCI - Adding SAP Note information in error messages , Status handling
	BC-UPG-OCS-SPA	2362521	Not in System	Add-On uninstallation aborts with error "Package type AOP is not suppo
	BC-WD-ABA	2285553	Not in System	Corrections for unified rendering up to SAP_UI 750/03 Ib

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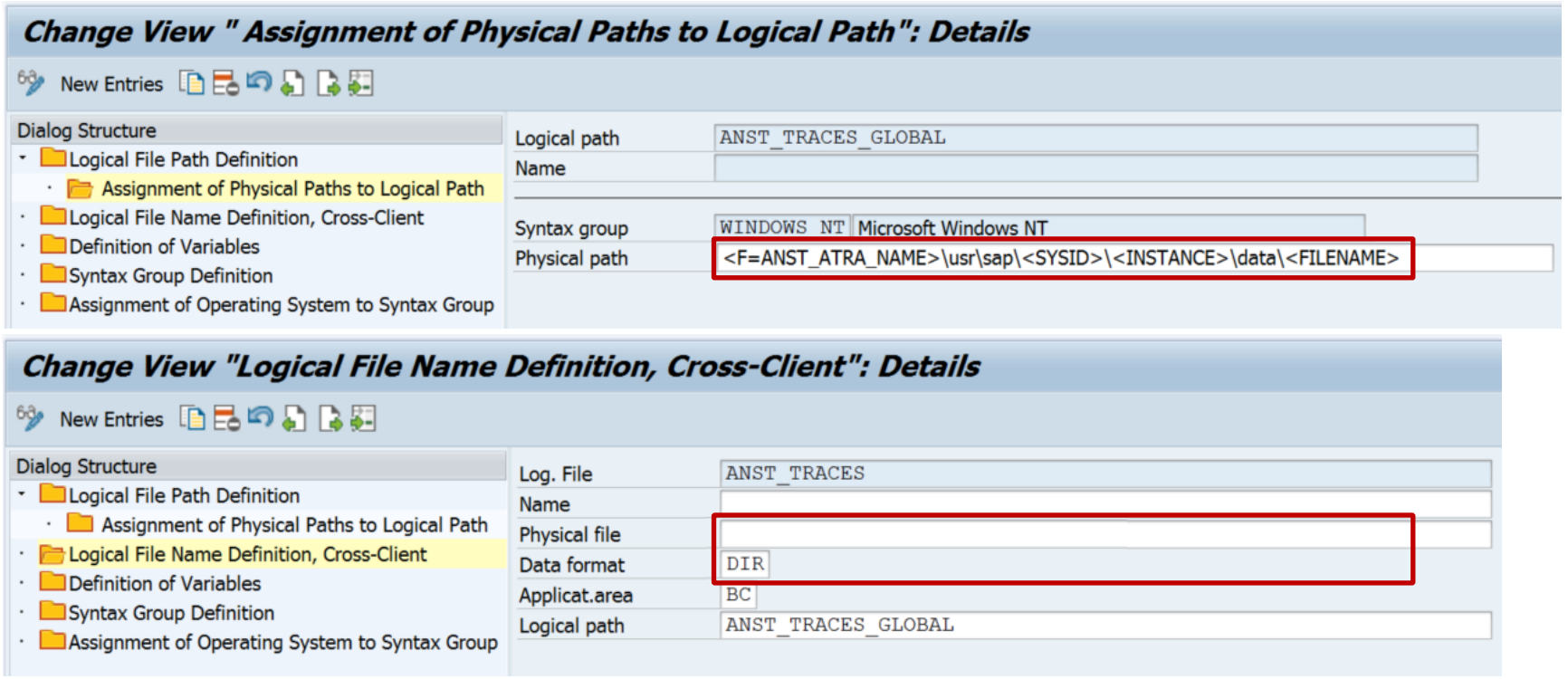
Automated Note Search & Customer Code Detection Tool (ANST)

Preparation for **Dynamic Tracing** which you need to go for RFC scenarios or Fiori applications:

Note 2286869 - ANST: Trace On/Off error "Dynamic Start and Stop cancelled by user“
You have to implement this note if required and you need the execute the manual activity in any case.

Transaction FILE:

Ensure to have the correct values for logical path ANST_TRACES_GLOBAL and logical file ANST_TRACES



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Automated Note Search & Customer Code Detection Tool (ANST)

Example: Dynamic tracing for System Recommendations Object List – UPL/SCMON integration

1. Ensure to use the same application server for Fiori and ANST!
2. Navigate in the Fiori App just before the screen which you want to trace
3. Activate tracing in ANST
4. Continue the Fiori App
5. Stop tracing in ANST
6. Choose Application Areas to collect objects in scope which might match
   (The selected Application Areas are used to collect object name but not as a filter for notes)
7. Request notes list, sort or filter by Application Area and identify relevant notes

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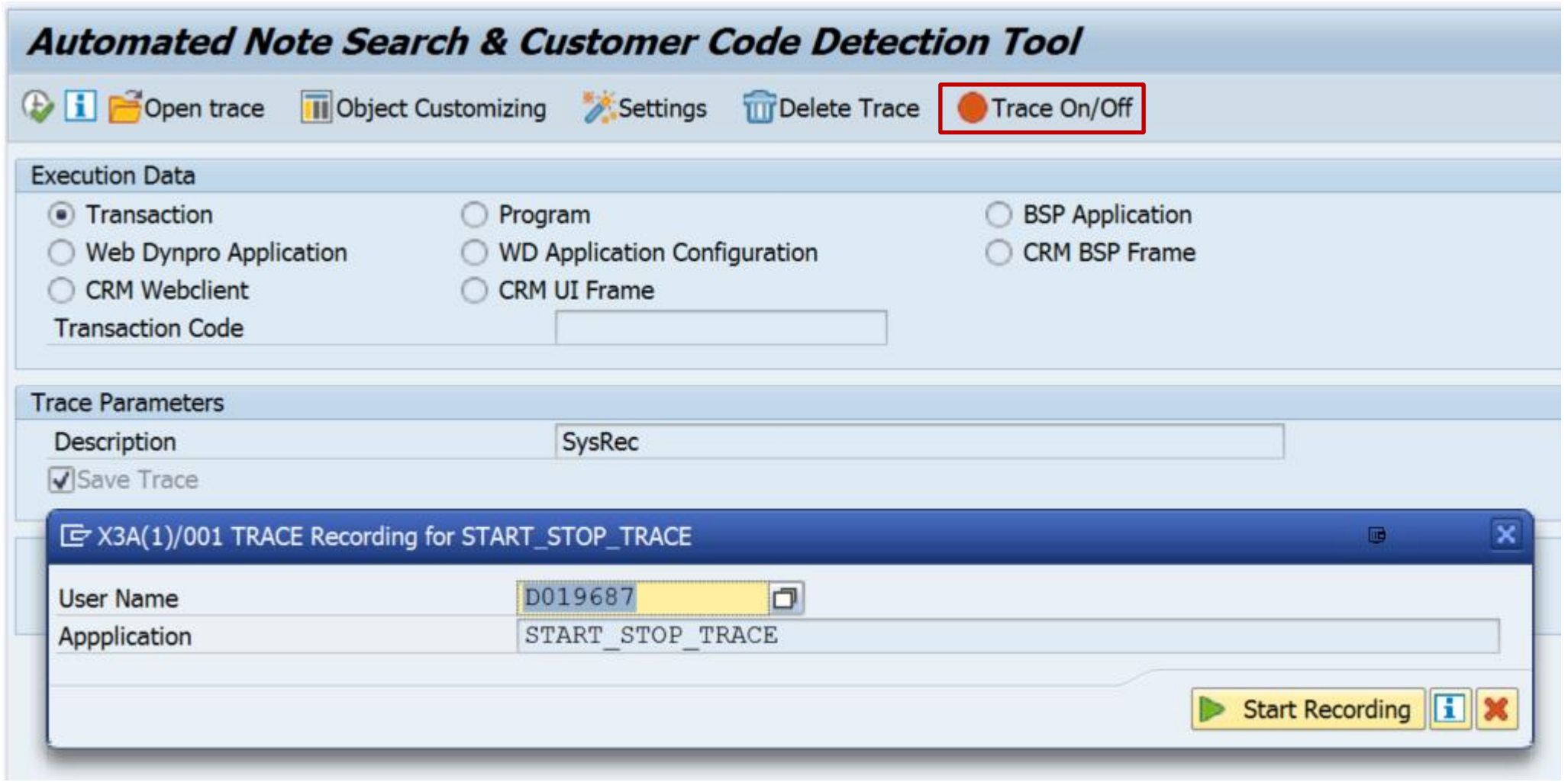
Automated Note Search & Customer Code Detection Tool (ANST)



Activate Trace

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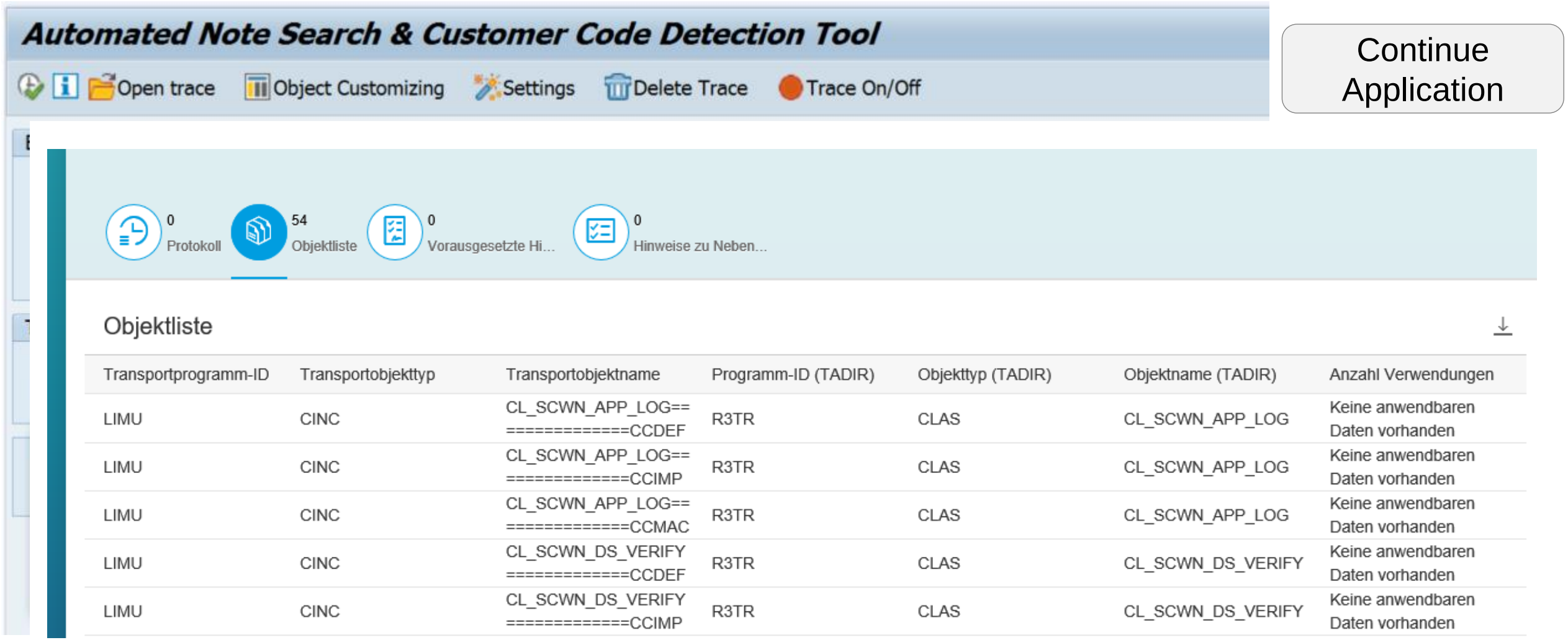
Automated Note Search & Customer Code Detection Tool (ANST)



Transportprogramm-ID	Transportobjekttyp	Transportobjektname	Programm-ID (TADIR)	Objekttyp (TADIR)	Objektname (TADIR)	Anzahl Verwendungen
LIMU	CINC	CL_SCWN_APP_LOG==========CCDEF	R3TR	CLAS	CL_SCWN_APP_LOG	Keine anwendbaren Daten vorhanden
LIMU	CINC	CL_SCWN_APP_LOG==========CCIMP	R3TR	CLAS	CL_SCWN_APP_LOG	Keine anwendbaren Daten vorhanden
LIMU	CINC	CL_SCWN_APP_LOG==========CCMAC	R3TR	CLAS	CL_SCWN_APP_LOG	Keine anwendbaren Daten vorhanden
LIMU	CINC	CL_SCWN_DS_VERIFY==========CCDEF	R3TR	CLAS	CL_SCWN_DS_VERIFY	Keine anwendbaren Daten vorhanden
LIMU	CINC	CL_SCWN_DS_VERIFY==========CCIMP	R3TR	CLAS	CL_SCWN_DS_VERIFY	Keine anwendbaren Daten vorhanden

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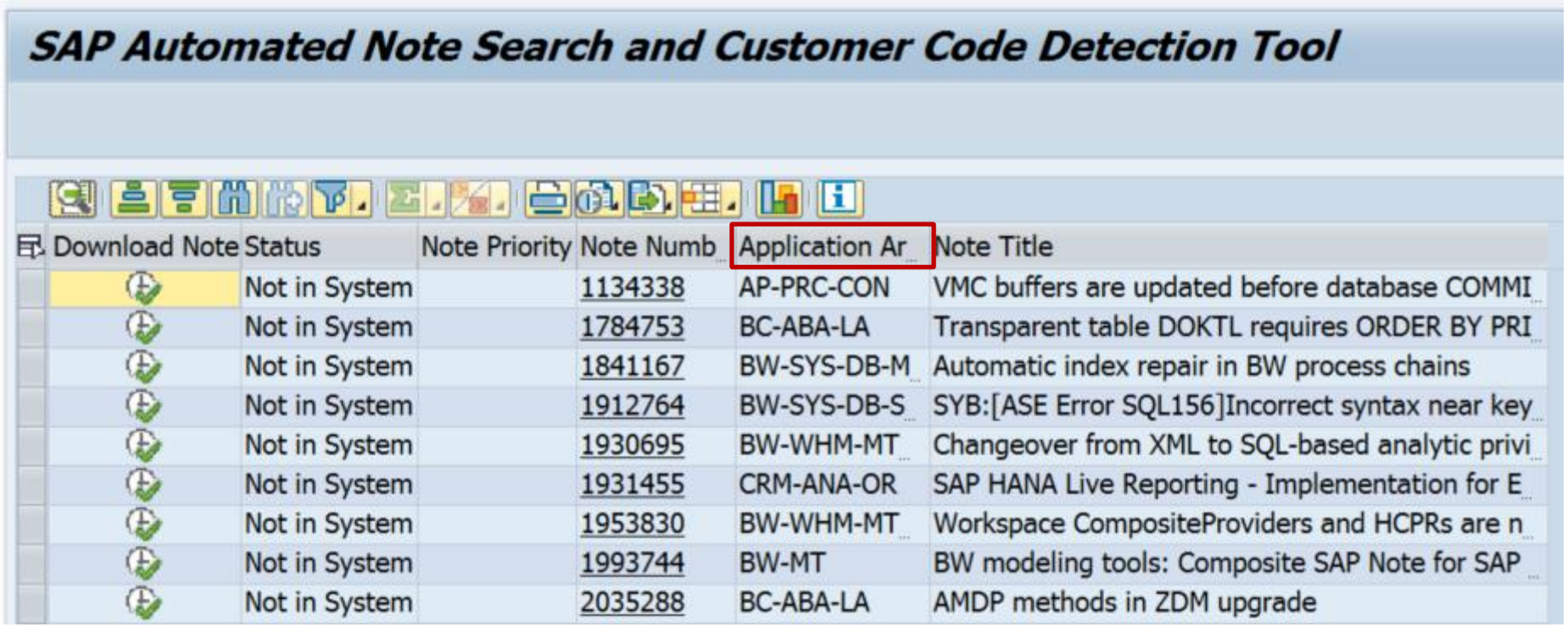
Automated Note Search & Customer Code Detection Tool (ANST)



SAP Automated Note Search and Customer Code Detection Tool

Download Note	Status	Note Priority	Note Numb	Application Ar	Note Title
	Not in System		1134338	AP-PRC-CON	VMC buffers are updated before database COMMI
	Not in System		1784753	BC-ABA-LA	Transparent table DOKTL requires ORDER BY PRI
	Not in System		1841167	BW-SYS-DB-M	Automatic index repair in BW process chains
	Not in System		1912764	BW-SYS-DB-S	SYB:[ASE Error SQL156]Incorrect syntax near key
	Not in System		1930695	BW-WHM-MT	Changeover from XML to SQL-based analytic privi
	Not in System		1931455	CRM-ANA-OR	SAP HANA Live Reporting - Implementation for E
	Not in System		1953830	BW-WHM-MT	Workspace CompositeProviders and HCPRs are n
	Not in System		1993744	BW-MT	BW modeling tools: Composite SAP Note for SAP
	Not in System		2035288	BC-ABA-LA	AMDP methods in ZDM upgrade

Filter Results

name (TADIR)	Anzahl Verwendungen
CWN_APP_LOG	Keine anwendbaren Daten vorhanden
CWN_APP_LOG	Keine anwendbaren Daten vorhanden

LIMU	CINC	CL_SCWN_APP_LOG==========CCMAC	R3TR	CLAS	CL_SCWN_APP_LOG	Keine anwendbaren Daten vorhanden
LIMU	CINC	CL_SCWN_DS_VERIFY==========CCDEF	R3TR	CLAS	CL_SCWN_DS_VERIFY	Keine anwendbaren Daten vorhanden
LIMU	CINC	CL_SCWN_DS_VERIFY==========CCIMP	R3TR	CLAS	CL_SCWN_DS_VERIFY	Keine anwendbaren Daten vorhanden

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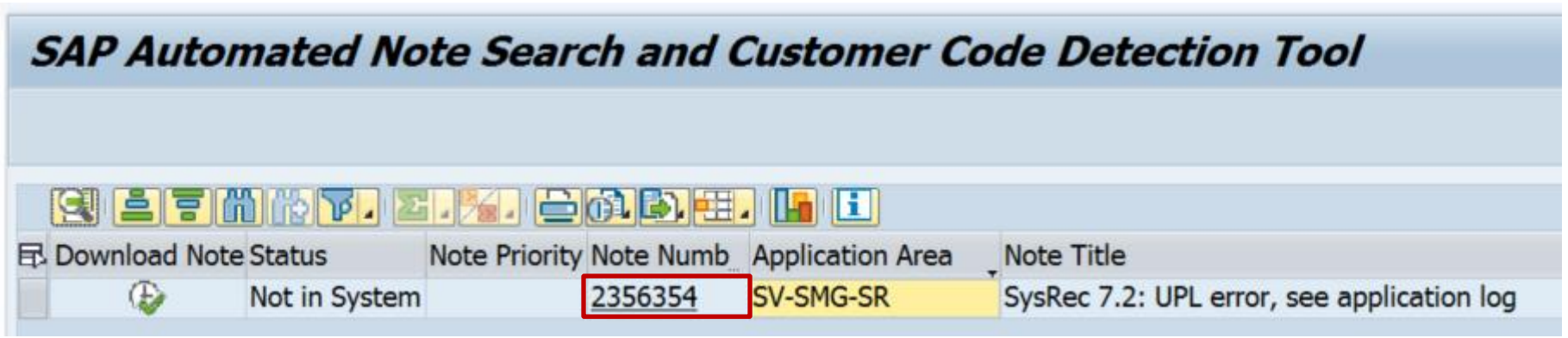
Automated Note Search & Customer Code Detection Tool (ANST)



Identify specific Notes

Objektliste

Transportprogramm-ID	Transportobjekttyp	Transportobjektname	Programm-ID (TADIR)	Objekttyp (TADIR)	Objektname (TADIR)	Anzahl Verwendungen
LIMU	CINC	CL_SCWN_APP_LOG==========CCDEF	R3TR	CLAS	CL_SCWN_APP_LOG	Keine anwendbaren Daten vorhanden
LIMU	CINC	CL_SCWN_APP_LOG==========CCIMP	R3TR	CLAS	CL_SCWN_APP_LOG	Keine anwendbaren Daten vorhanden
LIMU	CINC	CL_SCWN_APP_LOG==========CCMAC	R3TR	CLAS	CL_SCWN_APP_LOG	Keine anwendbaren Daten vorhanden
LIMU	CINC	CL_SCWN_DS_VERIFY==========CCDEF	R3TR	CLAS	CL_SCWN_DS_VERIFY	Keine anwendbaren Daten vorhanden
LIMU	CINC	CL_SCWN_DS_VERIFY==========CCIMP	R3TR	CLAS	CL_SCWN_DS_VERIFY	Keine anwendbaren Daten vorhanden

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December 2019

Topics December 2019

Customer Connection Program - SAP Identity Management 8.0
Continuous Influence Session - SAP Cloud Identity Access Governance

F4 Authorization check in Value Help

WINTER IS C0MING - How to keep Connectivity to Support Backbone
Note 2865869 - Technical Communication User Required to Connect to SAP

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Customer Connection Program
SAP Identity Management 8.0

https://blogs.sap.com/2019/12/09/customer-connection-program-for-sap-identity-management-8.0

Customers can submit improvement requests for SAP products in mainstream maintenance. The SAP team will consider requests with a minimum of 10 supporting customers (by votes).

https://influence.sap.com/sap/ino/#/campaign/2085

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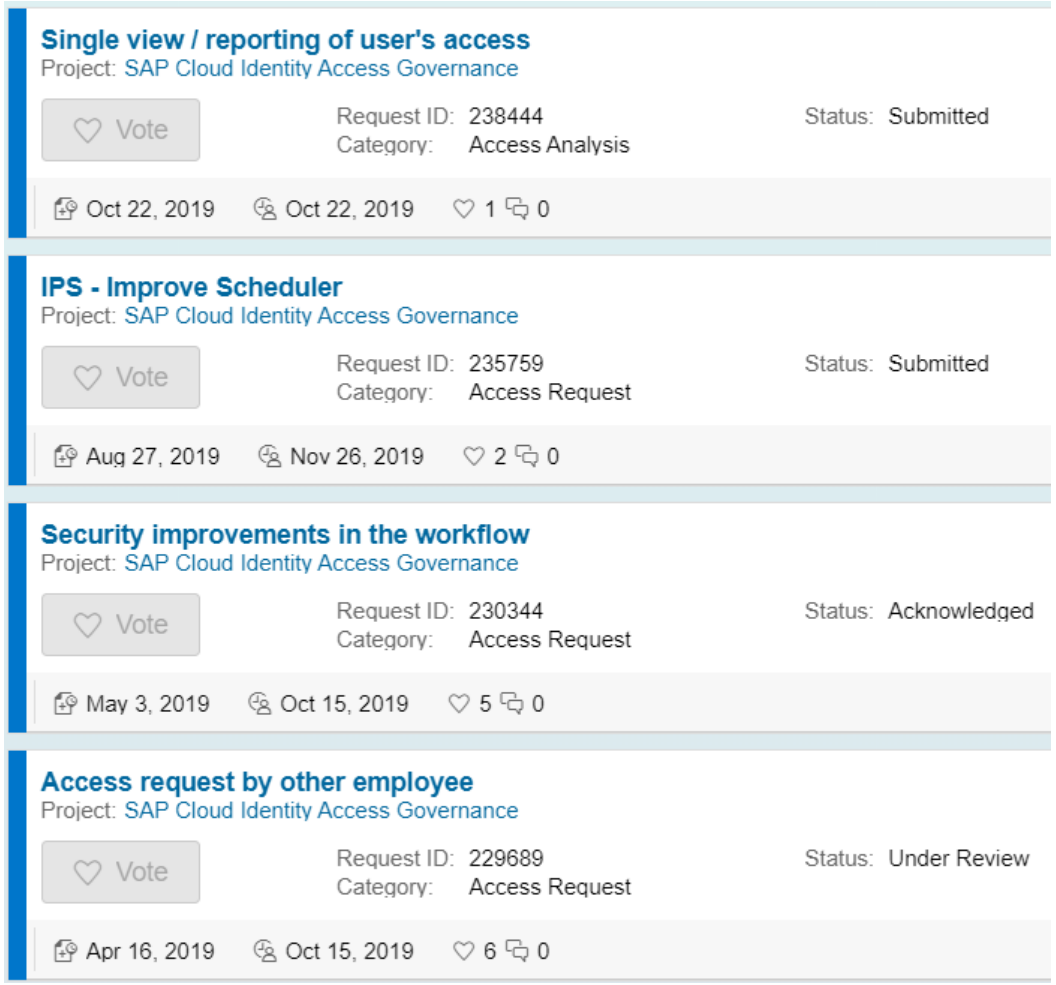
Continuous Influence Session
SAP Cloud Identity Access Governance

https://influence.sap.com/sap/ino/#/campaign/1739



Provide a single view (tile and report) of a user's access assignments, including risks associated with the access.

Modify the IPS job scheduler so that it gives more options than just "Run every XX Minutes“ and add an option to schedule IPS ReSync jobs

The approval workflow consists of three stages: manager, profile owner and security, and we are expecting that the security stage would only happen if there exist a risk.

Allow employees to open an access request for another user. The main idea is to have a option to centralize access requests and decrease approval steps.

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F4 Authorization check in Value Help

Example: Transaction MIRO

Authorization Trace: Transaction STAUTHTRACE

System Trace for Authorization Checks

User Buffer | CDS Access Control

Date	Date/Time	User	Type	Applicatio	Result of Authorization Check	Object	Field 1	Value 1	Field 2	Value 2
06.12.2019	15:52:58:597	D019687	Transaction	MIRO	Authorization check successful	S_TCODE	TCD	MIRO		
06.12.2019	15:52:58:597	D019687	Transaction	MIRO	Authorization check successful	M_RECH_BUK	BUKRS		ACTVT	01
06.12.2019	15:52:58:660	D019687	Transaction	MIRO	Authorization check successful	M_RECH_BUK	BUKRS	0001	ACTVT	01
06.12.2019	15:52:58:661	D019687	Transaction	MIRO	Authorization check successful	F_BKPF_BUK	BUKRS	0001	ACTVT	01
06.12.2019	15:52:58:663	D019687	Transaction	MIRO	Authorization check successful	M_RECH_BUK	BUKRS	0001	ACTVT	01
06.12.2019	15:52:58:695	D019687	Transaction	MIRO	Authorization check successful	M_RECH_AKZ	ACTVT	02		
06.12.2019	15:53:30:539	D019687	Transaction	MIRO	Authorization check successful	F_LFA1_GEN	ACTVT	F4		
06.12.2019	15:53:30:543	D019687	Transaction	MIRO	Authorization check successful	F_LFA1_GRP	KTOKK	0001	ACTVT	F4
06.12.2019	15:53:30:544	D019687	Transaction	MIRO	Authorization check successful	F_LFA1_GRP	KTOKK	KRED	ACTVT	F4
06.12.2019	15:53:30:545	D019687	Transaction	MIRO	Authorization check successful	F_LFA1_GRP	KTOKK	LIEF	ACTVT	F4

How to grant authorizations for new F4 check?

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F4 Authorization check in Value Help

Note 2682142 - Introduction of activity value 'Value Help' in authorization objects
The attachments show a long list of applications with updated authorization proposals

Note 2792518 - Introduction of activity value 'Value Help' in further authorization objects

- **You need to adjust authorization proposals (`SU25` and `SU24`) and roles (`SU25` and `PFCG`) to grant authorization for F4**

You can omit this activity temporarily by applying the procedure described in note 2606478.

Important correction note:
Note 2805887 - Enhancement of base class CL_SU2X_F4
Valid as of release 7.31

Useful other note:
Note 2567368 - SU2X | Enhancement of report SU2X_UPDATE_S_TABU_NAM

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F4 Authorization check in Value Help
Remove F4 from SU24 / Create and use role SAP_NEW_F4

Note 2606478 - REGENERATE_SAP_NEW | bridging authorizations for input helps
Valid as of release 7.52
Implement note 2805887 before

Step 1: Implement note 2606478 again to get the latest version of F4 authorization data
Currently you see version 5 from 26.06.2019

Step 2: Use report SU24_REVERT_F4 to remove F4 values from authorization proposals in SU24 temporality

Step 3: Execute step 2c in transaction SU25 and transport the generated roles to production
You will observe, that you do not get new F4 values in authorization proposals for roles

Step 4: Use report REGENERATE_SAP_NEW to generate role SAP_NEW_F4 and transport it to the production system

Step 5: Use transaction SU10 to assign this role SAP_NEW_F4 to all dialog users (directly or via a reference user)
Yes, in opposite to outdated authorization profile SAP_NEW or critical role SAP_NEW you can (almost) safely assign this role SAP_NEW_F4 to users if you just want to ignore the F4 check.

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WINTER IS C0MING - How to keep Connectivity to Support Backbone

Sending System:	System directly connected to SAP		
Software Component	SAP_BASIS < 700	SAP_BASIS ≥ 700	
Channel	RFC with technical user	RFC with technical user	https
Enable https communication with SAP Note 2837310 or ST-PI 2008_1_* SP22	n.a.	n.a.	Yes
Implement ST-PI 740 SP09	n.a.	n.a.	n.a.
Enable https communication with checklists	n.a.	n.a.	Yes
Functionality	Enables sending of SAP EarlyWatch Alert data to SAP, other applications are not covered		

Legend: less preferred option | workaround for EWA | best option

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WINTER IS C0MING - How to keep Connectivity to Support Backbone

Sending System:	System directly connected to SAP			SAP Solution Manager 7.1
Software Component	SAP_BASIS < 700	SAP_BASIS ≥ 700		ST 710 SP01-SP16
Channel	RFC with technical user	RFC with technical user	https	https
Enable https communication with SAP Note 2837310 or ST-PI 2008_1_* SP22	n.a.	n.a.	Yes	Yes
Implement ST-PI 740 SP09	n.a.	n.a.	n.a.	n.a.
Enable https communication with checklists	n.a.	n.a.	Yes	Yes
Functionality	Enables sending of SAP EarlyWatch Alert data to SAP, other applications are not covered			

Legend: less preferred option | workaround for EWA | best option

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WINTER IS C0MING - How to keep Connectivity to Support Backbone

Sending System:	System directly connected to SAP			SAP Solution Manager 7.1	SAP Solution Manager 7.2		
Software Component	SAP_BASIS < 700	SAP_BASIS ≥ 700		ST 710 SP01-SP16	ST 720 SP01-SP04	ST 720 SP05-SP07	ST 720 ≥ SP08
Channel	RFC with technical user	RFC with technical user	https	https	https	https	https
Enable https communication with SAP Note 2837310 or ST-PI 2008_1_* SP22	n.a.	n.a.	Yes	Yes	n.a.	n.a.	n.a.
Implement ST-PI 740 SP09	n.a.	n.a.	n.a.	n.a.	Yes	Yes	Already included
Enable https communication with checklists	n.a.	n.a.	Yes	Yes	Yes	Yes	Yes
Functionality	Enables sending of SAP EarlyWatch Alert data to SAP, other applications are not covered					All	

Legend: less preferred option | workaround for EWA | best option

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WINTER IS C0MING - How to keep Connectivity to Support Backbone

Sending System:	System directly connected to SAP			SAP Solution Manager 7.1	SAP Solution Manager 7.2		
Software Component	SAP_BASIS < 700	SAP_BASIS ≥ 700		ST 710 SP01-SP16	ST 720 SP01-SP04	ST 720 SP05-SP07	ST 720 ≥ SP08
Channel	Temporary workaround: RFC with technical communication user		https	https	https	https	https
Enable https communication with SAP Note 2837310 or ST-PI 2008_1_* SP22	n.a.	n.a.	Yes	Yes	n.a.	n.a.	n.a.
Implement ST-PI 740 SP09	n.a.	n.a.	n.a.	n.a.	Yes	Yes	Already included
Enable https communication with checklists	n.a.	n.a.	Yes	Yes	Yes	Yes	Yes
Functionality	Enables sending of SAP EarlyWatch Alert data to SAP, other applications are not covered					All	

Legend: less preferred option | workaround for EWA | best option

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Are you ready? Check EWA Alert about SAP Backbone Connectivity

EWA Workspace (Dashboard)
https://launchpad.support.sap.com/#/ewaworkspace
→
EWA Solution Finder (EWA Alerts)
https://launchpad.support.sap.com/#/ewasolutionfinder

The filter settings are compiled into the URL, therefore you can use the URL from the address bar to show this alert „Service Readiness → SAP Backbone Connectivity“ for all system for which the current S-user is authorized:

https://launchpad.support.sap.com/#/ewasolutionfinder/generic/filters/categoryHash=W3siY2F0ZWdvcnkiOiJTZXJ2aWNlUmVhZGluZXNzIiwic3ViY2F0ZWdvcnkiOiJCYWNrYm9uZUNvbm5lY3Rpdml0eSJ9XQ%253D%253D

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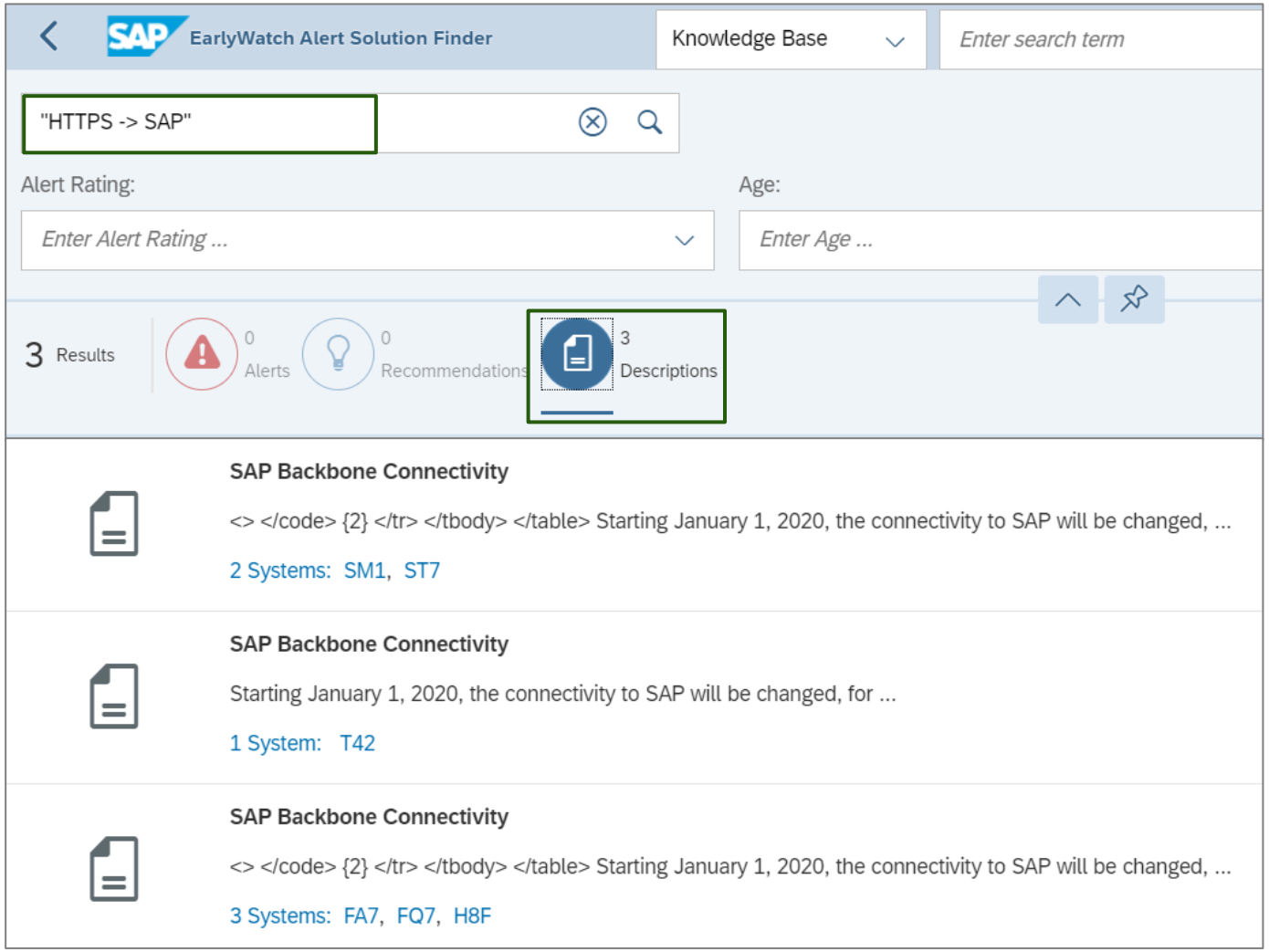
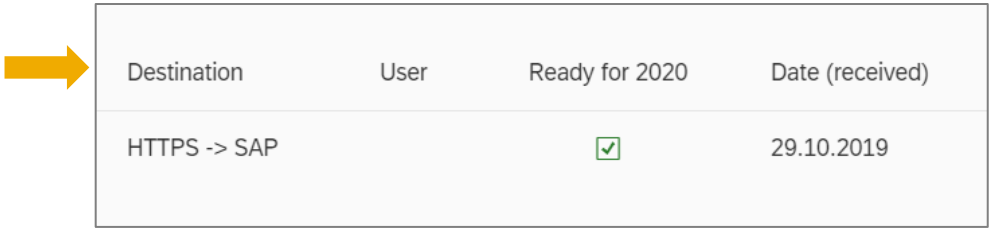
Are you ready? Check EWA Alert about SAP Backbone Connectivity



Instead of filtering for an alert category you can use one of the search strings
(including quotation marks and spaces)

"HTTPS -> SAP"
respective
"RFC -> SAP"

To get the list of systems which send EWA data via the new webservice destination respective via RFC.



Destination	User	Ready for 2020	Date (received)
HTTPS -> SAP		☑	29.10.2019

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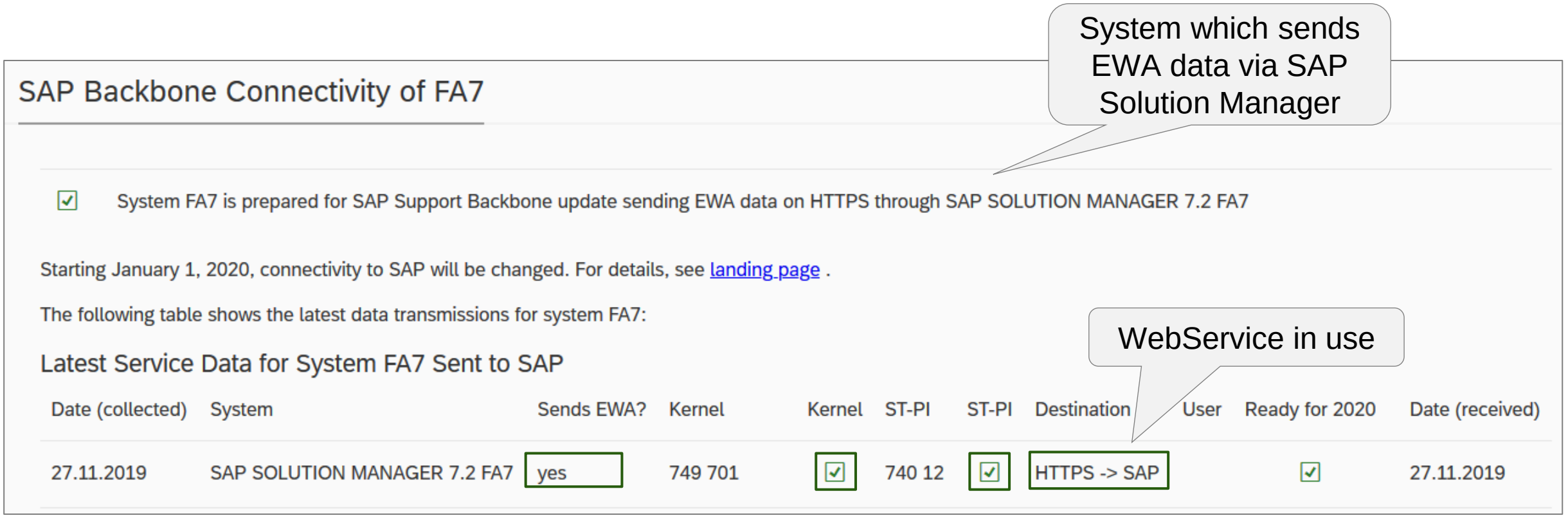
Are you ready? Check EWA Alert about SAP Backbone Connectivity

Yes !



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Note 2865869 - Technical Communication User Required to Connect to SAP - Anonymous User Login Denied

For a limited period of time your systems can continue to access the SAP Support Backbone with RFC.
To ensure functionality of the RFC destination, replacing the anonymous user with a technical communication user is the only mandatory action in the system.

RFC to SAP Support Backbone can only be used for the following functionality from January 2020 onwards:
SAP Note Assistant (transaction `SNOTE`) and EarlyWatch Alert (EWA / transaction `SDCCN`). This is a restriction especially for Solution Manager systems: all Solution Manager specific applications are not supported.

- Service Data Control Center (*SDCC*, transaction `SDCCN`) supports the following functionality with connection to SAP Support Backbone:
  - *Send session data*:
    Is used to send service data, especially that of the Earlywatch Alert, to SAP. It is also used for the license measurement data.
  - *Refresh service definitions*:
    Keeps the *service definitions* up to date. The service definitions are the list of function modules collected as service data for the EWA (or any other service) in *SDCC*.
  - *Service Preparation - Service Recommendation Refresh:*
    `RTCCTOOL` connects to SAP Support Backbone for the *Service Preparation - Service Recommendation Refresh.* It updates the content of the *Service Recommendation* (the checklist in `RTCCTOOL`).

- SAP Note Assistant (transaction `SNOTE`) supports the download and implementation of digitally signed SAP Notes.

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November 2019

Topics November 2019

Blog: Secure By Default - Ways To Harden Your Systems

System Recommendations – Important Notes

Note 2393937 - VMC Authority Check

Note 2777910 - Unrestricted File Upload vulnerability in AS Java (Web Container)

Note 2839864 - Update 2: OS Command Injection vulnerability in SAP Diagnostics Agent

SAP Support Backbone – SDCCN

Note 2836302 - Automated guided steps for enabling Note Assistant for TCI and Digitally Signed SAP Notes

Are you ready? Check EWA Alert about SAP Backbone Connectivity

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Secure By Default: Ways To Harden Your Systems

Blog from Birger Toedtmann, SAP Consulting
https://blogs.sap.com/2019/10/02/secure-by-default-ways-to-harden-your-systems-at-almost-no-cost/

- Use the SAP-provided tools and services, such as **EarlyWatch Alert**, **Security Optimization Service**, **Configuration Validation** and **System Recommendations**
- **Always introduce disruptive security settings with good timing.**
  The upgrade situation and new installations are very good points in time for this
- **S/4HANA 1909** provides an up-to-date “secure by default” design. So in case you are running a new installation or a conversion (but not in case of an upgrade), nothing has to be done for a variety of security settings

In case of an upgrade SAP recommends to implement (at least) the same settings as described in note 2714839 respective note 2713544 “New security settings during conversion to S/4HANA 1909”

Both notes show currently the same checklist:
`New_Security_Settings-SUM20P6_Conversion-to-S4H1909.xlsx`

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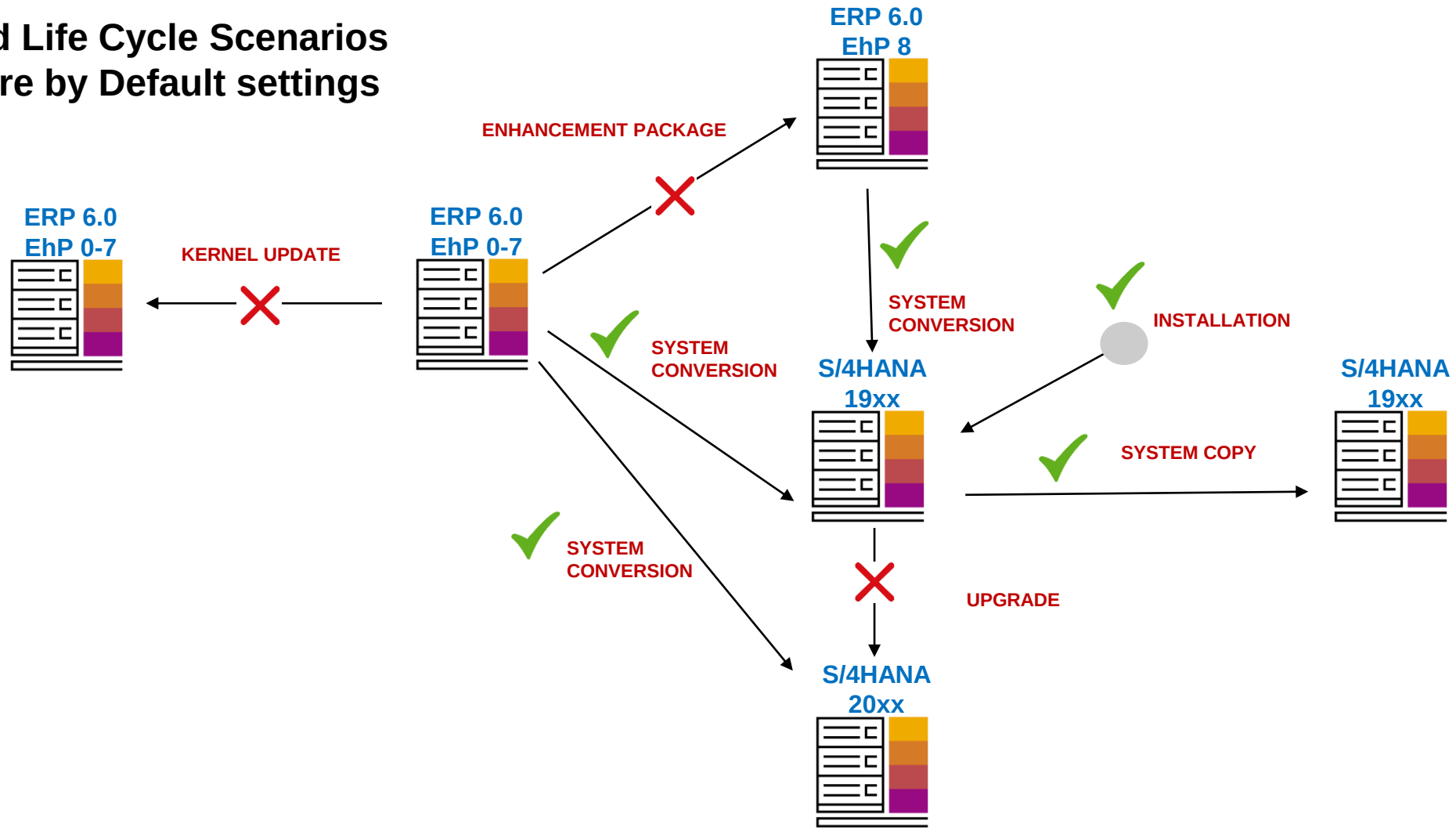
Secure By Default: Ways To Harden Your Systems

Supported Life Cycle Scenarios with Secure by Default settings



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Secure By Default: Ways To Harden Your Systems

Note	Name	Recommended	Note	Name	Recommended
515130	auth/check/calltransaction	3	2794817	ms/http_logging	1
-	auth/object_disabling_active	N	-	rdisp/gui_auto_logout	1H
2216306	auth/rfc_authority_check	6	2441606	rdisp/vbdelete	0
2776748	gw/reg_no_conn_info	255	2678501	rfc/callback_security_method	3
2776748	gw/rem_start	DISABLED	668256	rfc/ext_debugging	0
1277022	icf/set_HTTPonly_flag_on_cookies	0	1591259	rfc/reject_expired_passwd	1
-	login/disable_cpic	1	2788140	wdisp/add_xforwardedfor_header	TRUE
1023437	login/password_downwards_compatibility	0	2838480	Security Audit Log configuration	See note 2676384

2788140	icm/HTTP/logging_0	[…] LOGFORMAT=%t %a %u1 \"%r\" %s %b %Lms %{Host}i %w1 %w2
2788140	icm/HTTP/logging_client_0	[…] LOGFORMAT=%t %a %u1 \"%r\" %s %b1 %b %Lms %{Host}i %P
2788140	icm/security_log	[...] LEVEL=3
2794817	ms/HTTP/logging_0	[...] LOGFORMAT=%t %a %u1 \"%r\" %s %b %{Host}i
2140269	login/password_hash_algorithm	encoding=RFC2307,algorithm=iSSHA-512,iterations=15000,saltsize=256

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System Recommendations – Important Notes

Note 2795529 - SysRec: Irrelevant kernel notes are displayed

Note 2825239 - SysRec 7.2: Performance Improvement in SysRec Job in SP08 and SP09

Note 2833610 - SysRec 7.2: Download large volume of note data from SAP support backbone via web service

Transaction `DNO_CUST04`:

Field Name	Seq...	Field val.
SYSREC_CALC_MODE	0	VERS_2019
SYSREC_DELTA_DAYS	0	7
SYSREC_NOTE_TYPES	0	HSLPCA
SYSREC_RFC_CALL	0	
SYSREC_UNUSED_SUBHR	0	X

Note 2780862 - SYSREC7.2: Required notes missing which have been published on the very last day of a month

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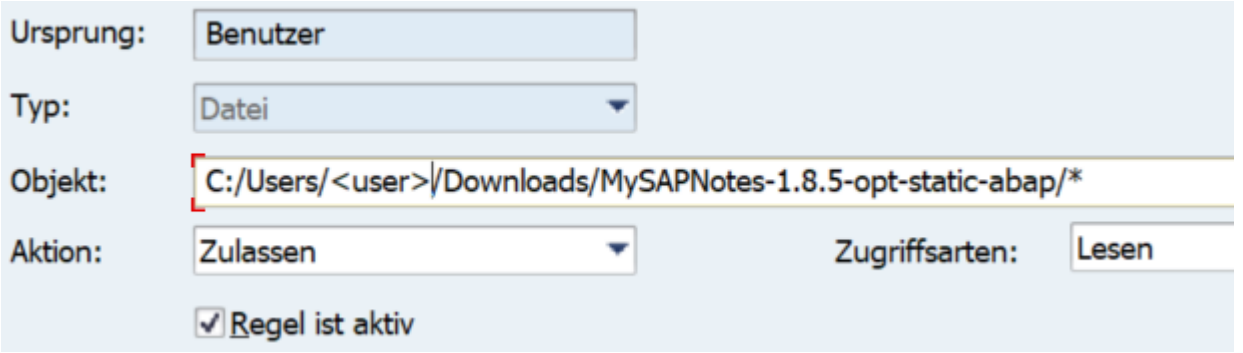
System Recommendations – Important Notes

Note 2747922 - SysRec: Corrections for Solution Manager 720 SP08 Fiori UI

To upload data you might need a security rule like this in the SAPGUI:



You might have to run `SPAU` beforehand if you already loaded previous versions

The note contains version 1.8.5 which is newer than a previous version like 1.9.69
(versions renumbered to match SP 8)

Use transaction `SE80` for package `UISM_AGS_SYSREC_UI`
to view file `version.json`

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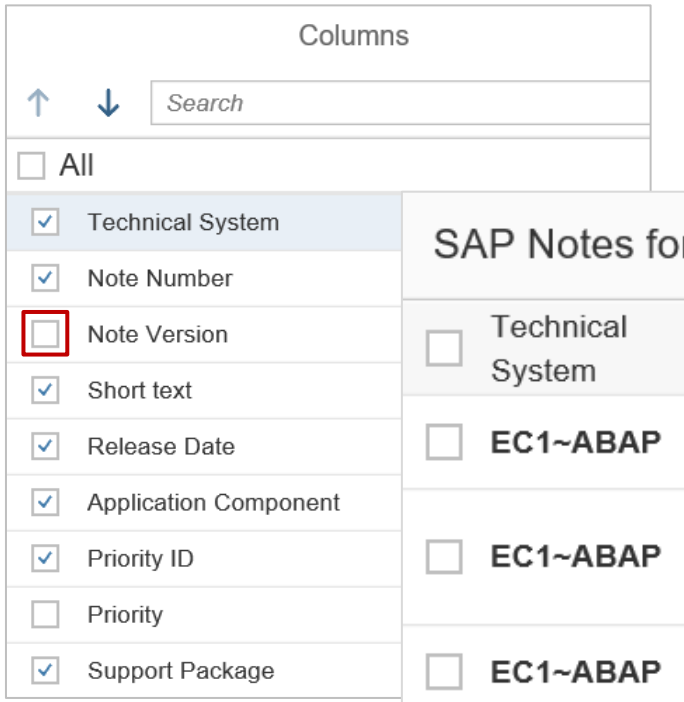
System Recommendations – Important Notes

Note 2747922 - SysRec: Corrections for Solution Manager 720 SP08 Fiori UI (version 1.8.5)

Note 2854704 - SysRec: Corrections for Solution Manager 720 SP09 Fiori UI (version 1.9.77)

A new feature allows you to show the note version on the Notes List (change setting required):



SAP Notes for selected technical systems: 100

Technical System	Note Number	Note Version	Short text	Release Date
EC1~ABAP	2724788	2	Various Vulnerabilities in ADOBE PDFPRINT LIBRARY	08.01.2019
EC1~ABAP	2711425	4	[CVE-2018-2505] Cross-Site Scripting (XSS) vulnerability in SAP Hybris Commerce storefronts	11.12.2018
EC1~ABAP	2707024	8	[CVE-2018-2500] Information Disclosure in Mobile Secure Android client	11.12.2018

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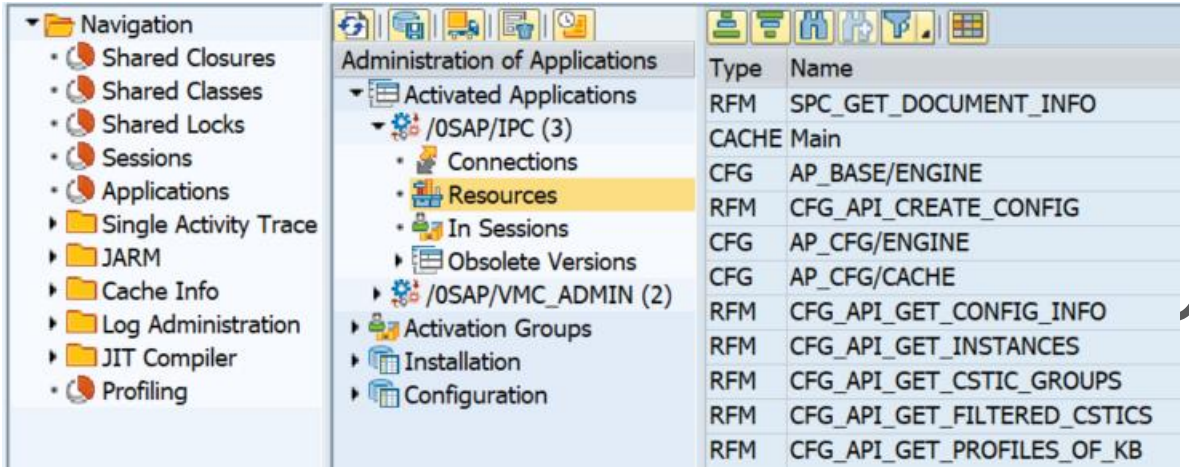
Note 2393937 - VMC Authority Check

The Virtual Machine Container (VMC), i.e. used in CRM systems, provides remote-enabled Java modules (jRFC) which can be called like any other RFC enabled functions of external RFC servers.



Within ABAP you just see empty function stubs to allow ABAP developers to see the interface:

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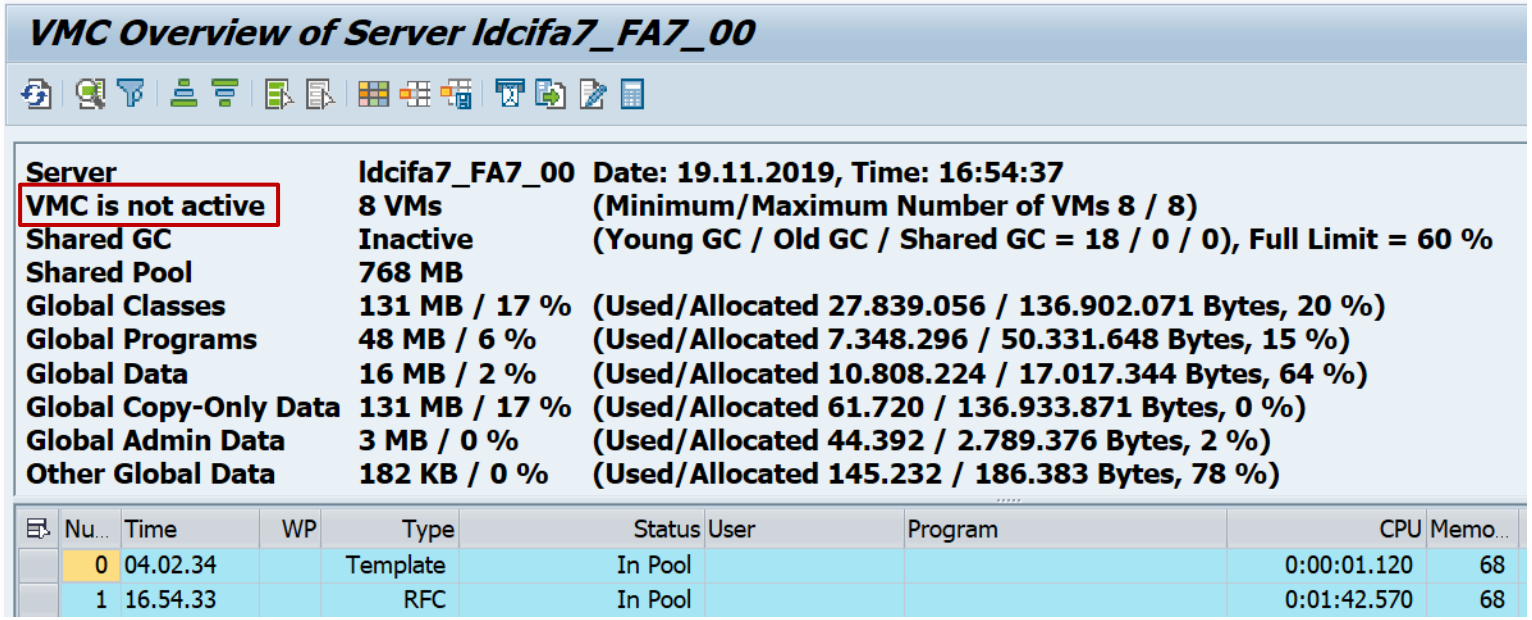
Note 2393937 - VMC Authority Check

The Virtual Machine Container (VMC) of an ABAP system is not active by default

Prerequisite to activate the VMC (default: `off`)**:**
Profile parameter `vmcj/enable` = `on` (or any other of the other 'active' values: `ENABLE`, `ACTIVATE`)

Check the status in transaction `SM52` :



… or even simpler:

Check the status via report `RSVMCRT_HEALTH_CHECK` :

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Note 2393937 - VMC Authority Check

Access to remote enabled functions in external RFC servers is not restricted by authorization object `S_RFC` (which is a check performed by an ABAP RFC server only).

Exception: the VMC of an ABAP system can run authorization check for `S_RFC` even if the function is implementd outside of ABAP. *(citation needed)*

However, you need to activate this setting first. *(citation needed)*

Related notes:
Note 863354 - Using the "VM container" component
Note 658464 - Security check of IPC (with references to some other notes)
Note 412309 - Authorization profile RFC user for IPC

Related topics:
Note 720523 - IPC security: Maintaining params for SSL secured connections
Note 698181 - IPC security: Maintaining parameters for SNC-RFC connections

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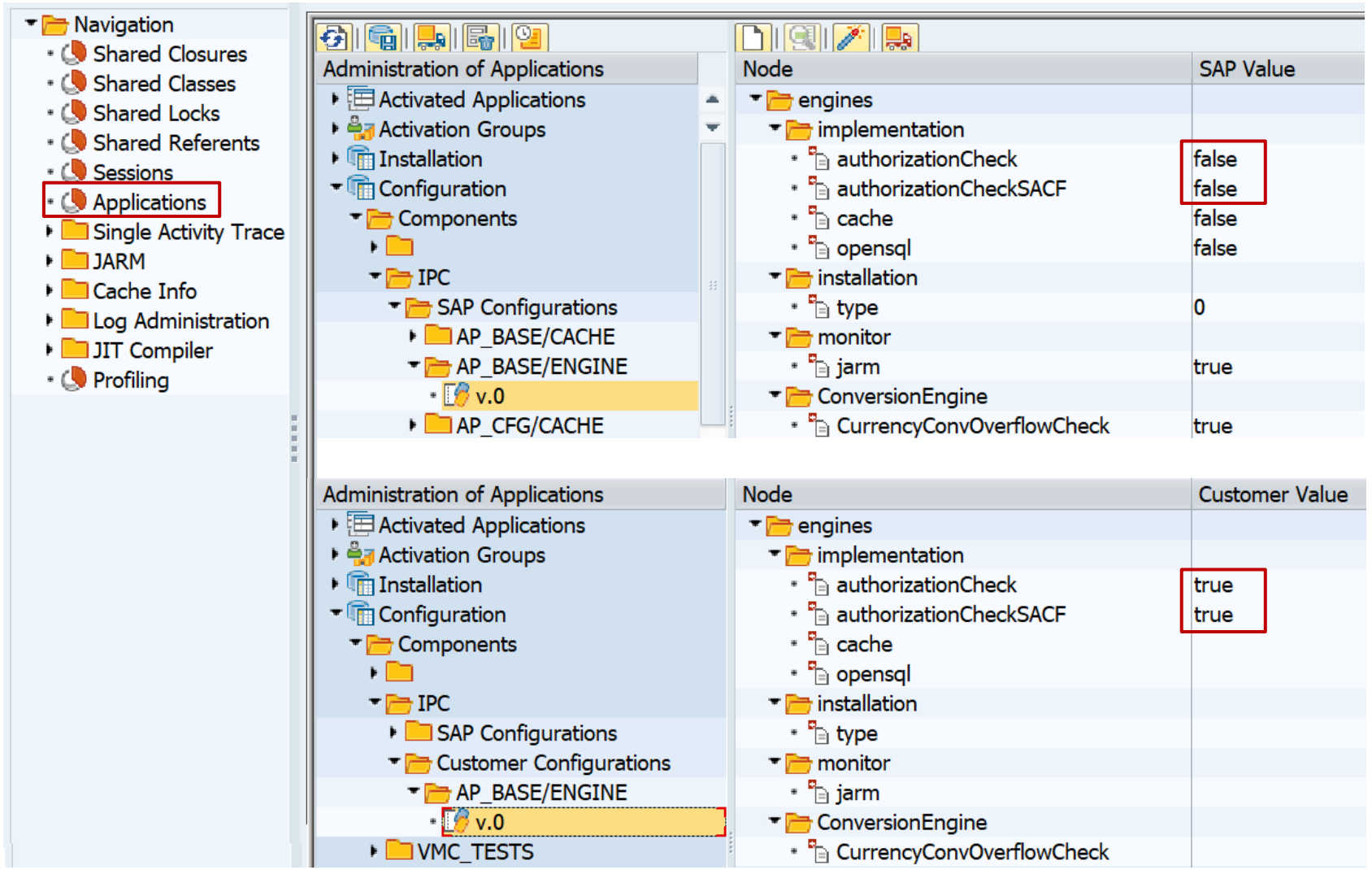
Note 2393937 - VMC Authority Check



Transaction `SM53`

The authorization checks are not active by default

You can activate them in a customer configuration as described in the note

The SACF setting activates an authorization check for additional authorization object `IPC` but only if you activate it in SACF, too

(citation needed)

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Note 2393937 - VMC Authority Check

Which users require the role containing authorizations for `S_RFC` and `IPC`?

This is described in the manual activity of the note:

The IPC - SACF scenario for AP Engines cannot be analyzed in transaction `SACF`, it can be analyzed with the VMC logs in transaction `SM53`. In order to see the needed VMC warnings logs, the default severity needs to be changed from `ERROR` to `WARNING` for the category `/Applications/AP/BASE/Core`

In order to build a user list, which are using the AP Engines, the VMC logs need to be analyzed. Check the logs for category `/Applications/AP/BASE/Core` and extract the users to build the user lists. This analysis needs to be done on each application server.

Use the user list to update all corresponding roles which are using the AP Engines.

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Note 2777910 - Unrestricted File Upload vulnerability in AS Java (Web Container)

Why do you not see patches for old Support Packages?

a) It could be the case that the vulnerability was introduced with a specific SP. However, the reference to the workaround described in related note 1975430 indicates that this particular security vulnerability exist in all releases.

b) Support Packages which are older than 24 month do not necessarily get (security) patches anymore

However, it seems that there exist more exceptions

Example for release 7.10 and 7.40:

Software Component	Support Package	Published (Last changed)	~Age	Patch	Published
ENGINEAPI 7.10	SP021	08.08.2016	38 month		
ENGINEAPI 7.10	SP022	27.07.2017	27 month		
ENGINEAPI 7.10	SP023	10.05.2018	17 month		
ENGINEAPI 7.10	SP024	10.05.2019	5 month	000002	20.06.2019
ENGINEAPI 7.10	SP025	Not available yet		000000	Not available yet
ENGINEAPI 7.40	SP016	30.10.2017	24 month		
ENGINEAPI 7.40	SP017	30.01.2018	21 month		
ENGINEAPI 7.40	SP018	14.08.2018	14 month		
ENGINEAPI 7.40	SP019	04.01.2019	9 month	000002 pl 6	26.08.2019
ENGINEAPI 7.40	SP020	23.07.2019		000001 pl 3	26.08.2019
ENGINEAPI 7.40	SP021	Not available yet		000000	Not available yet

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Note 2839864 - Update 2: OS Command Injection vulnerability in SAP Diagnostics Agent

Note 2808158 - OS Command Injection vulnerability in SAP Diagnostics Agent

Note 2823733 - Update 1: OS Command Injection vulnerability in SAP Diagnostics Agent

Note 2839864 - Update 2: OS Command Injection vulnerability in SAP Diagnostics Agent

By applying the patch the file `commands.xml` will be cleared of all commands except `echo`:
`<OsCmd exec="echo Hello" param="false" >`

As a result, commands for the OS Command Collector have to be added manually to the `commands.xml`. For reference the `old_commands.xml` is attached to the note.

In case commands need to be added for this purpose, it is strongly recommended to use setting `param="false"`.

Open question: which commands are required?

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Note 2839864 - Update 2: OS Command Injection vulnerability in SAP Diagnostics Agent

Which commands are required?

The old `commands.xml` shows various topics which might require commands if you are using these scenarios:

1. OS
2. TREX (TREX commands have been removed use transaction TREXADMIN in Solution Manager)
3. SAP MDM
4. SAP PPM BY IDS
5. FOCUS ALM
6. SAP BCM SOFTWARE
7. SAP BPC FOR MICROSOFT/NETWEAVER
8. SAP PRICE & MARGIN MANAGEMENT
9. SAP POS
10. SAP ARC&DOC ACCESS BY OT
11. BOBJ ENTERPRISE XI
12. VERTEX
13. WEBSPHERE APPSERVER
14. SAP MFG EXECUTION
15. SBOP DATA SERVICES 4.0

H. Help

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Note 2839864 - Update 2: OS Command Injection vulnerability in SAP Diagnostics Agent

Which commands are required?

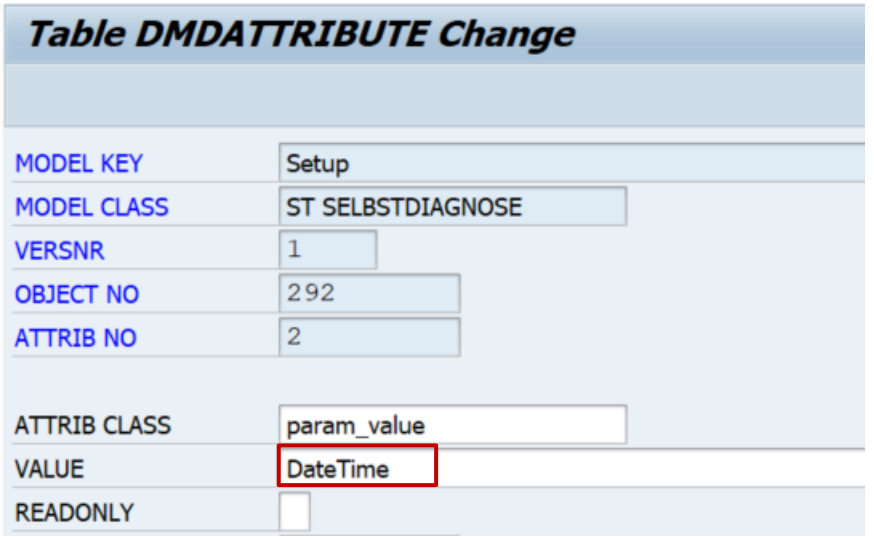
Example for topic “1. OS”

Note 2849096 - MSC: Cannot find command `DateTime` and `CpuStat` in command list

Using this note you can replace both commands by still existing `echo` command.

Instead of implementing and running the report you can use transaction `SE16` for table `DMDATTRIBUTE` as well:

```
report p_update_os_command_check.
update DMDATTRIBUTE
  set value = 'Echo'
  where model_key = 'Setup'
    and model_class = 'ST SELBSTDIAGNOSE'
    and attrib_class = 'param_value'
    and ( value = 'CpuStat' or value = 'DateTime' ).
```



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Support Backbone Connectivity – SDCCN

Note 2837310 - Supporting HTTPS Connections for SDCCN

On ST-PI 2008_1_7xx, *Service Data Control Center* (SDCC, transaction SDCCN) only supports RFC connections to SAP Support Backbone. HTTPS connections are not supported. In particular, Solution Manager 7.1 is not capable to connect to SAP Support Backbone after January 1st 2020 due to this missing functionality. An SAP Solution Manager system is no more allowed to communicate with SAP Support Backbone with RFC protocol.

This SAP Note provides the functionality allowing to connect a Solution Manager 7.1 to SAP Support Backbone using secure https connections for the functionality provided by SDCC.

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Support Backbone Connectivity – SDCCN
Note 2837310 - Supporting HTTPS Connections for SDCCN

SDCC *Refresh service definitions*:

- uses destination `SAP-SUPPORT_PORTAL`
- requires ST-PI 2008_1_700 18 SP14 (or notes 2220413 and 2220414)
- requires destination `SAP-SUPPORT_PORTAL` to be active in SDCC destination table `/BDL/RFCDEST`. (Without this note 2837310, it must be entered in transaction `SE16`.)
- If there is a main system defined in SDCC destination table, the *Refresh service definitions* is not performed against SAP Support Backbone.
- keeps the *service definitions* up to date. The service definitions are the list of function modules collected as service data for the EWA (or any other service) in SDCC

SDCC *Send session data*:

- uses destination `SAP-SUPPORT_PARCELBOX`
- requires this note 2837310 being implemented
- is used to send service data, especially that of the Earlywatch Alert, to SAP (aka direct EWA, which is not processed on a Solution Manager). It is also used for the license measurement data.

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Support Backbone Connectivity – SDCCN

Note 2837310 - Supporting HTTPS Connections for SDCCN

Related information:

Note 2740667 - RFC connection SAPOSS to SAP Service & Support backbone will change (latest) in January 2020

Note 2823658 - EWA Checks for SAP Backbone Connectivity

SAP Support Backbone Connectivity Troubleshooting in Solution Manager 7.2
https://gad5158842f.us2.hana.ondemand.com/dtp/viewer/#/tree/1423/actions/17822

Checklist for Support Backbone Update For SAP Solution Manager 7.2 SPS 5
https://help.sap.com/doc/20f8ecd5028346a38fac89c2f3052bf6/SP5/en-US/loiob0605883e376454abce03682db18e39d_sps5.pdf

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Note 2836302 - Automated guided steps for enabling Note Assistant for TCI and Digitally Signed SAP Notes

Use new report RCWB_TCI_DIGITSIGN_AUTOMATION to enable respective validate SNOTE

Task No.	Task Name	Task Status	Task Status Information
Step 1	Download & Implement Pre-requisite Notes	No Action Required	Click for Details
Step 2	Upload TCI Bootstrap Package	No Action Required	Click for Details
Step 3	Implement TCI Bootstrap Package	No Action Required	Click for Details
Step 4	Download & Implement TCI Bootstrap Note	No Action Required	Click for Details
Step 5	Upload TCI Rollback Package	No Action Required	Click for Details
Step 6	Implement TCI Rollback Package	No Action Required	Click for Details
Step 7	Download & Implement TCI Rollback Note	No Action Required	Click for Details
Step 8	Upload TCI package for Digitally Signed Note enablement: SAPK74000SCPSAPBASIS	Completed	
Step 9	Download & Implement SAP Note for Digitally Signed Note enablement: 0002576306	Completed	
Step 10	Download & Implement SAP Note: 0002721941	Completed	
Step 11	SNOTE Configuration for Digitally Signed SAP Note download	Completed	Re-configure

Report RCWB_SNOTE_AUTOMATE_DWNLD_PROC

Step Num...	Description	Action
Step 1	Configure Download Procedure for SNOTE	
Step 2	Maintain Procedure Connectivity	
Step 3	Lock Procedure Configuration in Transport Request	

Troubleshooting:

Note 2857602 - Report from SAP Note 2836302 is hanging in Step4
→ Finish the SPAM queue and make sure that the status is green

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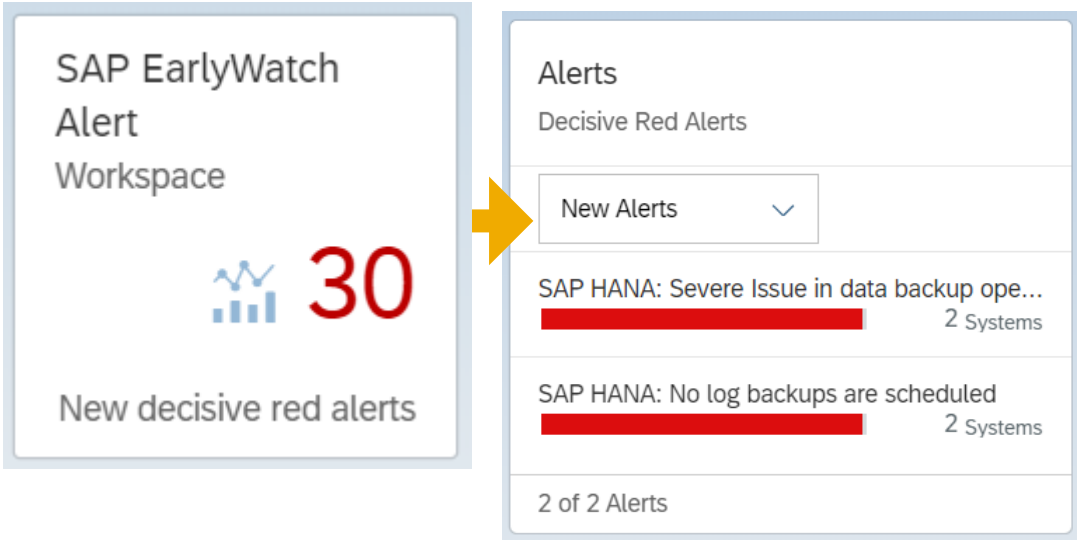
Are you ready? Check EWA Alert about SAP Backbone Connectivity

EWA Workspace
https://launchpad.support.sap.com/#/ewaworkspace



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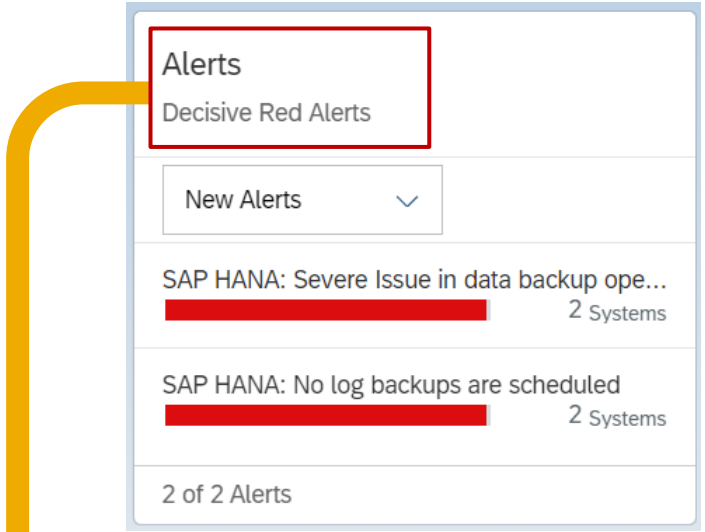
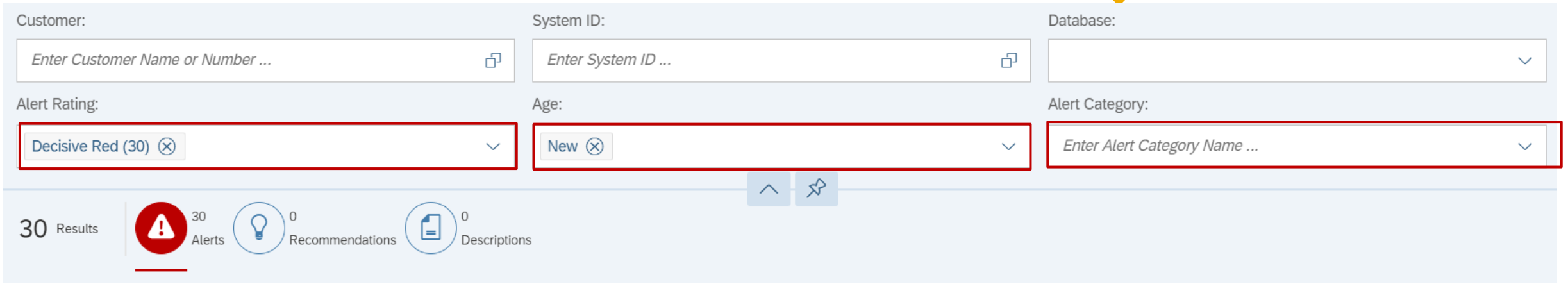
Are you ready? Check EWA Alert about SAP Backbone Connectivity

EWA Workspace
https://launchpad.support.sap.com/#/ewaworkspace

1. **Open Alerts (= EWA Solution Finder)**
2. **Remove „Alert Rating“ filter**
3. **Remove „Age“ filter**
4. **Choose „Alert Category“**
   „Service Readiness → SAP Backbone Connectivity“





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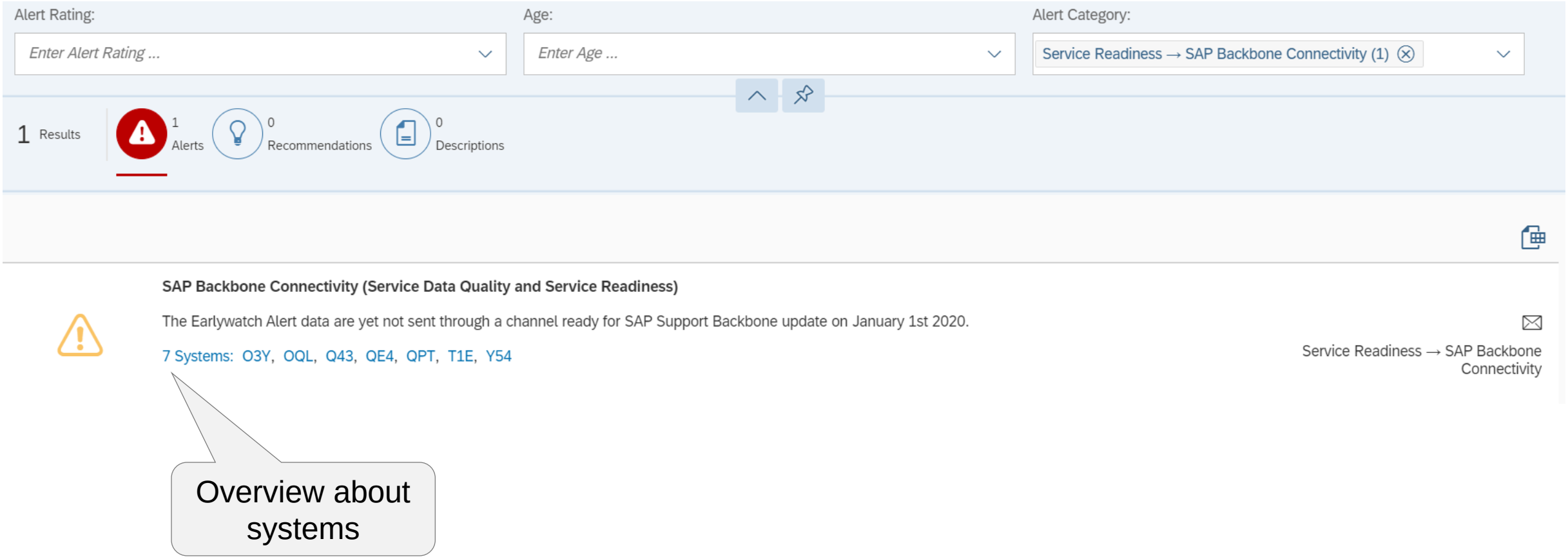
Are you ready? Check EWA Alert about SAP Backbone Connectivity



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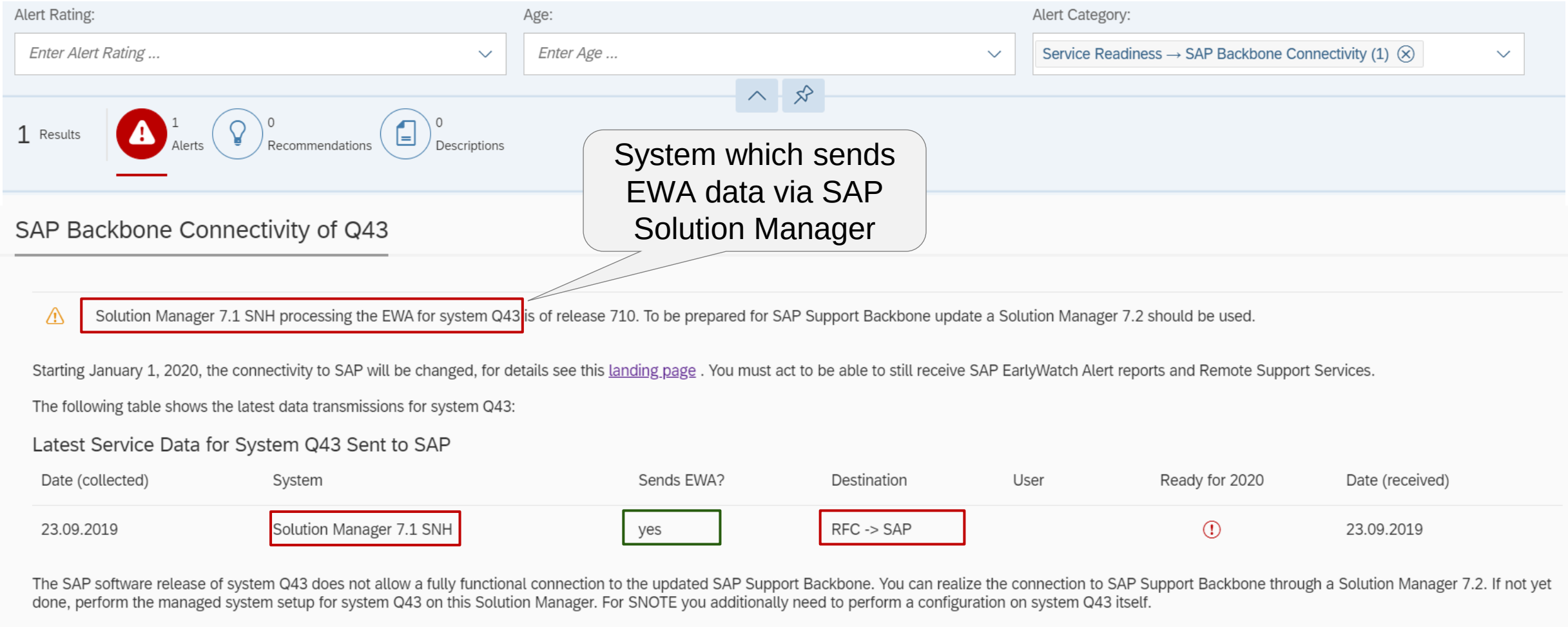
Are you ready? Check EWA Alert about SAP Backbone Connectivity



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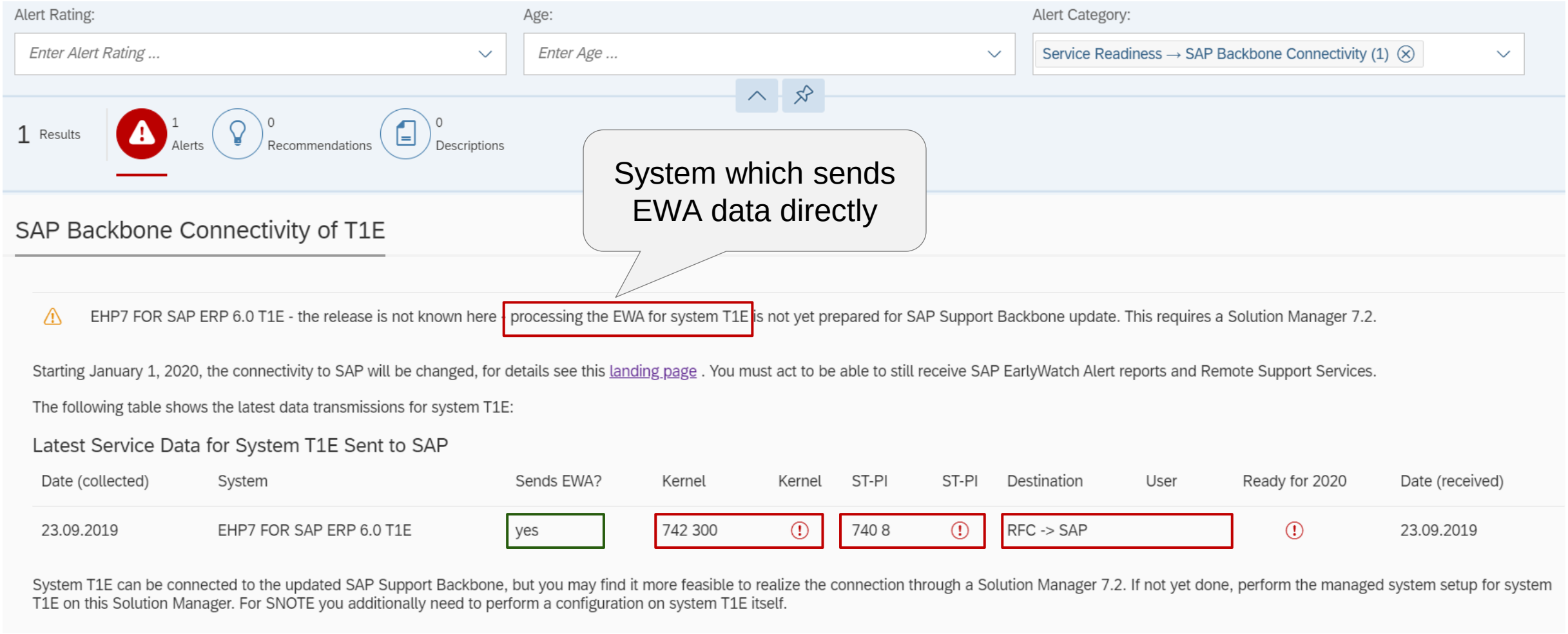
Are you ready? Check EWA Alert about SAP Backbone Connectivity



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Are you ready? Check EWA Alert about SAP Backbone Connectivity

EWA Workspace (Dashboard)
https://launchpad.support.sap.com/#/ewaworkspace
→
EWA Solution Finder (EWA Alerts)
https://launchpad.support.sap.com/#/ewasolutionfinder

The filter settings are compiled into the URL, therefore you can use the URL from the address bar to show this alert „Service Readiness → SAP Backbone Connectivity“ for all system for which the current S-user is authorized:

https://launchpad.support.sap.com/#/ewasolutionfinder/generic/filters/categoryHash=W3siY2F0ZWdvcnkiOiJTZXJ2aWNlUmVhZGluZXNzIiwic3ViY2F0ZWdvcnkiOiJCYWNrYm9uZUNvbm5lY3Rpdml0eSJ9XQ%253D%253D

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SAP Backbone Connectivity

a) **Get Software**
- SAP Solution Manager 7.2 SP 8
- **Kernel** (Release 742 patch ≥ 401, Release 745 patch ≥ 400, Release > 745)
- **ST-PI AddOn** (ST-PI 740 SP10, ST-PI 2008_1_700 SP20, ST-PI 2008_1_710 SP20, ST-A/PI 01T* SP01)
- Note Assistant, **Transaction SNOTE** (Notes 2576306 2603877, 2632679, 2721941, 2813264, …)
- **Task List for (partly) automated configuration (**Note 2827658)

b) **Configure Backbone Connectivity**
- **Create technical S-user on SAP Support Backbone**
- **Update PSE with certificates** (CA certificate plus optional client certificate)
- **Create web service destination**
- **Activate new connection for Note Assistant, transaction SNOTE**

c) **Go-live**
- **Check application log if SNOTE loads digitally signed notes via web service connection**
- **Check Workload Statistics if web service connections are used and RFC destinations are not used**

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SAP Backbone Connectivity

Decisions to Configure Backbone Connectivity

a) **Which systems are in scope?**
At least for all development systems (for `SNOTE`) and all production systems (for EWA) are in scope

b) **Individual webservice connections or central Download Service?**
The Download Service allows `SNOTE` to load notes including TCI packages

c) **How many technical S-users?**
1 per system
1 per 'system group'
1 per customer number

d) **Logon to technical S-users with passwords or with client certificates?**

e) **If you go for passwords: Configure systems manually or using (partly) automated task list?**

f) **If you go for client certificates: Create them via SAP Passport on SAP Support Portal or generate them locally?**

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October 2019

Topics October 2019

SAP EarlyWatch Alert Workspace – Security Status

SAP Support Backbone Connectivity – Trusted Certificates

Java: Guest user is not an Administrator

Note 2786151 - Denial of service (DOS) in Kernel (RFC), SAP GUI for Windows and for Java

Note 2828682 - Information Disclosure vulnerability in SAP Landscape Management Enterprise

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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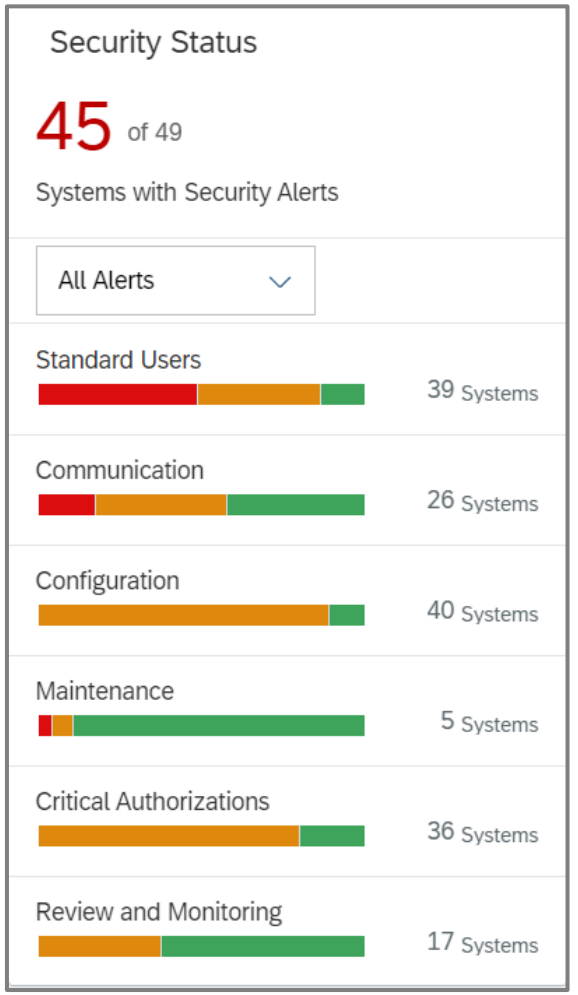
SAP EarlyWatch Alert Workspace - Security Status
https://launchpad.support.sap.com/#/ewaworkspace

New card *Security Status* added to the SAP EarlyWatch Alert Workspace:

New Authorization *Display Security Alerts in SAP EarlyWatch Alert Workspace*
https://launchpad.support.sap.com/#/user/management

Authorizations
…
Reports
Support Desk Evaluation
Service Reports and Feedback
Display Security Alerts in SAP EarlyWatch Alert Workspace
My Support Program Report

The new authorization is initially assigned to super administrators only.
Users can receive the authorization from super administrators or from user administrators (if they themselves got the authorization).



See Release Notes

Blog: Displaying Security Alerts in the SAP EarlyWatch Alert Workspace

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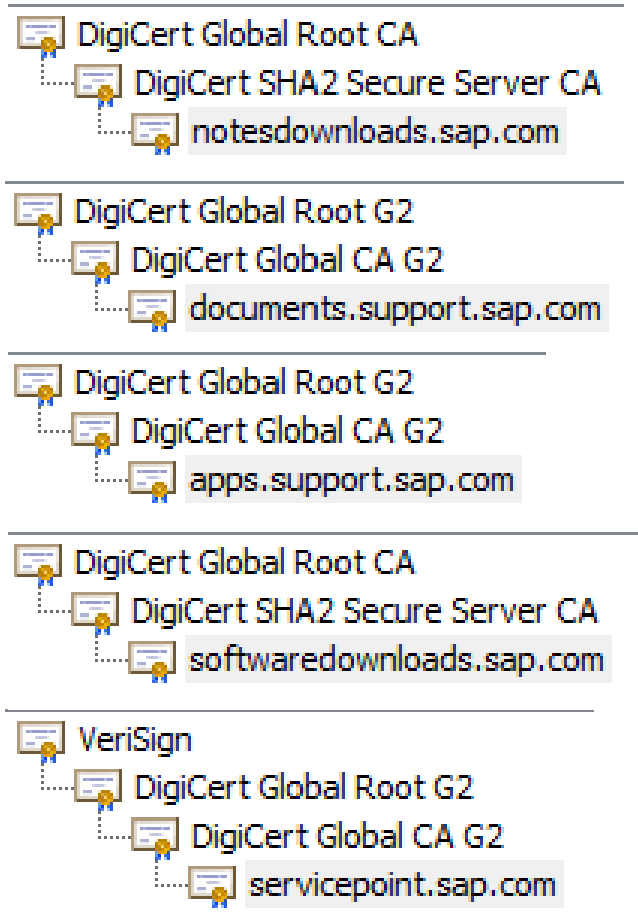
SAP Support Backbone Connectivity – Required Certificates

Which certificates are required for PSE SAPSUP?

- **Any of the certificates in a certificate chain can be used.**
- **You can call the URLs in the browser to inspect the certificate chain to decide which ones you want to add to the PSE**
- **Caution: other applications may use additional URLs (see `ST03N`)**
- **Recommendation:**
  DigiCert SHA2 Secure Server CA
  DigiCert Global CA G2



URL	Destination
https://notesdownloads.sap.com	`SAP-SUPPORT_NOTE_DOWNLOAD`
https://documents.support.sap.com	`SAP-SUPPORT_PARCELBOX`
https://apps.support.sap.com/dummy	`SAP-SUPPORT_PORTAL`
https://softwaredownloads.sap.com	
https://servicepoint.sap.com	
…	

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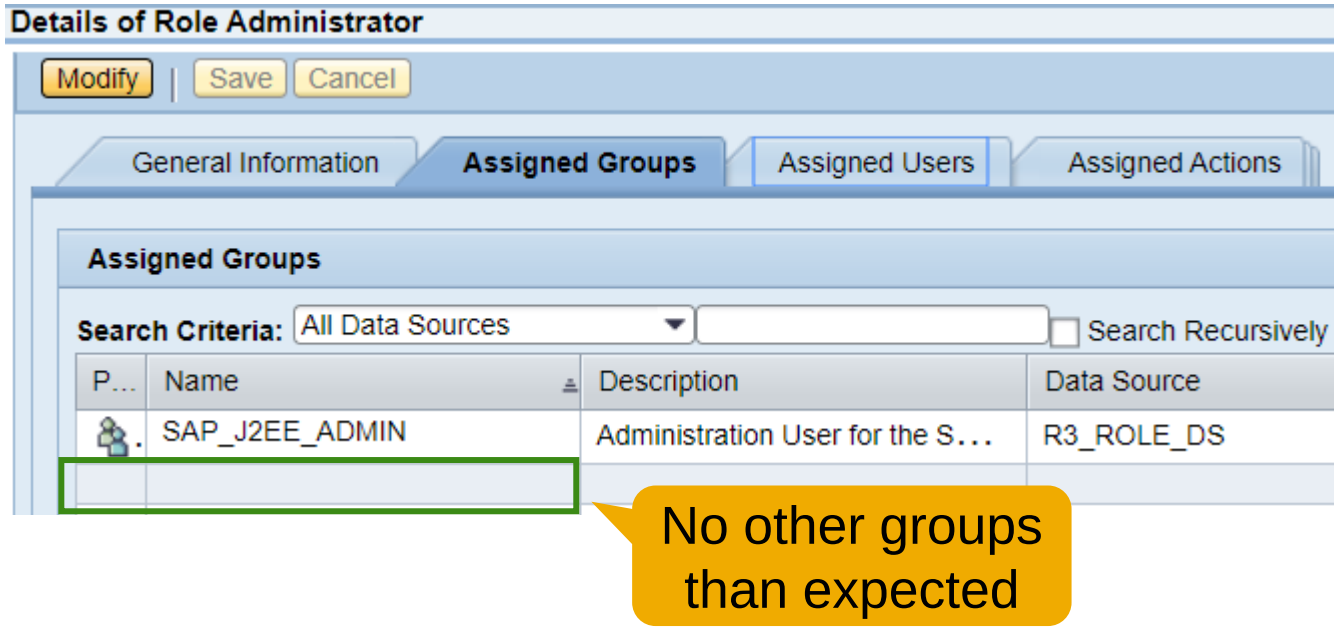
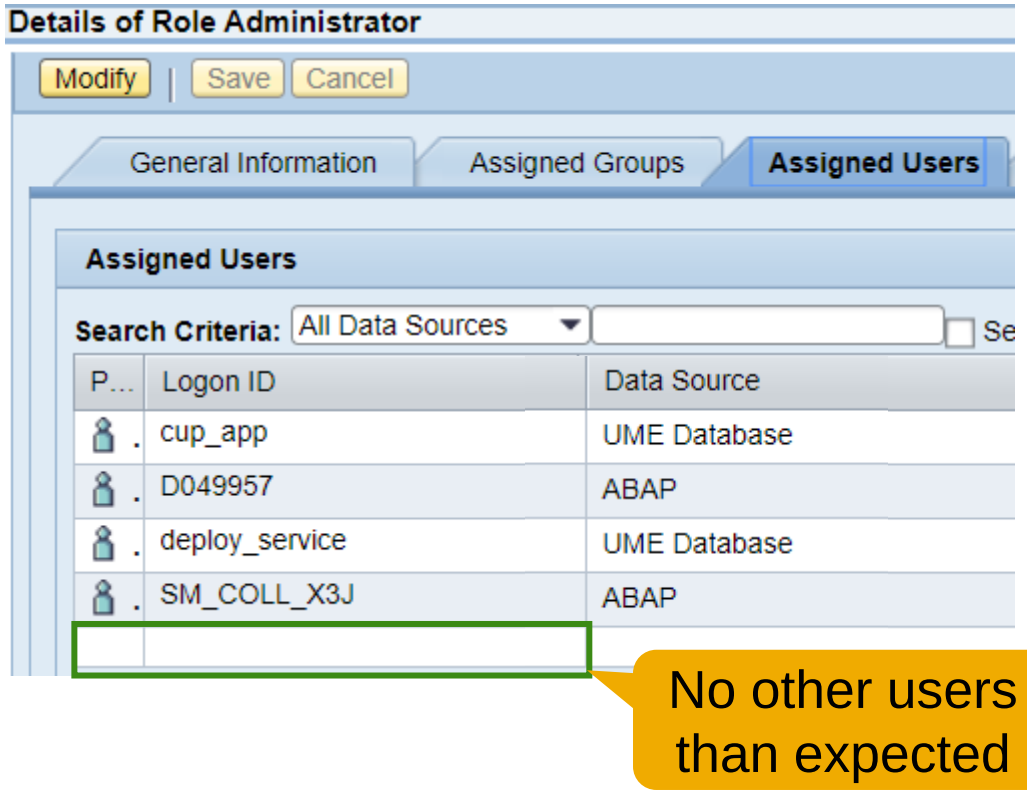
Java: Guest user is not an Administrator
No-brainer

User `J2EE_GUEST` is not an Administrator. Never.





Use proposed roles and users – Example for XI: UME Roles and Actions (AS Java)

https://help.sap.com/viewer/bd0c15451669484cbc84a54440340179/7.5.16/en-US/61908817bfae4c36a051d95b5a245364.html

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Java: Guest user is not an Administrator

What about other users having role Administrator?

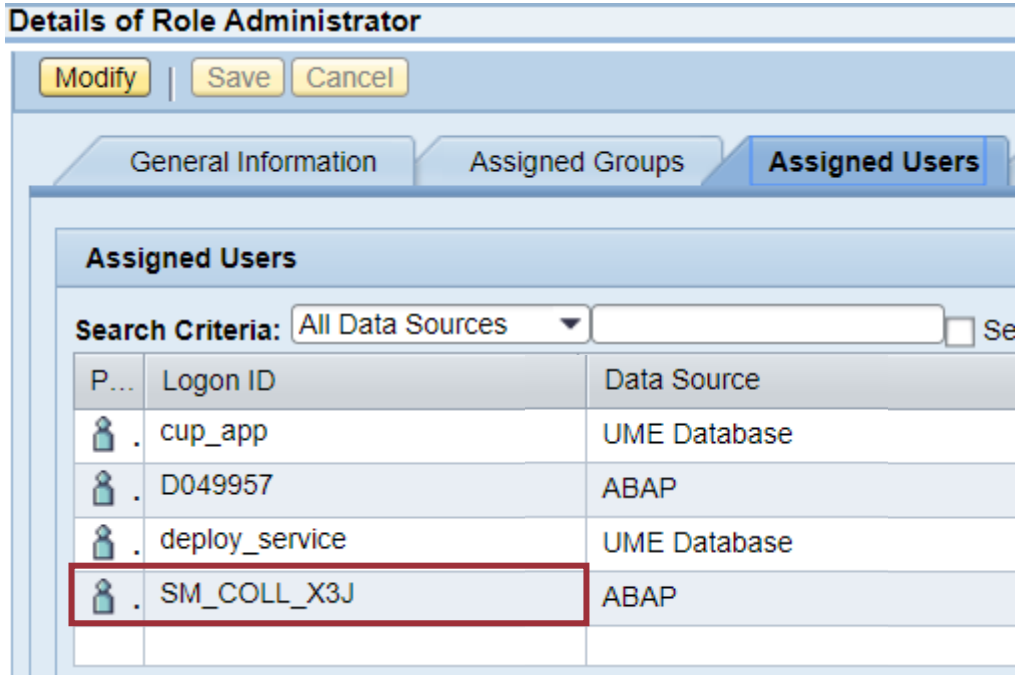
Note

Administration privileges are only required for the initial set-up of the Introscope BCI Adapter. If you are solely interested in Introscope Metrics, you can remove the Java administration privileges. Be aware that some extractors, especially those which are relevant in the context of RCA, may fail. As a consequence the Configuration Validation functions may not work properly. Additionally, the trace enabling of E2E is not possible.

Caution

The `CCDB CTC` Extractor and `CCDB DB` Extractor need `SAP_J2EE_ADMIN` rights to run. The role `SAP_J2EE_ADMIN` allows administration rights for the complete Java Stack, including `UME` (user administration).

User `SM_COLL_<sid>` is created for data collection in the managed system.



Technical User SM_COLL_<sid>

https://help.sap.com/viewer/283e4c6df1d44887a6449094bbfc3775/7.2.09/en-US/85455eb9b44e485eadf22cd9332bd283.html

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Note 2786151 - Denial of service (DOS) in Kernel (RFC), SAP GUI for Windows and for Java

1st version from 10.09.2019 (v12), updated on 24.09.2019 (v13): no change of patches between these publications

Section “Reason and Prerequisites” gives hints for your risk decision: The potential DOS attack is only possible if un-encrypted RFC connection is possible (no SNC) and if RFC trace is raised to trace levels 2 or 3 (default is 1). A successful attack would crash the work process with core dump instead of triggering a normal short dump.

Corrections:

- **On servers: RFC library within Kernel**
- **On clients: Embedded RFC library of SAP GUI for Windows and SAP GUI for Java**

Both corrections solve the same issue but are not dependent on each other

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Note 2828682 - Information Disclosure vulnerability in SAP Landscape Management Enterprise

Implement SAP Landscape Management 3.0 SP12 Patch 2

Perform the manual correction instruction that are described in this SAP Note. Execute at least goal 1 to update configuration parameters

Product Page:
www.sap.com/lama

Community Page:
www.sap.com/lama-community

Documentation:
https://help.sap.com/viewer/product/SAP_LANDSCAPE_MANAGEMENT_ENTERPRISE/3.0.12.0/en-US

What's New:
https://help.sap.com/viewer/98cc0d7a1caa44bf9618f35fae6eb6cb/3.0.12.0/en-US

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September 2019

Topics September 2019

DSAG - Customer Influence Voting

SAP Support Backbone Connectivity – Download Service
SAP Support Backbone Connectivity – Update of Task List

How to reload Message Server ACL

Notes 2362078, 2624688, 2778519 – Secure System Internal Communication

Note 2813809 - SOS: Release dependent changes of the data collector

Note 2838480 - SAL | Secure By Default (as of SAP_BASIS 7.54)
Note 2676384 - Best practice configuration of the Security Audit Log

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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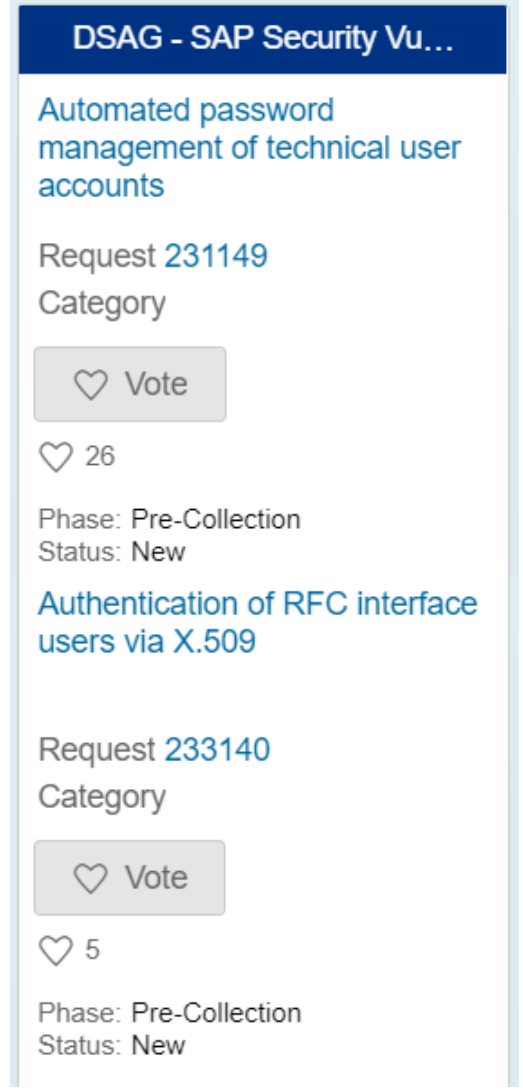
DSAG - Customer Influence Voting
https://influence.sap.com/sap/ino/#/campaign/1107/ideas

Automated password management of technical user accounts
https://influence.sap.com/sap/ino/#/idea/231149

The requested new solution implements a central software component, that is capable to change passwords of technical users in SAP systems (ABAP, JAVA, Business Objects) either manually triggered or automatically in a defined schedule (e.g. every n days, every last Saturday of a month) using a given password policy. It includes the password change in the password store (ABAP - SU01, Java - UME , etc.) and in all calling systems (at first SAP systems, but third party systems are in scope in general).

Authentication of RFC interface users via X.509
https://influence.sap.com/sap/ino/#/idea/233140

RFC communications can be secured using SNC. However, the established security context is a machine-to-machine one. The individual RFC interface user is not authenticated that way but still by either password or TrustedRFC methods only. While TrustedRFC is not a viable option for all cases, using passwords is error-prone and requires a high maintenance effort when policies demand a frequent password cycling. As a solution, it should be possible to authenticate the individual, called RFC user on the receiving side via X.509 authentication methods.



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DSAG - Customer Influence Voting
https://influence.sap.com/sap/ino/#/campaign/1107/ideas

Current status of discussion (of course this may change):

Automated password management of technical user accounts
https://influence.sap.com/sap/ino/#/idea/231149

- **not planned**

Authentication of RFC interface users via X.509
https://influence.sap.com/sap/ino/#/idea/233140

- **still in scope, as related to ongoing investigation about "RFC over WebSockets“ which would allow authentication and encryption based on TLS with client certificates**

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SAP Support Backbone Connectivity – Download Service

The most important use case for the ABAP Download Service is downloading from SAP file shares connected to the SAP Support Portal and the download of SAP Notes with all their dependencies and relevant SAP Notes transport-based correction instructions (TCIs).

The Download Service is part of SAP Solution Manager 7.2, however, as it's a basis component any ABAP system can be used as download service system. You can connect other systems to the download service system via RFC.

Documentation - SAP NetWeaver Download Service
https://help.sap.com/viewer/9d6aa23858204267895 2ab3b4aa5cc71/7.5.15/en-US/7cd5bc1666824b3eba96e8a79dd2055e.html

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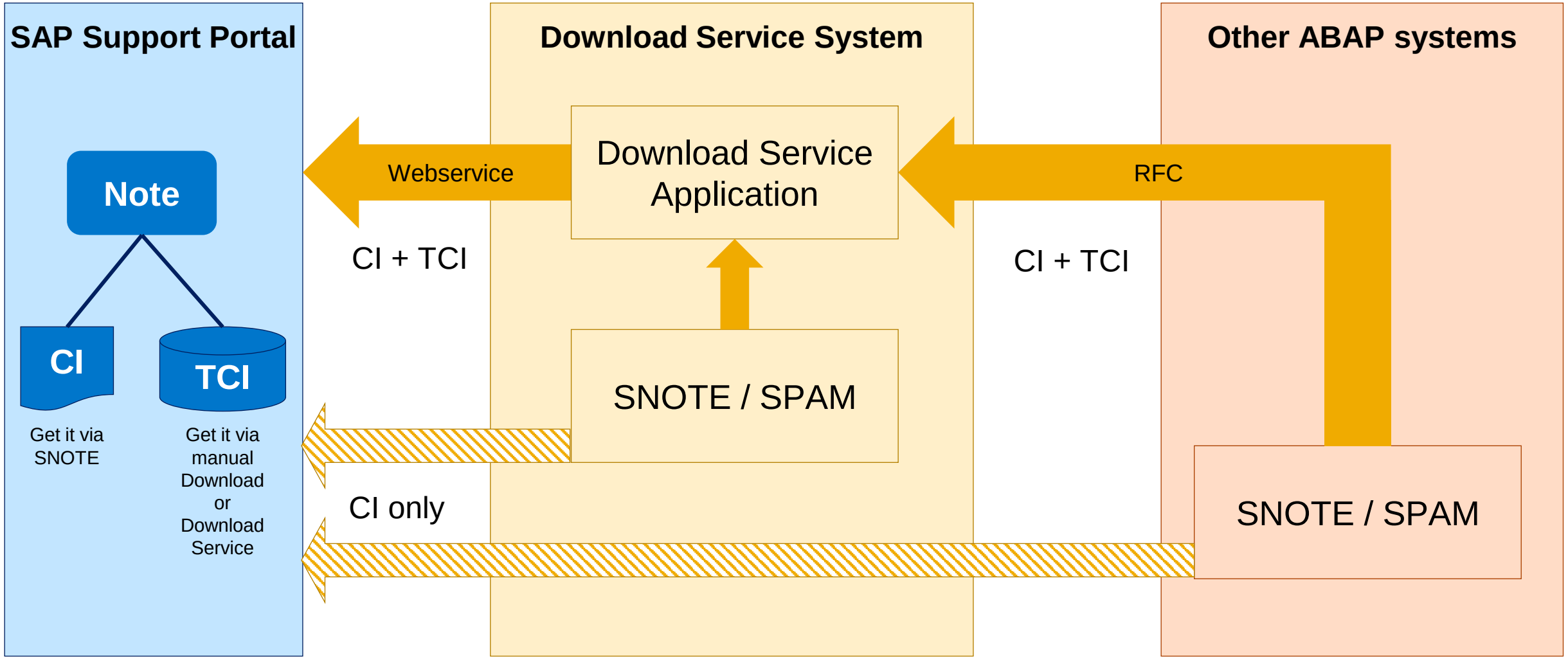
SAP Support Backbone Connectivity – Download Service



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SAP Support Backbone Connectivity – Download Service
Required correction notes

Note 2456654 - Adjustment of SAP NetWeaver Download Service for new download locations
Note 2503500 - Proxy configuration for SAP NetWeaver Download Service with manual implementation activities

- Valid for (=minimal possible version) SAP_BASIS 700 SP 32-34, 701 SP 17-19, 702 SP 17-19, 710 SP 19-22, 711 SP 14-17, 730 SP 13-17, 731 SP 14-20, 740 SP 9-17, 750 up to SP 9, 751 up to SP 3, 752 w/o SP

Note 2554853 - SAP NetWeaver download service for SAP Notes
Note 2618713 - SNOTE: Timeout during download of SAP Notes via SAP Download Service
Note 2681011 - Download Service: Missing method implementation in unit test class

- Solved with (= recommended version) SAP_BASIS 700 SP 36, 701 SP 21, 702 SP 21, 710 SP 23, 711 SP 18, 730 SP 19, 731 SP 23, 740 SP 20, 750 SP 11, 751 SP 6, 752 SP 1

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SAP Support Backbone Connectivity – Download Service Activation

On a Download Service System:

1. Maintain S-User and execution parameters using transaction `SDS_CONFIGURATION`
   Required roles `SAP_BC_SDS_CONF_ADMIN` respective `SAP_BC_SDS_TASK_USER`
2. Install client certificates according note 2620478 using transaction `STRUST`
3. Adapt proxy settings (if required)
4. Configure HTTPS service (if required)
5. Set up download directory (if required)
6. Set up SL protocol service (if required)

Logon with S-user and password required
Use of Client Certificates is not possible

On other managed systems:

- Create RFC Destination pointing to the Download Service System
  Required authorizations for remote user see next slide

On all systems:

- Configure applications like `SNOTE` or `LMDB` to use the Download Service locally or remotely

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SAP Support Backbone Connectivity – Download Service Activation

Required authorizations for remote user in Download Service System

inspired by role SAP_BC_SDS_TASK_USER / authorization trace using transaction STAUTHTRACE

Authorization object	Field 1	Value 1	Field 2	Value 2	Field 3	Value 3
S_RFC	RFC_TYPE	FUGR	RFC_NAME	SDS_APPLICATION STC_TM_API STC_TM_FUNCTIONS	ACTVT	16
S_RFC	RFC_TYPE	FUNC	RFC_NAME	FUNCTION_EXISTS	ACTVT	16
S_BTCH_ADM	BTCADMIN	Y				
S_BTCH_JOB	JOBACTION	RELE	JOBGROUP	' '		
S_CTS_ADMI	CTS_ADMFCT	EPS1				
S_DATASET	PROGRAM	CL_SDS_*	ACTVT	06, 33, 34	FILENAME	/usr/sap/trans/EPS/in/*
S_PROGNAM	P_ACTION	BTCSUBMIT	P_PROGNAM	STC_TM_PROCESSOR		
S_SDS_MGR	ACTVT	03, 16, 23	SDS_FUNCT	DOWNLOAD		
S_TC	ACTVT	03, 16	STC_SCN	SAP_BASIS_DOWNLOAD_SERVICE		

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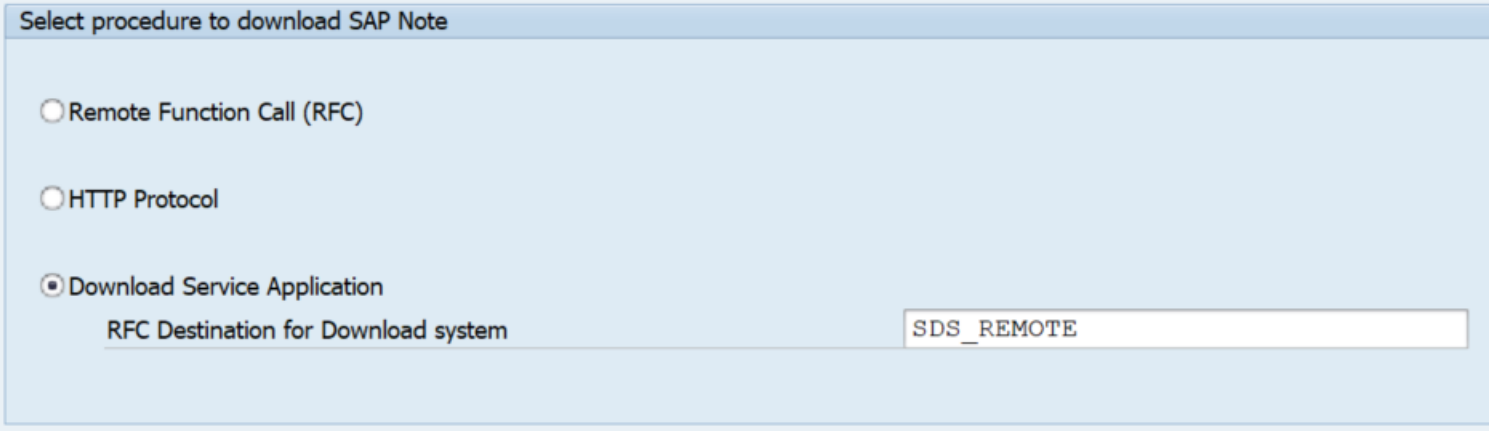
SAP Support Backbone Connectivity – Download Service Configuration for SNOTE

Use report `RCWB_SNOTE_DWNLD_PROC_CONFIG` to configure the RFC Destination:

- **In the download service system, use `NONE`**
- **In the managed systems, use the RFC connection pointing to the download service system**



If not available yet, you get this report via note 2576306 (complete via TCI) respective note 2508268 (with manual implementation steps)

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SAP Support Backbone Connectivity – Download Service Configuration for LMDB

Note 2756210 - Configuration of SAP Netweaver Download Service for LMDB Content import automation

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SAP Support Backbone Connectivity – Update of Task List

SAP NOTE 2827658 - Automated Configuration of new Support Backbone Communication - Update 02

Note 2827658 - Automated Configuration of new Support Backbone Communication - Update 02 (old note 2793641)

- **Corrected validity for 7.40**
- **Added check for DigiCert High Assurance EV Root CA certificate**
- **Updated task: 'New OSS: Create HTTPS Connections for SAP Services (SM59): in case a router string is used and the https proxy is active the host will be added to the http proxy filter list**
- **Updated task: 'Test HTTPS Connections for SAP Services (SM59)': added check for https proxy filter setting**
- **Added new task 'New OSS: Add hosts to filter in all clients with http proxy enabled (SM59)': loops over all clients and adjusts the https proxy filter in case the destination uses a router string and https proxy is active**
- **Update task 'Old OSS: Configuration of SAPOSS Connection (OSS1): Create connection SAPOSS': task set to optional**

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How to reload Message Server ACL

a) **Transaction `SMMS` → Goto → Security Settings → Access Control → Reload**
(Line length is limited in SMMS, enter multiple lines instead of long lines, see note 2383292)

b) **Own programs which calls ABAP function `MS_LOAD_ACL_INFO`**

c) **OS Command using `msmon` (use command `'HELP'` to find more commands)**

```
echo 'RELOAD_ACL_INFO' | msmon -mshost <mshost> -msserv <internal-MS-port> -expert -cmdfile -
```

d) **Same command using report `RSBDCOS0`**
Example using profile parameter variables:

```
echo 'RELOAD_ACL_INFO' | $(DIR_EXECUTABLE)$(DIR_SEP)msmon -mshost $(SAPMSHOST) -msserv $(rdisp/msserv_internal) -expert -cmdfile -
```

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How to reload Message Server ACL

If secure communication is active (profile parameter `system/secure_communication` = `ON`) then

- **Either call the reload command via the external port**

or

- **call `msmon` as `<sidadm>` to get access to the secure store**
- **add the option `-ssl secure_store` to request secure communication and**
- **use option `pf=<profile>` instead of `-mshost <mshost> -msserv <internal-MS-port>` to provide the reference to the crypto library**
- **ensure that environment variable `SECUDIR` is set**

```
SECUDIR=/usr/sap/<sysid>/<instance>/sec
```

```
echo 'RELOAD_ACL_INFO' | msmon pf=<profile> -ssl secure_store -expert -cmdfile -
```

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Notes 2362078, 2624688, 2778519 – Secure System Internal Communication

SAP recommends to activate Secure System Internal Communication by setting profile parameter `system/secure_communication = ON` in default profile `DEFAULT.PFL` for pure ABAP based systems according to note 2040644.

Minimum requirement: SAP_BASIS 7.40 SP 8 with Kernel release 742 or higher

Recommended minimal versions according to additional notes 2362078, 2624688, 2778519:

- **SAP_BASIS 7.40 SP 11**
- **Kernel release 749 with patch >= 710**
- **Kernel release 753 with patch >= 416**
- **Kernel release 773 with patch >= 121**
- **Kernel release > 773**

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Note 2813809 - SOS: Release dependent changes of the data collector

The data collectors within the managed systems of the following checks had to be revised due to release dependent changes:

- Users who are authorized to Call Function Modules for User Admin (0019)
- Users who are authorized to Disable Authorization Checks Within Transactions (0102)
- Users who are authorized to Maintain Trusted Systems (0240)
- Users who are authorized to Maintain Trusting Systems (0268)
- Users who are authorized to Activate ICF Services (0655)
- Users who are authorized to Delete Payroll Results (0951)

This issue is corrected with release 01U* (Support Package 0) of the ST-A/PI application service tools.

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Note 2838480 - SAL | Secure By Default (as of SAP_BASIS 7.54)
Note 2676384 - Best practice configuration of the Security Audit Log

Profile Parameters respective Kernel Parameters:

- **`rsau/enable = 1`**
- **`rsau/user_selection = 1`**
- **`rsau/selection_slots = 10`** (or higher)
- **`rsau/integrity = 1`** (if available according to note 2033317)
- **Target: Database** (if available)

Filters:

- **All clients `*`, user `SAP#*`: Record all events for user `SAP*`**
  The character `#` serves to mask `*` as non-wildcard.
- **All clients `*`, user <your emergency user IDs>*: Record all events**
- **Client `066`, all users *: Record all events**
- **All clients `*`, all users `*`: Record all events except events which might produce high volume `AUW`, `AU5`, `AUK`, `CUV`, `DUR`, and `EUE`.** Deactivate these events via "Detailed Display"

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August 2019

Topics August 2019

Note 2786035 - Code Injection vulnerabilities in SAP Commerce Cloud

Note 2798743 - Missing Authorization check in ABAP Debugger

Note 668256 - Using HTTP/external debugging

Note 668252 - Authorization check for HTTP/external debugging

Note 2286679 - Clickjacking Framing Protection in JAVA

SAP Support Backbone Connectivity – Check usage of destinations

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Note 2786035 - Code Injection vulnerabilities in SAP Commerce Cloud

Note 2697573 - Cross-Site Scripting (XSS) vulnerability in SAP Commerce / SAP Hybris
Solution:
SAP Hybris Commerce 6.7 or later

Note 2786035 - Code Injection vulnerabilities in SAP Commerce Cloud
Solution (software downloads for SAP Hybris Commerce):
SAP Hybris Commerce 6.3.0.31 Patch Release
SAP Hybris Commerce 6.4.0.25 Patch Release
SAP Hybris Commerce 6.5.0.22 Patch Release
SAP Hybris Commerce 6.6.0.20 Patch Release
SAP Hybris Commerce 6.7.0.18 Patch Release
SAP Commerce Cloud Patch Release 1808.13
SAP Commerce Cloud Patch Release 1811.9
SAP Commerce Cloud Patch Release 1905.1

Do not use these versions anymore because of note 2697573

These links show the patch info

Workaround: Deinstall Virtualjdbc and Mediaconversion extensions if not needed

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Note 2798743 - Missing Authorization check in ABAP Debugger

Why is the priority only “high”?

- **You need authorizations for debug-display in any case (`S_DEVELOP` with `OBJTYPE=DEBUG` and `ACTVT=03`) which should be considered as critical anyway**

- **The correction is a about a special case while debugging an update task**

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Note 668256 - Using HTTP/external debugging
Note 668252 - Authorization check for HTTP/external debugging

Debugging of RFC sessions is controlled using the dynamic profile parameter `rfc/ext_debugging`

- **0: RFC external debugging is not permitted**
- **1: RFC external debugging is only active for calls from external programs**
- **2: RFC external debugging is only active for calls from ABAP systems**
- **3: RFC external debugging is permitted [default]**

Mitigation:

- **Both users require authorizations for debug-display**
- **Authorization as choosen by parameter `abap/authority_to_catch_for_debugging` required, e.g. for `S_DEVELOP` with `OBJTYPE=DEBUG` and `ACTVT=90` is required**

➢ **Decice if you want to allow external debugging in productive systems**

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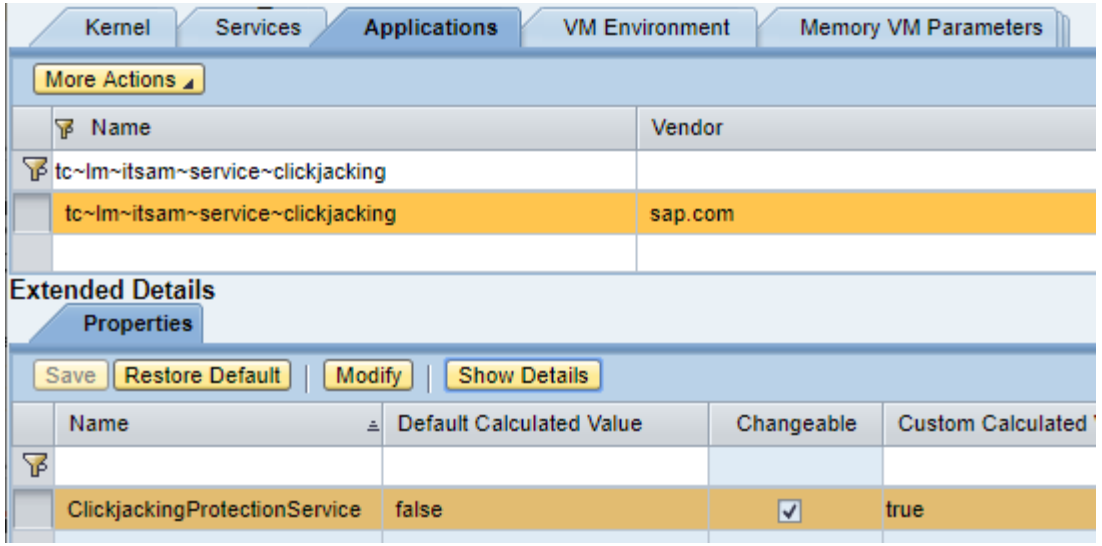
Note 2286679 - Clickjacking Framing Protection in JAVA

How to activate Clickjacking Protection

Enabling the Clickjacking Protection Service on Java systems

1. Log on to SAP NetWeaver Administrator at `http://<host>:<port>/nwa`.
2. Navigate to “Configuration → Infrastructure → Java System Properties”
3. Choose the Applications tab.
4. Search for an application named `tc~lm~itsam~service~clickjacking` and select the row.
5. Under the Properties tab, select the `ClickjackingProtectionService` property and change its value from `false` to `true`.
6. Save the configuration and restart AS Java.



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Note 2286679 - Clickjacking Framing Protection in JAVA

How to check if Clickjacking Protection is active

The new version of the note describes how to check if Clickjacking Protection is active on a Java server:

URL: `http[s]://<host>:<port>/sap.com~tc~lm~itsam~servlet~clickjacking/check`

Result:

```
{"version" : "1.0","active" : false, "status" : "OFF"}

{"version" : "1.0","active" : true, "origin" : "null","framing" : false}
```

Several UI Framework use this feature (see Online Help):

- Note 2169860 - Web Dynpro JAVA (WDJ)
- Note 2169722 - Enterprise Portal (iViews)
- Note 2290783 - Java Server Pages (JSP)

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Note 2286679 - Clickjacking Framing Protection in JAVA

How to check if Clickjacking Protection is active

Application Configuration Validation does not know about this setting:

Transaction `CCDB` → Cross Selection → Search for values/patterns:

However,

Name = `tc~lm~itsam~service~clickjacking`

or

Element Pattern = `ClickjackingProtectionService`

does not show results.

Update April 2021:

In the meantime you will find Configuration Store "Clickjacking" showing this Configuration Item

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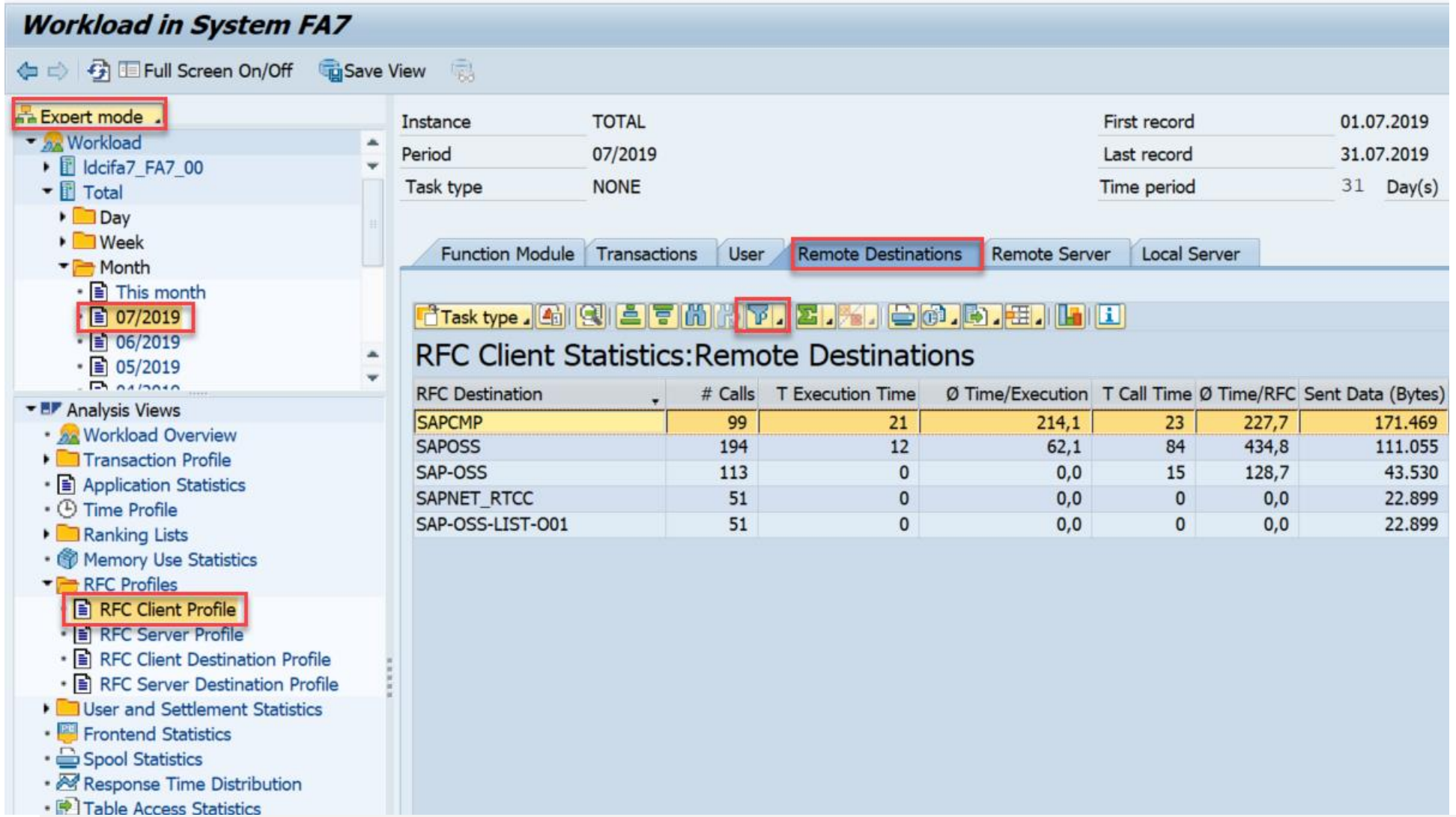
SAP Support Backbone Connectivity

Check usage of RFC Destinations



Transaction `ST03N` shows the usage of RFC Destinations

→

Ensure that none of these destinations are still in use

Filter for destinations:

`SAPCMP`
`SAPOSS`
`SAP-OSS`
`SAPNET_RTCC`
`SAP-OSS-LIST-O01`

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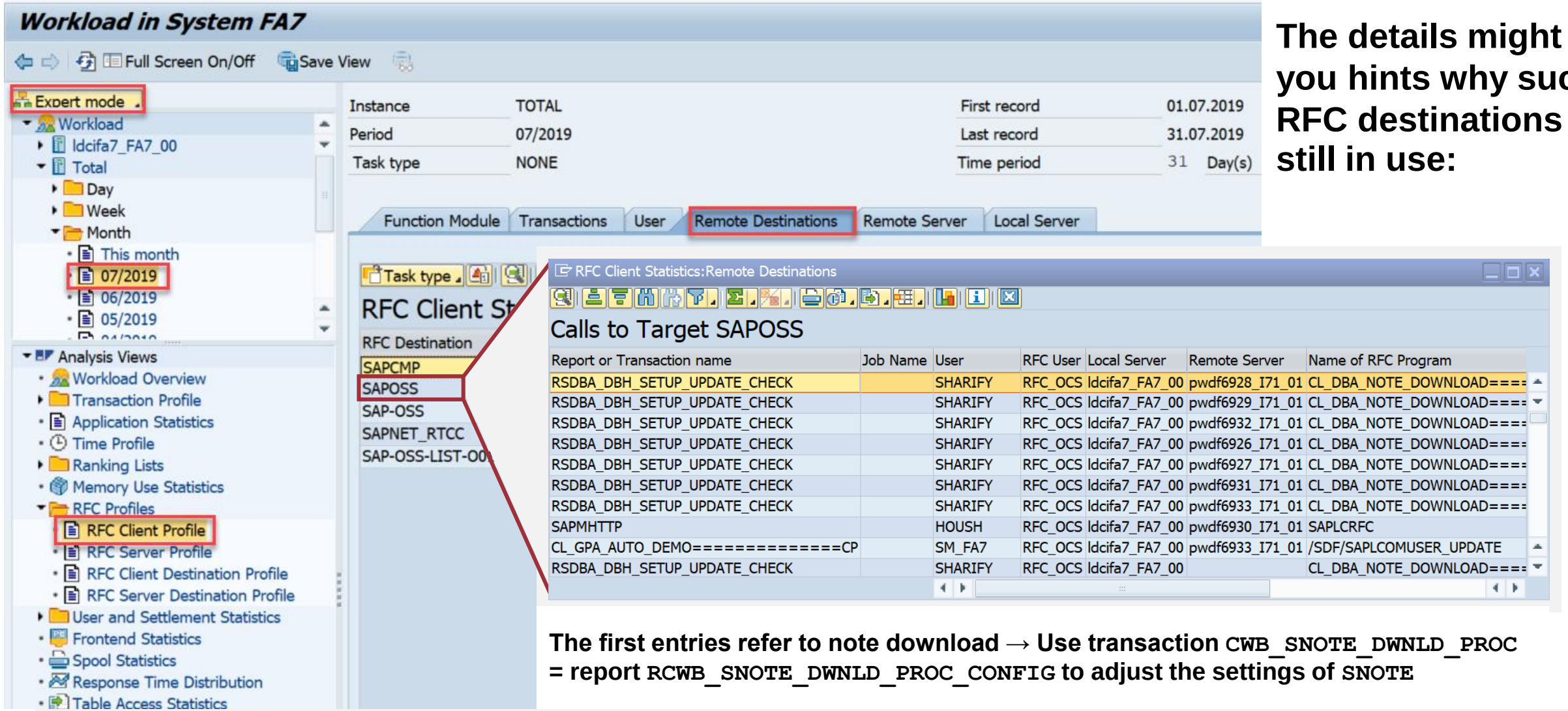
SAP Support Backbone Connectivity
Check usage of RFC Destinations



The details might give you hints why such RFC destinations are still in use:

The first entries refer to note download → Use transaction `CWB_SNOTE_DWNLD_PROC` = report `RCWB_SNOTE_DWNLD_PROC_CONFIG` to adjust the settings of `SNOTE`

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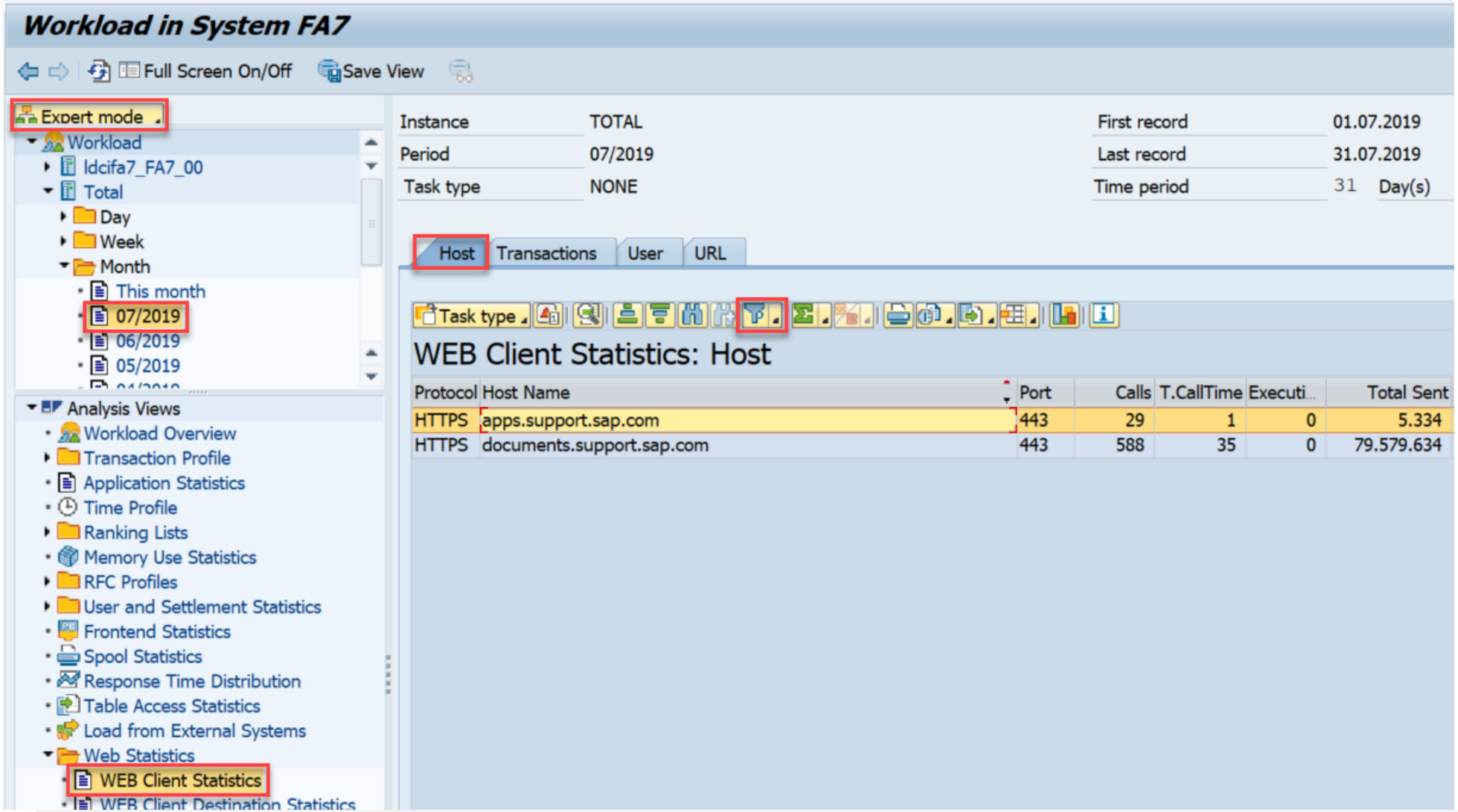
SAP Support Backbone Connectivity
Check usage of Webservice



Transaction `ST03N` shows the usage of Webservices

→

Check that the new webservices are used

Filter for host:
`*support.sap.com`

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July 2019

Topics July 2019

Note 2808158 - OS Command Injection vulnerability in SAP Diagnostics Agent

Note 2812152 - Update 1 to Security Note 2643447

Note 2774742 - Cross-Site Scripting (XSS) vulnerability in ABAP Server and ABAP Platform

Note 2738791 - Information disclosure in SAP NetWeaver AS Java (Startup Framework)

Security Audit Log as of 7.50

The intermediate Support Backbone Update Guide

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Note 2808158 - OS Command Injection vulnerability in SAP Diagnostics Agent

Updated by note 2839864

The SAP Diagnostics Agents get patched by a special procedure on the SolMan describe here:

Note 2686969 - Upgrading the LM-SERVICE Patch Level

Do you have additional manual work to do?

“*Since the number of allowed control characters has been reduced, it should be checked if all used commands still work, especially those manually added to the commands.xml.”*

→ If you do not know what this is about, you most likely do not need to do anything, however, this may be an opportunity to validate existing set of allowed OS commands which can be executed via the Diagnostics Agent.

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Note 2808158 - OS Command Injection vulnerability in SAP Diagnostics Agent

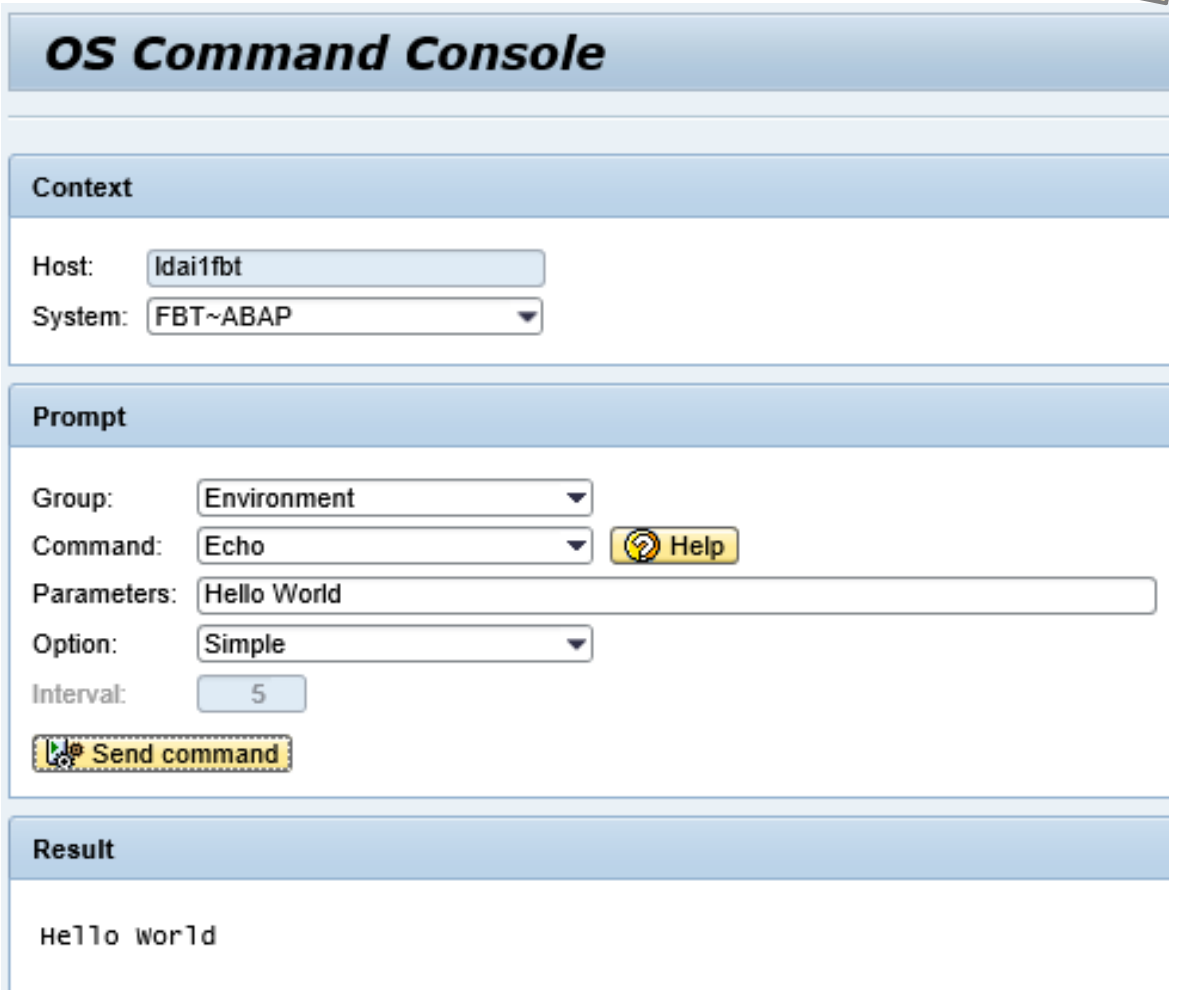
Updated by note 2839864

How-to execute OS commands?

Root Cause Analysis Workcenter
→ OS Command Console

Which allowed commands are available?

SAP Solution Manager Administration Workcenter
→ Agents Administration
→ Agent Admin
→ Choose tab „Applications Configuration“
→ `com.sap.smd.agent.application.remoteos`
→ Application Resources
→ `commands.xml`



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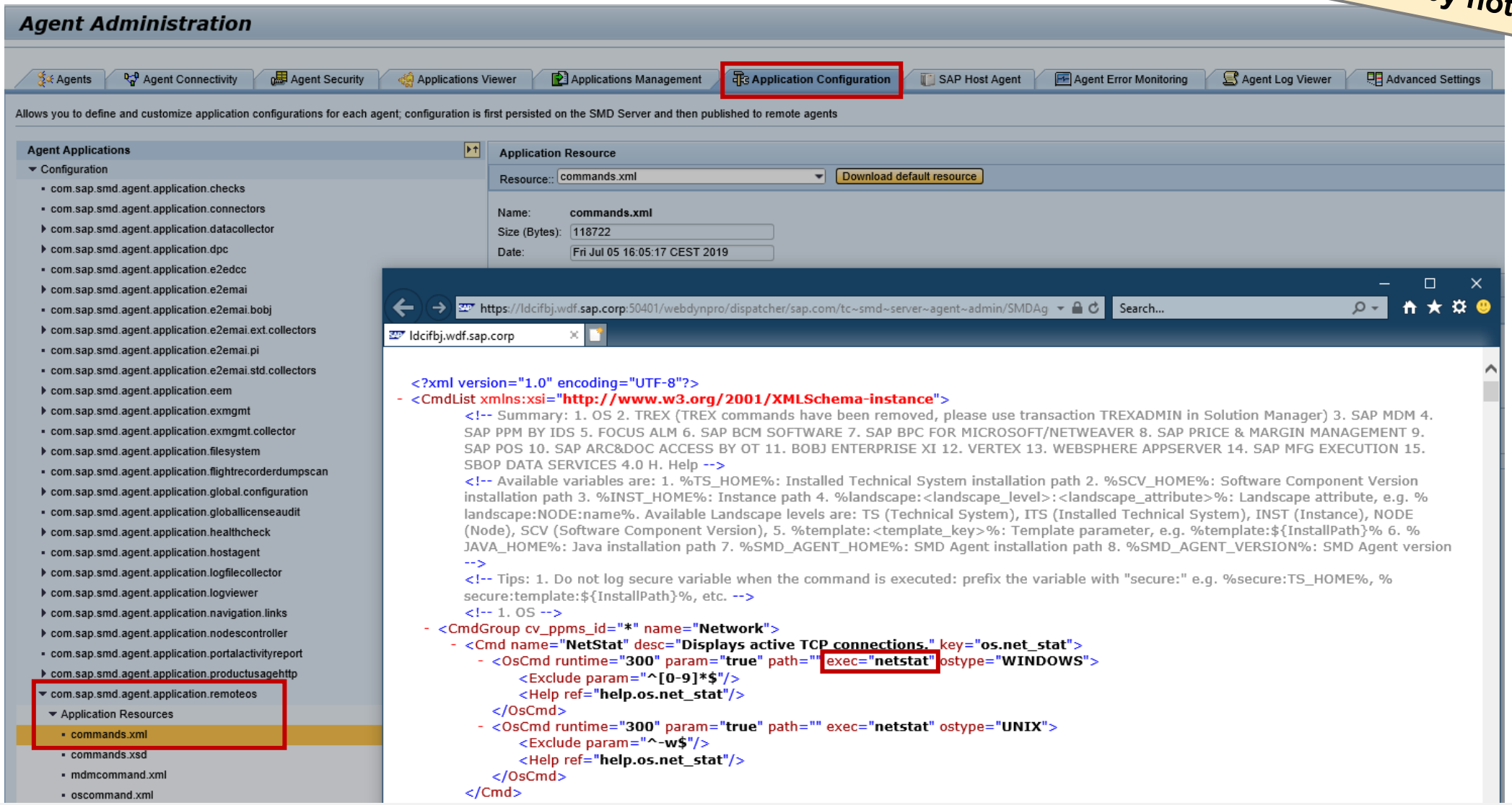
Note 2808158 - OS Command Injection vulnerability in SAP Diagnostics Agent

Updated by note 2839864



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Note 2812152 - Update 1 to Security Note 2643447

Side effect solving note, which is required if you install respective have installed note 2643447 via SNOTE

Note	Case 1	Case 2	Case 3	Case 4	Case 5
2643447	Cannot be implemented	Can be implemented	Can be implemented	Completely implemented	Completely implemented
2812152	Cannot be implemented	Can be implemented	Cannot be implemented	Can be implemented	Cannot be implemented
Conclusion	Nothing to do	Implement note 2812152 which loads note 2643447 to solve security vulnerability	Implement note 2643447 to solve security vulnerability	Implement note 2812152 to avoid syntax error	Nothing to do

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Note 2774742 - Cross-Site Scripting (XSS) vulnerability in ABAP Server and ABAP Platform

The note implements secure default configuration in SAP_BASIS 7.51, 7.52, 7.53
but keeps insecure default in SAP_BASIS 7.00, 7.01, 7.10, 7.11, 7.20, 7.30, 7.31, 7.40, 7.50.

If you are using SAP Content Management (see `SICF` path `/sap/bc/contentserver`)
and want to activate secure configuration in old releases you need to execute both manual activities:

1. The manual pre-implementation about modifying value range of DDIC domain `SDOK_PFNAM` enables you to maintain the setting (transportable). You can install a Support Package instead.

2. The manual post-implementation about maintaining table `SDOKPROF` using `SE16` describes how to enter either insecure value `inline` (a file is displayed directly in the browser) or secure value `attachment` (the browser shows a download popup).
As there is no automatic transport, use `SE16` to add the entry on a workbench transport manually. This step is required even if you install a Support Package.

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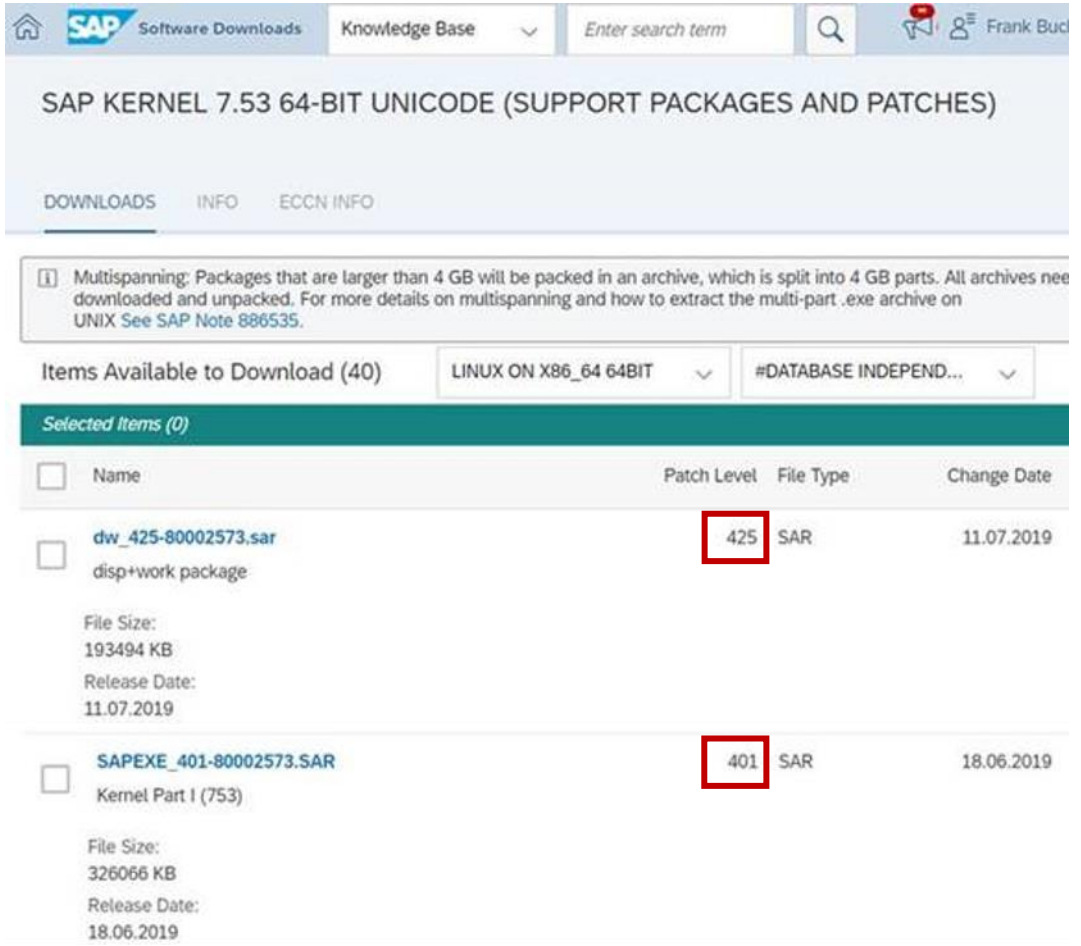
Note 2738791 - Information disclosure in SAP NetWeaver AS Java (Startup Framework)

Java systems run with parts of the Kernel.

The note refers to „SAP java startup / jstart“ which is part of the disp+work package.

The correction described by the note is part of e.g. Kernel 7.53 patch 410.

You cannot get a whole Kernel with at least this patch level (currently you find patch 401 for package `SAPEXE.SAR`), however, you can use the disp+work package (`dw.sar` currently show patch 425).



Depending on current setting of parameter `jstart/TRACE` you might consider to delete old trace files `/usr/sap/DAA/SMD*/work/dev_jstart*`, too.

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Security Audit Log as of 7.50
Transaction SM19 vs. RSAU_CONFIG

Note 2191612 - FAQ | Use of Security Audit Log as of SAP NetWeaver 7.50

1. Can transactions SM18, SM19, and SM20 still be used in parallel with RSAU_CONFIG, RSAU_READ_LOG, and RSAU_ADMIN?

…we recommend against mixed usage, since the settings for the new functions are not detectable in the old environment and - particularly in SM18 and SM19 - are ignored or accidentally overwritten.

Tip: Use transaction SM01_CUS in 000 clients to lock the "old" applications once you have switched to the current concept.

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Security Audit Log as of 7.50
Important corrections

Configuration:

Note 2663455 - RSAU_CONFIG | Corrections and functional enhancements
(correction for SNOTE respective SP for SAP_BASIS 7.50 SP 14, 7.51 SP 8, 7.52 SP 4, 7.53 SP 1)

Note 2743809 - RSAU_CONFIG | Optimization of screen sequence
(correction for SNOTE respective SP for SAP_BASIS 7.50 SP 15, 7.51 SP 8, 7.52 SP 4, 7.53 SP 2)

Reporting:

Note 2682603 - RSAU_INFO_SYAG | Incomplete display of active events
(correction for SNOTE respective SP for SAP_BASIS 7.50 SP 14, 7.51 SP 8, 7.52 SP 3, 7.53 SP 1)

Note 2682072 - RSAU_READ_LOG - error in selection with filter
(correction for SNOTE respective SP for SAP_BASIS 7.50 SP 14, 7.51 SP 7, 7.52 SP 3, 7.53 SP 1)

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The intermediate Support Backbone Update Guide
Overview

Connectivity to SAP's Support Backbone
https://support.sap.com/backbone-update

Support Backbone Update Guide (html / pdf)

Digitally Signed SAP Notes
https://support.sap.com/en/my-support/knowledge-base/note-assistant.html

Note 2537133 for FAQs on Digitally Signed SAP Notes
Webinar replay
Click here to view the presentation
Cheat Sheet for enabling SNOTE for Digitally Signed SAP Notes and for TCI

and (among others)

Note 2174416 - Creation and activation of users in the Technical Communication User app
Note 2740667 - RFC connection SAPOSS to SAP Service & Support backbone
Note 2738426 - Automated Configuration of new Support Backbone Communication

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The intermediate Support Backbone Update Guide
Enable SNOTE for Digitally Signed Notes and for https communication

Concerning the Note Assistant, transaction SNOTE, several steps are required:

1. **Get updated software (main part from September 2017) plus some smaller updates (notes 2603877, 2632679, 2721941, 2813264, …)**
2. **Request technical S-users via User for Support Hub Communication application and wait for 1 day**
   (preferred: 1 user per system; acceptable: 1 user per system line DEV-TST-PRD; not recommended: 1 user per installation or per customer number)
3. **Adjust destinations**
   a) **Up to release 7.31, replace generic user OSS_RFC with specific technical S-user in RFC Destinations SAPOSS, etc. as described in note 2740667**
   b) **As of release 7.40, adjust RFC Destinations SAPOSS, etc. and create http destinations SAP-SUPPORT_PORTAL, SAP-SUPPORT_PARCELBOX, SAP-SUPPORT_NOTE_DOWNLOAD as described in note 2827658** (which replace old **notes 2793641 and** 2738426)

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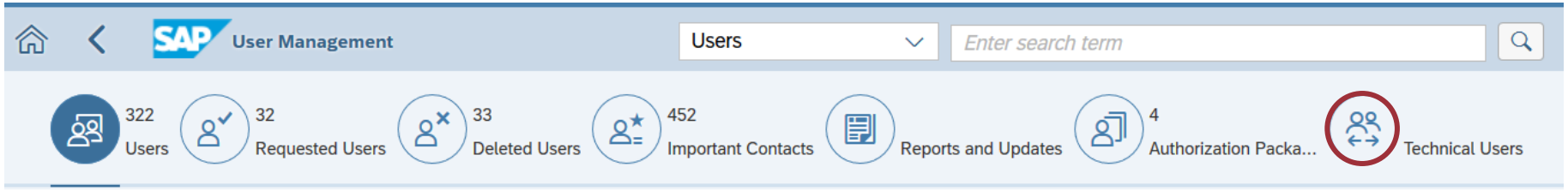
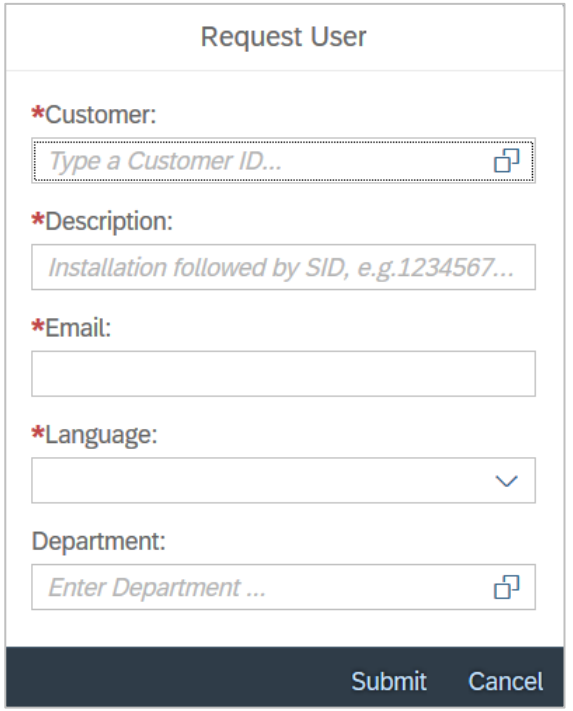
The intermediate Support Backbone Update Guide
Request Technical Communication User

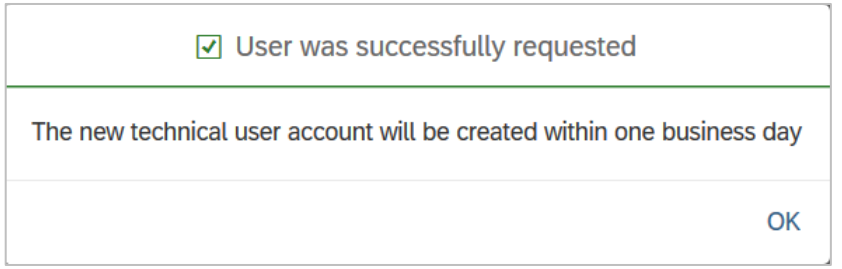


Request Technical Communication User on SAP Support Portal

Proposed naming: <installation number>_<system id>

https://launchpad.support.sap.com/#/user/management
→ https://launchpad.support.sap.com/#/techuser





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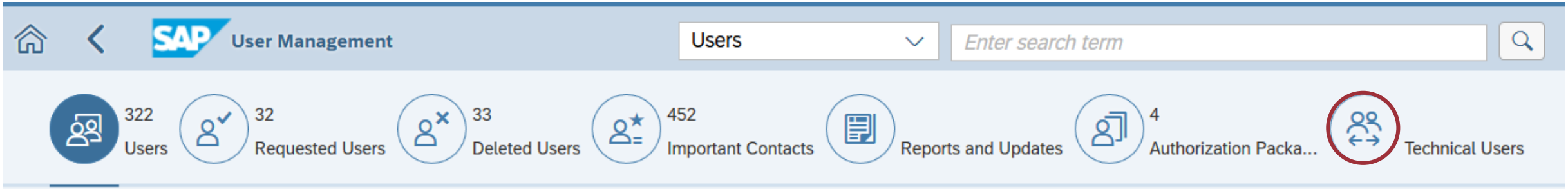
The intermediate Support Backbone Update Guide

Bonus: Note 2805811 - Enable client certificate authentication for tech. users

SAP Support Portal User Management - Technical Communication User Application

The Technical Communication User application allows you to administer user IDs used in system-to system connections between your company's landscape (most commonly in your SAP Solution Manager) and the SAP Support backbone. This application has now been enhanced and integrated into the User Management application.



Like before, you can request new users and activate them, delete existing ones, or change their passwords. In addition, if you want to exchange data with the SAP Support infrastructure using client certificate authentication, you can now generate SAP Passports for technical communication users (optional). This way you avoid the need to manage passwords.

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The intermediate Support Backbone Update Guide

(Partly) Automated Configuration of new Support Backbone Communication

SAP NOTE 2827658 - Automated Configuration of new Support Backbone Communication - Update 02

Note 2738426 - Automated Configuration of new Support Backbone Communication
Version 13 from 08.07.2019
For new implementation and update of existing task list:
Please jump directly to “SAP NOTE 2793641 - Automated Configuration of new Support Backbone Communication - Update 01 and follow instructions to implement SAP Note/TCI.

Note 2793641 - Automated Configuration of new Support Backbone Communication - Update 01
Version 3 from 08.07.2019

1. **Implement the TCI of note 2793641 with transaction `SNOTE`**
2. **Install certificates into transaction `STRUST`**
3. **Execute task list 'New OSS Communication’ via transaction `STC01` with adjusted settings**
4. **Check destinations using report `RSRFCCHK`**
5. **Switch `SNOTE` to using https instead of RFC**
6. **Verify that you can download digitally singed notes via https**

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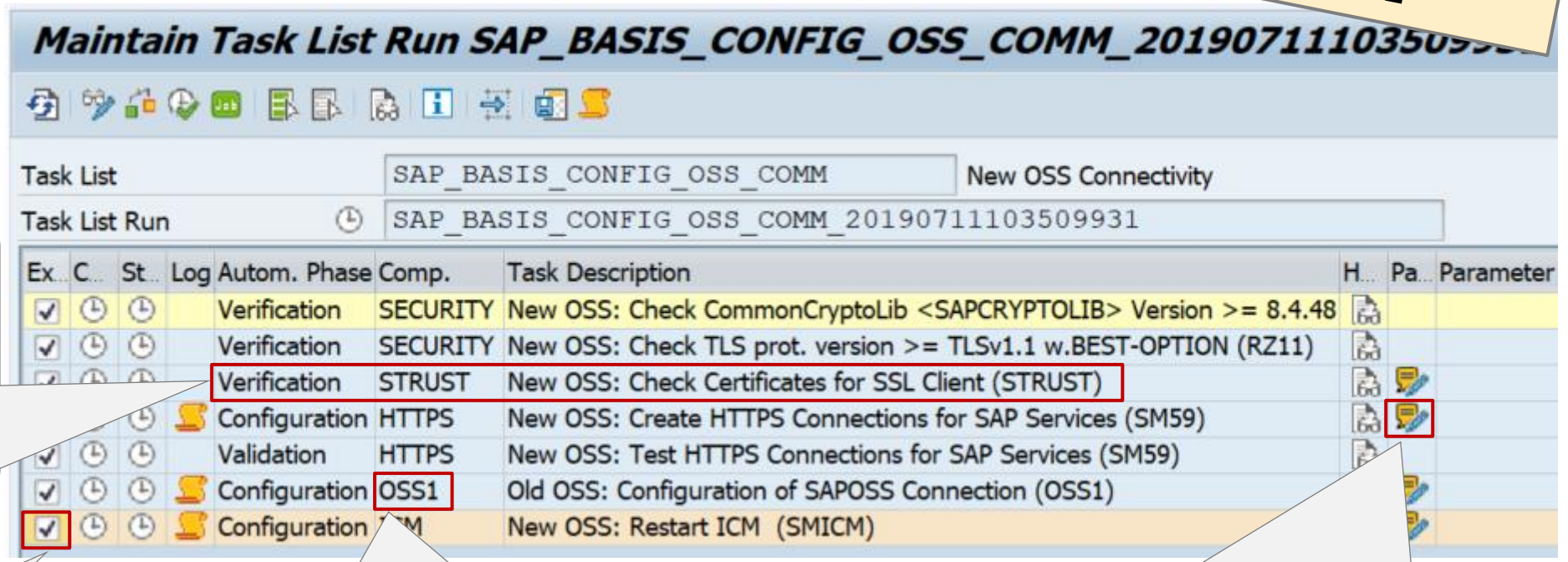
The intermediate Support Backbone Update Guide

Note 2793641 – (Partly) Automated Configuration

SAP NOTE 2827658 - Automated Configuration of new Support Backbone Communication - Update 02

Transaction STC01 for task list SAP_BASIS_CONFIG_OSS_COMM

Preparation: Manual activity to find and download the required certificates which you then upload into transaction STRUST



Restart ICM, too

This step is useless, as you do not want to use old RFC destinations anyway (and you would have to change the user afterwards as well).

Enter user credentials of Technical Communication User, scroll down and activate all three checkboxes „Overwrite existing destination“

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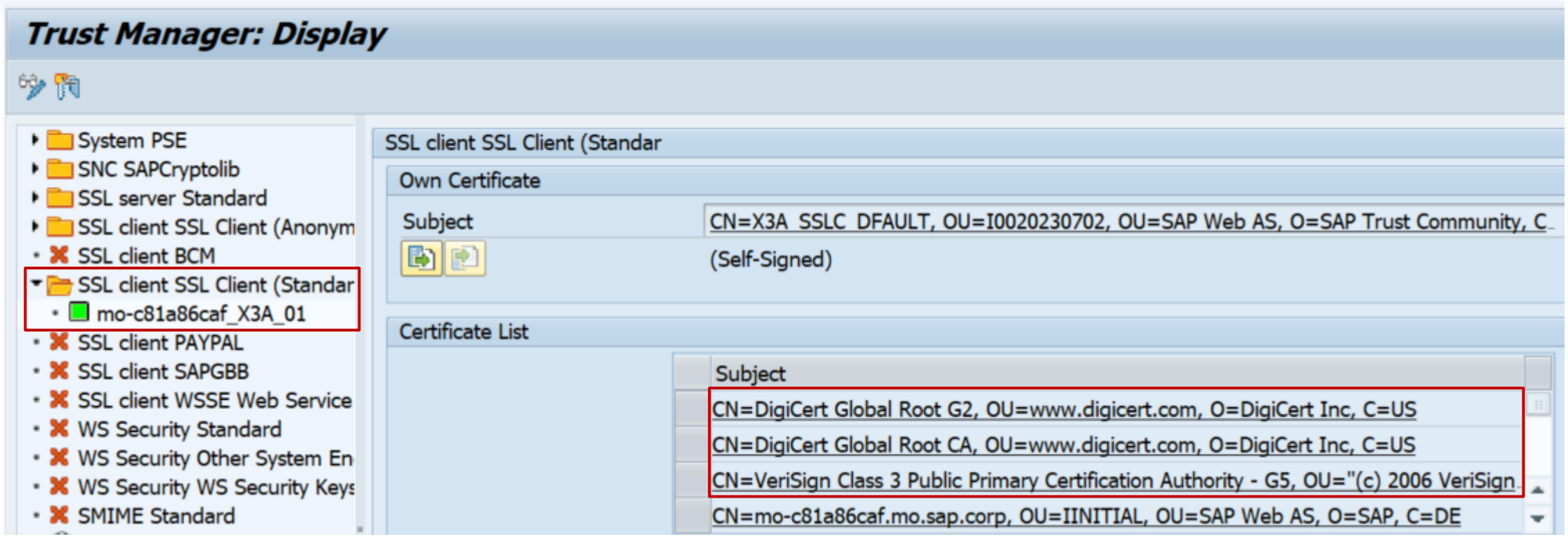
The intermediate Support Backbone Update Guide

Note 2793641 – (Partly) Automated Configuration

SAP NOTE 2827658 - Automated Configuration of new Support Backbone Communication - Update 02

Transaction `STRUST` for PSE „SSL-Client (Standard)“

You can get these certificates via note 2620478 - Download Service: Trust anchor certificates required for software downloads



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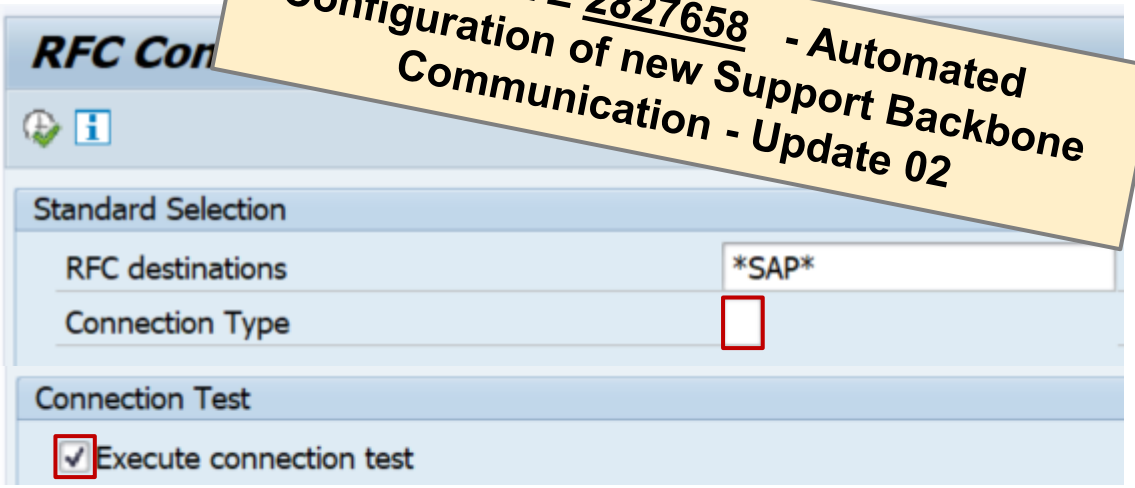
The intermediate Support Backbone Update Guide

Note 2793641 – (Partly) Automated Configuration

SAP NOTE 2827658 - Automated Configuration of new Support Backbone Communication - Update 02

Check adjusted SAP destinations using report `RSRFCCHK` (clear field ‚Connection Type')



The new destinations got the new settings:

`SAP-SUPPORT_NOTE_DOWNLOAD`
`SAP-SUPPORT_PARCELBOX`
`SAP-SUPPORT_PORTAL`

Destination `SAPOSS` still got generic user `OSS_RFC` and you have to adjust the other destinations `SAP-OSS`, `SAP-OSS-LIST-O01`, and `SAPNET_RTCC` by yourself also:

Connection type	RFC Destination	Target host	User or Alias	Password
ABAP Connections	SAP-OSS	OSS 1_PUBLIC /H/147.204.2.5/S/sapdp99/H/oss001	S0011331137	Password saved
	SAP-OSS-LIST-O01	OSS 1_PUBLIC /H/147.204.2.5/S/sapdp99/H/oss001	S0011331137	Password saved
	SAPNET_RTCC	OSS EWA /H/147.204.2.5/S/sapdp99/H/oss001	ST14_RTCC	Password saved
	SAPOSS	OSS EWA /H/147.204.2.5/S/sapdp99/H/oss001	OSS_RFC	Password saved
HTTP Connections to External Ser	SAP-SUPPORT_NOTE_DOWNLOAD	notesdownloads.sap.com	S0019841862	Password saved
	SAP-SUPPORT_PARCELBOX	documents.support.sap.com	S0019841862	Password saved
HTTP Connections to ABAP System	SAP-SUPPORT_PORTAL	apps.support.sap.com	S0019841862	Password saved

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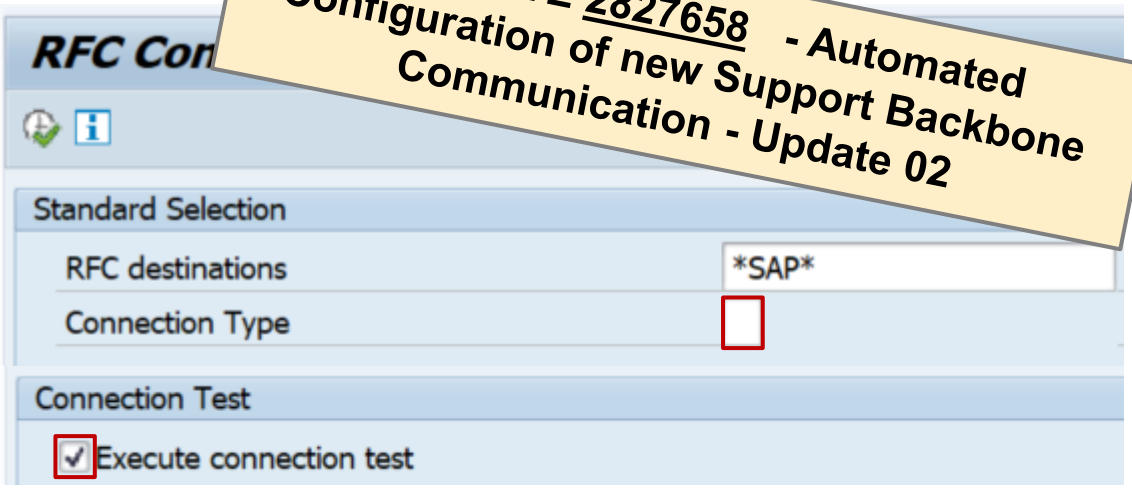
The intermediate Support Backbone Update Guide

Note 2793641 – (Partly) Automated Configuration

SAP NOTE 2827658 - Automated Configuration of new Support Backbone Communication - Update 02

Check adjusted SAP destinations using report `RSRFCCHK` (clear field ‚Connection Type‘)



The connection test of the destination `SAP-SUPPORT_NOTE_DOWNLOAD` returns http code 404 - not found.

Nevertheless, the connection is ok, to download notes

Connection type	RFC Destination	Target host	Connection Test	Logon Status
ABAP Connections	SAP-OSS	OSS 1_PUBLIC /H/147.204.2.5/S/sapdp99/H/oss001	✔	Connection test with logon was successful
	SAP-OSS-LIST-O01	OSS 1_PUBLIC /H/147.204.2.5/S/sapdp99/H/oss001	✔	Connection test with logon was successful
	SAPNET_RTCC	OSS EWA /H/147.204.2.5/S/sapdp99/H/oss001	✔	Connection test with logon was successful
HTTP Connections to External Ser	SAP-SUPPORT_NOTE_DOWNLOAD	notesdownloads.sap.com	✔	(HTTP: 404) Not Found
	SAP-SUPPORT_PARCELBOX	documents.support.sap.com	✔	(HTTP: 200)
HTTP Connections to ABAP System	SAP-SUPPORT_PORTAL	apps.support.sap.com	✔	(HTTP: 200) OK

ok

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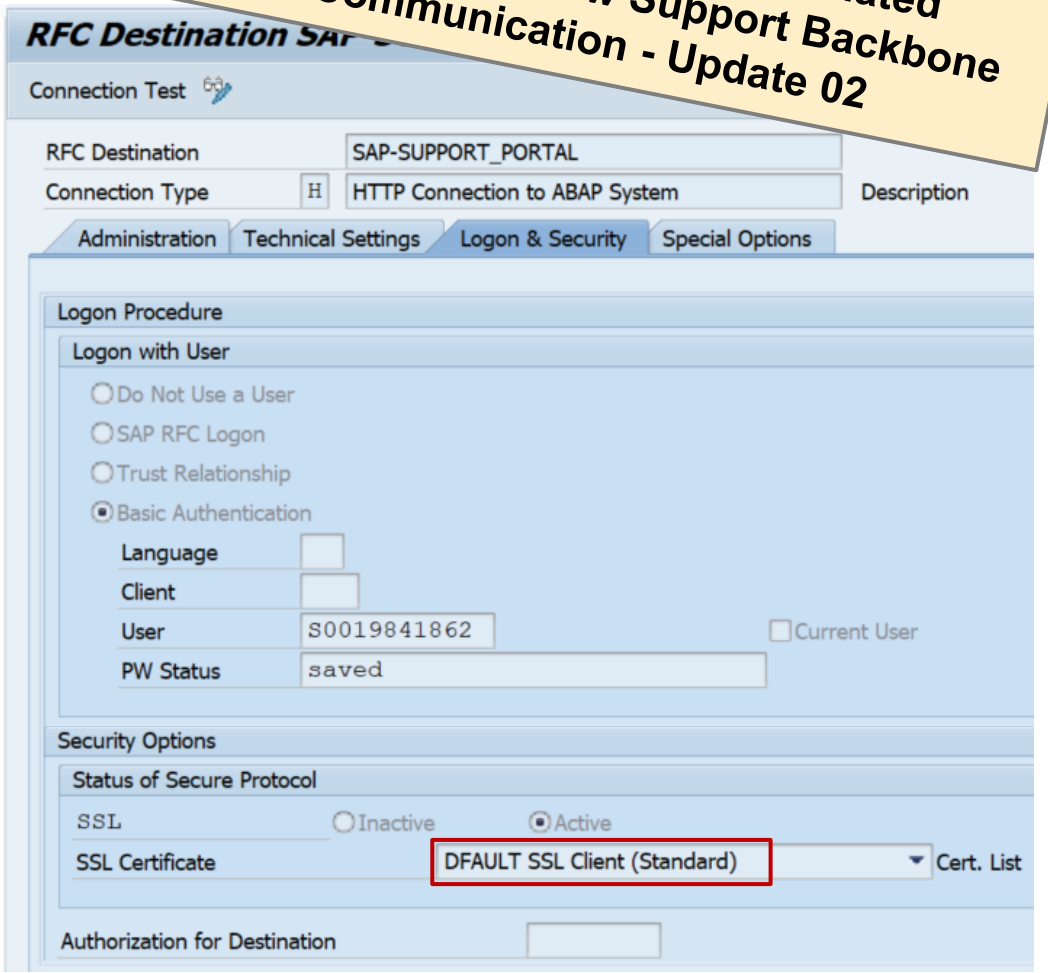
The intermediate Support Backbone Update Guide

Note 2721941 - Download of digitally signed note via

SAP NOTE 2827658 - Automated Configuration of new Support Backbone Communication - Update 02

You can observe that the automated task list creates destinations pointing to PSE „SSL Client (Standard)“ – this is the reason why it‘s necessary to import the CA certificates into this PSE.

You can define the destinations pointing to PSE „SSL Client (Anonymous)“, as well (which might be a more logical definition because the client certificate is not used anyway). In this case you have to import the CA certificates into this PSE.



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The intermediate Support Backbone Update Guide

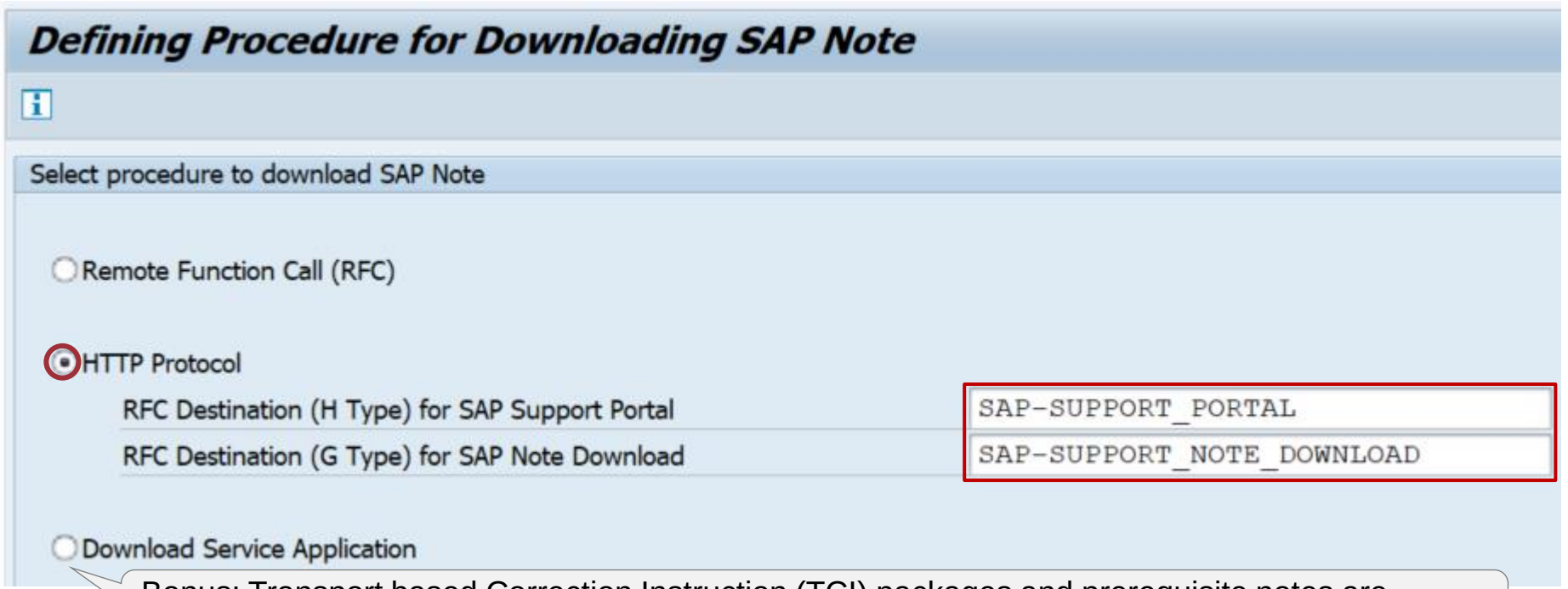
Note 2721941 - Download of digitally signed note via

SAP NOTE 2827658 - Automated Configuration of new Support Backbone Communication - Update 02

Finally you switch `SNOTE` from using RFC to connecting via

Transaction `CWB_SNOTE_DWNLD_PROC` = Report `RCWB_SNOTE_DWNLD_PROC_CON`

Enter the new destinations `SAP-SUPPORT_PORTAL` and `SAP-SUPPORT_NOTE_DOWNLOAD`



Bonus: Transport based Correction Instruction (TCI) packages and prerequisite notes are downloaded automatically via remote access to Download Service of SAP Solution Manager 7.2

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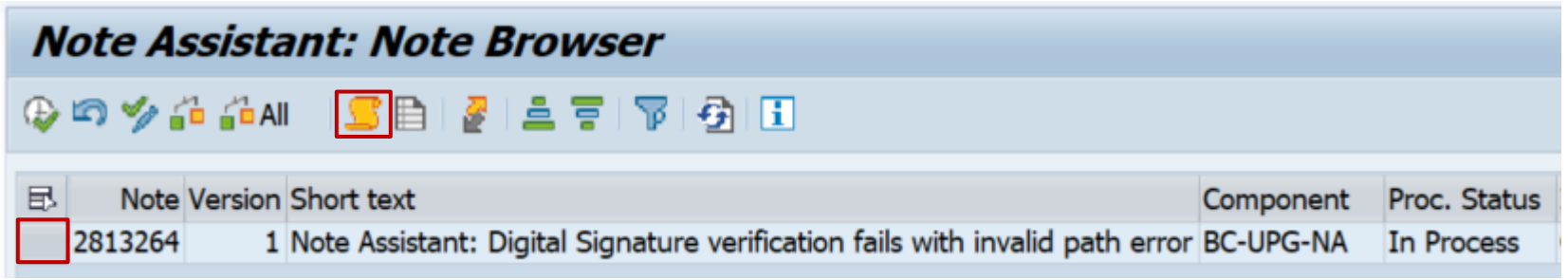
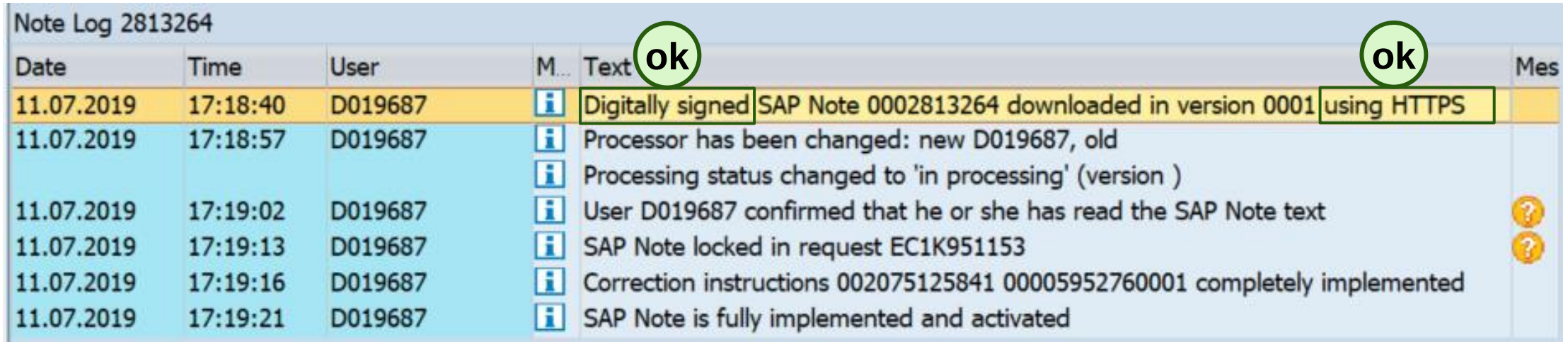
The intermediate Support Backbone Update Guide
Verification

Use `SNOTE` to download and install a note, then check the log:





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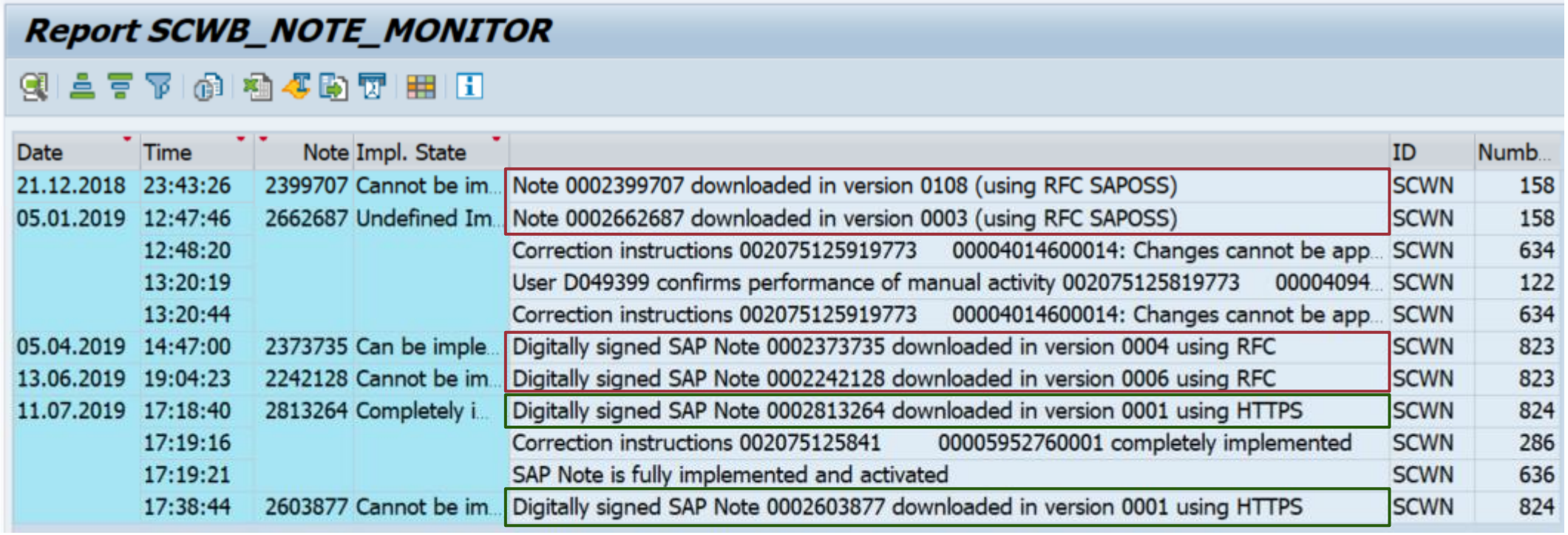
The intermediate Support Backbone Update Guide
Verification

You can use report `SCWB_NOTE_MONITOR`, too:

Msg. 158	**Note … downloaded in version … (using RFC SAPOSS)**	**very old**
Msg. 823	**Digitally signed SAP Note … downloaded ... using RFC**	**old**
Msg. 824	**Digitally signed SAP Note … downloaded ... using HTTP**	**ok**
Msg. 825	**Digitally signed SAP Note … downloaded ... using download service**	**ok**



Date	Time	Note	Impl. State		ID	Numb...
21.12.2018	23:43:26	2399707	Cannot be im...	Note 0002399707 downloaded in version 0108 (using RFC SAPOSS)	SCWN	158
05.01.2019	12:47:46	2662687	Undefined Im...	Note 0002662687 downloaded in version 0003 (using RFC SAPOSS)	SCWN	158
	12:48:20			Correction instructions 002075125919773 00004014600014: Changes cannot be app...	SCWN	634
	13:20:19			User D049399 confirms performance of manual activity 002075125819773 00004094...	SCWN	122
	13:20:44			Correction instructions 002075125919773 00004014600014: Changes cannot be app...	SCWN	634
05.04.2019	14:47:00	2373735	Can be imple...	Digitally signed SAP Note 0002373735 downloaded in version 0004 using RFC	SCWN	823
13.06.2019	19:04:23	2242128	Cannot be im...	Digitally signed SAP Note 0002242128 downloaded in version 0006 using RFC	SCWN	823
11.07.2019	17:18:40	2813264	Completely i...	Digitally signed SAP Note 0002813264 downloaded in version 0001 using HTTPS	SCWN	824
	17:19:16			Correction instructions 002075125841 00005952760001 completely implemented	SCWN	286
	17:19:21			SAP Note is fully implemented and activated	SCWN	636
	17:38:44	2603877	Cannot be im...	Digitally signed SAP Note 0002603877 downloaded in version 0001 using HTTPS	SCWN	824

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June 2019

Topics June 2019

How to get rid of Act Now! (if already done…)

Note 2070691 - Potential information disclosure relating to database server file system

Note 2748699 - Information Disclosure in Solution Manager 7.2 / CA Introscope Enterprise

Note 1997734 - Missing authorization check in RFC runtime

Note 2730227 - Missing Authorization Check in SAP Central Payment

RFC Gateway on Java

RFC Gateway and Message Server – Logging and Monitoring

ETD for RFC Gateway and Message Server Monitoring

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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How to get rid of Act Now! (if already done…)

The Support Portal shows a message box for all notes having ABAP correction instructions:

Act Now! SAP Notes Download and Upload Process Impacted. From January 1, 2020, the download and upload process **will stop working** unless Note Assistant (SNOTE transaction) is enabled in ABAP systems to work with digitally signed SAP Notes. Learn more about actions required from your side on the SAP Support Portal page for Digitally Signed SAP Notes. To understand the overall impact of the SAP Support Backbone update, refer to SAP Support Portal.

How to get rid of Act Now! If already done?

- **Use AdBlock rules which remove elements from a page** (you might need more entries)**:**

```
DIV[id="__xmlview2--idOSSRetiredMsg"]
DIV[id="__jsview3--idforRetireOSS"]
```

- **Use a TamperMonkey Script, which e.g. inserts a global CSS style to hides the elements**

```
$('head').append('<style type="text/css">#__xmlview2--idOSSRetiredMsg,
#__jsview3--idforRetireOSS { display: none; }</style>');
```

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How to get rid of Act Now! (if already done…)

TamperMonkey Script

```
// ==UserScript==
// @name         Hide_OSSRetiredMsg
// @namespace    http://tampermonkey.net/
// @version      1.0
// @description  Remove "Act Now! SAP Notes Download and Upload Process Impacted."
// @author       Frank Buchholz, SAP SE
// @match        https://launchpad.support.sap.com/
// @grant        none
// ==/UserScript==

function addGlobalStyle(css) {
    var head, style;
    head = document.getElementsByTagName('head')[0];
    if (!head) { return; }
    style = document.createElement('style');
    style.type = 'text/css';
    style.innerHTML = css;
    head.appendChild(style);
}

addGlobalStyle('#__xmlview2--idOSSRetiredMsg, #__jsview3--idforRetireOSS { display: none; }');
```

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Note 2070691 - Potential information disclosure relating to database server file system

The original version 4 of note 2070691 didn't covered all releases and introduced a side-effect error which is solved in note 2708068. The new version 6 contains the same solution and covers all relevant releases.

You can install one of both notes to get the same solution (which is e.g. part of ST-PI 7.40 SP 11)

Note	Version	Short text	Component ID	Status	Implementation Stat.
2070691	6	Potential information disclosure relating to database server file system	SV-SMG-SDD	new	Can be implemented
2708068	3	2070691 encoutered error message unable to find delivery event	SV-SMG-SDD	new	Can be implemented

SP available as of mid of June

If you install one of the notes,

Co...	Status	Obj. Type	Object		Message Text
☑		FUNC	/SDF/SADV_SHOW_DBA_PROFILE_LOG		Changes can be applied
☑		FUNC	/SDF/SORA_SAPDBA_SXPG		Changes can be applied

SNOTE will state, that there is no need to install the other one:

Co...	Status	Obj. Type	Object		Message Text
☑		FUNC	/SDF/SADV_SHOW_DBA_PROFILE_LOG		All changes already exist
☑		FUNC	/SDF/SORA_SAPDBA_SXPG		All changes already exist

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Note 2748699 - Information Disclosure in Solution Manager 7.2 CA Introscope Enterprise Manager

Procedure:

1. **Apply patch of note 2748699 on SAP Solution Manager (and check note 1579474)**
2. **Apply patch of related notes 2534316 (for Introscope 10.5) respective 2285189 (for Introscope 10.1) depending on the installed version**
3. **Change password of user `SM_EXTERN_WS` (respective the user which you have designated for this purpose) in the SAP Solution Manager via transaction `SOLMAN_SETUP` → "Cross Scenario Configuration" → "Mandatory Configuration" → "System Preparation" → "Maintain Technical Users"; Use Case ID is `SM_EXTERN_WS` (Do not use transaction `SU01`)**
4. **Push configuration in SAP Solution Manager to managed systems via transaction `SOLMAN_SETUP` → "Cross Scenario Configuration" → "Mandatory Configuration" → "Basic Configuration" → "Configure Basic Functions" → execute task "Push DPC Configuration to CA Introscope"**

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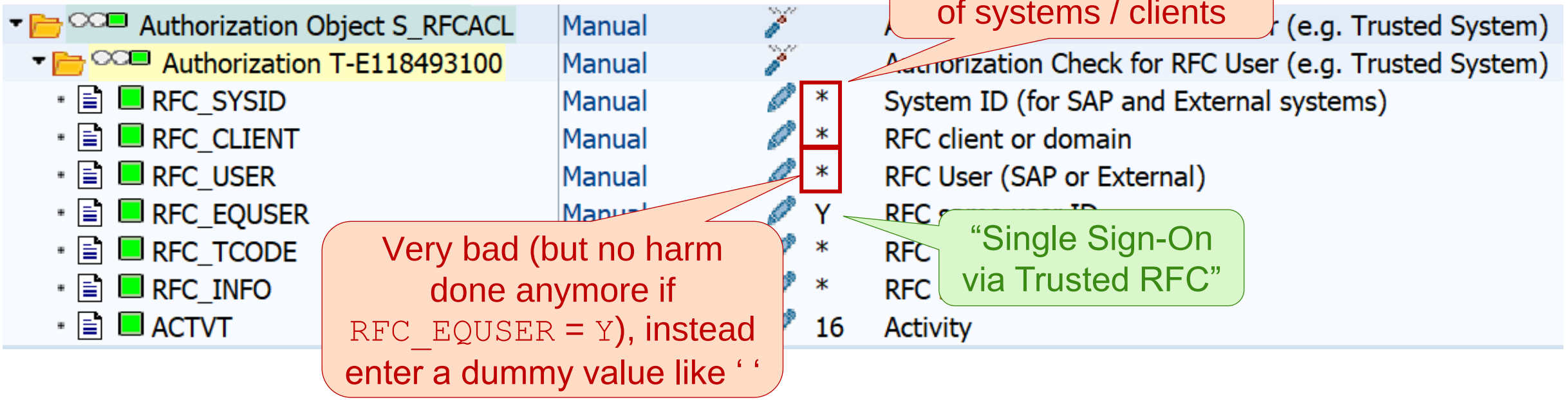
Note 1997734 - Missing authorization check in RFC runtime

With this correction from 2015 you could be a little bit more lazy in case of scenario "Single Sign-On via Trusted RFC" concerning authorizations for `S_RFCACL` field `RFC_USER` … but it's still recommended to work with strict authorizations:



The SOS still reports authorizations with `RFC_USER` = * as "not compliant" (independent from the value of `RFC_EQUSER`).

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Note 2730227 - Missing Authorization Check in SAP Central Payment

Note 2730227 - Missing Authorization Check in SAP Central Payment

⇔ (required / is relevant only if)

Note 2651431 - Central Payment: Historical Open Items – Ensuring Payment and Clearing Takes Place in the Source System (Source Side)

⇔ (required / is relevant only if)

Pilot Note 2346233 - Central Payment for SAP Central Finance: Pilot Note for Activating Central Payment

⇔ (required / is relevant only if)

… several other notes …

Central Payment is released in S/4HANA 1709 with the status “Released with Restrictions”

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Note 1529849 - Gateway security setting on SCS instance, AS Java

General rule (if required at all): Start of RFC servers not required. Only local registered RFC servers available.

secinfo

```
# start of external programs disabled (no entry required)
```

reginfo

```
# list of java servers
p TP=* HOST=local
p TP=* HOST=<host name>
...
```

You can manage the gateway with the program `gwmon`.
In particular, changes to the files can be dynamically loaded subsequently without having to restart the RFC Gateway.

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RFC Gateway and Message Server – Logging and Monitoring

How to check if there's a Standalone Gateway running on an application server?

`sapcontrol -nr $$ -function GetProcessList`

$$ corresponds to instance number

Example for standalone RFC Gateway on ASCS/SCS instance:

```
GetProcessList
OK
name, description, dispstatus, textstatus, starttime, elapsedtime, pid
msg_server, MessageServer, GREEN, Running, 2019 05 07 14:09:25, 672:37:49, 52888
enserver, EnqueueServer, GREEN, Running, 2019 05 07 14:09:25, 672:37:49, 52889
gwrd, Gateway, GREEN, Running, 2019 05 07 14:09:25, 672:37:49, 52890
```

https://wiki.scn.sap.com/wiki/pages/viewpage.action?pageId=491913782

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RFC Gateway and Message Server – Logging and Monitoring

How to use ‘gwmon’ tool to monitor a standalone RFC Gateway?

```
echo GET_RELEASE | gwmon -cmdfile - -gwhost mo-c81a86caf -gwserv sapgw01
```

Prerequisite: Remote monitoring needs to be active with `gw/monitor=2`

Useful commands:

```
GET_RELEASE
GET_PARAM
GET_SECINFO
GET_REGINFO
GET_TRUSTED_IPADR
GET_SEC
```

https://wiki.scn.sap.com/wiki/pages/viewpage.action?pageId=491913782

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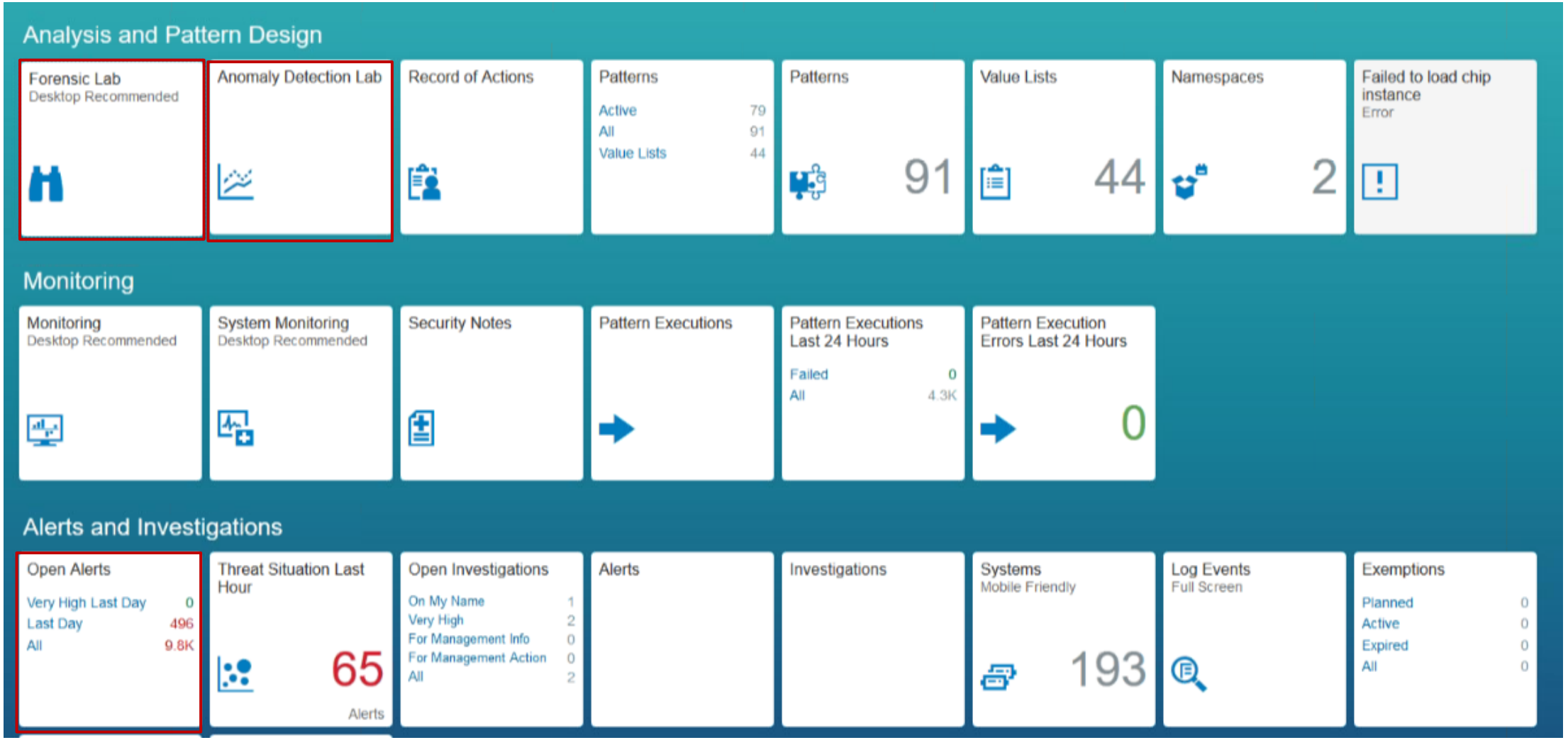
ETD for RFC Gateway and Message Server Monitoring
Launchpad



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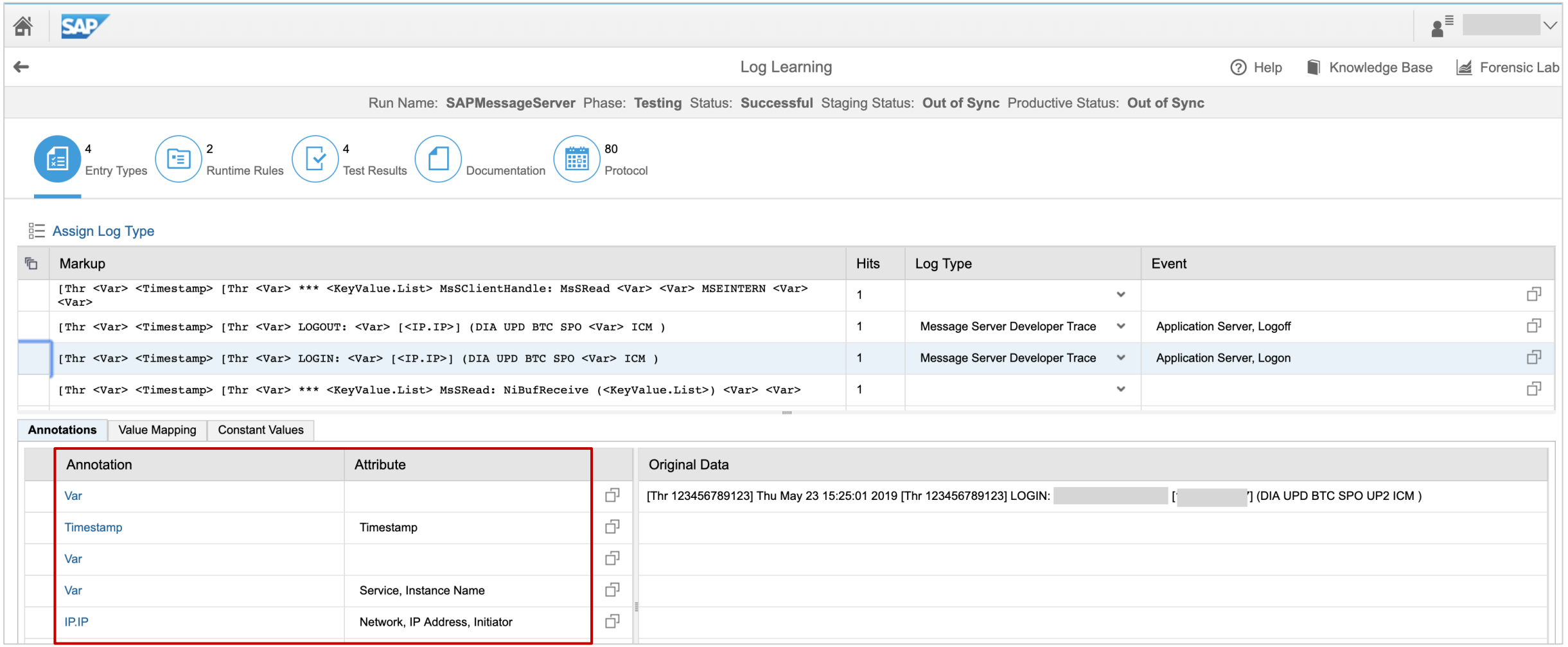
ETD for RFC Gateway and Message Server Monitoring

Preparation: Log Learning of Log Type “SAP Message Server“



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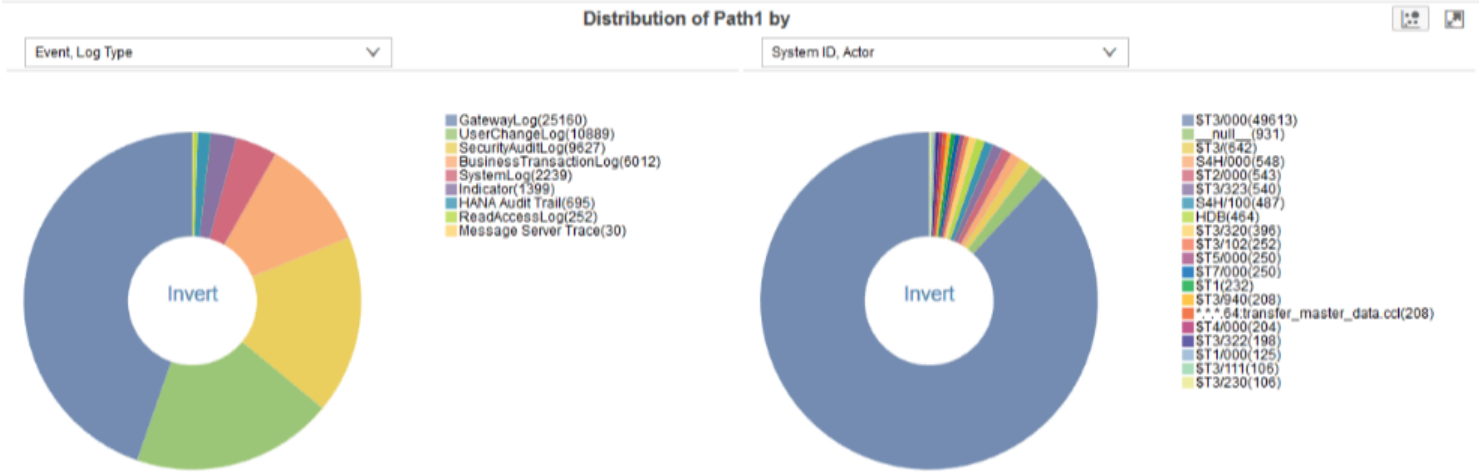
ETD for RFC Gateway and Message Server Monitoring
Event database

Event Log Types

…

Message Server Trace



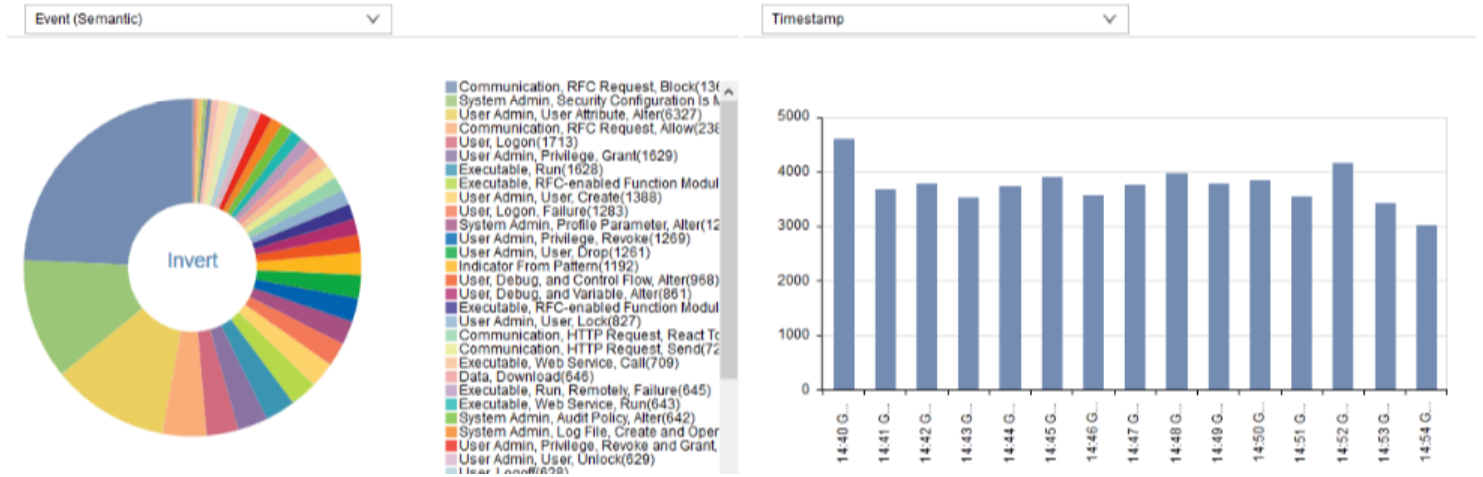
Source Systems

Semantic Events

…

Server Logon

Server Logoff



Timestamp of selected events

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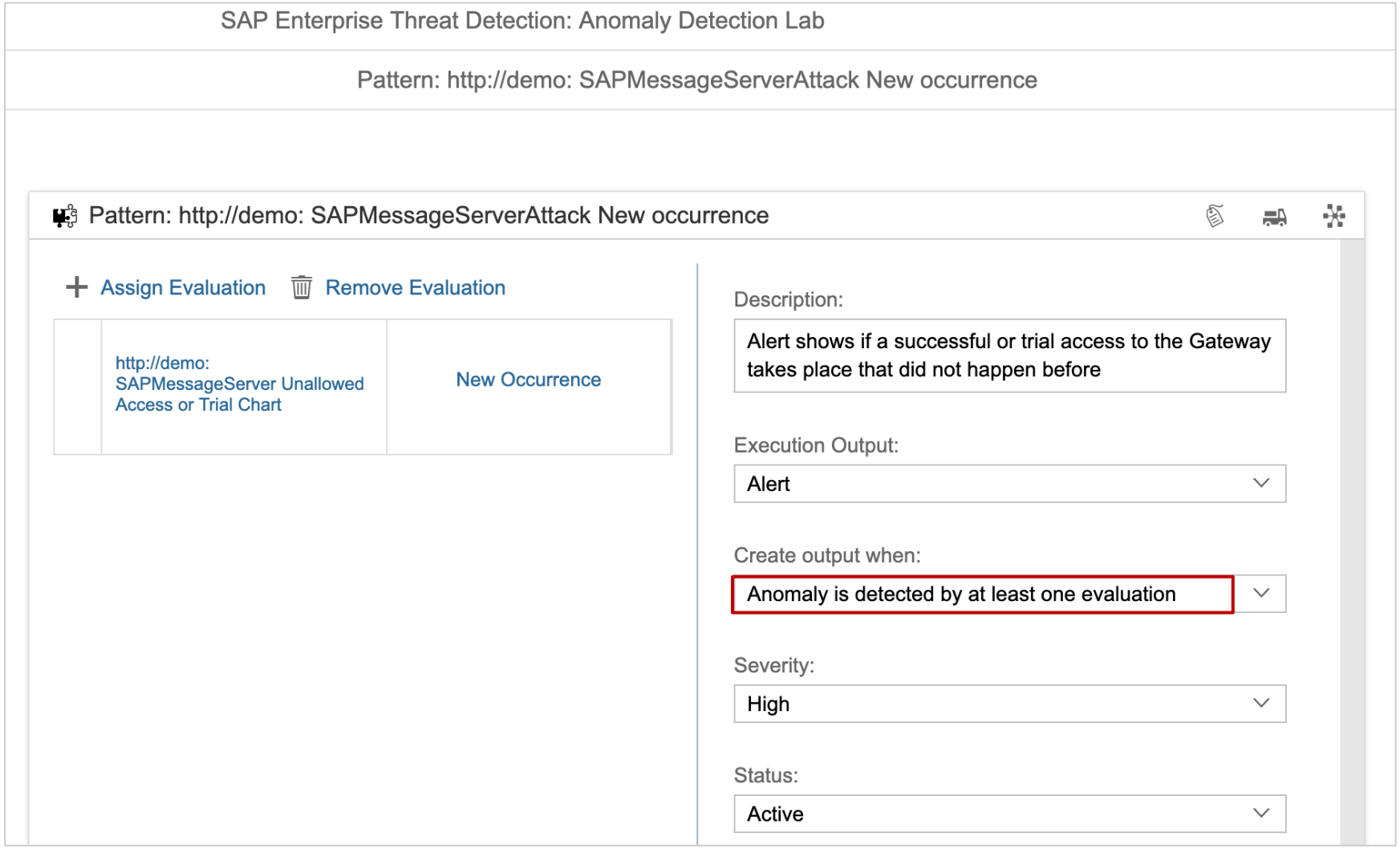
ETD for RFC Gateway and Message Server Monitoring
Anomaly Detection Lab



Purpose: Find unusual events

Assumption: We'll get only the same events like in the past 4 weeks

Alert: New events

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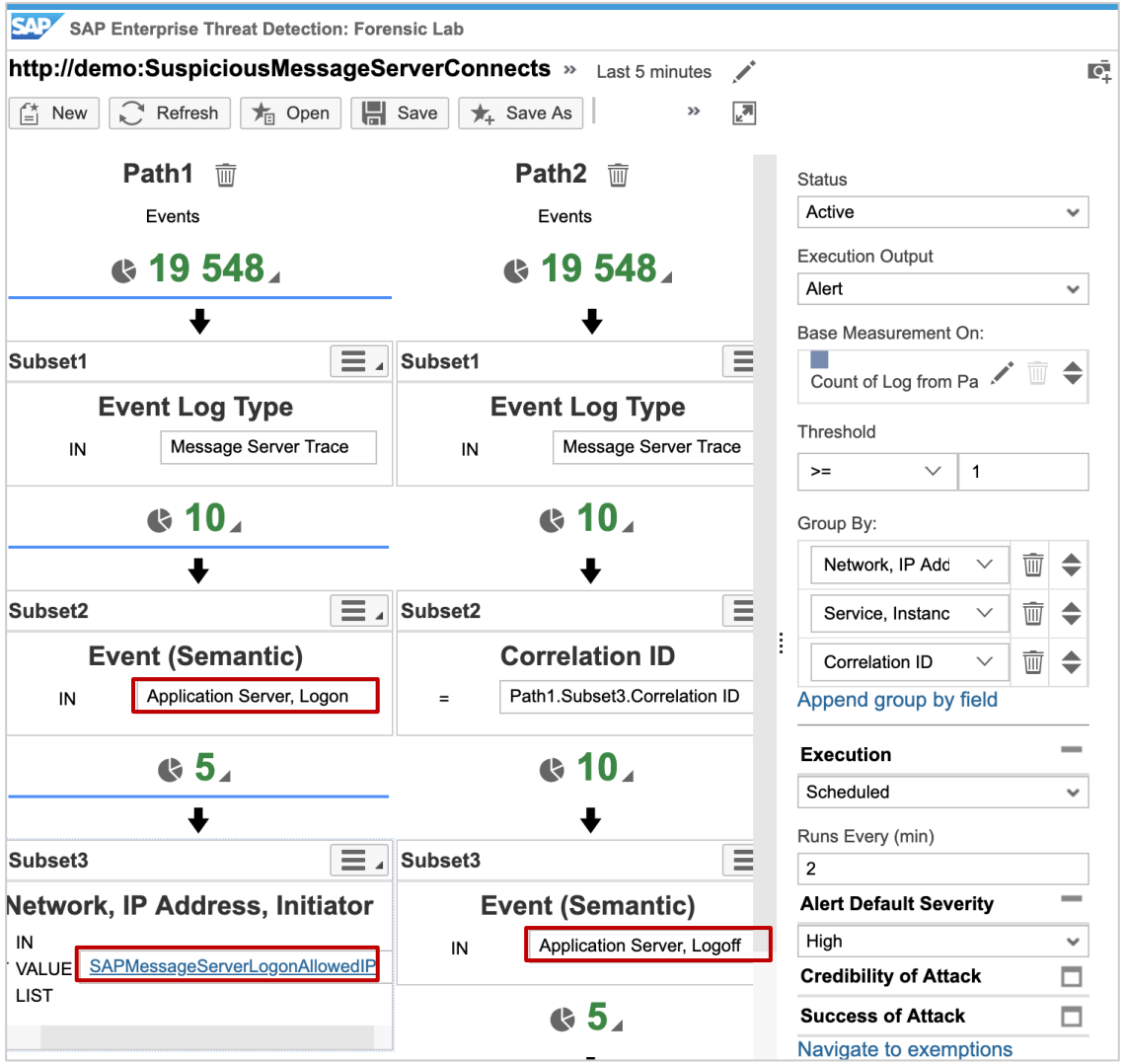
ETD for RFC Gateway and Message Server Monitoring

Attack Detection Patterns in Forensic Lab



Purpose: Detects potential attacks

Source: Message Server Log

Path1: Application Server Logon validated against allowlist

Path2: Application Server Logoff

Correlation: Logoff shortly after Logon

Alert: Critital logon attempts

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May 2019

Topics May 2019

Extended availability for Security Corrections

RFC Gateway & Message Server Security

Pilot Phase for Security Dashboard in the SAP EarlyWatch Alert Workspace

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Extended availability for Security Corrections

News @ Support Portal: https://support.sap.com/securitynotes

Security fixes for SAP NetWeaver based products are also delivered with the support packages of these products. For all SAP Security Notes with high or very high priority we provide this service for support packages shipped within the last 24 months* (extended from 18 month).

***Exceptions are e.g. SAP Gui, Kernel, HANA which come with their own release strategy.**

ABAP: no big difference as most ABAP Corrections Instructions cover all Support Packages of releases which are in maintenance anyway (if technically possible)

Java: no big deal either, typically you can expect one more older Support Package which offers a solution via patch (however, you most likely will go for an Support Package upgrade anyway)

- **Go for regular, i.e. yearly Support Package upgrades (see note 2797813 , too)**

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RFC Gateway & Message Server vulnerabilities

You can find reports on SAP vulnerabilities that have hit the media by end of April (you can find one example here or another in German here). The background of these reports were messages from US-CERT and Reuters which refer to a presentation at OPCDE DBX 2019 that got picked up quickly.

In order to demonstrate the urgency of the matter the security researchers published a modular exploit kit that makes it even easier to attack these misconfigurations.

Please note that the reported vulnerabilities are basically misconfigurations in on-premise installations SAP has addressed in multiple publications years ago. This is acknowledged by other security companies that incited the coverage.

You can find official statements from SAP here or here.

Two weeks later, the security researchers published some notes regarding the news release after SAP OPCDE talk.

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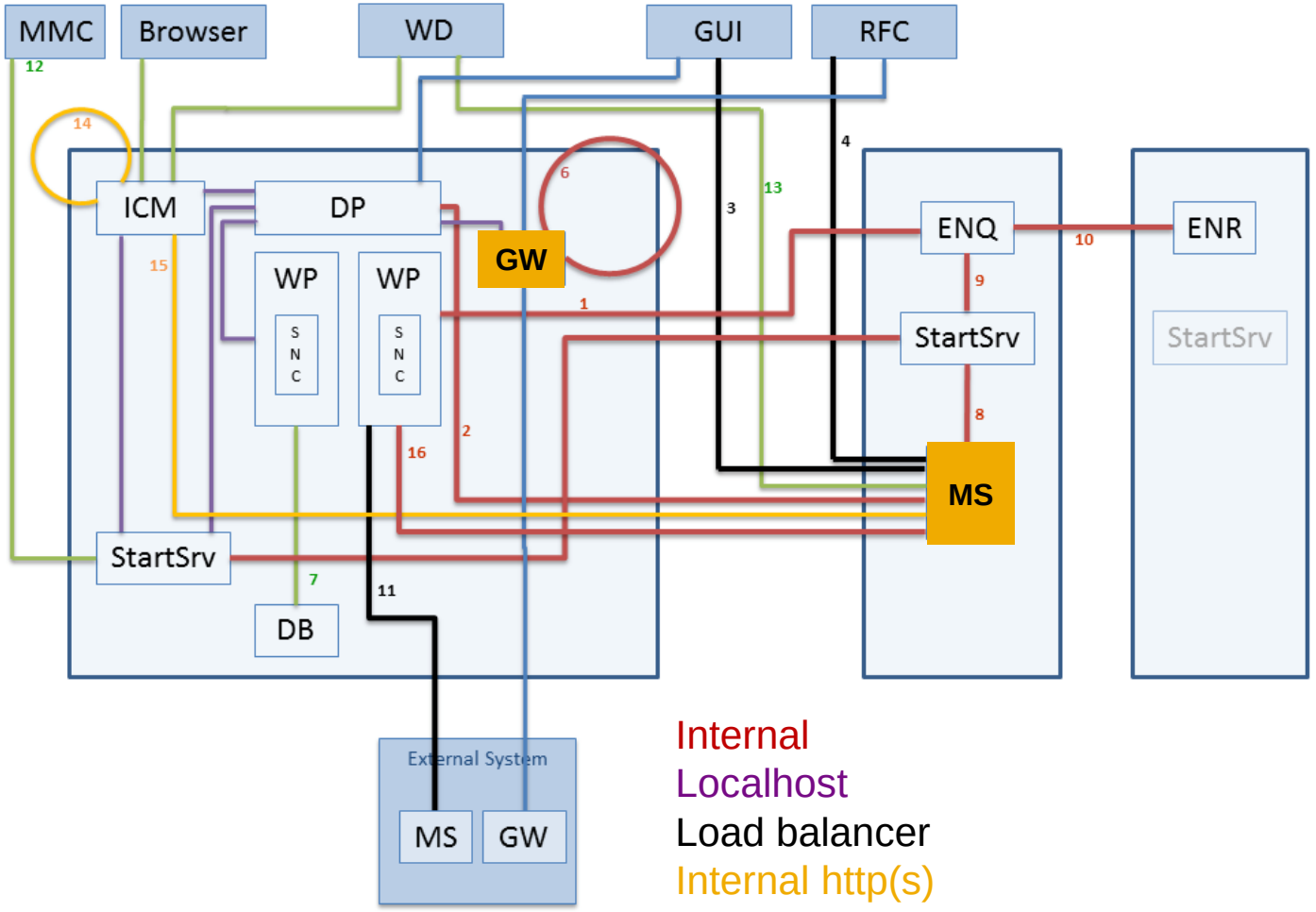
Architecture & Main Risks

RFC Gateway (GW)

- Remote access via RFC always possible
- Access Control List secures access i.e. using keywords “local” and “internal”
- Attacker can execute OS commands on application server

Message Server (MS)

- Remote access possible if internal port is not blocked on network level
- Access Control List secures access to internal port
- Attacker server plays the role of an application server which allows Man-in-the-Middle attacks
- Attacker becomes “internal” in relation to other components of the application server



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RFC Gateway & Message Server vulnerabilities

Only on-premise ABAP (including S/4HANA) and Java (see note 1529849) based systems are affected.

When installing a new single system with SAP Basis >=740 using a most recent SWPM release, these freshly created systems are properly secured concerning profile parameters.

However, systems that have been upgraded throughout the last years may still be vulnerable, including those of SAP Basis >= 740.

If you did not misconfigure networks in a way that would allow RFC communications or Message Server access to SAP systems from the Internet (which SAP strongly recommends not to do), the vulnerability can be exploited from the customers intranet only, if at all.

You should review important SAP security recommendations, in particular the whitepaper "SAP Security Recommendations: Securing Remote Function Calls (RFC)" concerning the RFC Gateway and the Documentation of Message Server security.

The first publication of this whitepaper was over 8 years ago.

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RFC Gateway and Message Server Configuration Settings

Topic	Profile Parameter	changeable in RZ11	Recommended value	RFC Whitepaper	EarlyWatch Alert Note 863362	Security Optimization Service	Security Baseline Template 1.9
GW	gw/acl_mode	yes	1	yes	yes	yes (SY088)	yes
GW	gw/reg_no_conn_info	yes	255	-	yes	yes (SY087)	yes
GW	gw/proxy_check			-	-	-	-
GW	gw/sim_mode	yes	0	yes	-	yes (0273)	yes
GW	gw/monitor	yes	1	yes	-	Yes (0269)	yes
GW	gw/logging	yes	ACTION=SsZ (plus some more switches)	yes	-	-	-
GW	gw/sec_info		<file name>	yes	yes	yes (SY089, 0282)	-
GW	gw/reg_info		<file name>	yes	yes	yes (SY089)	-
GW	gw/prxy_info		<file name>	-	-	-	-
GW	Non-trivial entries in the ACL files		no * values for host	yes	yes	yes	yes
Topic	**Profile Parameter**	**changeable in RZ11 / SMMS**	**Recommended value**	**Documentation (party only description but no recommendation) + Notes**	**EarlyWatch Alert Note 863362**	**Security Optimization Service**	**Security Baseline Template 1.9**
MS	ms/acl_info		<file name>	Note 821875, 1421005	yes	yes (SY094)	yes
MS	ms/audit	yes	1 or 3		-	-	-
MS	rdisp/msserv		Default sapms<SID> (=36NN) respective 0 on central Java SCS instance	Note 821875, 1421005	yes	yes (SY092)	-
MS	rdisp/msserv_internal		39NN	Note 821875, 1421005	yes	yes (SY092)	yes
MS	ms/acl_file_int		<file name>		-	-	-
MS	ms/monitor	yes	0	Note 821875	yes	yes (SY093)	yes
MS	ms/admin_port	yes	0	Note 821875	yes	yes (SY093)	yes
MS	ms/server_port_<xx>	yes	not set		-	-	-
MS	system/secure_communication		ON	Note 2040644	-	-	-
MS	Non-trivial entries in the ACL files		no * values		-	-	yes
MS	Firewall settings			Note 821875	- (out of scope)	- (out of scope)	- (out of scope)

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RFC Gateway and Message Server Configuration Validation

Use following Configuration Stores to validate the setting in application Configuration Validation of the SAP Solution Manager:

ABAP

- **Profile Parameters:** `ABAP_INSTANCE_PAHI`
- **RFC Gateway secinfo:** `GW_SECINFO`
- **RFC Gateway reginfo:** `GW_REGINFO`
- **Message Server ACL:** `MS_SECINFO`

Java

- **Profile Parameters:** `Parameters`
- **ACL files:** -

See Security Baseline Template with Target Systems BL_S-7 and BL_S-8

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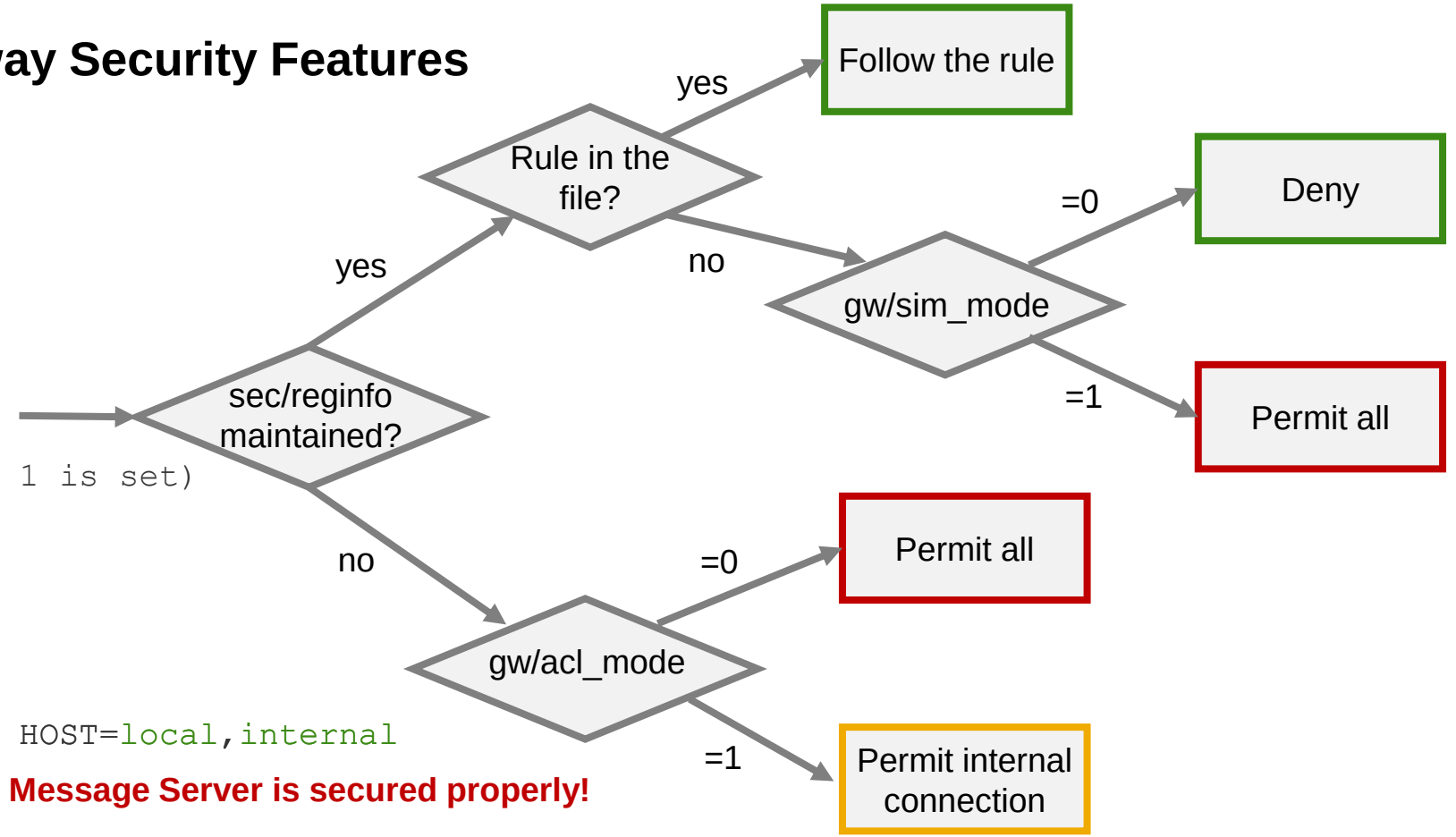
RFC Gateway Security

RFC Gateway @ SAP Wiki
https://wiki.scn.sap.com/wiki/display/SI/RFC+Gateway

Note 2605523 - [WEBINAR] Gateway Security Features



Secure default settings:

```
gw/reg_no_con_info = 255 (at least bit 1 is set)
gw/acl_mode = 1
gw/sim_mode = 0
```

Secure default rule for secinfo:

```
P TP=* USER=* USER-HOST=local,internal HOST=local,internal
```

Using "internal" is secure if, and only if the SAP Message Server is secured properly!

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Message Server Security
Notes 821875, 1421005, 1495075 plus 2040644

1. **Split ports via Profile Parameters `rdisp/msserv` and `rdisp/msserv_internal`**
   (which *allows* to use a firewall with port filter between server network and user network)
2. **Activate ACL list to block foreign servers**
   (which requires new operational instructions i.e. in case of a changing server landscape)
   a. Recommended: on application level via Profile Parameter **`ms/acl_info`** using host names, domains or IP patterns
   b. Optional: on network level via Profile Parameters `ms/acl_file_admin`, `ms/acl_file_ext`, `ms/acl_file_extbnd`, and `ms/acl_file_int` using IP patterns (like `permit 10.18.0.0/16`)
3. **Protect and encrypt internal connections of the Message Server via Profile Parameter `system/secure_communication`**
   See same topic from 2018-12
   The installation tool (but not the upgrade tool) activates this automatically for new systems
4. **Close down remote monitoring and administration via Profile Parameters `ms/monitor`, `ms/admin_port` and `ms/server_port_<xx>`**
   (which requires to establish other monitoring and administration procedures)

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Open items

Message Server ACL `ms/acl_info` or `ms/acl_file_int`

- To accept local addresses you need to define a permit rule for address `127.0.0.1` respective the key word `local`
- To be checked: Patterns like `10.15.*.*` do not seem to work, however, `10.15.45.*` or `10.15.0.0/16` should work fine

Other components like Dispatcher, Enqueue Server, RFC Gateway, and ICman offer ACL files, too

Indirect attack via SAP Router

- Do not install a SAP Router on any application server; use a different server
- What about ACL file `saprouttab` with src `*` to connect to port `33NN` ?

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What else?

- **Activate System Internal Communications Security**
- **Use the EWA Solution Finder in the SAP Support Portal to view security alerts concerning the configuration of the RFC Gateway, see topic from 2018-02**

Ensure to control critical authorization for maintaining Profile Parameters

`S_ADMI_FCD` with `S_ADMI_FCD` = `PADM`

respective

`S_RZL_ADM` with `ACTVT` = `01`

for transactions `RZ10`, `RZ11`, `SMMS` and `RFC` enabled functions

`TH_CHANGE_PARAMETER`	function group `THFB`
`SPFL_PARAMETER_CHANGE_VALUE`	function group `SPFL_PROFILE_PARAMETER`
`ANST_CHANGE_PARAMETER`	function group `ANST_SEARCH_TRACES`

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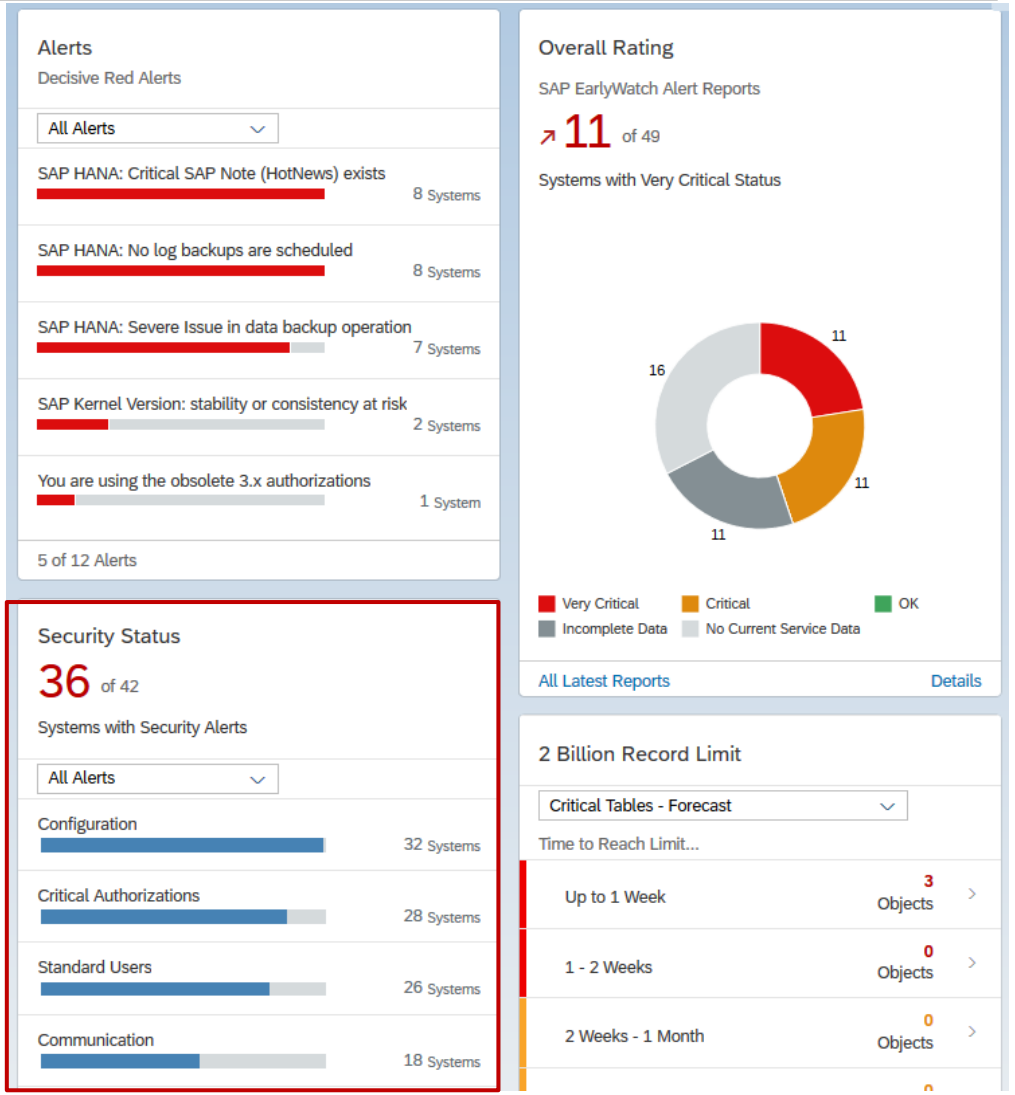
Pilot Phase for Security Dashboard in the SAP EarlyWatch Alert Workspace

The SAP EarlyWatch Alert Workspace offers a new Security Dashbord which summarizes the security related alerts as shown by the EWA Solution Finder

When interes in the Pilot Phase apply with a brief email (with k PILOT) to:

Productive mode as of October 2019

Dr. Hendrik Mue
hendrik.mueller@sap.com



*** Active pilot use and feedback/quote on how it supports you in your security tasks or processes is mandatory. Seats for participation are limited.

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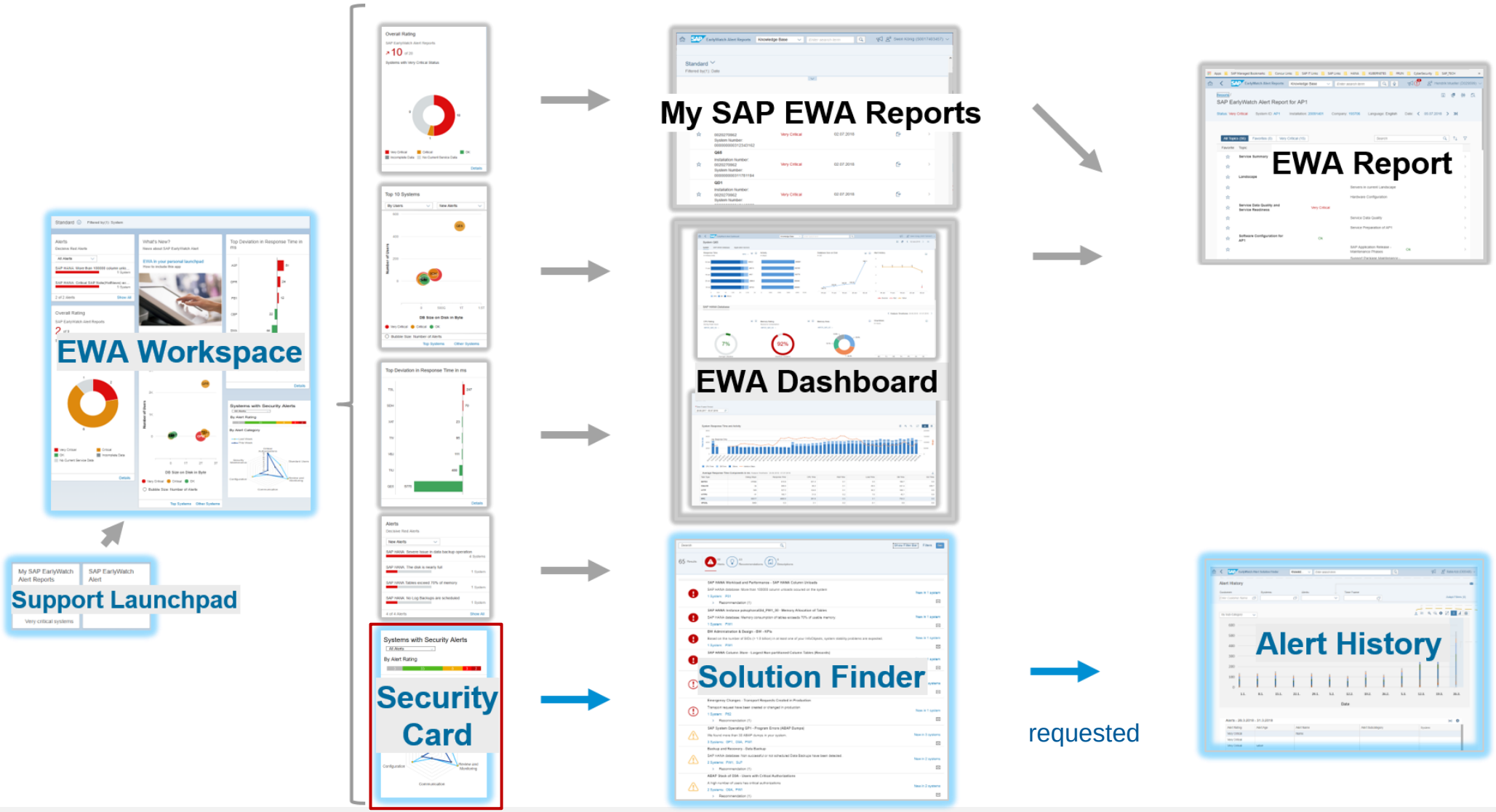
Pilot Phase for Security Dashboard in the SAP EarlyWatch Alert Workspace



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April 2019

Topics April 2019

SAP Solution Manager Internet Demo System
(EWA, SOS, SysRec, ConfigVal)

Note 2729710 - XML External Entity vulnerability in sldreg on ABAP and Java Platform
Note 2772376 - XML External Entity vulnerability in sldreg on SAP HANA

Note 2643371 - Missing Authorization check in ABAP Server File Interface
Note 2643447 - Directory Traversal vulnerability in ABAP Server File Interface

Do not disable authority objects

Clickjacking Protection (Reloaded)
Why now? It's much easier now! (at least for user interfaces based on SAP_UI)

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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SAP Solution Manager Internet Demo System (EWA, SOS, SysRec, ConfigVal)

SolMan Internet Demo System
https://support.sap.com/en/alm/solution-manager/demo-systems/internet-demo-system.html

Fiori Launchpad
https://www.sapsolutionmanagerdemo.com/sap/bc/ui5_ui5/ui2/ushell/shells/abap/FioriLaunchpad.html

User `BAUERA` (or use some other users)
Password `Solman72`

- **Change Management → System Recommendations**
- **SAP Solution Manager Administration → Configuration Change Database (CCDB)**
- **Root Cause Analysis → Configuration Validation and Configuration Validation Reporting**
- **SAP Engagement and Service Delivery → EWA and SOS**

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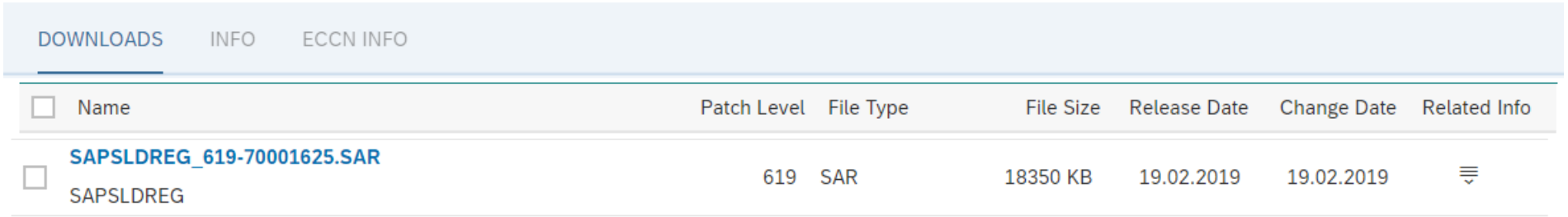
Note 2729710 - XML External Entity vulnerability in sldreg on ABAP and Java
Note 2772376 - XML External Entity vulnerability in sldreg on SAP HANA

These notes solve an XML External Entity (XXE) vulnerability in SLD Registration program `sldreg.exe`

Note 2729710 Version 5 February 2019: Kernel patch for ABAP

Note 2729710 Version 7 April 2019: Use `sldreg.exe` from same Kernel patch for Java, too



Note 2772376 April 2019: **Full HANA update**

Attacker requires authenticated user with local access

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Note 2643371 - Missing Authorization check in ABAP Server File Interface
Note 2643447 - Directory Traversal vulnerability in ABAP Server File Interface

Both notes are independent, solve different aspects and target all operating systems, i.e. Windows and Unix/Linux.

ABAP note 2643447 targets developer of custom code, too (case 2d).

Check settings in transaction `SM30` for table `SPTH`
We do not expect issues if you do not have used 'weird' path or file names like a tilde ~ followed by digits.

Only as of Kernel 7.53, the parameter `abap/path_norm_Windows` has secure default `0`.

Related note with documentation, relevant only if the ABAP application server runs on Microsoft Windows:
Note 2634476 - Profile parameter `abap/path_norm_Windows`

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Do not disable authority objects
auth/object_disabling_active

Documentation: Globally Deactivating Authorization Checks
https://help.sap.com/saphelp_nwpi71/helpdata/en/52/671463439b11d1896f0000e8322d00/frameset.htm

Profile parameter auth/object_disabling_active

You can deactivate authorization objects globally in transaction AUTH_SWITCH_OBJECTS if this parameter has the value Y (default). If the parameter has the value N, deactivation is not allowed.

Mitigation: You cannot suppress authorization checks for authorization objects that belong to Basis components (starts with S_) or to Human Resources (HR) (PLOG or starts with P_).

SOS Check "Global Disabling of Authority Checks Is Not Prevented" (0104) recommends auth/object_disabling_active = N and that table TOBJ_OFF (which you maintain via transaction AUTH_SWITCH_OBJECTS) is empty.

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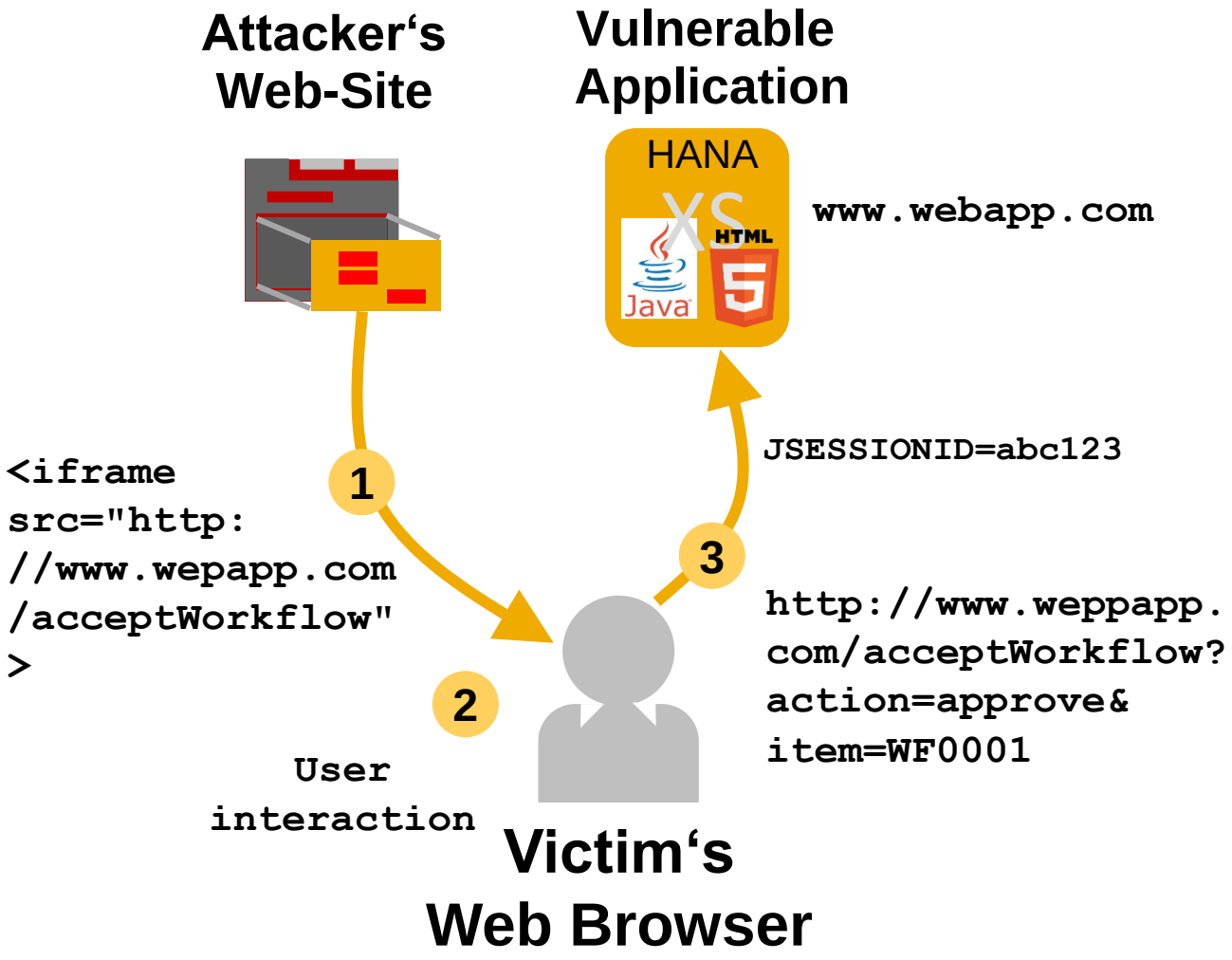
Clickjacking Protection (Reloaded)
Vulnerability synopsis



Clickjacking allows an attacker to manipulate transaction data like **workflow process, system state or user maintenance steps** by luring user to perform an interaction with the UI.

This is particularly dangerous when **administrators or privileged business user** are successfully attacked.

➔ **Unauthorized transaction execution**

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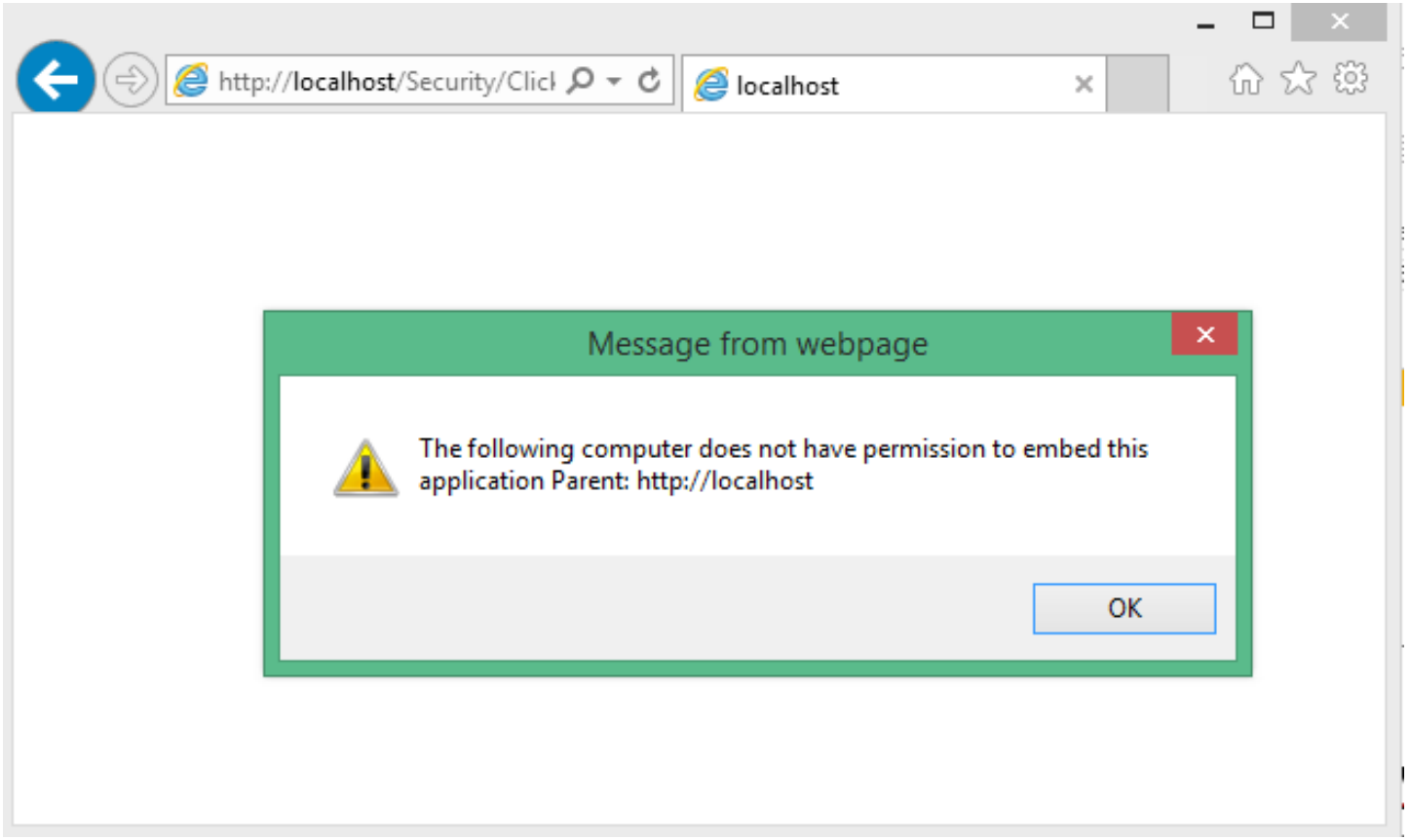
Clickjacking Protection (Reloaded)
Result for ABAP

Depending on the UI Framework you get either an empty frame or an error message if Clickjacking Protection blocks rendering a page.

Here is the error message show by WebDynpro ABAP:



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Clickjacking Protection (Reloaded)

Why now? It's much easier now! (at least for user interfaces based on SAP_UI)

Note 2573569 - UCON HTTP Whitelist Downport (7.40 SP 20, 7.50 SP 12, 7.51 SP 6, 7.52 SP 1)
(February 2018)

Note 2507225 - Integration of Clickjacking Framing Protection with UCON HTTP Whitelist
(April 2018)

Note 2667053 - CX_HTTP_WHITELIST was raised
(July 2018)

Note 2667160 - Activation of client dependent UCON HTTP Whitelist - clickjacking settings are not saved correctly
(July 2018)

Note 2547381 - CORS integration in UCON HTTP Whitelist and Internet Communication Framework and and Clickjacking integration in HTTP Whitelist
(October 2018)

Transaction `UCON_CHW` or `UCONCOCKPIT`

https://help.sap.com/viewer/1ca554ffe75a4d44a7bb882b5454236f/7.51.3/en-US/91f9f84fe8a64ce59dc29b76e47078eb.html

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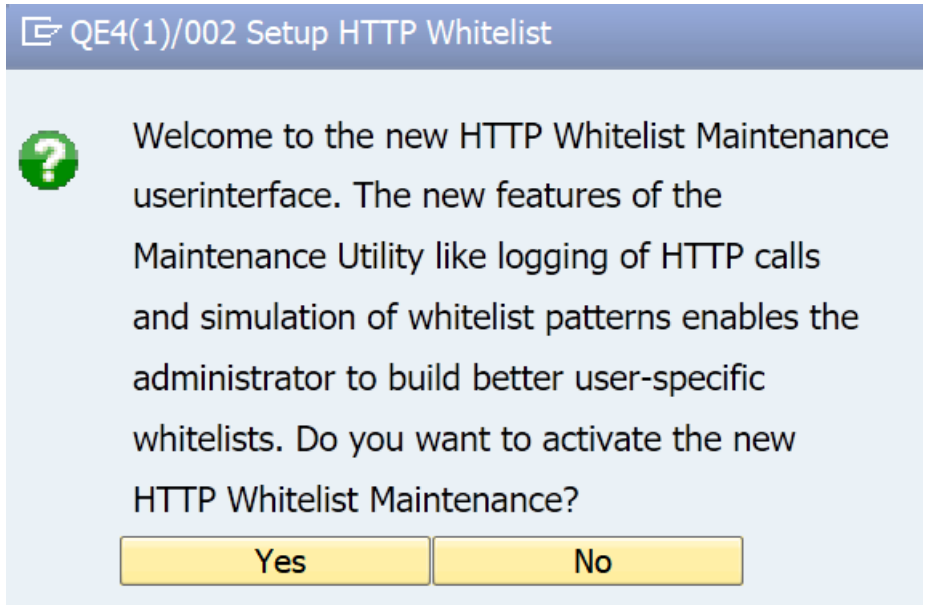
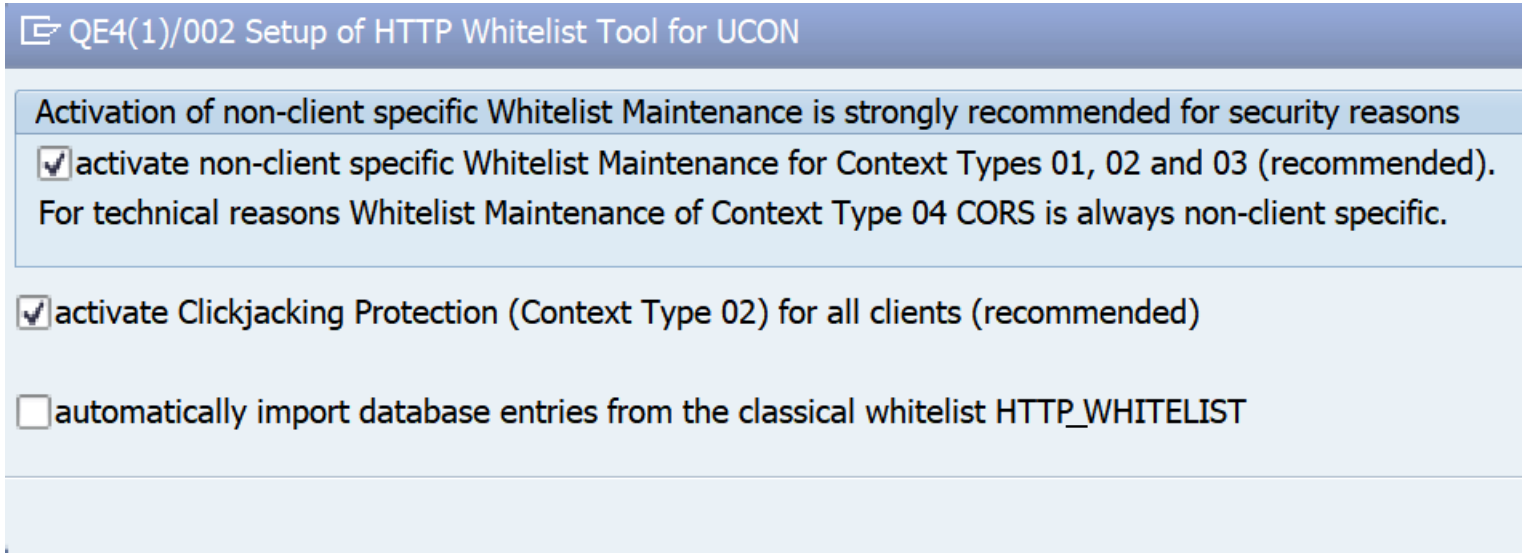
Clickjacking Protection (Reloaded)
Transaction UCON_CHW or UCONCOCKPIT

Use UCON Logging to learn if any entries in allowlist are required.

Secured with authority object S_UCON_WHI respective S_UCON_ADM for UCON_TYPE = UCHW

Activation:





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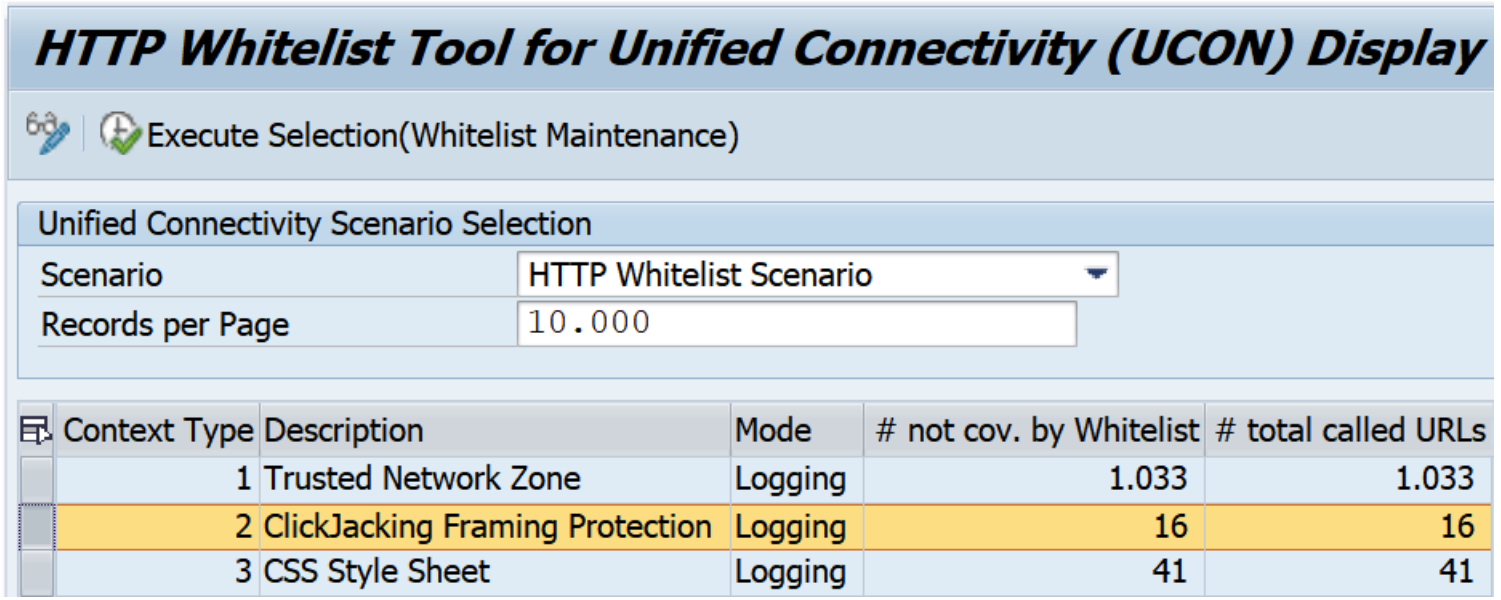
Clickjacking Protection (Reloaded)
Transaction UCON_CHW or UCONCOCKPIT

Use UCON Logging to learn if any entries in allowlist are required.

Example:



Context Type	Description	Mode	# not cov. by Whitelist	# total called URLs
1	Trusted Network Zone	Logging	1.033	1.033
2	ClickJacking Framing Protection	Logging	16	16
3	CSS Style Sheet	Logging	41	41

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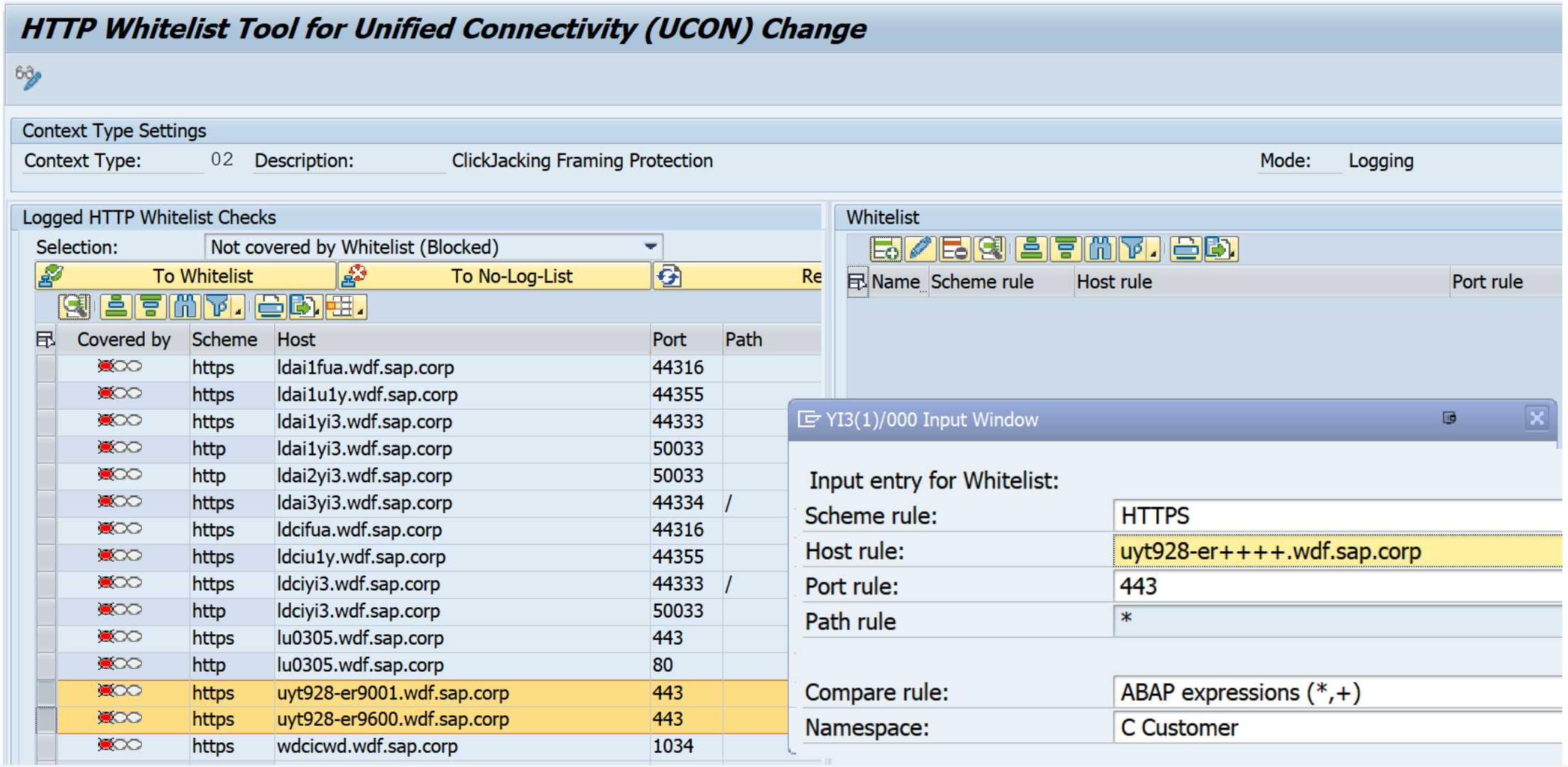
Clickjacking Protection (Reloaded)
Transaction UCON_CHW or UCONCOCKPIT



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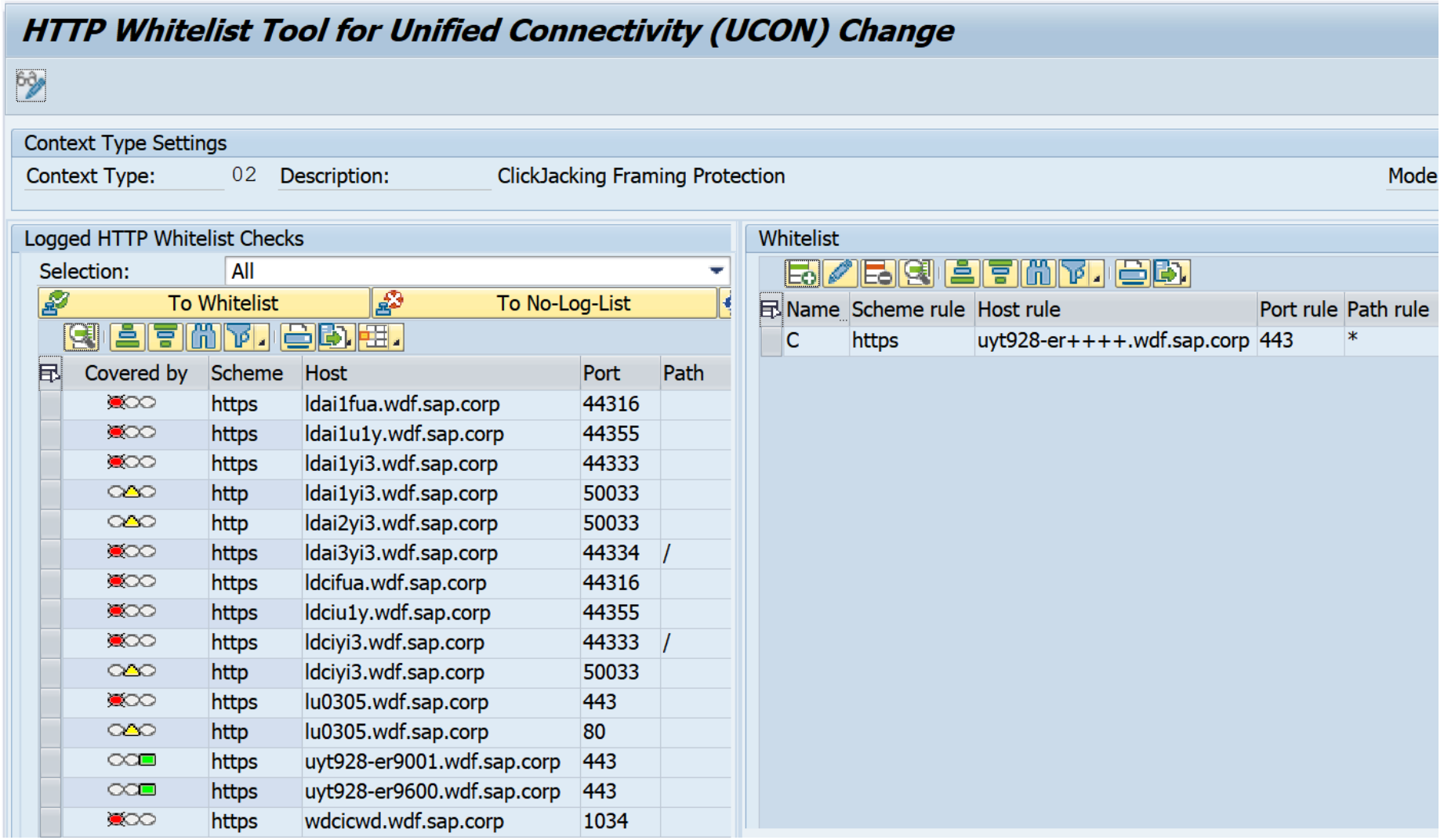
Clickjacking Protection (Reloaded)
Transaction UCON_CHW or UCONCOCKPIT



Result:

HTTP is blocked

Servers `uyt928-er+++` are accepted

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Clickjacking Protection (Reloaded)
Required actions in a nutshell (in addition to UCON notes)

Pre-consideration

- Central Clickjacking protection information:
  → see note **2319727**
- Check system requirements:
  → see below (July 2016)
- Check your landscape setup and define a list of trusted domains / hosts

Custom code

- ABAP: no adaption required
  Information: For BSP application solution relies on existance of HTML Tags `<head></head>`*.*
  → *see note **2319192***
- JAVA: (Custom) JSP applications require adaption
  → see note **2290783**

Configuration ABAP

- Perform configuration for activation of Clickjacking protection ABAP
  - Central allowlist maintenance: → see note **2142551**
  - **UCON HTTP allowlist:** → see note **2507225**
  - BSP activation: → see note 2319192
  - What about note 2028904 describing a mandatory configuration activity with transaction `SICF`?

Configuration JAVA

- Perform configuration for activation of Clickjacking protection JAVA
  - Central allowlist maintenance & activation:
    → see note **2170590**
  - Framework activation: → see notes 2169860 (WDJ), 2169722 (EP), 2263656 (HTMLB), 2244161 (WCEM)

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Clickjacking Protection (Reloaded)
References

Online Help

Using an allowlist for Clickjacking Framing Protection

https://help.sap.com/saphelp_nw73ehp1/helpdata/en/96/6b6233e5404ebe80513ae082131132/frameset.htm

https://help.sap.com/viewer/864321b9b3dd487d94c70f6a007b0397/7.4.19/en-US/966b6233e5404ebe80513ae082131132.html

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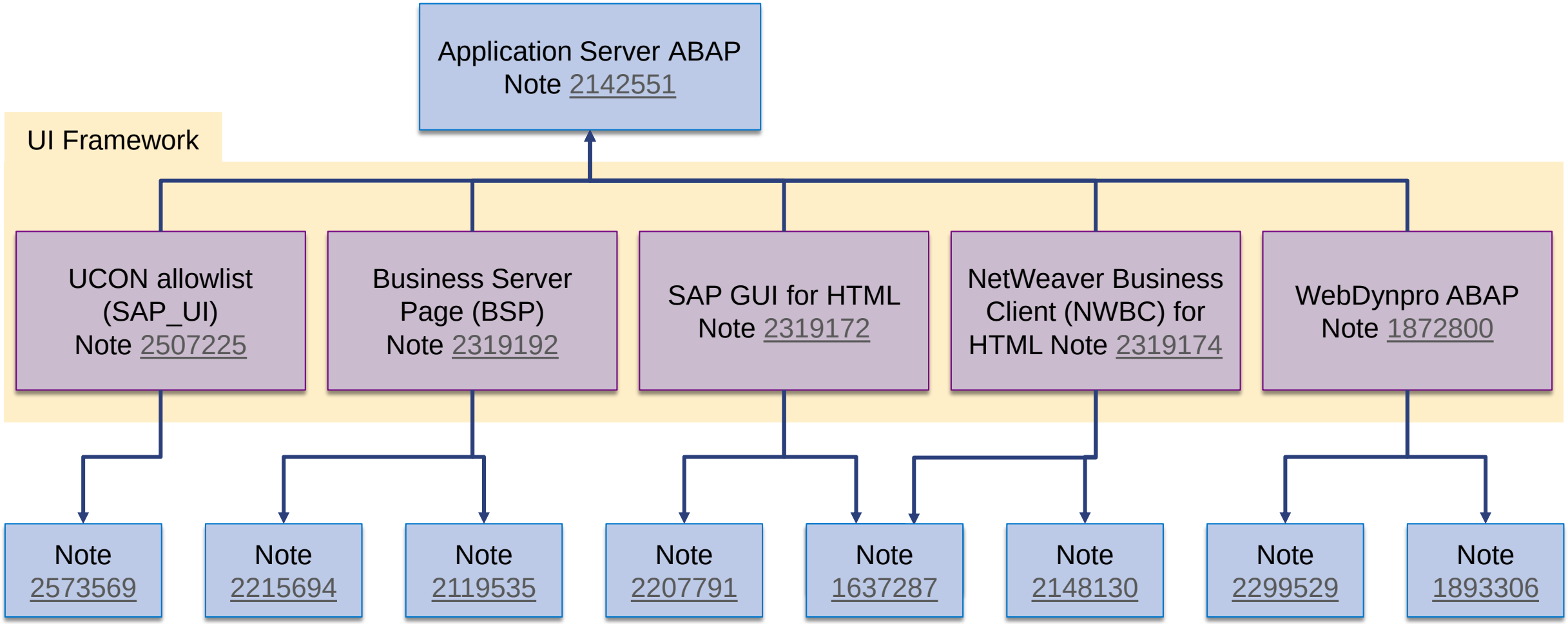
Clickjacking Protection (Reloaded)

ABAP Framework



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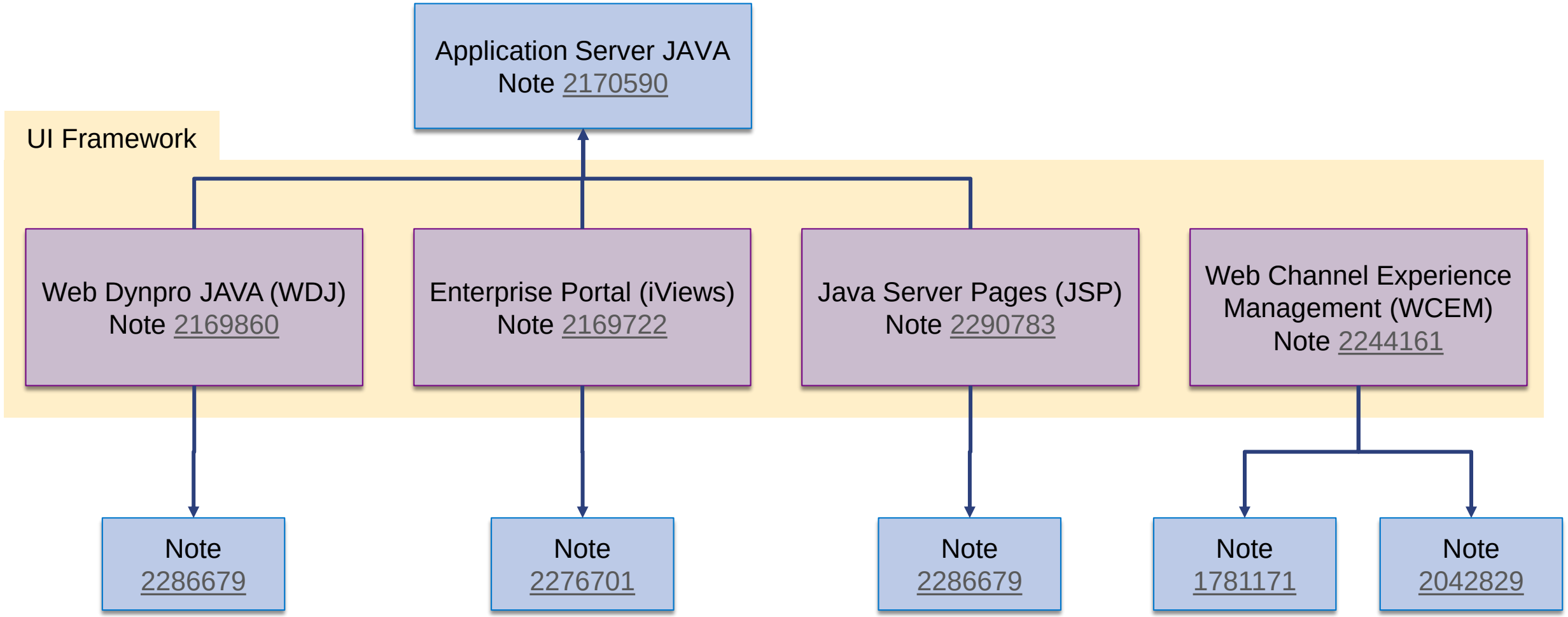
Clickjacking Protection (Reloaded)

JAVA Framework



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March 2019

Topics March 2019

WINTER IS C0MING - How to keep Connectivity to SAP's Support Backbone

Note 2475591 - Transport Check Report

Note 2030144 - Switchable authorization checks for RFC in SLCM (Student Life cycle Mngmt.)

Note 2524203 - Switchable authorization checks for RFC in FI-CA

Notes 2764283 2742027 2724713 about XSA

Overview about recent Notes concerning System Recommendations

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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WINTER IS C0MING - How to keep Connectivity to Support Backbone

SAP's support backbone has been updated. The legacy infrastructure remains in place to allow a safe transition for customers.

Customers need to switch to the new infrastructure before January 2020 to ensure continuous connectivity.

This impacts every ABAP-based SAP system which is connected to the support backbone:

- **Upgrade SAP Solution Manager at least to 7.2 SP 7 (+ manual activities)**
  (System Recommendations requires at least SolMan 7.2 SP 5)
  https://support.sap.com/en/alm/solution-manager/sap-support-backbone-update.html

- **Update SNOTE to handle digitally signed SAP Notes**
  https://support.sap.com/en/my-support/knowledge-base/note-assistant.html

- **All ABAP-based SAP systems which have direct connectivity to SAP (i.e. sending EWA reports directly to SAP) need to be updated with the latest ST-PI AddOn**
  Minimum versions: ST-PI 740 SP10, ST-PI 2008_1_700 SP20, ST-PI 2008_1_710 SP20, ST-A/PI 01T* SP01

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WINTER IS C0MING - How to keep Connectivity to Support Backbone

Connectivity to SAP's Support Backbone
https://support.sap.com/en/release-upgrade-maintenance/maintenance-information/connectivity-to-sap.html

Update of SAP's Support Backbone: Frequently Asked Questions (FAQ)
https://support.sap.com/en/release-upgrade-maintenance/maintenance-information/connectivity-to-sap/sap-support-backbone-update-faq.html

Note 2716729 - SAP backbone connectivity - SAP Parcel Box configuration

Note 2714210 - New communication channel to SAP Backbone for Service Content Update

Note 2740667 - RFC connection SAPOSS to SAP Service & Support backbone will change (latest) in January 2020

[…]

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Note 2475591 - Transport Check Report

The following checks are available:

a) **Cross Reference:** For all objects in the selected transport requests the referenced objects are identified by a where-used-analysis. This check works for ABAP repository, data dictionary, customizing, SAP notes and BW objects (=prediction of return code 8).

b) **Sequence Check:** The sequence check identifies other transport requests with identical objects which have been released in the last 90 days, but have not yet been imported into the target system.

c) **Cross Release:** If the current system and the target system are on different support package levels, this check identifies critical objects in the selected transport request, which belong to inconsistent software components.

d) **Import Time in Source System:** The import time of the selected transport requests in the source system is summed up.

e) **Online Import Check:** This check estimates the criticality of an import when the end users are working in the production system. Prerequisite: activate UPL/SCMON (maybe in addition to already activated SCMON)

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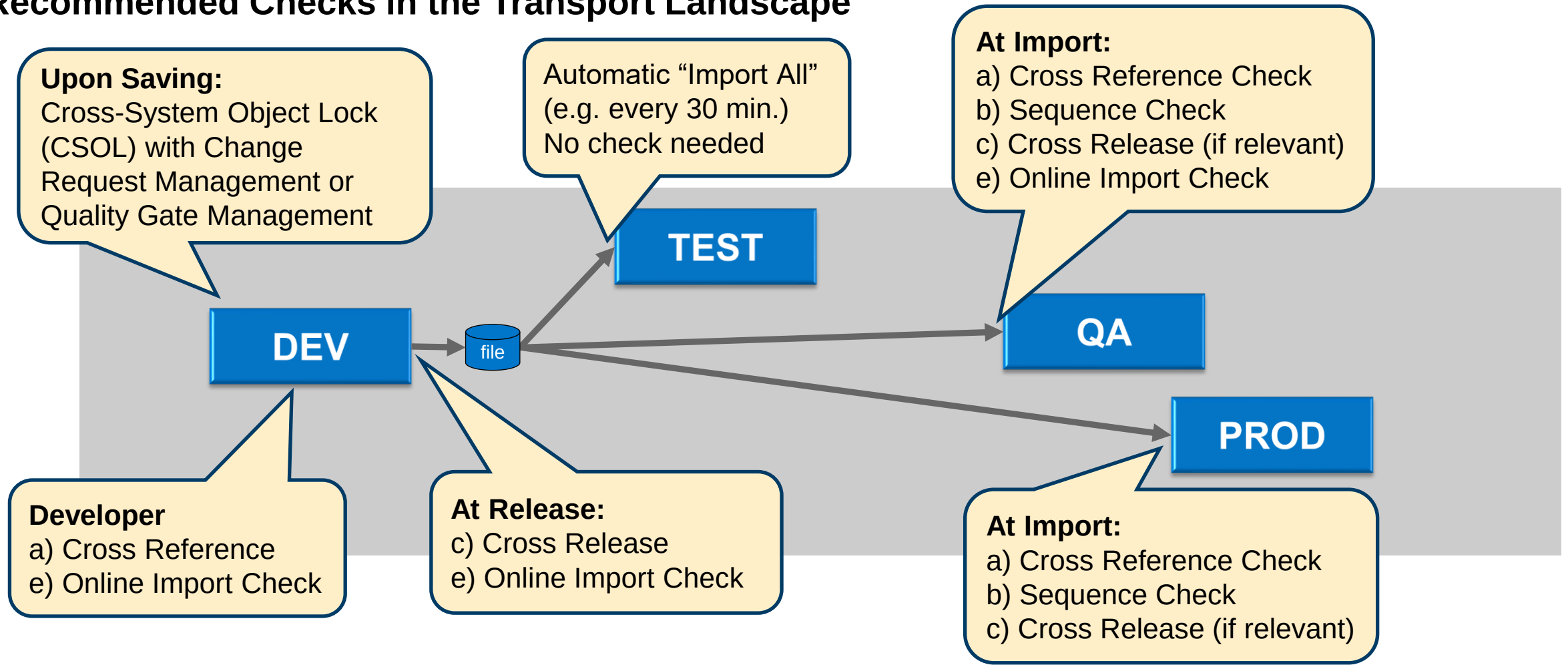
Note 2475591 - Transport Check Report

Recommended Checks in the Transport Landscape



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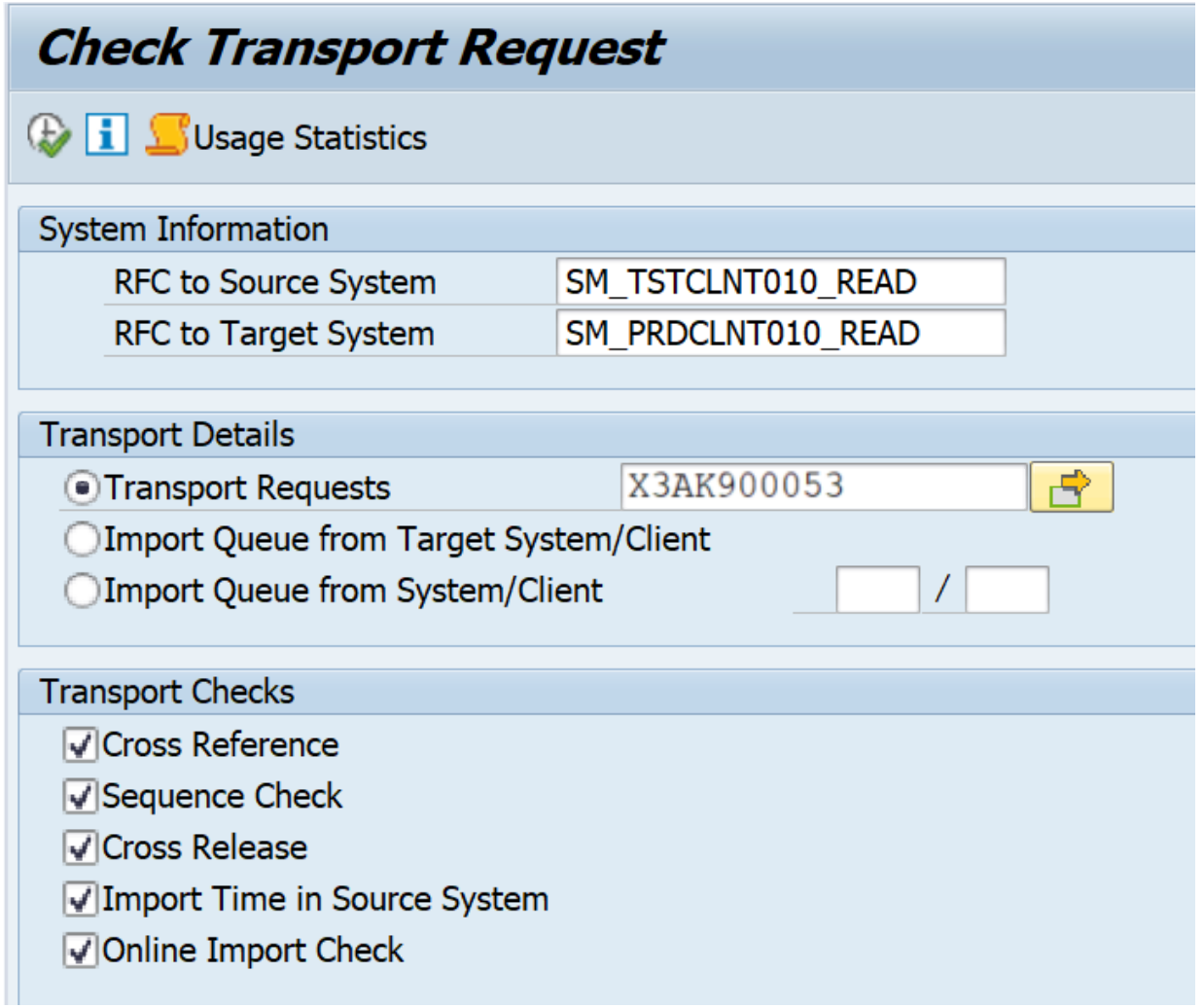
Note 2475591 - Transport Check Report

Transaction `/SDF/TRCHECK`
= Report `/SDF/CMO_TR_CHECK`

RFC-Destinations are mandatory, but you can use `NONE` (for local checks) or `SM*READ` or `SM*TMW` (if you use the report in the SAP Solution Manager) to address the source and target system.



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Note 2475591 - Transport Check Report

Online Import Check Results

Table access or report execution per hour of a week (requires collection of usage statistics)

Prerequisite

- **In order to see the hourly data you must collect usage statistics for one week.**
- **Run the report `/SDF/OI_ADMIN` in the production system.**

Example

- **In this example the best import window for objects affecting the report `SAPFV45P` (sales order) is on the weekend or in the evening from 22:00 to 23:00.**

Program SAPFV45P - Executions

Hour of Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
0	860.013	52.468.955	63.040.657	41.086.762	55.501.123	64.966.680	10.017.261
1	1.281.523	258.084.003	245.504.763	49.931.344	263.012.939	252.315.170	4.022.861
2	1.891.132	279.592.599	262.266.661	48.709.732	275.396.425	273.559.525	1.181.538
3	94.712	240.190.194	274.103.512	45.864.254	224.609.773	268.576.156	910.964
4	321.281	275.386.739	178.963.315	47.598.080	229.076.256	175.117.100	59.771
5	877.576	291.279.454	250.562.169	47.372.51...	290.912.925	272.495.113	62.896
6	4.590.532	280.395.926	265.889.144	44.366.562	278.228.396	260.261.703	98.208
7	10.403.819	258.464.898	269.726.310	43.259.276	264.574.771	243.084.376	210.149
8	18.675.263	200.776.324	239.596.250	50.105.347	230.136.659	176.881.336	227.843
9	21.792.317	172.434.841	203.292.626	58.837.058	187.732.772	124.959.085	169.223
10	19.161.215	99.337.142	120.051.350	42.092.272	98.365.367	72.089.584	2.008.979
11	24.033.244	44.578.060	75.569.064	24.577.888	78.137.826	16.332.932	253.817
12	21.450.678	37.516.950	48.555.908	25.272.056	60.479.811	11.647.906	880.133
13	23.382.161	43.278.638	30.380.935	33.161.443	26.449.616	7.083.735	1.178.893
14	27.086.261	45.339.126	27.289.331	27.409.630	34.610.338	8.597.278	6.005.955
15	27.923.366	28.199.781	22.618.788	20.422.421	24.805.961	18.367.688	7.200.379
16	26.501.882	34.392.968	35.734.942	23.913.250	20.087.518	11.541.123	5.393.039
17	14.948.496	19.560.348	30.144.286	18.731.347	12.762.499	7.059.319	7.247.348
18	18.055.286	27.618.053	18.992.712	13.182.881	13.979.089	566.109	7.182.667
19	26.095.793	30.969.214	13.065.676	21.061.222	12.561.001	70.016	306.784
20	15.521.590	26.415.294	19.042.915	15.377.100	12.297.554	191.761	232.688
21	23.492.383	16.925.113	15.173.150	7.268.709	10.550.515	4.545.189	229.672
22	16.917.066	6.556.826	7.331.414	1.096.558	8.855.797	7.055.925	76.330
23	25.408.512	16.005.361	11.051.921	11.893.144	20.397.472	12.677.615	157.491

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Note 2030144 - Switchable authorization checks for RFC in SLCM (Student Life cycle Management)

Old note from 2014, but …

... did you have activated the switch?

... did you have activated all other switches?

1. Activate Security Audit Log

`DUO` (Authorization check on object &A in scenario &B successful)
`DUP` (Authorization check on object &A in scenario &B failed)
`DUQ` (Active scenario &A was changed - &B)

2. Check transaction `SACF` (or `SACF_INFO`) as part of every Support Package upgrade and activate all scenarios

Report Environment:
Release/System ID/Client: 753 / EC1 / 001
Executed On: 19.03.2019/14:36:56
Number of Scenarios Found 248

Scenario Name	Component ID	Object	Short Text for Check
FI_ACE_REPORT	FI-LA	F_ACE_DST	Authorization check f
		F_ACE_PST	
		F_L_ACCRUL	
FI_AP_VENDOR_BAPI	LO-MD-BP-VM	F_LFA1_GEN	Authorization Checks
FI_AR_CM_BAPI	FI-AR-AR	F_KNKA_KKB	Authorization Check
FI_AR_CUSTOMER_BAPI		F_KNA1_GEN	Authorization Checks
FI_BL_PAYRQ_RELEASE	FI-BL-PT	F_PAYRQ	Release of Payment
FI_DOC_CHANGE	FI	F_BKPF_BED	FI Document Change
		F_BKPF_BEK	
		F_BKPF_BES	
		F_BKPF_BLA	
		F_BKPF_BUK	
		F_BKPF_GSB	
		F_BKPF_KOA	
		F_FAGL_SEG	

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Note 2524203 - Switchable authorization checks for RFC in FI-CA

Old note from 2017 which is published now…

… and you already have the software part of the solution as part of a SP upgrade

… but with inactive settings

… therefore … see previous slide

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Notes 2764283 2742027 2724713 about XSA

Solution: get new software

How to check the version of existing installations?

- **Locally using the XS command line interface (ok)**
- **Centrally via …**
  - SAP HANA 2.0 Cockpit ?
  - SAP Solution Manager
    - LMDB ?
    - System Recommendations ?
    - CCDB and Configuration Validation (Store `VERSION` of Store Group `XSA_STOREGROUP`) ?

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Wiki: Maintenance of Product in the System Landscape

https://wiki.scn.sap.com/wiki/display/SMSETUP/Maintenance+of+Product+in+the+System+Landscape

The Wiki describes how to connect various system types to the SAP Solution Manager

- Automatic creation of Technical System?
- Automatic entry of installed software?

Application Server ABAP

Application Server Java

SAP HANA: Managed System Setup of SAP HANA in Solution Manager

SAP HANA XSA: SAP HANA XSA System Monitoring setup

SAP BusinessObjects Enterprise: Managed System Setup of BOE 4.X system in Solman 7.1 and 7.2

Web Dispatcher: Configuring Web Dispatcher for Root Cause Analysis in Solution Manager

SAP Router: Managed System Setup of SAP Router in SAP Solution Manager 7.1

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Overview about recent Notes concerning System Recommendations

Release Notes

Note 2725557 - SysRec: Note type 'License Audit Notes' in System Recommendation as of Solution Manager 7.2 SP 8

Note 2689083 - SysRec: Field "Status" is replaced with "Processing Status" and "Implementation Status" as of SolMan 7.2 SP 7

Correction Notes

Note 2640996 - SysRec: Enhancement of UPL error message Handling

Note 2745082 - SysRec: NonABAP notes relevance check fix

Note 2443137 - SysRec: Note count is 0 in SysRec system overview

Note 2683868 - SysRec: Download Basket doesn't contain the files

Note 2536918 - SysRec: Display all systems and notes at one time

Fiori App Correction Notes

Note 2747922 - SysRec: Corrections for Solution Manager 720 SP 08 Fiori UI

Note 2741223 - SysRec: Corrections for Solution Manager 720 SP 07 Fiori UI

Note 2656937 - SysRec: Collective corrections for SAP Solution Manager 7.2 SP 07 Fiori UI

Note 2556623 - SysRec: Collective Corrections for Solution Manager 720 SP03-SP06 Fiori UI

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February 2019

Topics February 2019

SAP Customer Engagement Initiative 2019 – Security

Note 2742027 - Missing Authentication check in SAP HANA Extended Application Services, XSA

Note 2709897 - Directory Traversal in SAP Enterprise Architecture Designer on XSA

Note 2750987 - Potential Corruption of Encrypted Root Key Backups by SAP HANA Cockpit

Note 2712210 - SysRec 7.2 SP 5 customize the calculation of security notes for unused subHR component

Recap: Security Patch Process

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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SAP Customer Engagement Initiative / Customer Influence https://influence.sap.com

SAP Customer Engagement Initiative 2019 – Security

Registration ends on 16.03.2019

- **Simplified SAP Notes Implementation**
  https://influence.sap.com/sap/ino/#/campaign/1754
- **Improve security declaration consumption via CVE**
  https://influence.sap.com/sap/ino/#/campaign/1792
- **Intelligent Authorization Handling using Responsibility Management in SAP S/4HANA**
  https://influence.sap.com/sap/ino/#/campaign/1797
- **SAP Cloud Platform Data Lifecycle Services - Blocking Store**
  https://influence.sap.com/sap/ino/#/campaign/1798
- **Government Risk and Compliance: SAP Cloud Identity Access Governance**
  https://influence.sap.com/sap/ino/#/campaign/1801
- **Identity Access Management for B2B Scenarios**
  https://influence.sap.com/sap/ino/#/campaign/1834

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Note 2742027 - Missing Authentication check in SAP HANA Extended Application Services, XSA

The note solves a vulnerability of the XSA
An update of the underlying SAP HANA system is not required.
(But there is another note this month which requires a joint update.)

Affected are only SAP HANA systems running on SAP HANA 1 SPS11 or SPS12 or HANA2 SPS0 in combination with XSA runtime version 1.0.97-1.0.99.

The note recommends to update the XS advanced runtime to version 1.0.100 or later.
An update of the XS advanced runtime can be performed independently from SAP HANA database.

SAP HANA systems without XS advanced installed are not affected.
SAP HANA systems with HANA2 SPS1 or later (with or without XS advanced) are also not affected.

A configuration workaround, which blocks potential misuse of the issue, is described in the security note. There is no need to update the SAP HANA database server.

How to check the version of installed XSA?
Use the xs command line client (xs CLI) and execute command "`xs version`" to show the version of XSA.

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Note 2709897 - Directory Traversal in SAP Enterprise Architecture Designer on XSA

The note solves a vulnerability in an application running on XSA
EAD can be updated independently from the HANA database and the XSA engine.

An update of XSA and the underlying SAP HANA system is not required.
(But there is another note this month which requires a joint update.)

Affected is any version below 1.4.3 of component SAP Enterprise Architecture Designer on XSA.

How to check the version of the installed application?
Use the xs command line client (xs CLI) and execute command "`xs lc`" to show the component info overview. Check the entry for `XSAC_HANA_EA_D (sap.com) 1.X.Y`

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Note 2709897 - Directory Traversal in SAP Enterprise Architecture Designer on XSA

```
> xs login
USERNAME: XSA_ADMIN
PASSWORD>
Authenticating...

> xs lc

Getting software components in org "orgname" / space "SAP" as XSA_ADMIN...
Found software components:

software component           version
-----------------------------------
XSAC_ALM_PI_UI (sap.com)     1.12.6
XSAC_FILE_PROC (sap.com)     1.0.22
XSAC_HANA_EA_D (sap.com)     1.5.1
XSAC_HRTT (sap.com)          2.8.33
XSAC_MESS_SRV (sap.com)      1.3.6
XSAC_MONITORING (sap.com)    1.7.1
XSAC_PORTAL_SERV (sap.com)   1.3.2
XSAC_SAP_WEB_IDE (sap.com)   4.4.0
XSAC_SERVICES (sap.com)      1.6.12
XSAC_UI5_FESV4 (sap.com)     1.52.24
XSAC_UI5_SB (sap.com)        1.0.3
XSAC_XSA_COCKPIT (sap.com)   1.1.8
```

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Note 2750987 - Potential Corruption of Encrypted Root Key Backups when using SAP HANA Cockpit

Do not use SAP HANA Cockpit 2 to create the root key backup as it could lead to corruption.

It is not possible to repair a corrupted root key backup.

Verify existing root key backup files, i.e. if you cannot tell how the backup was created.

Perform root key backups only using the command line as described in the SAP HANA Administration Guide:
https://help.sap.com/viewer/6b94445c94ae495c83a19646e7c3fd56/2.0.03/en-US/b1e7562e2c704c19bd86f2f9f4feedc4.html

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Note 2750987 - Potential Corruption of Encrypted Root Key Backups when using SAP HANA Cockpit

Copy the root key backup file and validate the integrity using the following command (you will be asked for the root key backup password):

```
hdbnsutil -validateRootKeysBackup <filename>
```

If the validation fails, you need to immediately create a new root key backup for your system:

```
hdbnsutil -backupRootKeys <filename> --dbid=<dbid> | --
database_name=<database_name> --type=ALL
```

Please note that this command must be executed for SystemDB and every tenant individually.

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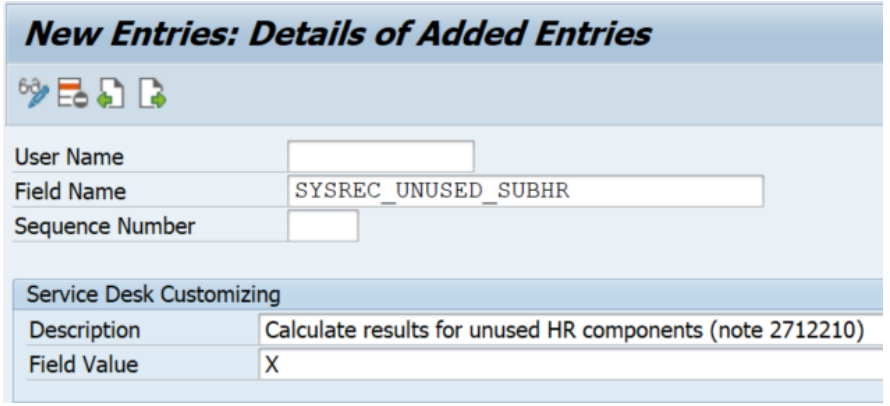
Note 2712210 - SysRec 7.2 SP 5 customize the calculation of security notes for unused subHR component

By default SysRec omits notes for unused HR components

After implementing this note you can activate a switch to show Security Notes for such unused components, too. Keep in mind to reset the SysRec buffer according to note 2449853 to trigger full calculation once.

Transaction SM30_DNOC_USERCFG_SR



Use function OCS_GET_INSTALLED_COMPS exporting parameter ET_CVERS_SUB with field UNUSED = X to see which components are „unused“:

SUBCOMP	SUBREL	MASTERCOMP	MASTERREL	U
SAP_HRCAE	608	SAP_HR	608	X
SAP_HRCAR	608	SAP_HR	608	X
SAP_HRCAT	608	SAP_HR	608	X
SAP_HRCAU	608	SAP_HR	608	X
SAP_HRCBE	608	SAP_HR	608	X
SAP_HRCBG	608	SAP_HR	608	X
SAP_HRCBR	608	SAP_HR	608	X

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Note 2712210 - SysRec 7.2 SP 5 customize the calculation of security notes for unused subHR component

HR Security Notes are rather rare: Just 5 notes have been (re)-published since 2017

It‘s not simple to identify such notes on Support Portal because you cannot select for generic Software Components `SAP_HR*` or `EA-HR*` and you have to enter names one by one.

It might be easier to construct the URL externally:

```
https://launchpad.support.sap.com/#/mynotes?tab=Search&sortBy=ReleasedOn&f
ilters=releaseStatus%25253Aeq~'NotRestricted'%25252BsecurityPatchDay%25253
Aeq~'NotRestricted'%25252Btype%25253Aeq~'SECU'%25252BfuzzyThreshold%25253A
eq~'0.9'%25252BsoftwareComponent%25253Aeq~'SAP_HR'~'SAP_HRGXX'~'SAP_HRRXX'
~'EA-HR'~'EA-HRGXX'~'EA-HRRXX'~'SAP_HRCDE'~'EA-HRCDE'
```

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Note 2712210 - SysRec 7.2 SP 5customize the calculation of security notes for unused subHR component

Link for `SAP_HR`, `EA-HR` plus all 118 components:

```
https://launchpad.support.sap.com/#/mynotes?tab=Search&sortBy=ReleasedOn&filters=releaseStatus%2
5253Aeq~'NotRestricted'%25252BsecurityPatchDay%25253Aeq~'NotRestricted'%25252Btype%25253Aeq~'SEC
U'%25252BfuzzyThreshold%25253Aeq~'0.9'%25252BsoftwareComponent%25253Aeq~`SAP_HR'~'SAP_HRCAE'~'SA
P_HRCAR'~'SAP_HRCAT'~'SAP_HRCAU'~'SAP_HRCBE'~'SAP_HRCBG'~'SAP_HRCBR'~'SAP_HRCCA'~'SAP_HRCCH'~'SA
P_HRCCL'~'SAP_HRCCN'~'SAP_HRCCO'~'SAP_HRCCZ'~'SAP_HRCDE'~'SAP_HRCDK'~'SAP_HRCEG'~'SAP_HRCES'~'SA
P_HRCFI'~'SAP_HRCFR'~'SAP_HRCGB'~'SAP_HRCGR'~'SAP_HRCHK'~'SAP_HRCHR'~'SAP_HRCHU'~'SAP_HRCID'~'SA
P_HRCIE'~'SAP_HRCIN'~'SAP_HRCIT'~'SAP_HRCJP'~'SAP_HRCKR'~'SAP_HRCKW'~'SAP_HRCKZ'~'SAP_HRCMX'~'SA
P_HRCMY'~'SAP_HRCNL'~'SAP_HRCNO'~'SAP_HRCNZ'~'SAP_HRCOM'~'SAP_HRCPH'~'SAP_HRCPL'~'SAP_HRCPT'~'SA
P_HRCQA'~'SAP_HRCRO'~'SAP_HRCRU'~'SAP_HRCSA'~'SAP_HRCSE'~'SAP_HRCSG'~'SAP_HRCSI'~'SAP_HRCSK'~'SA
P_HRCTH'~'SAP_HRCTR'~'SAP_HRCTW'~'SAP_HRCUA'~'SAP_HRCUN'~'SAP_HRCUS'~'SAP_HRCVE'~'SAP_HRCZA'~'SA
P_HRGXX'~'SAP_HRRXX'~'EA-HR'~'EA-HRCAE'~'EA-HRCAR'~'EA-HRCAT'~'EA-HRCAU'~'EA-HRCBE'~'EA-
HRCBG'~'EA-HRCBR'~'EA-HRCCA'~'EA-HRCCH'~'EA-HRCCL'~'EA-HRCCN'~'EA-HRCCO'~'EA-HRCCZ'~'EA-
HRCDE'~'EA-HRCDK'~'EA-HRCEG'~'EA-HRCES'~'EA-HRCFI'~'EA-HRCFR'~'EA-HRCGB'~'EA-HRCGR'~'EA-
HRCHK'~'EA-HRCHR'~'EA-HRCHU'~'EA-HRCID'~'EA-HRCIE'~'EA-HRCIN'~'EA-HRCIT'~'EA-HRCJP'~'EA-
HRCKR'~'EA-HRCKW'~'EA-HRCKZ'~'EA-HRCMX'~'EA-HRCMY'~'EA-HRCNL'~'EA-HRCNO'~'EA-HRCNZ'~'EA-
HRCOM'~'EA-HRCPH'~'EA-HRCPL'~'EA-HRCPT'~'EA-HRCQA'~'EA-HRCRO'~'EA-HRCRU'~'EA-HRCSA'~'EA-
HRCSE'~'EA-HRCSG'~'EA-HRCSI'~'EA-HRCSK'~'EA-HRCTH'~'EA-HRCTR'~'EA-HRCTW'~'EA-HRCUA'~'EA-
HRCUN'~'EA-HRCUS'~'EA-HRCVE'~'EA-HRCZA'~'EA-HRGXX'~'EA-HRRXX'
```

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Recap: Security Patch Process

- **SAP Security Notes and SAP Security Patch Day**
  What they are, when they're published
- **System Recommendations**
  Tool to find the applicability of notes to systems
- **SAP Security Patch Process**
  How to put all into a working mechanism

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January 2019

Topics January 2019

Note 2699233 - Information Disclosure in SAP Financial Consolidation Cube Designer

Note 2727624 - Information Disclosure in SAP Landscape Management

Note 2696233 - Multiple Vulnerabilities in SAP Cloud Connector

Note 2724788 - Various Vulnerabilities in ADOBE PDFPRINT LIBRARY

Note 2688393 - SI: Deactivation of the protocols TLS 1.0 and TLS 1.1 on 12/31/2018

What's new in System Recommendations 7.2 SP 8

Support for Notes which are Relevant for System Measurement / License Audit Notes
Separation between Display and Change authorizations

What's new in Configuration Validation 7.2 SP 8

Send Configuration Validation reports via email
Send System Recommendations reports via email

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Note 2699233 - Information Disclosure in SAP Financial Consolidation Cube Designer

Solution:
“… It now introduces an allowlist …”

Solution options:

☐ **Static, hard coded allowlist → just apply the patch**

☐ **Empty, active allowlist → secure, but maybe incomplete**

■ **Empty, inactive allowlist because it’s empty → manual configuration required**

☐ **Empty, inactive allowlist because of main switch → manual configuration required**

☐ **Logging / simulation available to identify required entries → good to know**

Solution

The fix is a change in the configuration file of the Deployer Service.

It now introduces an allowlist of Financial Consolidation URLs, configured by a Cube Designer administrator, which will no longer allow manipulation of the service call. You can find more information here.

Install the patches mentioned in this security note.

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Note 2699233 - Information Disclosure in SAP Financial Consolidation Cube Designer

The example shows an empty, inactive allowlist:

```
<AuthenticatedURL>
 <!-- webserver url="http://10.100.100.123/FC101WS" / -->
 <!-- webserver url="http://10.100.100.123/FC101WS_2" / -->
 </AuthenticatedURL>
 </AuthenticatedFinanceWebServers>
```

You need to add at least an active dummy entry:

```
<webserver url="dummy" />
```

If you add real entries do not forget to add entries for http and https.

Solution

The fix is a change in the configuration file of the Deployer Service.

It now introduces an allowlist of Financial Consolidation URLs, configured by a Cube Designer administrator, which will no longer allow manipulation of the service call. You can find more information here.

Install the patches mentioned in this security note.

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Note 2727624 - Information Disclosure in SAP Landscape Management

This vulnerability affects HANA installations even if the issue is located in a different component.

1. **Implement the referenced SAP Landscape Management Patch LaMa 3.0 SPS09 PL1**

2. **Delete old activities and log files to remove confidential information about HANA systems which you have installed via LaMa.**
   Delete log files once you do not need them any longer. Log and activity data may have been exported by users. Ensure proper deletion of these exports, too.

3. **Ensure the SAP HANA system user is disabled according to the HANA Security Guide**

4. **Change relevant passwords of system users of tenants and other administration users**

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Note 2696233 - Multiple Vulnerabilities in SAP Cloud Connector

The SAP Cloud Connector opens TLS encrypted communication channels to SAP Cloud Platform which then can be used by on-premise applications.

The Cloud Connector connects to the SAP Cloud Platform (SCP) via HTTPS and checks if the server certificate is signed by a valid and trusted CA, however the Common Name is not verified yet.

Install new version (≥ 2.11.3) of the SAP Cloud Connector
See linked slides to check the version of the SAP Cloud Connector and to verify more security settings.

So far, I do not see a possibility to check the version of the SAP Cloud Connector and the version of the jvm via application Configuration Validation in the SAP Solution Manager

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Note 2724788 - Various Vulnerabilities in ADOBE PDFPRINT LIB

In System Recommendations, the note is visible for all ABAP systems because of it's special assignment to software component BC-FES-GUI

BC-FES-GUI was added to all ABAP systems as a virtual software component of type 'Support Package Independent' as of May 2017

2724788 - Various Vulnerabilities in ADOBE PDFPRINT LIBRARY

Version 2 from Jan 8, 2019 in English

Description | CVSS | Software Components | Support Package Patches | Attributes | Languages

Software Components

Software Component	From	To
PDFPRINT	7.50	7.50
SAPCPRINT	7.50	7.50
	7.50 BYD	7.50 BYD
BC-FES-GUI	7.50	7.50

Support Package Patches

Software Component	Support Package	Patch Level
SAP CLOUD PRINT MANAGER 750	SP000	000003
SAP CLOUD PRNT MGR 750 FOR BYD	SP000	000003
SAPPDFPRINT 7.50	SP000	000003

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Note 2688393 - SI: Deactivation of the protocols TLS 1.0 and TLS 1.1 on 12/31/2018

You must make sure that TLSv 1.2 is available in your system.
For TLSv 1.2, we recommend that you use at least version 8.4.49 of the CommonCryptoLib (CCL).

You must also make sure that TLSv 1.2 is included using the values maintained in the profile parameter `ssl/client_ciphersuites`.

Example: `ssl/client_ciphersuites = 150:PFS:HIGH::EC_P256:HIGH`

`150` = 2(BEST) + 4(NO_GAP) + 16("blind") + 128(TLSv1.0)

Example: `ssl/client_ciphersuites = 918:PFS:HIGH::EC_P256:EC_HIGH`

`918` = 2(BEST) + 4(NO_GAP) + 16("blind") + 128(TLSv1.0) + 256(TLSv1.1) + 512(TLSv1.2)

BEST + NO_GAP includes all higher versions, too. Therefore it's not necessary to list them explicitly.

The technical details are provided in section 7 of SAP Note 510007 (*Setting up SSL on Application Server ABAP*).

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Note 2688393 - SI: Deactivation of the protocols TLS 1.0 and TLS 1.1 on 12/31/2018

Cipher suites number in profile parameters `ssl/ciphersuites` and `ssl/client_ciphersuites`

Value	Description
1	"BC"- Option (accept SSL Version 2.0 CLIENT-HELLO / SSLv2Hello for TLSv1.x Handshake)
2	"BEST"- Option (activate highest available TLS protocol version, i.e. TLSv1.2 for CCL 8.4.31+)
4	"NO_GAP"- Option (no gaps between TLS protocol versions; is forced to date)
16	Allow blind sending of a client certificate
32	"Strict protocol version configuration" option--do not automatically enable TLSv1.0
64	SSLv3 (do not use)
128	TLSv1.0 (if the CommonCryptoLib is too old, you cannot disable TLSv1.0, as e.g. with note 2065806)
256	TLSv1.1
512	TLSv1.2

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Note 2688393 - SI: Deactivation of the protocols TLS 1.0 and TLS 1.1 on 12/31/2018

How-to deactivate TLS 1.0?

Note 2384243 - NetWeaver Application Server: How to configure strict TLS 1.2

Note 2384290 - SapSSL update to facilitate TLSv1.2-only configurations, TLSext SNI for 721+722 clients

```
ssl/ciphersuites        = 801:PFS:HIGH::EC_P256:EC_HIGH
ssl/client_ciphersuites = 816:PFS:HIGH::EC_P256:EC_HIGH
```

How-to test for weak ciphersuites?

Testing for Weak SSL/TLS Ciphers, Insufficient Transport Layer Protection (OTG-CRYPST-001)
https://www.owasp.org/index.php/Testing_for_Weak_SSL/TLS_Ciphers,_Insufficient_Transport_Layer_Protection_(OTG-CRYPST-001)

List of tools:
https://www.owasp.org/index.php/Testing_for_Weak_SSL/TLS_Ciphers,_Insufficient_Transport_Layer_Protection_(OTG-CRYPST-001)#Tools

[31] SSL service recognition via nmap
https://nmap.org/nsedoc/scripts/ssl-enum-ciphers.html

[32] Testing supported Cipher Suites, BEAST and CRIME attacks via TestSSLServer
http://www.bolet.org/TestSSLServer/

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Note 2688393 - SI: Deactivation of the protocols TLS 1.0 and TLS 1.1 on 12/31/2018

> sapgenpse tlsinfo -c **`DEFAULT`**

Running in client mode

Configured protocol versions:
TLSv1.0

Enabled cipher suites:
TLS_RSA_WITH_AES128_CBC_SHA
TLS_RSA_WITH_AES256_CBC_SHA
TLS_ECDHE_RSA_WITH_AES128_CBC_SHA
TLS_ECDHE_RSA_WITH_AES256_CBC_SHA
TLS_ECDHE_ECDSA_WITH_AES128_CBC_SHA
TLS_ECDHE_ECDSA_WITH_AES256_CBC_SHA

Enabled elliptic curves:
EC_P384 [optimized: FALSE]
EC_P521 [optimized: FALSE]
EC_P256 [optimized: FALSE]
EC_X25519 [optimized: FALSE]

> sapgenpse tlsinfo -c **`150:PFS:HIGH::EC_P256:HIGH`**

Running in client mode

Configured protocol versions:
TLSv1.0, TLSv1.1, TLSv1.2 (Blind Client Certificate)

Enabled cipher suites:
TLS_ECDHE_RSA_WITH_AES128_GCM_SHA256
TLS_ECDHE_RSA_WITH_AES256_GCM_SHA384
TLS_ECDHE_RSA_WITH_AES128_CBC_SHA
TLS_ECDHE_RSA_WITH_AES256_CBC_SHA384
TLS_ECDHE_RSA_WITH_AES256_CBC_SHA
TLS_ECDHE_ECDSA_WITH_AES128_GCM_SHA256
TLS_ECDHE_ECDSA_WITH_AES256_GCM_SHA384
TLS_ECDHE_ECDSA_WITH_AES128_CBC_SHA
TLS_ECDHE_ECDSA_WITH_AES256_CBC_SHA384
TLS_ECDHE_ECDSA_WITH_AES256_CBC_SHA
TLS_RSA_WITH_AES128_GCM_SHA256
TLS_RSA_WITH_AES256_GCM_SHA384
TLS_RSA_WITH_AES128_CBC_SHA
TLS_RSA_WITH_AES256_CBC_SHA

Enabled elliptic curves:
EC_P256 [optimized: FALSE]

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Note 2688393 - SI: Deactivation of the protocols TLS 1.0 and TLS 1.1 on 12/31/2018

> *sapgenpse tlsinfo -c* **`950:PFS:HIGH::EC_P256:EC_HIGH`**

Running in client mode

Configured protocol versions:
TLSv1.0, TLSv1.1, TLSv1.2 (Blind Client Certificate, Strict Protocol Version Mode)

Enabled cipher suites:
TLS_ECDHE_RSA_WITH_AES128_GCM_SHA256
TLS_ECDHE_RSA_WITH_AES256_GCM_SHA384
TLS_ECDHE_RSA_WITH_AES128_CBC_SHA
TLS_ECDHE_RSA_WITH_AES256_CBC_SHA384
TLS_ECDHE_RSA_WITH_AES256_CBC_SHA
TLS_ECDHE_ECDSA_WITH_AES128_GCM_SHA256
TLS_ECDHE_ECDSA_WITH_AES256_GCM_SHA384
TLS_ECDHE_ECDSA_WITH_AES128_CBC_SHA
TLS_ECDHE_ECDSA_WITH_AES256_CBC_SHA384
TLS_ECDHE_ECDSA_WITH_AES256_CBC_SHA
TLS_RSA_WITH_AES128_GCM_SHA256
TLS_RSA_WITH_AES256_GCM_SHA384
TLS_RSA_WITH_AES128_CBC_SHA
TLS_RSA_WITH_AES256_CBC_SHA

Enabled elliptic curves:
EC_P256 [optimized: FALSE]
EC_P384 [optimized: FALSE]
EC_P521 [optimized: FALSE]
EC_X25519 [optimized: FALSE]

> *sapgenpse tlsinfo -c* **`816:PFS:HIGH::EC_P256:EC_HIGH`**

Running in client mode

Configured protocol versions:
TLSv1.1, TLSv1.2 (Blind Client Certificate, Strict Protocol Version Mode)

Enabled cipher suites:
TLS_ECDHE_RSA_WITH_AES128_GCM_SHA256
TLS_ECDHE_RSA_WITH_AES256_GCM_SHA384
TLS_ECDHE_RSA_WITH_AES128_CBC_SHA
TLS_ECDHE_RSA_WITH_AES256_CBC_SHA384
TLS_ECDHE_RSA_WITH_AES256_CBC_SHA
TLS_ECDHE_ECDSA_WITH_AES128_GCM_SHA256
TLS_ECDHE_ECDSA_WITH_AES256_GCM_SHA384
TLS_ECDHE_ECDSA_WITH_AES128_CBC_SHA
TLS_ECDHE_ECDSA_WITH_AES256_CBC_SHA384
TLS_ECDHE_ECDSA_WITH_AES256_CBC_SHA
TLS_RSA_WITH_AES128_GCM_SHA256
TLS_RSA_WITH_AES256_GCM_SHA384
TLS_RSA_WITH_AES128_CBC_SHA
TLS_RSA_WITH_AES256_CBC_SHA

Enabled elliptic curves:
EC_P256 [optimized: FALSE]
EC_P384 [optimized: FALSE]
EC_P521 [optimized: FALSE]
EC_X25519 [optimized: FALSE]

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What's new in System Recommendations 7.2 SP 8
Support for Notes which are Relevant for System Measurement

Similar like for HotNews, Performance Notes, or Legal Change Notes you can now identify relevant notes having the attribute „Relevancy for System Measurement“ aka „License Audit Notes“

Note:

2294328 - Measurement result for metric ID 3216 is

Description | Software Components | Corrections | Support Packages

Attributes

Name	Value
Other Components	XX-SER-LAS License Auditing Services
Relevancy for System Measurement	Engine Measurement Correction

System recommendations:

75 All | 28 ABAP | 3 ATC | 10 BOBJ | 1 CLOUD_CONN | 16 HANADB | 10 JAVA | 1 SUP | 5 UNSPECIFIC | 1 WEBDISP

System

Technical System	IT Admin Role	System Priority	Security Notes	Hot News	Performance Notes	Legal Change Notes	License Audit Notes	Favorite
AHN~ABAP	DEVELOP	High	217	120	672	564	1	★
AHN~HANADB	Undefined	Undefined	23	49	173	477	0	☆
BE6~ABAP	Test System	Undefined	198	125	602	550	1	★
BEA~ABAP	Undefined	Undefined	127	69	378	548	1	★
BEB~JAVA	Undefined	Undefined	63	89	245	479	0	☆
BEC~ABAP	Development System	Undefined	55	60	242	504	1	☆

Limitation: The Notes Search on SAP Support Portal https://support.sap.com/notes does not show a filter option for such notes

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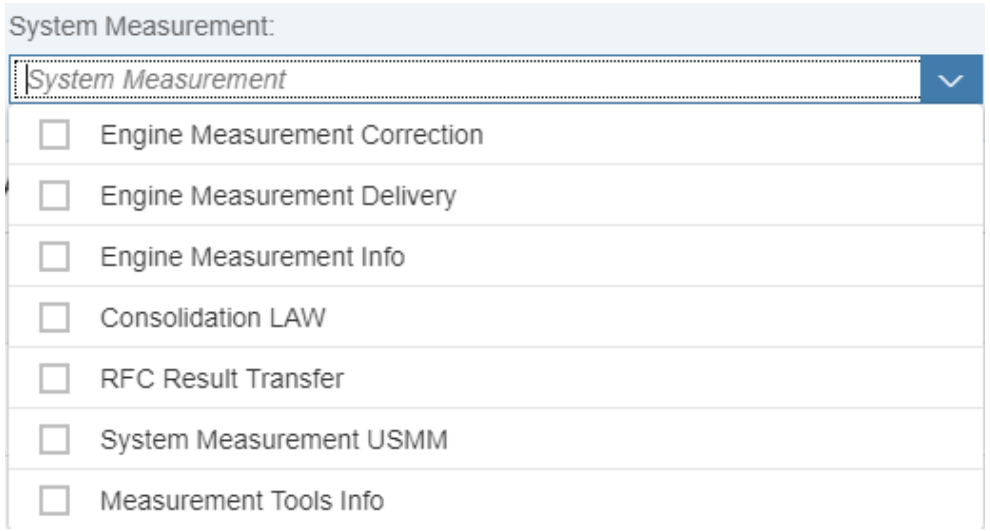
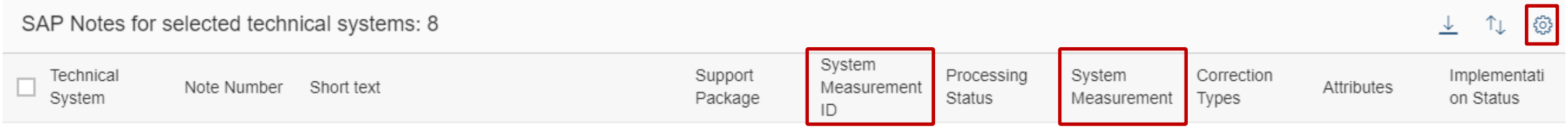
What's new in System Recommendations 7.2 SP 8

Support for Notes which are Relevant for System Measurement

You can activate a new filter field on the SAP Note Overview screen:



You can display the System Measurement and System Measurement ID columns on the SAP Note Overview screen via the settings button:



See Online Help: https://help.sap.com/viewer/34eaf25a11d54485aecf05e041f78555/107/en-US/aab02c8d37b54536bc3319521ea08eff.html

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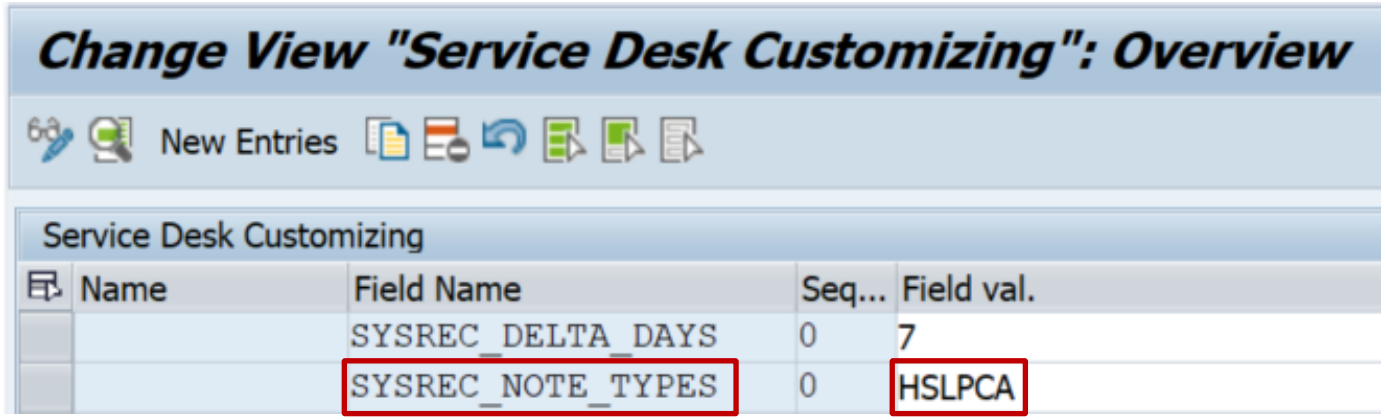
What's new in System Recommendations 7.2 SP 8
Support for Notes which are Relevant for System Measurement

Preparation, which only required if you have previously changed the customizing, i.e. to view correction notes, too.

In this case you have to extend the settings via transaction `SM30_DNOC_USERCFG_SR` for table `DNOC_USERCFG`

`SYSREC_NOTE_TYPES` `HSLPCA`



See Online Help: https://help.sap.com/viewer/34eaf25a11d54485aecf05e041f78555/107/en-US/aab02c8d37b54536bc3319521ea08eff.html

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What's new in System Recommendations 7.2 SP 8
Support for Notes which are Relevant for System Measurement - Examples

Engine Measurement Correction

Note 2621557 - ILM Audit Module: Introduction of additional measurement units
Note 2512261 - FKKINV: Usage measurement for SAP Convergent Invoicing still includes documents for …
Note 2294328 - Measurement result for metric ID 3216 is 1 too high
Note 2254780 - Enhancement of software license audit for SAP GTS
Note 2234559 - Transaction USMM triggers a runtime error DBSQL_SQL_ERROR

LAW Consolidation

Note 2407507 - LAW 2.0 SDCCN transfer does not work to 7.31
Note 2164594 - LAW 2.0: Falsche Nutzertypen bei Konsolidierung
Note 2112104 - LAW 2.0: Fehlende Sortierfunktion im RFC STATUS

System Measurement USMM

Note 2213466 - System measurement: Performance during determination of user address data
Note 2170034 - System measurement: Incorrect measurement date is displayed in the License Administration Workbench
Note 1900773 - System measurement: Automatic measurement via RFC or as a background job

RFC Result Transfer

Note 2498932 - System measurement job RSUVM017 or RSUVM007 terminates sporadically
Note 2170036 - LAW 2.0: RFC results from component systems are placed in LAW1 inbox
Note 1630359 - Report RSLAW_PLUGIN: Error message in case of RFC problems

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What's new in System Recommendations 7.2 SP 8

Separation between Display and Change authorizations

Using authorization object `SM_FUNCS` for `SM_APPL` = `SYSTEM_REC` you now can distinguish between activity `03` “Display” and `02` “Change” for accessing status and comments.

Activity `06` “Delete” is checked if you are decommissioning a system.

The check for accessing status and comments does not distinguish between note types.

The template roles `SAP_SYSREC_ALL` and `SAP_SYSREC_DIS` are already adjusted accordingly in SP 7

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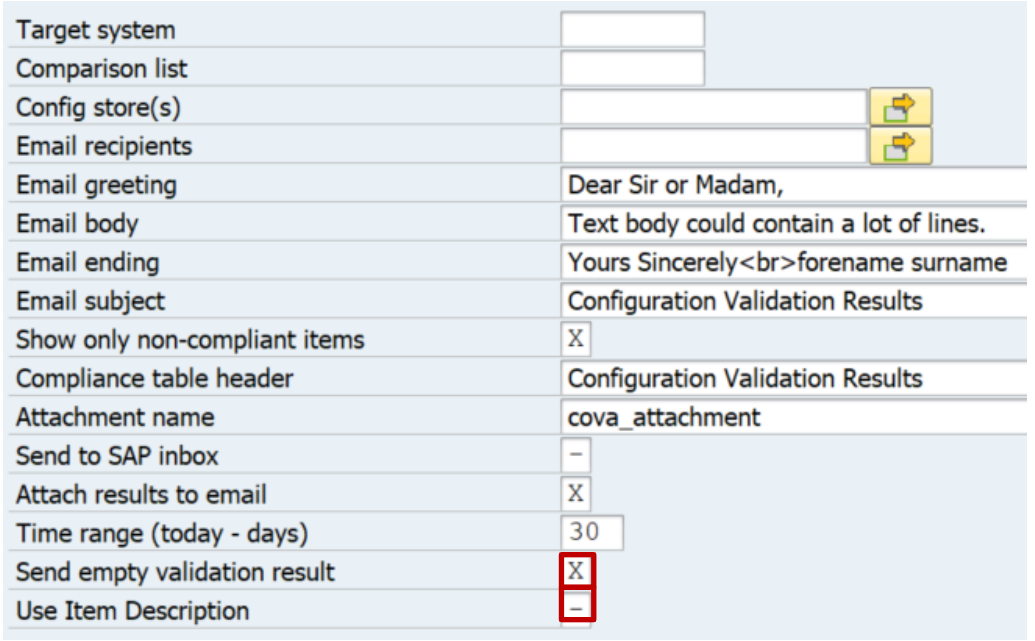
What's new in Configuration Validation 7.2 SP 8

Send Configuration Validation reports via email

Report `DIAGCV_SEND_CONFIG_VALIDATION`

Target system	Target system (mandatory)
Comparison list	Comparison list (mandatory)
Config store(s)	Configuration stores (multi values)
Email recipients	Email recipients (multi values)
Email greeting, body, ending	Text (html)
Email subject	Text
Show only non-compliant items	**x** (default) show non-compliant only, ‘ ‘ show compliant and non-compliant, + show all including ‘item not found’ and ‘additional in target system’
Compliance table header	Text (html)
Attachment name	File name
Send to SAP inbox	– (default) no, **x** send to sender, too
Attach results to email	**x** (default) results as attachment, ‘ ‘ results inline
Time range (today - days)	Number of days (if the query is time dependent)
Send empty validation result	**x** (default) send also email when validation result is empty, ‘ ‘ no mail if empty results
Use Item Description	– (default) no, **x** show weight and item description (instead of store group name column)



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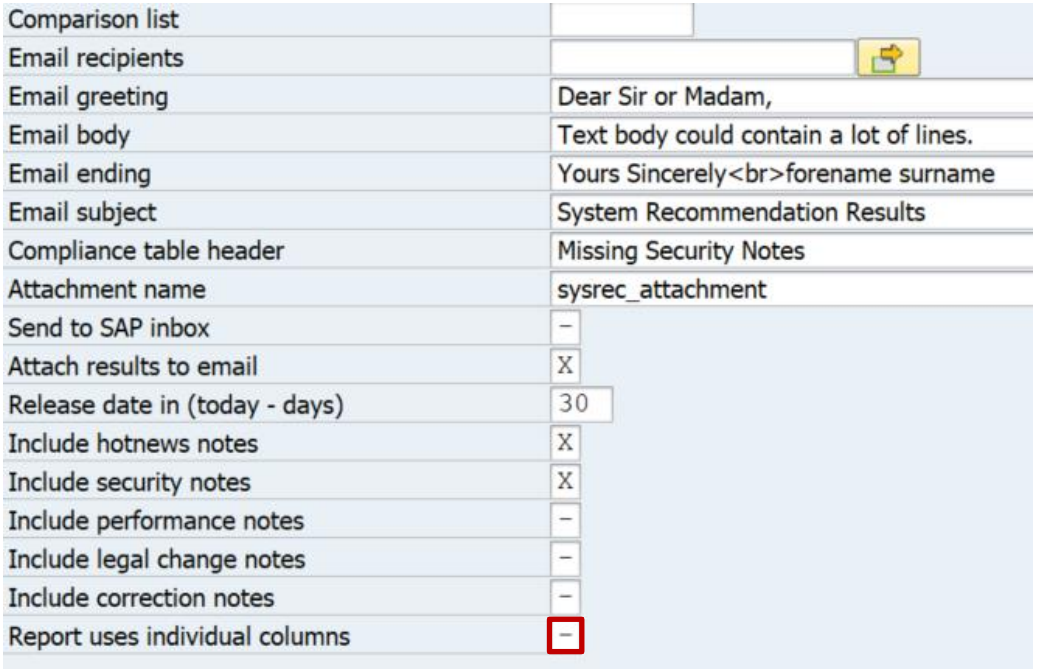
What's new in Configuration Validation 7.2 SP 8

Send System Recommendations reports via email

Report `DIAGCV_SEND_SYSREC`

Comparison list	Comparison list (mandatory)
Email recipients	Email recipients (multi values)
Email greeting, body, ending	Text (html)
Email subject	Text
Compliance table header	Text (html)
Attachment name	File name
Send to SAP inbox	– (default) no, **x** send to sender, too
Attach results to email	**x** (default) results as attachment, ‘ ‘ results inline
Release date in (today - days)	Number of days



Include HotNews, Security Notes, Performance notes, Legal Change notes, Correction notes
x select note type, ‘ ‘ do not select note type

Report uses on individual columns
– (default) show configuration validation standard report,
x show system recommendation report

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December 2018

Topics December 2018

Note 2718993 - Cross-Site Scripting using host header in NetWeaver AS Java

Note 2721962 - Version Management: REMOTE comparison option is missing the "Target sys" option

Note 2530147 - Missing Authorization check in DFPS stock transfer process

Note 2061129 - Missing whitelist check in SAP Dispute Management

RFC Security Optimization Projects

Note 2040644 - System Internal Communications Security

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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Note 2718993 - Cross-Site Scripting using host header in NetWeaver AS Java

The note does not describe a software patch but a manual configuration instruction:

Configure appropriate **ProxyMappings** to disregard the information provided in the request host header and to avoid HTTP host header manipulation, even if there is no Proxy or Load balancer in front of the system. For more details see documentation about Mapping Ports and KBA 1927272.

Example:
You have NetWeaver AS Java including ICM installed on host `www.local.com` and ports `50000` for http respective `50001` for https.

Configure `ProxyMappings` property as follows:

```
50000=(Host:www.local.com,Port:50000,Scheme:http,Override:true),
50001=(Host:www.local.com,Port:443,Scheme:https,Override:true)
```

The Override attribute (with default value *false*) is activated to force the host and port information from the request to be overridden by the relevant information from this property.
If you are already using a Proxy, ensure that this attribute is set.

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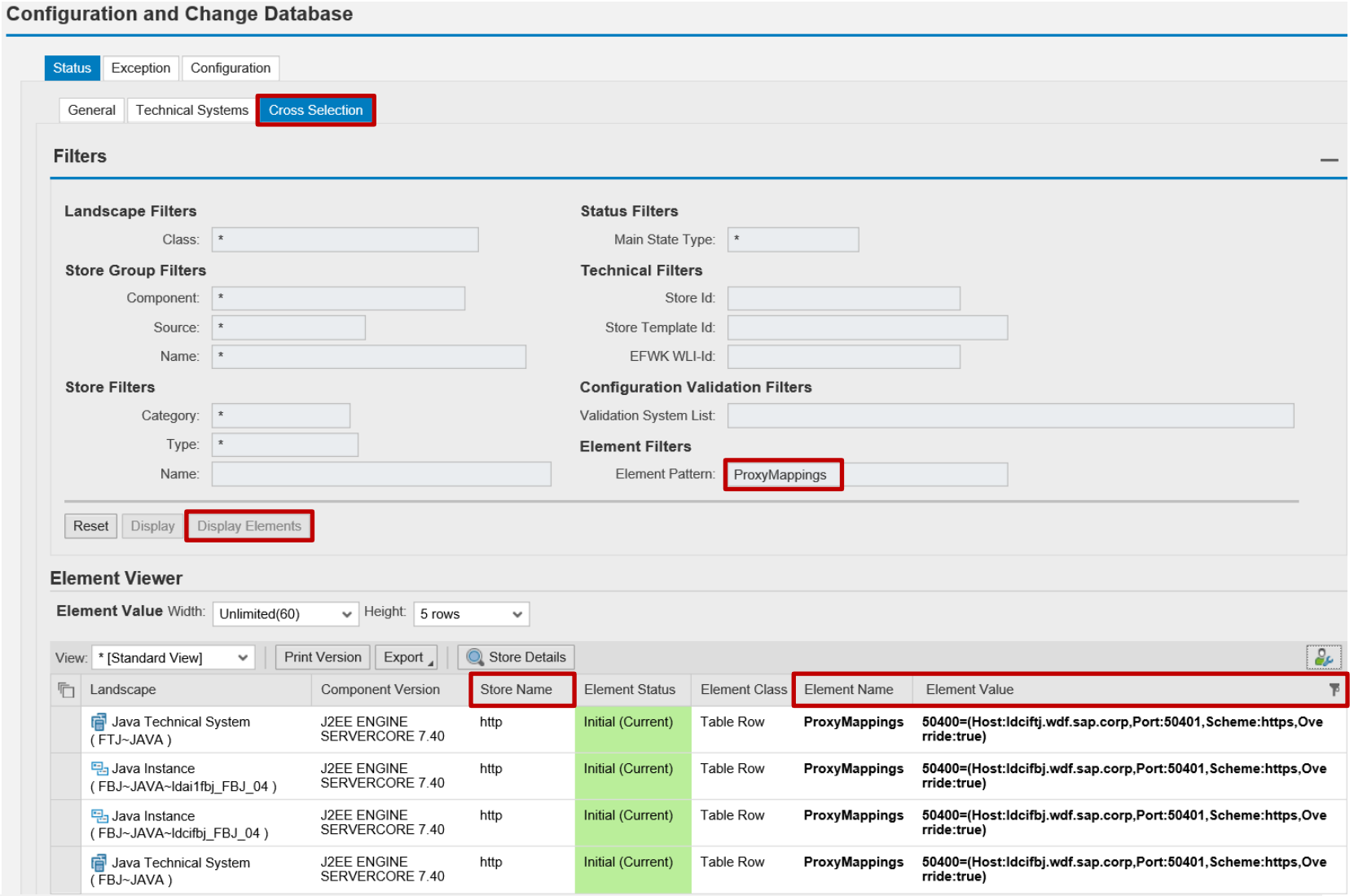
Note 2718993 - Cross-Site Scripting using host header in NetWeaver AS Java

In application **Change Reporting** and **Configuration Validation**, respective (as shown here) in transaction **`CCDB`** you find the Configuration Item **`ProxyMappings`** in the Configuration Store **`http`** for Java systems:



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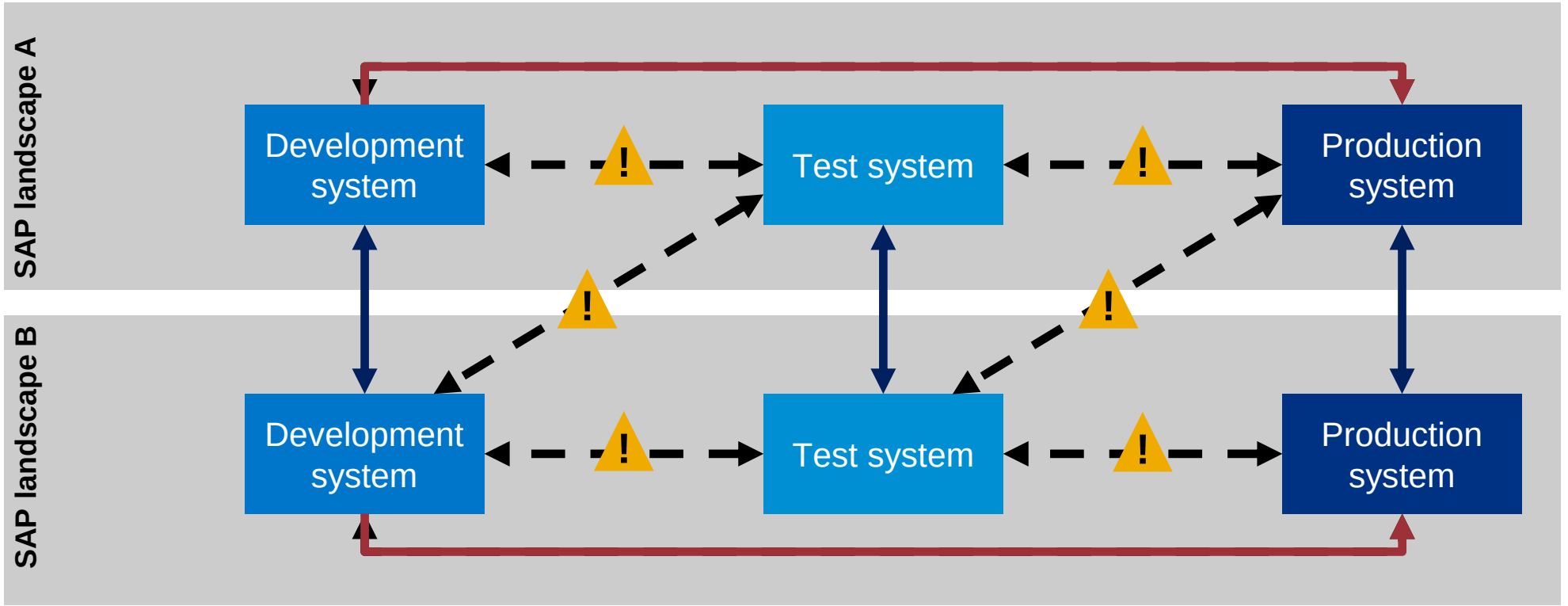
Note 2721962 - Version Management: REMOTE comparison option is missing the "Target sys" option

Remote version comparison requires an RFC destination from DEV to PROD:



OK: RFC destinations between systems of same security classification

CHECK: RFC destinations from low security level to high security level (trust relationship, stored credentials)
RFC destinations from high security level to low security level (callback)

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Note 2721962 - Version Management: REMOTE comparison option is missing the "Target sys" option

Do not use Trusted RFC (which would require that PROD trusts DEV).

Use either a login-destination (which requires that the developer needs a user with password on PROD) or use a technical user with limited authorizations:

An authorization trace of the remote comparison feature using tran STAUTHTRACE shows that the user requires a role having authorizations for S_RFC with ACTVT=16 and RFC_TYPE=FUNC for the listed function modules.

It might be more stable to add some more remote enabled functions to the authorizations. You can use wildcards for function names (but do not add the complete function groups).

Some other authorizations for RFC functions (plus S_DEVELOP with ACTVT=03) are required for the 'Split-Screen-Editor' in SE38:

```
RFC_SYSTEM_INFO
RPY_EXISTENCE_CHECK_PROG
RFC_SYSTEM_INFO
RPY_EXISTENCE_CHECK_FUNC
READ_SOURCE_WITH_ENHANCEMENTS
```

Remote-enabled function (field RFC_NAME)	Description
TR_SYS_PARAMS	Read system name, type, change option
SVRS_GET_VERSION_DIRECTORY SVRS_GET_VERSION_DIRECTORY_40 **SVRS_GET_VERSION_DIRECTORY_46** or SVRS_GET_VERSION_DIRECTORY*	Read version directory
SVRS_GET_VERSION_FUNC SVRS_GET_VERSION_FUNC_40 SVRS_GET_VERSION_METH SVRS_GET_VERSION_METH_40 SVRS_GET_VERSION_REPS **SVRS_GET_VERSION_REPS_40** […] or SVRS_GET_VERSION_*	Reads version of ABAP function, method, or program
GET_E07T_DATA GET_E07T_DATA_40 **GET_E07T_DATA_46** or GET_E07T_DATA*	Extracts the E07T for the appropriate Read short texts for workbench requests and tasks
FUNCTION_EXISTS	Check existence of function
SVRS_GET_NOTE_CI_TCI_INFO	Get Note CI and TCI information

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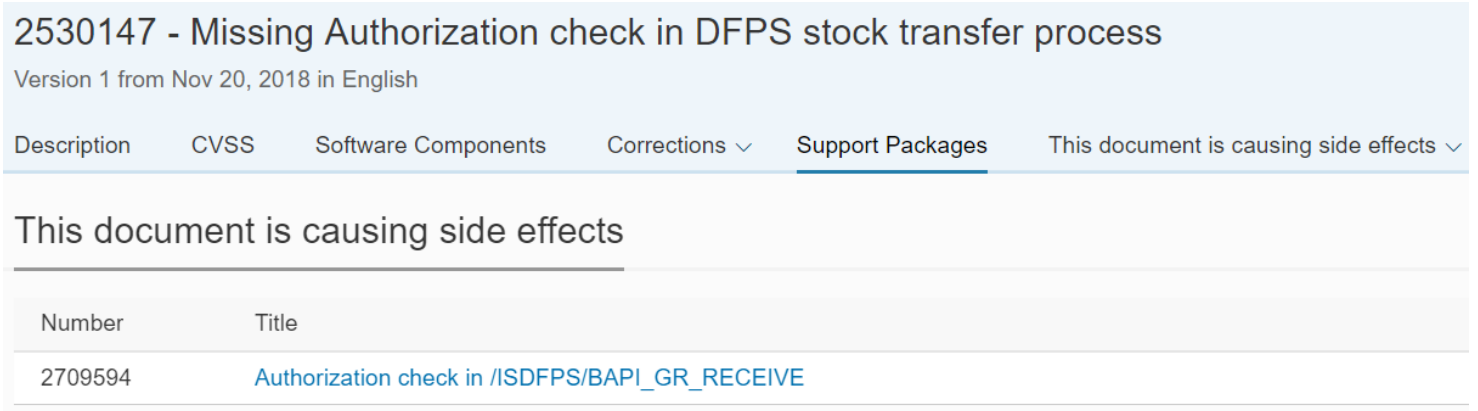
Note 2530147 - Missing Authorization check in DFPS stock transfer process

The corrections for software component `EA-DFPS` adds an unconditional authority check for authority object `DF_BAS_ALE` in a remote-enabled BAPI function.

This authority check is too strict - it only should be checked in case of an external RFC call. It is not required for local calls of the function module in the context of IDoc processing.

This is solved with another side-effect-solving normal note:
Note 2709594 - Authorization check in /ISDFPS/BAPI_GR_RECEIVE

- **Implement both notes.**



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Note 2061129 - Missing whitelist check in SAP Dispute Management

This note is not valid for

SAP_FIN 618
SAP_FIN 720

because the correction is already part of the initial version of these releases.

The superfluous validity assignment was removed.

System Recommendations does not show the note for these releases anymore.

Latest Changes with Version 1 | 1 | Compare

2061129 - Missing whitelist check in SAP Dispute Management

Version	13	**Type**	SAP Security Note
Language	English	**Master Language**	English
Component	FIN-FSCM-DM (Dispute Management)	**Released On**	0230.1011.20152018

Symptom

UPDATE 30th November 2018 : This note has been re-released with updated 'Correction Instruction for missing release SAP_FIN 618 and 720'. Also CVSS information has been added.

Software Components

Software Component	Release		
SAP_APPL	602 - 602		
SAP_APPL	603 - 603		
SAP_APPL	604 - 604		
SAP_APPL	605 - 605		
SAP_APPL	606 - 606		
SAP_APPL	616 - 616		
SAP_FIN	617 - 617		
SAP_FIN	618 - 618	SAP_FIN	700 - 700
SAP_FIN	720 - 720		

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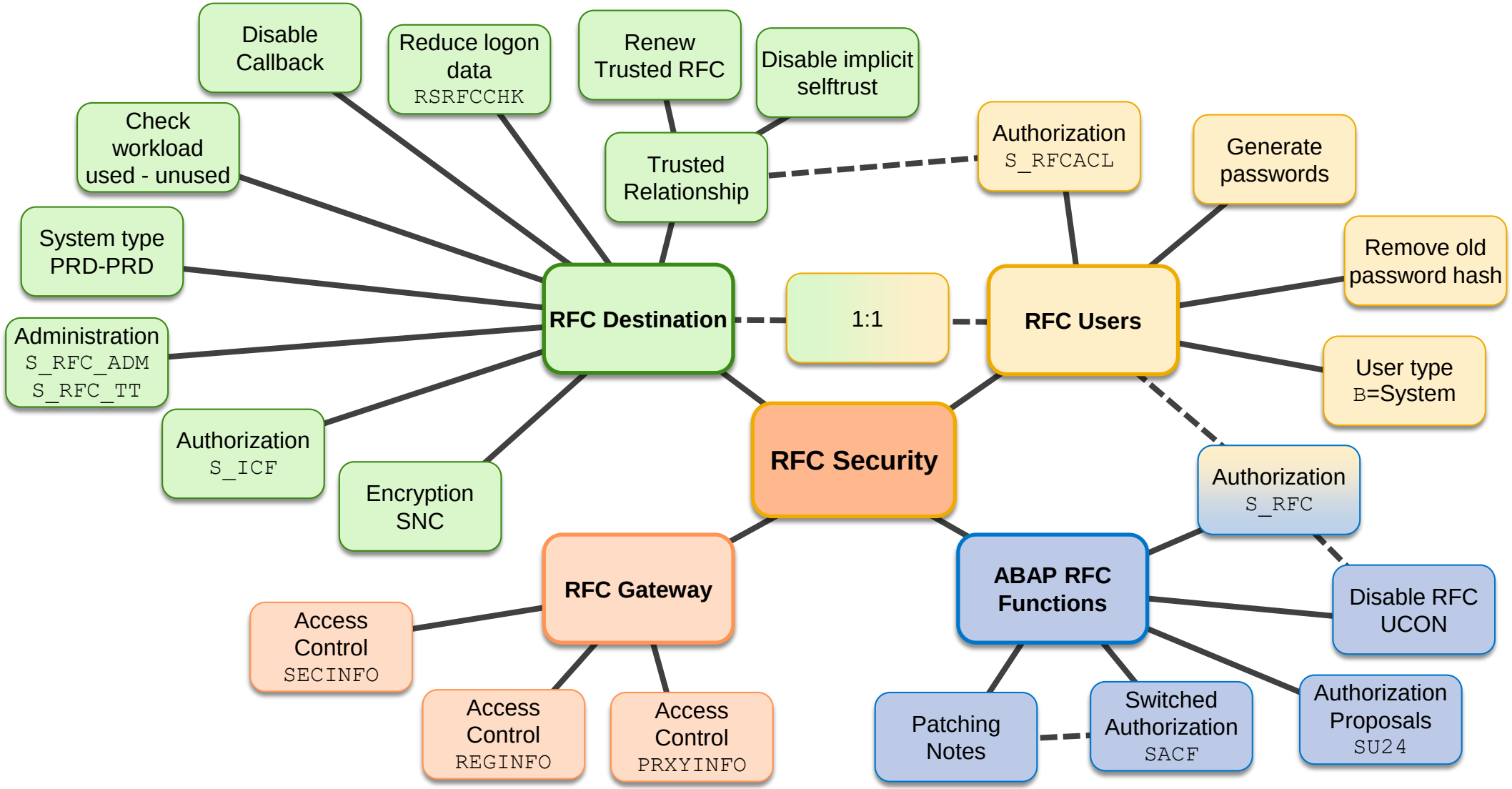
RFC Security Optimization Projects

Security Whitepaper https://support.sap.com/securitywp
→ SAP Security Recommendations: Securing Remote Function Calls (RFC)



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Note 2040644 - System Internal Communications Security

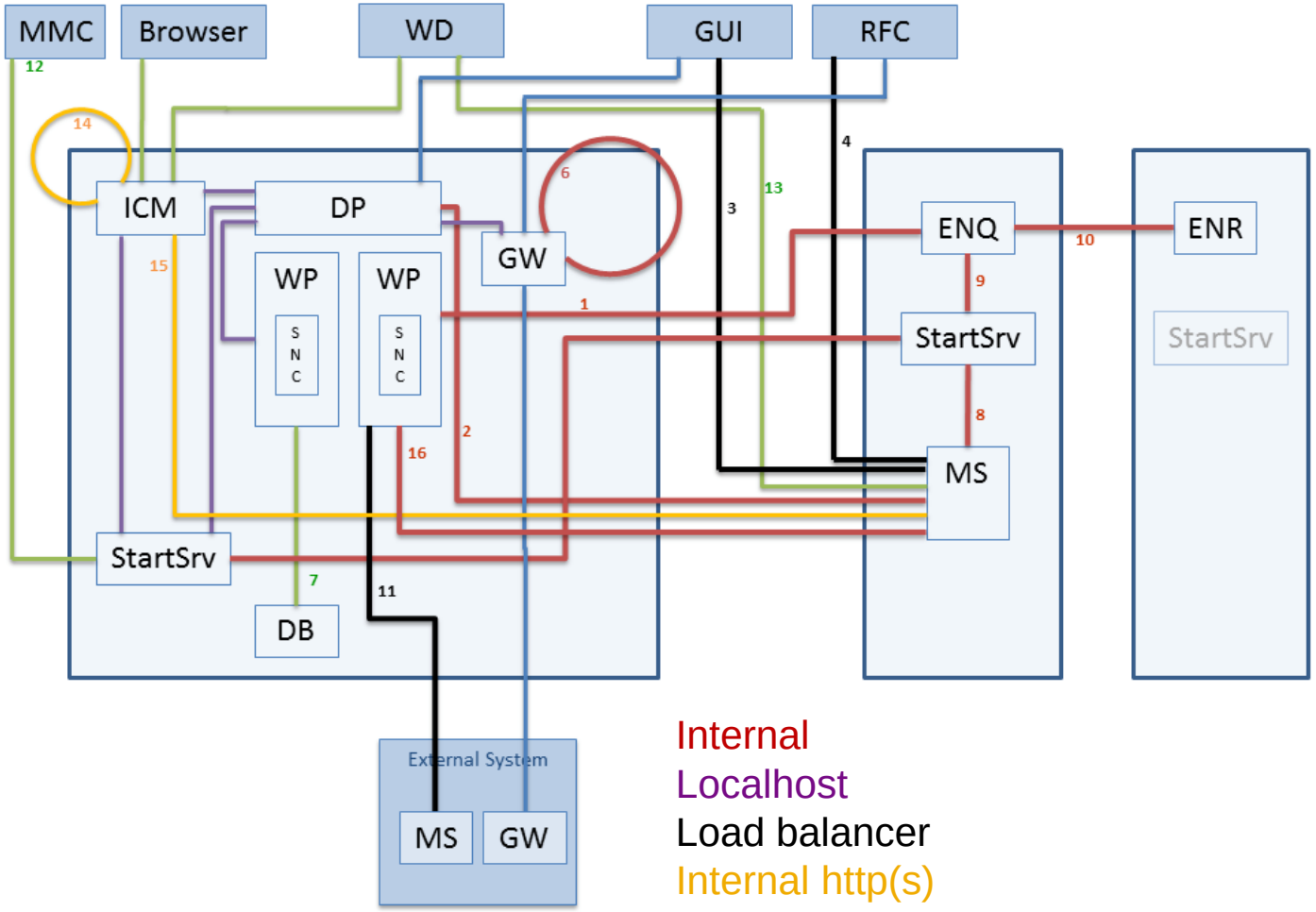
Requirement

The SAP internal server communication is not secure:

Work Process, Dispatcher, Gateway, Enqueue, SAPStartSrv, etc. have no encrypted communication and no authentication between each other. This allows sniffing, man-in-the-middle attacks, rogue server attacks, …

Requirements:

- **All Server components must be authenticated**
- **Communication between the components must be encrypted**



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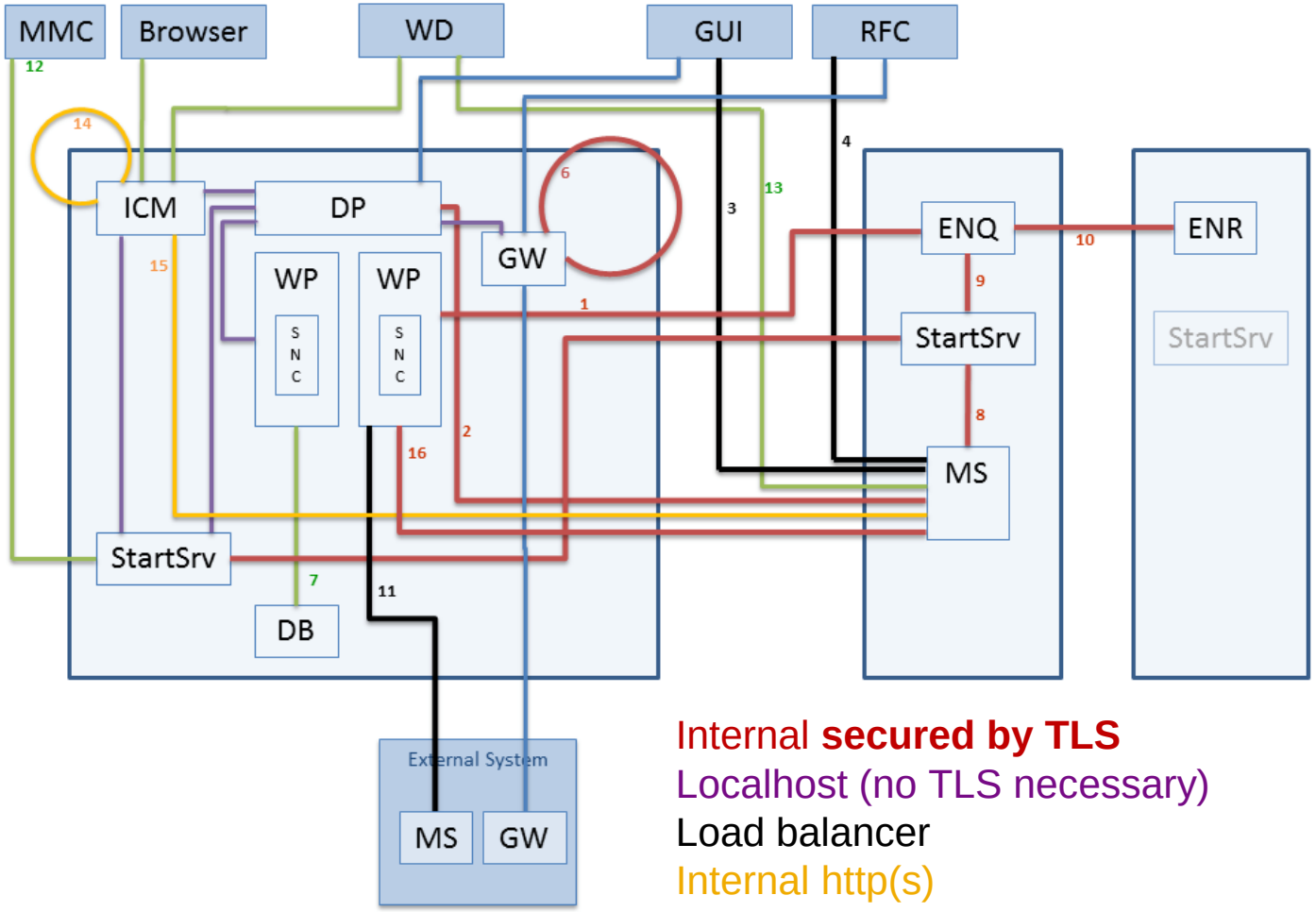
Note 2040644 - System Internal Communications Security
Solution

Solution:

- Use **TLS** encrypted communication between internal components
- Strengthen current **Secure Store** by enabling “Service Provider Interface” for external key storage providers (also Hardware Tokens) and use this feature within the Kernel
- **Automated Trust Setup** for lower TCO and easy adoption by customers



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Note 2040644 - System Internal Communications Security
First steps

Credits: SAP Consulting

"The usage of this feature is currently limited to pilot customers that have previously contacted SAP. To patriciate in the pilot phase, open a ticke OSS component BC-SEC referring to this OS note."

Removed in May 2019

→ Go for it – the feature is available for quite AP just wants to track which customers are making use of it

Minimum requirement: SAP_BASIS 7.40 SP 8 (11) with Kernel release 742 or higher

Set profile parameter `system/secure_communication = ON` in default profile `DEFAULT.PFL`

→ At system startup the `sapstart` service of each component requests a certificate for the component

→ **Automatic setup of the PKI** at first usage (no need to configure anything in trust manager)

→ **Automatic certificate renewal** (again: no need to configure anything in trust manager)

→ All communication is encrypted

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Note 2040644 - System Internal Communications Security First steps

Minimum requirement: SAP_BASIS 7.40 SP 8 with Kernel release 742 or higher

Recommended minimal versions according to additional notes 2362078, 2624688, 2778519:

- **SAP_BASIS 7.40 SP 11**
- **Kernel release 749 with patch >= 710**
- **Kernel release 753 with patch >= 416**
- **Kernel release 773 with patch >= 121**
- **Kernel release > 773**

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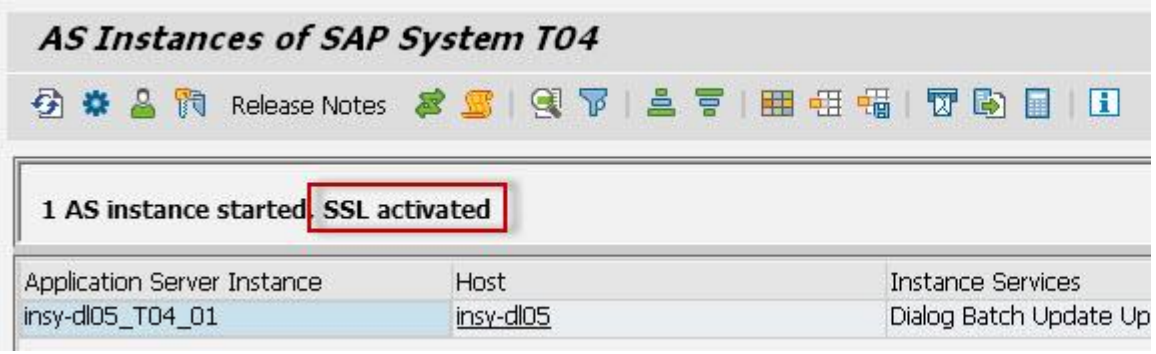
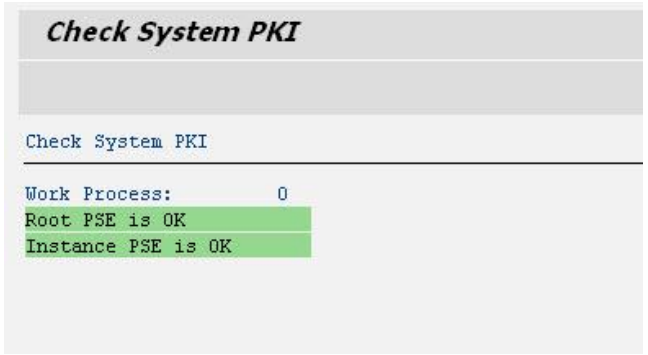
Note 2040644 - System Internal Communications Security
Check activation

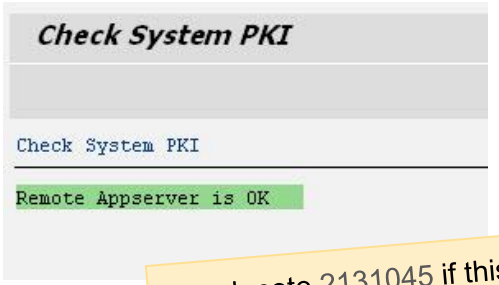
Transaction SM51



Report SSFPKITEST1



Report SSFPKITEST2



Check note 2131045 if this report does not work properly

Report SSFPKITEST3

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Note 2040644 - System Internal Communications Security
Caveats

The setting `system/secure_communication = BEST` would allow the server to self-determine if TLS is possible for all components or not. However, it will then allow insecure communication.

Make sure that

- You don’t use outdated Common Crypto Libraries
- The corresponding environment variables are set correctly and consistent for all components.

We’ve observed issues with libraries loaded twice or more though a messy environment, preventing proper operation of TLS for all server components.

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Note 2040644 - System Internal Communications Security
Caveats

Note that after activation, no non-internal tool will be able to access internal components (e.g. enqueue server) anymore if not secured by TLS and if not taking part in the internal PKI.
3rd party monitoring tools may fail. This is intended.

All external communication needs to use the external ports.

Other affected components:

- SAPEVT e.g. for external job scheduler (see note 2000417) and MSMON
- LM Tools
- SUM / SAPinst: Installations and upgrades seem to be working fine. To go the safe way, you may want to disable the feature before starting the upgrade and re-enable it afterwards
- Dual-stack systems are not supported

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Note 2040644 - System Internal Communications Security

Caveats

If port filters are used directly on instances (system internal firewall), you may want to fixate the GWs SSL port using instance profile parameter `gw/internal_port` and allow access to the specified port in your firewall setup. When `gw/internal_port` is not set, the gateway will assign dynamic ports that can change after each system restart (or the restart of the gwrd process).

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Note 2040644 - System Internal Communications Security

Conclusion

- **Once it is running: no side effects**
- **In no case has a performance impact been observed so far**
- **Best point in time for implementation: After release upgrade, conversions, new installations**

Online Documentation: Encrypting Internal Server Communication of SAP NetWeaver AS for ABAP
https://help.sap.com/viewer/e73bba71770e4c0ca5fb2a3c17e8e229/7.4.19/en-US/41ffb9eb52244e979bf7164f93fe7472.html

Blog: Secure Server Communication in SAP Netweaver AS ABAP
https://blogs.sap.com/2015/04/04/secure-server-communication-in-sap-netweaver-as-abap

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November 2018

Topics November 2018

Security Notes Statistics: ABAP vs. others

Spring Framework Vulnerabilities in SAP

Note 2490973 - Missing Authorization check in SAP SRM

Note 1517831 - Potential Directory Traversal in SAP HCM Payroll NPO

Notes 2392860 2693083 - Leveraging privileges by customer transaction code (reloaded)

KBA 2709955 - Processor-based vulnerabilities: patch progress by solution in SAP‘s cloud environments

New Security Audit Log Messages (reloaded)
Notes 2299636 & 2332693 & 2360408 for `SE06` and `SCC4`

News from SNOTE
Note 2258238 - SAP Note Assistant: Troubleshooting Reports

News about Configuration Validation
Fiori based Reporting as of SolMan 7.2 SP 6

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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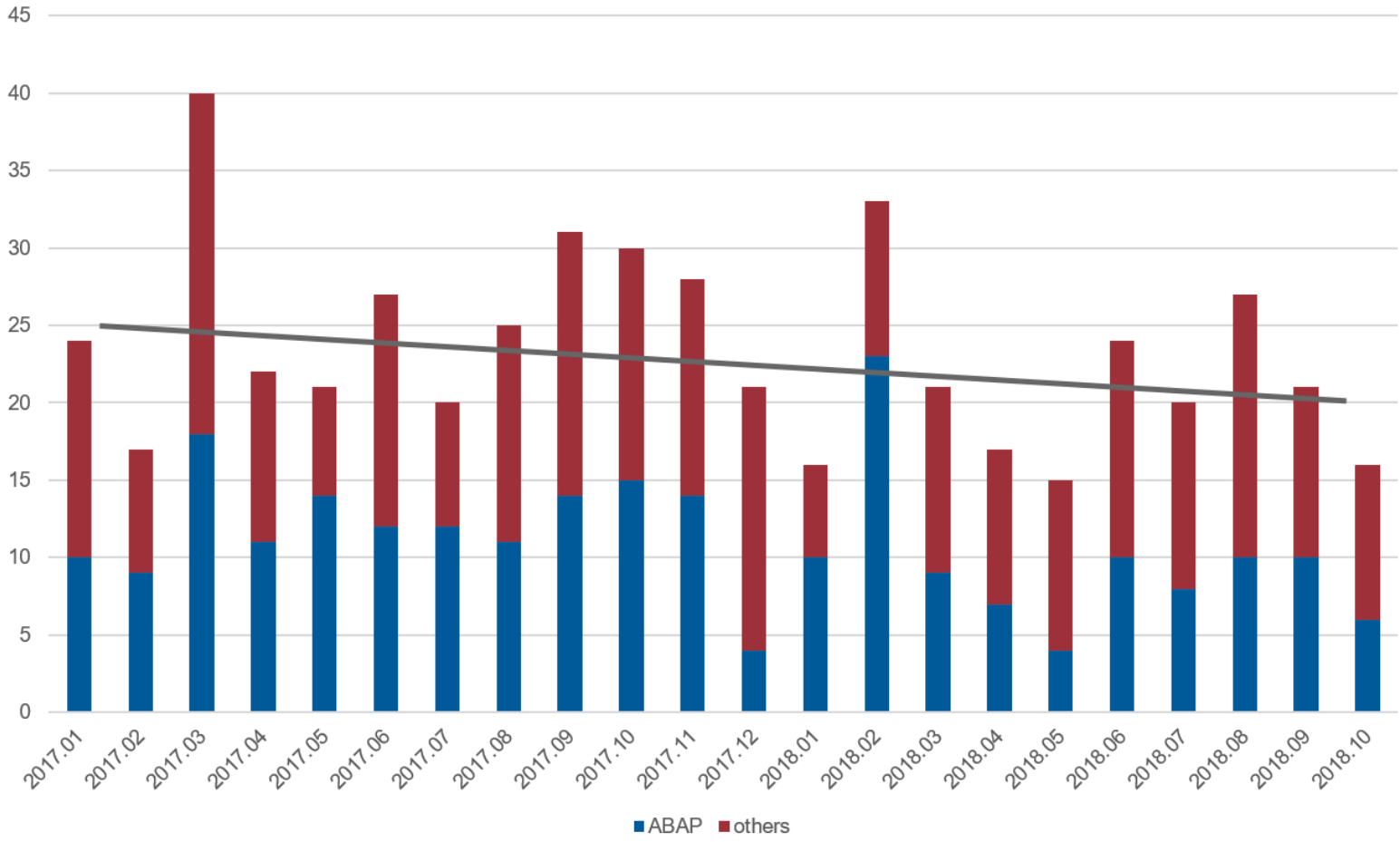
Security Notes Statistics: ABAP vs. others

The workload of a monthly patch process decreased from ~25 new or changed notes in 2017 to ~20 in 2018.

The percentage of ABAP notes decreased from ~50% in beginning of 2017 to ~40% in 2018.



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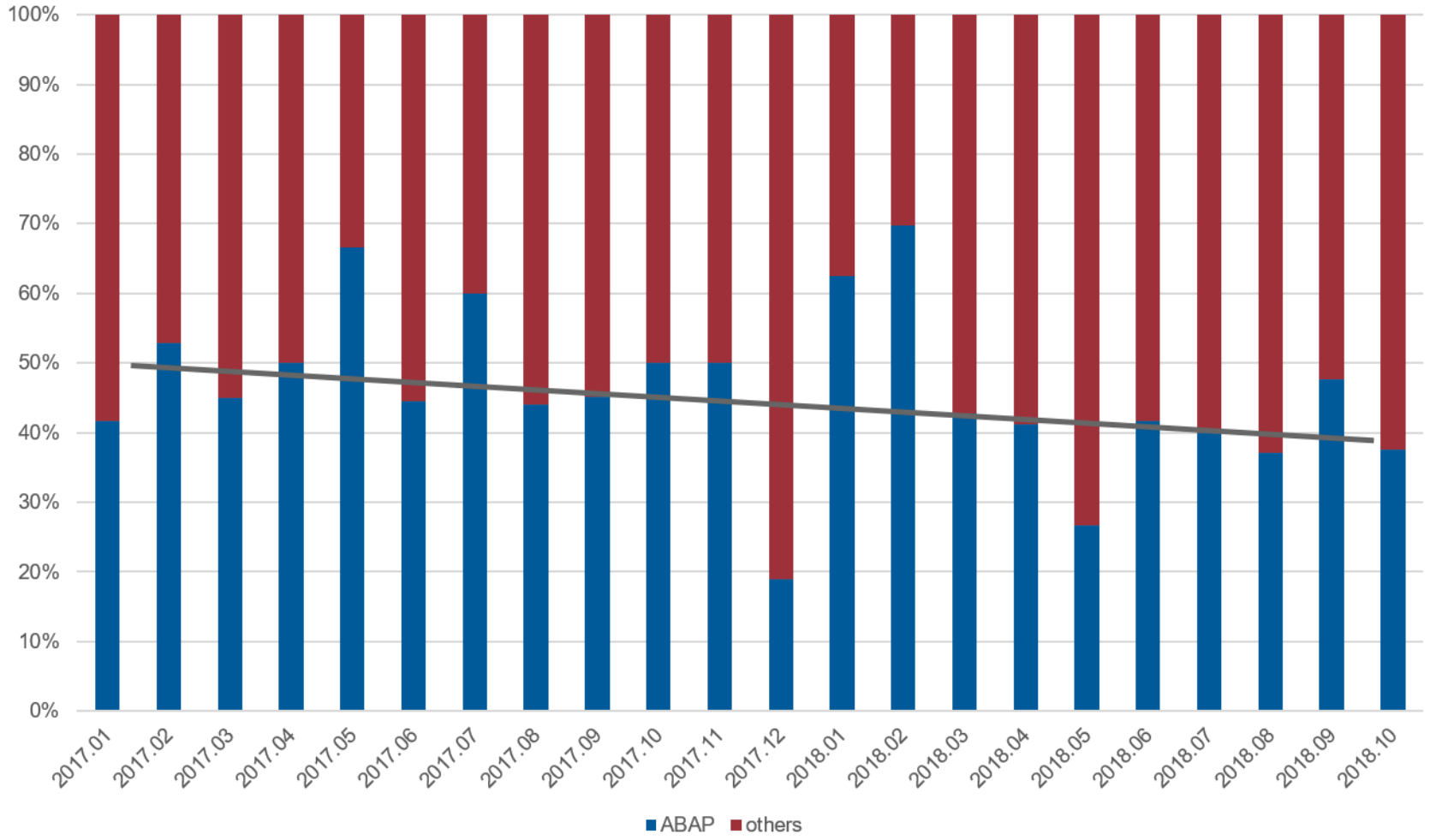

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Spring Framework Vulnerabilities in SAP

Implement the following notes for following products affected by these vulnerabilities:

Note 2681280 - **HAN-SDS** - Security vulnerability in Spring Framework library used by SAP HANA Streaming Analytics

Note 2633025 - **BC-XS-SEC** - Update SAP Client Library 1.25.0
(use latest version 1.28.0 according to note 2710106)

Note 2656951 - **CRM-CCI** - SAP Contact Center Hotfix 7.0.11.13 Universal Queue: Open Source Vulnerability Fix

Note 2656955 - **CRM-CCI** - SAP Contact Center Hotfix 7.0.12.16 Universal Queue: Open Source Vulnerability Fix

Check this note, too:

Note 2411730 - HTTP Session can be lost when Spring framework is used

Multiple CVE reports published for the Spring Framework
https://spring.io/blog/2018/04/05/multiple-cve-reports-published-for-the-spring-framework

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Spring Framework Vulnerabilities in SAP

No action required for the these products:

Note 2630687 - BC-SYB-ASE - Does SAP ASE use Spring Framework and MVC in any product modules - SAP ASE

Note 2630766 - BC-SYB-IQ - Does SAP IQ use Spring Framework and MVC in any product modules

Note 2631128 - BC-SYB-SQA - Does SAP SQL Anywhere use Spring Framework and MVC in any product modules?

Note 2634988 - MOB-ONP-SEC - Vulnerability of Spring Framework , MVC and Spring Data - SAP Mobile Platform

Note 2631282 - BI-BIP-ADM - Spring Vulnerability Data REST CVE-2017-8046 on SAP BusinessObjects XI 3.1 and Business Intelligence 4.x

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Note 2490973 - Missing Authorization check in SAP SRM

Vulnerability: “Missing Authorization check”

Solution options:

☐ **Deactivate/delete obsolete code, no test required**

■ **Change code**

☐ **Invent allowlist, manual configuration required**

☐ **Invent ‘old’ authorization check, no change of roles required**

☐ **Invent ‘new’ authorization check, change of roles required**

☐ **Invent ‘switched’ authorization check, change of roles and manual configuration required**

```
FUNCTION BBPG_BUDGET_CHECK.

  DATA: LV_SUBRC LIKE SY-SUBRC.

*>>>> START OF DELETION <<<<<
  IF NOT IS_CAUFVD-PSPEL IS INITIAL.
*>>>> END OF DELETION <<<<<<<

*>>>> START OF INSERTION <<<<<
* Begin of note 2490973
* Introducing Authorization Check
  DATA: lv_external_call TYPE sap_bool.

  CALL METHOD cl_rfc=>check_rfc_external
      RECEIVING
        external_call    = lv_external_call
      EXCEPTIONS
        kernel_too_old   = 1
        unexpected_error = 2
        OTHERS           = 3.

  IF lv_external_call = abap_true.
   EXIT.
  ENDIF.
* End of note 2490973

  IF NOT IS_CAUFVD-PSPEL IS INITIAL.
*>>>> END OF INSERTION <<<<<<
```

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Note 1517831 - Potential Directory Traversal in SAP HCM Payroll NPO

No action needed.

The correction was published end of 2010 for `SAP_HRCUN` release 604 (and 600).

We adjusted the note ..

- **to avoid that the Note Assistant, transaction `SNOTE`, shows it as 'can be implemented' (and when you try to implement the note you would get the message 'all changes are already implemented'**
- **to allow application System Recommendations to omit the note**

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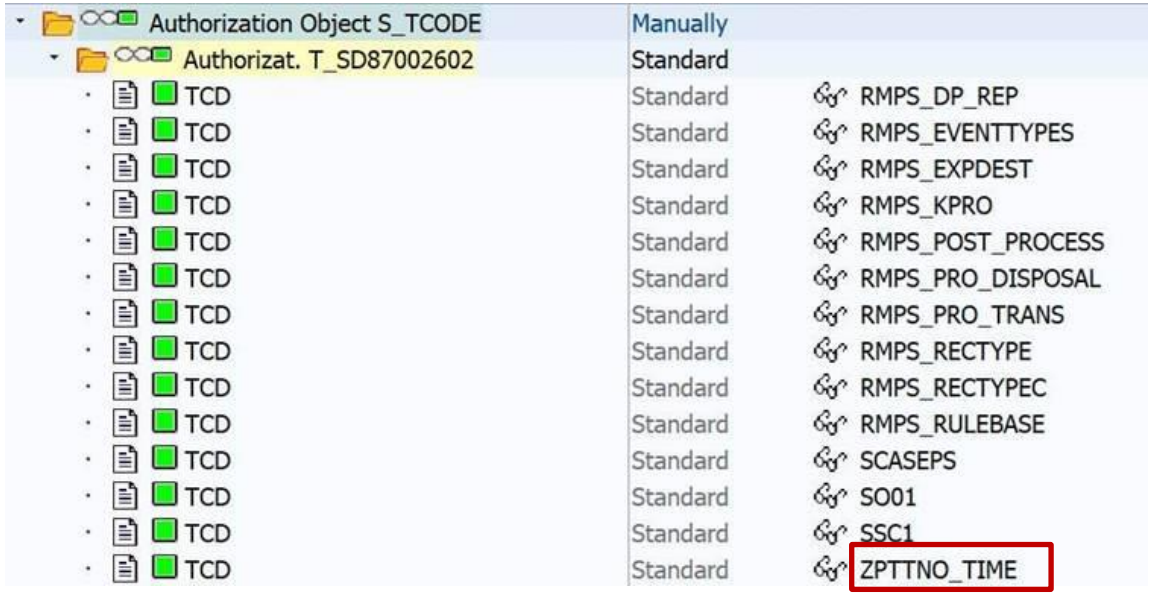
Notes 2392860 2693083 - Leveraging privileges by customer transaction code (reloaded)

SAP standard roles

- **SAP_PS_RM_PRO_ADMIN**
- **SAP_PS_RM_PRO_REVIEWER**
- **SAP_PS_RM_PRO_RECMANAGER**

not only contain a custom transaction in the menu and the authorizations but contain very powerful critical authorizations for S_DEVELOP, S_PROGRAM, (S_RFC), S_TABU_DIS, S_USER_GRP, etc. and a lot of other * values

→ Do not use these roles, check authorizations first



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KBA 2709955 - Processor-based vulnerabilities: patch progress by solution in SAP‘s cloud environments

Meltdown and Spectre are security vulnerabilities that affect most of Intel x86 processors.
The vulnerabilities concern flaws in the CPU architecture, especially caching and speculative execution, as well as CPU features intended to boost performance.

These processors are widely used, including in SAP data centers.
SAP will apply available fixes to its cloud infrastructure without undue delay.

The KBA shows the status of the patch progress by solution in SAP‘s cloud environments.

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New Security Audit Log Messages (reloaded)
Notes 2299636 & 2332693 & 2360408 for SE06 and SCC4

All three notes (2299636 to get the messages & 2332693 for SE06 & 2360408 for SCC4) are required to introduce the following messages for 7.31, 7.40, 7.50:

EU1 **Very Critical** **System changeability changed (&A to &B) *in transaction SE06***

EU2 **Very Critical** **Client setting for &A changed (&B) *in transaction SCC4***

It might be the case that you cannot implement note 2360408 even if it is still required – check the coding in include LOSZZF01 for

```
CALL   FUNCTION   'RSAU_WRITE_CTS_ORG_SETTINGS'
```

→ If you do not find this statement but cannot implement the note (or if you do not find the statement after implementing the note) then raise a ticket on component BC-CTS-CCO.

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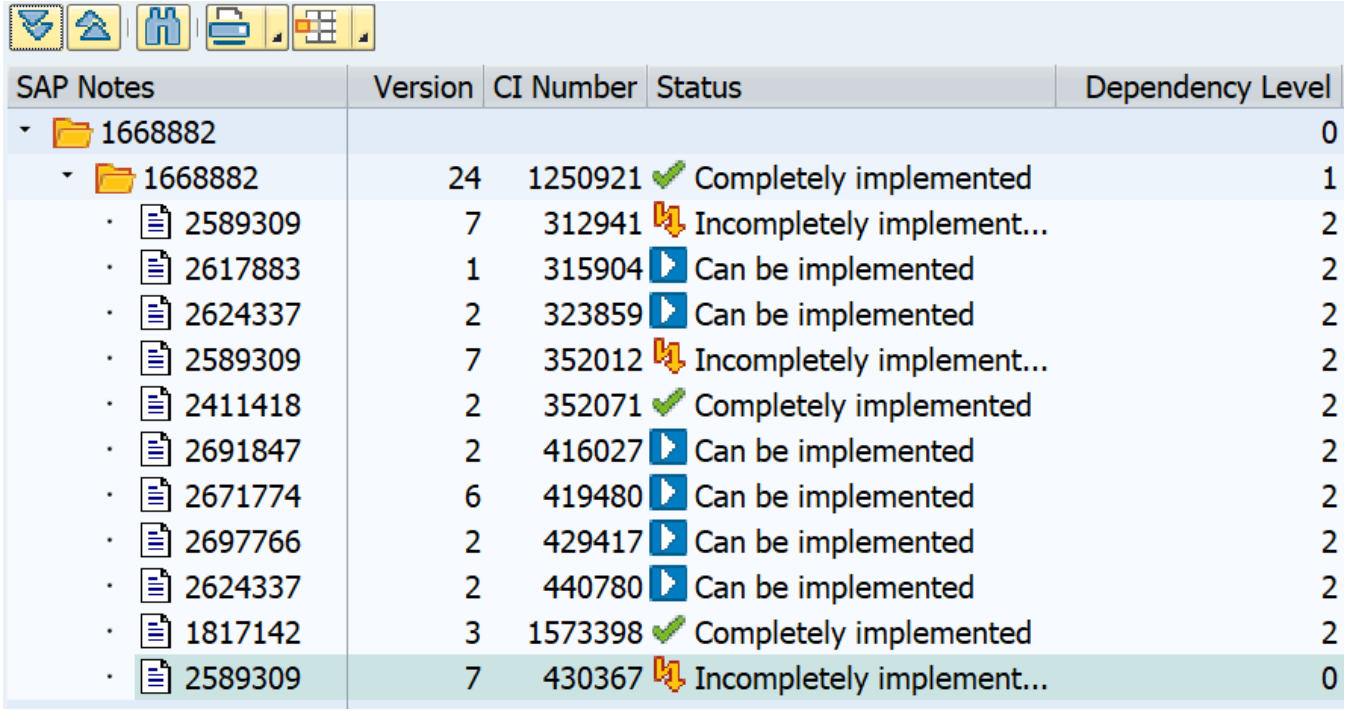
Note 2258238 - SAP Note Assistant: Troubleshooting Reports

Report SCWN_PREREQUISITE_CALC_SWI shows which prerequisites notes have been implemented along with a particular note.

Example in case of incomplete implementations:



SAP Notes	Version	CI Number	Status	Dependency Level
1668882				0
1668882	24	1250921	Completely implemented	1
2589309	7	312941	Incompletely implement...	2
2617883	1	315904	Can be implemented	2
2624337	2	323859	Can be implemented	2
2589309	7	352012	Incompletely implement...	2
2411418	2	352071	Completely implemented	2
2691847	2	416027	Can be implemented	2
2671774	6	419480	Can be implemented	2
2697766	2	429417	Can be implemented	2
2624337	2	440780	Can be implemented	2
1817142	3	1573398	Completely implemented	2
2589309	7	430367	Incompletely implement...	0

You can use “Print preview of entire hierarchy” followed by Copy Block into Clipboard (Strg-Y) to transfer the note numbers into the Note Browser of SNOTE:

Note	Version	Short text	Component	Status	Implementation Stat.
1817142	3	Dump IMPORT_FORMAT_ERROR during display of versions	BC-UPG-NA	Finished	Completely implemented
2411418	2	Identifying TCI in old release where SAP Note 1995550 is not	BC-UPG-NA	Finished	Completely implemented
2589309	7	Fixes to reimplementation handling - Ignore TADIR for new ob	BC-UPG-NA	Finished	Incompletely implemented
2617883	1	TLOG object read during SPDD phase	BC-UPG-NA	new	Can be implemented
2624337	2	SNOTE - Note re implementation issue due to object support i	BC-UPG-NA	new	Can be implemented
2671774	6	Error during Note implementation: Unable to find delivery ev	BC-UPG-NA	new	Can be implemented
2691847	2	Previously inactive object activated when current implementa	BC-UPG-NA	new	Can be implemented
2697766	2	SNOTE: Runtime Error CONVT_DATA_LOSS occurs while downloadin	BC-UPG-NA	new	Can be implemented

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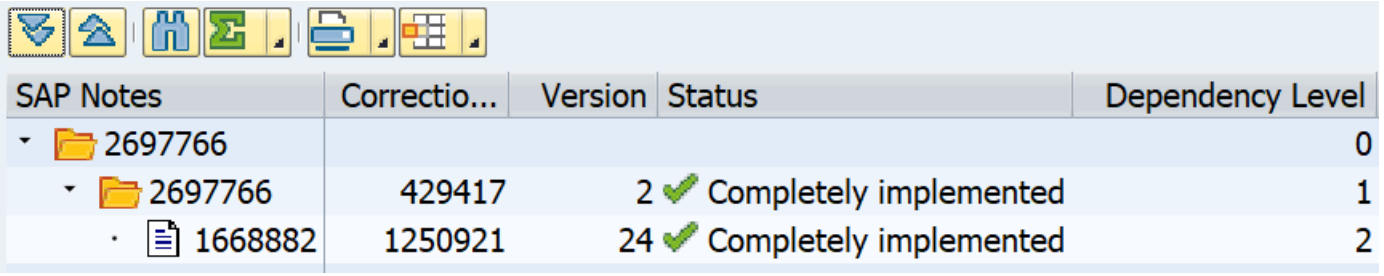
Note 2258238 - SAP Note Assistant: Troubleshooting Reports

Report SCWN_NOTES_SUCCESSORS_CALC shows which dependent notes will be affected if a note needs to be de-implemented.



SAP Notes	Correctio...	Version	Status	Dependency Level
2697766				0
2697766	429417	2	Completely implemented	1
1668882	1250921	24	Completely implemented	2

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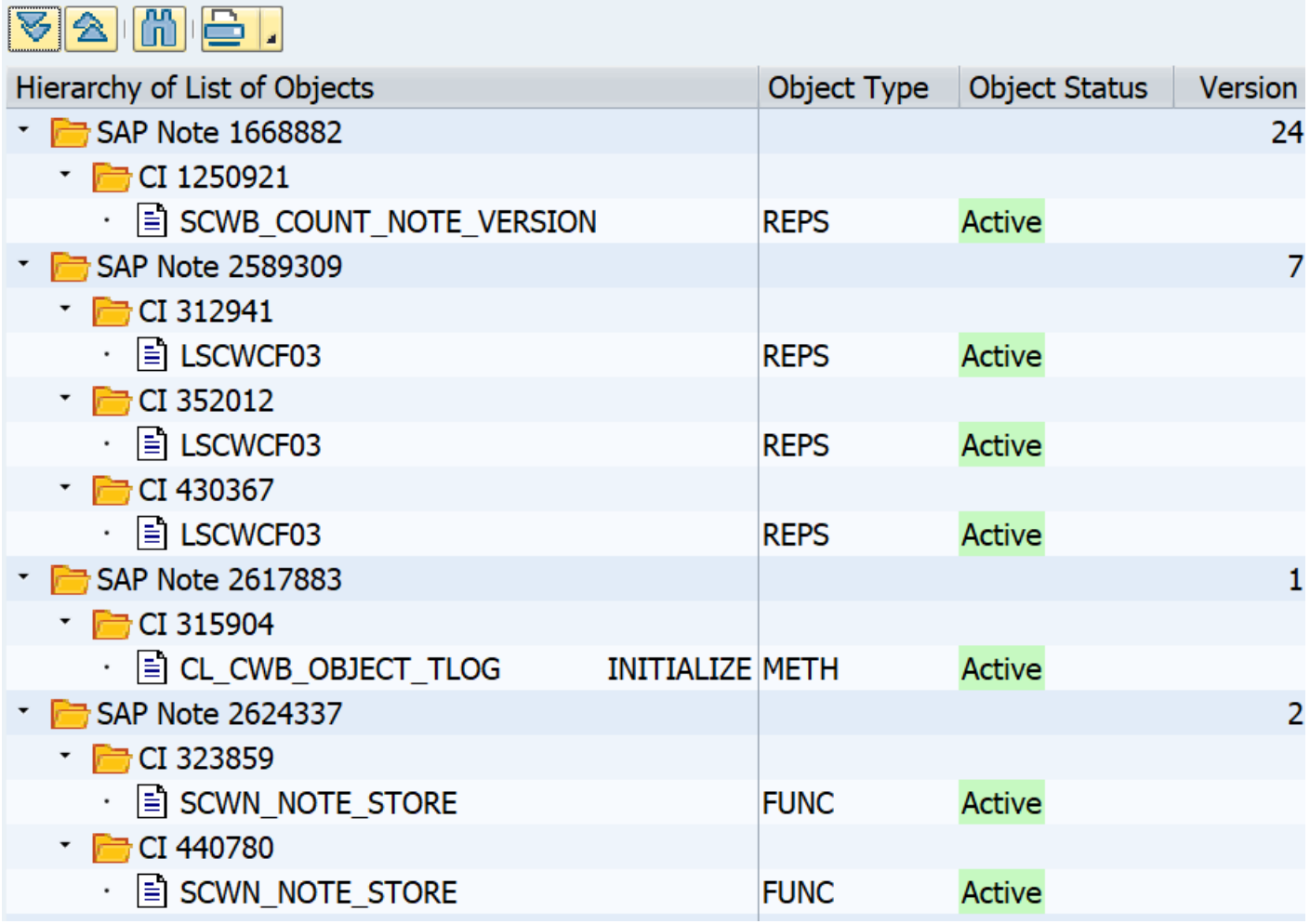
Note 2258238 - SAP Note Assistant: Troubleshooting Reports

Report SCWN_OBJECT_LIST_CALC_SWI shows which objects were touched by a note and what the status are for those objects.



Hierarchy of List of Objects		Object Type	Object Status	Version
SAP Note 1668882				24
CI 1250921				
SCWB_COUNT_NOTE_VERSION		REPS	Active	
SAP Note 2589309				7
CI 312941				
LSCWCF03		REPS	Active	
CI 352012				
LSCWCF03		REPS	Active	
CI 430367				
LSCWCF03		REPS	Active	
SAP Note 2617883				1
CI 315904				
CL_CWB_OBJECT_TLOG	INITIALIZE	METH	Active	
SAP Note 2624337				2
CI 323859				
SCWN_NOTE_STORE		FUNC	Active	
CI 440780				
SCWN_NOTE_STORE		FUNC	Active	

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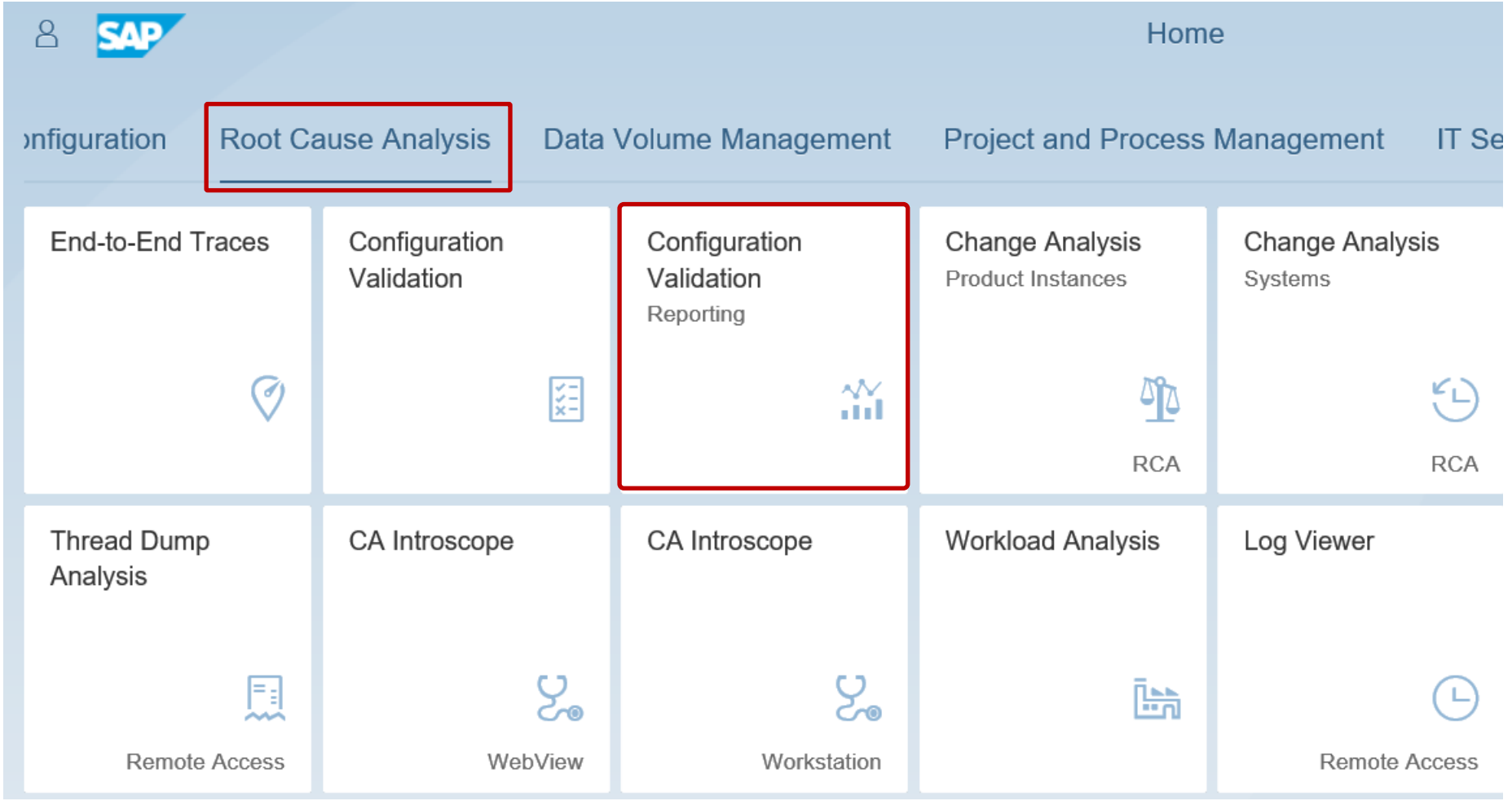
News about Configuration Validation
Fiori based Reporting as of SolMan 7.2 SP 6

The Fiori Launchpad tile “Configuration Validation Reporting” points to the new reporting app:



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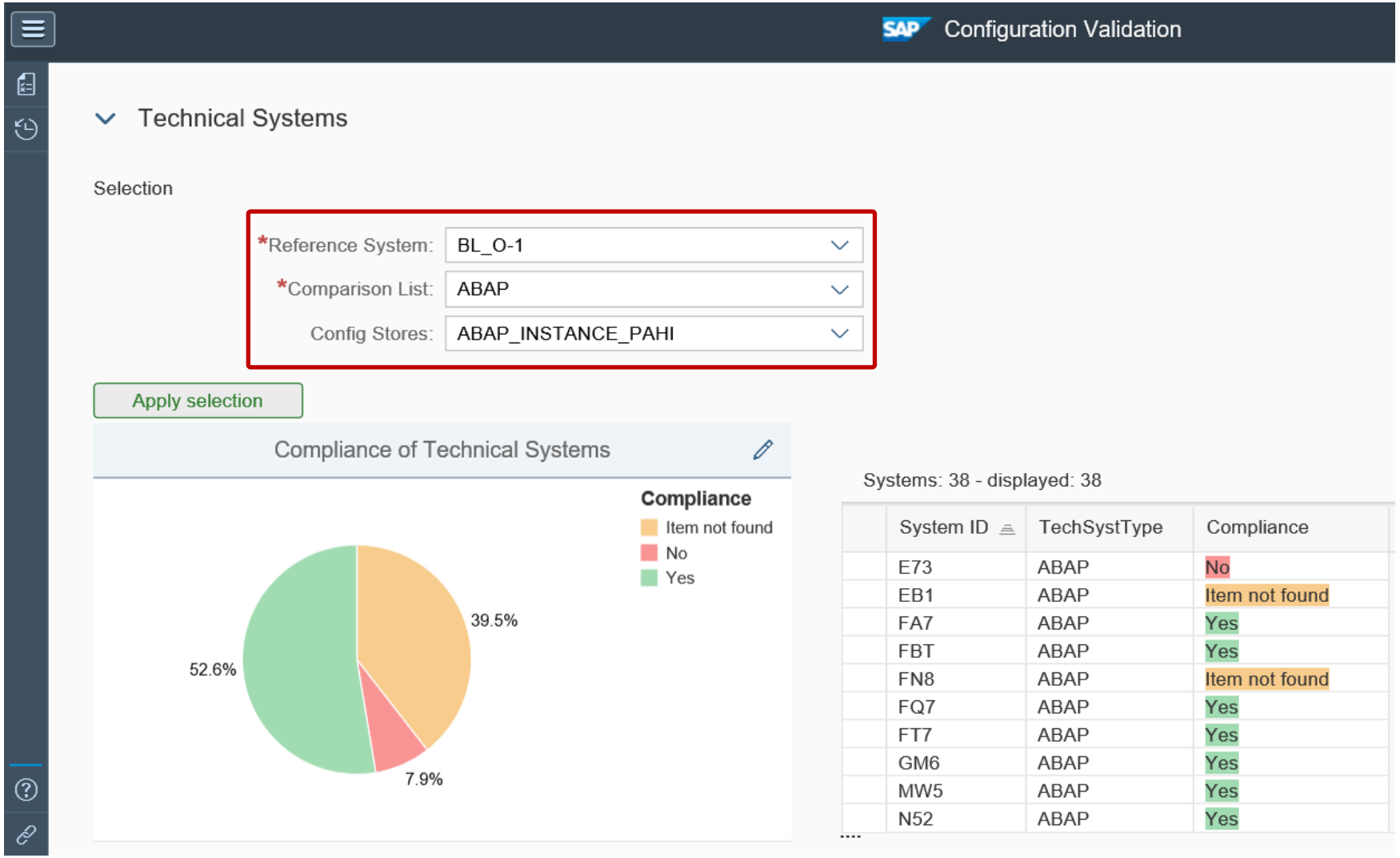
News about Configuration Validation
Fiori based Reporting as of SolMan 7.2 SP 6



You select a Target System, a Comparison List and optionally a selection for a Configuration store

You get a System Overview page

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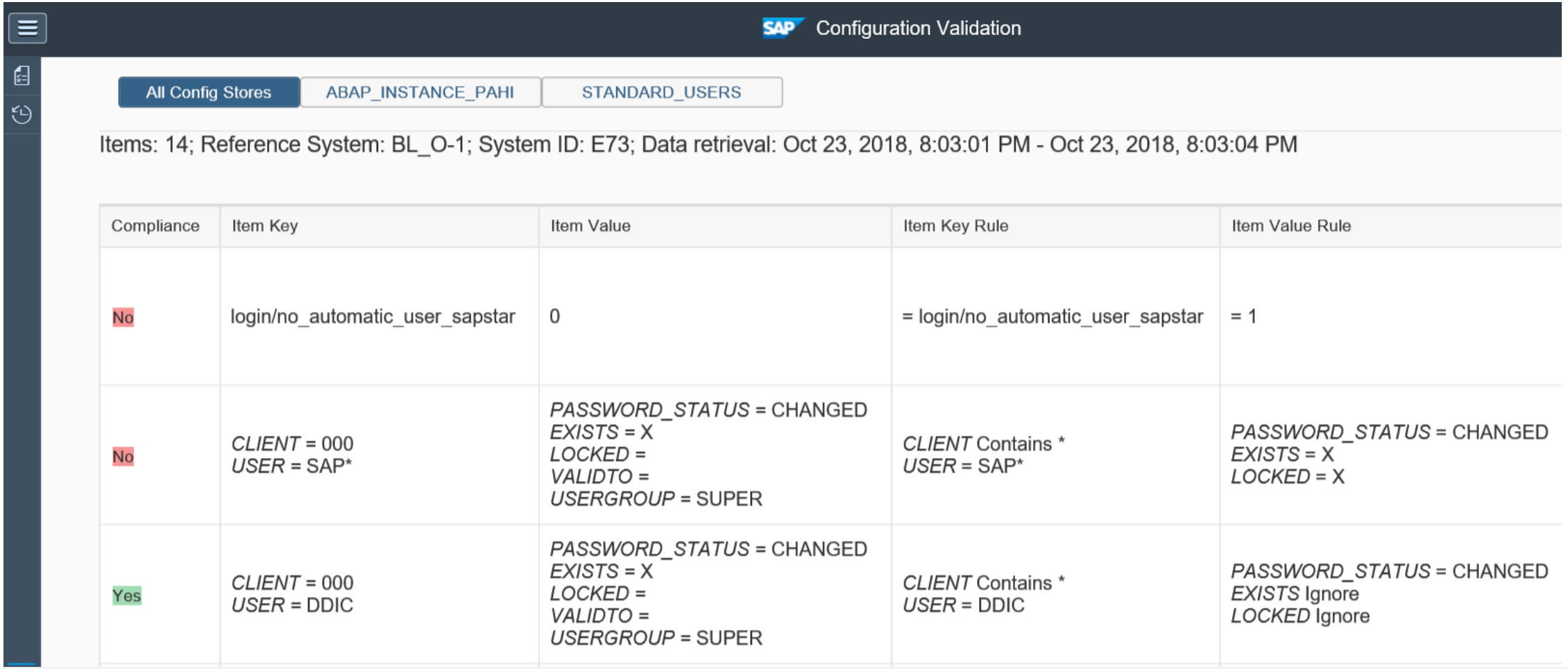
News about Configuration Validation
Fiori based Reporting as of SolMan 7.2 SP 6

Drilldown into system specific details:



Compliance	Item Key	Item Value	Item Key Rule	Item Value Rule
No	login/no_automatic_user_sapstar	0	= login/no_automatic_user_sapstar	= 1
No	*CLIENT* = 000 *USER* = SAP*	*PASSWORD_STATUS* = CHANGED *EXISTS* = X *LOCKED* = *VALIDTO* = *USERGROUP* = SUPER	*CLIENT* Contains * *USER* = SAP*	*PASSWORD_STATUS* = CHANGED *EXISTS* = X *LOCKED* = X
Yes	*CLIENT* = 000 *USER* = DDIC	*PASSWORD_STATUS* = CHANGED *EXISTS* = X *LOCKED* = *VALIDTO* = *USERGROUP* = SUPER	*CLIENT* Contains * *USER* = DDIC	*PASSWORD_STATUS* = CHANGED *EXISTS* Ignore *LOCKED* Ignore

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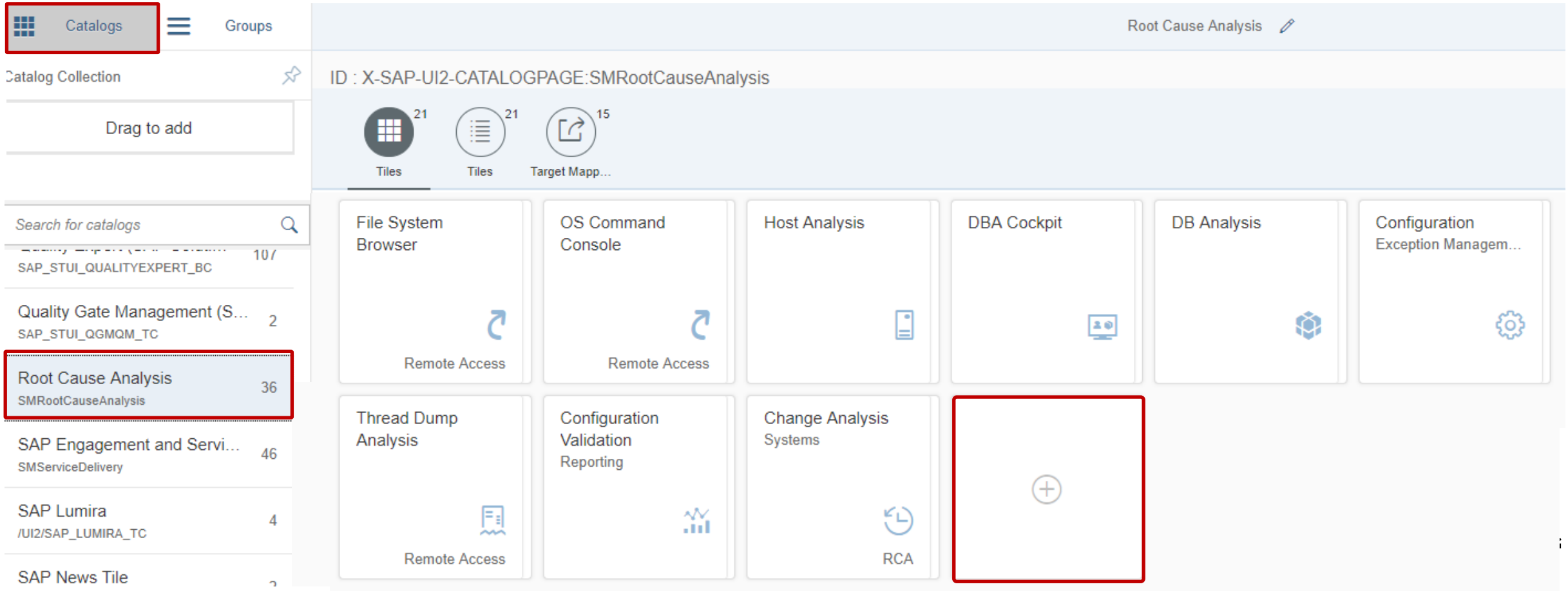
How-to create a specific Fiori tile

Create tile in Fiori Launchpad Designer

Start the Launchpad Designer via report `/UI2/START_URL`
respective transactions `/UI2/FLPD_CUST` (client-spc.) or `/UI2/FLPD_CONF` (cross-client)



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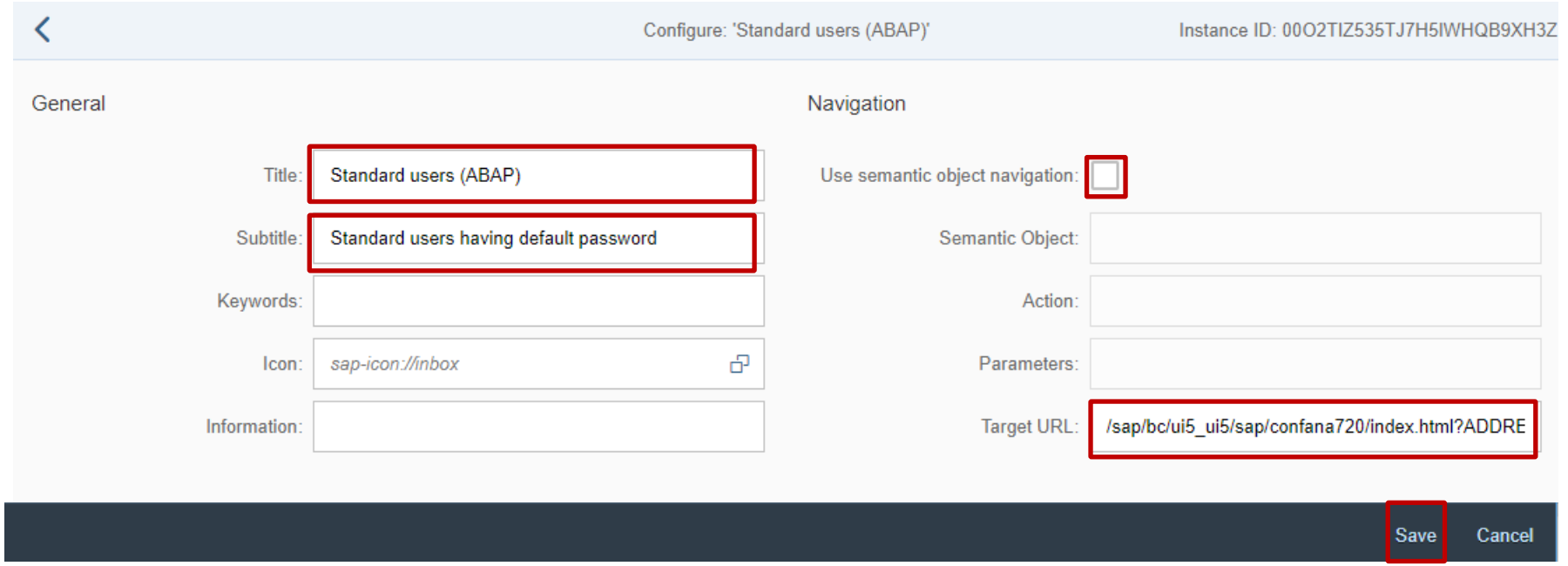
How-to create a specific Fiori tile
Define „App Launcher – Static“ tile in catalog

Enter texts

Choose icon, e.g.
`sap-icon://business-objects-experience`

Deselect check box „Use semantic object navigation”



Enter target URL after replacing variables:

```
/sap/bc/ui5_ui5/sap/confana720/index.html?TARGET_ID=<target_system>&
COMPLIST=<comparison_list>&CONFSTORE=<configuration_store>&ADDRESTRI
CTIONS&DATERANGE&sap-client=<client>&sap-language=<language>
```

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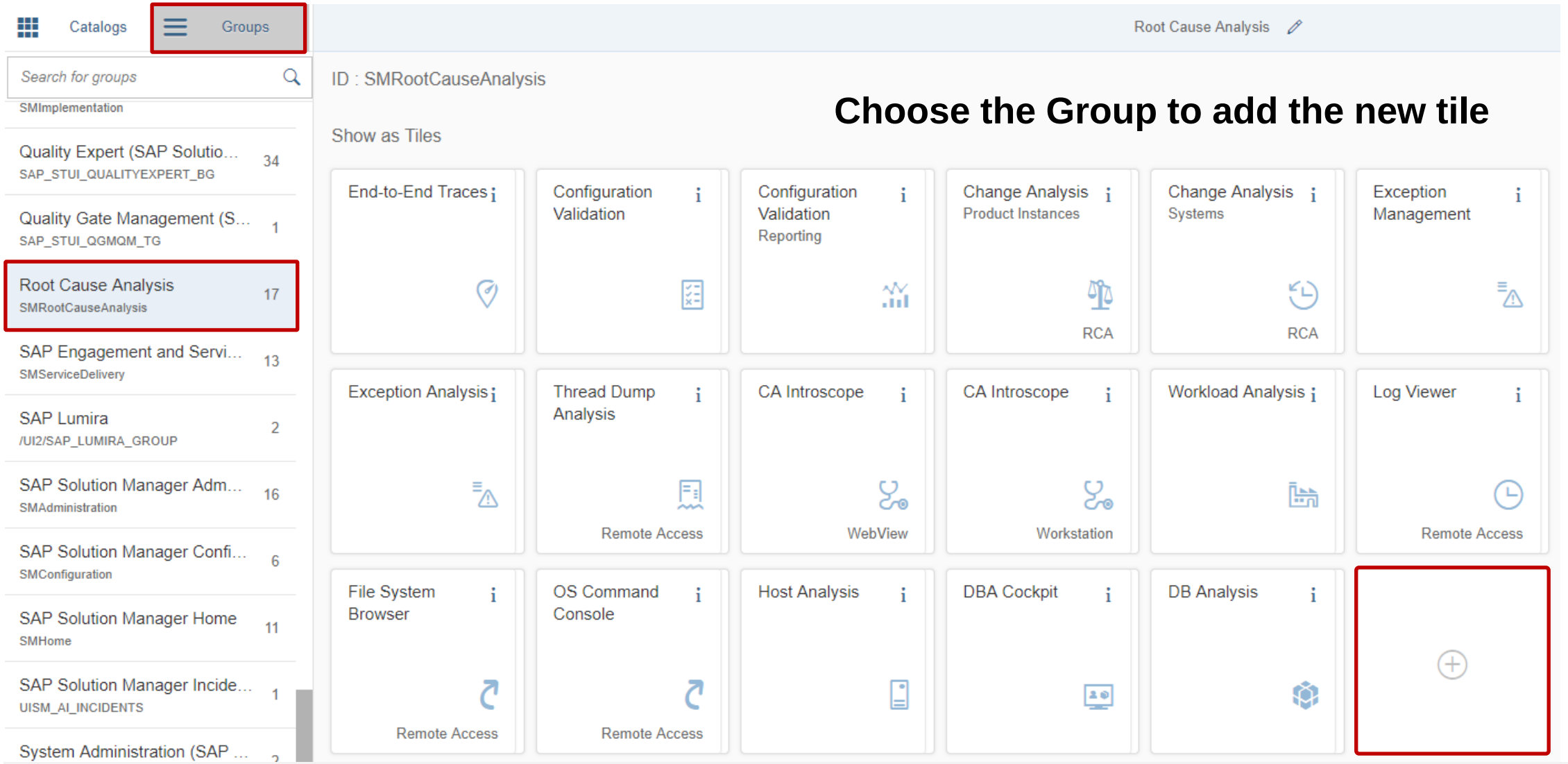
How-to create a specific Fiori tile
Add tile to group



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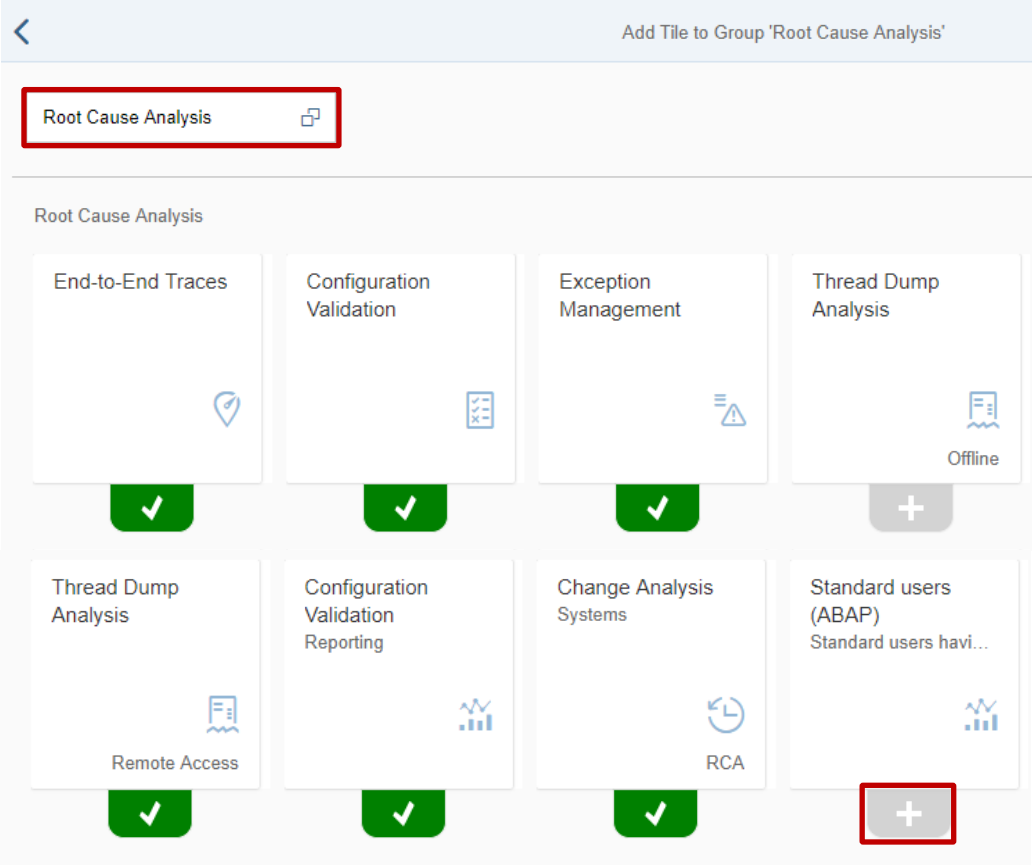
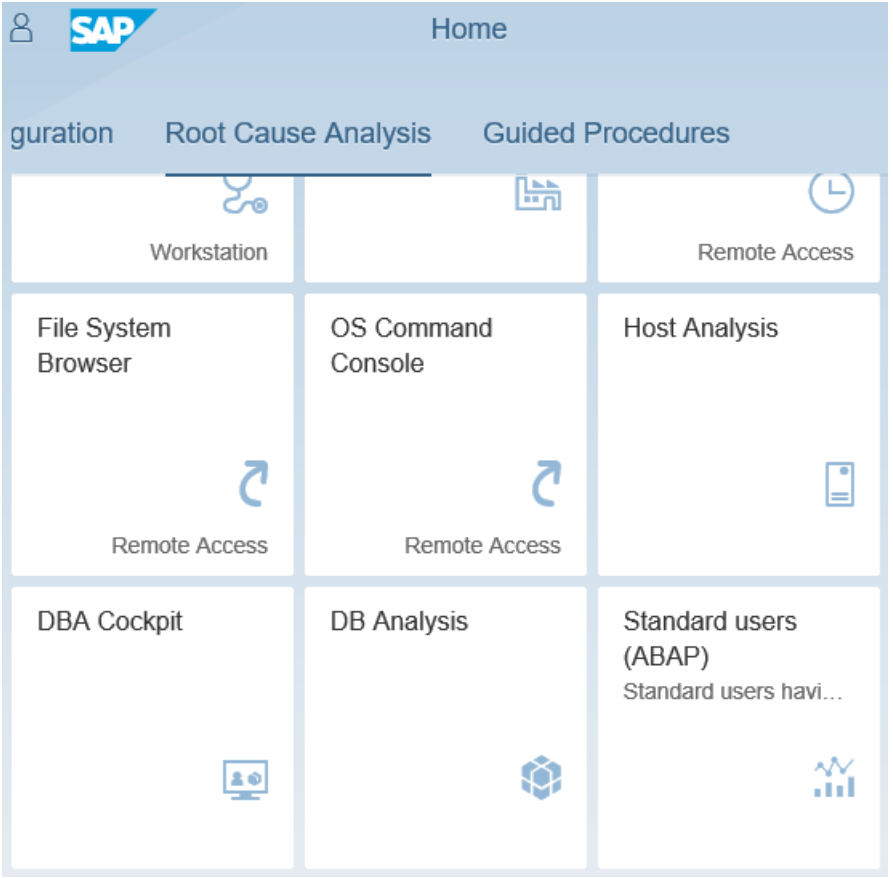
How-to create a specific Fiori tile
Add tile to group

Choose the Catalog containing the new tile and add it to the group:



Restart the Launchpad to view the new tile:



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October 2018

Topics October 2018

News from Support Portal Launchpad
SAP Notes Dependency Browser

Note 2699726 - Missing network isolation in Gardener

Note 2392860 - Leveraging privileges by customer transaction code

Support Connection using Local respective Central FireFighter

Note 2442227 - Simulation of authorization checks

System Recommendations 7.2 SP 7 – How to find updated notes

Recordings:
DSAG (German)
ASUG

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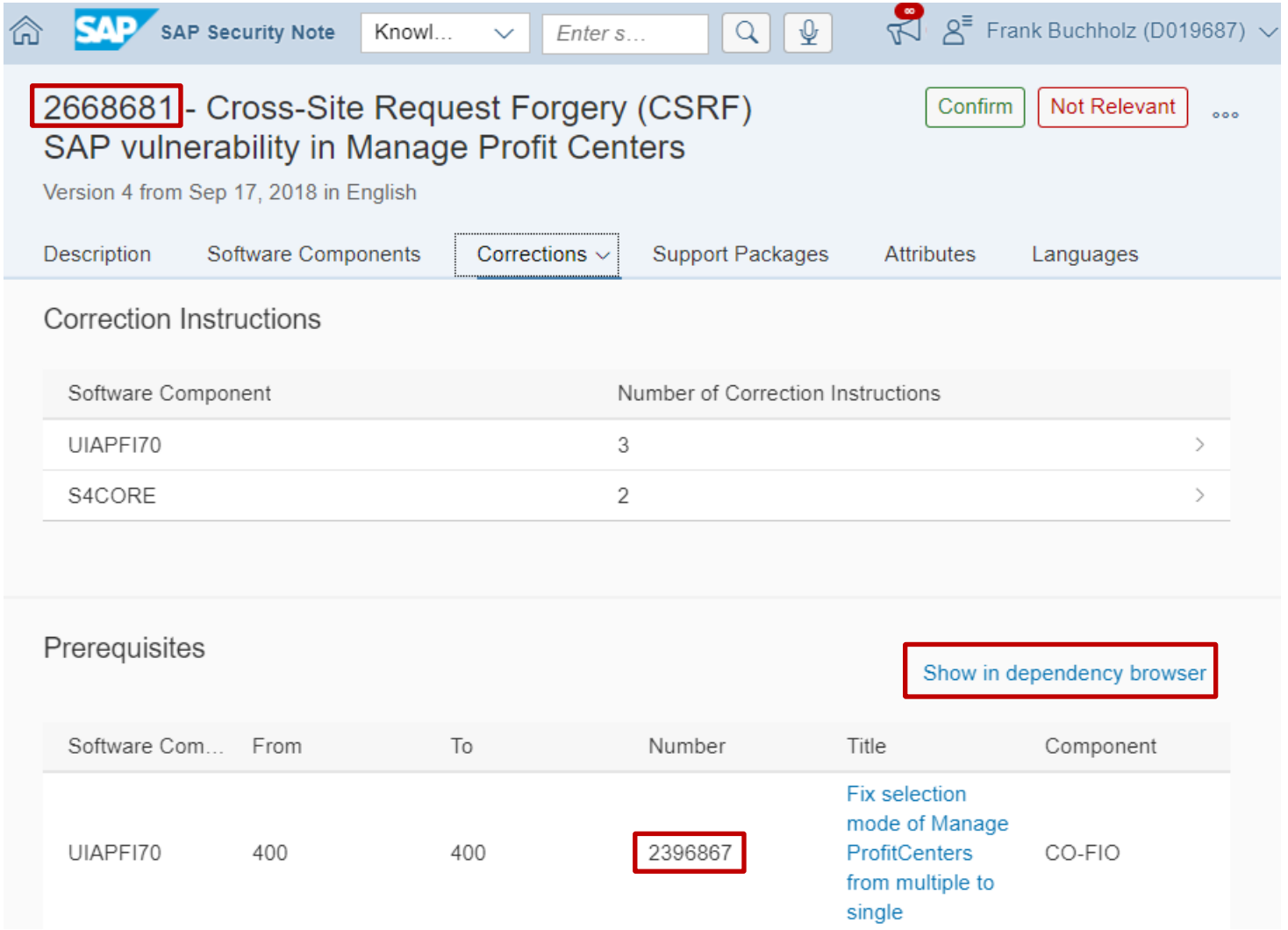
News from Support Portal Launchpad
SAP Notes Dependency Browser

The SAP Notes Dependency Browser helps you analyze the prerequisites for an SAP Note that you are going to implement on a particular system: Only those SAP Notes are shown that apply for the system.

You can open the SAP Notes Dependency Browser as well from the Prerequisites section and from Correction Instructions of notes:

Example: Note 2668681 requires note 2396867 and others



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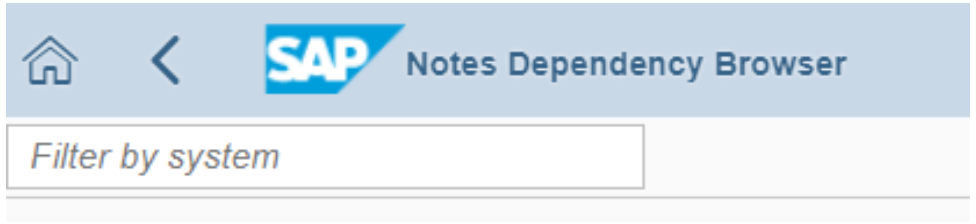
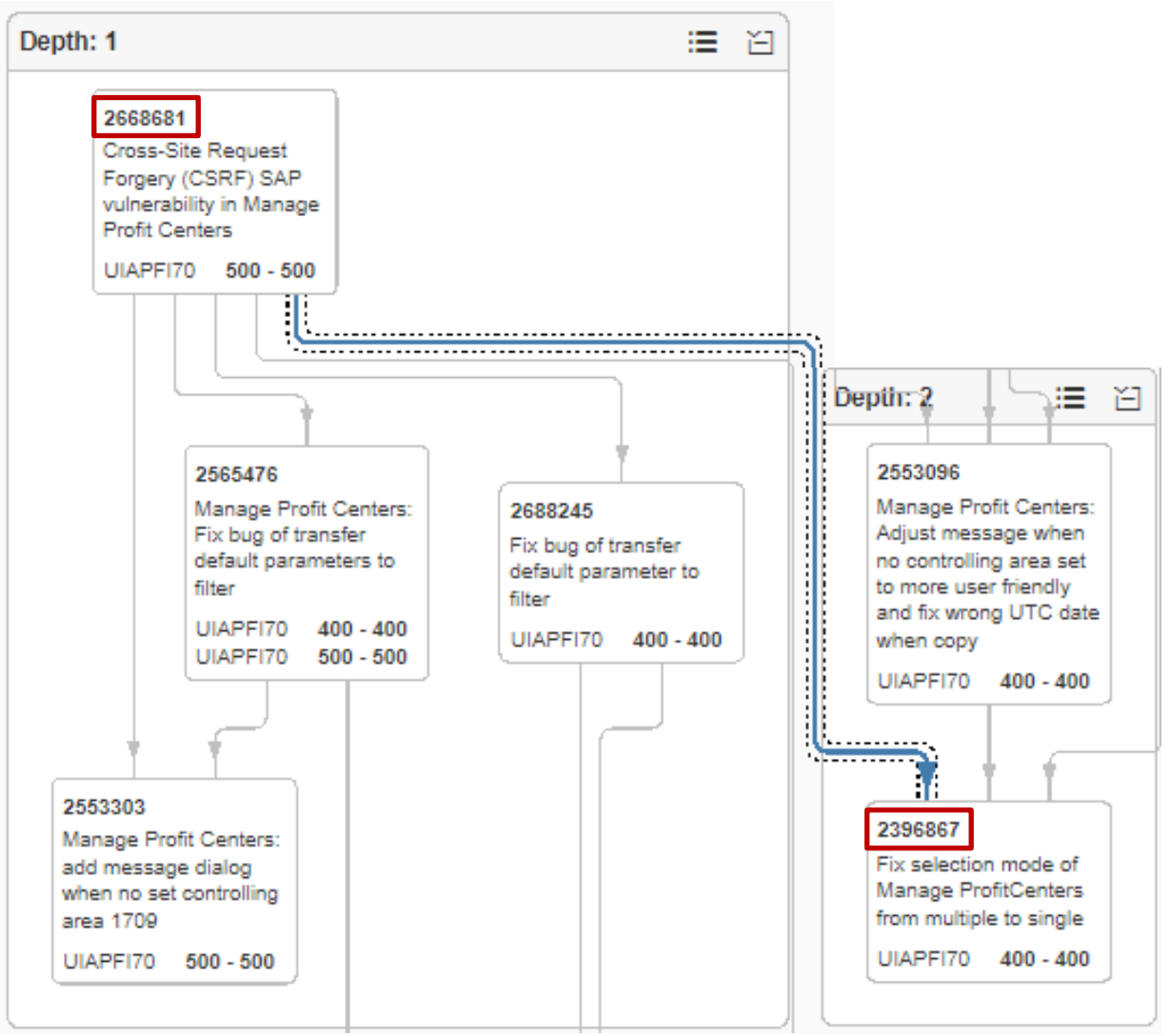
News from Support Portal Launchpad
SAP Notes Dependency Browser



Example: Note 2668681 requires note 2396867 and others



Due to the number of Prerequisites Notes being too large, they cannot be displayed completely.

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Note 2699726 - Missing network isolation in Gardener

SAP's outbound Open Source project "Gardener" is a tool for providing Kubernetes clusters on various cloud providers. You can find more information about project "Gardener" in the Kubernetes Blog https://kubernetes.io/blog/2018/05/17/gardener/ .

At SAP we consume project "Gardener" as well inbound already for providing Kubernetes clusters for several SAP products which are in a beta shipment phase like SAP Cloud Platform Continuous Integration and Delivery (indirect shipment).

The Gardener Core Team at SAP is responsible for all (security) updates of all Gardener instances and all Gardener managed Kubernetes clusters in the above-mentioned context. But because Gardener is an Open Source project and the SAP ecosystem is large, the Gardener Core Team at SAP decided to not only inform the Gardener Open Source Community directly but as well in general via this SAP security note.

No software component can be assigned:

Validity

This document is not restricted to a software component or software component version

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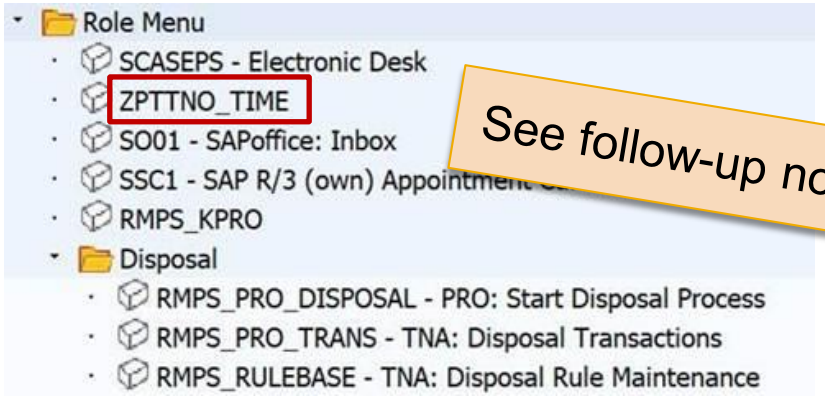
Note 2392860 - Leveraging privileges by customer transaction code

SAP standard roles

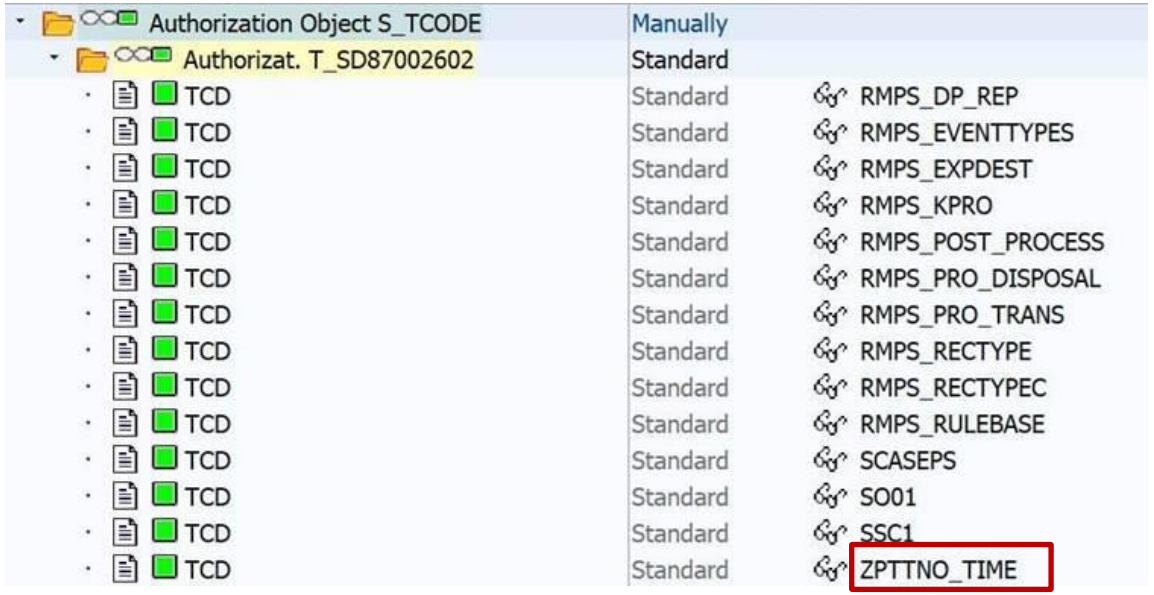
- **SAP_PS_RM_PRO_ADMIN**
- **SAP_PS_RM_PRO_REVIEWER**
- **(and SAP_PS_RM_PRO_RECMANAGER and maybe others)**

not only contain a custom transaction in the menu and the authorizations but contain very powerful critical authorizations for S_DEVELOP, S_PROGRAM, (S_RFC), S_TABU_DIS, S_USER_GRP, etc. and a lot of other * values

→ Do not use these roles, check authorizations first



See follow-up note 2693083, too



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Support Connection using Local FireFighter

Use a custom role based on role `SAP_GRIA_SUPER_USER_MGMT_USER` to grant minimal authorizations for the support users which is used for initial logon.

Draft proposal for **ticket notification** (Prio: Very High, Source: Accounts):

This ticket refers to the production system, however, you cannot logon directly but you have to use the FireFighter process:

1. *Logon to the system using the support user and call transaction* `/n/GRCPI/GRIA_EAM`*, choose a free entry and logon via the FireFighter to the system.*
2. *Enter the reason code <code> and add the incident number / service order into the text field.*
3. *Describe briefly the indented actions and confirm the popup to logon to the production system.*
4. *Do not forget to logoff from the production system as well as from the FireFighter transaction after you have finished your work.*

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Support Connection using Central FireFighter

Use a custom role based on role `SAP_GRAC_SUPER_USER_MGMT_USER` to grant minimal authorizations for the support users which are used for initial logon in the central system.

Critical: Ensure to reduce authorizations for authorization object `S_RFC` !
You may use transaction `STAUTHTRACE` to trace required authorizations.

Check following note concerning the authorizations in the production systems:
Note 2413716 - Setup of Trusted RFC in GRC Access Control EAM

Ensure that the system names shown in the central system match to the names of the referenced production systems.
Example: P00CLNT400 for system P00 with client 400

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Support Connection using Central FireFighter

Draft proposal for **ticket notification** (Prio: Very High, Source: Accounts):

This ticket refers to the production system, however, you cannot logon directly but you have to use the Central FireFighter system <FFF>:

1. *Use the Secure Area to retrieve logon data for system <FFF> with installation number <nnnnnnnnn>.*
2. *Search for open connections [via STFK] for system <FFF> with installation number <nnnnnnnnn> of customer number <cccccc> and logon to that system.*
3. *Within system <FFF> call transaction* `GRAC_EAM`*, choose a free entry targeting the production client and connect to the system.*
4. *Enter the reason code <code> and add the incident number / service order into the text field.*
5. *Describe briefly the indented actions and confirm the popup to logon to the production system.*
6. *Check using the SAPGUI status bar that you have reached the correct system and client.*
7. *Do not forget to logoff from the production system as well as from the FireFighter transaction after you have finished your work.*

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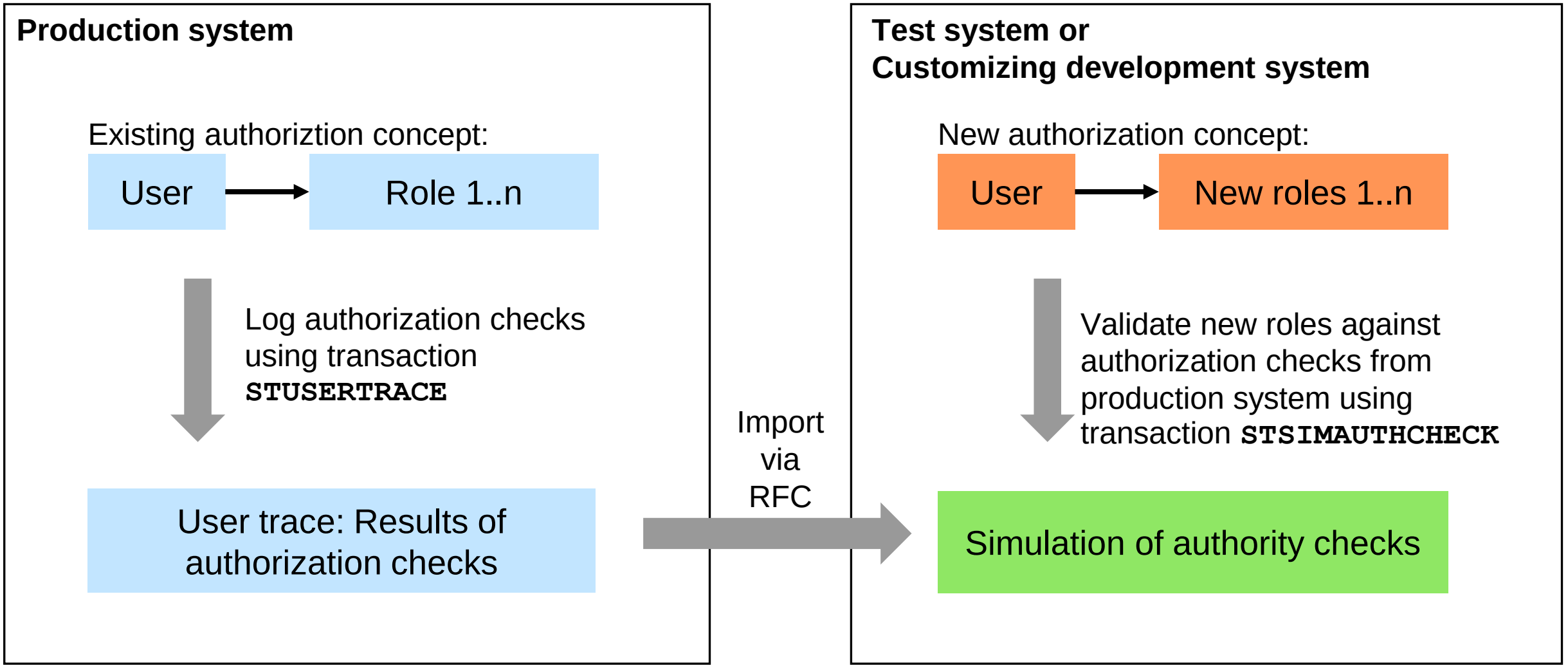
Note 2442227 - Simulation of authorization checks



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Note 2442227 - Simulation of authorization checks

Prerequisites:
You have activated profile parameter `auth/auth_user_trace` and transaction `STUSERTRACE`
You have recorded authorization checks using the user trace

Analysis:
Using transaction `STSIMAUTHCHECK` (= report `RSUSR_SUAUTHVALTRC_SIMU`), you can check for a selection of users whether the recorded authorization checks would run successfully with their current authorizations or not. In this simulation, either all authorizations of the users or just individual roles assigned to the users can be taken into account. The trace data can be read from the local system or from a remote system.

Usage:
For example, you can check the effects of a new role concept by comparing the result of the simulation in a role development system with the result of the authorization check from the user trace in the test or production system.

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Note 2442227 - Simulation of authorization checks

Transaction `STSIMAUTHCHECK` - Simulation of authorization checks

Use

You have used the user trace to record a list of authorization checks. You can use this program to check whether the recorded authorization checks would run successfully or not for selected users with their current authorizations. You can run this simulation for all authorizations of the users or just for individual roles assigned to the users. The trace data can be read from a local or remote system.

For example, you can check the effects of a new role concept by comparing the result of the simulation in a role development system with the result of the authorization check from the user trace in a test system.

Requirements

The user trace for authorization checks must be active for an extended period of time so that the authorization checks for the scenarios you want to examine are logged as fully as possible.

If you want to use different user names for the simulation, choose User Mapping and assign a *User for Authorization Check* to the *User for Simulation*.

Selection

Select the users for the simulation. You have to enter users or user groups.

The following options are available for the authorizations used for the simulation:

- All authorizations of the user are used, but without the authorizations of the reference user.
- Only the authorizations of the selected roles are used, as long as they are assigned to the user.

Authorization checks are read from the trace data for each selected user of the simulation. Use the *Mapping Table* if you want to read the authorization checks of another user.

The authorization check from the user trace can be read from a remote system. To do this, enter the respective RFC destination. In the target system, the RFC function module `SUAUTH_READ_TRACE_VALUES` is used and the authorization for the object `S_ADMI_FCD` is checked with `S_ADMI_FCD = STUR`.

Additional Options:

- Only Display Differences Between Trace and Simulation Result: The result of a simulation is displayed only if it is different from the result of the authorization check.
- Also Include Check for Other User: If the ABAP language command authority-check for user is used in an authorization check, the authorization check does not run for the logged-on user, but for the user specified in user. If this option is set, the trace entries where the user was specified in the addition for user are also selected for the user.

Output

The output shows the result of the simulation for each logged authorization check from the user trace.

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Note 2442227 - Simulation of authorization checks

Transaction STUSERTRACE - User Trace for Authorization Checks

Use

This long-term trace collects client-specific and user-specific authorization data, and stores it in the database.

During the execution of a program, every authorization check is recorded exactly once with the first time stamp, together with the name and type of the running application, the point in the program, the authorization object, the checked authorization values, and the result.

The trace data is used to support the maintenance of authorization default values and authorizations, in particular for users with special tasks or special authorization objects - for example, for communications users in RFC scenarios.

Activating the Authorization Trace

The authorization trace is activated using the profile parameter `auth/auth_user_trace`. The profile parameter is dynamically switchable.

You can switch on the trace either fully or only for selected authorization checks by using a filter. You can use the application type, users, and authorization objects as filters. This enables you to investigate specific scenarios such as RFC programs or background jobs over a long period.

Note the following: If you are using a trace with filters, you have to define at least one filter, otherwise recording will not take place.

Performance

Each authorization check logged by the authorization trace needs at least an additional database selection of approx. 1 millisecond. How this extends the runtime of each affected application depends on the number of recorded authorization checks. To limit the number of recorded checks, we recommend using a filter.

Activation of the authorization trace without filters has a significant effect on performance.

Authorization Concept

The functions of the `STUSERTRACE` transaction are protected by the authorization object `S_ADMI_FCD`. Checks are performed on the authorization field `S_ADMI_FCD` with the following values:

`STUF`: Change filter of user traces for authorization checks

`STUR`: Evaluation of user traces for authorization checks

Delete and Reorganize

In the results list, you can delete individual data records by selecting the relevant lines and using the *Delete* function in the toolbar.

To delete large volumes of data, use the report `RSUSR_SUAUTHVALTRC_REORG`. To do this, call the menu function *Goto* → *Reorganize*.

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Note 2442227 - Simulation of authorization checks

Analysis using transaction STUSERTRACE in production system:

User Trace for Authorization Checks: 17 Hits

User Buffer

Type of Application	Application Name		User	Check	Result	Result	Addit.Info	Access Filtering	Entity	Object	Field 1	Value 1
			D019687		0	Authorization chec				/UIF/FLEX	/UIF/KEYU	X
			D019687		0	Authorization chec				S_DEVELOP	DEVCLASS	
SAP Gateway Business Suite Enablement - Service	/UI2/INTEROP	0001	D019687		0	Authorization chec				S_SERVICE	SRV_NAME	A15F5E180FD9799
SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV	0001	D019687		0	Authorization chec				AI_LMDB_OB	ACTVT	03
SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV	0001	D019687		0	Authorization chec				AI_LMDB_OB	ACTVT	03
SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV	0001	D019687		0	Authorization chec				AI_LMDB_OB	ACTVT	03
SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV	0001	D019687		0	Authorization chec				AI_LMDB_OB	ACTVT	03
SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV	0001	D019687		0	Authorization chec				AI_LMDB_OB	ACTVT	03
SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV	0001	D019687		0	Authorization chec				AI_LMDB_OB	ACTVT	03
SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV	0001	D019687		0	Authorization chec				AI_LMDB_OB	ACTVT	03
SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV	0001	D019687		0	Authorization chec				AI_LMDB_OB	ACTVT	03
SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV	0001	D019687		0	Authorization chec				AI_LMDB_OB	ACTVT	03
SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV	0001	D019687		0	Authorization chec				AI_LMDB_OB	ACTVT	03
SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV	0001	D019687		0	Authorization chec				AI_LMDB_OB	ACTVT	03
SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV	0001	D019687		0	Authorization chec				SM_FUNCS	ACTVT	
SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV	0001	D019687		0	Authorization chec				S_SERVICE	SRV_NAME	8A5C52B04A84DA
SAP Gateway: Service Groups Metadata	AGS_FLP_INTEROP_0001		D019687		0	Authorization chec				S_SERVICE	SRV_NAME	738D848517A8DC
SAP Gateway: Service Groups Metadata	AGS_SYSREC_SRV_0001		D019687		0	Authorization chec				S_SERVICE	SRV_NAME	BA7D9B4C27043E

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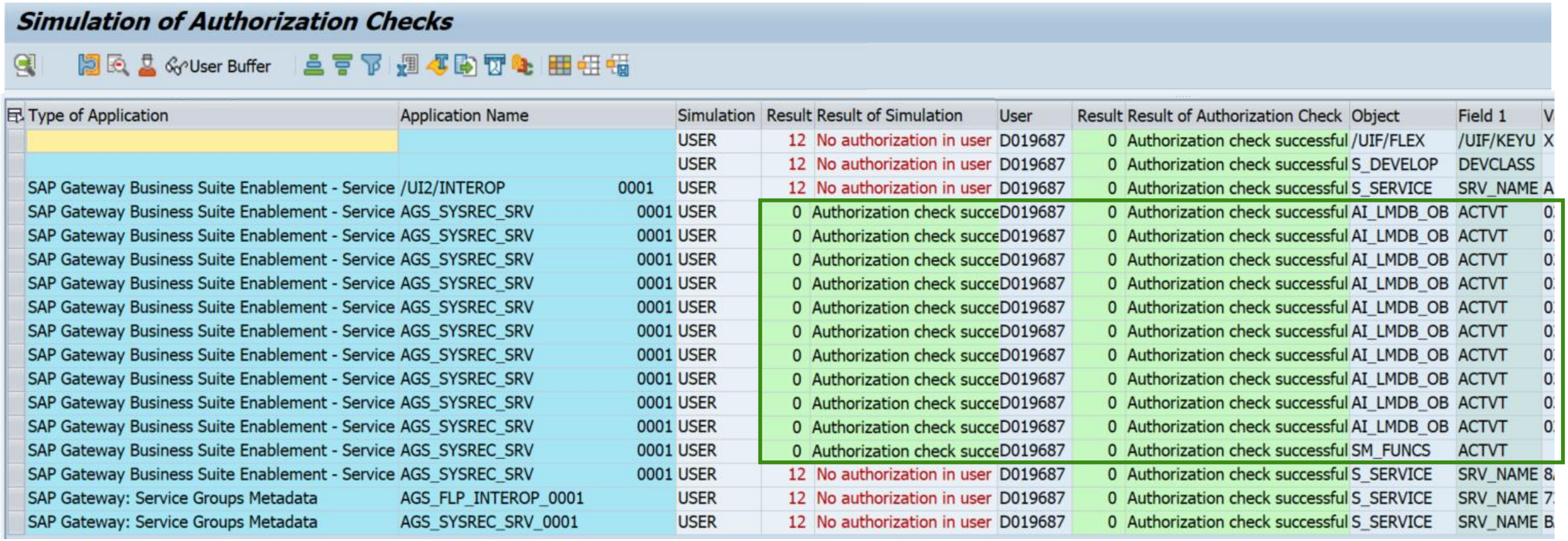
Note 2442227 - Simulation of authorization checks

Simulation using transaction `STSIMAUTHCHECK` in test or customizing development system:



Simulation of Authorization Checks

User Buffer

Type of Application	Application Name		Simulation	Result	Result of Simulation	User	Result	Result of Authorization Check	Object	Field 1	V
			USER	12	No authorization in user	D019687	0	Authorization check successful	/UIF/FLEX	/UIF/KEYU	X
			USER	12	No authorization in user	D019687	0	Authorization check successful	S_DEVELOP	DEVCLASS	
SAP Gateway Business Suite Enablement - Service	/UI2/INTEROP	0001	USER	12	No authorization in user	D019687	0	Authorization check successful	S_SERVICE	SRV_NAME	A
SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV	0001	USER	0	Authorization check succe	D019687	0	Authorization check successful	AI_LMDB_OB	ACTVT	0
SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV	0001	USER	0	Authorization check succe	D019687	0	Authorization check successful	AI_LMDB_OB	ACTVT	0
SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV	0001	USER	0	Authorization check succe	D019687	0	Authorization check successful	AI_LMDB_OB	ACTVT	0
SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV	0001	USER	0	Authorization check succe	D019687	0	Authorization check successful	AI_LMDB_OB	ACTVT	0
SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV	0001	USER	0	Authorization check succe	D019687	0	Authorization check successful	AI_LMDB_OB	ACTVT	0
SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV	0001	USER	0	Authorization check succe	D019687	0	Authorization check successful	AI_LMDB_OB	ACTVT	0
SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV	0001	USER	0	Authorization check succe	D019687	0	Authorization check successful	AI_LMDB_OB	ACTVT	0
SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV	0001	USER	0	Authorization check succe	D019687	0	Authorization check successful	AI_LMDB_OB	ACTVT	0
SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV	0001	USER	0	Authorization check succe	D019687	0	Authorization check successful	AI_LMDB_OB	ACTVT	0
SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV	0001	USER	0	Authorization check succe	D019687	0	Authorization check successful	AI_LMDB_OB	ACTVT	0
SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV	0001	USER	0	Authorization check succe	D019687	0	Authorization check successful	AI_LMDB_OB	ACTVT	0
SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV	0001	USER	0	Authorization check succe	D019687	0	Authorization check successful	SM_FUNCS	ACTVT	
SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV	0001	USER	12	No authorization in user	D019687	0	Authorization check successful	S_SERVICE	SRV_NAME	8
SAP Gateway: Service Groups Metadata	AGS_FLP_INTEROP_0001		USER	12	No authorization in user	D019687	0	Authorization check successful	S_SERVICE	SRV_NAME	7
SAP Gateway: Service Groups Metadata	AGS_SYSREC_SRV_0001		USER	12	No authorization in user	D019687	0	Authorization check successful	S_SERVICE	SRV_NAME	B

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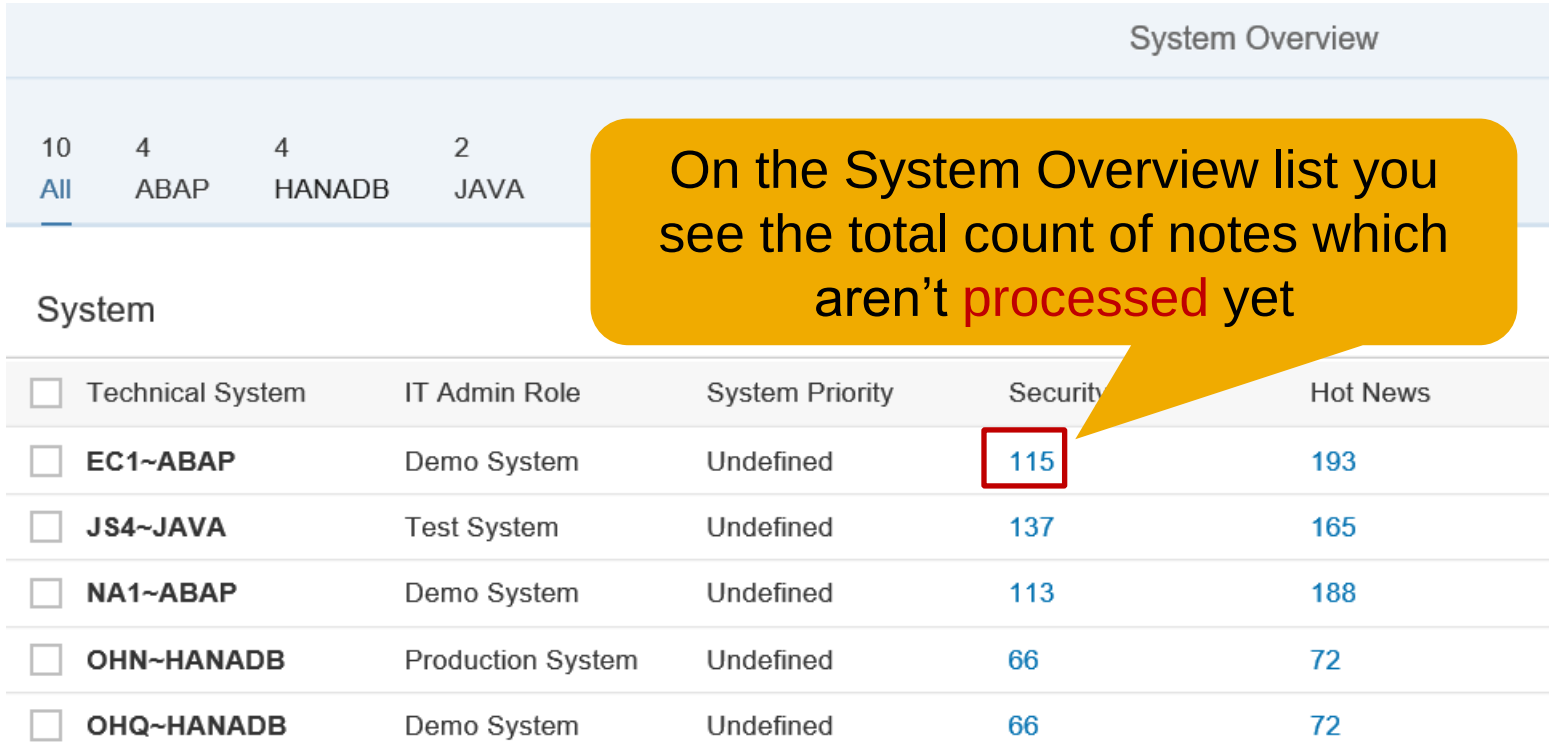
System Recommendations 7.2 SP 7 - How to find updated notes

With System Recommendations 7.2 SP 7 you get two status fields:

Implementation status set by the SysRec background job

- **New**
- **New version available**
  You have implemented an older version of the notes
- **Updated**
  You have set an processing status for an older version of the note

Processing status set by an administrator using status codes defined in customizing table `AGSSR_STATUS`



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System Recommendations 7.2 SP 7 - How to find updated notes

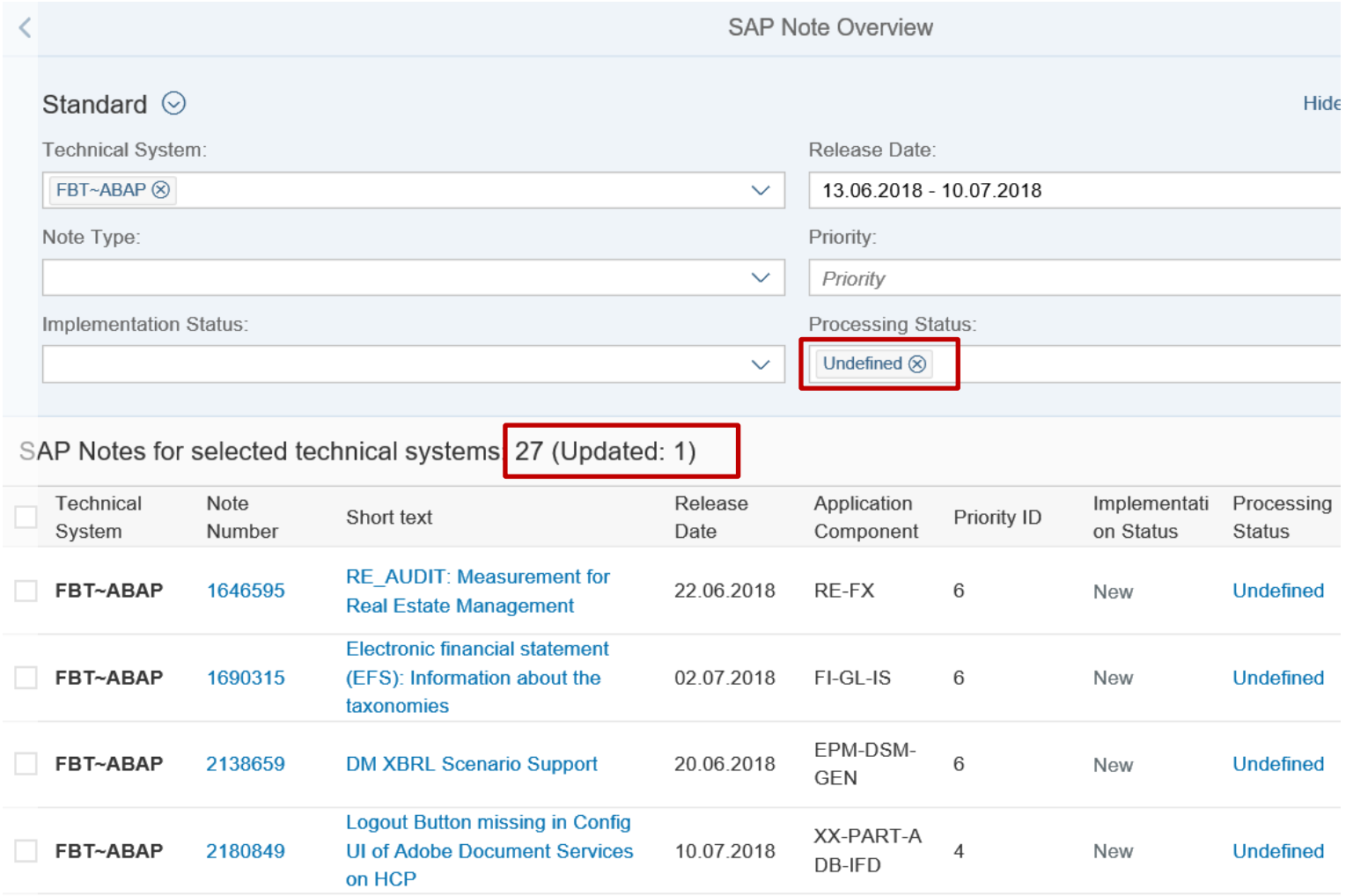
The Note Overview list shows notes with processing status “undefined” by default. Notes with other status values are not shown.

Therefore you do not see notes for which you already have set a processing status.

New versions of notes which already got a specific processing status for older versions get the implementation status “Updated”.

Because of the filter on processing status you do not see these notes.

At least you get a hint showing the count of invisible updated notes.



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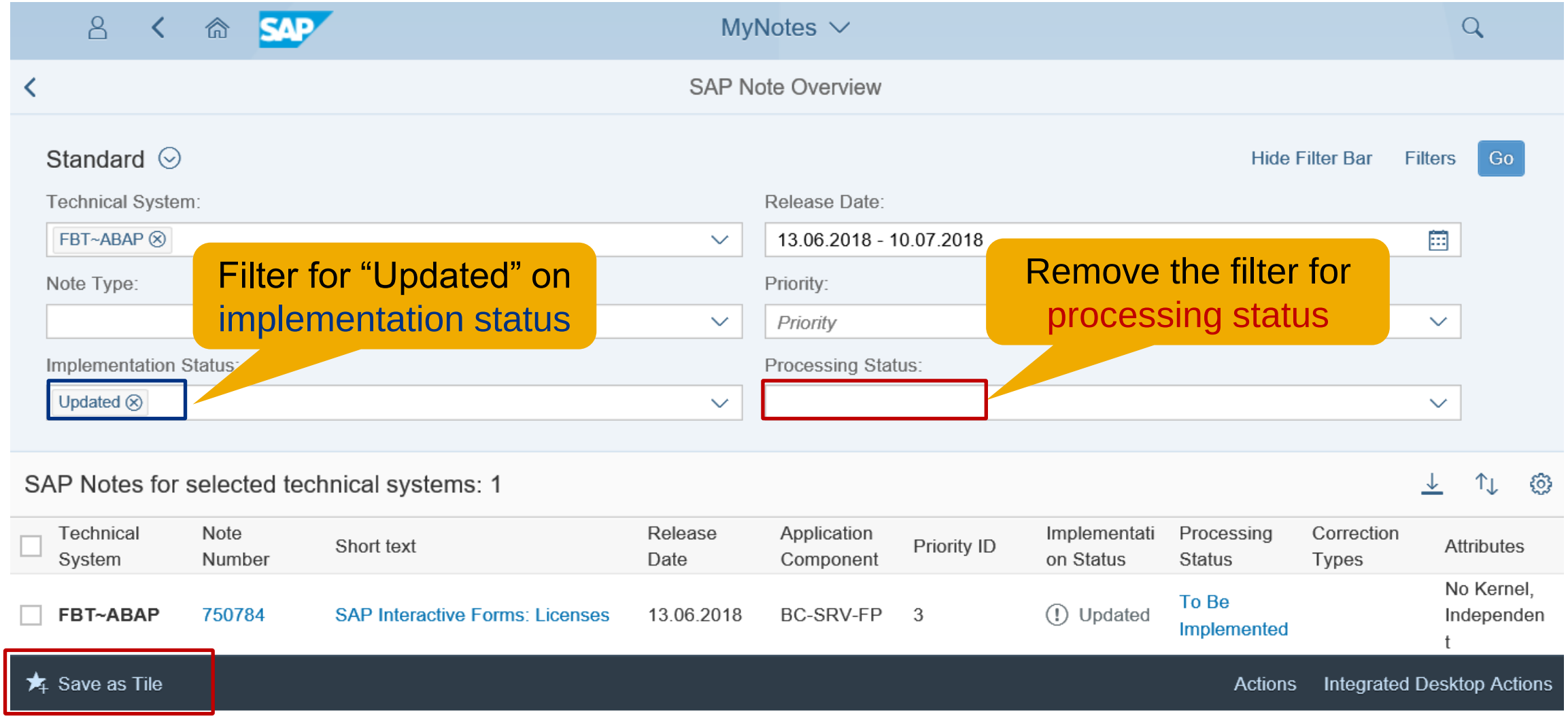
System Recommendations 7.2 SP 7 - How to find updated notes



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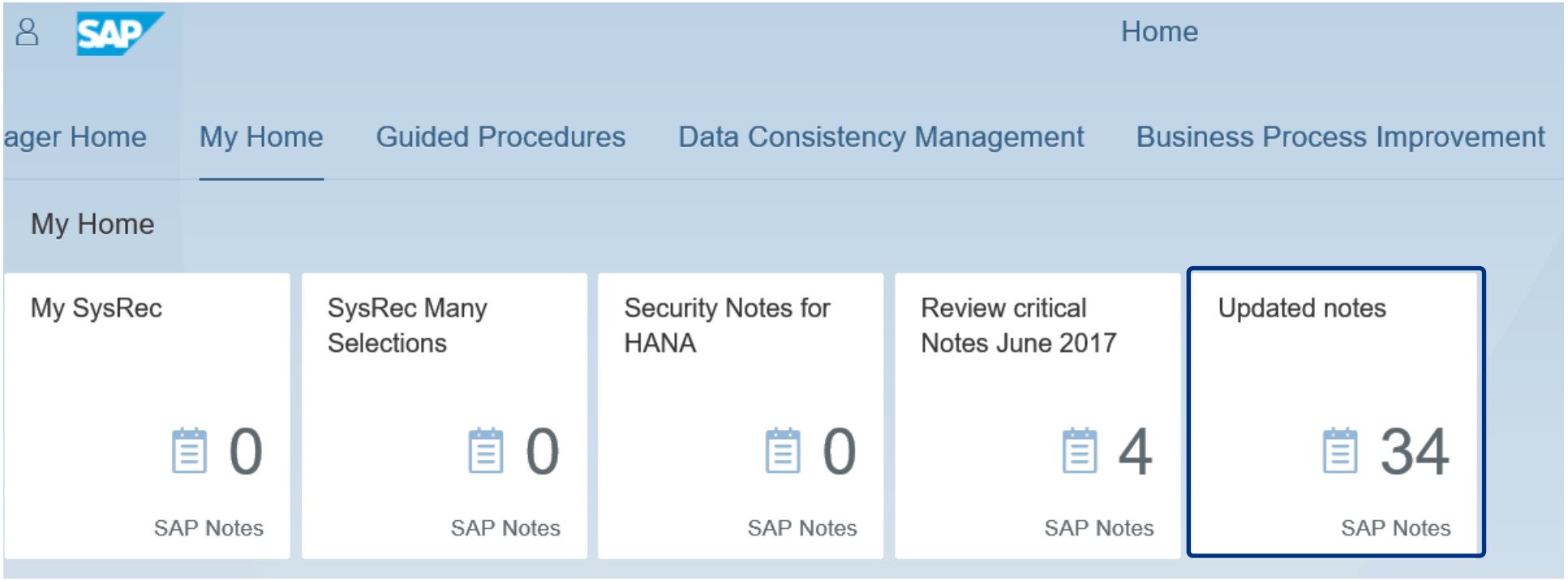
System Recommendations 7.2 SP 7 - How to find updated notes

Create a specific filter for updated (security) notes and save it as a tile into a suitable Fiori Launchpad Group:



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September 2018

Topics September 2018

Note 2585923 - CUA: Text comparison (callback whitelist)

Note 1640584 - Missing authorization check for maintenance of trust

Note 2644279 - Missing XML Validation vulnerability in BEx Web Java Runtime Export Web Service

Note 2522156 - SAL | New events for UCON_HTTP whitelists

Note 2234192 - Enhancement to application start lock as of 7.50

Note 2622434 - Information disclosure relating to password in SAProuter

Recordings:
DSAG (German)
ASUG

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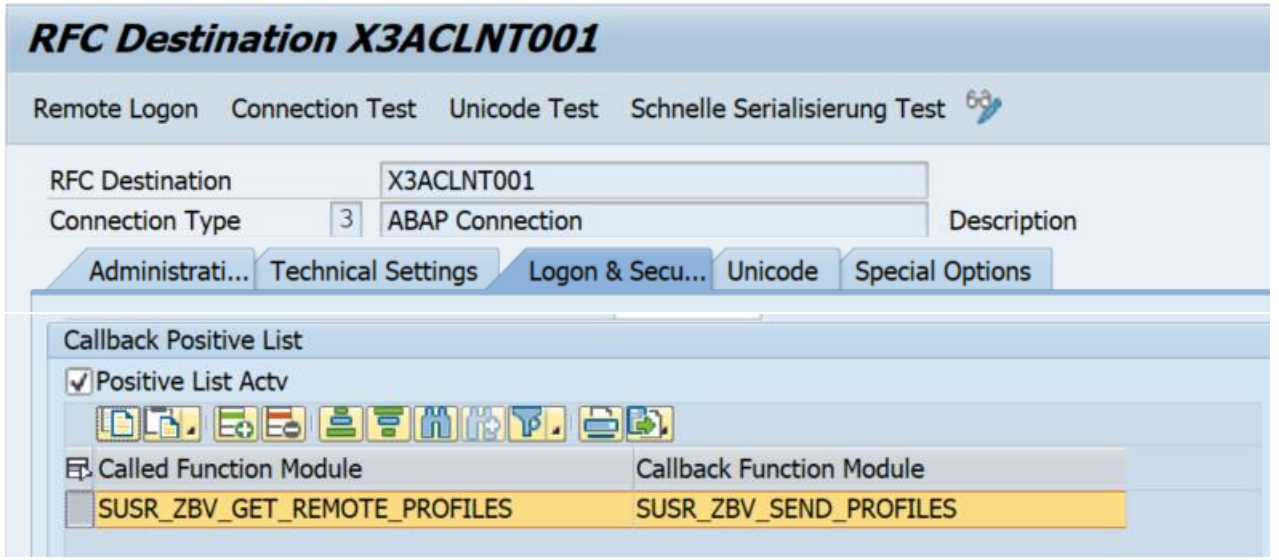
Note 2585923 - CUA: Text comparison (callback whitelist)

The CUA uses RFC callback as part of function “text comparison” which loads authorization profile names, role names and license options into the CUA main system.

New report `RSUSR_CUA_CALLBACK_WHITELISTS` generates required RFC callback allowlist entries for all RFC destinations which connect the main system to the client systems of the Central User Administration (CUA):

Called function module in manages system:
`SUSR_ZBV_GET_REMOTE_PROFILES`

Callback function module in CUA main:
`SUSR_ZBV_SEND_PROFILES`



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Note 1640584 - Missing authorization check for maintenance of trust

Validity of note:	**SAP_BASIS 731**	**(only this release)**
Validity of correction instrucions:	**-**	**(none)**
Solution via Support Package:	**SAP_BASIS 731 SP 17**	**(highest number)**

https://launchpad.support.sap.com/#/softwarecenter/search/SAPKB73117

→ Published end of 2015, not relevant for current systems anymore

Related note from 2013:

Note 1416085 - PFCG: Authorization maintenance for object S_RFCACL

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Note 2644279 - Missing XML Validation vulnerability in BEx Web Java Runtime Export Web Service

Application System Recommendations shows this note for ABAP based systems because software component SAP_BW is listed in the validity part of the note, however, the note is irrelevant for the ABAP systems because it describes Java corrections for the Java stack of an BI system only.

You will see this note for such Java systems even after patching because the note does not contain references to SP or patches containing the solution. (Tell SAP if you do not get the note at all.)

Related note 2470973 shows the correct list of software components and offers links to software packages.

Description	Software Components	This document is referenced by
BI-BASE-S	7.10	7.11
	7.20	7.20
	7.30	7.30
	7.31	7.31
	7.40	7.40
	7.50	7.50
SAP_BW	700	702
	710	711
	730	730
	731	731

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Notes 2522156 and 2508918 - SAL | New events for UCON_HTTP whitelists (7.40) and CDS views (7.50)

Implement notes 2522156, 2508918, 2573779, 2573792 (to activate usage of the messages) and Implement notes 2463645, 2682603 (to get the definition and view of the messages).

Message ID	Message	Category	Weighing
EUI	Setup of UCON HTTP White List was changed	RFC Start	Severe
EUJ	Status of UCON HTTP White List for context type &A was changed	RFC Start	Severe
EUK	Access to UCON HTTP White List for context type &A was rejected	RFC Start	Critical
EUL	HTTP Security Header Register for Header &A was changed	RFC Start	Severe
EUM	Trusted Site List &A of HTTP Security Header was changed	RFC Start	Severe
EUN	Content Security Policy for Service &A was violated	RFC Start	Critical
EUO	UCON HTTP Whitelist of for context type &A was changed	RFC Start	Severe
EUV	CDS-View &A (Field &B) was published	Other	Non-Critical
EUW	Blacklisting is enabled (Connection / Table / Field : &A &B &C)	Other	Non-Critical
EUX	Blacklisting is disabled (Connection / Table / Field : &A &B &C)	Other	Non-Critical
EUY	Data Blocking enabled for &A	Other	Non-Critical
EUZ	Data Blocking disabled for &A	Other	Non-Critical

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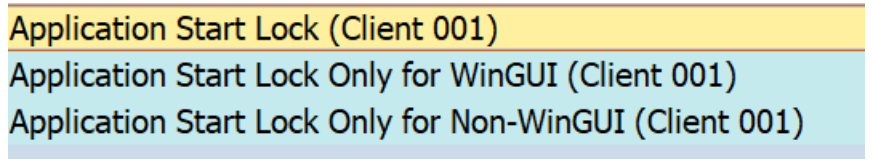
Note 2234192 - Enhancement to application start lock as of 7.50

New transactions SM01_DEV and SM01_CUS replace good old transaction SM01

Transaction SM01_DEV: maintain global application start lock in development system

Transaction SM01_CUS: maintain local application start lock
In client 000 you can maintain cross-client settings,
in other clients you maintain settings for this client



Use Audit Information System transaction/report RSAUDITC_BCE to view the settings

Category	Name	App. Short Text	Status (S)	CORE_TCD	Pers.Resp.	Created On	Status (C)	Client	Comment	ChngdBy(C)	Date (C)	Time (C)
Dialog Transaction	SM01	Lock Transactions			SAP			001		D019687	18.09.2018	13:04:23
Report Transaction	SM01_CUS	Local App. Start Lock Maintenance			SAP	23.12.2015						
Report Transaction	SM01_DEV	Global App. Start Lock Maintenance			SAP	23.12.2015						
Dialog Transaction	SM02	System Messages			SAP							
Report Transaction	SM04	Logons to an AS Instance			SAP							
Report Transaction	SM05	HTTP Session Management: Monitoring			SAP	03.02.2009						

Install recent notes (which include prerequisite notes), too: 2367061, 2420609, 2422243, 2578158

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SAProuter

You find SAProuter Security Notes like all other Security Notes on https://support.sap.com/notes with Document type = SAP Security Notes

Let's assume we can find the name SAPROUTER in the short text of basis notes – but as there might be written as SAP ROUTER let's search for "router" giving following result:

Note 2622434 - Information disclosure relating to password in SAProuter	10.07.2018
Note 2037492 - Potential denial of service in SAP Router	14.10.2014
Note 1986895 - Potential disclosure of information in SAProuter	08.04.2014
Note 1853140 - Managing SAProuter from external host	12.11.2013
Note 1820666 - Potential remote code execution in SAProuter	08.05.2013
Note 1663732 - Potential information disclosure relating to SAProuter	03.08.2012

You get the same list if you search for application component BC-CST-NI

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SAProuter

Let’s double-check this list using https://support.sap.com/notes and search for recent notes of application component BC-CST-NI

Among several functional corrections you find some more normal notes about the SAProuter which touch security as well:

Note 2126550 - Saprouter crashes with active SNC trace when the saprouter trace file is renamed
04.02.2015

Note 2046942 - Support encrypted passwords in saprouttab
25.07.2014

Note 2106963 - Saprouter over SNC doesn't work with CommonCryptoLib due to oversized initial SNC token
23.01.2015

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SAProuter

The application System Recommendations in the Solution Manager is great to find relevant notes for

- ABAP,
- Kernel disp+work,
- Java,
- HANA
- and some other products

but cannot give you exact results for

- other parts of the Kernel (like CommonCryptoLib)
- or independent installations of executables (like RFC Libraries or the SAProuter).

Therefore you have to find these installations by yourself.

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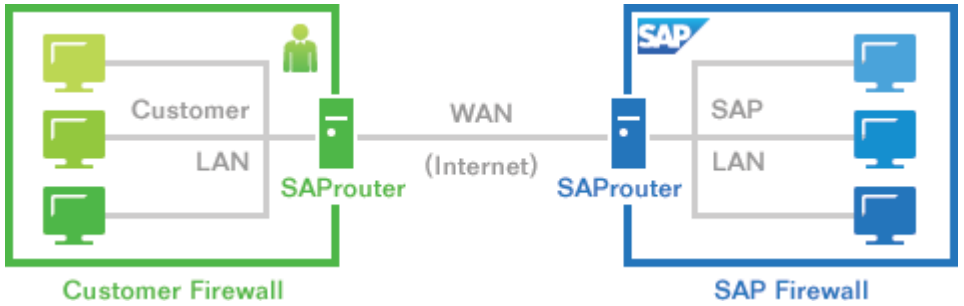
SAProuter

Tutorial:
Getting Started with SAProuter - Tutorials



Best practice:
http://scn.sap.com/community/security/blog/2013/11/13/security-of-the-saprouter

Recommended activities:

- SAP recommends to upgrade any (active) SAProuter installation as soon as possible
- Use an access control list (saprouttab) to limit connectivity
- Activate SNC to encrypt the communication channel to SAP support and to block any other connections from the internet or use hardware encryption using IPSEC
- Integrate the SAProuter into a firewall
- Use an SAProuter password for SAP Support (and define process how to change it)
- (Change the default port)

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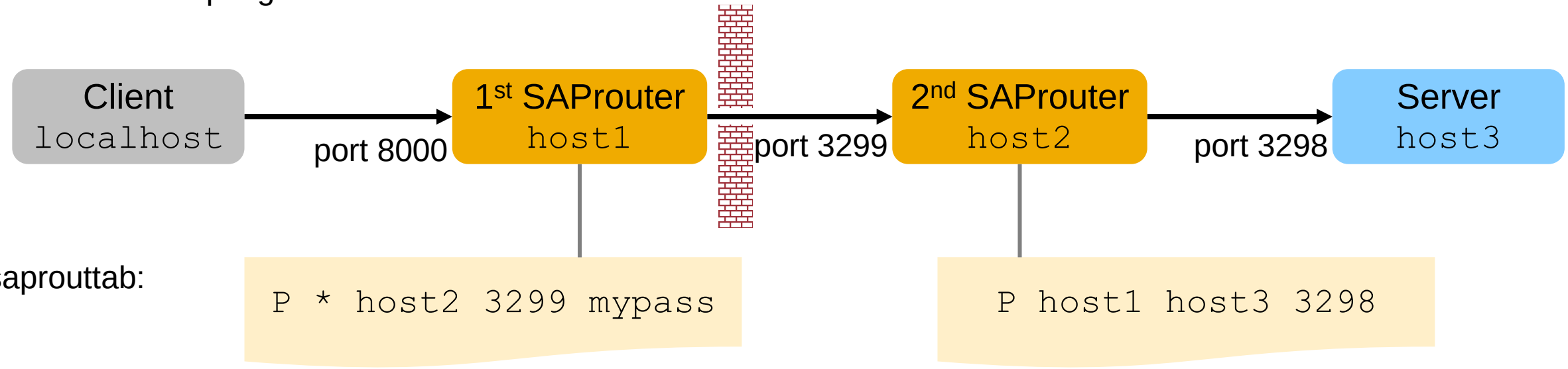
Note 2622434 - Information disclosure relating to password in SAProuter

Note 2622434 - Information disclosure relating to password in SAProuter

Relevant only if several SAProuter are chained and one of the first SAProuters require a password

Issue example: The 1st SAProuter transmits password `mypass` to the 2nd SAProuter, even if it‘s already used while accepting the connection.



Connect string from client: `/H/host1/S/8000/H/host2/S/3299/W/mypass/H/host3/S/3298`

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August 2018

Topics August 2018

Change Diagnostics @ Support Portal

Validate version of CommonCryptoLib

Note 2546807 - List of Diagnostic Agents can’t be retrieved due to enforced security at API level

Secure Diagnostics Agent

Note 2614229 - Memory Corruption vulnerability in SAP BusinessObjects Business Intelligence platform

Note 2671160 - Missing input validation in ABAP Change and Transport System (CTS)

Security Baseline Template Version 1.9 (including ConfigVal Package version 1.9_CV-5)

Recordings:
DSAG (German)
ASUG

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Change Diagnostics @ Support Portal

Change Diagnostics @ Support Portal (Overview & Capabilities)
https://support.sap.com/en/solution-manager/sap-solution-manager-7-2/expert-portal/applications/root-cause-analysis/change-diagnostics.html

- Change Reporting
- Change Analysis / Product Instance
- Change Analysis / Systems
- Configuration Validation
- Configuration Validation / Reporting

Configuration Validation @ WIKI (Technical Details)
https://wiki.scn.sap.com/wiki/display/TechOps/ConfVal_Home

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Validate version of CommonCryptoLib

The **CommonCryptoLib** shows a specific version number which is a text which contains the version information and a date.

Examples:

8.5.9 Feb 8 2017
8.5.13 May 2017
8.5.22 Jul 25 2018

You need an authorization for `AI_CCDB_SC` with `CONT_AUTH=SECURITY` and `ACTVT=03` to access configuration store `CRYPTOLIB`.

You cannot use the > or >= operator to validate the version using application Configuration Validation for Configuration Store **`CRYPTOLIB`** with Configuration Item **`CCL`**.

Solution: Use a Regular expression to analyze the digits

Example according to note 2444321 which asks for **8.5.10 or higher**:

```
^(8\.5\.\d{2,}|8\.[6789]\.\d+|8\.\d{2,}\.\d+|9\.\d+\.\d+|\d{2,}\.\d+\.\d+)[ ].*
```

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Validate version of CommonCryptoLib

Result:

SAP System ID	ConfigStore Name	Config. Item Value	Compliance	Compliant (1=Yes, -1=No, ' '=Not valuated)
E73	CRYPTOLIB	8.5.9 Feb 8 2017	No	-1
FA7	CRYPTOLIB	8.5.18 Nov 23 2017	Yes	1
FBT	CRYPTOLIB	8.5.21 Apr 17 2018	Yes	1
FQ7	CRYPTOLIB	8.5.18 Nov 23 2017	Yes	1
FT7	CRYPTOLIB	8.5.20 Apr 5 2018	Yes	1
N52	CRYPTOLIB	8.4.48 Jan 26 2016	No	-1
Q3A	CRYPTOLIB	LIB_ID_UNKNOWN	No	-1
Q5K	CRYPTOLIB	8.5.5 Sep 23 2016	No	-1
QDD	CRYPTOLIB	8.4.49 Mar 4 2016	No	-1
QE4	CRYPTOLIB	8.5.13 May 17 2017	Yes	1
QEX	CRYPTOLIB	8.5.20 Apr 5 2018	Yes	1
QV6	CRYPTOLIB	8.4.41 Aug 18 2015	No	-1
SI7	CRYPTOLIB	8.5.21 Apr 17 2018	Yes	1
SMY	CRYPTOLIB	8.4.49 Mar 4 2016	No	-1
ST7	CRYPTOLIB	8.5.6 Nov 7 2016	No	-1
U3S	CRYPTOLIB	8.5.22 Jul 25 2018	Yes	1

See https://wiki.scn.sap.com/wiki/display/TechOps/ConfVal_CommonCryptoLib

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Note 2546807 - List of Diagnostic Agents can't be retrieved due to enforced security at API level

Security Note 2546807 (valid for ST 720) refers to Normal Note 2544779 (valid for ST 720 SP 6)

→ System Recommendations shows Security Note 2546807 always for all SolMan 7.2 installations.

What happens/is necessary after an upgrade from ST 720 SP 3 or SP 5 to SP 7:
Q: Is it necessary to execute the manual configuration steps described in Normal Note 2544779?
A: (No answer yet)

Manual Activity valid for Software Component ST Release 720 `SAPK-72006INSTMAIN` - `SAPK-72006INSTMAIN`

After implementing the automatic correction attached to this SAP Note, follow these steps :
1. Start `SOLMAN_SETUP` transaction
2. Navigate to the Infrastructure Preparation scenario under Mandatory Configuration
3. Navigate to the Define CA Introscope step
4. Remove the already discovered CA Introscopes and perform the discovery again
5. Provide the user data and save the step

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Secure Diagnostics Agent

Connect the Diagnostics Agents via P4S (Transport Layer Encryption with or without Authentication) instead of P4.

- **Upgrade SAP JVM as described in Wiki how to upgrade a SAP JVM 6.1 or 8.1 for the Diagnostics Agent**
- **Configure SSL on the AS Java as described in Note 1770585**
- **Configure the P4S port for the J2EE NetWeaver Application Server according to Note 2419031**

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Note 2614229 - Memory Corruption vulnerability in SAP BusinessObjects Business Intelligence platform

Credits:
ERP Applications Under Fire: How cyberattackers target the crown jewels
https://www.onapsis.com/research/reports/erp-security-threat-report

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Note 2614229 - Memory Corruption vulnerability in SAP BusinessObjects Business Intelligence platform

Several Notes for Software Component ENTERPRISE respective SBOP BI PLATFORM SERVERS

- **Go for an update according to note 2614229 which shows the highest SP/patch levels**

	Note 2407193		Note 2412999		Note 2630018		Note 2633846		Note 2644154		Note 2614229	
SBOP BI PLATFORM SERVERS 4.0	SP012	5										
SBOP BI PLATFORM SERVERS 4.1	SP007	11	SP007	12								
	SP008	7	SP008	9								
	SP009	1	SP009	3	SP009	12	SP009	12			**SP009**	**13**
	SP010	0	SP010	0	SP010	7	SP010	7			**SP010**	**7**
			SP011	0	SP011	200	SP011	200			**SP011**	**200**
					SP012	0	SP012	0			**SP012**	**0**
SBOP BI PLATFORM SERVERS 4.2	SP002	9	SP002	11								
	SP003	5	SP003	7								
	SP004	0	SP004	1	SP004	9	SP004	9			**SP004**	**9**
			SP005	0	SP005	400	SP005	400	SP005	400	**SP005**	**400**
					SP006	0	SP006	0	SP006	0	**SP006**	**0**
SBOP BI PLATFORM SERVERS 4.3			SP000	0								

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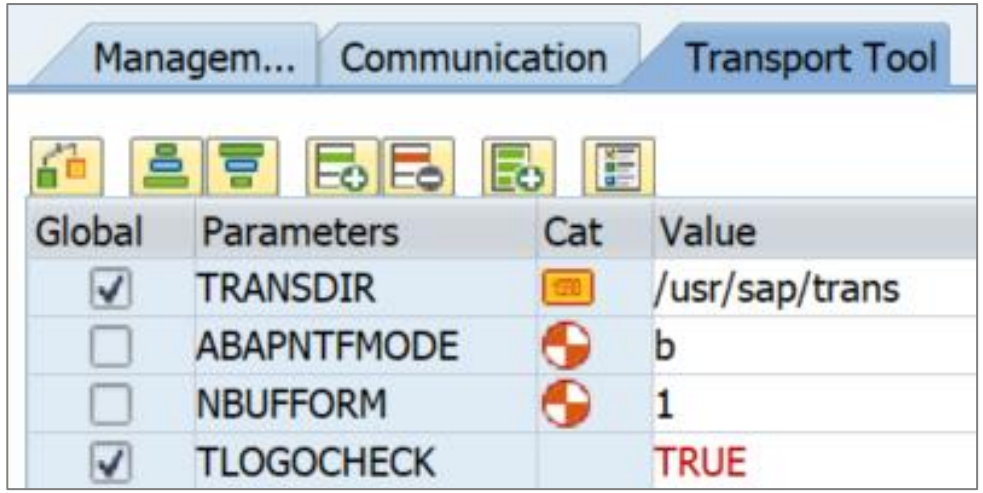
Note 2671160 - Missing input validation in ABAP Change and Transport System (CTS)

The extension is part of a Kernel (R3trans) update:

721 patch 1112/1119, 722 patch 625/715, 745 patch 810/824, 749 patch 521/615,
753 patch 220/312, 773 patch 11/25, 774 patch -/12
(use the higher patch level to get an additional functional correction)



Additional manual configuration required
`STMS` → Overview → Systems → Change:

Set transport parameter `TLOGOCHECK` = `TRUE` as global parameter to make it effective for all systems in the transport domain

or

Keep this parameter switched off (default) in QA systems and monitor the transport return codes in the QA systems (monitoring imports with RC=0006) and switch on this parameter individually for every productive systems.

Credits:
https://blog.virtualforge.com/en/how-to-double-your-salary-in-1-minute

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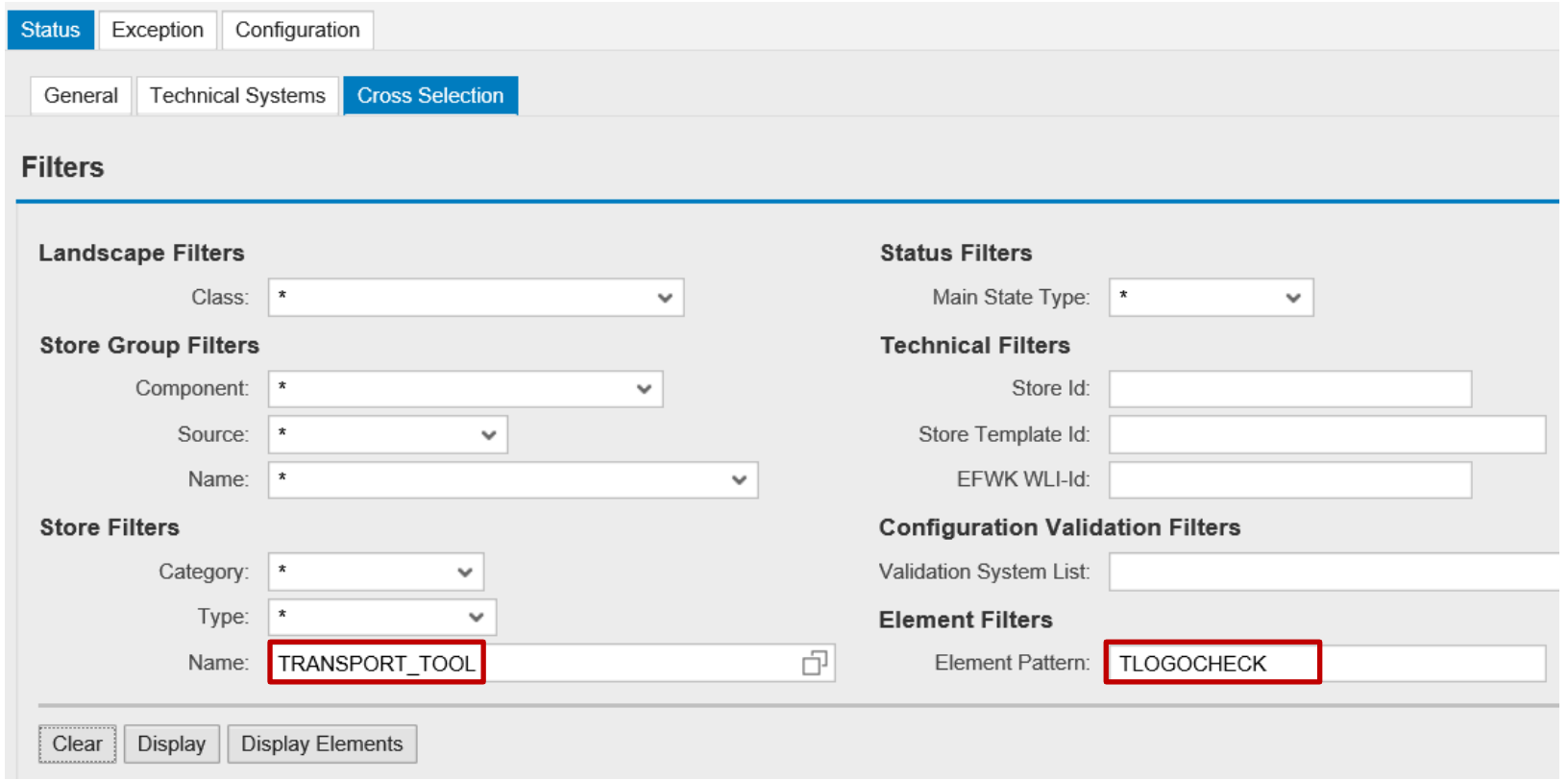
Note 2671160 - Missing input validation in ABAP Change and Transport System (CTS)

Monitor parameter `TLOGOCHECK` in application `CCDB` respective Configuration Validation using configuration store `TRANSPORT_TOOL` (use this store to validate parameter `RECCLIENT` as well).

You do not see entries in transaction `CCDB` if the parameter is not set (in opposite to Profile Parameters there is no default definition).



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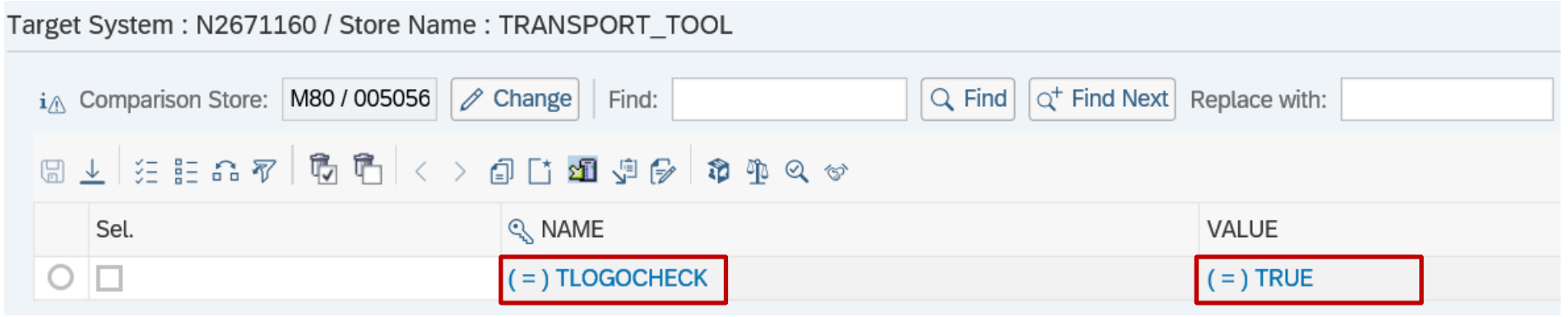
Note 2671160 - Missing input validation in ABAP Change and Transport System (CTS)

Target System for Configuration Validation



Configuration Validation shows “Item not found” if parameter is not set.

Configuration Items

SAP System ID	ConfigStore Name	Config. Item	Cv. DataOperator	Config. Item Value	Compliance	Compliant (1=Yes, -1=No, ' '=Not valuated)
M10	TRANSPORT_TOOL	TLOGOCHECK	=VALUE:TRUE/	#	Item not found	-1
M21	TRANSPORT_TOOL	TLOGOCHECK	=VALUE:TRUE/	#	Item not found	-1
M26	TRANSPORT_TOOL	TLOGOCHECK	=VALUE:TRUE/	#	Item not found	-1
M31	TRANSPORT_TOOL	TLOGOCHECK	=VALUE:TRUE/	#	Item not found	-1
M36	TRANSPORT_TOOL	TLOGOCHECK	=VALUE:TRUE/	#	Item not found	-1
M80	TRANSPORT_TOOL	TLOGOCHECK	=VALUE:TRUE/	#	Item not found	-1

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Note 2671160 - Mitigation (without solving the issue)
Option a) Checking Critical Objects in Transport Requests

Use transaction `STMS` → Import Overview → Extras → Critical transport objects (`SM30` for table `TMSTCRI`) to maintain a list of forbidden transport objects

Set transport parameter `CHK_CRIOBJ_AT_EXPORT = E` within `STMS` to block exporting of transports containing forbidden objects.

Limitation: The check works on exports only but not on imports

see

Checking Critical Objects in Requests
http://help.sap.com/saphelp_nw70/helpdata/en/54/39d73add219573e10000000a11402f/frameset.htm

Defining Transport Objects as Critical
https://help.sap.com/saphelp_nw70/helpdata/en/60/e3fd03e36811d184810000e8a57770/frameset.htm

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Note 2671160 - Mitigation (without solving the issue)
Option b) Critical Objects Check and Approval in ChaRM

Transaction `SPRO` → SAP Solution Manager → Capabilities (Optional) → Change Control Management → Transport Management System → Specify Critical Transport Objects (WebDynpro Application `CM_COCKPIT` → Tab Critical Objects)

Limitation: The check works on exports only but not on imports

See

Critical Transport Object Checks
https://help.sap.com/viewer/8b923a2175be4939816f0981b73856c7/7.2.07/en-US/4d6fc4bdc469569be10000000a42189b.html

Approving and Exporting Critical Objects
https://help.sap.com/viewer/8b923a2175be4939816f0981b73856c7/7.2.07/en-US/4d6fc4c0c469569be10000000a42189b.html

(Tipp: search for some best-practice documents on the internet)

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Note 2671160 - Mitigation (without solving the issue)
Option c) Approving or Rejecting Requests (Quality Assurance)

Check requests in the QA system before they are delivered to subsequent systems

See

TMS Quality Assurance
https://help.sap.com/saphelp_nw70ehp2/helpdata/en/9c/a544c6c57111d2b438006094b9ea64/frameset.htm

Approving or Rejecting Requests (Quality Assurance)
https://help.sap.com/saphelp_nw70ehp2/helpdata/en/9c/a544d2c57111d2b438006094b9ea64/frameset.htm

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Note 2671160 - Mitigation (without solving the issue)
Option d) Quality Gate Management in SAP Solution Manager

Quality gate management (QGM) provides an integrated and consistent quality process for managing changes and their deployment.

See

Quality Gate Management
https://help.sap.com/viewer/8b923a2175be4939816f0981b73856c7/7.2.07/en-US/a90473a0d3f74adcaa6c6b4be7635867.html

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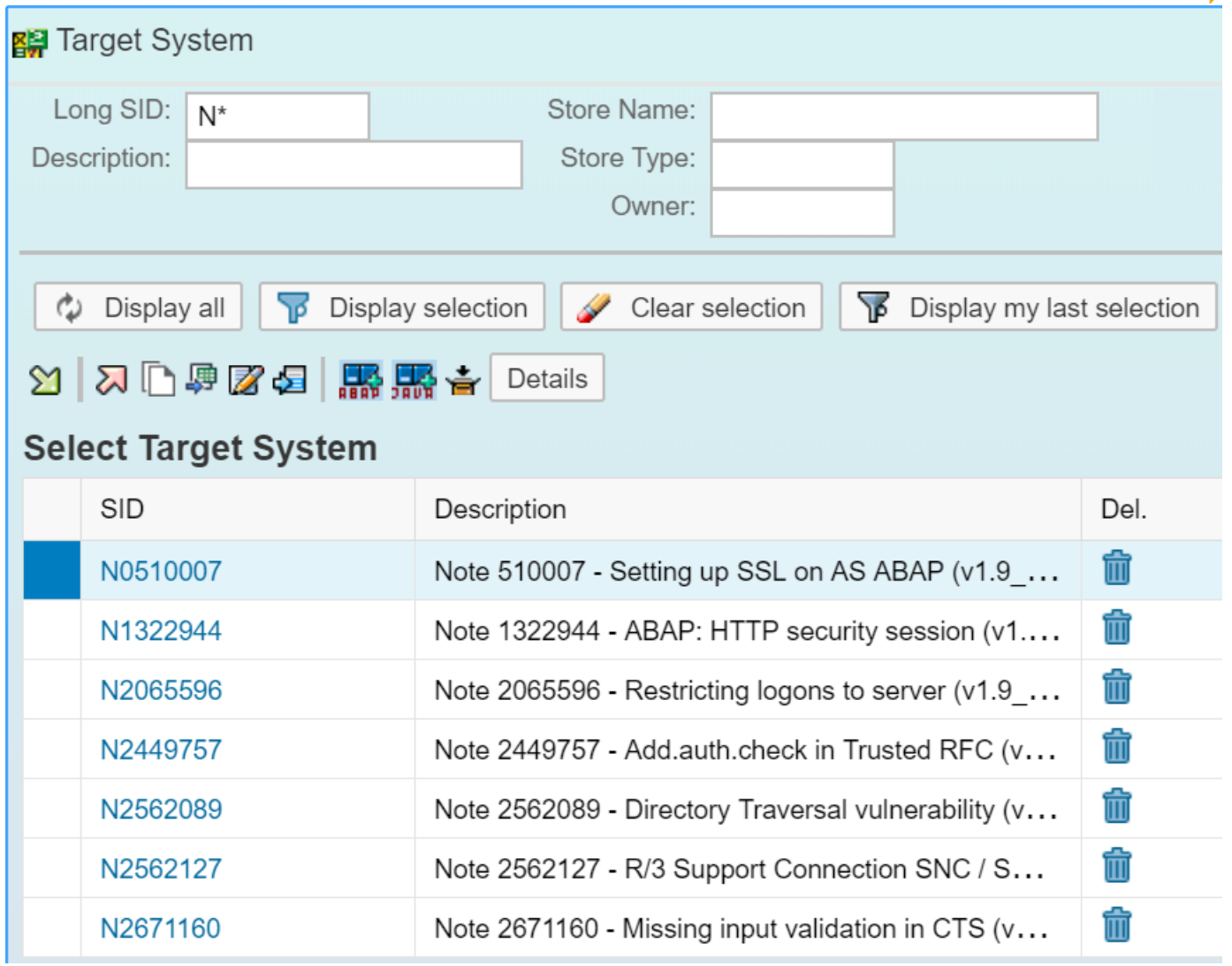
Security Baseline Template ConfigVal Package version 1.9_CV-5

Changed target systems:

- BL_I-5 Web Dispatcher Security
- BL_S-1 ABAP Profile Parameters
- BL_S-6 RFC Connectivity
- BL_O-8 Security Audit Log (ABAP)

New chapter 6. “Target Systems for individual Security Notes” describes new target systems:

- N0510007
- N1322944
- N2065596
- N2449757
- N2562089
- N2562127
- N2671160



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July 2018

No Webinar in June

Topics July 2018

Recommended Notes for System Recommendations

System Recommendations 7.2 SP 7

Trusted RFC – Whom should a SAP Solution Manager trust?

Note 2644227 - Command execution with SAP Internet Graphics Server (IGS) request through the multiplexer RFC listener

Note 2621121 - Information Disclosure in UI5 Handler

Note 2538856 - Cross-Site Scripting (XSS) vulnerability in SAPUI5

Note 2597913 - Denial of Service (DOS) in SAP Gateway

Note 2110950 - Potential disclosure of persisted data in ST

Note 2180849 - Logout Button missing in Config UI of Adobe Document Services on HCP

New Security Audit Log Messages
Notes 2299636 & 2332693 & 2360408 for SE06 and SCC4
Note 2535552 - SCU3: New authorization design for table logging

Security Audit Log as of SAP_BASIS 7.50

Recordings:
DSAG (German)
ASUG

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Recommended Notes for System Recommendations

Note 2556623 - SysRec: Collective Corrections for Solution Manager 720 SP03-SP06 Fiori UI

Corrections for System Recommendations 720 Fiori UI version 1.5.22 (no change concerning calculation results):

9. …
10. In *Object List* you export as CSV file but the field 'Usage count' is not getting exported.
    In *Filter Definition* date change issue in date picker.

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System Recommendations 7.2 SP 7

Separation between “Implementation Status” and “Processing Status”

The “Implementation Status” is set by the background job automatically

- New — New note
- New version available — Implemented ABAP note for which a new version is available
- Updated — Updated note which has a processing status for an older version
- [Implemented] — Implemented notes are omitted in System Recommendations

The “Processing Status” is set by the user manually

- Maintain available status values in customizing table `AGSNOTE_STATUS`
- Ensure to enter texts in all required languages
- The background job migrates existing status data into the new field once
  If the old status was “New” or “New version available” then the new status becomes “Undefined”

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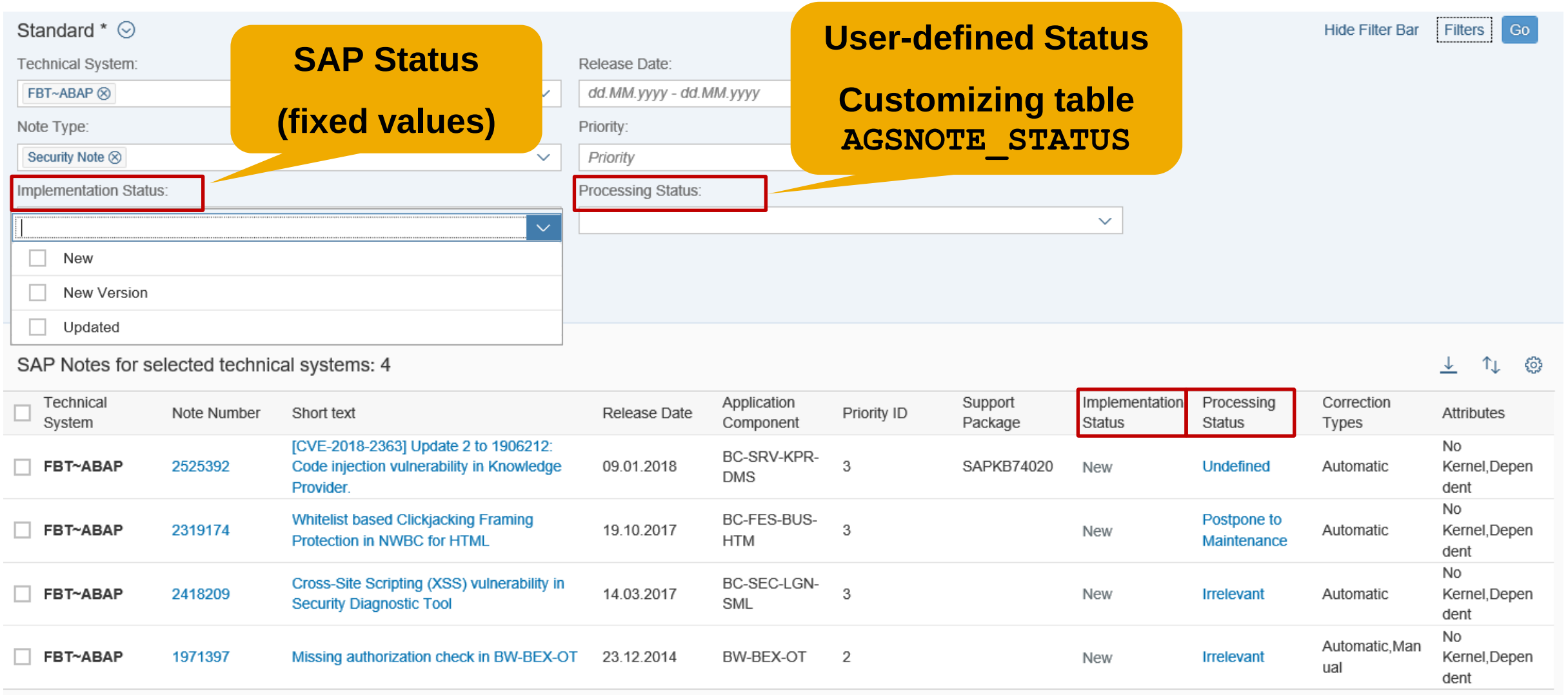
System Recommendations 7.2 SP 7

Separation between “Implementation Status” and “Processing Status”



Technical System	Note Number	Short text	Release Date	Application Component	Priority ID	Support Package	Implementation Status	Processing Status	Correction Types	Attributes
FBT~ABAP	2525392	[CVE-2018-2363] Update 2 to 1906212: Code injection vulnerability in Knowledge Provider.	09.01.2018	BC-SRV-KPR-DMS	3	SAPKB74020	New	Undefined	Automatic	No Kernel,Dependent
FBT~ABAP	2319174	Whitelist based Clickjacking Framing Protection in NWBC for HTML	19.10.2017	BC-FES-BUS-HTM	3		New	Postpone to Maintenance	Automatic	No Kernel,Dependent
FBT~ABAP	2418209	Cross-Site Scripting (XSS) vulnerability in Security Diagnostic Tool	14.03.2017	BC-SEC-LGN-SML	3		New	Irrelevant	Automatic	No Kernel,Dependent
FBT~ABAP	1971397	Missing authorization check in BW-BEX-OT	23.12.2014	BW-BEX-OT	2		New	Irrelevant	Automatic,Manual	No Kernel,Dependent

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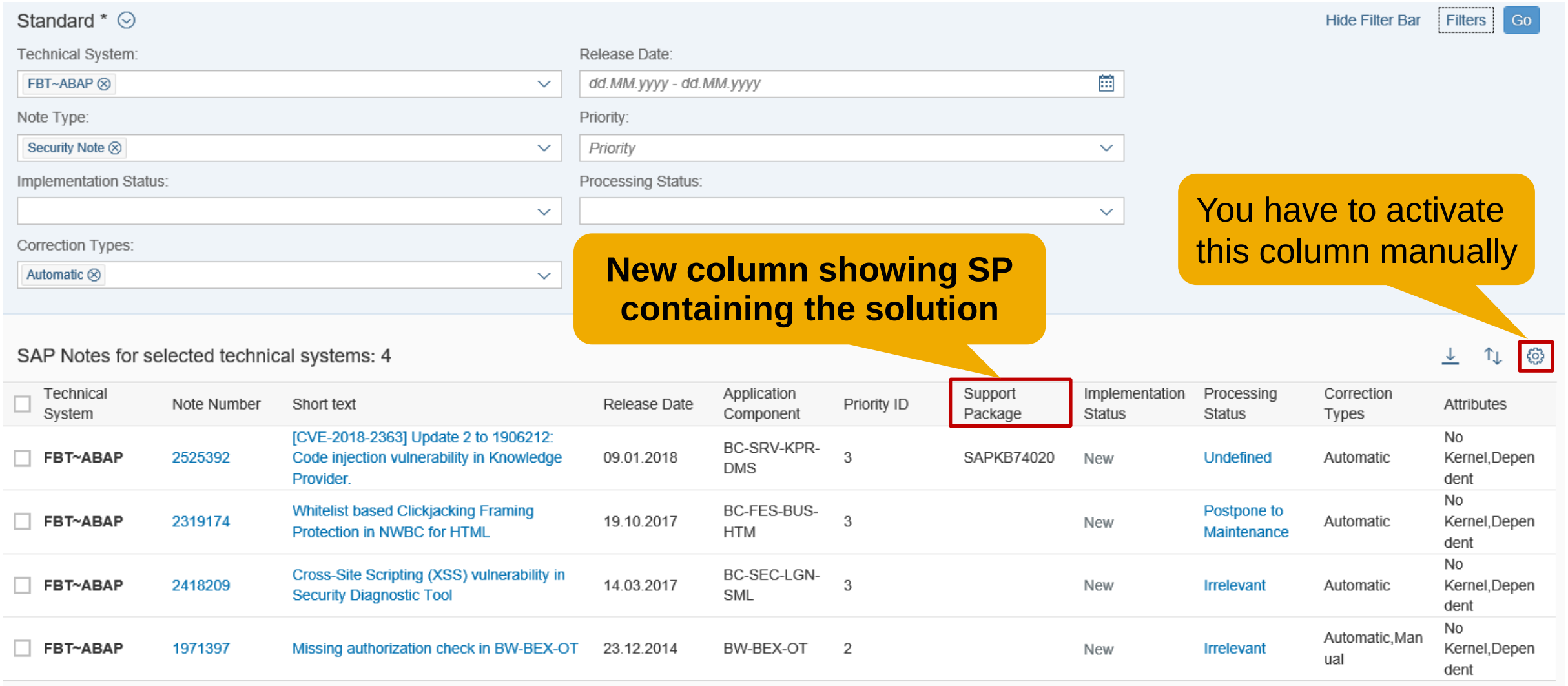
System Recommendations 7.2 SP 7

New column “Support Package containing the solution” for ABAP notes



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FBT~ABAP	1971397	Missing authorization check in BW-BEX-OT	23.12.2014	BW-BEX-OT	2		New	Irrelevant	Automatic,Manual	No Kernel,Dependent

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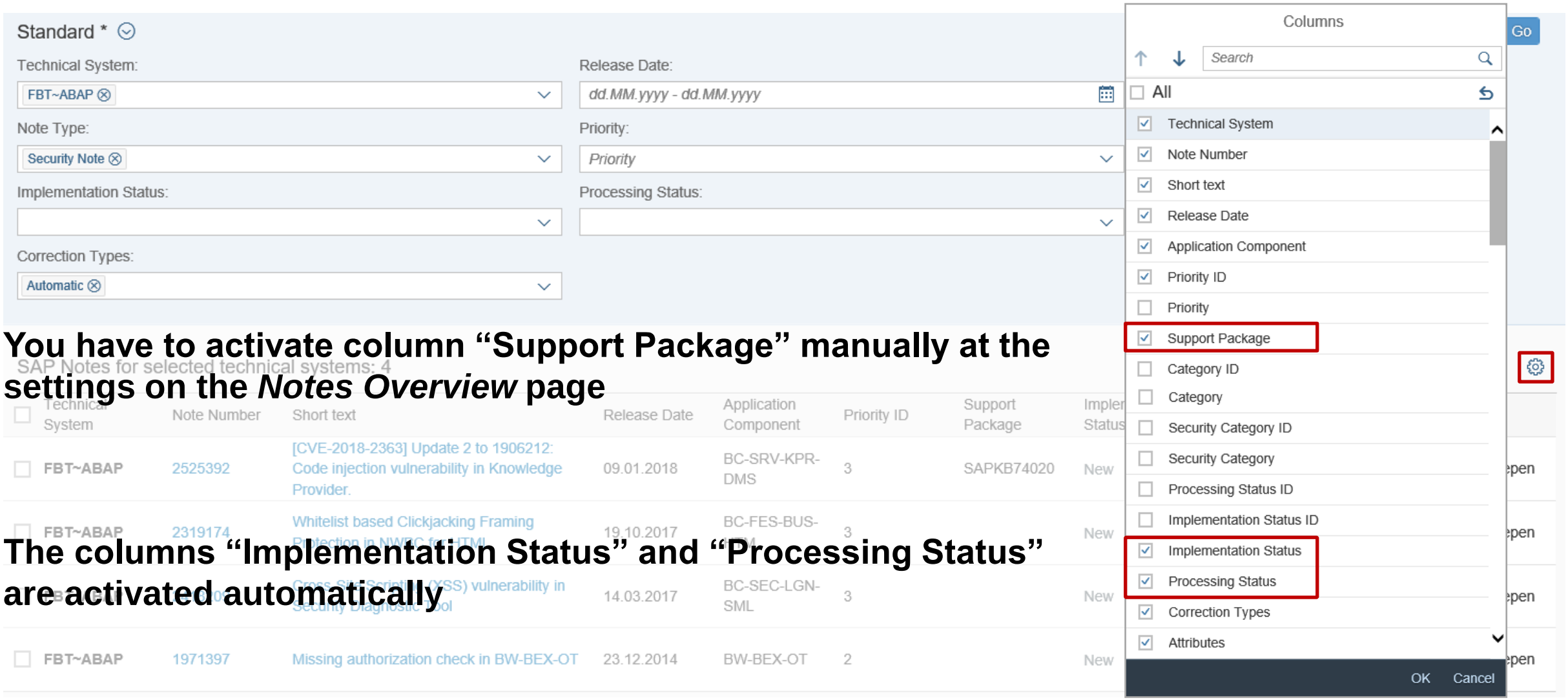
System Recommendations 7.2 SP 7

New columns



You have to activate column “Support Package” manually at the settings on the *Notes Overview* page

The columns “Implementation Status” and “Processing Status” are activated automatically

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System Recommendations 7.2 SP 7
Online Help

SAP Solution Manager 7.2 SP 7
https://help.sap.com/viewer/product/SAP_Solution_Manager/7.2.07/en-US

- The new features of System Recommendations are not listed in Release Notes
- As before, the Online Help refers to corresponding Fiori pages:

System Recommendations @ SAP Fiori for SAP Solution Manager 1.0 SPS 6
https://help.sap.com/viewer/34eaf25a11d54485aecf05e041f78555/106/en-US/a5e801557f614c55e10000000a4450e5.html

- (no change)

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Trusted RFC – Whom should a SAP Solution Manager trust?

Only following scenarios requires that the SAP Solution Manager trust a very specific managed system:

- **Fiori Frontend Server**
  The Fiori Frontend Server needs to be trusted by the SAP Solution Manager if you do not use the embedded Fiori Frontend of the SAP Solution Manager itself only

- **GRC Access Control FireFighter**
  The central GRC systems needs to be trusted by the SAP Solution Manager if you use FF in the SAP Solution Manager, too

- **Retrofit-Configuration**
  A very specific system needs to be trusted by the SAP Solution Manager

Do not allow any other trusted systems!
(… except for very good reasons … “required for testing with eCatt” is not a good reason)

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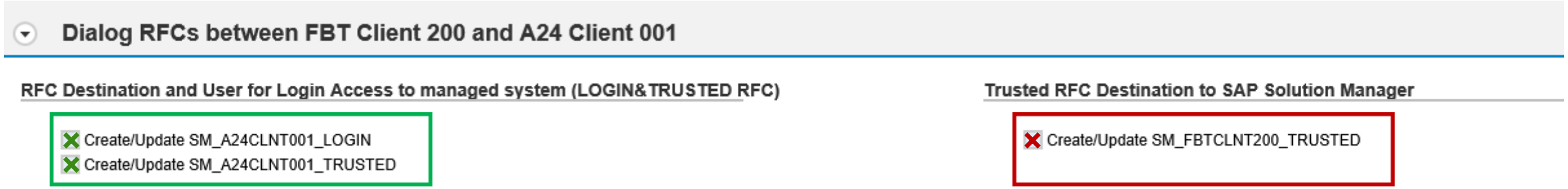
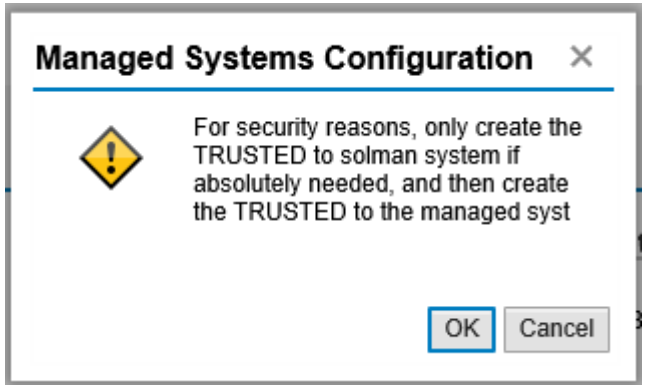
Trusted RFC – Whom should a SAP Solution Manager trust?

Never activate the checkbox on the right side at "Trusted RFC Destination to SAP Solution Manager" during SolMan Setup - Managed System Configuration:



If you activate the checkbox, at least you a warning:



Take it serious!

(If you need this trusted relationship simply create it explicitly using transaction `SMT1`.)

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Note 2644227 - Command execution with SAP Internet Graphics Server (IGS) request through the multiplexer RFC listener

Consulting note describing manual configuration:

Transaction `SMGW` → Goto → Expert Functions → External Security → Maintain ACL Files
Create an `reginfo` entry for the SAP Internet Graphics Server (IGS) with the following arguments:

```
P TP=IGS.<SID> HOST=local CANCEL=local ACCESS=local
```

or

```
P TP=IGS.<SID> HOST=local CANCEL=local ACCESS=internal
```

Typical content of existing ACL file:

```
P TP=* HOST=local CANCEL=local ACCESS=local
P TP=* HOST=internal CANCEL=internal ACCESS=internal
P TP=Trex_X3A_* HOST=* CANCEL=* ACCESS=*
P TP=IGS.X3A HOST=local CANCEL=local ACCESS=*
P TP=IGS.X3A HOST=internal CANCEL=internal ACCESS=*
P TP=SLD_UC HOST=local CANCEL=local ACCESS=*
P TP=SLD_UC HOST=internal CANCEL=internal ACCESS=*
P TP=SLD_NUC HOST=local CANCEL=local ACCESS=*
P TP=SLD_NUC HOST=internal CANCEL=internal ACCESS=*
```

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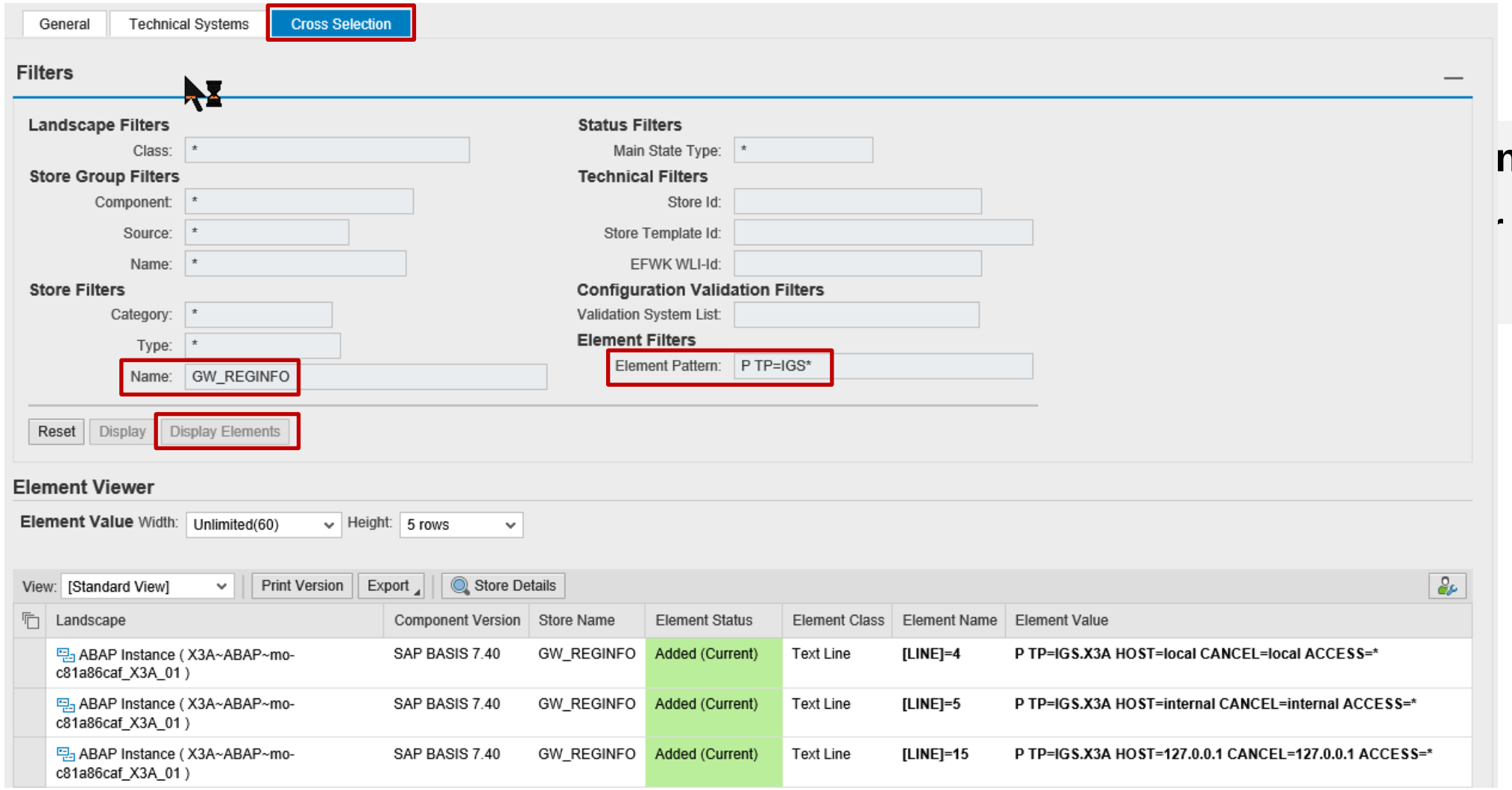
Note 2644227 - Command execution with SAP Internet Graphics Server (IGS) request through the multiplexer RFC listener



n Validation:

· Configuration

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Note 2621121 - Information Disclosure in UI5 Handler

Application Component CA-UI5-DLV

Simple ABAP note

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Note 2538856 - Cross-Site Scripting (XSS) vulnerability in SAPUI5
Application Component CA-UI5-CTR-ROD

The note describes independent solutions for different technologies:

HANA see “Solution Text”, i.e.

- SAP HANA DATABASE 1.0 — Maintenance Revision 122.16
- SAP HANA DATABASE 2.0 — Maintenance Revision 012.04
- SAP HANA DATABASE 2.0 SPS 02 — Maintenance Revision 024.00
- SAP HANA DATABASE 2.0 SPS 03 — Initial Revision 030.00

For SAP HANA platform:

SAP UI5 versions in SAP HANA platform components have been updated with the following versions.

SAP HANA PLATFORM EDITION 2.0 SPS 03:

- SAP HANA DATABASE 2.0 o >= Maintenance Revision 003.00
- SAP EXTENDED APP SERVICES 1 / XS RUNTIME 1 o >= Build 1.0.82 / Patch 82
- XS SERVICES 1 o >= SP06 Patch 5

```
|Manual Activity                                                                |
|VALID FOR                                                                      |
|Software Component   UISAPUI5                          SAP UI5 CLIENT...       |
| Release 100          SAPK-10012INUISAPUI5 - SAPK-10019INUISAPUI5              |
|Software Component   SAP_UI                                                    |
| Release 740          SAPK-74012INSAPUI - SAPK-74019INSAPUI                    |
Please implement note 2547009 to get the newest UI5 version.
```

ABAP see “Manual Activities” which refer to other notes

- SAP_UI 7.40 SP 20 according to Note 2547009 (and for UISAPUI5 100)
- SAP_UI 7.50 SP 10 according to Note 2482210 (and for UI_700 200)
- SAP_UI 7.51 SP 05 according to Note 2493450
- SAP_UI 7.52 SP 01 according to Note 2468634

Support Package Patches

Softw are Component	Support Package	Patch Level
SAPUI5 CLIENT RT AS JAVA 7.30	SP013	000017
	SP014	000020
	SP015	000015
	SP016	000013
	SP017	000008

Java see “Support Package Patches“

- See Java patches

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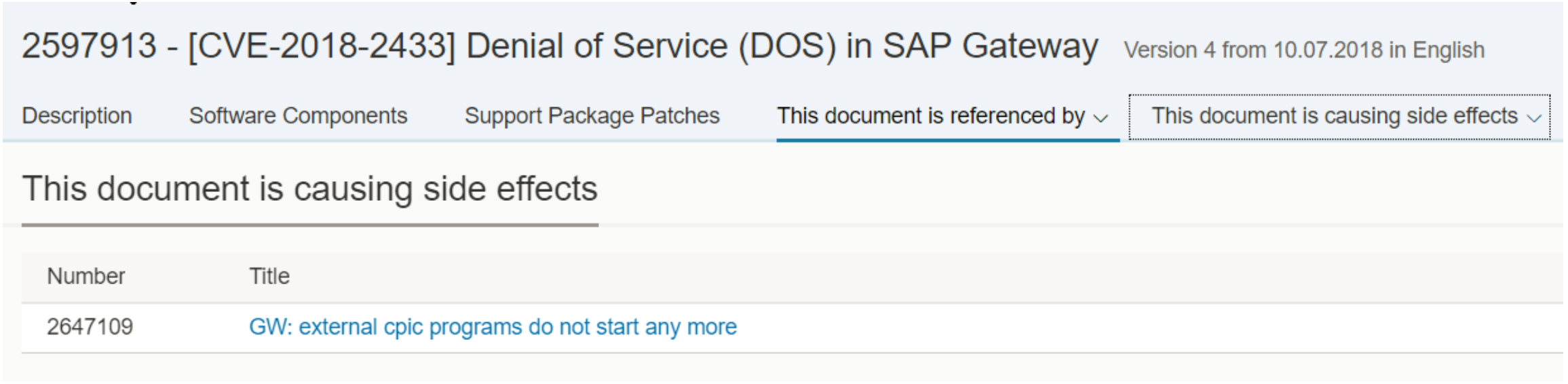
Note 2597913 - Denial of Service (DOS) in SAP Gateway

Note 2597913 (Version 4 from 10.07.2018) **solves some issues but introduces a new error which gets solved with note 2647109** (Version 5 from 04.06.2018)**:**

	Note 2597913	Note 2647109
SAP KERNEL 7.21	patch 1016	patch 1020
SAP KERNEL 7.22	patch 610	patch 617
SAP KERNEL 7.45	patch 715	patch 723
SAP KERNEL 7.49	patch 510	patch 514
SAP KERNEL 7.53	patch 110	patch 201



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Note 2110950 - Potential disclosure of persisted data in ST

Old note from 2014 for SolMan 7.1
SAPKITL710 – SAPKITL711

→ not relevant anymore

(Same for notes 1900259 and 1553387)

Deactivation of obsolete coding → no testing required

Coloring of ABAP correction instruction: see SAP Note Enhancer

```
*$*$-----------------------------------------------------------------$*$*
*$ Correction Inst.          0120061532 0001815152                    $*
*$-----------------------------------------------------------------$*
*$ Valid for       :                                                 $*
*$ Software Component   ST         SAP Solution Manager              $*
*$  Release 710          SAPKITL710 - SAPKITL711                     $*
*$  Release 712          SAPKITL801 - SAPKITL801                     $*
*$*$-----------------------------------------------------------------$*$*
*&---------------------------------------------------------------------*
*& Object          FUNC SMY_GET_ALL_SYSTEMS_BY_PRODUCT
*& Object Header   FUGR SMSY_GET_DATA
*&---------------------------------------------------------------------*
*& FUNCTION SMY_GET_ALL_SYSTEMS_BY_PRODUCT
*&---------------------------------------------------------------------*
...
FUNCTION SMY_GET_ALL_SYSTEMS_BY_PRODUCT.
*>>>> START OF DELETION <<<<<
data: it_systems type table of smsy_systems.
data: iv_systems type smsy_systems.
*       systemname like smsy_system-systemname,
*     end of it_systems.
DATA: select_condition TYPE linetab OCCURS 0 WITH HEADER LINE.
```

```
*>>>> START OF INSERTION <<<<<

*data: it_systems type table of smsy_systems.
*data: iv_systems type smsy_systems.
**       systemname like smsy_system-systemname,
**     end of it_systems.
*DATA: select_condition TYPE linetab OCCURS 0 WITH HEADER LINE.
*
```

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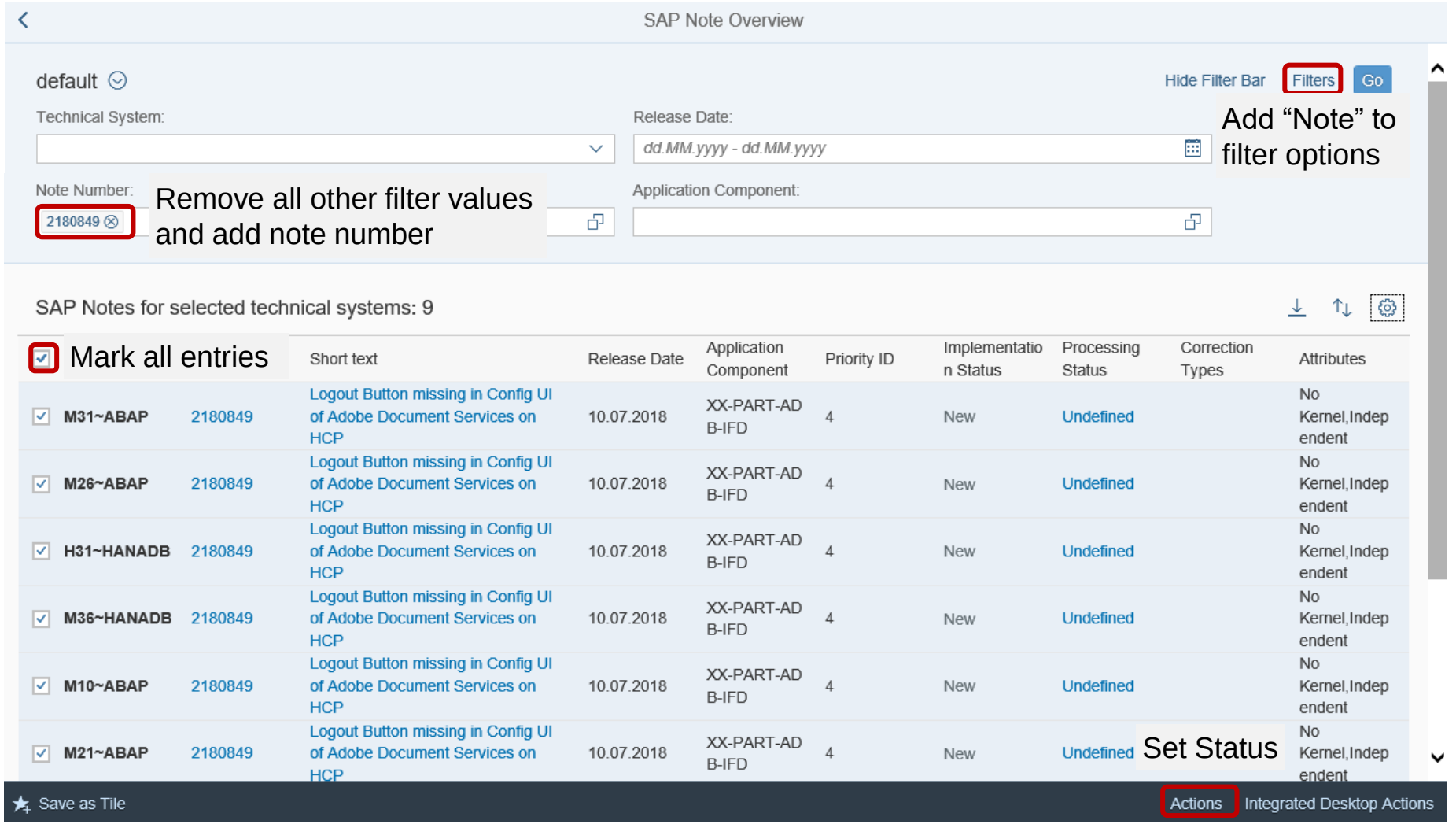
Note 2180849 - Logout Button missing in Config UI of Adobe Document Services on HCP

This (old) note is about "HANA Cloud Platform", which is maintained by SAP

→ Nothing to do for customers

Note is "Independent"

→ SysRec shows the note for all systems
→ set "irrelevant" status manually



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New Security Audit Log Messages
Notes 2299636 & 2332693 & 2360408 for SE06 and SCC4

All three notes (2299636 to get the messages & 2332693 for SE06 & 2360408 for SCC4) are required to introduce the following messages for 7.31, 7.40, 7.50:

EU1 **Very Critical** **System changeability changed (&A to &B) *in transaction SE06***

EU2 **Very Critical** **Client setting for &A changed (&B) *in transaction SCC4***

It might be the case that you cannot implement note 2360408 even if it is still required – check the coding in include LOSZZF01 for
`CALL FUNCTION 'RSAU_WRITE_CTS_ORG_SETTINGS'`
→ If you do not find this statement but cannot implement the note in SAP_BASIS 7.31, 7.40, or 7.50 then raise a ticket

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New Security Audit Log Messages
Note 2535552 - SCU3: New authorization design for table logging

Report `RSTBPDEL` writes message `EU3` to SAL and Syslog

`EU3` Critical &A change documents deleted without archiving (&B)

Note 2535552

- has manual post-installation steps
- has required notes 2525372, 1919440, 1750915, 1735308
- and has side effect solving notes 2621537, 2634844, 2639096

➢ Implement all these notes if required

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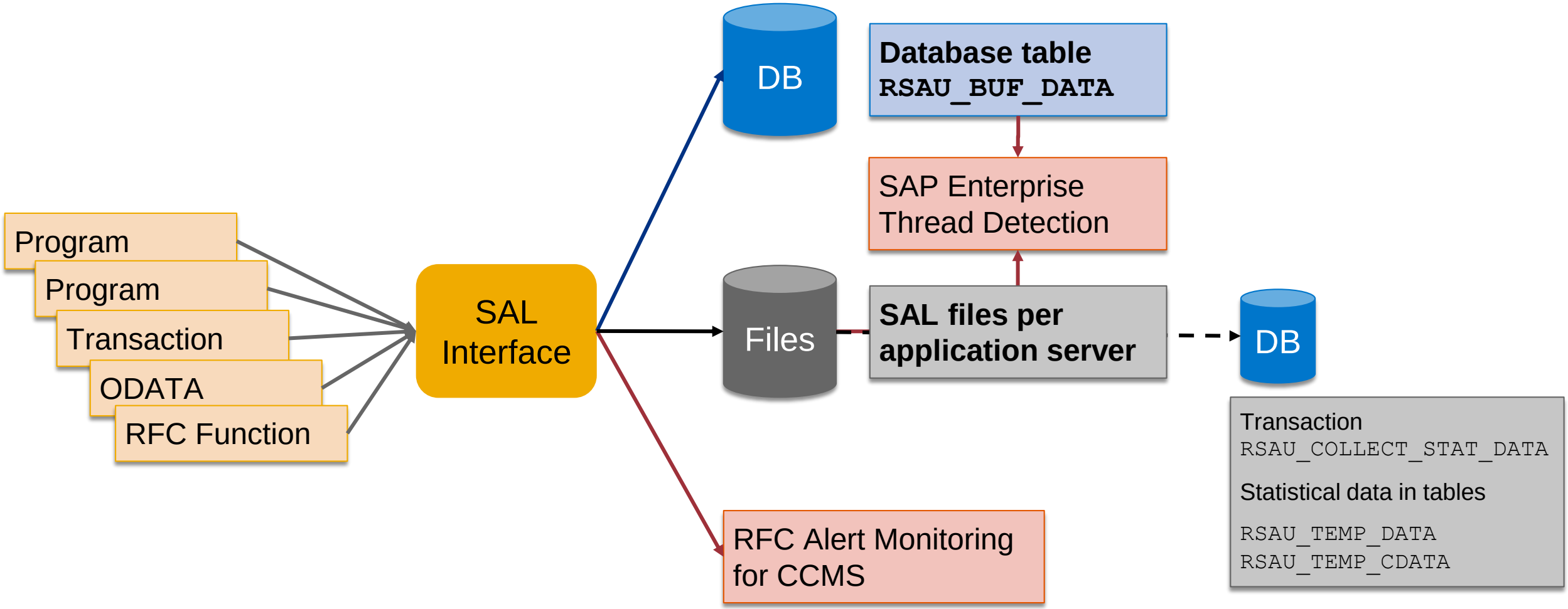
Security Audit Log as of SAP_BASIS 7.50

Data flow / data storage



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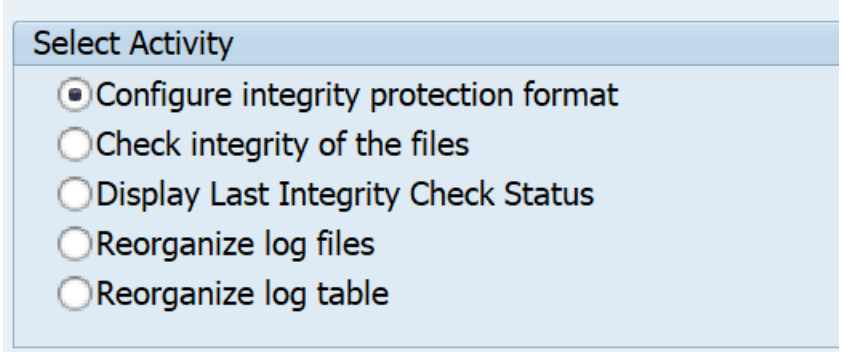
Security Audit Log as of SAP_BASIS 7.50
Maintenance

- **Transaction `RSAU_ADMIN` - Log Data Administration** SM18
  - = report `RSAU_FILE_ADMIN`
  - Configure integrity protection
  - Check integrity protection
  - Reorganization of log files
  - Reorganization of log events in database using archiving object `BC_SAL`



- **Transaction `RSAU_CONFIG` - Configuration** SM19
  - = report `RSAU_CONFIG_MAINT`
  - Maintain Kernel parameters
  - Maintain dynamic configuration / filters
  - Maintain static configuration / filters
- **Transaction `RSAU_TRANSFER` - Download/Upload Configuration Data**
  - = report `RSAU_TRANSFER`
  - Download/Upload Configuration Data

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Security Audit Log as of SAP_BASIS 7.50
Show

- **Transaction `RSAU_CONFIG_SHOW` - Show Configuration**
  - = report `RSAU_CONFIG_SHOW`
  - Show parameters
  - Show dynamic configuration / filters
  - Show static configuration / filters
- **Transaction `RSAU_READ_LOG` - Reporting** `SM20`
  - = report `RSAU_READ_LOG` `RSAU_SELECT_EVENTS`
  - Show log events from files
  - Show log events from database
- **Transaction `RSAU_READ_ARC` – Reporting**
  - = report `RSAU_ARCHIVE_READ`
  - Show log events from archiving object `BC_SAL`
- **Report `RSAU_INFO_SYAG` – Show Message Definitions**
  - Show documentation about messages

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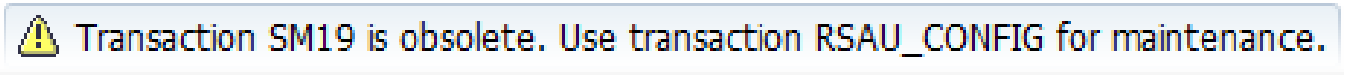
Security Audit Log as of SAP_BASIS 7.50
Recommendation after Upgrade

Use of new transactions / parameters / features is optional (and recommended)

Avoid mixture in multiple systems especially for “Profile Parameters” vs. “Kernel Parameters” to avoid confusion

Once you maintain Kernel Parameters you get a warning after next restart of the server:



Filters

- Up to 90 filers are available, you can transport or download/upload filter definitions
- Filters for Audit Classes cover new events automatically
- Filters for individual event messages should be analyzed if some new messages should be activated, too

Decide how to store log for audit purpose in the future

- Complete files
- Extracts
- Data retention periods

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Security Audit Log as of SAP_BASIS 7.50
Links

Analysis and Recommended Settings of the Security Audit Log (SM19 / SM20)

https://blogs.sap.com/2014/12/11/analysis-and-recommended-settings-of-the-security-audit-log-sm19-sm20/

Note 2191612 - FAQ | Use of Security Audit Log as of SAP NetWeaver 7.50

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May 2018

Topics May 2018

Note 2524107 - AIS | Enhancements in system audit reporting

SAP Solution Manager User Management Transaction `USR_MNGT`

Note 2081029 - Potentially false redirection of Web site content in Web Dynpro ABAP

Note 2449757 - Additional Authentication check in Trusted RFC on own system (reloaded)

Note 2610231 - Code Injection Vulnerability in SAP MaxDB ODBC Driver

Recommended Notes for System Recommendations

Recordings:
DSAG (German)
ASUG

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Note 2524107 - AIS | Enhancements in system audit reporting

Report RDDPRCHK – Check Table Logging

The function for deactivating logging is available following this correction procedure via the function code =DACTVT only.

Extended version, see Note 2579568 - RDDPRCHK | Optimization for reporting

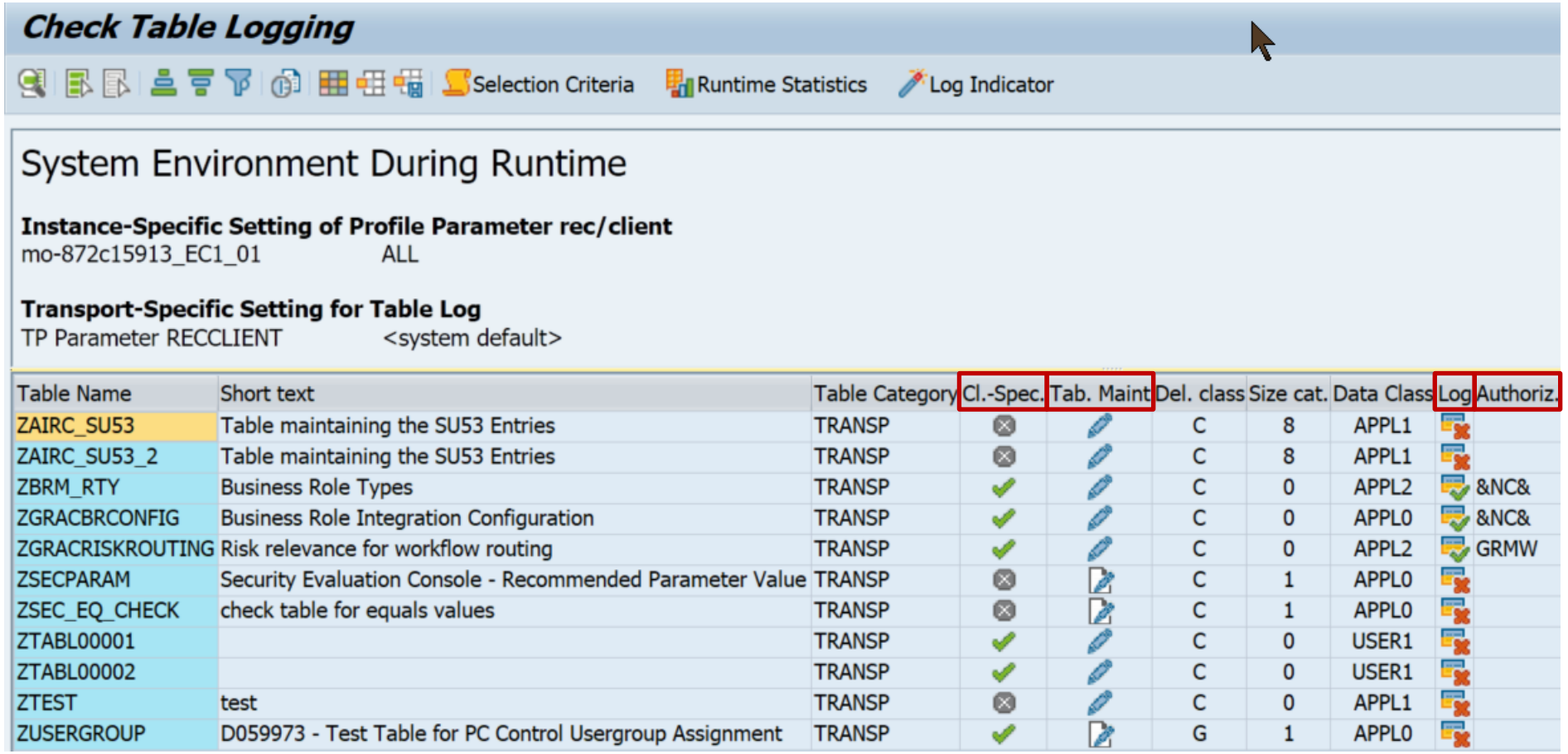

Table Name	Short text	Table Category	Cl.-Spec.	Tab. Maint	Del. class	Size cat.	Data Class	Log	Authoriz.
ZAIRC_SU53	Table maintaining the SU53 Entries	TRANSP			C	8	APPL1		
ZAIRC_SU53_2	Table maintaining the SU53 Entries	TRANSP			C	8	APPL1		
ZBRM_RTY	Business Role Types	TRANSP			C	0	APPL2		&NC&
ZGRACBRCONFIG	Business Role Integration Configuration	TRANSP			C	0	APPL0		&NC&
ZGRACRISKROUTING	Risk relevance for workflow routing	TRANSP			C	0	APPL2		GRMW
ZSECPARAM	Security Evaluation Console - Recommended Parameter Value	TRANSP			C	1	APPL0		
ZSEC_EQ_CHECK	check table for equals values	TRANSP			C	1	APPL0		
ZTABL00001		TRANSP			C	0	USER1		
ZTABL00002		TRANSP			C	0	USER1		
ZTEST	test	TRANSP			C	0	APPL1		
ZUSERGROUP	D059973 - Test Table for PC Control Usergroup Assignment	TRANSP			G	1	APPL0		

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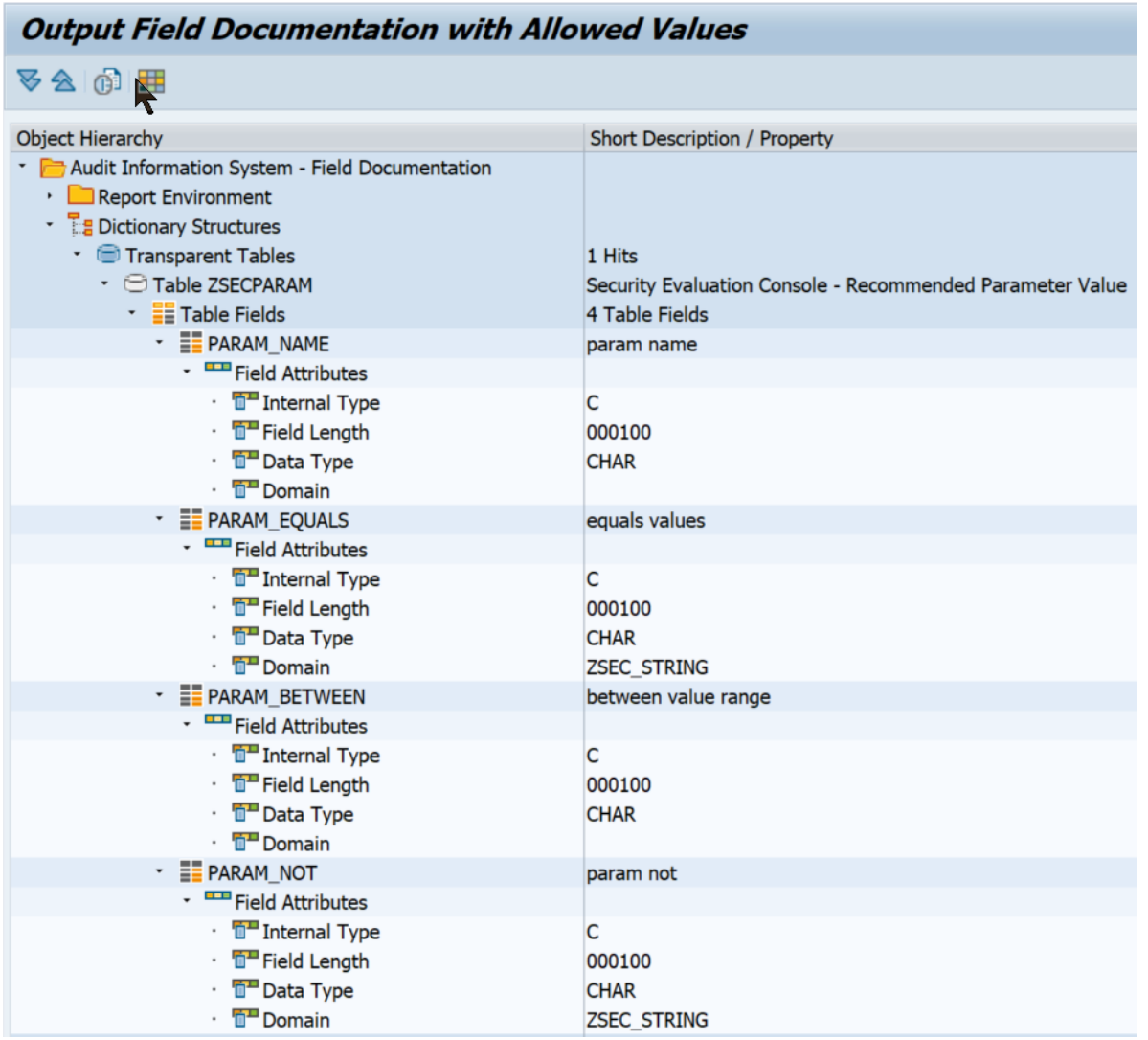
Note 2524107 - AIS | Enhancements in system audit reporting

Report RDD00DOC - Output Field Documentation with Allowed Values



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Note 2524107 - AIS | Enhancements in system audit reporting

Report RSCRDOMA is now replaced by report RSAUDIT_WUSL_DDIC

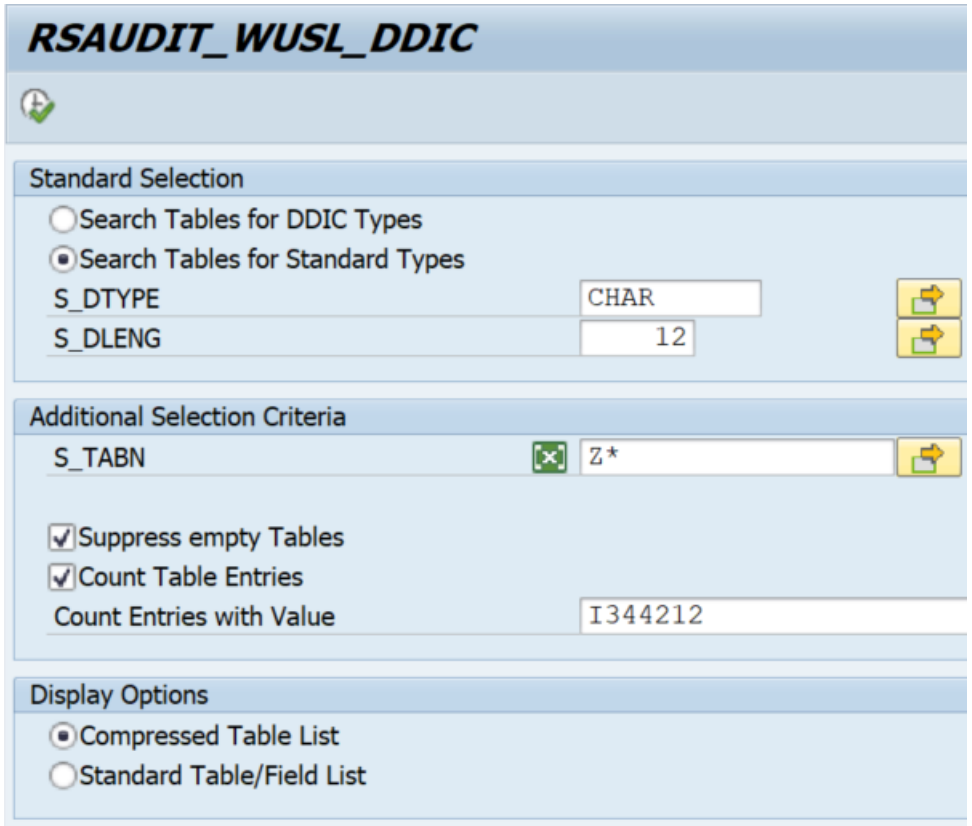

Table Name	Short Description	CNT_ALL	CNT_VAL
ZAIRC_SU53	Table maintaining the SU53 Entries	1.702	
ZARIXCA2		56	
ZCS_CC_OWNER	Companycode to Role owner mapping	2	2
ZCS_USR	ZCS_USR	3	2
ZGPM_PROJECT		4	
ZTESTHR	Test HR Payroll	2	

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SAP Solution Manager User Management Transaction USR_MNGT

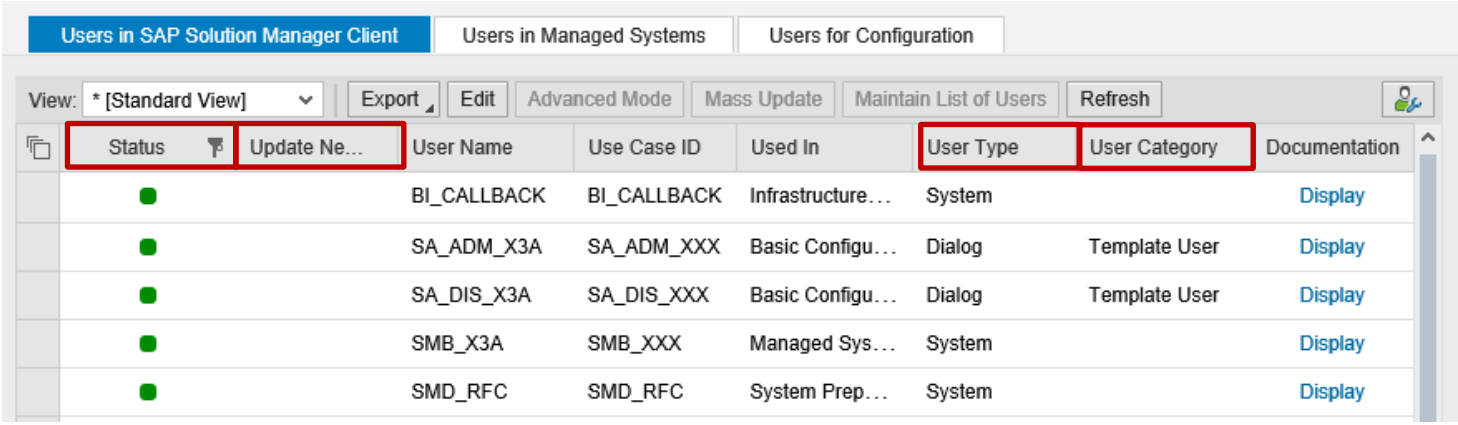
Transaction USR_MNGT shows an overview about users managed by SOLMAN_SETUP.

Existing users ● Status “Success”

To-be-updated users ▲ Status “Warning”

Missing password ● Status “Error”

Non-existing users ◊ Status “Do not exist”



Checks / Actions:

- **Do you need all these existing users, i.e. do you need “template users”?**
- **Does the user type match to the purpose of the user and your security policy?**
- **Update role assignments if needed**

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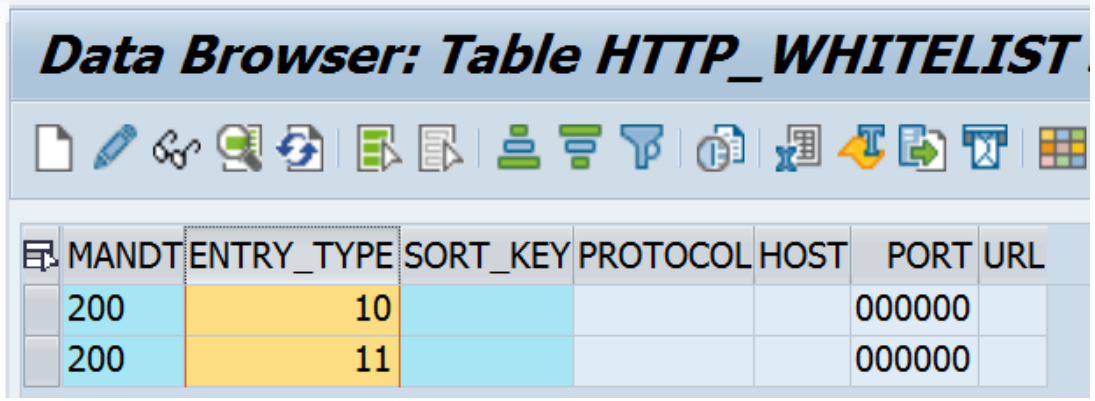
Note 2081029 - Potentially false redirection of Web site content in Web Dynpro ABAP application

ABAP corrections (automatic and manual) are old → no action needed to update software

Manual configuration of allowlist is still needed!

Use transaction `SE16` to create (empty) entries in table `HTTP_WHITELIST` for entry types `10`, `11` (and maybe some more) to block cross-domain redirection.



01	HTTP Framework to filter for valid URLs (Note 853878)
02	Exit URL for parameter `sap-exiturl`
03	NWBC runtime
10	WebDynpro Resume URL (Note 2081029)
11	Web Dynpro Redirect URL (Note 2081029)
20	Redirect URL for parameter `sap-mysapred` of ICF (Note 612670)
21	Redirect URL for parameter `redirectURL` of ICF (Note 1509851)
30	Clickjacking Framing Protection (Note 2142551)
40	Suite Redirect
99	Redirect (generic)

You can use report `RS_HTTP_WHITELIST` instead, too, which shows the value help for the entry type field.

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Note 2449757 - Additional Authentication check in Trusted RFC on own system (reloaded)

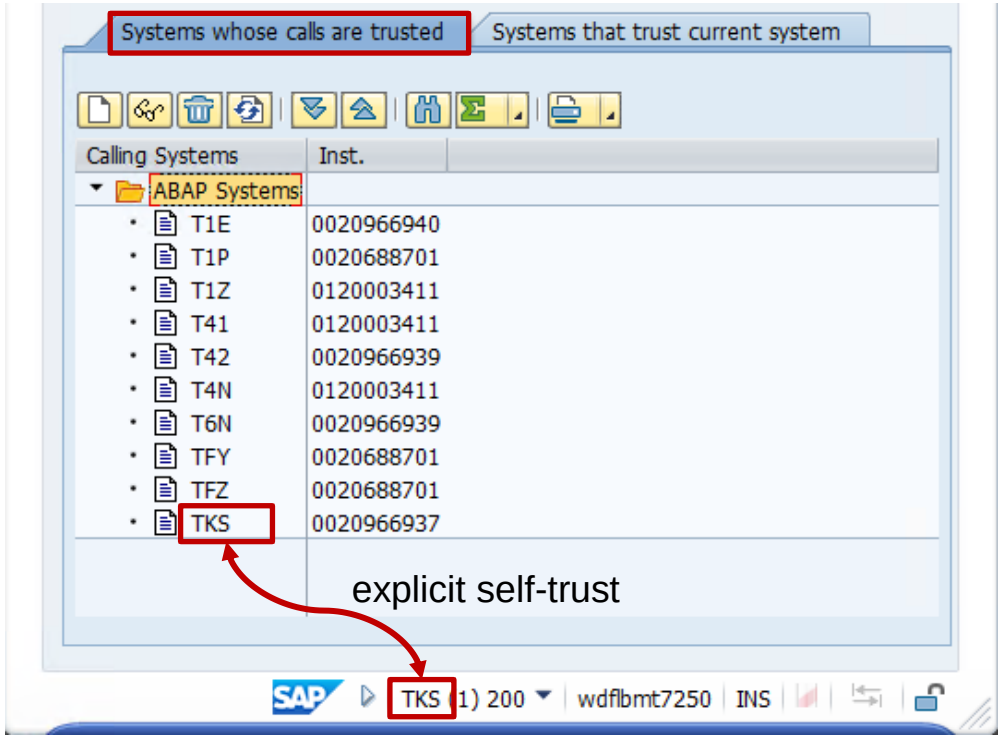
Caution: Use Kernel update as described in note 2614667 before activating parameter `rfc/selftrust` in systems where you want to define Trusted RFC destinations within the same system.

- **No Trusted RFC within a system required:**

  No trust relationship in transaction `SMT1`
  Activate the profile parameter

- **Trusted RFC within a system required:**

  Define the trust releationship in transaction `SMT1` but do not activate the profile parameter unless you get the Kernel update



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Note 2610231 - Code Injection Vulnerability in SAP MaxDB ODBC Driver

This note is about client software, not about the server part of the database.

For comparison:
You see the server version at System → Status:

Database information	
DB Client Lib	SQLDBC 7.9.7.010
DB Releases	MaxDB 7.8, MaxDB 7.9
DBSL Version	742.06
DBSL Patch-Level	009

FAQ Note 822239:

18. How can I determine which version an SAP MaxDB client library has?

Switch to the directory that contains the library whose version you want to determine,
i.e. for version >= 7.8: `/sapdb/clients/<SID>/lib`
Use the following command: `sqlwhat <library_name> -i Build`

Output, e.g.: `Rel. 7.6.6 Build: 022-123-241-261`

24. How can I determine which ODBC version is installed on the host?

You can check installed software using the **sbdregview** tool (e.g. using report `RBDCOS0`):
`/sapdb/programs/bin/sdbregview -l | grep -i ODBC`

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Note 2610231 - Code Injection Vulnerability in SAP MaxDB ODBC Driver

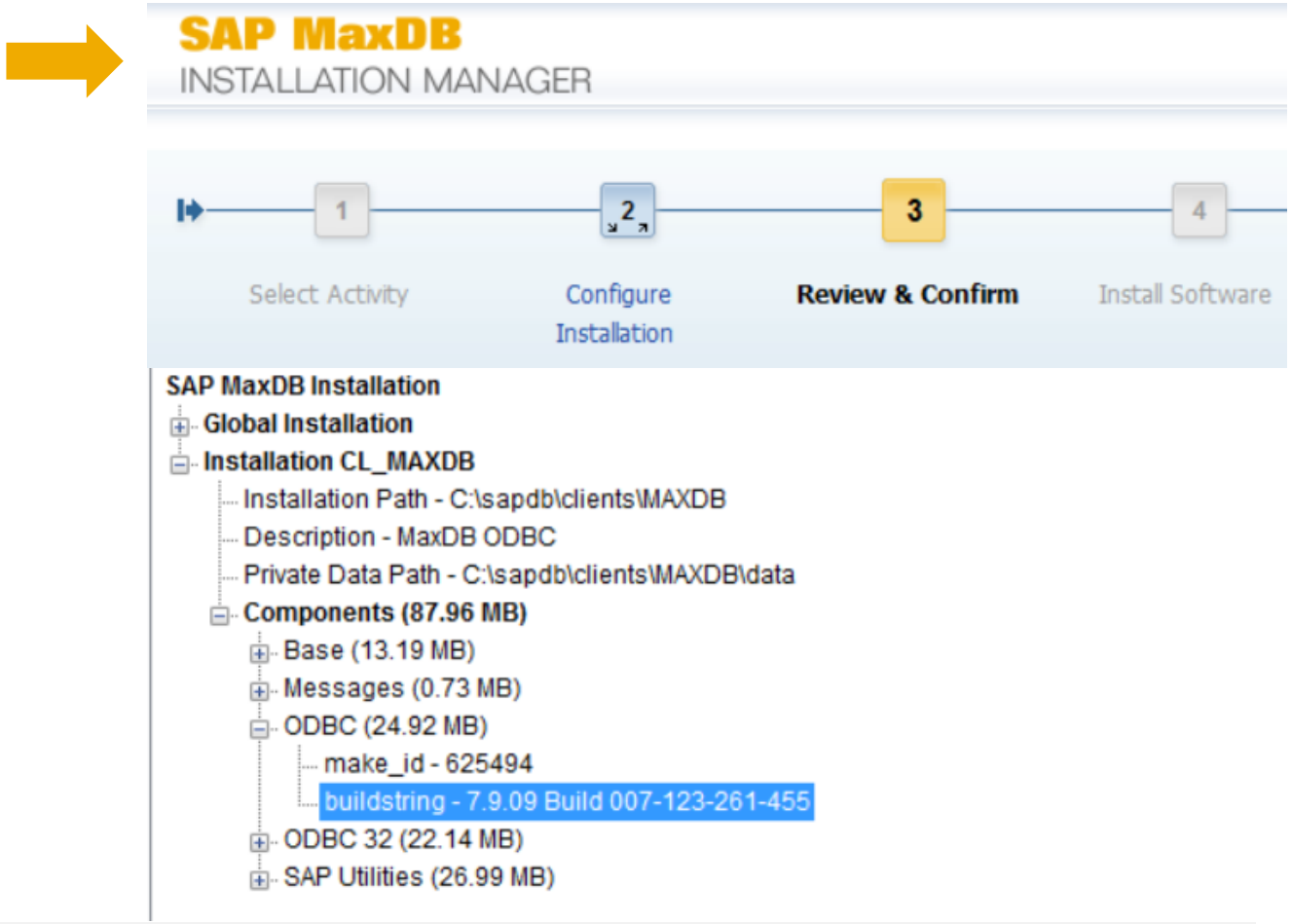
The client library is part of the Application Runtime Package (MAXDBART)

MAXDB 64-BIT /

MAXDB 7.9 64-BIT

DOWNLOADS INFO ECCN INFO

Name	Patch Level	File Type
MAXDB7909_7-20009122.SAR MAXDB 7.9.09.7 Server Package	7	SAR
MAXDBART7909_7-20009122.SAR MAXDB 7.9.09.7 Application Runtime Package	7	SAR



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Recommended Notes for System Recommendations

Optimization of UPL/SCMON integration:

Note 2610652 - SysRec: Query Execution Error when checking UPL data

plus

Note 2619312 - Custom Code Management (ST 7.2 SP03 or higher):
The API "CL_AGS_CC_UPL_DATA" enhancement

Note 2590592 - SysRec7.2 NonABAP system notes calculation (new version available)

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Recommended Notes for System Recommendations

Note 2556623 - SysRec: Collective Corrections for Solution Manager 720 SP03-SP06 Fiori UI

Corrections for System Recommendations 720 Fiori UI version 1.5.21 (no change concerning calculation results):

1. In *Note Overview* you have saved search criteria as variant, after you re-enter System Recommendations the saved variant is not available.
2. In *System Overview* and *Note Overview* by default 20 items are loaded at one time, you need to keep on scrolling down the mouse to see more items. You want to load all items at one time.
3. When selecting technical system in *Note Overview* the dropdown list for technical systems does not show all values if there are more than 100 systems available. This list contains only 100 entries which are sorted alphabetically and after the 100th it is truncated.
4. In *Note Overview* you mark several notes and click button *Actions-Change Status* to set notes status, only the Status ID of the first note is updated.
5. The title of table in *Note Overview* is "System with SAP Notes (number)", it should read "SAP Notes for selected technical system: number".
6. In *Note Overview* you set the note status for a note, the comment entered for the last note appears in the comment textbox.
7. In *Note Overview* you execute a self-defined variant, "No data" is displayed in *Note List*.
8. In *Note Overview* you select the date range, after clicking on *Go* button, the dates automatically change to different values.
9. When you display a large number (>1000) of notes in *Note Overview*, you observe that the performance is low.

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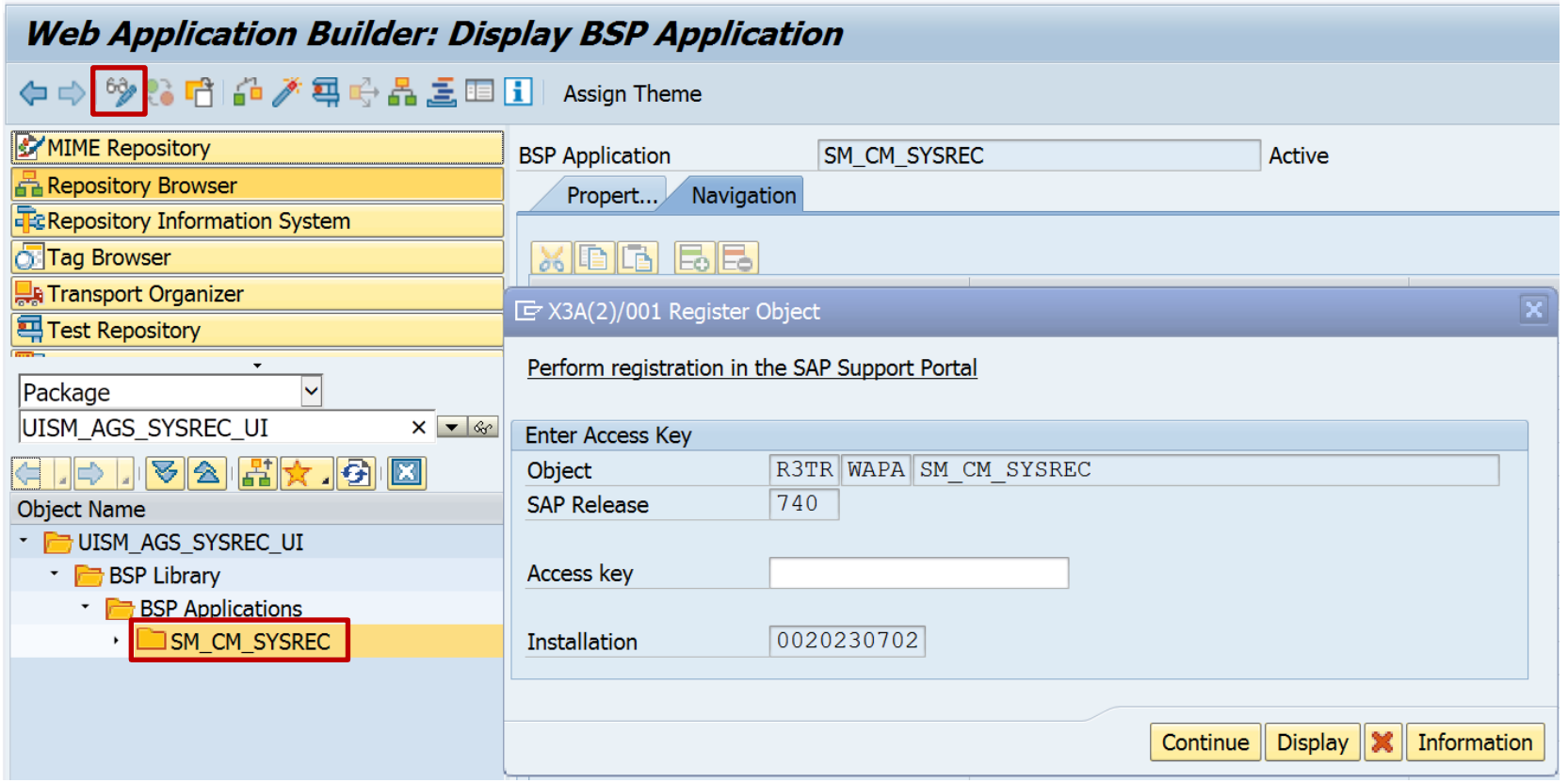
Note 2556623 - SysRec: Collective Corrections for Solution Manager 720 SP03-SP06 Fiori UI

Preparation to avoid error "No license to edit object `R3TR WAPA SM_CM_SYSREC`":

Call transaction `SE80` for package `UISM_AGS_SYSREC_UI`.

Navigate to BSP application `SM_CM_SYSREC` and enter change mode. This triggers the popup to enter the registration key.



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Note 2556623 - SysRec: Collective Corrections for Solution Manager 720 SP03-SP06 Fiori UI

Create a workbench transport.

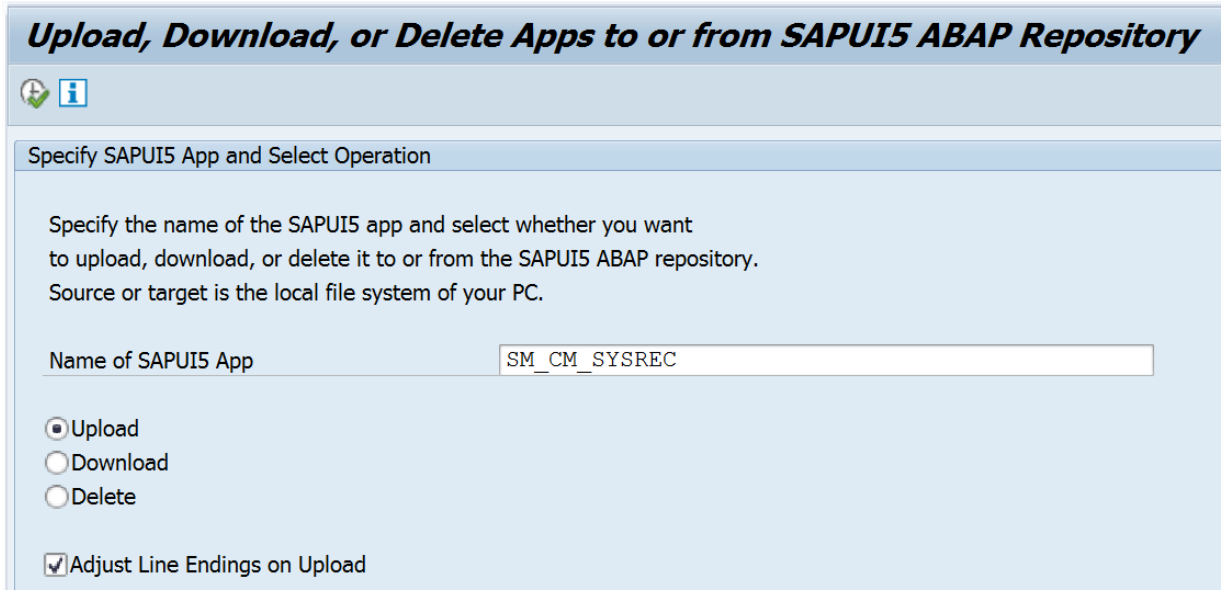
Now you can use report `/UI5/UI5_REPOSITORY_LOAD` to implement the note.

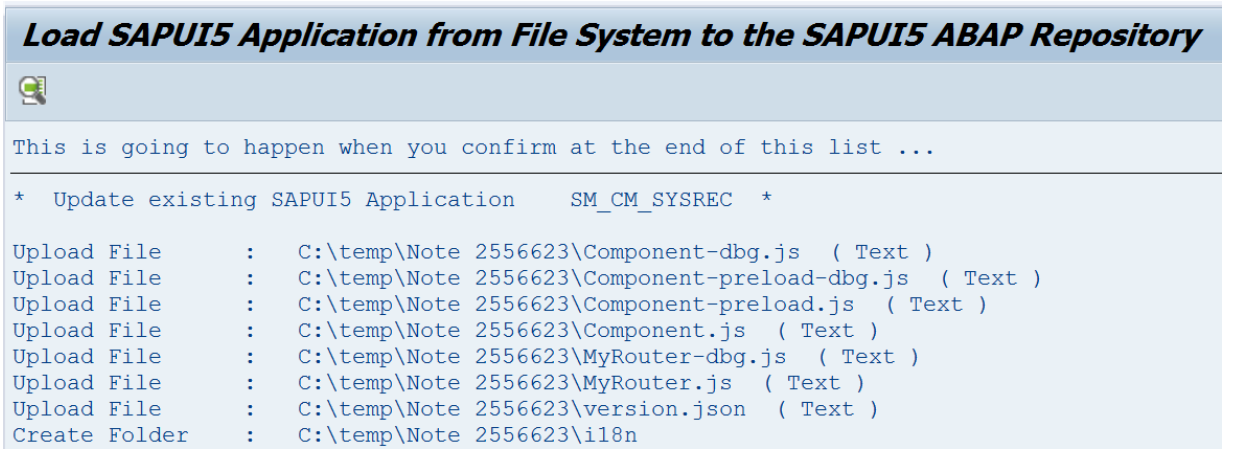
Name of SAPUI5 Application: `SM_CM_SYSREC`
Upload: Checked
Adjust Line Endings on Upload: Checked

Execute and start upload

Enter transport request: <…>
External Codepage: `CP1252`

Check log, you should only get info messages





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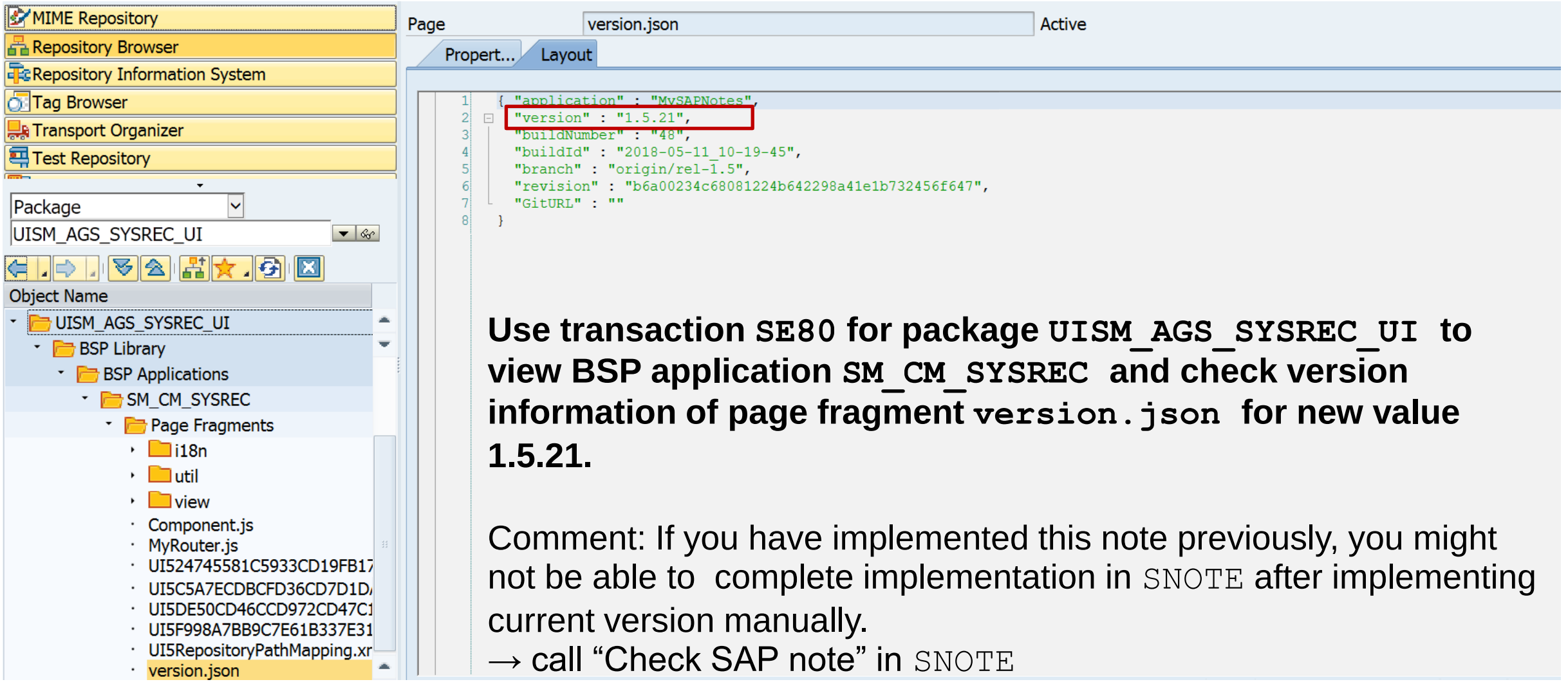
Note 2556623 - SysRec: Collective Corrections for Solution Manager 720 SP03-SP06 Fiori UI



Use transaction `SE80` for package `UISM_AGS_SYSREC_UI` to view BSP application `SM_CM_SYSREC` and check version information of page fragment `version.json` for new value 1.5.21.

Comment: If you have implemented this note previously, you might not be able to complete implementation in `SNOTE` after implementing current version manually.
→ call “Check SAP note” in `SNOTE`

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April 2018

Topics April 2018

Switchable authorization checks (SACF)

Note 2272827 - Check of S_PROGNAM for scheduling of job step

Note 184277 - Length Limitation of SNC-Names

Note 2562127 - R/3 Support Remote Connection with SNC / SSO

Note 2614141 - Improper session management when using SAP Cloud Connector

Note 2622660 - Security updates for web browser controls delivered with SAP Business Client

Note 2190621 - SAP Netweaver SAL incorrect logging of addresses

Note 2497000 - Missing Authorization check in XX-CSC-BR-NFEIN

Note 2497027 - Missing Authorization check in XX-CSC-BR-NFE

System Hardening with SAP Security Notes

Recordings:
DSAG (German)
ASUG

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Switchable authorization checks (SACF)

Status from 2018-04:

80	**Security Notes about SACF**
+108	**More notes about SACF**
+34	**Notes of application component BC-SEC-AUT* about SACF tool**
222	**Notes in total (most have a part for `SNOTE` as well as a manual installation instruction)**
+12	**Notes describing Release Information**

SAP Update Manager (SUM) informs you after system updates to run transaction `SACF_COMPARE` to activate switchable authorization checks required by your business processes.

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SACF Maintain productive scenarios of Switchable Authorizations

Maintaining Scenarios for Switchable Authorization Checks

If SAP delivers new authorization checks for established business processes as part of corrections by SAP Note or by Support Package, these checks should be available in the customer landscape but should not disrupt productive processes. New authorization checks are identified in delivered code with scenario names. A scenario groups the new or changed authorization checks of a business process. The construct of switchable authorization checks allows you to implement tighter security requirements, in accordance with customer requirements, in a simple way. The cross-application solution of switchable authorization checks provides the necessary transparency about the degree to which tighter authorization concepts are implemented.

For scenario definitions to take effect during an authorization check, they need to be transferred to the productive scenarios area using transaction `SACF_COMPARE`.

Then, use transaction `SACF` to maintain productive scenarios to your particular requirements.

Decide about

- **Scenario status `L` (logging only) vs. `A` (active authorization check)**
- **SAL Status `A` (all events) vs. `E` (only error events)**

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SACF_COMPARE Compare Active Scenarios for Switchable Authorizations

Compare Active Scenarios for Switchable Authorizations

Switchable authorization scenarios are provided by software vendors and need to be stored in the local system landscape as active scenarios. Only the active scenarios affect the process of an authorization check.

To support the initial configuration and the later (modification) comparison of scenarios, the following comparison scenarios are available with transaction `SACF_COMPARE`: (The comparison is started in simulation mode. Changes must be started from the results list.)

- **Set Initial Values of Active Scenarios**

  This step allows you to perform the initial configuration of the active scenarios. The comparison starts with an analysis of the objects to be adjusted. Starting from this list, initial values are set for the comparable scenarios selected in the list.

- **Automatic Comparison of Active Scenarios**

  The automatic comparison starts with an analysis of the objects to be adjusted. The automatic comparison is performed, starting from this list. All differences between the scenario definition and the active scenario where the difference in the active data record of the active scenario is not based on a manual change can be compared automatically.

- **Manual Comparison of Active Scenarios**

  If there are differences between manually-adjusted data for active scenarios and the associated scenario definitions, you can use this processing option to identify and edit them.

- **Consistency Check**

  This option allows you to check scenarios in active use with regard to the completeness of secure usage. This option does not have a change mode.

Notes

Additional Comparison Option: Individual Maintenance Using Transaction `SACF` (In the Maintenance Dialog of a Scenario Definition)

Since active scenarios can also run in local system landscapes in "learning mode", it is not possible to assign a status with a characteristic such as "Comparison finalized", "Checked", and so on. However, you can use the time stamp of the last change to check the comparison.

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Switchable authorization checks (SACF)

Search SACF notes on SAP Support Portal and export the list to `cvs` file

Use Copy&Paste to download notes into `SNOTE`

Use Copy&Paste to create a variant in note browser of `SNOTE`

Check status of these notes and decide which to implement … could be many

Individual testing required

- **Go for Support Package update first**

Note Assistant: Note Browser

All

Component ID	Note	Version	Short text	Status	Implementation State
BC-INS-TC-CNT	2456192	7	System Copy: Task Content (11. Improvements)	new	Can be implemented
BC-SEC-AUT	2478172	2	SU25 | Adjustment of navigation panel	new	Can be implemented
	2514902	1	SACF | API for information function	new	Can be implemented
	2516551	2	SACF | Function "Transfer scenario definition to productive	new	Can be implemented
	2518797	2	SACF | Functional enhancement and anonymization	new	Can be implemented
	2531979	1	SACF | Documentation display/status display in cloud	new	Can be implemented
	2565157	1	SU21 | Where-used list for switchable authorization scenario	new	Can be implemented
BC-SEC-ETD	2477281	11	Enhancements ABAP Interface for SAP Enterprise Threat Detect	new	Can be implemented
	2573113	4	ETD 1.0 SP6 - Fix for memory allocation error in SECM_LOG_2_	new	Can be implemented
	2573675	2	ETD 1.0 SP6 - UDO-Report for Note 2573113	new	Can be implemented
CRM-BF-TAX	2156422	1	Switchable authorization checks for RFC in Business Partner	new	Can be implemented
EHS-SAF	2066956	1	Switchable authorization checks for RFC in EHS	new	Can be implemented
FI-CAX-FS	2531131	2	Switchable Authorization checks for RFC BCA_DIM_WRITE_OFF in	new	Can be implemented
	2531511	1	For top include for defining global variables for scenarios	new	Can be implemented
	2537668	1	Return Lot RFC BCA_DIM_POST_PLAN_JOB: SpringField RFC Error	new	Can be implemented
IS-HER-CM	2471736	1	Switchable Authorization checks for RFC in Accounts in SLcM	new	Can be implemented
IS-PS-CA	2517501	6	Switchable Authorization checks for SAP ERP Funds Management	new	Can be implemented
LO-MD-BP	2611166	2	DEBI and KRED Search help authorization checks functionality	new	Can be implemented
LO-MD-BP-VM	2561163	2	KRED search helps authorization object F_LFA1_BEK is not pro	new	Can be implemented
MM-FIO-IV	2621636	1	Create Supplier Invoice: Value help for invoicing party with	new	Can be implemented
PA-PA-XX	2046243	1	Switchable authorization checks for RFC in Payroll, Time Man	new	Can be implemented
PY-DE	2485928	1	Switchable authorization checks for RFC in subsequent proces	new	Can be implemented
PY-US-RP	2152230	1	Switchable authorization checks for RFC in Reconciliation Re	new	Can be implemented
RE-FX-BP	2409619	1	DEBI and KRED search help # no authorization	new	Can be implemented
SCM-EWM-MON	2602547	4	/SCWM/MON: Missing authorization for the automatic refresh f	new	Can be implemented
XX-PROJ-FI-CA	2487377	1	FKKBIX: Correction of SACF scenario FKK_CI_BIT_CHANGE	new	Can be implemented
	2513468	1	FKKINV: Technische Voraussetzungen für weitere Hinweise	new	Can be implemented
	2603429	1	Switchable Authorization checks in FI-CA Adjust Receivables	new	Can be implemented
	2614558	1	FKK_DOC_AUTHORITY_CHECK: SACF-based checks for segment and	new	Can be implemented
	2614616	2	Selection of open items: Missing check for ledger group	new	Can be implemented

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Proposal for Security Optimization during normal operations

1. Activate Security Audit Log (if not done already) i.e. for messages DUO DUP DUQ DUU DUV
2. Optional: Implement missing Security Notes listed in application System Recommendations and other normal notes about SACF (use the Expert Search in the SAP Support Portal)
   - But you may decide to skip SACF notes to avoid to implement manual instructions.
3. Activate all SACF scenarios in transaction SACF_COMPARE and transport them to PRD
   Scenario status L (logging), SAL Status A (all)
   This has no effect on existing business processes.
4. Repeat weekly:
   a. Analyze logs and adjust roles if necessary (Messages DUP DUV)
   b. Change Scenario status to A (active) for
      - Scenarios which are not in use (no log entries)
      - Scenarios which are in use and users have required authorizations (Messages DUO DUU)
5. Later you can reduce the SAL Status to E (error)

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Proposal for Security Optimization during Support Package update

1. Activate Security Audit Log (if not done already) i.e. for messages DUO DUP DUQ DUU DUV
2. Run technical Support Package update
3. Implement newer Security Notes listed in application System Recommendations and other normal notes about SACF (use the Expert Search in the SAP Support Portal)
   - But you may decide to skip SACF notes to avoid to implement manual instructions.
4. Activate all SACF scenarios in transaction SACF_COMPARE and transport them to TST
   Scenario status A (active), SAL Status A (all)
   Missing authorizations lead to errors in existing business processes.
5. Perform regular complete application and acceptance testing
6. Analyze logs and adjust roles if necessary (Messages DUP DUV)
7. Go live with strong security settings
8. Later you can reduce the SAL Status to E (error)

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Note 2272827 - Check of S_PROGNAM for scheduling of job step

Transaction `SACF` and `SACF_COMPARE` do not know the scenario even in a higher Support Package level.

Transaction `SACF_COMPARE` → "Consistency Check for Productive Scenarios" may show an error: "Missing scenario called by SOLMAN_BTC with the application (ACE_CALCULATION_CONTROLLER)"

To solve this issue it is necessary to upload the attachment from note 2272827 via transaction `SACF_TRANSFER` into the development system. The scenario gets registered on a transport which you can use to transport it to the production system.

Note 1922808 describes that such notes could exist:

[1] SAP has provided or corrected data for a switchable authorization scenario via an SAP Note. *The authorization scenario is attached in the form of a file* to this SAP Note as an advance correction. […]

[2] SAP has provided or corrected data for a switchable authorization scenario via an SAP Note *and delivered it via a Support Package*. […]

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Note 184277 - Length Limitation of SNC-Names
Note 2562127 - R/3 Support Remote Connection with SNC / SSO

Note 184277 describes limitations concerning the maximal length of printable SNC names. For all relevant (= actively used) `SAP_BASIS` and Kernel releases it tells:

- Hard Limit: Release >= 6xx R/3 Kernel 254 8-bit chars for the printable name
- Warning: Do NOT use SNC-Names that are longer than 220 printable characters with SAP Netweaver >= 6xx.

Note 2562127 describes an additional temporary limitation concerning the SNC names of APAP application servers if you use SNC / SSO secured Support Remote Connection

Solved in June 2018

- Please take into account, that at this point in time we DO NOT support SNC names with a length bigger than 80 characters. This feature will be delivered by June 2018.

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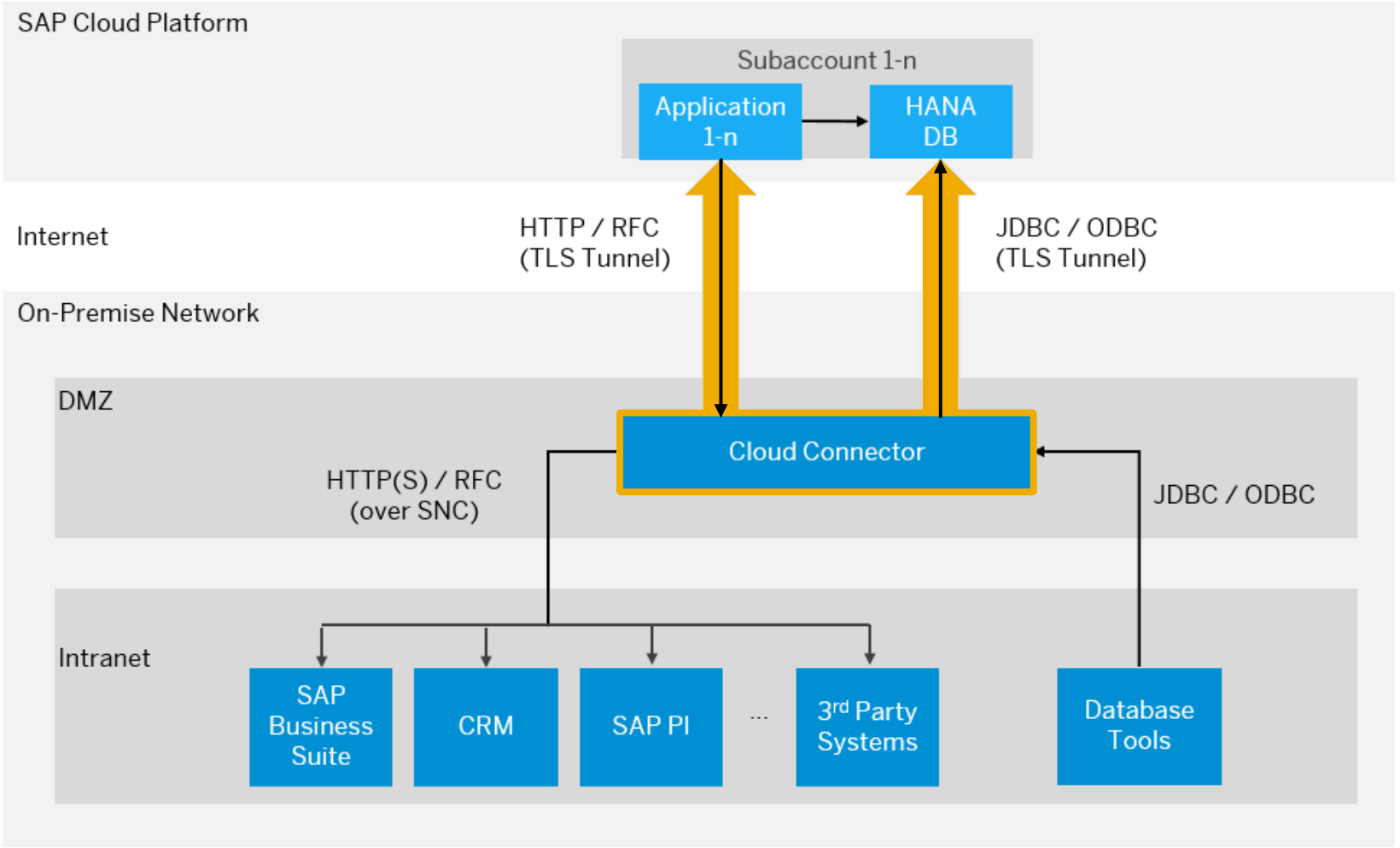
Note 2614141 - Improper session management when using SAP Cloud Connector

Connectivity landscape using SAP Cloud Connector in cloud extension scenarios

The SAP Cloud Connector opens encrypted communication channels to SAP Cloud Platform which then can be used by on-premise applications.



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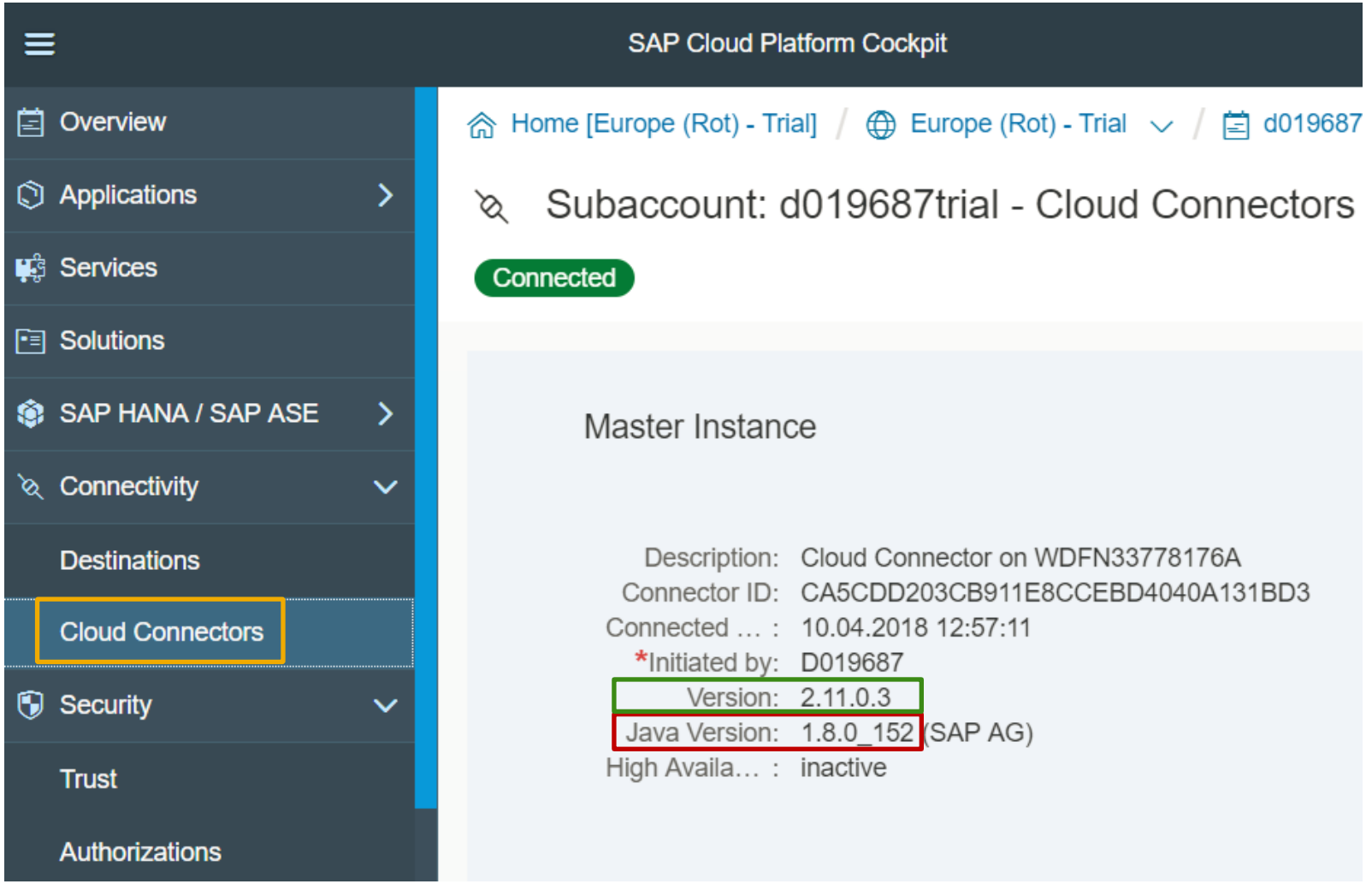
Note 2614141 - Improper session management when using SAP Cloud Connector

Check the version centrally on https://account.hana.ondemand.com

- **SAP Cloud Connector**
  check version ≥ 2.11

- **Java JRE**
  check version ≥ 1.8.0_162 (which match to Oracle JDK Update 8u162)

  see note 2219315 - Mapping of SAP JVM patches to Oracle JDK updates



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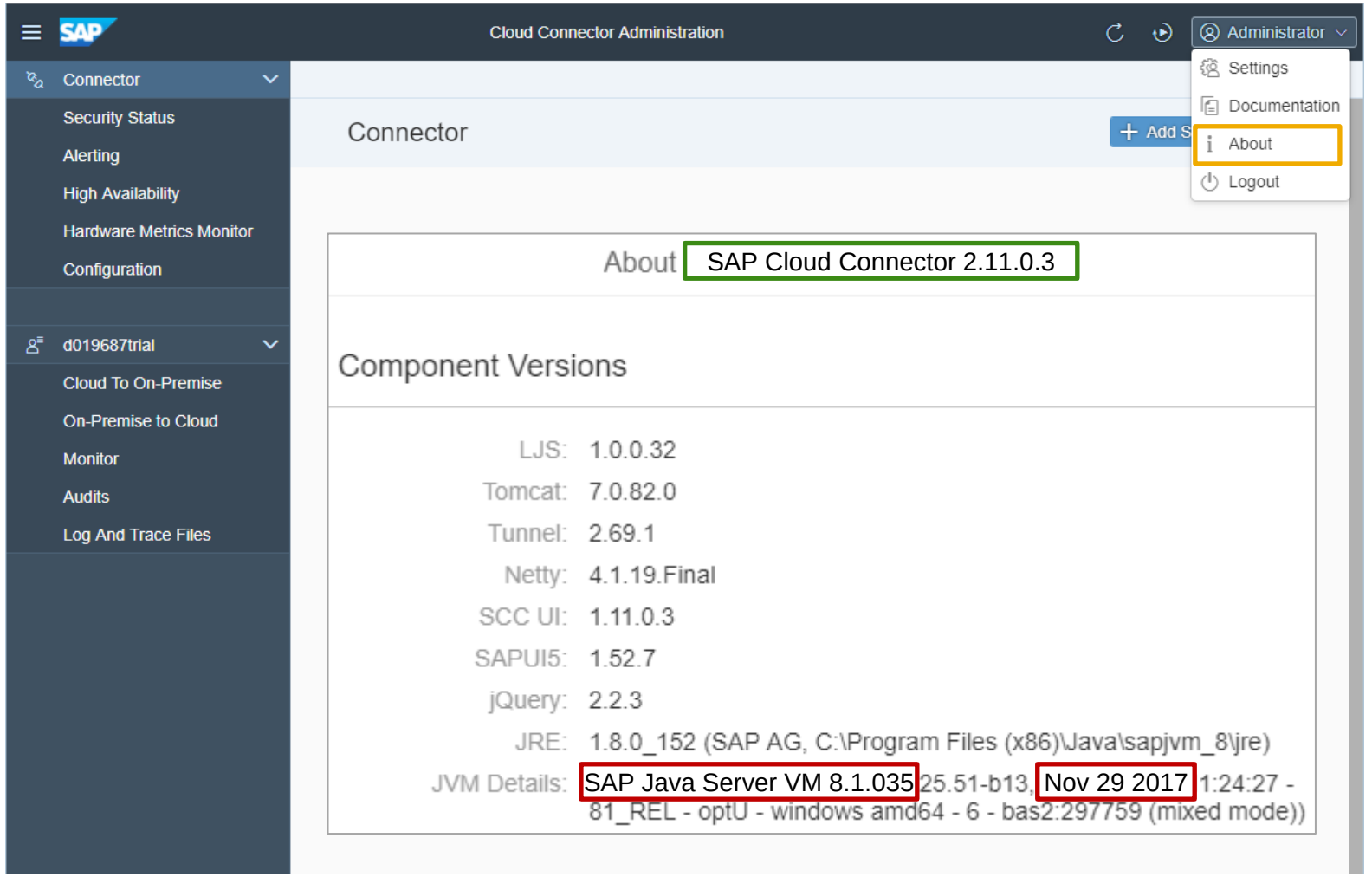
Note 2614141 - Improper session management when using SAP Cloud Connector

Check the version locally:

- **SAP Cloud Connector**
  check version ≥ 2.11

- **Java JVM**
  check version ≥ 8.1.036
  or date ≥ 09.02.2018

  see note 2219315 - Mapping of SAP JVM patches to Oracle JDK updates



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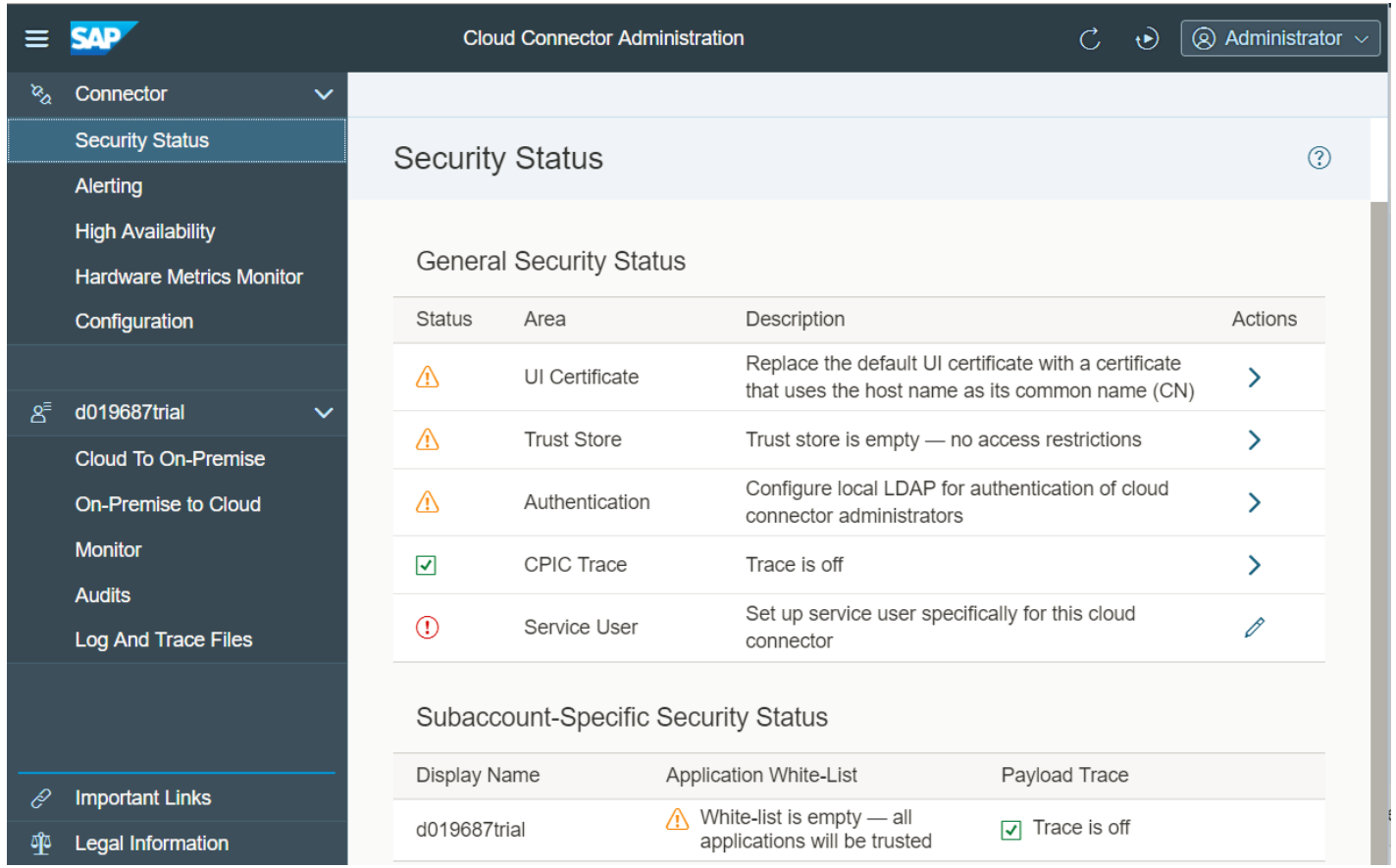
Note 2614141 - Improper session management when using SAP Cloud Connector

Check the security status:

- **Both the general and the subaccount-specific security status are aggregated on the top**
- **The ”General Security Status” addresses security topics of the current installation that are subaccount-independent**
- **The ”Subaccount-Specific Security Status” lists security-related information for each subaccount.**
- The service user is specific to the Windows Operating System and is only visible when running the Cloud Connector on Windows. It cannot be addressed through the UI.



Note: The security status is for informational purposes only and merely serves as a reminder to address security issues or as confirmation that your installation complies with all recommended security settings.

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Note 2614141 - Improper session management when using SAP Cloud Connector

1. **Update the Java VM**
   https://help.sap.com/viewer/cca91383641e40ffbe03bdc78f00f681/Cloud/en-US/0eb9851c41914d379feb138bf808a18f.html

2. **Install a Failover Instance for High Availability (if not done already)**
   https://help.sap.com/viewer/cca91383641e40ffbe03bdc78f00f681/Cloud/en-US/c697705179a24d2b8b6be038fae59c33.html

3. **Follow the Security Guideline**
   https://help.sap.com/viewer/cca91383641e40ffbe03bdc78f00f681/Cloud/en-US/8db6945e70b44c5d8e0873c3e9fb3bf2.html

4. **Upgrade SAP Cloud Connector**
   https://help.sap.com/viewer/cca91383641e40ffbe03bdc78f00f681/Cloud/en-US/7a7cc373019b4b6eaab39b5ab7082b09.html

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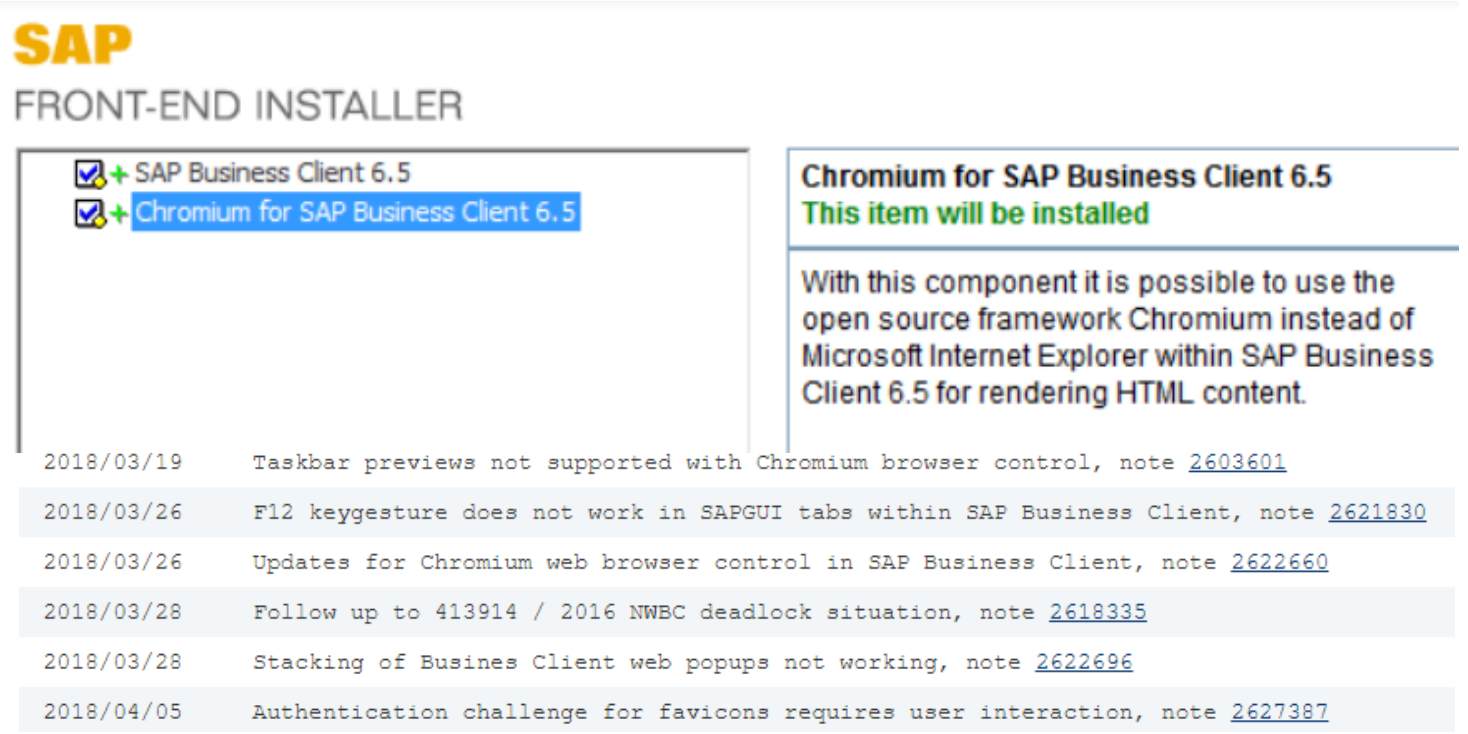
Note 2622660 - Security updates for web browser controls delivered with SAP Business Client

Internet Explorer: Security corrections for .NET framework are delivered via Microsoft Update.

Chromium: The full browser control is delivered with SAP Business Client, security corrections for this browser control are shipped with SAP Business Client patches.

SAP recommends to patch the SAP Business Client regularly via automated **workstation installation from a server**.

The installation procedure should consist of an **uninstallation of the old release** plus an installation of the new release via an adjusted Frontend Installation with SAPSetup



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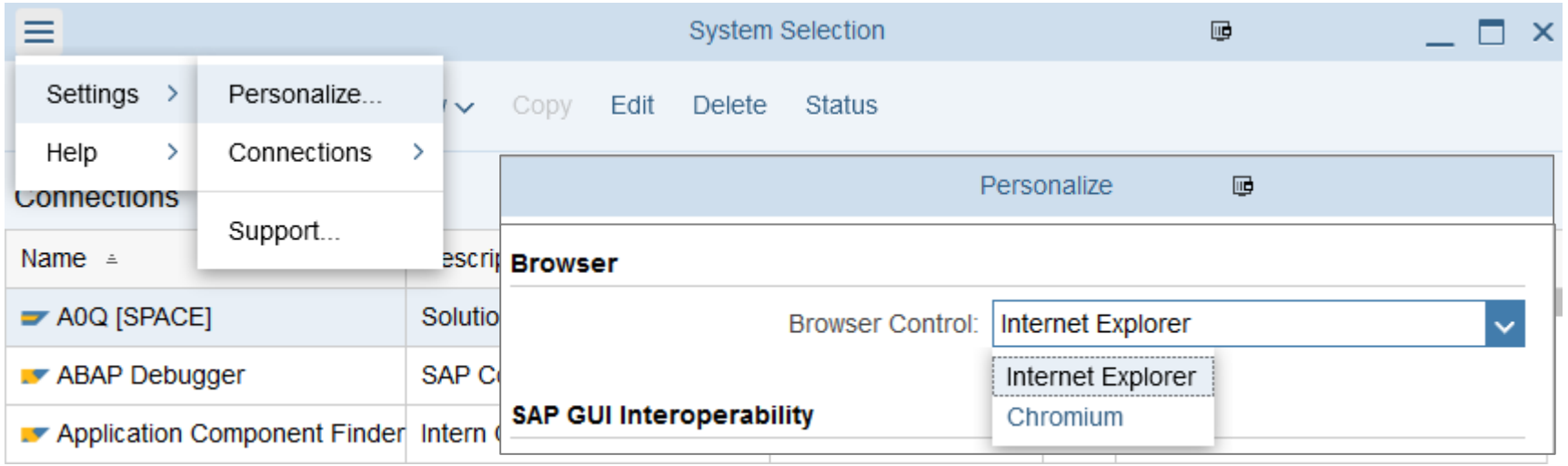
Note 2622660 - Security updates for web browser controls delivered with SAP Business Client

The user decides which browser engine, **Internet Explorer** respective **Chromium**, is used:



You can publish an administrator default via file `NwbcOptions.xml.template` as described in SAP Business Client Settings or you can use remote settings which are stored centrally as described in Provision of Administrator Configuration File (see note 2075150, too)

Inspect more settings in these files in sections `<WebbrowserFeatures>` (for Internet Explorer) respective `<ChromiumSettings>`

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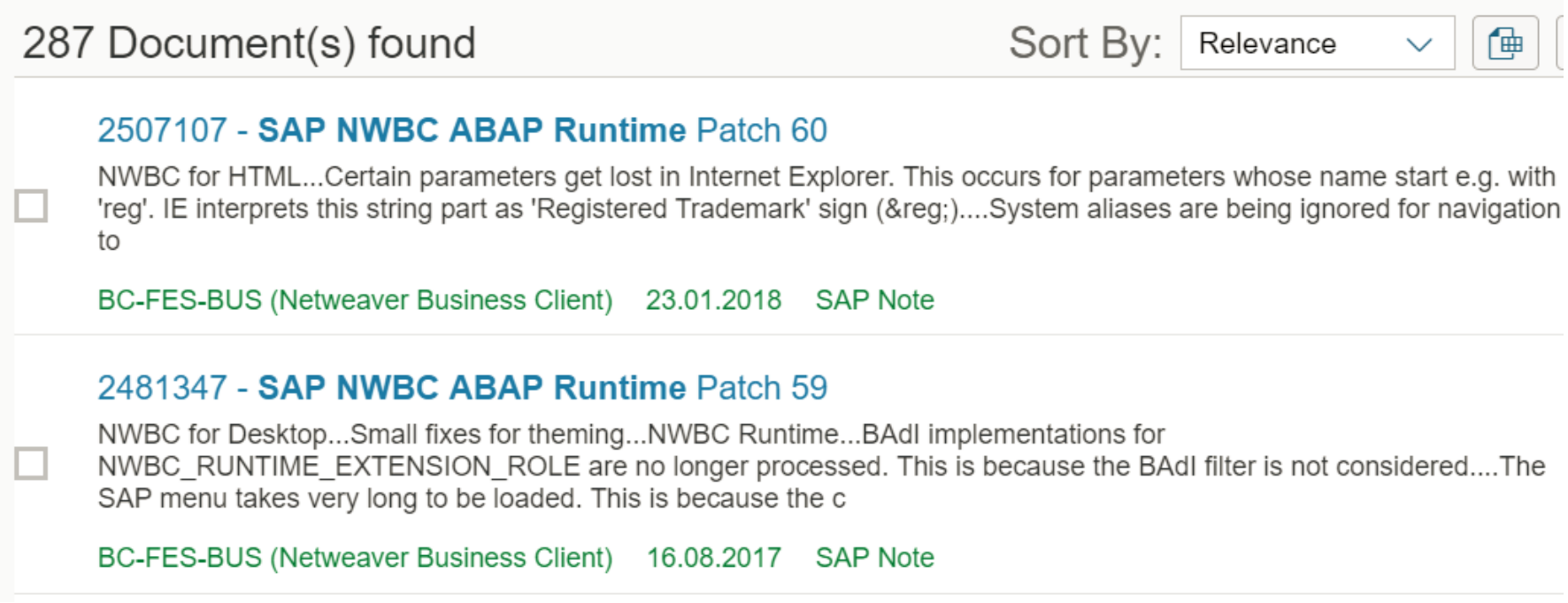
Note 2622660 - Security updates for web browser controls delivered with SAP Business Client

Related Note 2446515 - SAP Business Client 6.5: Prerequisites and restrictions

Go for regular updates of the ABAP Server part, too.
Search notes about “SAP NWBC ABAP Runtime”:



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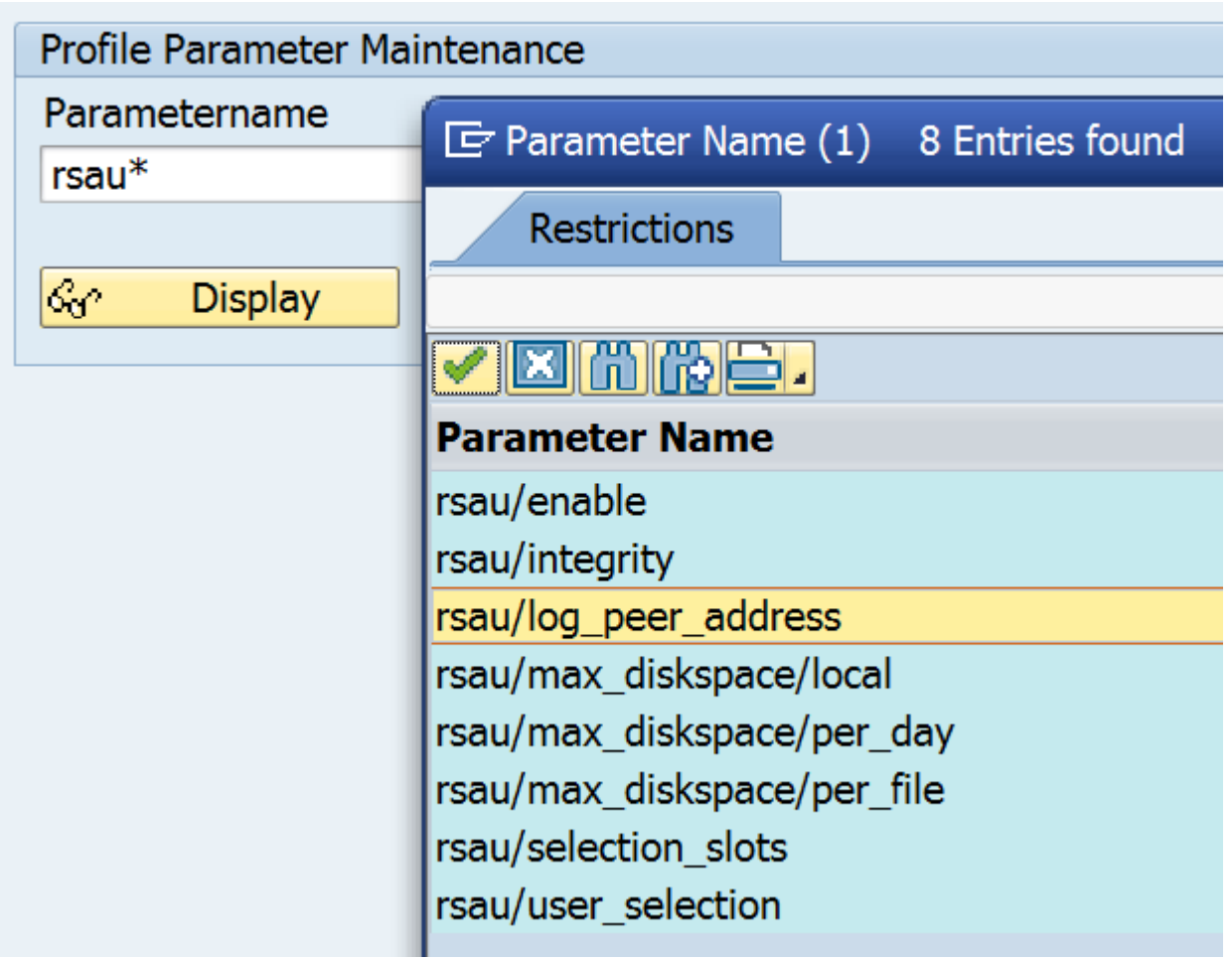
Note 2190621 - SAP Netweaver SAL incorrect logging of addresses

In some network landscape - for example containing proxy or NAT router, the IP address of the client (that is, terminal IP address) is logged in Security Audit Logging (SAL) instead of the router IP address (that is, the last routed IP address, sometimes also called peer IP address). Since the router IP address cannot be manipulated by the client (user), the router address is preferable for the purpose of audit.

Activate profile parameter

```
rsau/log_peer_address = 1
```



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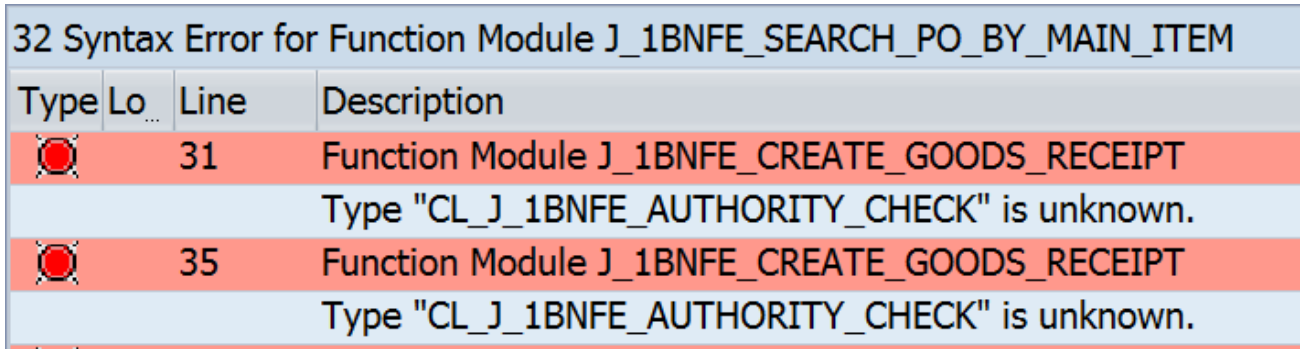
Note 2497000 - Missing Authorization check in XX-CSC-BR-NFEIN
Note 2497027 - Missing Authorization check in XX-CSC-BR-NFE

These notes are relevant only for Brazil.

However, as usual we recommend to update all installed software, independently if you are using it or not.

Implementing note 2497000 might lead to implementation error:
Type "CL_J_1BNFE_AUTHORITY_CHECK" is unknown.

Solution: Implement note 2497027 first.



If you are using this component, another legal change note 2477513 (which automatically implements notes 2497027, 2368483, too) should be implemented as well.

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System Hardening with SAP Security Notes

SAP S/4HANA comes with stronger security by default, however, you should implement some additional basic security configuration settings.

See “Security Guide for SAP S/4HANA 1709 FPS01”
https://help.sap.com/doc/d7c2c95f2ed2402c9efa2f58f7c233ec/1709%20001/en-US/SEC_OP1709_FPS01.pdf#page=14

These Security Notes are relevant for other ECC installations as well.

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System Hardening with SAP Security Notes

Note 1322944	ABAP: HTTP security session management
Note 1531399	Enabling SSL for Session Protection
Notes 1585767, 1693981	Enabling Virus Scanning
Note 1616535	Secure configuration of ICM for the ABAP application server
Note 1853140	Managing SAProuter from external host
Note 1973081	XSRF vulnerability: External start of transactions with OKCode
Notes 2086818, 2107562	Fixing POODLE SSLv3.0 (CVE-2014-3566) Vulnerability
Notes 2142551, 2245332, 2319172, 2319192, 2333957, 2349128	allowlist based Clickjacking Framing Protection
Note 2185122	Switchable authorization checks for RFC in data extraction within CA-MDG
Note 2260344	OS command injection vulnerability in SCTC_* Function modules
Note 2421287	Front-end printing with SAP GUI 750

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System Hardening with SAP Security Notes
Note 1322944 - ABAP: HTTP security session management

Transaction SICF_SESSIONS activates/deactivates session management per client
It‘s always active if SAML2 is activated (see transaction SAML2)

(De)activation is logged with Security Audit Log Message BUG

You can activates/deactivatesession management for individiual services in transaction SICF
see note 1947241 for details.

Transaction SM05 shows active sessions

Profile Parameters:
http/security_session_timeout = 1800 (30 minutes)
http/security_context_cache_size = 2500
login/create_sso2_ticket = 3 (Generate assertion ticket)

```
login/create_sso2_ticket = 3
login/accept_sso2_ticket = 1
login/ticketcache_entries_max = 1000
login/ticketcache_off = 0
login/ticket_only_by_https = 0
icf/set_HTTPonly_flag_on_cookies = 3
icf/user_recheck = 1
http/security_session_timeout = 1800
http/security_context_cache_size = 2500
rdisp/plugin_auto_logout = 1800
rdisp/autothtime = 60
```

Client	Client Name	Current Status
000	SAP AG Konzern	
001	SAP AG Konzern	

Online Help Activating HTTP Security Session Management on SAP NetWeaver AS for ABAP
Wiki: https://wiki.scn.sap.com/wiki/pages/viewpage.action?pageId=462054228

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System Hardening with SAP Security Notes
Note 1322944 - ABAP: HTTP security session management

Check Session Management using Configuration Validation

Configuration Store ABAP_INSTANCE_PAHI

Operator	Parameter	Operator	Unt. Wert
=	http/security_context_cache_size	>=	2500
=	http/security_session_timeout	<=	1800
=	login/create_sso2_ticket	Not(A or B)	1 2

Configuration Store SESSION_MANAGEMENT (client specific configuration store)

NAME	VALUE
(=) SESSION_MANAGEMENT	(=) ACTIVE

SAP-Systemkennung	Mandant	Name des Konfigurationsspeichers	Konfigurationselement	Wert des ConfigItems	KonfValid: Datenoper	Compliance	Konform (1=ja, -1=nein, " "=nicht bewertet)
EC1	001	SESSION_MANAGEMENT	SESSION_MANAGEMENT	ACTIVE	=VALUE:ACTIVE/	Yes	1
	#	ABAP_INSTANCE_PAHI	Content out-of-date	Days: 286	#	Item not found	-1
X3A	000	SESSION_MANAGEMENT	SESSION_MANAGEMENT	INACTIVE	=VALUE:ACTIVE/	No	-1
	001	SESSION_MANAGEMENT	SESSION_MANAGEMENT	ACTIVE	=VALUE:ACTIVE/	Yes	1
	#	ABAP_INSTANCE_PAHI	http/security_context_cache_size	2500	>= 2500	Yes	1
			http/security_session_timeout	1800	<= 1800	Yes	1
			login/create_sso2_ticket	3	Not(A or B) 1 2	Yes	1

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March 2018

Topics March 2018

New old notes

Note 2597543 - Directory Traversal vulnerability in SAPCAR

Note 2449757 - Additional Authentication check in Trusted RFC on own system (reloaded)

Dashboard Builder for Configuration Validation

Recordings:
DSAG (German)
ASUG

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New old notes

Sometimes quite old notes are released for various reasons

- **Use function ‘Show Version’ to analyze the change history (not found = never published)**
- **Check age of Support Package**
- **If such notes describe software updates only then you will not see them in application System Recommendations, assuming that you regularly run a Support Package update.**

SAP Component	Number	Version	Title	Category	Priority	Released On
SV-SMG-DVM	2051336	4	Potential disclosure of persisted data in SV-SMG-DVM	Program error	Correction with medium priority	13.03.2018
BW-SYS-DB-DB4	1974016	2	Missing authorization check in function modules of BW-SYS-DB-DB4	Program error	Correction with medium priority	15.02.2018
XX-CSC-RU-FI	1906841	1	Potential disclosure of persisted data in XX-CSC-RU	Program error	Correction with medium priority	13.03.2018
CRM-ANA-PS	1696317	2	Unauthorized modification of displayed content in CRM-ANA-PS	Program error	Correction with medium priority	27.02.2018

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Note 2597543 - Directory Traversal vulnerability in SAPCAR

With this version `SAPCAR_1014-80000938` performs validation on file paths in an archive during extraction, for example, by removing the drive letter, stripping leading slashes, and normalizing directory traversal commands like "../", in order to prevent files in question from being extracted to a directory outside the intended target directory.

Get version from latest release 7.21 (!):
https://launchpad.support.sap.com/#/softwarecenter/search/SAPCAR%25207.21

No implication expected as SAP always uses relative paths for files in archives that are released to customers.

Ensure to update `sapcar` everywhere, it's not only installed as part of the kernel.

Check the version using command `sapcar -version` e.g. with report `RSBDCOS0`

```
[1]sapcar -version

SAPCAR information

kernel release                721
kernel make variant           721_REL
DBMS client library
compiled on                   NT 6.1 7601 S x86 MS VC++ 14.00 for NTAMD64
compiled for                  64 BIT
compilation mode              Non-Unicode
compile time                  Mar 23 2017 14:34:35
update level                  0
patch number                  816
```

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Note 2449757 - Additional Authentication check in Trusted RFC on own system (reloaded)

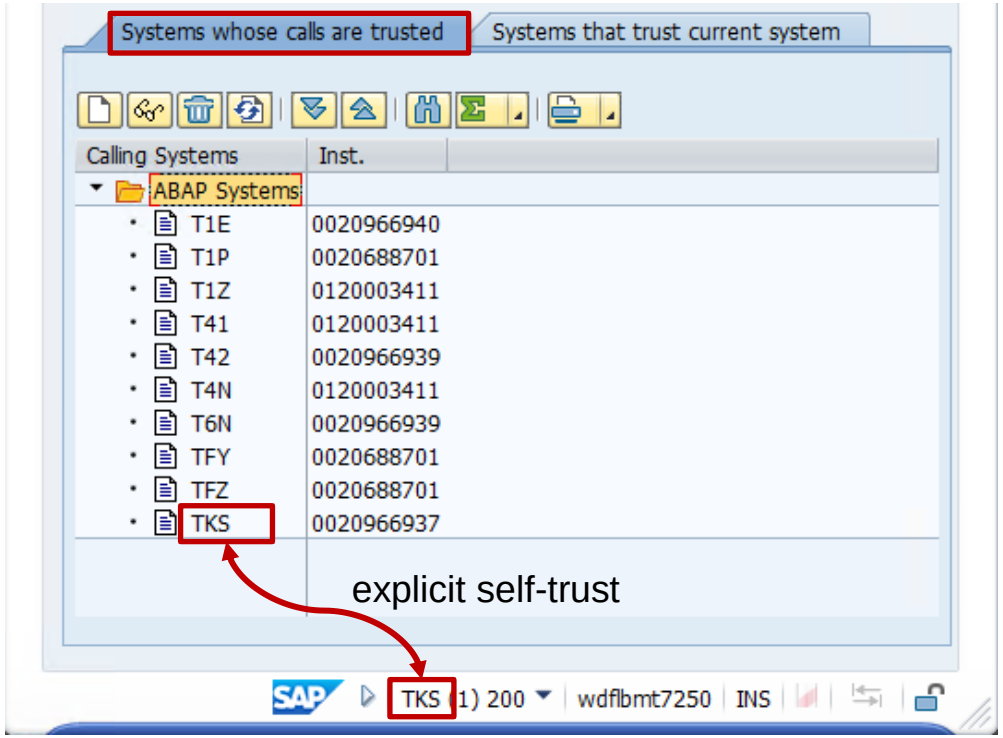
Caution: Use Kernel update as described in note 2614667 before activating parameter `rfc/selftrust` in systems where you want to define Trusted RFC destinations within the same system.

- **No Trusted RFC within a system required:**

  No trust relationship in transaction `SMT1`
  Activate the profile parameter

- **Trusted RFC within a system required:**

  Define the trust releationship in transaction `SMT1` but do not activate the profile parameter unless you get the Kernel update



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Dashboard Builder for Configuration Validation

Online Help: Dashboard Builder
https://help.sap.com/viewer/82f6dd44db4e4518aad4dfce00116fcf/7.2.05/en-US/d0c91556d22c0033e10000000a44538d.html

Blog: SAP Solution Manager 7.2 – Dashboard Builder
https://blogs.sap.com/2017/02/28/sap-solution-manager-7.2-dashboard-builder/

Blog: SAP Solution Manager 7.2 – Dashboard Builder configuration
https://blogs.sap.com/2017/05/16/sap-solution-manager-7.2-dashboard-builder-configuration/

KPI Catalog
https://go.support.sap.com/kpicatalog

SAP Security Baseline Template Version 1.9 (including ConfigVal Package version 1.9_CV-4)
https://support.sap.com/content/dam/support/en_us/library/ssp/offerings-and-programs/support-services/sap-security-optimization-services-portfolio/Security_Baseline_Template.zip

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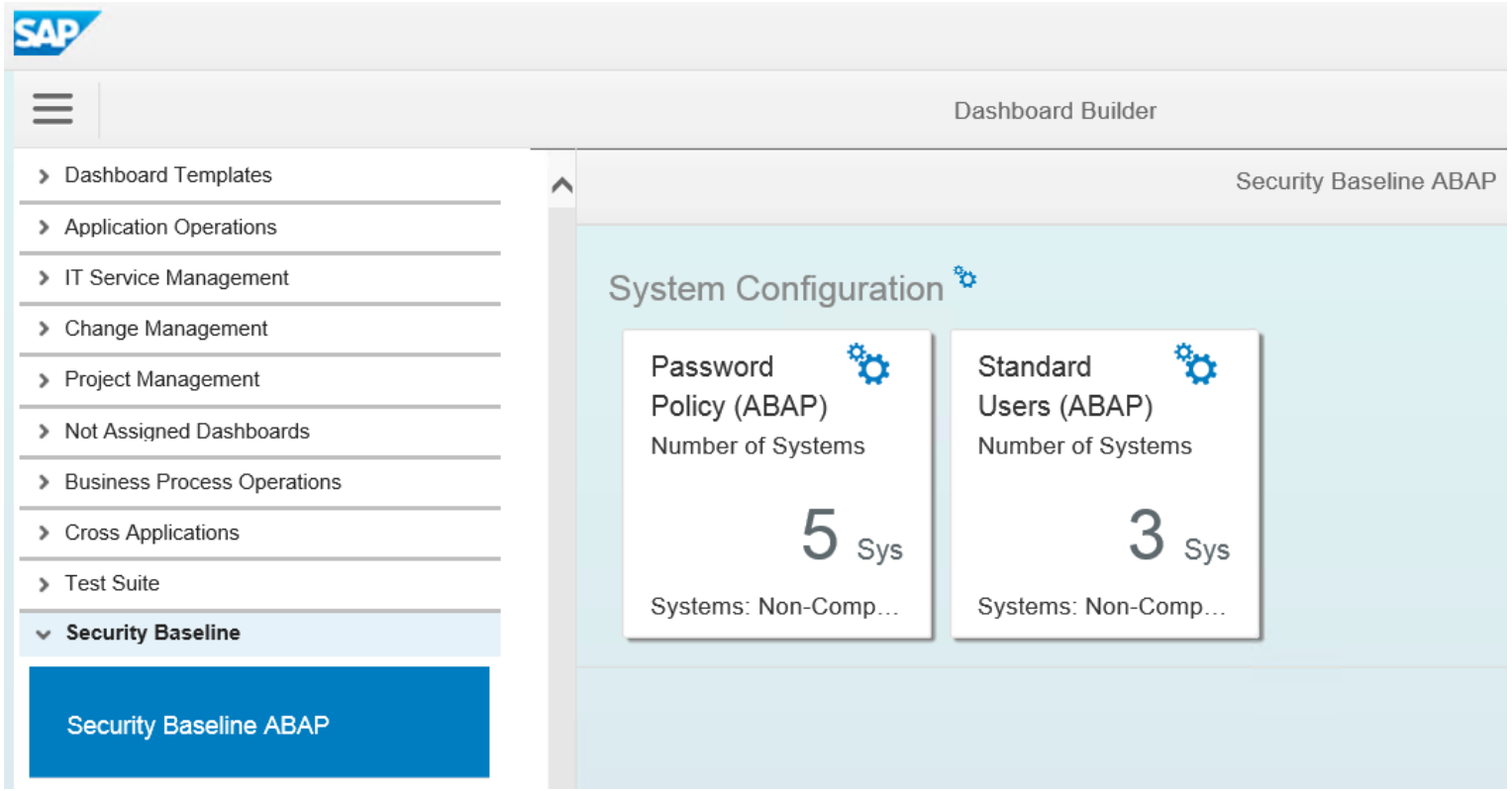
Dashboard Builder for Configuration Validation
Dashboard



So far, two examples are part of the SAP Security Baseline Template

These examples are based on following Target Systems:

BL_S-1 Password Policy

BL_O-1 Standard Users

The numbers on the tiles show the count of non-compliant systems

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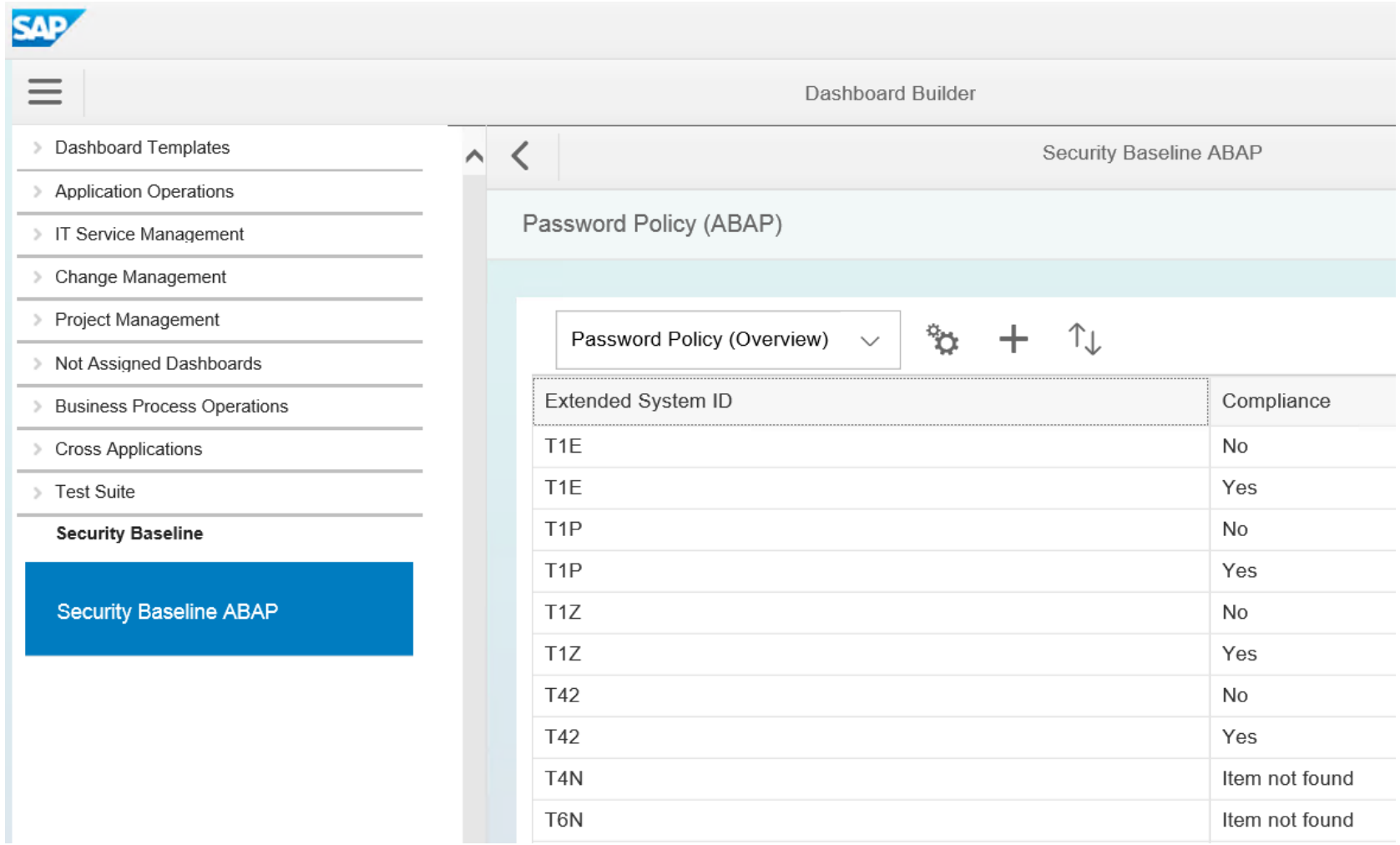
Dashboard Builder for Configuration Validation

Example: Overview



Extended System ID	Compliance
T1E	No
T1E	Yes
T1P	No
T1P	Yes
T1Z	No
T1Z	Yes
T42	No
T42	Yes
T4N	Item not found
T6N	Item not found

The overview page shows partly consolidated results per system

You observe that some systems show compliant and not-compliant results. This is because we check for multiple configuration items and some of them produce a compliant result, others a non-compliant result

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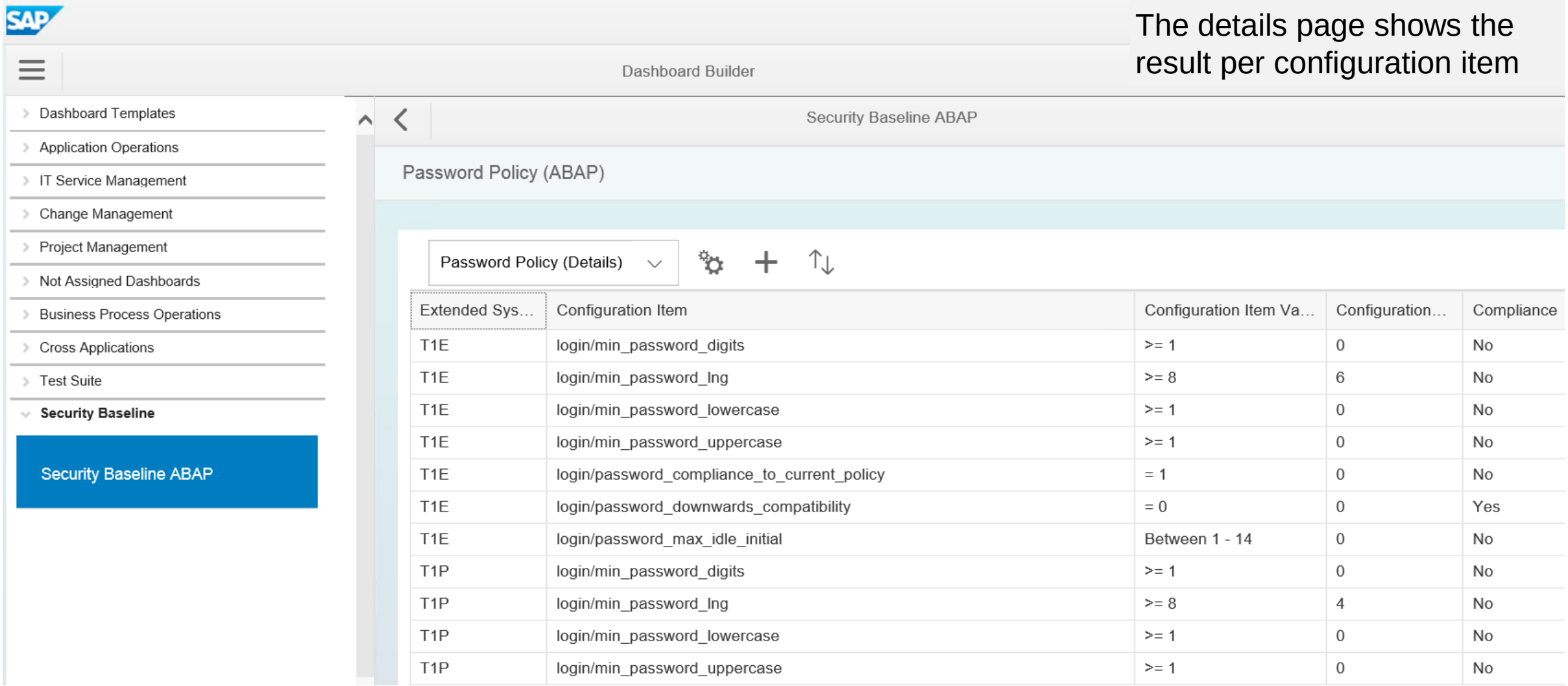
Dashboard Builder for Configuration Validation

Example: Details

The details page shows the result per configuration item



Extended Sys…	Configuration Item	Configuration Item Va…	Configuration…	Compliance
T1E	login/min_password_digits	>= 1	0	No
T1E	login/min_password_lng	>= 8	6	No
T1E	login/min_password_lowercase	>= 1	0	No
T1E	login/min_password_uppercase	>= 1	0	No
T1E	login/password_compliance_to_current_policy	= 1	0	No
T1E	login/password_downwards_compatibility	= 0	0	Yes
T1E	login/password_max_idle_initial	Between 1 - 14	0	No
T1P	login/min_password_digits	>= 1	0	No
T1P	login/min_password_lng	>= 8	4	No
T1P	login/min_password_lowercase	>= 1	0	No
T1P	login/min_password_uppercase	>= 1	0	No

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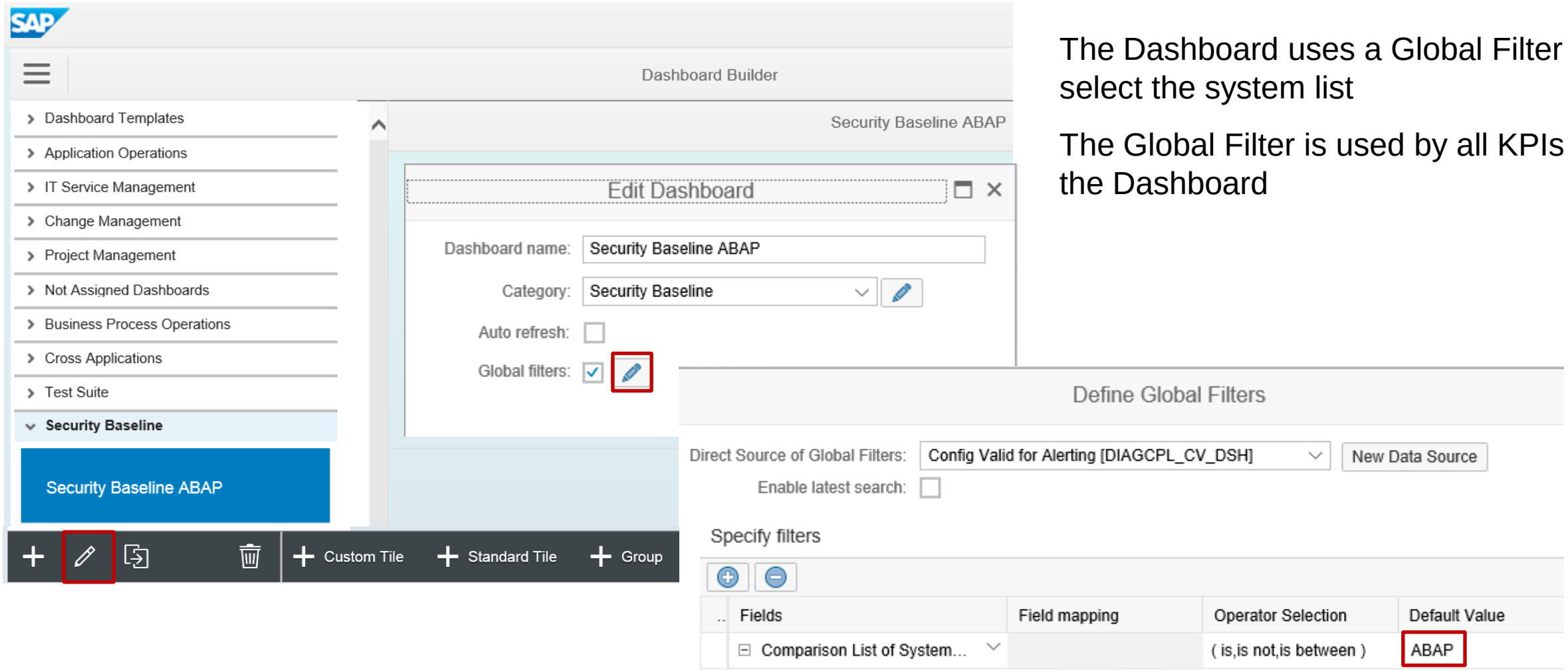
Dashboard Builder for Configuration Validation

Example: Definition of Dashboard



The Dashboard uses a Global Filter to select the system list

The Global Filter is used by all KPIs of the Dashboard

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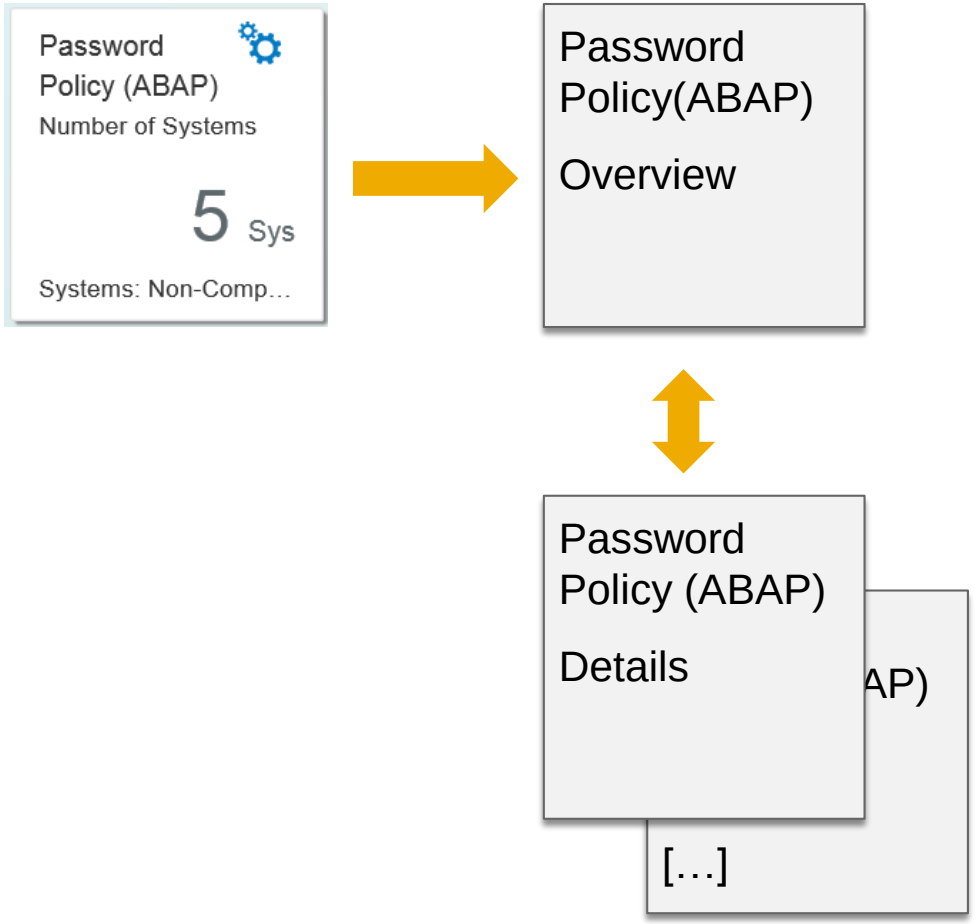
Dashboard Builder for Configuration Validation

Example: Definition of Dashboard KPIs

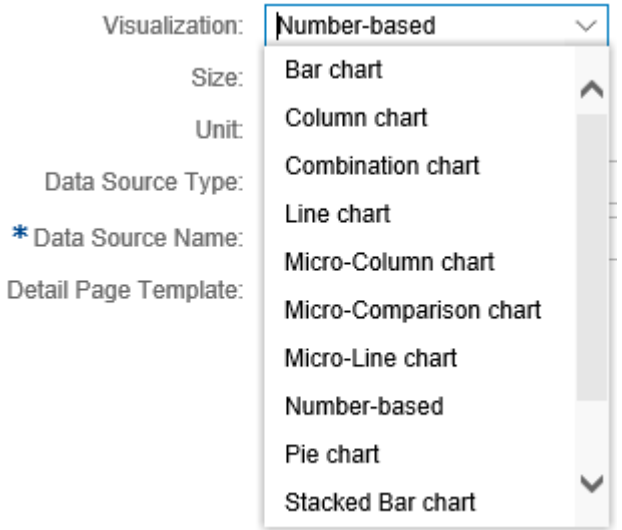


A dashboard tile shows the consolidated result of a KPI

You can drill-down into an overview view and to one or more detail views

You define all views independently with similar settings as described on next page

Various visualization types are available:



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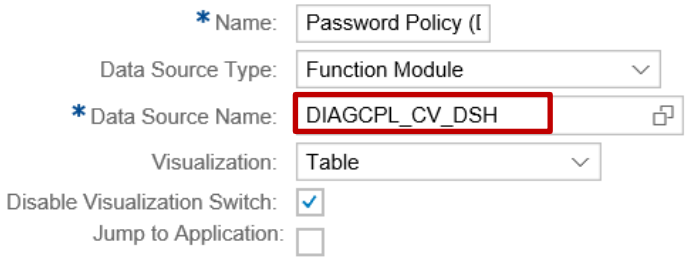
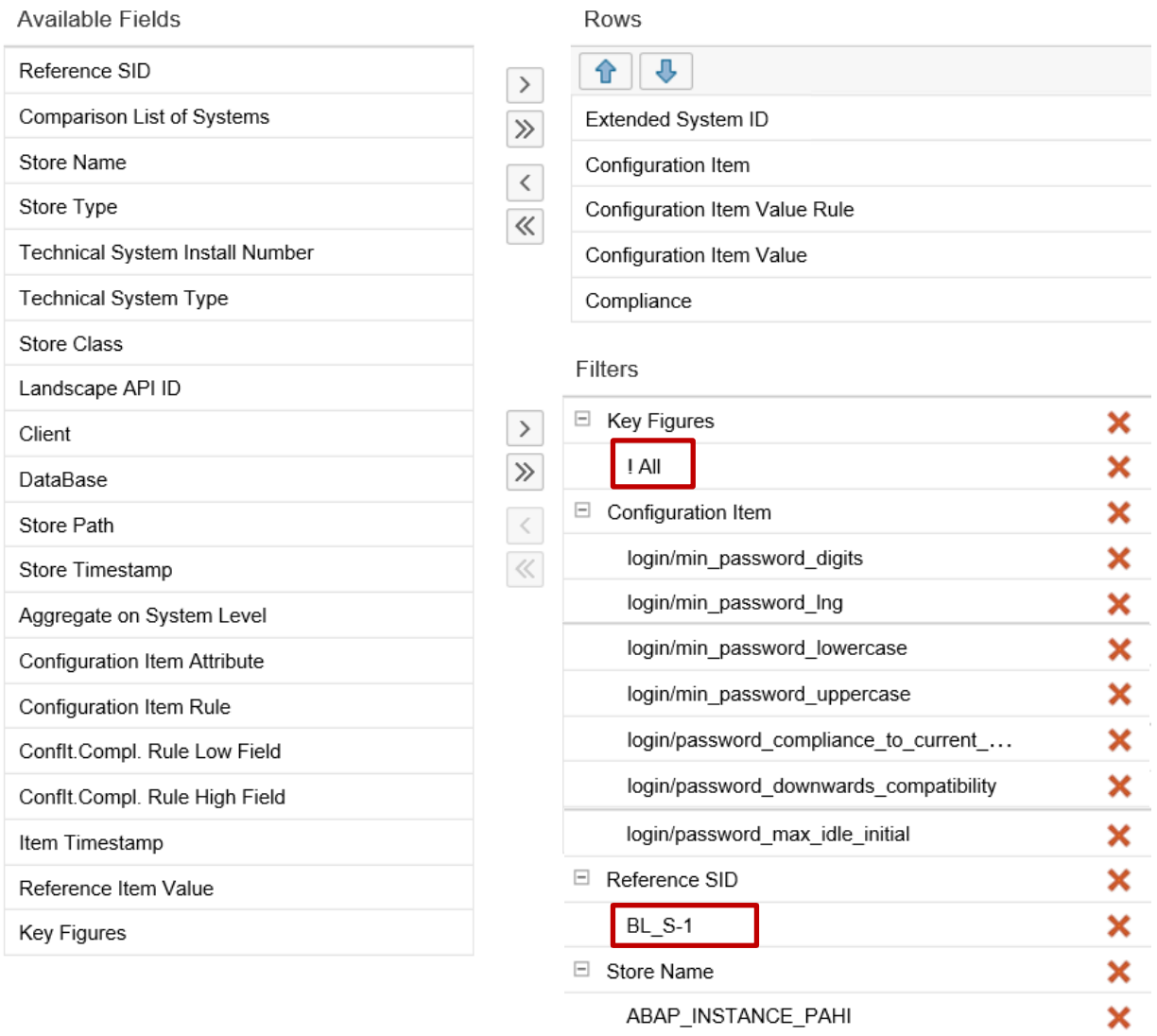
Dashboard Builder for Configuration Validation
Example: Definition of KPI





The definition of a view shows:

- The data source `DIAGCPL_CV_DSH` (= Configuration Validation)
- The selected visible fields in the rows
- The filter for the Target System
- The filters for the Configuration Stores and the Configuration Items (necessary if the Target System contains more rules than the ones which should be used here)

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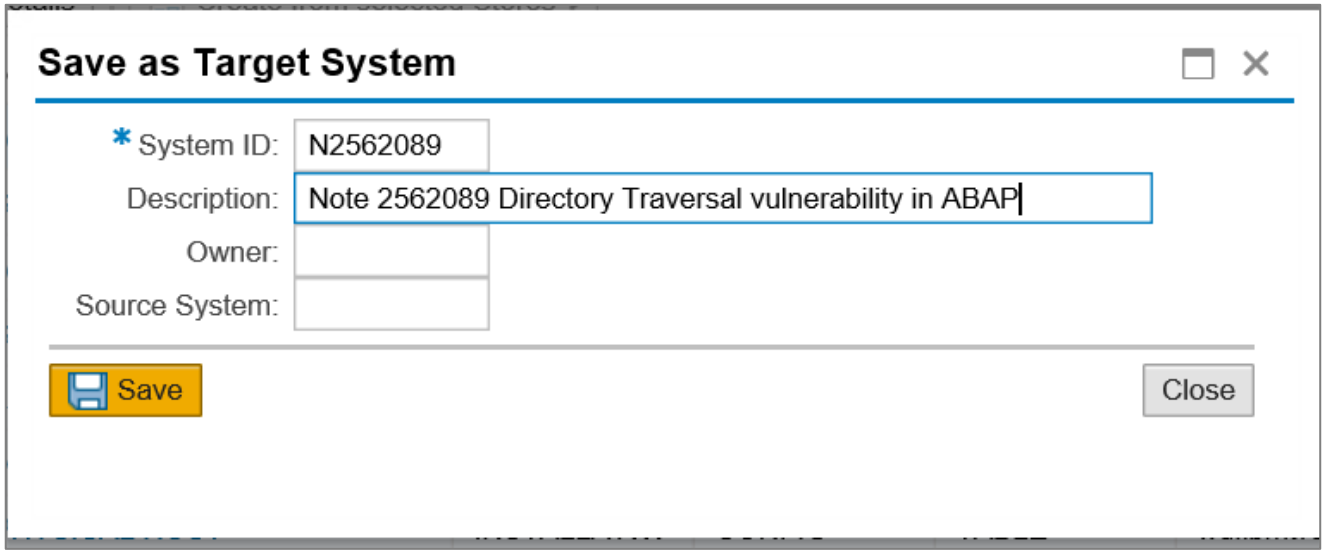
Dashboard Builder for Configuration Validation

Example Note 2562089 : Create Target System

Note 2562089 - Directory Traversal vulnerability in ABAP

ABAP correction: **Configuration Store `ABAP_NOTES` for note 2562089**

Configuration: **Configuration Store `ABAP_INSTANCE_PAHI` with check rule for profile parameter `abap/path_normalization = ext`**



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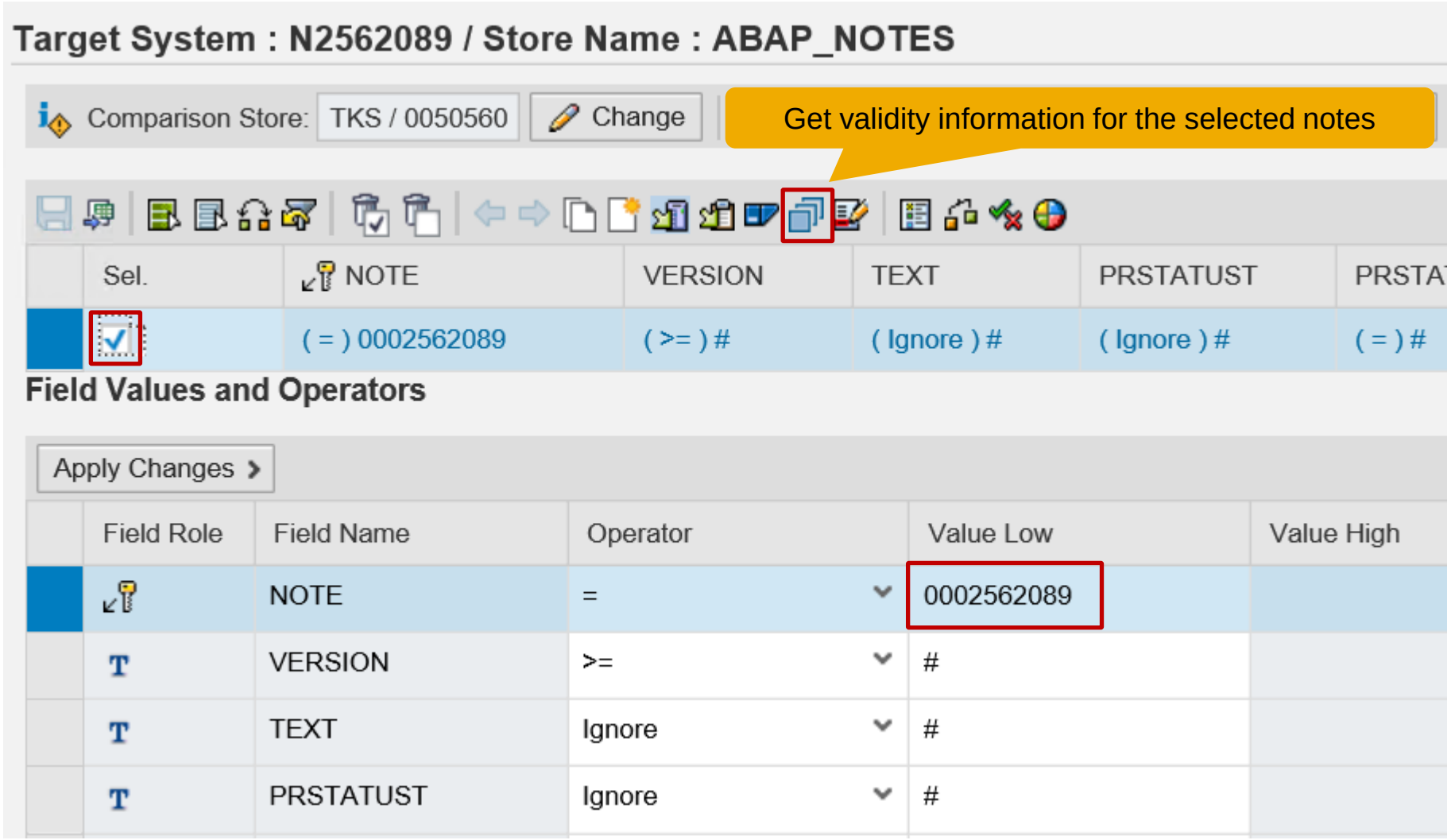
Dashboard Builder for Configuration Validation

Example Note 2562089 : Edit Target System



To define the rule set for ABAP notes you just enter the note number into configuration store `ABAP_NOTES`, select the line, and use the function "*Get validity information for the selected notes*" to populate the rule set.

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Dashboard Builder for Configuration Validation

Example Note 2562089 : Edit Target System

Target System : N2562089 / Store Name : ABAP_NOTES

Comparison Store: TKS / 0050560 | Change | Find: | Find | Find Next | Replace with: | in: All colu | Replac

Sel.	NOTE	VERSION	TEXT	PRSTATUST	PRSTATUS	COMPONENT	RELEASE	EXTRELEA...
☐	(=) 0002562089	(>=) 0008	(Ignore) #	(Ignore) Com...	(=) E	(=) SAP_B...	(=) 752	(<=) 0001
☐	(=) 0002562089	(>=) 0008	(Ignore) #	(Ignore) Com...	(=) E	(=) SAP_B...	(=) 740	(<=) 0019
☐	(=) 0002562089	(>=) 0008	(Ignore) #	(Ignore) Com...	(=) E	(=) SAP_B...	(=) 750	(<=) 0010
☐	(=) 0002562089	(>=) 0008	(Ignore) #	(Ignore) Com...	(=) E	(=) SAP_B...	(=) 751	(<=) 0005

Target System : N2562089 / Store Name : ABAP_INSTANCE_PAHI

Comparison Store: TKS / 0050560 | Change | Find: | Find | Find Next

Sel.	Operator	Parameter	Operator	Value Low
☐	=	abap/path_normalization	=	ext

Result for configuration store
`ABAP_NOTES`

Enter a rule for the profile parameter for configuration store
`ABAP_INSTANCE_PAHI`

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Dashboard Builder for Configuration Validation

Example Note 2562089 : Reporting

Configuration Items

ConfigStore Name	Config. Item	SAP System ID	Config. Item Value	Value of Target System	Compliance	Last Check [UTC]	Compliant (1=Yes, -1=No, ' '=Not valuated)
ABAP_INSTANCE_PAHI	abap/path_normalization	T1E	#	ext	Item not found	20180321101712	-1
		T1P	#	ext	Item not found	20180321101710	-1
		T1Z	#	ext	Item not found	20180321101810	-1
		T41	on	ext	No	20180316141526	-1
		T42	#	ext	Item not found	20180321104908	-1
		T4N	#	ext	Item not found	0	-1
		T6N	#	ext	Item not found	0	-1
		TKS	#	ext	Item not found	20180321102306	-1
ABAP_NOTES	0002562089	T1E	#	Version 0008 Completely implemented	No	20180320191611	-1
		T1P	#	Version 0008 Completely implemented	No	20180320191100	-1
		T1Z	#	Version 0008 Completely implemented	No	20180320191053	-1
		T41	#	Version 0008 Completely implemented	No	20180315190113	-1
		T42	#	Version 0008 Completely implemented	No	20180320191313	-1
		TKS	Version 0008 Completely implemented	Version 0008 Completely implemented	Yes	20180321102307	1

Standard reporting using Configuration Validation with adjusted layout

You can store the view as a “bookmark” for repeated reporting

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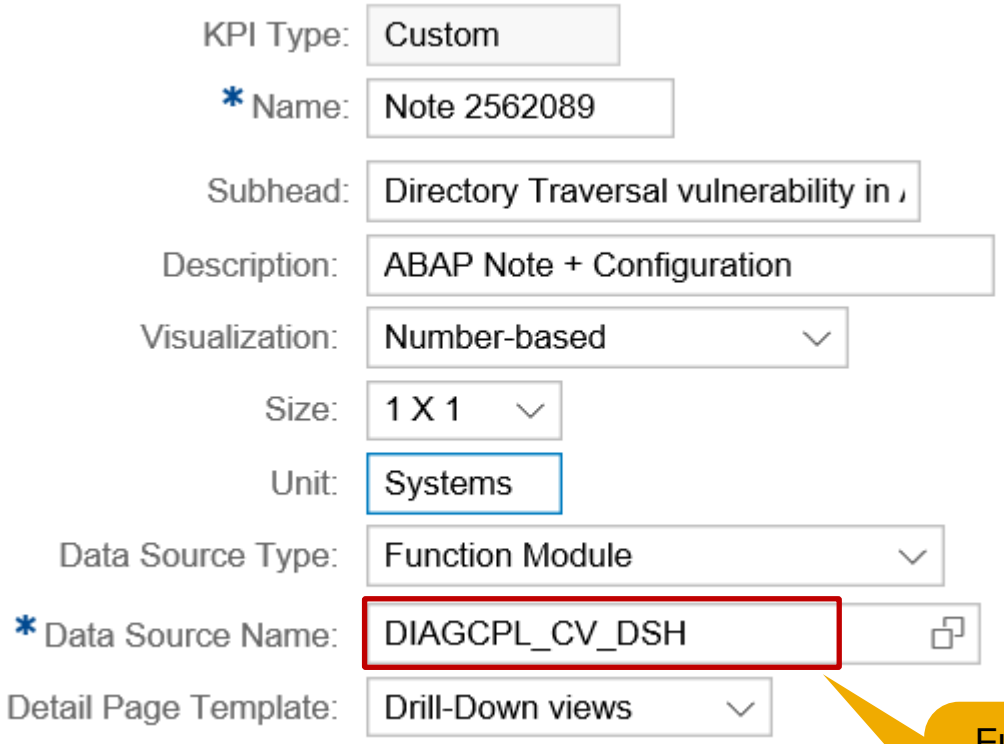
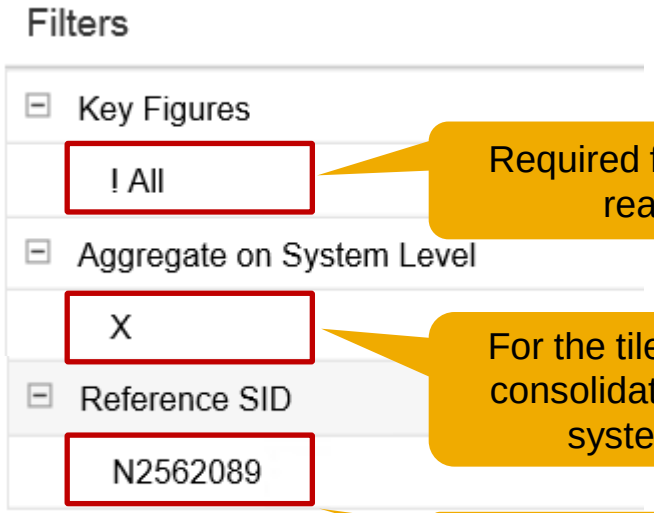
Dashboard Builder for Configuration Validation

Example Note 2562089 : Definition of corresponding Dashbord Tile



Function module which implements the integration with Configuration Validation



Required for technical reasons

For the tile we want to consolidate results on system level

Target System

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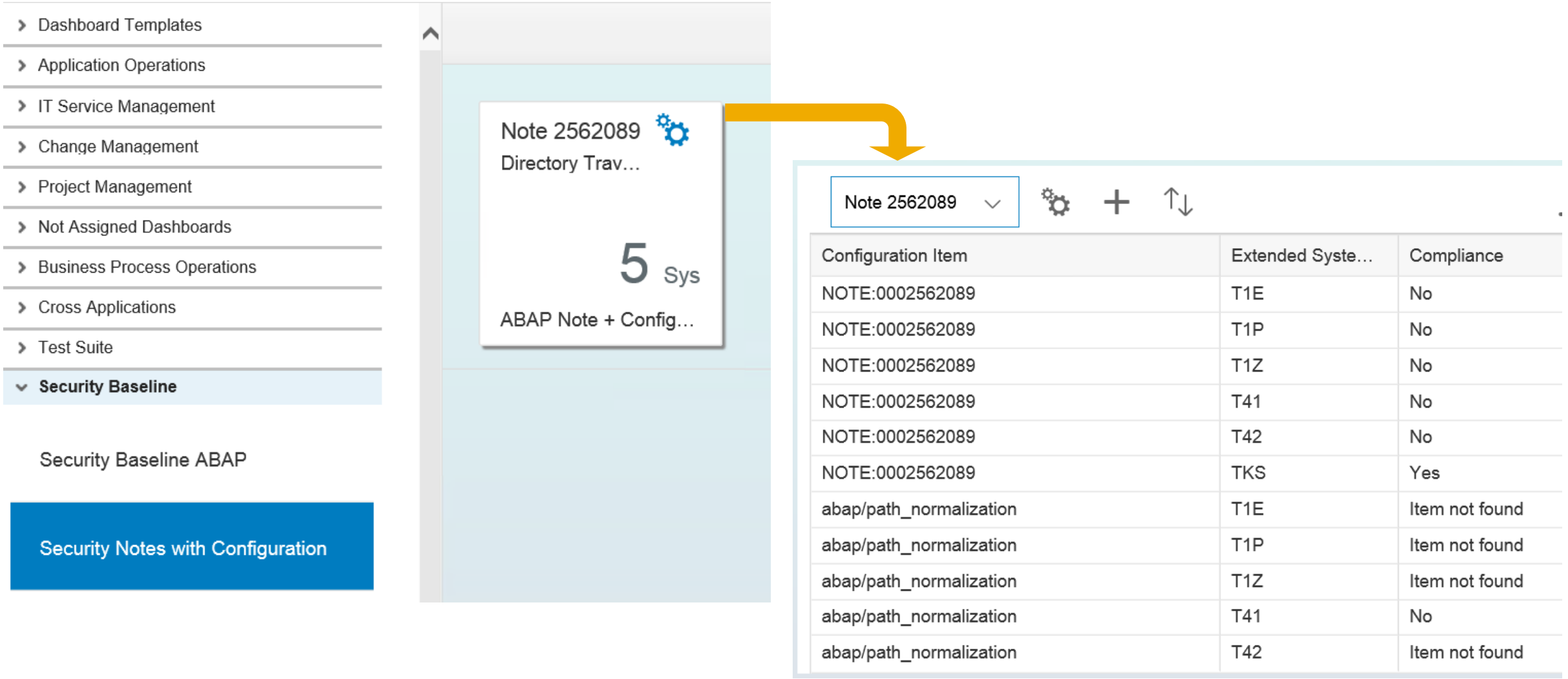
Dashboard Builder for Configuration Validation

Example Note 2562089 : Dashbord Tile and Drilldown View



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February 2018

Topics February 2018

Recommended Notes for System Recommendations

Note 2408073 - Handling of Digitally Signed notes in SAP Note Assistant (reloaded)

EarlyWatch Alert Workspace and
EarlyWatch Alert Solution Finder in Support Portal Launchpad

Note 2562089 - Directory Traversal vulnerability in ABAP File Interface

Note 2525222 - [multiple CVE] Security vulnerabilities in SAP Internet Graphics Server (IGS)

Note 1584573 - Security Verdict in SUGM SAUS SUGM_UPG_TYPE_PLUS_DEL_XML
Note 1977547 - Update 1 to Security Note 1584573

Recordings:
DSAG (German)
ASUG

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Recommended Notes for System Recommendations

Note 2585487 - SysRec7.2 notes for obsolete kernel versions are displayed for the target system

Note 2590592 - SysRec7.2 Support Package for kernel notes are missing

Note 2591182 - SysRec7.2 Display notes consistent with the SYSREC_LAST_MONTHYEAR customizing settings

- Customizing setting `SYSREC_LAST_MONTHYEAR` (format: `YYYY_MM`) defines the oldest age of notes which are visible (default `2009_01`)

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General Customizing and Personalization
Transaction SM30_DNOC_USERCFG_SR

SYSREC_STATUS_FILTER (*)	Defines which SAP Notes are counted on the overview page: By default it only shows notes with status 'new' or 'new version available' (in use up to 7.2 SP 6).
SYSREC_UPL_ACTIVE (*)	Activate/deactivate the integration with UPL/SCMON while showing the object list of ABAP notes.
SYSREC_UPL_MONTH (*)	Count of month for which UPL/SCMON data get loaded. The default is 2 which represents the current and the previous month.
SYSREC_NOTE_TYPES	Defines for which types of notes the application calculates results. Enter the list of characters representing the note types HotNews, Security, Performance, Legal Change, Correction, and License Audit.
SYSREC_LAST_MONTHYEAR	Defines the earliest calculated notes. By default the application calculates all SAP Notes which were released between January 2009 and the current month.
SYSREC_BPCA_USER	Defines if the current user should be added as selection for BPCA.
SYSREC_BPCA_DATE	Defines the earliest filter for BPCA results. You can change the start date for this period.
SYSREC_CHARM_LOG_TYPE	Defines the text id according to table TTXID for the text object CRM_ORDERH.
SYSREC_CHARM_USER	Defines if the current user should be added as selection for ChaRM.
SYSREC_CHARM_DATE	Defines the earliest filter for ChaRM results. You can change the start date for this period.
SYSREC_OBJECT_EXP	Lifetime of the cache which contains the object list of notes. The default is 14 days.
SYSREC_REQ_EXP	Lifetime of the cache which contains the required notes of notes. The default is 14 days.
SYSREC_SIDE_EFFECT	Lifetime of the cache which contains the side-effect notes of notes. The default is 14 days.
SYSREC_UNSUPPORTED_SYSTEM (*)	System types which you want to block from SysRec (one entry per system type)
SYSREC_UNUSED_SUBHR	Calculate results for unused HR components (see note 2712210)

(*) User specific personalization

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Note 2408073 - Handling of Digitally Signed notes in SAP Note Assistant (reloaded)

“Upload notes file”, “upload TCI file” and “download note from Support Portal” now work quite similar. All methods deal with files and verify the digital signature using external program `sapcar`.

Required Authorizations:

Auth.-Object	Field 1	Field 2	Field 3
S_CTS_ADMI	CTS_ADMFCT=TABL		
S_C_FUNCT	PROGRAM=CL_SCWN_DS_VERIFY==========CP	ACTVT=16	CFUNCNAME=SYSTEM
S_DATASET	PROGRAM=CL_SCWN_NOTE_SAR_FILE_N=======CP	ACTVT=33	FILENAME=/usr/sap/trans/tmp/*
S_DATASET	PROGRAM=SAPLOCS_FILEMGMT	ACTVT=06,34	FILENAME=/usr/sap/trans/tmp/*
S_RFC_ADM	RFCDEST=SAPOSS,SAPSNOTE	ACTVT=36	

Required Profile Parameter:

`rdisp/call_system = 1` (default)

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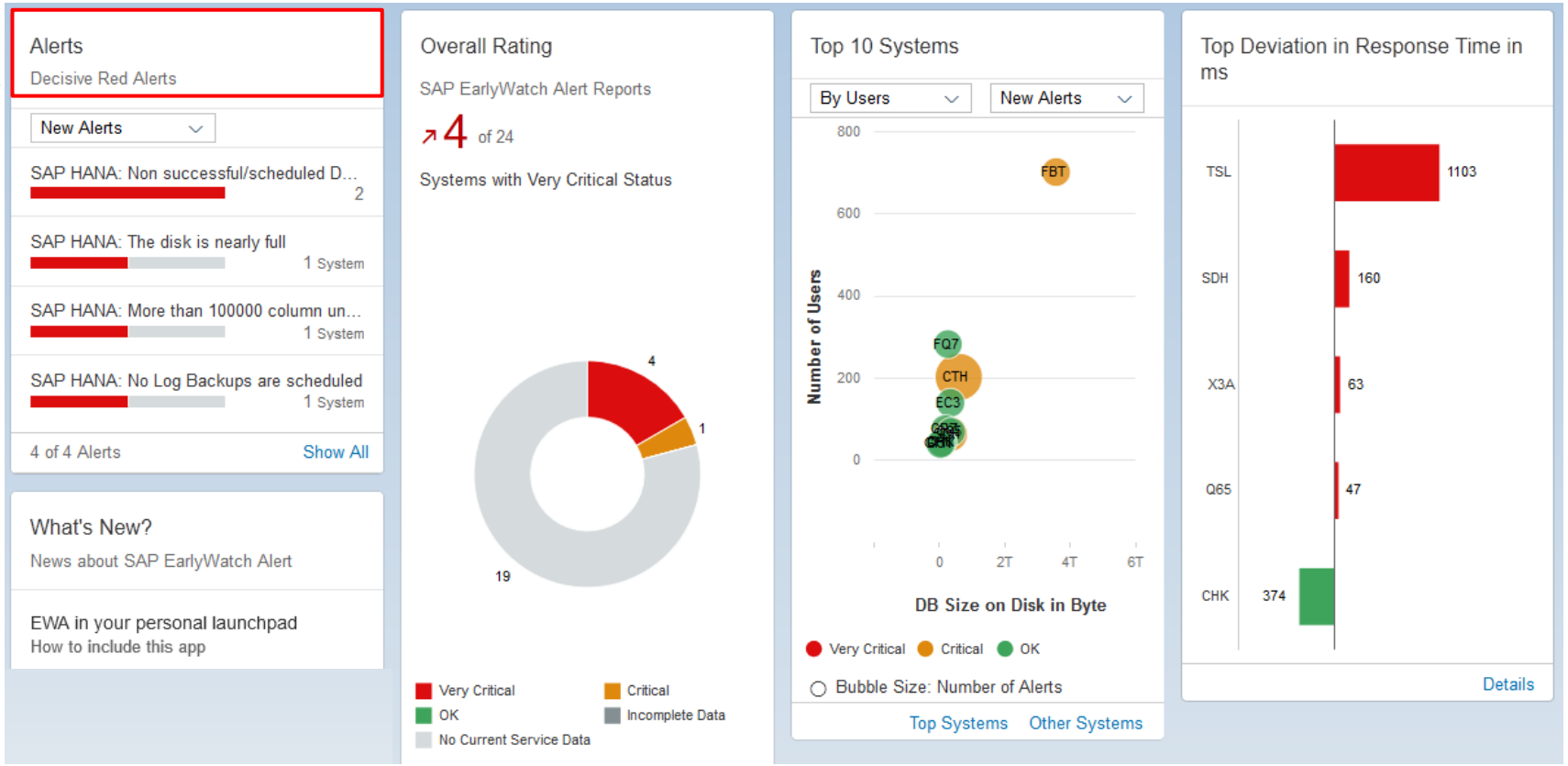
EarlyWatch Alert Workspace in Support Portal Launchpad
https://launchpad.support.sap.com/#/ewaworkspace

SAP EarlyWatch Alert Workspace – gain an overview on your system landscape health
https://blogs.sap.com/2017/08/15/sap-earlywatch-alert-workspace-gain-an-overview-on-your-system-landscape-health/

Link to Alert Solution Finder ewasolutionfinder



Note 2517661 - How to include EWA Fiori Cloud apps into customer launchpads

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EarlyWatch Alert Solution Finder in Support Portal Launchpad
https://launchpad.support.sap.com/#/ewasolutionfinder

You can view the EWA Alerts in Support Portal Launchpad, i.e. you can search for “Security”

4 Systems	**Gateway Security (Security → ABAP Stack → Gateway and Message Server Security)** Gateway access control list (`reg_info` / `sec_info`) contains trivial entries (`P TP=* USER=* USER-HOST=* HOST=*`)
6 Systems	**Default Passwords of Standard Users (Security → ABAP Stack)** Standard users including `SAP*` or `DDIC` have default password
14 Systems	**SAP HANA Network Settings for Internal Services (Security → SAP HANA Database HPJ)** SAP HANA internal network configuration is insecure
2 Systems	**SAP HANA Network Settings for System Replication Communication (listeninterface) (Security → SAP HANA Database P22)** SAP HANA network settings for system replication is insecure
22 Systems	**ABAP Password Policy (Security → ABAP Stack)** Secure password policy is not sufficiently enforced (`login/min_password_lng` and `login/password_max_idle_initial`)
6 Systems	**Gateway Security (Gateway and Message Server Security)** Gateway Access Control List (`reg_info` / `sec_info`) contains trivial entries (`P TP=*`)
22 Systems	**Users with Critical Authorizations (Security → ABAP Stack)** A high number of users has critical authorizations
15 Systems	**Default Passwords of Standard Users (Security → ABAP Stack)** Standard users other than `SAP*` or `DDIC` have default password
3 Systems	**Protection of Passwords in Database Connections (Security ➞ ABAP Stack)** Protection of passwords in database connections (note 1823566)
3 Systems	**SAP HANA SSFS Master Encryption Key (Security → SAP HANA Database)** SAP HANA SSFS master encryption key is not changed (note 2183624)

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EarlyWatch Alert for RFC Gateway Example

Gateway Security

Enabling an Initial Security Environment

Parameter: gw/acl_mode

Rating	Instance	Current Value	Recommended Value
⚠	sapaht_AHT_10	0	1

Evaluated Risk - Medium

Recommendation: Parameter gw/acl_mode can be set to 1 to activate a more secure default behavior if either of the access control lists defined by gw/sec_info and gw/reg_info does not exist.
SAP recommends setting gw/acl_mode to 1 to establish an additional line of defense should any of the access control lists be missing. For more information, see SAP Note 1480644 .

Gateway Access Control Lists

Parameters: gw/sec_info gw/reg_info

Rating	Instance	Error Condition
☑	All instances	gw/reg_info and gw/sec_info are defined

reg_info

Rating	Instance	Error Condition	File does not exist (default)
⚠	All instances	P TP=*	

sec_info

Rating	Instance	Error Condition	File does not exist (default)
☑	All instances		

Recommendation: The profile parameters gw/sec_info and gw/reg_info provide the file names of the corresponding access control lists. These access control lists are critical to controlling RFC access to your system, including connections to RFC servers. You should create and maintain both access control lists, which you can do using transaction SMGW.

See the following SAP Notes for further information:
SAP Note 1305851 - Overview note: "reg_info" and "sec_info"
SAP Note 1408081 - Basic settings for reg_info and sec_info

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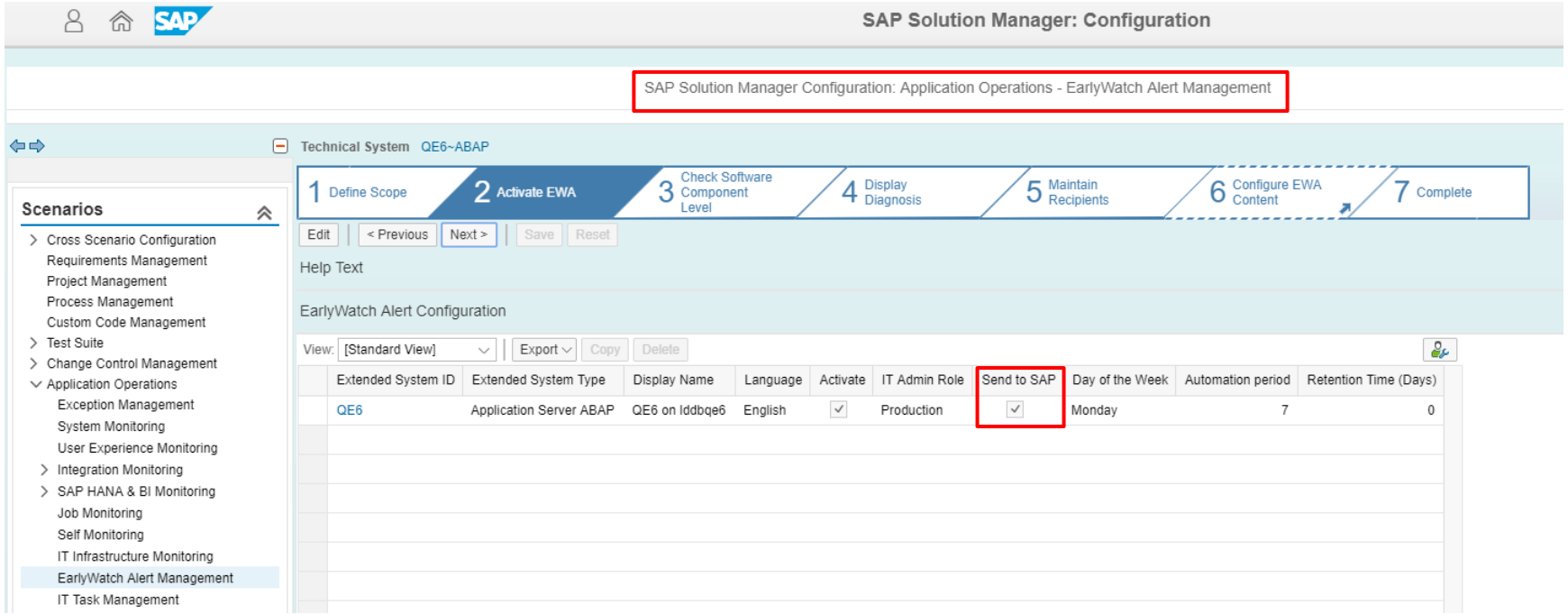
EarlyWatch Alert Workspace and Solution Finder Prerequisites

- **SAP Solution Manager sends EWA data**



or

- **Monitored System sends EWA data directly**
  Note 207223 - SAP EarlyWatch Alert processed at SAP

- **SAP ONE Support Launchpad:**
  Authorization: “Service Reports & Feedback”(English),
  “Zugriff auf Servicemeldungen” (German)

If you don't want to have HANA Checks in your EarlyWatch Alert of a HANA Database which is connected via DBCON, then create an entry in DBACOCKPIT with this connection and add in the description field `NON_EWA_...`
Note 1985402.

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Note 2562089 - Directory Traversal vulnerability in ABAP File Interface

Relevant for Security Optimization Project "Secure against Directory Traversal using SPTH"

Adjust the settings in table SPTH and set profile parameter abap/path_normalization (described in note 2551541) to the value ext

Values:

off	no check for SPTH, not recommended
res	restricted check for SPTH (compatibility setting of note 2433777), not recommended
on	(default), ok
ext	extended check for SPTH replacing relative paths (introduced with note 2562089), ok

Some files are protected always: .pse files, cred_v2 file, SSFS-dat-files, SSFS-key-files

Related note: Note 2433777 - Missing Authorization check in ABAP File Interface

Related topic: Security Optimization Project "Secure against Directory Traversal using transaction (S)FILE", see note 1497003

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Security Optimization Project “Secure against Directory Traversal using SPTH”

Online Help SPTH

https://help.sap.com/doc/abapdocu_750_index_htm/7.50/en-US/abenfile_interface_authority.htm

Path in file system	S	NR	RO	Auth.group
*	☐	☑	☐	
/	☐	☐	☐	
/tmp	☐	☐	☐	
/tmp/files	☑	☐	☐	TEMP

PATH	Generic filenames
SAVEFLAG	(S) If the flag is set, the files specified in PATH are included in security procedures.
FS_NOREAD	(NR) If the flag is set, this means that **no** access is allowed. This flag overrides all user authorizations. If you set FS_NOREAD, FS_NOWRITE is also automatically set.
FS_NOWRITE	(RO) If the flag is set, this means that **no write** access is allowed. This flag overrides all user authorizations.
FSBRGRU	The authorization group corresponds to the first field (RS_BRGRU) of authorization object S_PATH. You define authorization groups in customizing table SPTHB You can use the second field of the authorization object S_PATH (ACTVT) to check whether the user has authorization to read (value 3) or change (value 2) files.

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Note 2525222 - [multiple CVE] Security vulnerabilities in SAP Internet Graphics Server (IGS)

The note solves multiple security vulnerabilities (multiple CVE entries)

In addition a new configuration setting is introduced.

The IGS is downwards compatible in in its main release. You can always use the latest IGS version. See notes 454042, 514841 (Troubleshooting when a problem occurs with the IGS), and 959358. Remember to remove the old version of the IGS before installing the new one. Your configuration files will not be removed and can be reused by the new IGS.

SAP IGS is not listed in System→Status but it may be part of an ABAP system in `LMDB`, therefore it could be covered by System Recommendations (but maybe miss the patch level). Some other notes about IGS might be visible in System Recommendations because of additional assignments to the Kernel.

See slides about note 2380277 to learn how to check the version of the IGS

Solution: SAP IGS 7.20 SP 15, 7.45 SP 4, 7.49 SP 2, 7.53 SP 2

Version	7450.0.2.1
Build Date	Apr 10 2017
System	AMD/Intel x86_64 with Linux (linuxx86_64)
Profile File Path	/usr/sap/X3A/SYS/profile/X3A_DVEBMGS01_mo-c81a86caf

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Note 2525222 - [multiple CVE] Security vulnerabilities in SAP Internet Graphics Server (IGS)

LMDB (if SAP IGS is registered – only in this case you get a result in System Recommendations)**:**

Technical System FBT on lddbfbt - FBT (Application Server ABAP) - Software

Product Instances | Product Instances (Details) | Software Component Versions

Add | Delete | Repository Information | Details

Display Name	Supplier	Installation Type	System or Instance	SP L...
SAP BASIS 7.40 (SAP_BASIS 740)	automatic	Installed on System	FBT on lddbfbt	0018
SAP BW 7.40 (SAP_BW 740)	automatic			0018
SAP CRM ABAP 7.13 (BBPCRM 713)	automatic			0014
SAP FIORI FOR SAP SOL. MGR 1.0 (ST-UI 100)	automatic			0006
SAP IGS 7.20 (BC-FES-IGS 7.20)	automatic	Installed on Instance	AppServer 00 of FBT on ldai1fbt	012
SAP IGS 7.20 (BC-FES-IGS 7.20)	automatic		AppServer 00 of FBT on ldai2fbt	012
SAP IGS 7.20 (BC-FES-IGS 7.20)	automatic		AppServer 00 of FBT on ldcifbt	012

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Note 1584573 - Security Verdict in SUGM SAUS SUGM
Note 1977547 - Update 1 to Security Note 1584573

The note is about Upgrade Tools which are a quite special part of SAP_BASIS. It's not possible to restrict the validity of the note or the correction instructions as usual.

Existing disclaimer:

- If the object from these correction instructions is not available in the system, or if it contains no source code or contains only comment lines, you can ignore the correction instructions.

Disclaimer added:

- This note is only relevant for newly installed systems or systems which never have been updated using Software Update Manager 1.0 or 2.0.
  If you have used Software Update Manager since 2014 you do not need to apply this note and you can set the status to ‚irrelevant'.

Proposal:

- **Check the condition described in note 1977547 and/or**
- **Try to implement both notes using `SNOTE`, if `SNOTE` refuses implementation, set note to 'irrelevant'**

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January 2018

Topics January 2018

Note 2562127 - R/3 Support Remote Connection with SNC / SSO
Note 2562154 - HTTP Remote Connection with SNC / SSO

Transparent Software Vulnerability Disclosure - SAP is a CVE Naming Authority

Meltdown and Spectre

Note 2576306 - Transport-Based Correction Instruction (TCI) for Download of Digitally Signed SAP Notes (reloaded)

Note 2554853 - SAP NetWeaver download service for SAP Notes

Notes 1891583 / 2065596 - Restricting logon to the application server

Note 2525392 - Update 2 to 2278931 and 1906212: Code injection vulnerability in Knowledge Provider

Note 2533541 - SQL Injection vulnerability in Olingo JPA

Note 2453871 - Cross-Site Scripting (XSS) vulnerability in SAP BusinessObjects Design Studio

Note 2341600 - SUIM | Search in role menu RSUSR_ROLE_MENU

Recordings:
DSAG (German)
ASUG

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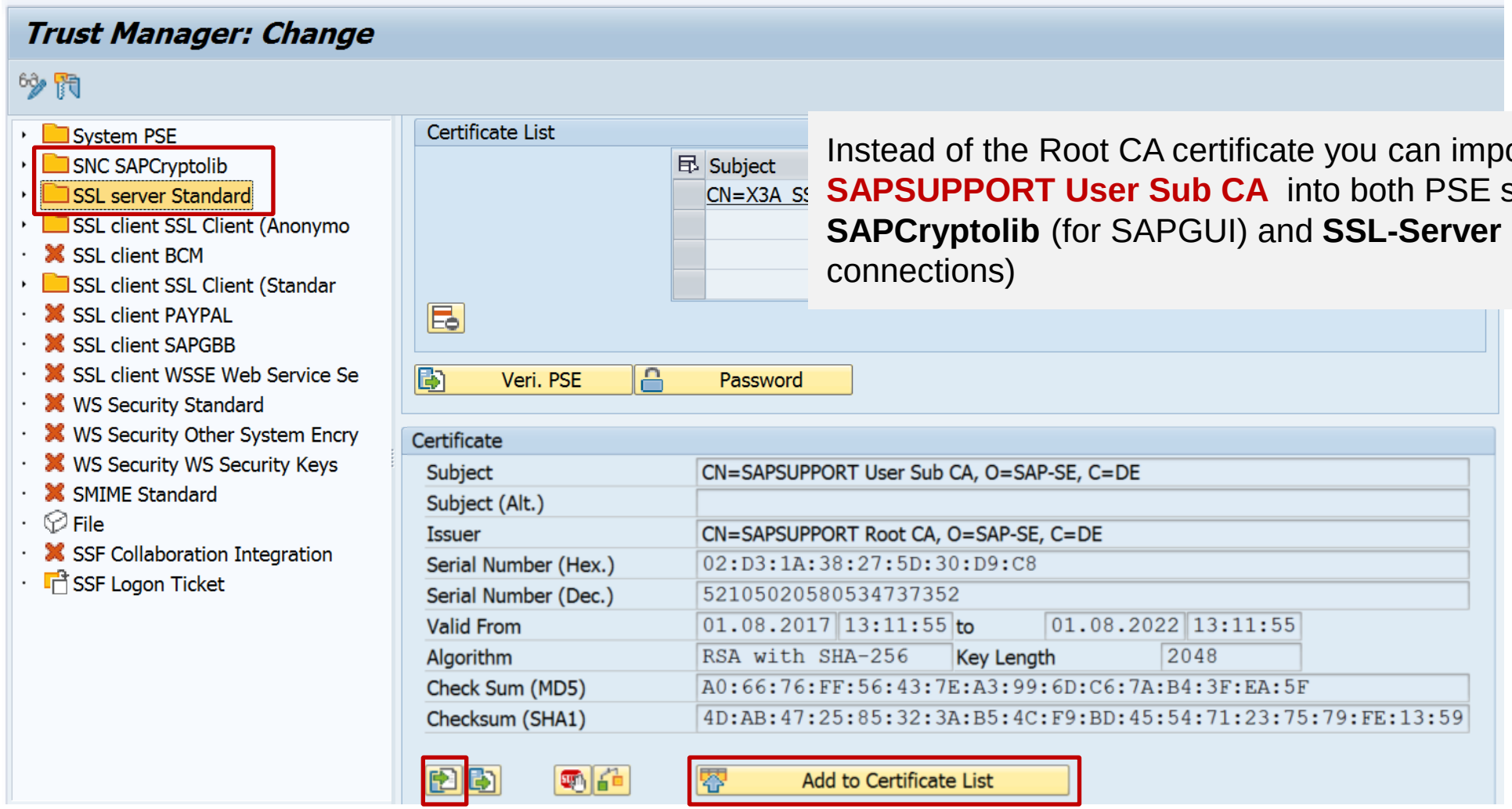
Note 2562127 - R/3 Support Remote Connection with SNC / SSO
Note 2562154 - HTTP Remote Connection with SNC / SSO



Instead of the Root CA certificate you can import the sub CA certificate **SAPSUPPORT User Sub CA** into both PSE stores **SNC SAPCryptolib** (for SAPGUI) and **SSL-Server Standard** (for HTTP connections)

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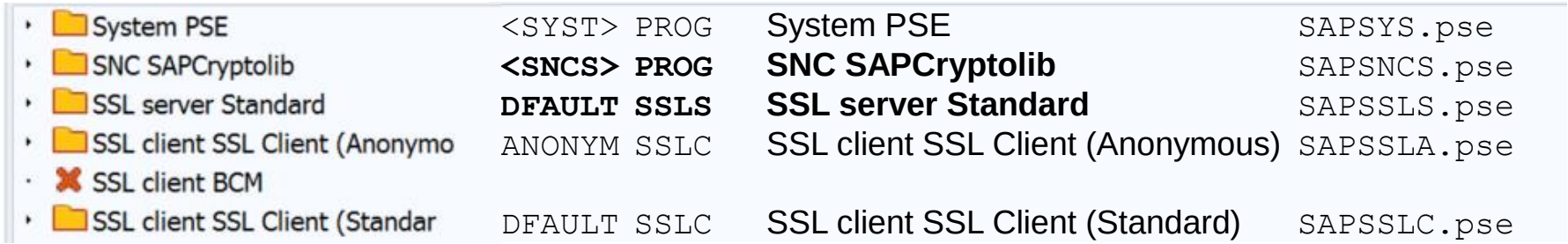
Note 2562127 - R/3 Support Remote Connection with SNC / SSO
Note 2562154 - HTTP Remote Connection with SNC / SSO

You can use application Configuration Validation with Configuration Store `PSE_CERT` to check for the existence of one of the certificates:

APPLICATION	CONTEXT	TYPE	SUBJECT	ISSUER	SERIALNO	VALID_FROM	VALID_TO
<SNCS>	PROG	CERTIFICATE	CN=SAPSUPPORT Root CA, O=SAP-SE, C=DE	CN=SAPSUPPORT Root CA, O=SAP-SE, C=DE	D9F939E522DF0B05	20170801131155	20270801131155
DFAULT	SSLS	CERTIFICATE	CN=SAPSUPPORT Root CA, O=SAP-SE, C=DE	CN=SAPSUPPORT Root CA, O=SAP-SE, C=DE	D9F939E522DF0B05	20170801131155	20270801131155
<SNCS>	PROG	CERTIFICATE	CN=SAPSUPPORT User Sub CA, O=SAP-SE, C=DE	CN=SAPSUPPORT Root CA, O=SAP-SE, C=DE	02D31A38275D30D9C8	20170801131155	20220801131155
DFAULT	SSLS	CERTIFICATE	CN=SAPSUPPORT User Sub CA, O=SAP-SE, C=DE	CN=SAPSUPPORT Root CA, O=SAP-SE, C=DE	02D31A38275D30D9C8	20170801131155	20220801131155



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Transparent Software Vulnerability Disclosure
SAP is a CVE Naming Authority

SAP is now a CVE Numbering Authority. Using Common Vulnerabilities and Exposures, an industry standard, as a mechanism to disclose patches to vulnerabilities reported by external sources, SAP will facilitate faster security patch consumption. This initiative will also support tools that report on vulnerabilities using CVE disclosures, thereby enabling automation of security processes and transparency for SAP customers. The release of CVE disclosures is aligned with SAP's Security Patch Day that takes place on the second Tuesday of every month.

Contact: cna@sap.com

Search for *keyword* „SAP“:

- https://cve.mitre.org/cgi-bin/cvekey.cgi?keyword=SAP

Search for entries *about* vendor SAP (via NIST Advanced Search with Vendor = SAP):

- List
- Statistics

Search for entries having CONFIRM entries *by* SAP:

- https://www.google.de/search?q=CONFIRM%3Ahttps%3A%2F%2Flaunchpad.support.sap.com+site%3Amitre.org

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Meltdown and Spectre

Who is affected?

All systems that use Intel, ARM and AMD CPU although with different impact and risks.

January 3 information on how to exploit functionalities related with the CPU architecture that can lead to information disclosure were made public.

The white papers on both issues can be found here:

https://spectreattack.com

https://meltdownattack.com/meltdown.pdf

https://spectreattack.com/spectre.pdf

This exploitation has 3 known variants:

Variant 1: bounds check bypass (CVE-2017-5753)

Variant 2: branch target injection (CVE-2017-5715)

Variant 3: rogue data cache load (CVE-2017-5754)

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Meltdown and Spectre

https://www.sap.com/corporate/en/company/security.html

What are Meltdown and Spectre?

Technically, Spectre and Meltdown are different variations of the same architectural vulnerability that affects nearly every computer chip manufactured in the last 20 years. It could, if exploited, allow attackers to get access to data previously considered protected. Security researchers have published information about these vulnerabilities in early 2018.

Are SAP systems affected?

SAP has thoroughly investigated the impact of these vulnerabilities and is closely aligning with corresponding vendors, providers, and the Open Source community. SAP Security and SAP Operations are working on investigating if where and how our platforms, databases, application and cloud operations are affected.

Taking a proactive approach

We are fixing potential flaws derived from Spectre and Meltdown without undue delay. As a consumer of affected software and hardware, we largely depend on the availability of patches provided by respective vendors, providers or the open source community. The schedule of applying appropriate patches is to a large extent determined by their availability.

Recommendation to customers

SAP recommends that all customers implement security patches provided by hardware and operating system providers as soon as they become available. We will ensure that fixes are applied to our cloud infrastructure without undue delay. SAP Global Security is constantly monitoring the situation.

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Meltdown and Spectre

Search notes and other material on https://support.sap.com/notes for

- CVE-2017-5753 CVE-2017-5715 CVE-2017-5754
- speculative execution vulnerabilities
- Meltdown Spectre

Linux

Note 2586312 - Linux: How to protect against speculative execution vulnerabilities?
Note 2591472 - IBM Z: How to protect against speculative execution vulnerabilities?

Windows

https://wiki.scn.sap.com/wiki/display/ATopics/SAP+on+Windows
→ Important SAP Notes

Note 2585591 - How to protect against speculative execution vulnerabilities on Windows?

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Meltdown and Spectre

Cloud

Note 2588225 - How to protect against speculative execution vulnerabilities on IBM Cloud?
Note 2588298 - Fixes for Speculative Execution Vulnerabilities on Alibaba Cloud
Note 2588044 - How to protect against speculative execution vulnerabilities on Google Cloud Platform (GCP)?
Note 2588867 - How to protect against speculative execution vulnerabilities on Microsoft Azure?
Note 2589580 - How to protect against speculative execution vulnerabilities on Amazon Web Services (AWS)?
Note 2588124 - How to protect against speculative execution vulnerabilities on Oracle Cloud Infrastructure?

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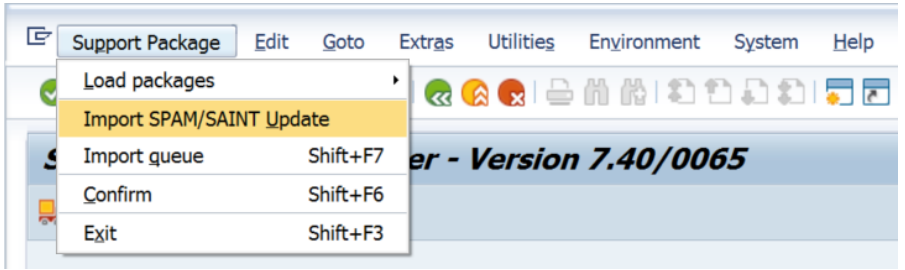
Note 2576306 - Transport-Based Correction Instruction (TCI) for Download of Digitally Signed SAP Notes (reloaded)

Good news: Instead of implementing notes 2408073, 2546220, and 2508268 manually (which would lead to multiple manual activities) you can implement the new TCI for `SNOTE` as described in note 2576306. You do not need to perform any manual activities in this case.

Prerequisite: Note 2187425 describes how to prepare the Note Assistant (Transaction SNOTE) to consume TCIs:



- `SPAM` Version 66 or higher
  (update `SPAM` via client `000`)
- plus Note Assistant Bootstrapping note:
  for SAP BASIS 700 Note 2446868
  for SAP BASIS 701,702 Note 2444141
  as of SAP BASIS 731 Note 1995550
- plus note 2520826

Note 2408073 still describes how to extract notes text files from digitally signed archive files in case `SNOTE` is not prepared in time.

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Note 2554853 - SAP NetWeaver download service for SAP Notes

Note 2554853 „SAP NetWeaver download service for SAP Notes" recommends to set
`ssl/client_ciphersuites = 918:PFS:HIGH::EC_P256:EC_HIGH`

This is secure and the most reasonable & equivalent recommendation as in note 510007.

Beginning with CommonCryptoLib 8.5.4 (see note 2288631), the cipher suite `3DES_EDE_CBC` was demoted from class `HIGH` to class `MEDIUM`, and will also become disabled by above parameter values. (You can disable cipher suite `3DES_EDE_CBC` via token `!e3DES` as well.)

Quite strict example (which might to lead to issues depending on the individual IT landscape):

```
ssl/ciphersuites =  550:PFS:HIGH:!e3DES:!mSHA1:TLS_FALLBACK_SCSV::EC_HIGH:+EC_OPT
ssl/client_ciphersuites = $(ssl/ciphersuites)
```

Prerequisite: Ensure that all clients and servers including legacy 3rd party software are able to work with remaining protocols and cipher suites. Enable logging about TLS properties of established TLS sessions according to note 2379540, check note 510007 first and be aware of note 2384290.
Execute `sapgenpse tlsinfo -c` to see the effective list of available protocols and cipher suites.

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Notes 1891583 / 2065596 - Restricting logon to the application server

You can restrict new logons to application servers using dynamically switchable profile parameter `login/server_logon_restriction`

0: No restriction (default)
All users can log on to the application server

1/**3**: A logon to the application server is allowed only if the user is assigned to a security policy containing attribute `SERVER_LOGON_PRIVILEGE` with value `1` (see transaction `SECPOL`)

2/**4**: No logon is allowed to the application server

The recommended values `3` respective `4` allow internal logons like the execution of ‘background job steps’ or ‘internal RFC calls’

Only new logons get blocked, existing sessions stay alive

Built-in user `SAP*` is able to logon always

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Note 2525392 - Update 2 to 2278931 and 1906212: Code injection vulnerability in Knowledge Provider

The simple solution of the previous notes (check if URL starts with `www.` or `http`) gets improved (check if URL match to regular expression `^(((http|https|file)(:\/\/)).*)+$`).

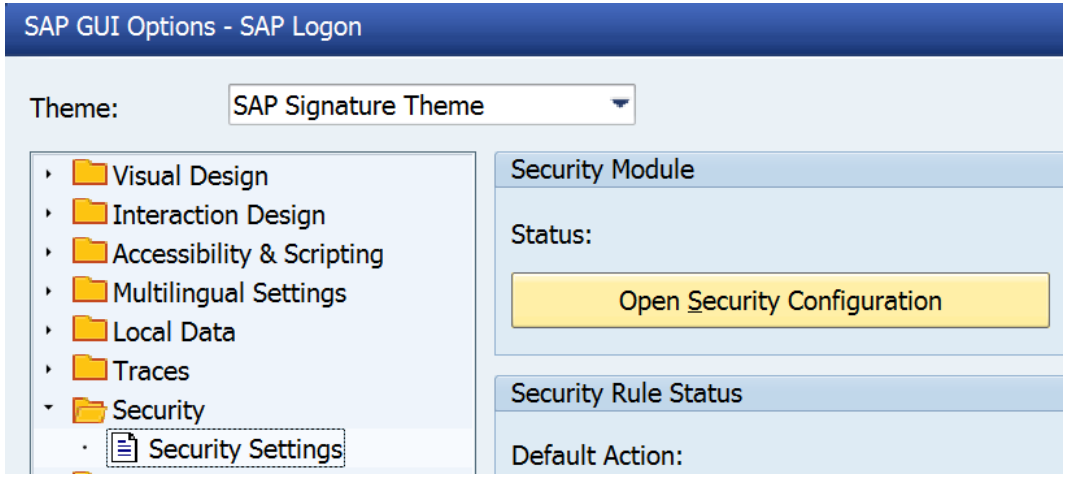
Implement this part using the Note Assistant, transaction `SNOTE`.

Notes 2278931 and 1906212 are touched with text update.

Why do we see an additional manual instruction?

The system sends the URL to the SAPGUI, which can execute additional checks before executing it (via the Browser).

The manual instruction just reminds you to run a security optimization project to develop and publish custom SAPGUI Security Settings.



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Note 2533541 - SQL Injection vulnerability in Olingo JPA

The Apache Oliglo Library is not part of any SAP standard product. This note is only relevant to you if you make use of the open source library in OData development processes.

Get the new version of the library from https://olingo.apache.org/doc/odata2/download.html in this case.

Conclusion:

- **Not needed for systems based on ABAP, Java, HANA, etc.**

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Note 2453871 - Cross-Site Scripting (XSS) vulnerability in SAP BusinessObjects Design Studio

Note 2453871 had no validity information and was not assigned to any SP (solved now).

Because of this it is visible as a required note for all systems (ABAP, Java, HANA, …) in application System Recommendations of the SAP Solution Manager.

The note 2453871 refers to notes 2376849 (1.6 SP 5) and 2555577 (1.6 SP 6)

Therefore, the same validity and SPs are relevant:

Validity

ANALYSISDESIGN-BIPCLNT	1.6	1.6
ANALYSISDESIGN-BIPSERV	1.6	1.6
ANALYSISDESIGN-RT-APPL	1.6	1.6
ANALYSISDESIGN-ECLIPSE	1.6	1.6
ANALYSISDESIGN-RT-CLNT	1.6	1.6
DESIGNSTUDIO-BIP-ADD-ON	1.6	1.6
DESIGNSTUDIO-CLIENT	1.6	1.6
DESIGNSTUDIO-NW	16.0	16.0
HCO_BI_AAS 16	16	

Support Packages & Patches

DESIGN STUDIO NW 1.6	SP005 respective SP006

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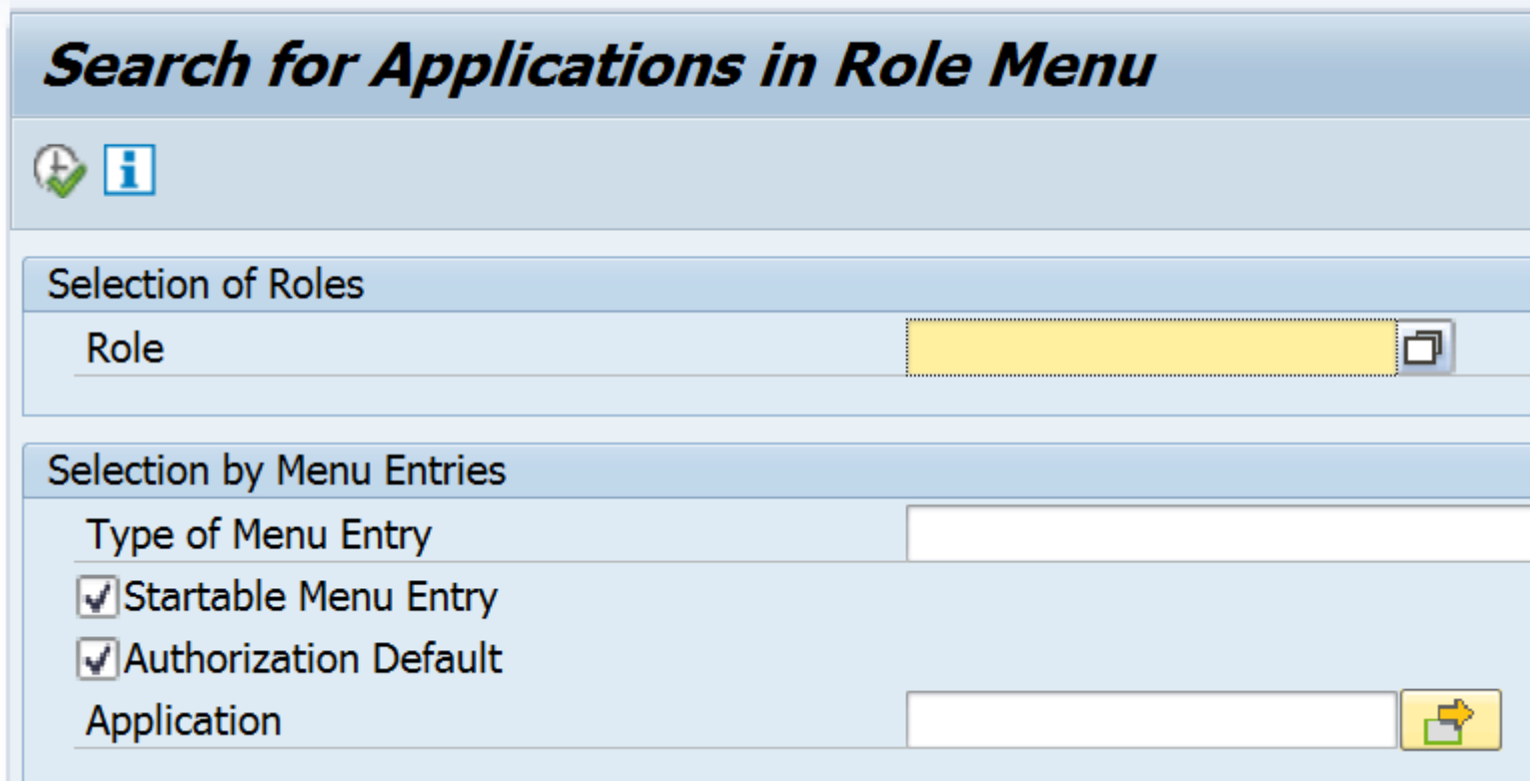
Note 2341600 - SUIM | Search in role menu RSUSR_ROLE_MENU

Use transaction `SUIM` respective report `RSUSR_ROLE_MENU` to find applications in role menus:

- Use report `RSUSR_ROLE_MENU`, i.e. to search for Fiori Catalogs (which provide authorizations), Fiori Groups (which show Fiori tiles), or OData services in role menus.
- Ensure to implement following notes: 2341600, 2449011, 2356418, 2369818, 2439307
- See Note 2449011 - SUIM | Search for startable applications in roles



Available as of SAP_BASIS 7.50

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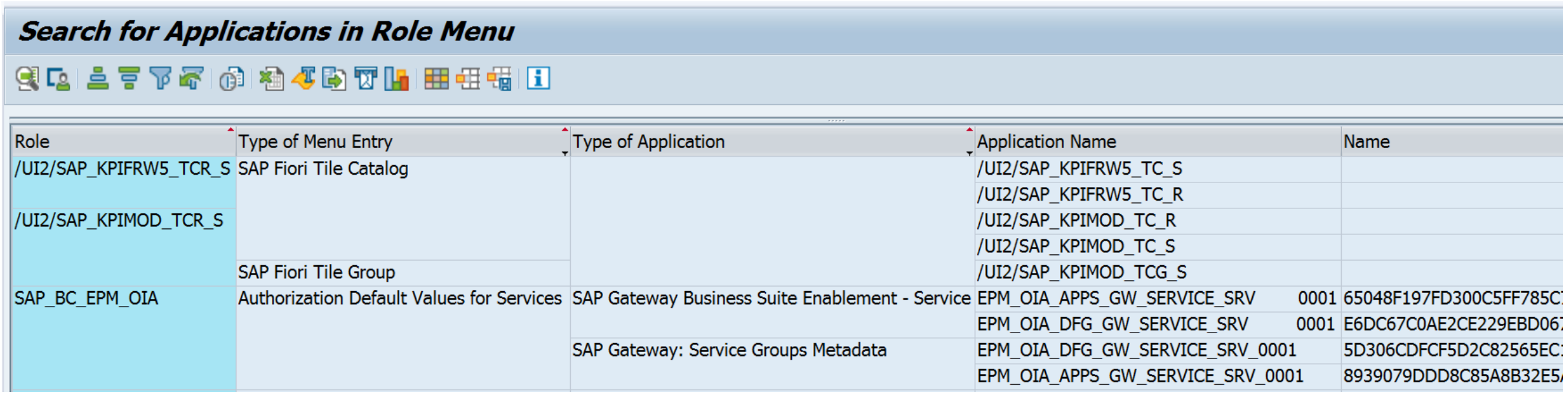
Note 2341600 - SUIM | Search in role menu RSUSR_ROLE_MENU

Tipp:

- **No selection on selection screen for “Type of Menu Entry” but use …**
- **Filter for “Type of Menu Entry”: *Fiori* and *Service***
- **Filter for “Type of Application”: = <empty> and *Gateway***
- **Show additional column “Name” (which shows the hash value)**
- **Save the Layout …**
- **and use this Layout on selection screen**



Search for Applications in Role Menu

Role	Type of Menu Entry	Type of Application	Application Name	Name
/UI2/SAP_KPIFRW5_TCR_S	SAP Fiori Tile Catalog		/UI2/SAP_KPIFRW5_TC_S	
			/UI2/SAP_KPIFRW5_TC_R	
/UI2/SAP_KPIMOD_TCR_S			/UI2/SAP_KPIMOD_TC_R	
			/UI2/SAP_KPIMOD_TC_S	
	SAP Fiori Tile Group		/UI2/SAP_KPIMOD_TCG_S	
SAP_BC_EPM_OIA	Authorization Default Values for Services	SAP Gateway Business Suite Enablement - Service	EPM_OIA_APPS_GW_SERVICE_SRV 0001	65048F197FD300C5FF785C
			EPM_OIA_DFG_GW_SERVICE_SRV 0001	E6DC67C0AE2CE229EBD067
		SAP Gateway: Service Groups Metadata	EPM_OIA_DFG_GW_SERVICE_SRV_0001	5D306CDFCF5D2C82565EC
			EPM_OIA_APPS_GW_SERVICE_SRV_0001	8939079DDD8C85A8B32E5

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December 2017

Topics December 2017

Note 2449757 - Additional Authentication check in Trusted RFC on own system

Note 2357141 - OS Command Injection vulnerability in Report for Terminology Export

SAP HANA Security Notes

Note 2427292 - Information disclosure in SAP MMC Console
Note 2500044 - Full access to SAP Management Console

Note 2562127 - R/3 Support Remote Connection with SNC / SSO
Note 2562154 - HTTP Remote Connection with SNC / SSO

Note 2531131 - Switchable Authorization checks for RFC BCA_DIM_WRITE_OFF in Loans

Recommended Notes for System Recommendations

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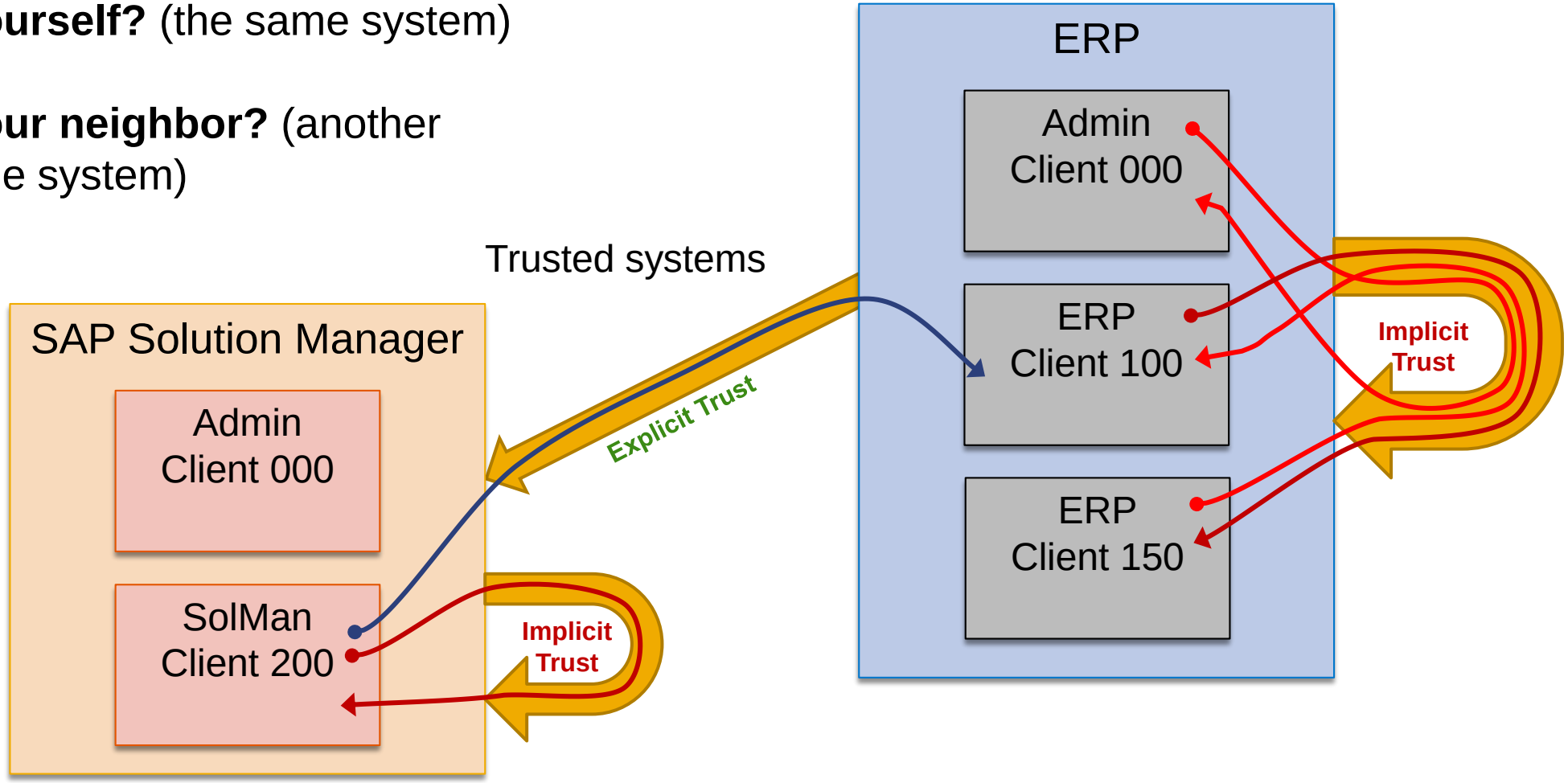
Note 2449757 - Additional Authentication check in Trusted RFC on own system

Do you trust yourself? (the same system)

Do you trust your neighbor? (another client of the same system)



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Note 2449757 - Additional Authentication check in Trusted RFC on own system

A Trusted RFC connection can be established to a different client or a different user on the same system, although no explicit Trusted/Trusting Relation to the own system has been defined via transaction `SMT1`.

Mitigation: Authorizations for `S_RFCACL` are always required

As of Kernel 7.21 patch 920, 7.22 patch 417, 7.45 patch 519, 7.49 patch 310 you can activate profile parameter `rfc/selftrust` to force that Trusted RFC requires an explicit trust relationship even within the same system.

Caution: Wait for Kernel update as described in note 2614667 before activating the parameter in systems where you want to define Trusted RFC destinations within the same system.

Related note 2413716 - Setup of Trusted RFC in GRC Access Control EAM

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Note 2357141 - OS Command Injection vulnerability in Report for Terminology Export

Published in November 2016, updated in November 2017

No update of automatic correction instruction (which solves the OS Command Injection vulnerability).

New manual instruction to copy & modify a GUI status and to block functions 'Execute and Print' and 'Execute in Background' for submitting report `TERM_TBX_EXPORT`.

You need to implement this modification to be able to execute the report again only if you are using report `TERM_TBX_EXPORT` (which is not the case) and if you do not have one of the listed Support Packages.

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SAP HANA Security Notes

Note 2520995 - [CVE-2017-16679] URL Redirection vulnerability in Startup Service

- Affected is the SAP Start Service/Host Agent, which is part of the SAP HANA system, too.
- The Startup Service allows an attacker to redirect users to a malicious site due to insufficient URL validation.
- The issue is fixed with SAP Host Agent/SAP Start Service in SAP HANA with the following revisions:
  HANA 1.0 SPS 12 revision 122.14, HANA 2.0 SPS 01 revision 12.03, HANA 2.0 SPS 02 revision 22

Note 2549983 - [CVE-2017-16687] Information Disclosure in SAP HANA XS classic user self-service

- Affected are the user self-services, which are part of SAP HANA XS classic content. The user self-services are deactivated by default. Deactivated user self-services they are not affected by this issue. (See note how to check status of self-services.)
- An unauthenticated user could use the error messages to determine if a given username is valid.
- The issue is fixed with the following HANA revisions:
  HANA 1.0 SPS 12 revision 122.10, HANA 2.0 SPS 00 revision 2.02, HANA 2.0 SPS 01 revision 12, HANA 2.0 SPS 02

Note 2522510 - [CVE-2017-16680] Potential audit log injection vulnerability in SAP HANA XS Advanced

- Affected is the XS advanced runtime.
- Attackers can inject control characters in XSA's logs. The interpretation of audit log files could be hindered or misdirected.
- Fixed with XSA 1.0.63

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Note 2427292 - Information disclosure in SAP MMC Console
Note 2500044 - Full access to SAP Management Console

Both notes addresses potential security vulnerabilities about Java Reflection.

Older J2EE versions, which do not yet use a key to trigger web services, are not affected. This leads to a loose correlation between kernel and J2EE version.

Recommended settings (no business impact):

- `jstartup/service_acl = service:*; library:*; interface:*; com.sap.*; sap.com.*`
  Solution available with Kernel 7.22 patch 310, 7.45 patch 411, 7.49 patch 210
  (Add two more entries to block custom coding only)
- `jstartup/secure_key = 1`
  Solution available with Kernel 7.45 patch 516 (600),7.49 patch 312, 7.53 patch 14

Mitigation:

- **Strictly restrict development and deployment rights on your J2EE instance – which you should do anyway.**

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Note 2562127 - R/3 Support Remote Connection with SNC / SSO
Note 2562154 - HTTP Remote Connection with SNC / SSO

You want to encrypt all communications channels, i.e. between user network and server network. You have activated SNC either as

- **SNC for Single Sign-On (using client certificates)**
- **SNC Client encryption (still using user/password)**

No SSO Licence required even if SAP Support uses SSO to connect to your systems!

and you want to enforce that SNC is used for all connections by deactivating profile parameter `snc/accept_insecure_gui` (old) respective activating `snc/only_encrypted_gui` (recommended).

Implement the notes to allow SAP support remote connections using the Secure Network Communication (SNC) protocol, too.

(Workaround used so far: Set `snc/accept_insecure_gui=U` to allow exceptions for such users)

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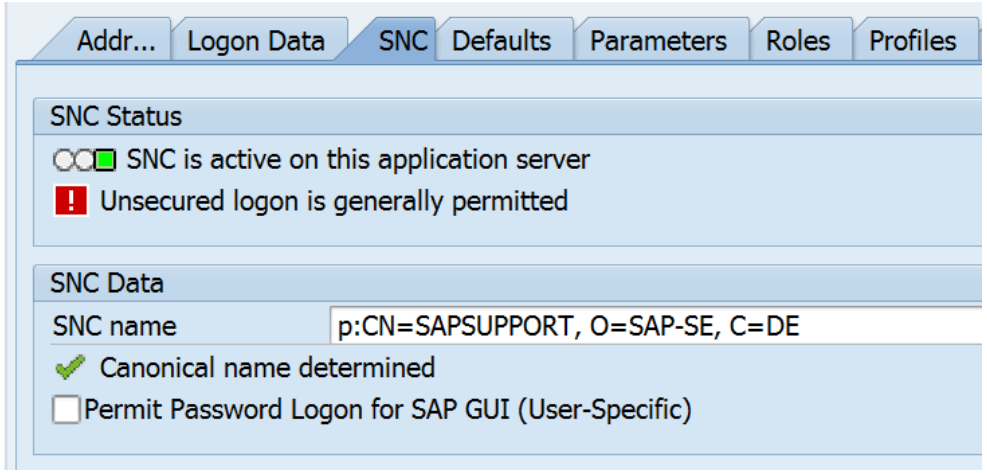
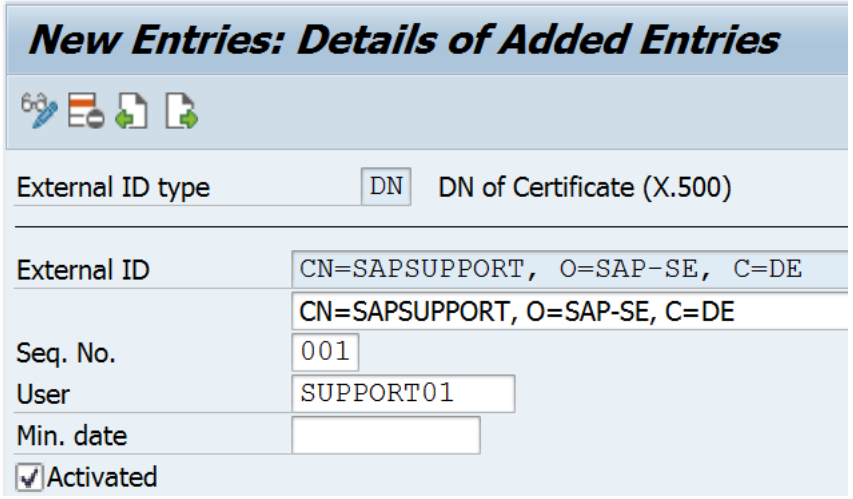
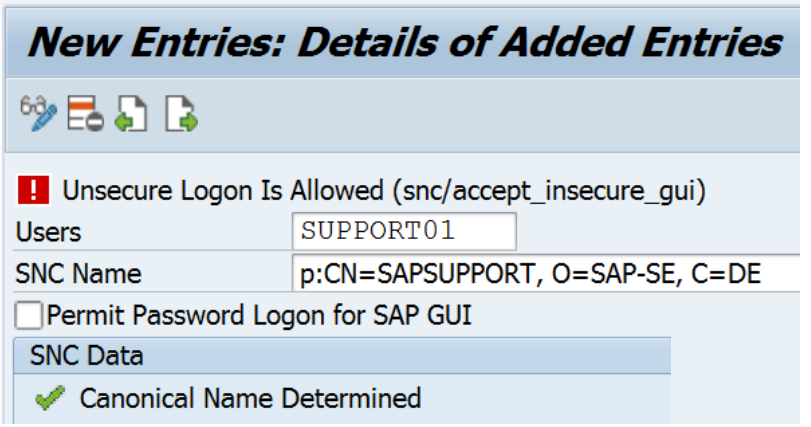
Note 2562127 - R/3 Support Remote Connection with SNC / SSO
Note 2562154 - HTTP Remote Connection with SNC / SSO

One SNC Name `CN=SAPSUPPORT, O=SAP-SE, C=DE` is used for all SAP support users. Assign this name to all such user accounts in all relevant clients, i.e. client `000` and the productive client.

- **in transaction `SU01` or**
  via transaction `SM30` for table `USRACL` (for SAPGUI)
  (Take care to add leading `p:` to the SNC name)
- **via transaction `SM30` for table `VUSREXTID`**
  with extid type `DN` (for HTTP connections)







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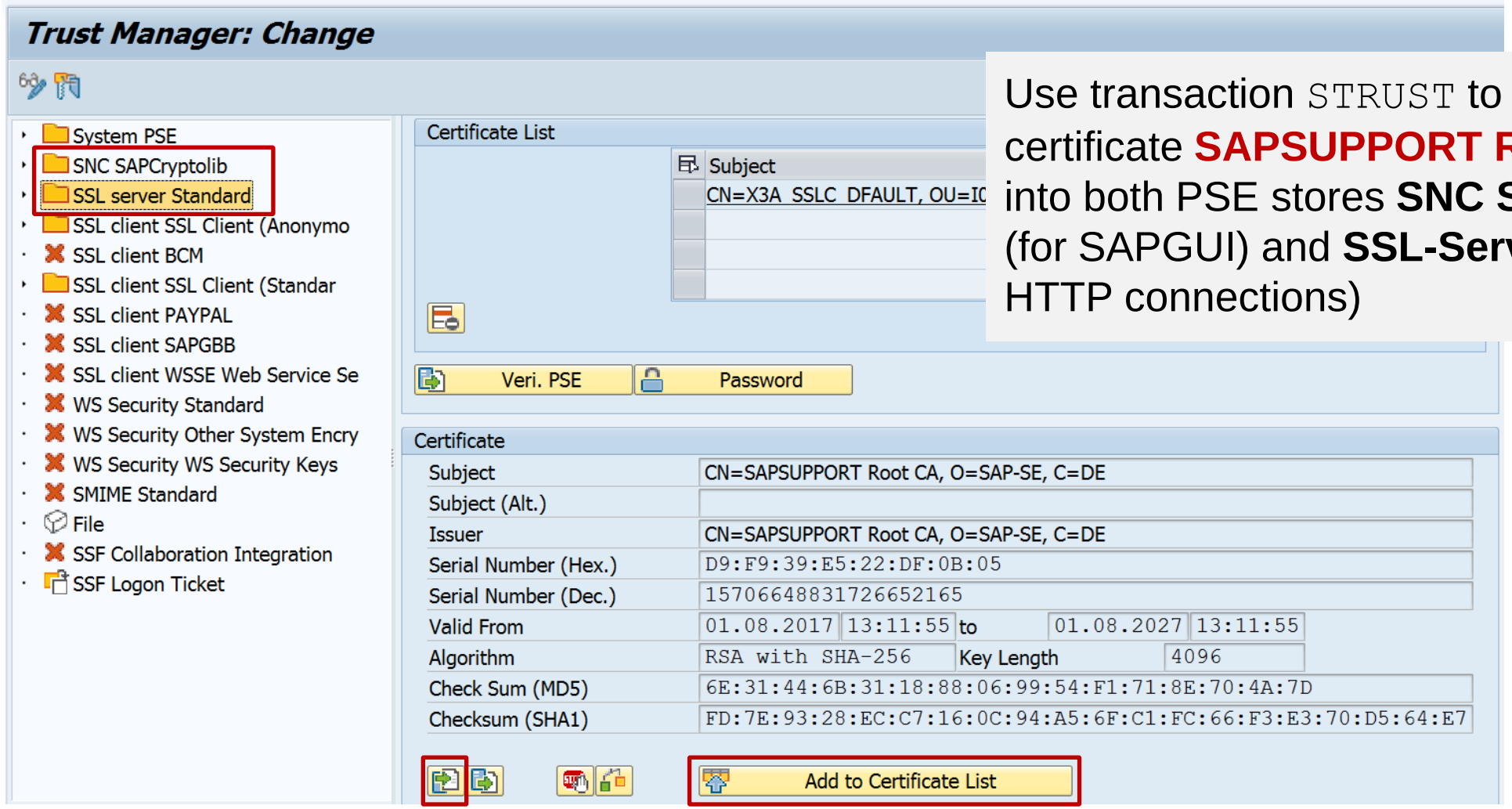
Note 2562127 - R/3 Support Remote Connection with SNC / SSO
Note 2562154 - HTTP Remote Connection with SNC / SSO



Use transaction `STRUST` to import the root certificate **SAPSUPPORT Root CA** into both PSE stores **SNC SAPCryptolib** (for SAPGUI) and **SSL-Server Standard** (for HTTP connections)

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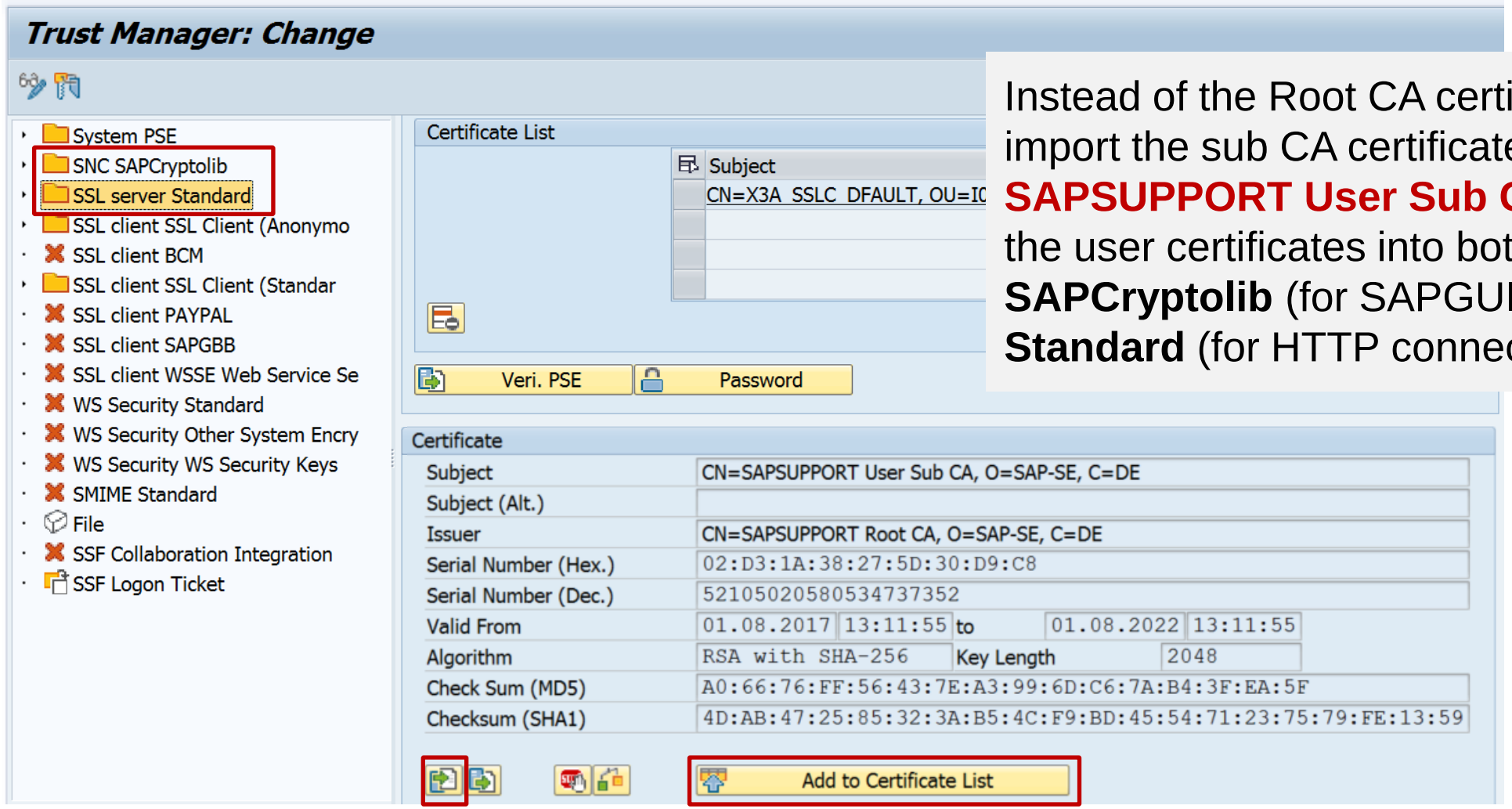
Note 2562127 - R/3 Support Remote Connection with SNC / SSO
Note 2562154 - HTTP Remote Connection with SNC / SSO



Instead of the Root CA certificate you can import the sub CA certificate **SAPSUPPORT User Sub CA** which issues the user certificates into both PSE stores **SNC SAPCryptolib** (for SAPGUI) and **SSL-Server Standard** (for HTTP connections)

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Note 2562127 - R/3 Support Remote Connection with SNC / SSO
Note 2562154 - HTTP Remote Connection with SNC / SSO

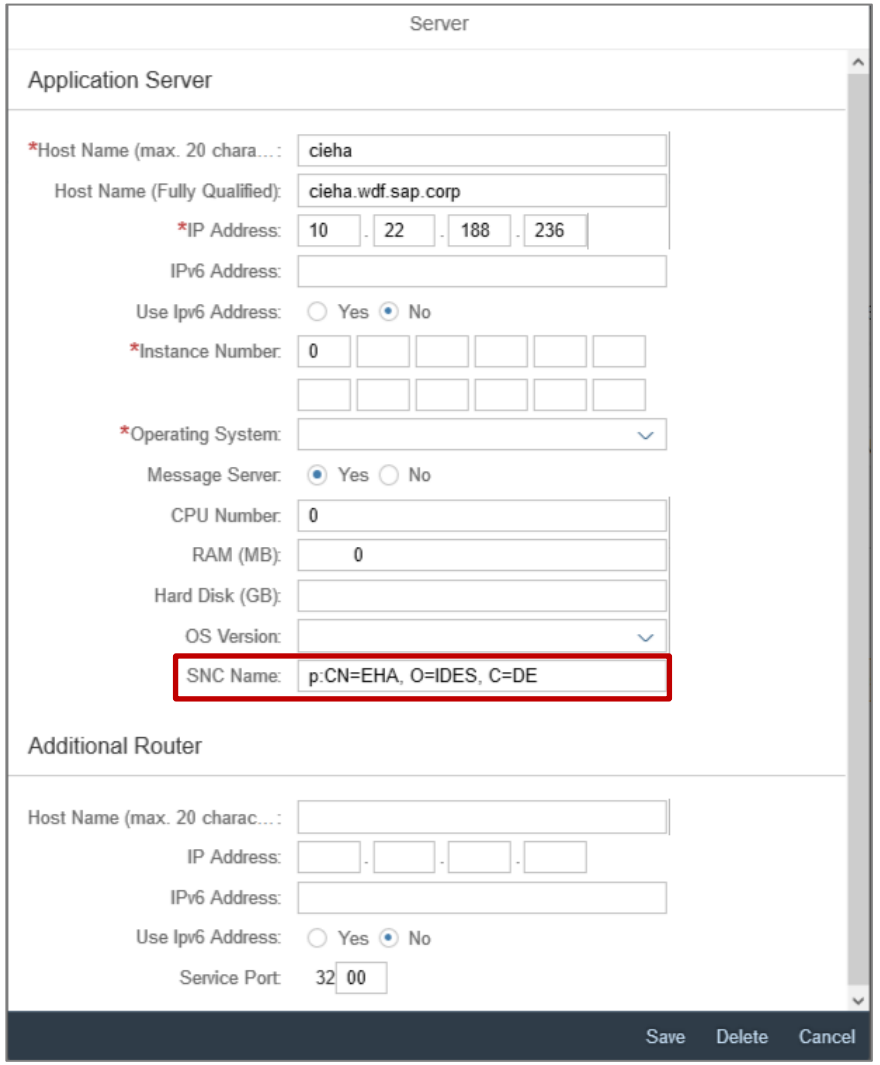
Add the SNC name of your system at "Servers & SAPRouters" for your application server(s)

(EHA) ★ ★ Edit ...

Software | Servers & SAProuters | License Key

DB/Application/Other Servers +

Server Type	Host Name	Instance Number	IP Address	Operating System	Add. Router Host Name
Application Server					
Application Server	cldvmxli00183				
Application Server	cieha	00	10.22.188.236	Windows NT	
Database Server					
Database Server				LINUX	



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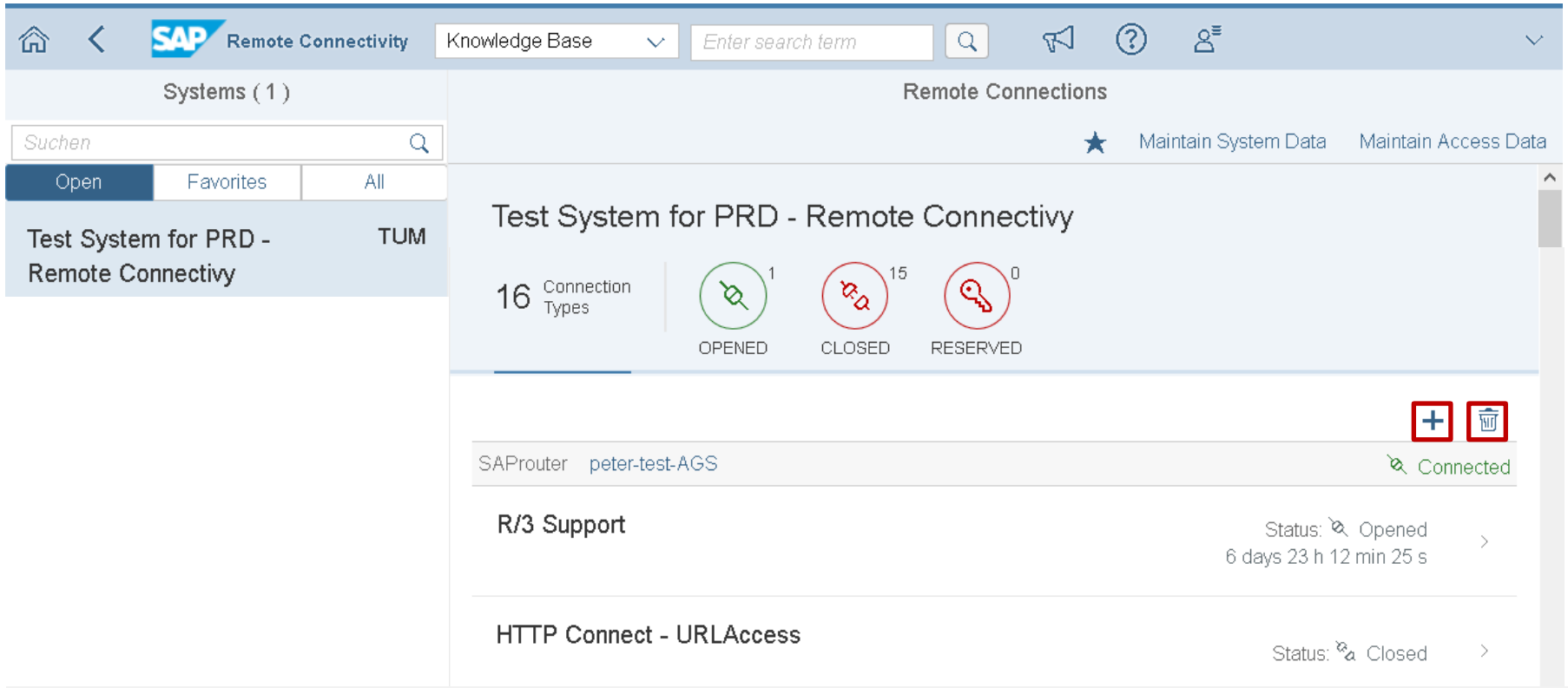
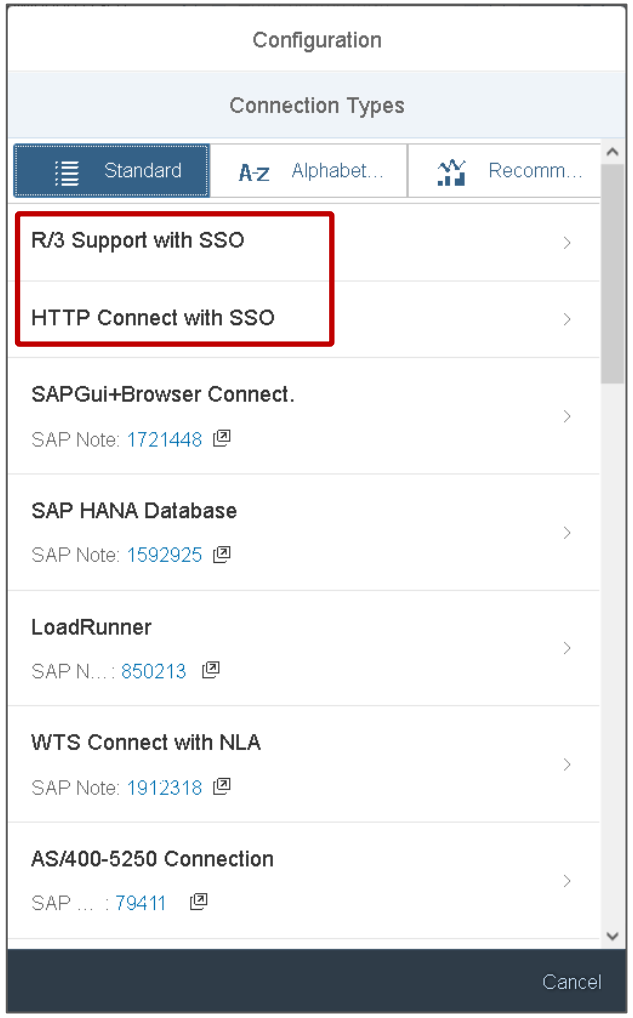
Note 2562127 - R/3 Support Remote Connection with SNC / SSO
Note 2562154 - HTTP Remote Connection with SNC / SSO

Add the new protocols…

… and after successful testing, remove the non-SNC protocols





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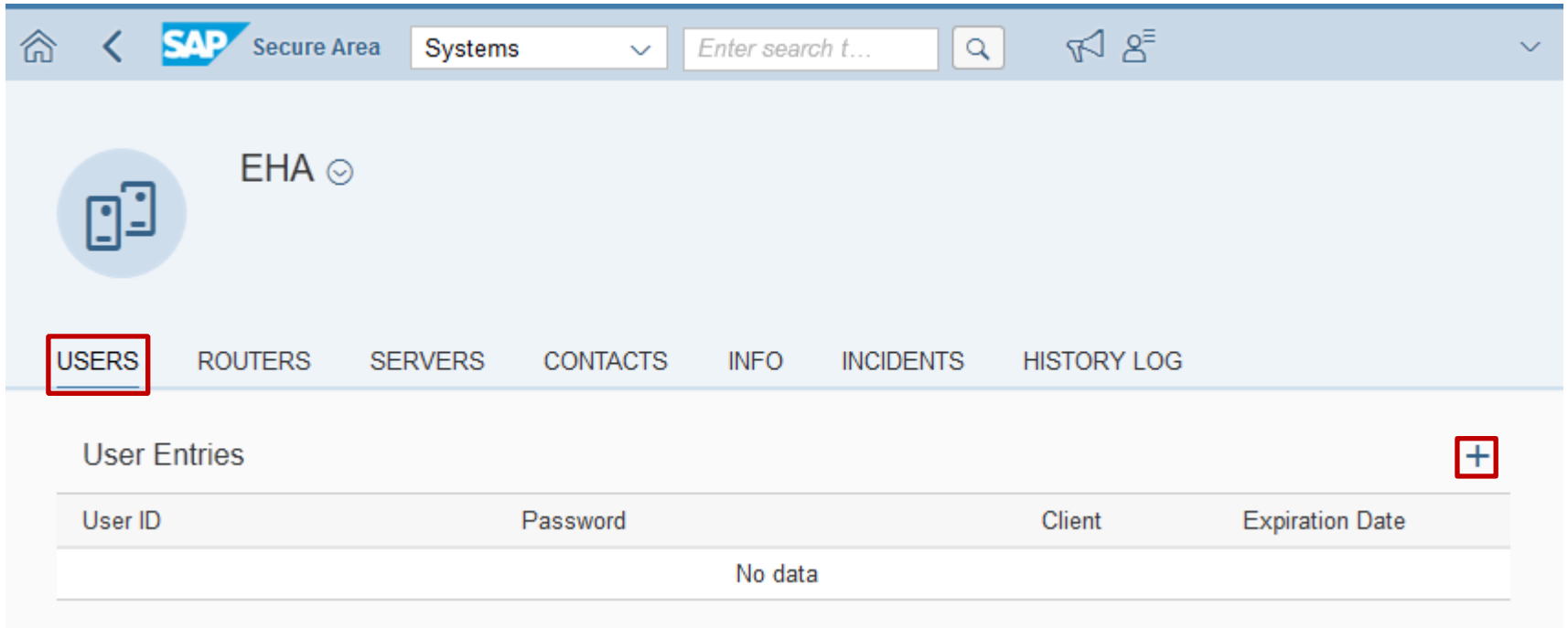
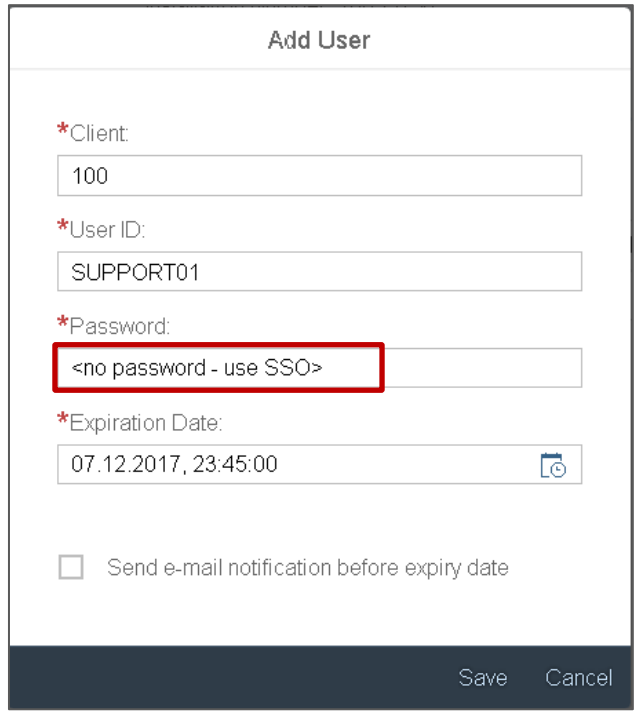
Note 2562127 - R/3 Support Remote Connection with SNC / SSO
Note 2562154 - HTTP Remote Connection with SNC / SSO

SAP support users do not need a password anymore
Enter some explaining text instead of a password
You still should assign the user entry to the incident to tell about the user name!





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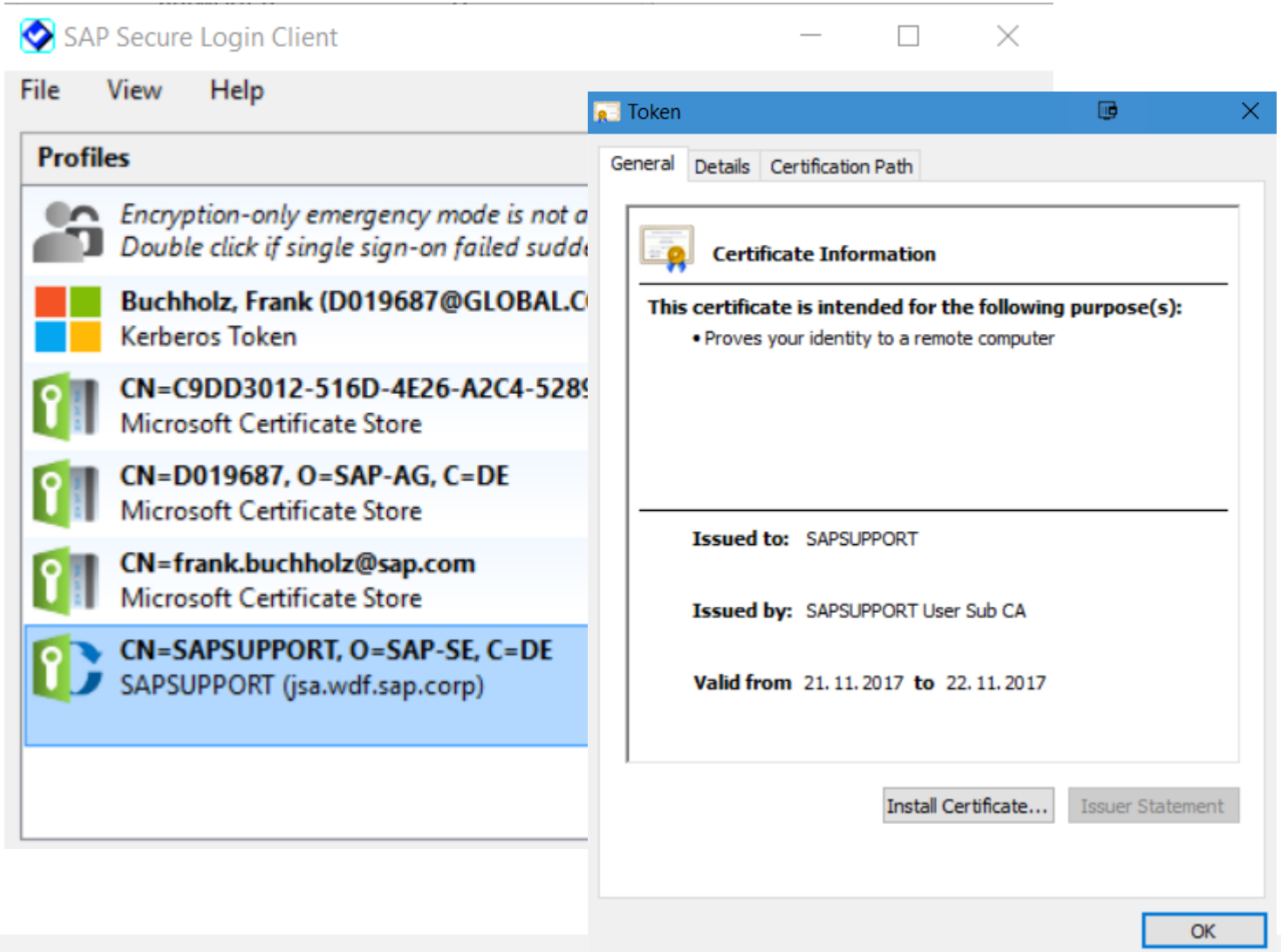
Note 2562127 - R/3 Support Remote Connection with SNC / SSO
Note 2562154 - HTTP Remote Connection with SNC / SSO

Now, SAP support users can use the new connection types

SAP issues temporary certificates to support users which are be used by the new connection types



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Note 2562127 - R/3 Support Remote Connection with SNC / SSO
Note 2562154 - HTTP Remote Connection with SNC / SSO

Remote Support
https://support.sap.com/remoteconnection

Related notes (maybe not updated yet):

Note 812732 - R/3 support service connection

Note 1773689 - How to add logon credentials securely to an incident - SAP ONE Support Launchpad

Blogs:

…

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Note 2531131 - Switchable Authorization checks for RFC BCA_DIM_WRITE_OFF in Loans (FI-CAX-FS)

The note is not visible anymore since 2.11.2017.

Following Support Packages for Software Component FI-CAX contain the coding part of the solution:

6.02 SP 20,	**6.04 SP 20,**	**6.05 SP 17,**	**6.06 SP 20,**	
6.17 SP 15,	**6.18 SP 9,**	**8.00 SP 6,**	**8.01 SP 4,**	**8.02 SP 1**

Do not forget the general manual configuration for this type of correction “SACF”:

Collective maintenance of switchable authorization scenarios is done after system updates using transaction `SACF_COMPARE`.

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Recommended Notes for System Recommendations 7.2

Note 2563064 - SysRec: Kernel note is missing
Note 2461414 - SysRec: notes for obsolete kernel versions are displayed

Note 2556623 - SysRec: Corrections for Solution Manager 720 Fiori UI
Note 2536918 - SysRec: Display all systems and notes at one time

Note 2549846 - SysRec: Date in filter bar gets changed
(omit this note if implementation fails)

Note 2545616 - SysRec 7.2: Note is missing in Note Overview

Note 2542562 - SysRec: Notes are not calculated for software component with empty support package level in LMDB

In case of an upgrade from 7.1 to 7.2:
Note 2547598 - SysRec: check configuration data
Execute report `AGSNO_CHECK_MIG` after installing this note in all systems to show old settings
Note 2547915 - SysRec： copy configured systems from 7.1 to 7.2
Execute report `AGSNO_ADJUST_SYSTEM` after installing this note in all systems to migrate old settings

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October 2017

Topics October 2017

Note 2408073 - Handling of Digitally Signed notes in SAP Note Assistant (reloaded)

Note 2371726 - Code Injection vulnerability in Text Conversion

Note 2269032 - Authorization check for S_PROGRAM

Note 2457014 - Missing Authorization check in PA-PA-US

Note 2531241 - Disclosure of Information/Elevation of Privileges LVM 2.1 and LaMa 3.0
Note 2520772 - Disclosure of Information/Elevation of Privileges LaMa 3.0

Check RFC Callback protection using Configuration Validation

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Note 2408073 - Handling of Digitally Signed notes in SAP Note Assistant (reloaded)

It's not possible to prepare SNOTE automatically by implementing notes 2518518 and 2408073 anymore. Note 2518518 is archived, instead you have to follow some new manual implementation steps in note 2408073:

- **Create a table**
- **Create an application log object**
- **Create messages**
- **Change a GUI status and GUI title**
- **Create text elements**

Note 2408073 still describes how to extract notes text files from digitally signed archive files in case SNOTE is not prepared in time.

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Note 2371726 - Code Injection vulnerability in Text Conversion

Critical note:
(correction of old
Security Note 1673713)

```
  COMMAND1(9)    = 'mkdir -p '.
*>>>> START OF DELETION <<<<<
* Begin note 1673713
  FIND REGEX '[^A-Z a-z 0-9 _ \, \^ % $ # @ ! \~ \{ \} \[ \] \; \( \) \- \`]' IN DIRNAME MATCH COUNT mcnt.
*>>>> END OF DELETION <<<<<<<

*>>>> START OF INSERTION <<<<<
* Begin note 2371726
* Begin note 1673713
*  FIND REGEX '[^A-Z a-z 0-9 _ \, \^ % $ # @ ! \~ \{ \} \[ \] \; \( \) \- \`]' IN DIRNAME MATCH COUNT mcnt.
  FIND REGEX '[^A-Z a-z 0-9 \w]' IN DIRNAME MATCH COUNT mcnt.
* End note 2371726
*>>>> END OF INSERTION <<<<<<
```

First published in November 2016 with version 5 – What was changed now with version 6?

According to the Advisory we already had seen the correct solution:
Note 2371726 Version 5 - Code Injection vulnerability in Text Conversion
Function `BRAN_DIR_CREATE` now restricts the name of the directory to be created to a real name, allowing only "_" as special character.

- Implement the new version of the note using `SNOTE` but do not

Don't worry if you cannot apply version 6 on top of version 5.

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Note 2269032 - Authorization check for S_PROGRAM

The authorization check for execution of reports `S_PROGRAM` associated with an report authorization group has been made stricter in `SAP_BASIS` 7.40 and 7.50.

Activities of authorization object `S_PROGRAM`:

`SUBMIT`	Execute report
`BTCSUBMIT`	Schedule report for background processing
`VARIANT`	Edit variants (but not execute reports anymore)

Use `SE16` for table `AGR_1251` with `OBJECT=S_PROGRAM`, `FIELD=P_ACTION`, and `LOW=SUBMIT` or `VARIANT` to find roles which contain `VARIANT` but not `SUBMIT`:

Use report `RSCSAUTH` to validate and maintain report authorization group assignments.

Data Browser: Table AGR_1251 Select Entries 247

Check Table...

MAN	AGR_NAME	COUNTE	OBJECT	AUTH	VARIA	FIELD	LOW
001	SAP_SM_DASHBOARDS_ADMIN	45	S_PROGRAM	T_F741003700		P_ACTION	SUBMIT
001	SAP_SM_ESH_ADMIN	23	S_PROGRAM	T_F760011900		P_ACTION	SUBMIT
001	SAP_SM_ICC_ADMIN	17	S_PROGRAM	T_S763018400		P_ACTION	SUBMIT
001	SAP_SM_INC_EXTRACTOR	104	S_PROGRAM	T_S790503600		P_ACTION	VARIANT
001	SAP_SM_MS_SETTINGS	57	S_PROGRAM	T_S790588800		P_ACTION	SUBMIT
001	SAP_SM_SA38	1	S_PROGRAM	T_SF05076300		P_ACTION	SUBMIT

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Note 2457014 - Missing Authorization check in PA-PA-US

Application specific security correction for distributed reporting.

With this note the **RFC enabled function module `HR_EXPORT_TO_OTHER_SYS_US_CE`** calls Business Add-In `HRPAD00AUTH_DIST` with a default implementation restricting the executable reports to reports using HR logical databases – which will be successful in this case if the BAdI is active. This Business Add-In was delivered with note 1531288.

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Notes 2531241 and 2520772 - Disclosure of Information/Elevation of Privileges LVM 2.1 and LaMa 3.0

Both notes target SAP Landscape Management (LaMa) which was formerly known as Landscape Virtualization Management (LVM)**.**

This application automates system operations and requires to store passwords of managed systems in the Secure Store of Java.

Both notes propose following manual actions:

- **Install the patch**
  VCM LVM 2.1 SP 10 patch 1
  VCM LVM 3.0 SP 4 patch 1
  VCM LVM ENTERPRISE 3.0 SP 4 patch 1

- **Identify all stored passwords and consider to**
  - Change these passwords in the managed systems
  - Delete these passwords from the store (but you cannot get rid of them from log files etc)

Collective note 2350252 - SAP Landscape Management 3.0 - Standard edition

DSAG documents and events about LaMa: https://www.dsag.de/search/site/lama (German)

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Check RFC Callback protection using Configuration Validation

Security Whitepaper https://support.sap.com/securitywp
→ SAP Security Recommendations: Securing Remote Function Calls (RFC)

Online Help

Notes about RFC callback – Information:

Note 2058946 - Maintenance of callback positive lists before Release 7.31
Note 1971118 - No RFC callback check
Note 1686632 - Positive lists for RFC callback

Notes about RFC callback – Required allowlist entries:

Comment in Blog “Remote Code Analysis in ATC for Developers” (May 2019)
Note 2585923 - CUA: Text comparison (callback whitelist) (February 2018)
Note 2251931 - Runtime error CALLBACK_REJECTED_BY_WHITELIST in graphical Screen Painter
Note 2133349 - Error RFC_CALLBACK_REJECTED when starting tp
Note 1992755 - RFC callback deactivated → transport tools no longer work

Notes about RFC callback – Custom code:

Note 1515925 - Preventing RFC callbacks during synchronous RFC

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Check RFC Callback protection using Configuration Validation

Notes about RFC callback – Kernel updates:

Note 2523719 - Internal RFC Callback rejected by UCON
Note 2483870 - RFC Callback whitelist check for destination BACK [7.45 patch 515, 7.49 patch 221]
Note 2463707 - RFC Callback whitelist check for internal calls [7.45 patch 515, 7.49 patch 215]
Note 2173003 - Short dump CALLBACK_REJECTED_BY_WHITELIST, function module name and destination missing [7.21 patch 419, 7.22 patch 2, 7.41 patch 115, 7.42 patch 29, 7.43 patch 6]
[…]

Notes about RFC callback – ABAP updates:

Note 2382935 - Generation of RFC Callback Whitelist fails [SAP_BASIS 7.40 SP 17, 7.50 SP 7, 7.51 SP 2]
Note 2235513 - External RFC callback to customer systems in SNOTE [SAP_BASIS 7.02 SP 18, 7.10 SP 21, 7.11 SP 16, 7.30 SP 15, 7.31 SP 18, 7.40 SP 14, 7.50 SP 2]
Note 1686632 - Positive lists for RFC callback [SAP_BASIS 7.02 SP 17, 7.10 SP 19, 7.11 SP 14, 7.20 SP 8, 7.30 SP 12, 7.31 SP 13, 7.40 SP 7]

Notes about RFC callback – Security Audit Log:

Note 2463645 - SE92 | Correction for SAL event definitions
Note 2128095 - SAL | Missing parameters in DUI, DUJ, and DUK messages
Note 1968729 - SAL: Message definition for RFC callback
Note 539404 - FAQ: Answers to questions about the Security Audit Log

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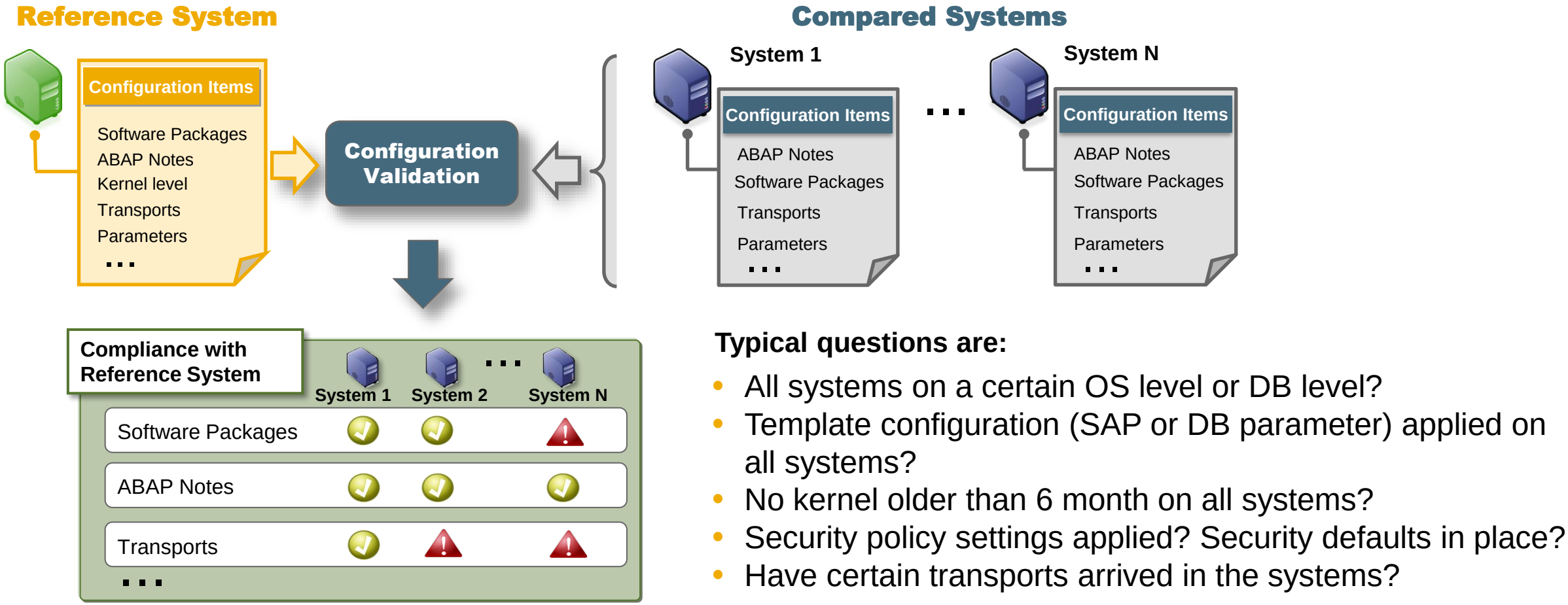
Check RFC Callback protection using Configuration Validation

The Idea behind Configuration Validation

A reporting to understand how homogeneous the configuration of systems is



Typical questions are:

- All systems on a certain OS level or DB level?
- Template configuration (SAP or DB parameter) applied on all systems?
- No kernel older than 6 month on all systems?
- Security policy settings applied? Security defaults in place?
- Have certain transports arrived in the systems?

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Check RFC Callback protection using Configuration Validation

You use Configuration Reporting to show cross-system reports about configuration settings

The following Configuration Stores are used to check RFC Callback protection:

`ABAP_INSTANCE_PAHI`	**Profile Parameters** **Compliance rule: `rfc/callback_security_method = 3`**
`RFCDES_TYPE_3`	**RFC Destinations** **Comliance rule: `CALLBACK_WHITELIST_ACTIVE = X`**

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Check RFC Callback protection using Configuration Validation
Transaction CCDB

Main state	Landscape	Group Source	Store Name	Group Name	Store Type	Component Version
Correct	ABAP Technical System (M85~ABAP)	ABAP	BGRFC_CONFIGURATION	SAP_NETWEAVER_GATEWAY	Table Store	SAP NW GATEWAY FOUNDATION 7.40
Correct	ABAP Technical System (M85~ABAP)	ABAP	RFCDES	RFC-DESTINATIONS	Table Store	SAP BASIS 7.40
Correct	ABAP Technical System (M85~ABAP)	ABAP	RFCDES_TYPE_3	RFC-DESTINATIONS	Table Store	SAP BASIS 7.40
Correct	ABAP Technical System (M85~ABAP)	ABAP	RFCDES_TYPE_3_CHECK	RFC-DESTINATIONS	Table Store	SAP BASIS 7.40
Correct	ABAP Technical System (M85~ABAP)	ABAP	RFCDES_TYPE_G	RFC-DESTINATIONS	Table Store	SAP BASIS 7.40
Correct	ABAP Technical System (M85~ABAP)	ABAP	RFCDES_TYPE_H	RFC-DESTINATIONS	Table Store	SAP BASIS 7.40
Correct	ABAP Technical System (M85~ABAP)	ABAP	RFCDES_TYPE_L	RFC-DESTINATIONS	Table Store	SAP BASIS 7.40
Correct	ABAP Technical System (M85~ABAP)	ABAP	RFCDES_TYPE_T	RFC-DESTINATIONS	Table Store	SAP BASIS 7.40
Correct	ABAP Technical System (M85~ABAP)	ABAP	RFCSYSACL	ABAP-SECURITY	Table Store	SAP BASIS 7.40

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Check RFC Callback protection using Configuration Validation
Transaction CCDB

History	RFCDEST	RFCTYPE	CALLBACK_WHITELIST	CALLBACK_WHITELIST_ACTIVE	LOGON_CLIENT	LOGON_USER
	BGRFC_SUPERVISOR	3			001	BGRFC_SUSR
1	M11CLNT800_S4H262_04	3			800	GRCADM
	M85	3				
	M85CLNT001	3				
1	SAP-OSS	3		X	001	S0005141447
1	SAP-OSS-LIST-O01	3		X	001	S0005141447
1	SAPCMP	3		X	001	SAPCMDB_RFC
2	SAPNET_RTCC	3		X	001	ST14_RTCC
1	SAPOSS	3		X	001	OSS_RFC
1	SDCC_OSS	3		X	001	SDCC_NEW
1	SM_M11CLNT800_LOGIN	3			800	
1	SM_M11CLNT800_READ	3			800	SM_M85
1	SM_M11CLNT800_TMW	3			800	SMTMM85
1	SM_M11CLNT800_TRUSTED	3			800	
					800	

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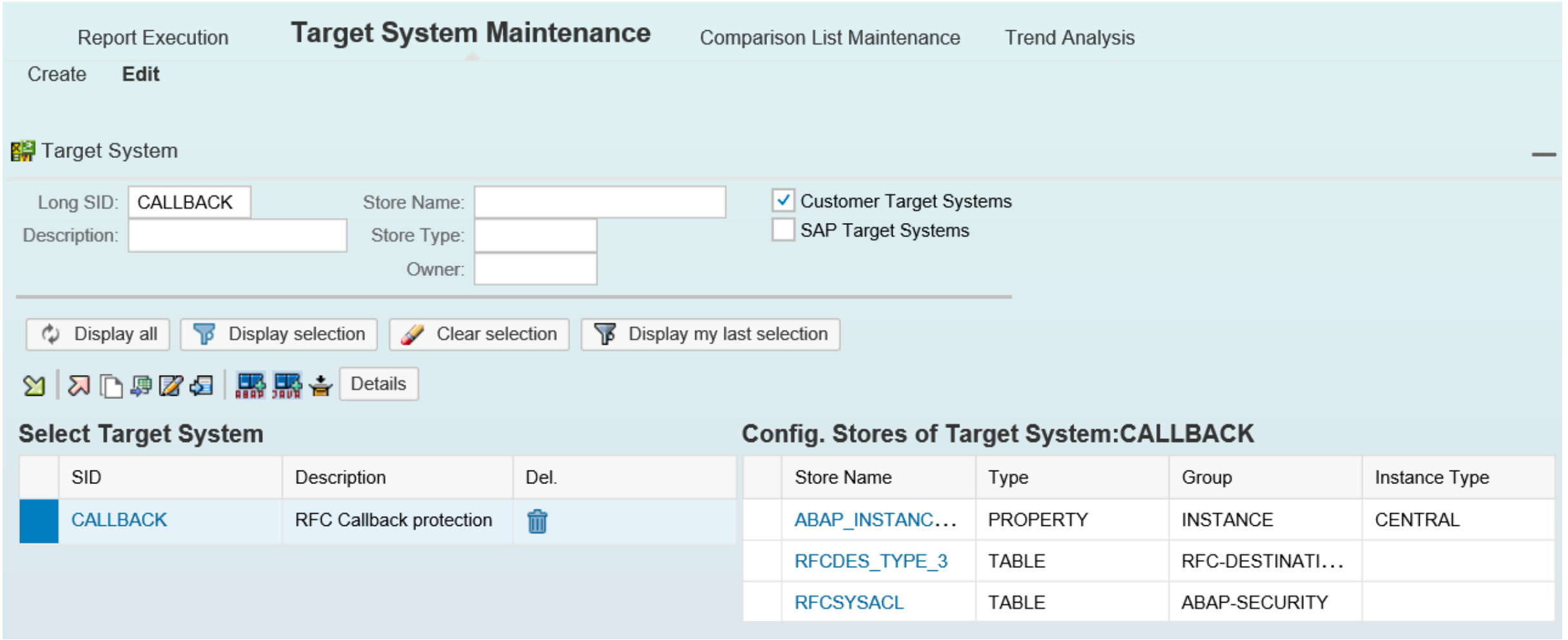
Check RFC Callback protection using Configuration Validation



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Check RFC Callback protection using Configuration Validation

Target System : CALLBACK / Store Name : ABAP_INSTANCE_PAHI

Comparison Store: M85 / 0050561 | Change | Find: | Find | Find Next | Replace with: | in: All colu | Replace

Sel.	Operator	Parameter	Operator	Value Low	Value High	Comparison…	T…	W…
☐	=	rfc/callback_security_method	=	3				

Configuration Items

SAP System ID	Instance	Config. Item	Config. Item Value	Cv. DataOperator	Compliance	Compliant (1=Yes, -1=No, ' '=Not valuated)
M11	wdflbmt0722_M11_10	rfc/callback_security_method	1	= 3	No	-1
	wdflbmt0723_M11_10	rfc/callback_security_method	1	= 3	No	-1
	wdflbmt8221_M11_10	rfc/callback_security_method	1	= 3	No	-1
	wdflbmt8222_M11_10	rfc/callback_security_method	1	= 3	No	-1
M24	wdflbmt0788_M24_10	rfc/callback_security_method	#	= 3	Item not found	-1
	wdflbmt8205_M24_10	rfc/callback_security_method	#	= 3	Item not found	-1
	wdflbmt8206_M24_10	rfc/callback_security_method	#	= 3	Item not found	-1
	wdflbmt8207_M24_10	rfc/callback_security_method	#	= 3	Item not found	-1
M34	lt5112_M34_10	rfc/callback_security_method	1	= 3	No	-1
M85	wdflbmt0716_M85_10	rfc/callback_security_method	1	= 3	No	-1
	wdflbmt0732_M85_10	rfc/callback_security_method	1	= 3	No	-1
	wdflbmt0742_M85_10	rfc/callback_security_method	1	= 3	No	-1

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Check RFC Callback protection using Configuration Validation

Target System : CALLBACK / Store Name : RFCDES_TYPE_3

Comparison Store: M85 / 0050561 | Change | Find: | Find | Find Next | Replace with: | in: All colu | Replace

Sel.	RFCDEST	RFCTY...	ARFC_A...	ARFC_...	ARFC_M...	AUTHO...	BASXML...	CALLB...	CALLBA...	CATEG...	W...
☐	(Contains) *	(=) 3	(Ignore)	(Ignore) 0	(Ignore)	(Ignore)	(Ignore) 0	(Ignore) *	(=) X	(Ignore)	...

Configuration Items

SAP System ID	Config. Item	Compliance	Compliant (1=Yes, -1=No, ' '=Not valuated)
M85	BGRFC_SUPERVISOR	No	-1
	M11CLNT800_S4H262_04	No	-1
	M85	No	-1
	M85CLNT001	No	-1
	SAP-OSS	Yes	1
	SAP-OSS-LIST-O01	Yes	1
	SAPCMP	Yes	1
	SAPNET_RTCC	Yes	1
	SAPOSS	Yes	1
	SDCC_OSS	Yes	1
	SM_M11CLNT800_LOGIN	No	-1
	SM_M11CLNT800_READ	No	-1

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September 2017

Topics September 2017

Note 2408073 - Handling of Digitally Signed notes in SAP Note Assistant

Note 2520064 - Missing Authentication check in SAP Point of Sale (POS) Retail Xpress Server
Note 2528596 - Hard-coded Credentials in SAP Point of Sale Store Manager

Note 2483870 - RFC Callback whitelist check for destination BACK

Note 2507798 - Bypass of email verification in e-recruiting

Note 2449011 - SUIM | Search for startable applications in roles - RSUSR_START_APPL

Note 2520885 - Logout function missing in SAP Best Practices Package Manager for Partner

Note 2051717 - SQL-Injection-Schwachstelle in SAP Netweaver

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Note 2408073 - Handling of Digitally Signed notes in SAP Note Assistant

Security Spotlight News

Digitally Signed SAP Notes – September 12, 2017

SAP is making Notes more secure by ensuring all SAP Notes files are digitally signed.

We strongly recommend customers to **upload** only digitally signed SAP Notes files once they are made available. To prepare your system to consume digitally signed SAP Notes files, please implement SAP Security Note 2408073. Without implementing this SAP Security Note, it will not be possible to upload a digitally signed SAP Note file.

Please also note, with SAP Security Note 2408073, the digital signature verification feature is enabled only for uploading signed SAP Notes files. The feature to **download** a digitally signed SAP Note via SAPOSS connection will be released to Customers in the coming months. It is recommended to implement SAP Note 2408073 before download functionality is released.

For details, please visit this blog. Watch the Note Assistant page on SAP Support Portal, for the latest updates

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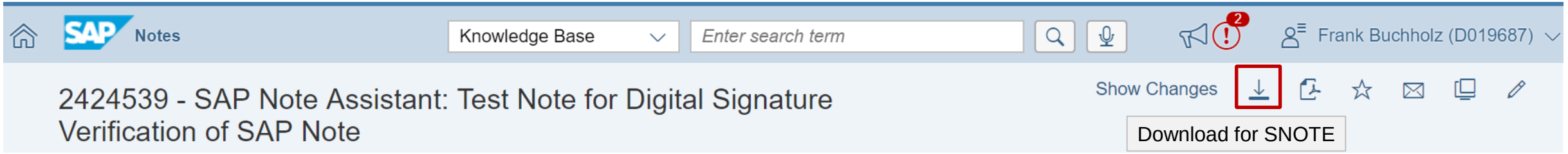
Note 2408073 - Handling of Digitally Signed notes in SAP Note Assistant

SAP plans to deliver digitally signed note files on SAP Support Portal.



Currently you get a `.ZIP` file containing a `.TXT` file. In the future you'll get a `.SAR` file instead.

You should prepare transaction `SNOTE` to be able to upload such files.

- Implement notes ~~2518518~~ and 2408073, or
- update to the corresponding `SAP_BASIS` support package
- If you do not implement the notes or update the support package, you have to follow the process for every `.SAR` file as described for old releases below 7.00 (which do not verify digital signatures).

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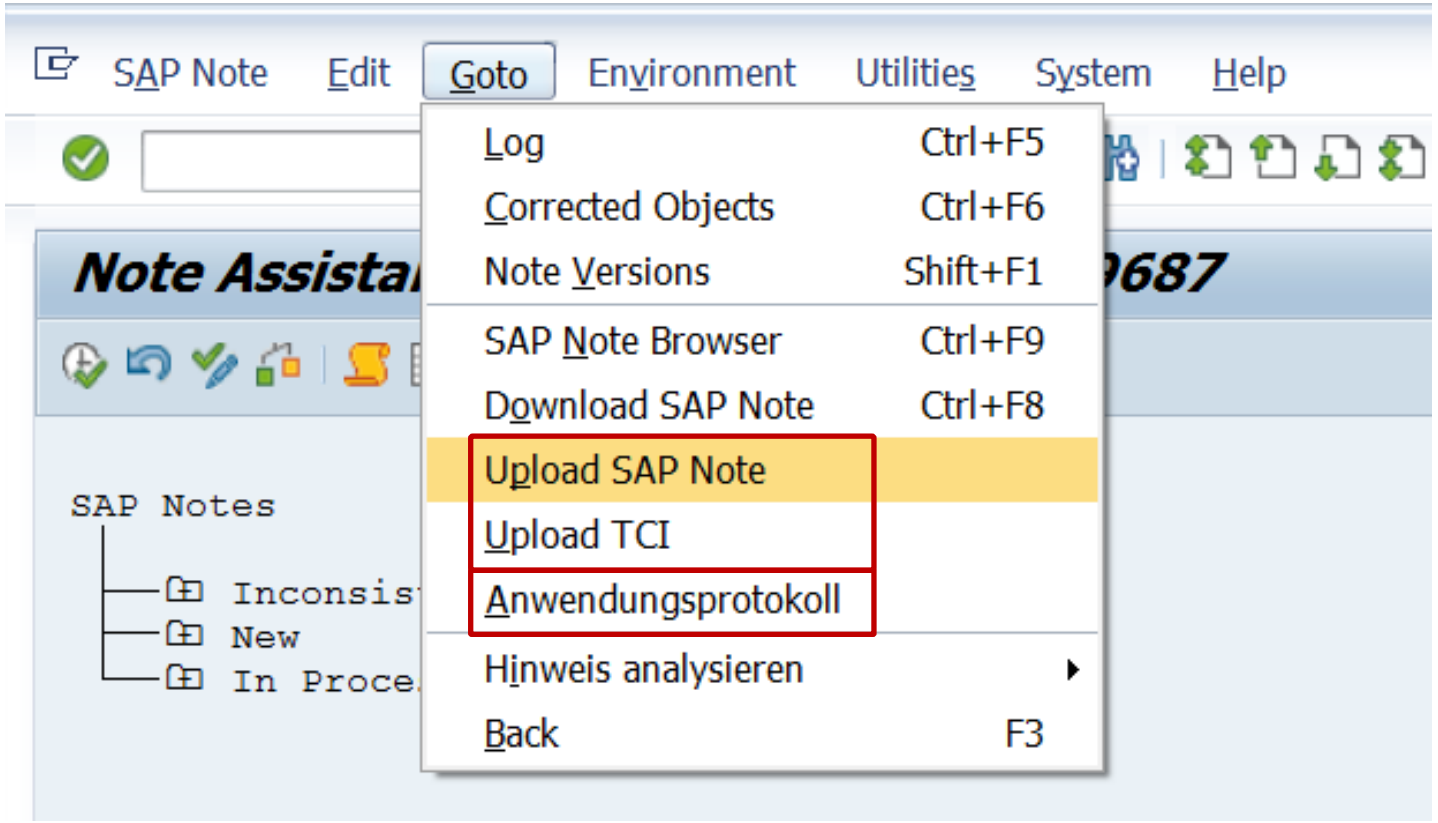
Note 2408073 - Handling of Digitally Signed notes in SAP Note Assistant

You should prepare transaction `SNOTE` to consume `.SAR` using function "Upload SAP Note" or "Upload TCI".

(You use function "Download SAP Note" to load notes directly from SAP Support Portal via the `SAPOSS` connection. This is a different function which is not affected by the current patch.)



The new function "Application Log" points to new report `SCWN_FAILED_DS_VERIFICATION`
The report shows failed digital signature validations logs

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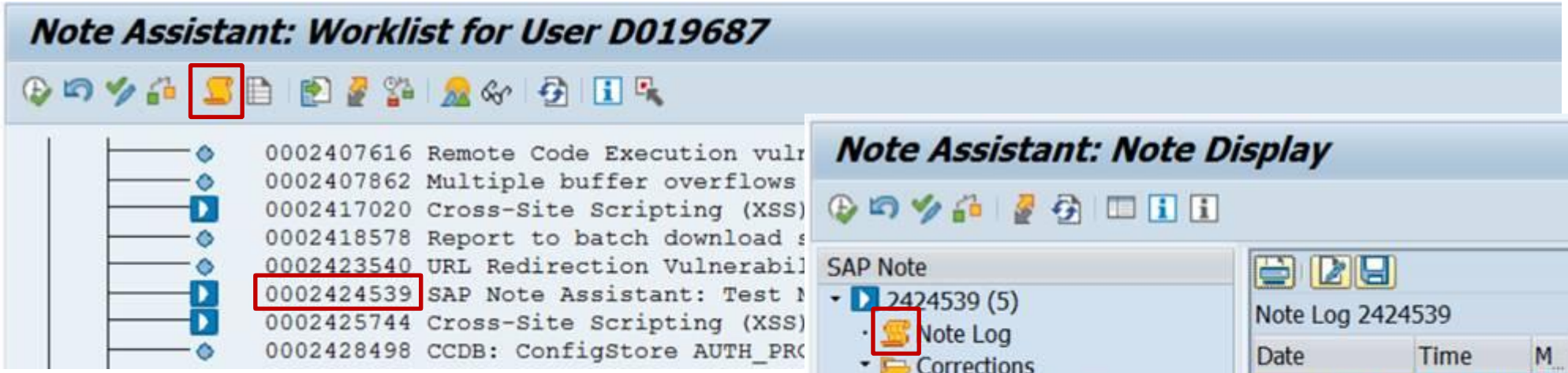
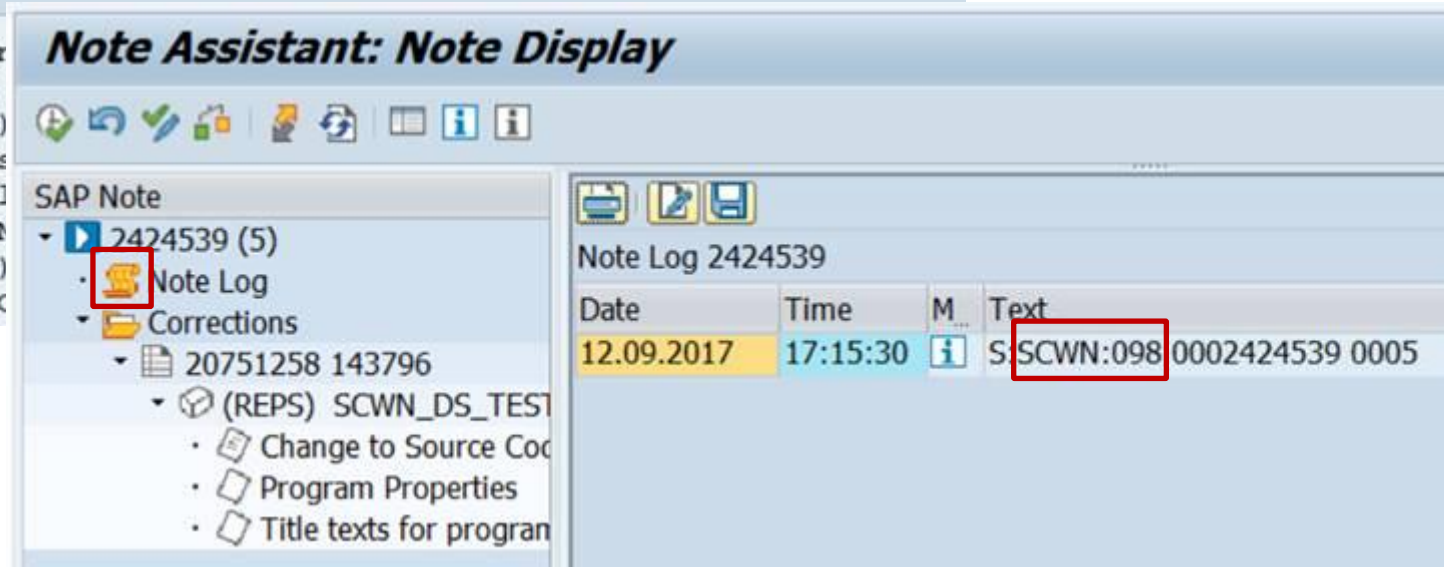
Note 2408073 - Handling of Digitally Signed notes in SAP Note Assistant

~~Implement note **2518518** first. Run the report `SCWN_NOTE_2408073` delivered with this note and then proceed with implementation of note **2408073**.~~

Use the attached file `0002424539_00.SAR` to test the verification of a digitally signed `.SAR` file. After uploading the file, check the log of note 2424539 in your worklist:





If you are using another language than German you just see the message code SCWN 098 instad of a text.

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Note 2408073 - Handling of Digitally Signed notes in SAP Note Assistant

Report `SCWN_FAILED_DS_VERIFICATION` might not work after installing the note.
Re-run report `SCWN_NOTE_2408073` to solve the issue. Instead of using this report, you can use transaction `SLG1` for log object `CWBDS` instead, to show failed digital signature validations logs (if there are any).

Report `SCWN_DS_CLEAR_NOTE_FILE` can be used to delete temporary files if this is not done automatically. The temporary `.ZIP` files and `.SAR` for the notes and the temporary file `SIGNATURE.SMF` are located in folder `$(DIR_TRANS)/tmp`

Related topic:

Note 2178665 - Signature validation of archives with SAPCAR

Note 1634894 - SAPCAR: Signed Archive

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Note 2520064 - Missing Authentication check in SAP Point of Sale
Note 2528596 - Hard-coded Credentials in POS Store Manager

Security Spotlight News

Important Security Fix for SAP Point of Sales (POS) Retail Xpress Server - August 18, 2017

In IT-Security Conference (HITB GSEC conference, 24th August, 2017), there was a presentation on vulnerabilities affecting SAP Point of Sales (POS) Retail Xpress Server.
http://gsec.hitb.org/sg2017/sessions/get-to-the-money-hacking-pos-and-pop-systems/

SAP Point of Sales, Software Component `XPRESSBU`

Note 2476601 with correction `SAPPOS23_SP11_Build1171` had been replaced with
Note 2520064 containing `SAPPOS22_Build1153` respective `SAPPOS23SP11_Build1177`
This note shows how to check the installed version, too.

Note 2528596 covers notes 2520232 and 2529966 and **contains additional corrections**.

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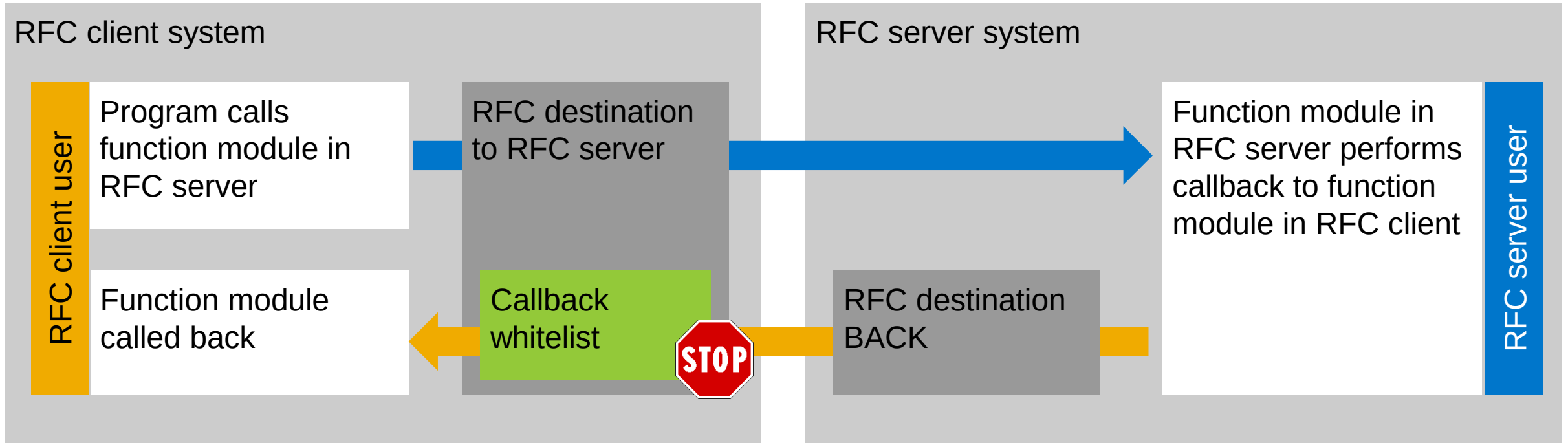
Note 2483870 - RFC Callback whitelist check for destination BACK



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Note 2483870 - RFC Callback whitelist check for destination BACK

Question: “Do I really need Kernel 7.45 patch 515 to secure RFC callback?”

Validity of note:

- Kernel releases 7.21, 7.22, 7.45, 7.49, 7.50, 7.51

Solution:

- Kernel 7.45 patch 515, 7.49 patch 221

The note solves a side effect (=bug) which was introduced with note 2463707.
Solution (and introduction of new bug) of this note 2463707:

- Kernel 7.45 patch 515, 7.49 patch 215

- **On Release 7.45 the solution is part of the same patch as the previously introduced bug → no issue**
- However, all Kernel versions before 7.45 patch 515 might be affected by the issue about internal RFC calls, which require RFC allowlist entries
- You log RFC callback using the Security Audit Log anyway → no issue (except that you might end up with some additional RFC allowlist entries which are not required in the future)

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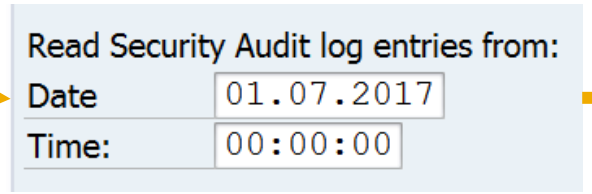
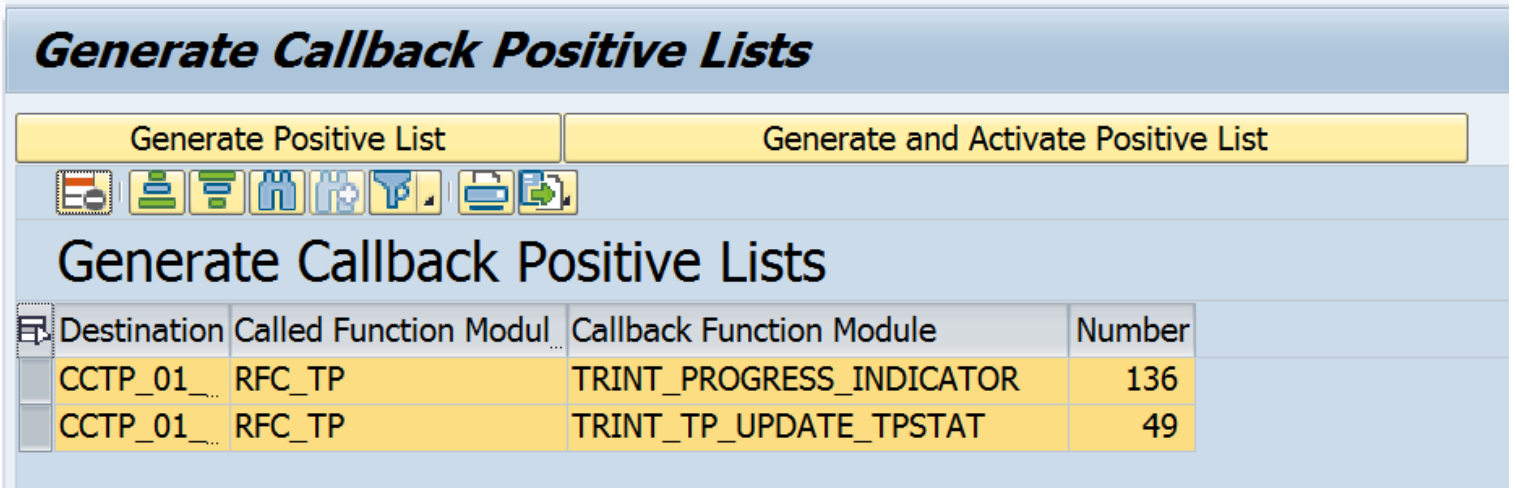
Note 2483870 - RFC Callback whitelist check for destination BACK Generate callback whitelist





Transaction SM59

You can generate required allowlist entries using logged calls from the Security Audit Log messages DUI, DUJ, and DUK

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Note 2483870 - RFC Callback whitelist check for destination BACK
Required whitelist entries

Note 2251931 - Runtime error CALLBACK_REJECTED_BY_WHITELIST in graphical Screen Painter (Transaction SE51 / SE80)

Destination EU_SCRP_WN32

Functions (generate them or add them manually):

```
RS_SCRP_GF_PROCESS*   RFC_GET_FUNCTION_INTERFACE
RS_SCRP_GF_PROCESS*   RS_SCRP_GF_*
```

Generate Callback Positive Lists

Destination	Called Function Module	Callback Function Module
EU_SCRP_WN32	RS_SCRP_GF_PROCESS_640	RFC_GET_FUNCTION_INTERFACE
EU_SCRP_WN32	RS_SCRP_GF_PROCESS_640	RS_SCRP_GF_RBUILDINFO
EU_SCRP_WN32	RS_SCRP_GF_PROCESS_640	RS_SCRP_GF_RELEMTABLE
EU_SCRP_WN32	RS_SCRP_GF_PROCESS_640	RS_SCRP_GF_RICONS
EU_SCRP_WN32	RS_SCRP_GF_PROCESS_640	RS_SCRP_GF_RKEYS
EU_SCRP_WN32	RS_SCRP_GF_PROCESS_640	RS_SCRP_GF_RKEYTEXTS
EU_SCRP_WN32	RS_SCRP_GF_PROCESS_640	RS_SCRP_GF_RMESSAGES
EU_SCRP_WN32	RS_SCRP_GF_PROCESS_640	RS_SCRP_GF_RPROPTABLE
EU_SCRP_WN32	RS_SCRP_GF_PROCESS_640	RS_SCRP_GF_RSTATUS_40
EU_SCRP_WN32	RS_SCRP_GF_PROCESS_640	RS_SCRP_GF_RTEXTS

Note 2133349 - Error RFC_CALLBACK_REJECTED when starting tp
Note 1686632 - Positive lists for RFC callback

Destinations CALLTP*, CCTP* and C_TP*

Functions (automatically generated as needed):

```
RFC_TP                TRINT_PROGRESS_INDICATOR
RFC_TP                TRINT_TP_UPDATE_TPSTAT
```

Generate Callback Positive Lists

Destination	Called Function Modul	Callback Function Module
CCTP_01_...	RFC_TP	TRINT_PROGRESS_INDICATOR
CCTP_01_...	RFC_TP	TRINT_TP_UPDATE_TPSTAT

CAD Desktop might require RFC Callback, too:
https://help.sap.com/saphelp_erp60_sp/helpdata/en/f9/99c6535e601e4be10000000a174cb4/frameset.htm

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Note 2507798 - Bypass of email verification in e-recruiting

Important because

- **E-Recruiting is (of course) connected to the internet**
- **the exploit is described in the public, e.g. here:**

  SEC Consult SA-20170912-0 :: Email verification bypass in SAP E-Recruiting
  http://seclists.org/fulldisclosure/2017/Sep/26

  SAP E-Recruiting bug could let you stop rivals poaching your people
  http://www.theregister.co.uk/2017/09/13/sap_erecruiting_email_bug/

Relevant if

- **Switch `RECFA VERIF` is active which defines that applicants have to confirm their email addresses in order to be able to submit the application. This is the default setting.**

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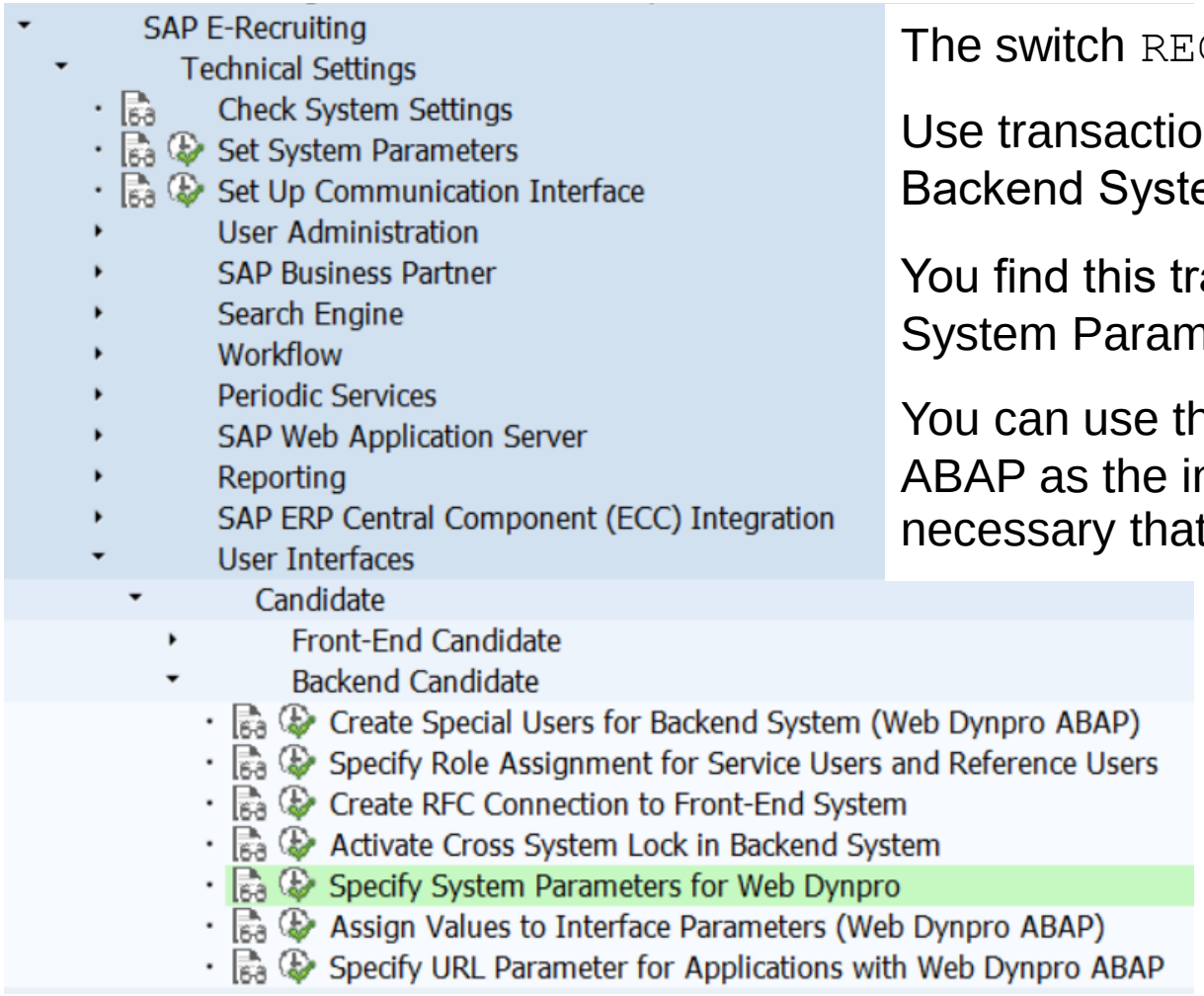
Note 2507798 - Bypass of email verification in e-recruiting



The switch `RECFA VERIF` is stored in customizing table `T77S0`

Use transaction `OO_HRRCF_WD_BL_CUST` “System Parameter Backend System” (or `SM30` for table `T77S0`) to view the settings

You find this transaction in the Implementation Guide at “Specify System Parameters for Web Dynpro”

You can use the verification process only if you use Web Dynpro ABAP as the interface technology for the candidate. Therefore it is necessary that the switch `RECFA WEBUI` is also set (default setting).

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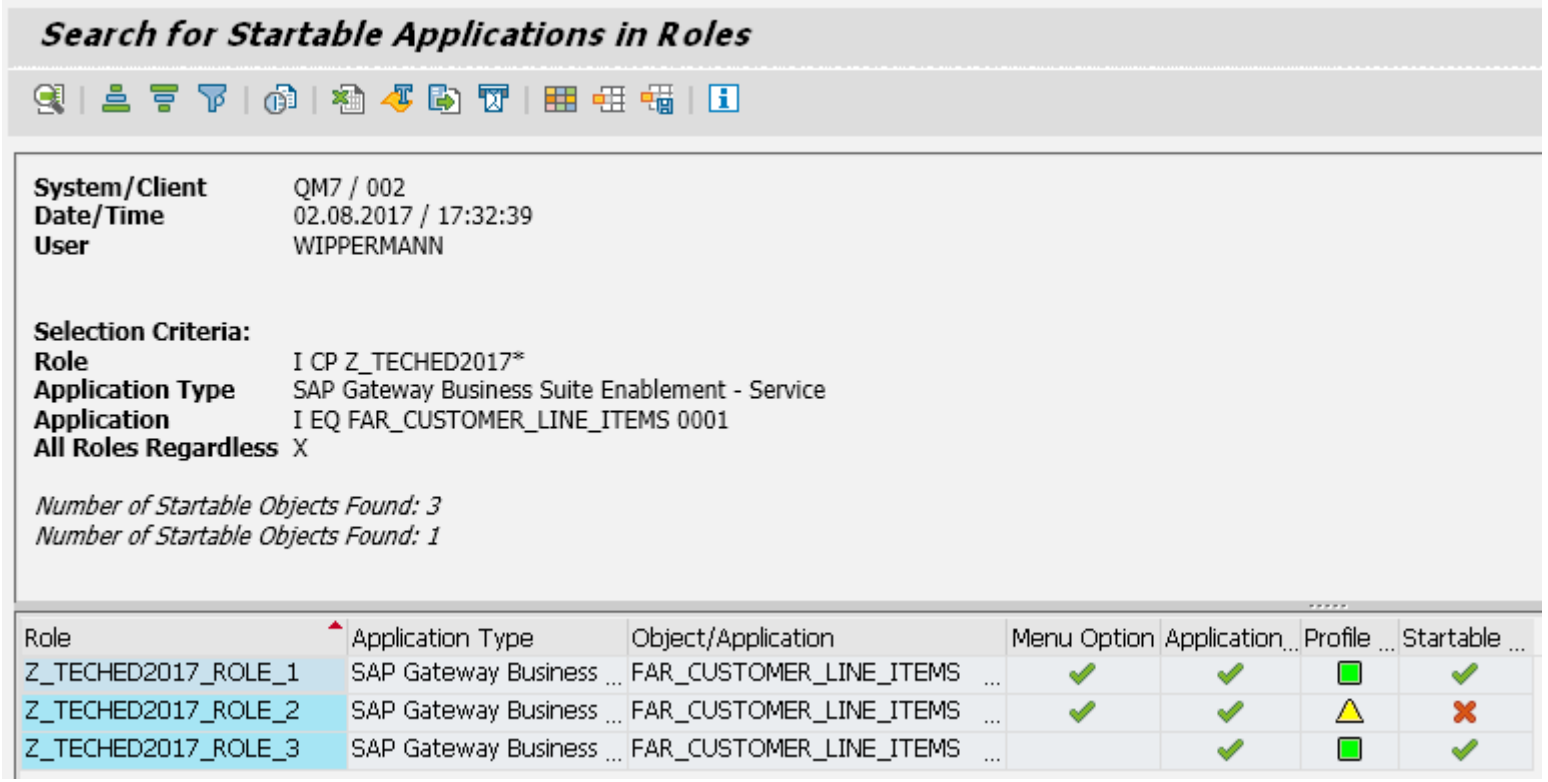
Note 2449011 - SUIM | Search for startable applications in roles

Use transaction `SUIM` respective report `RSUSR_START_APPL` to identify startable applications in roles:

- The roles and the generated profiles contain all of the start authorizations required for the application (`S_TCODE`, `S_SERVICE`, `S_RFC`, `S_START`, and authorizations as defined in transaction `SE93`)

- No application start lock in transactions `SM01_DEV` (global) and `SM01_CUS` (client).



Search for Startable Applications in Roles

System/Client	QM7 / 002
Date/Time	02.08.2017 / 17:32:39
User	WIPPERMANN

Selection Criteria:

Role	I CP Z_TECHED2017*
Application Type	SAP Gateway Business Suite Enablement - Service
Application	I EQ FAR_CUSTOMER_LINE_ITEMS 0001
All Roles Regardless	X

Number of Startable Objects Found: 3
Number of Startable Objects Found: 1

Role	Application Type	Object/Application	Menu Option	Application...	Profile ...	Startable ...
Z_TECHED2017_ROLE_1	SAP Gateway Business ...	FAR_CUSTOMER_LINE_ITEMS ...	✓	✓	■	✓
Z_TECHED2017_ROLE_2	SAP Gateway Business ...	FAR_CUSTOMER_LINE_ITEMS ...	✓	✓	△	✗
Z_TECHED2017_ROLE_3	SAP Gateway Business ...	FAR_CUSTOMER_LINE_ITEMS ...		✓	■	✓

Available as of SAP_BASIS 7.50

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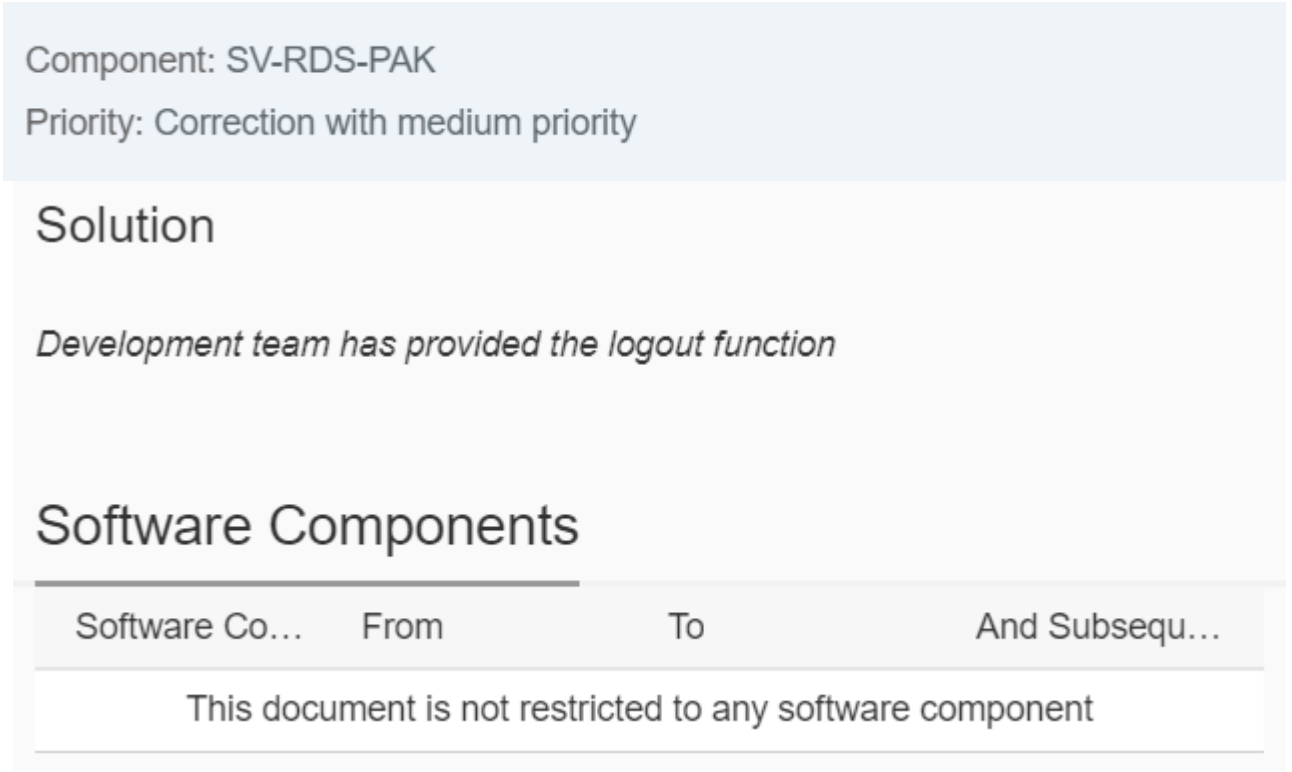
Note 2520885 - Logout function missing in SAP Best Practices Package Manager for Partner

This note is not relevant for any on-premise system → ignore it



Component: SV-RDS-PAK

Priority: Correction with medium priority

Solution

Development team has provided the logout function

Software Components

Software Co…	From	To	And Subsequ…
This document is not restricted to any software component			

References:

SV-RDS – Rapid Deployment Solutions

SV-RDS-PAK – Package Manager

Note 2041140 - Order SAP pre-assembled Best Practices solution software appliance as an SAP Partner

https://blogs.sap.com/2017/05/15/partner-packaged-solutions-on-sap-best-practices-explorer-s4hana-and-beyond

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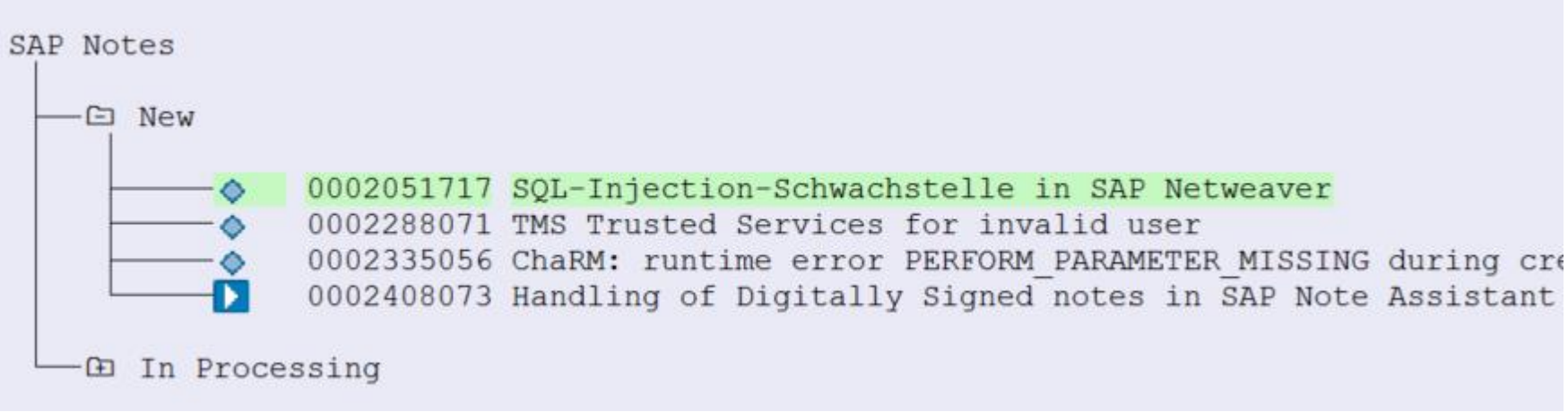
Note 2051717 - SQL-Injection-Schwachstelle in SAP Netweaver

Critical note which solves SQL injection via DBCON

Old correction form beginning of 2015 according to the assigned Support Packages

Published now, therefore transaction `SNOTE` shows it as “cannot be implemented”



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August 2017

Topics August 2017

What's new in Configuration Validation on SolMan 7.2

What‘s new in System Recommendation

Note 2394536 - URL Redirection vulnerability in Knowledge Management and Collaboration and Web Page Composer

Note 2216306 - S_RFC check and profile parameter auth/rfc_authority_check

Note 2417020 - Cross-Site Scripting (XSS) vulnerability in SAP NetWeaver Business Client for HTML

Note 2024431 - TDDAT adjustment in customer landscape (reloaded)
Comparison of Table Authorization Group Assignment

Note 2356982 - SE54 | Maintenance of table authorization groups
Note 1645260 - Extended maintenance of table authorization groups

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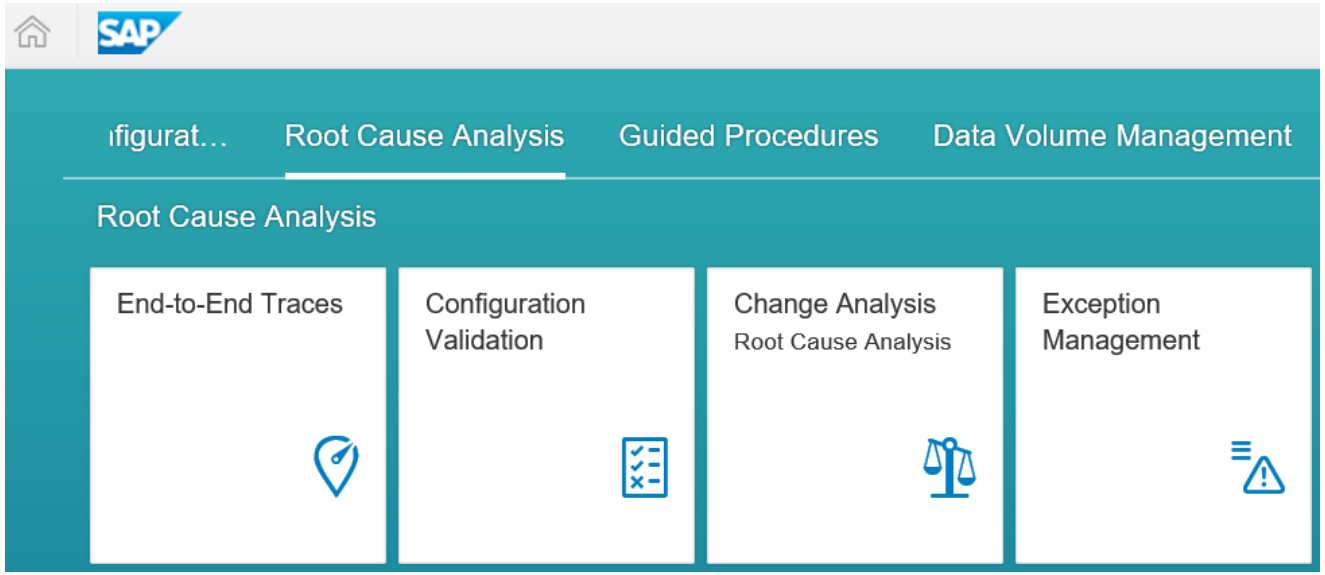
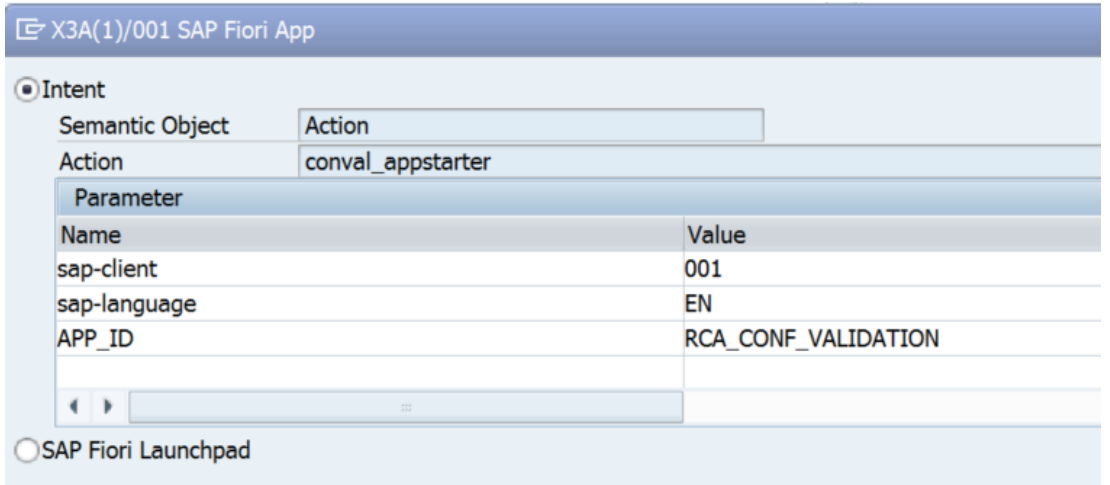
What's new in Configuration Validation
How to start it on SolMan 7.2



SAP Fiori Launchpad
Tile Group “Root Cause Analysis”
`sap-ui2-group:SMRootCauseAnalysis`
which is part of role `SAP_SMWORK_DIAG`

or add SAP Fiori App to the Easy Access Menu:

Semantic Object	**`Action`**
Action	**`conval_appstarter`**
Parameters:	
`APP_ID`	**`RCA_CONF_VALIDATION`**
`sap-client`	**`001`**
`sap-language`	**`EN`**



`https://<host>:<port>/sap/bc/ui5_ui5/ui2/ushell/shells/abap/FioriLaunchpad.html#Action-conval_appstarter?sap-client=001&sap-language=EN&APP_ID=RCA_CONF_VALIDATION`

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What's new in Configuration Validation
SolMan 7.2 SP 3: More ABAP Configuration Stores

Transactions

LOCKED_TRANSACTIONS

Virus Scan Providers

VSCAN_GROUP
VSCAN_SERVER

ABAP Change Logs (*)

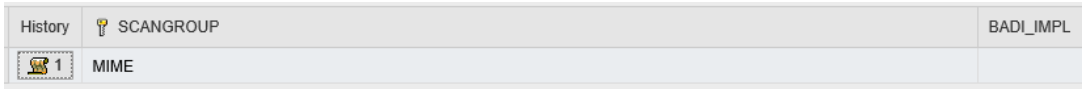
GLOBAL_CHANGE_LOG
COMPONENTS_CHANGE_LOG
NAMESPACES_CHANGE_LOG
AUTH_PROFILE_USER_CHANGE_DOC
(customizing possible, timestamps are extracted from

SAPUI5

SAPUI5_LIBS
SAPUI5_VERSION

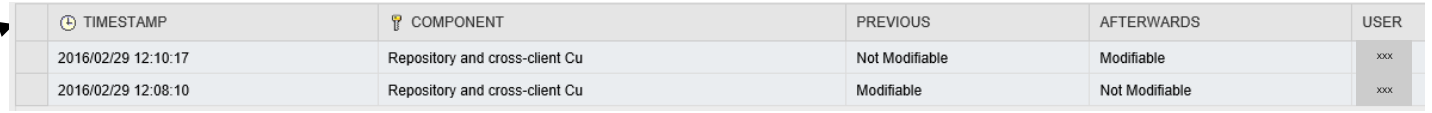
System Timezone

SYSTEM_TIMEZONE



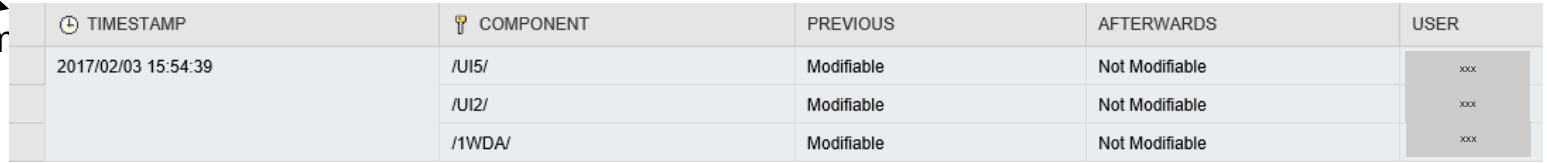
History	SCANGROUP	BADI_IMPL
1	MIME	

History	NAME	TYPE	SCANGROUP	STATUS	ASNAME	TRACELEVEL
1	VSA_LDAI1FBT	ADAPTER	MIME	ACTV	ldai1fbt_FBT_00	0
1	VSA_LDAI2FBT	ADAPTER	MIME	ACTV	ldai2fbt_FBT_00	0
1	VSA_LDCIFBT	ADAPTER	MIME	ACTV	ldcifbt_FBT_00	0
1	VSCAN_LDCIFBT	SERVER	MIME	ACTV	ldcifbt_FBT_00	0

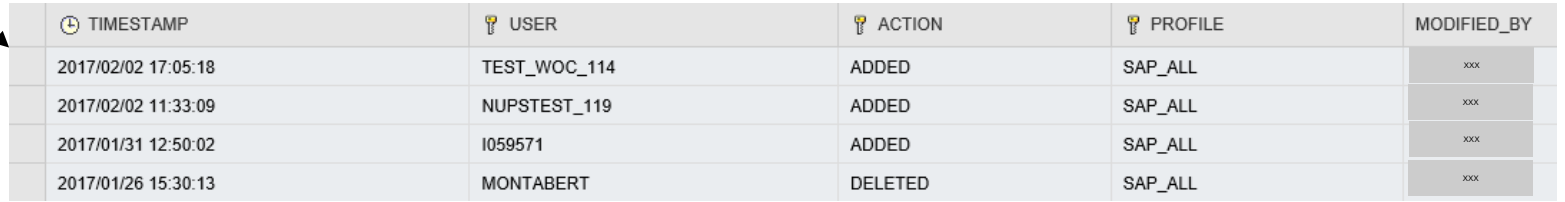


TIMESTAMP	COMPONENT	PREVIOUS	AFTERWARDS	USER
2016/02/29 12:10:17	Repository and cross-client Cu	Not Modifiable	Modifiable	xxx
2016/02/29 12:08:10	Repository and cross-client Cu	Modifiable	Not Modifiable	xxx

TIMESTAMP	COMPONENT	PREVIOUS	AFTERWARDS	USER
2017/01/23 09:57:03	SAP_BASIS	Not Modifiable/ Not Enhanceable	Not Modifiable/ Enhanceable Only	xxx
2017/01/20 15:16:33	SAP_BASIS	Restricted Modifiability	Not Modifiable/ Not Enhanceable	xxx
2017/01/20 15:14:40	SAP_BASIS	Not Modifiable/ Enhanceable Only	Restricted Modifiability	xxx



TIMESTAMP	COMPONENT	PREVIOUS	AFTERWARDS	USER
2017/02/03 15:54:39	/UI5/	Modifiable	Not Modifiable	xxx
	/UI2/	Modifiable	Not Modifiable	xxx
	/1WDA/	Modifiable	Not Modifiable	xxx



TIMESTAMP	USER	ACTION	PROFILE	MODIFIED_BY
2017/02/02 17:05:18	TEST_WOC_114	ADDED	SAP_ALL	xxx
2017/02/02 11:33:09	NUPSTEST_119	ADDED	SAP_ALL	xxx
2017/01/31 12:50:02	I059571	ADDED	SAP_ALL	xxx
2017/01/26 15:30:13	MONTABERT	DELETED	SAP_ALL	xxx

*including integration into system monitoring and alerting

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What's new in Configuration Validation
SolMan 7.1 SP 14 / 7.2 SP 3: CCDB SPML Java Extractor

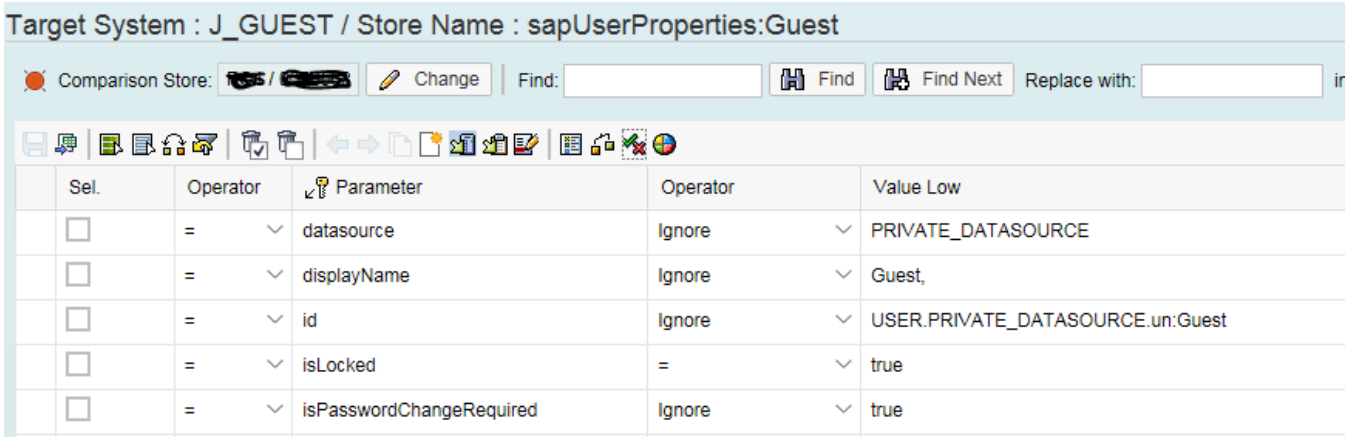
The Diagnostic Agent can now read user and role date from the J2EE engine using SPML

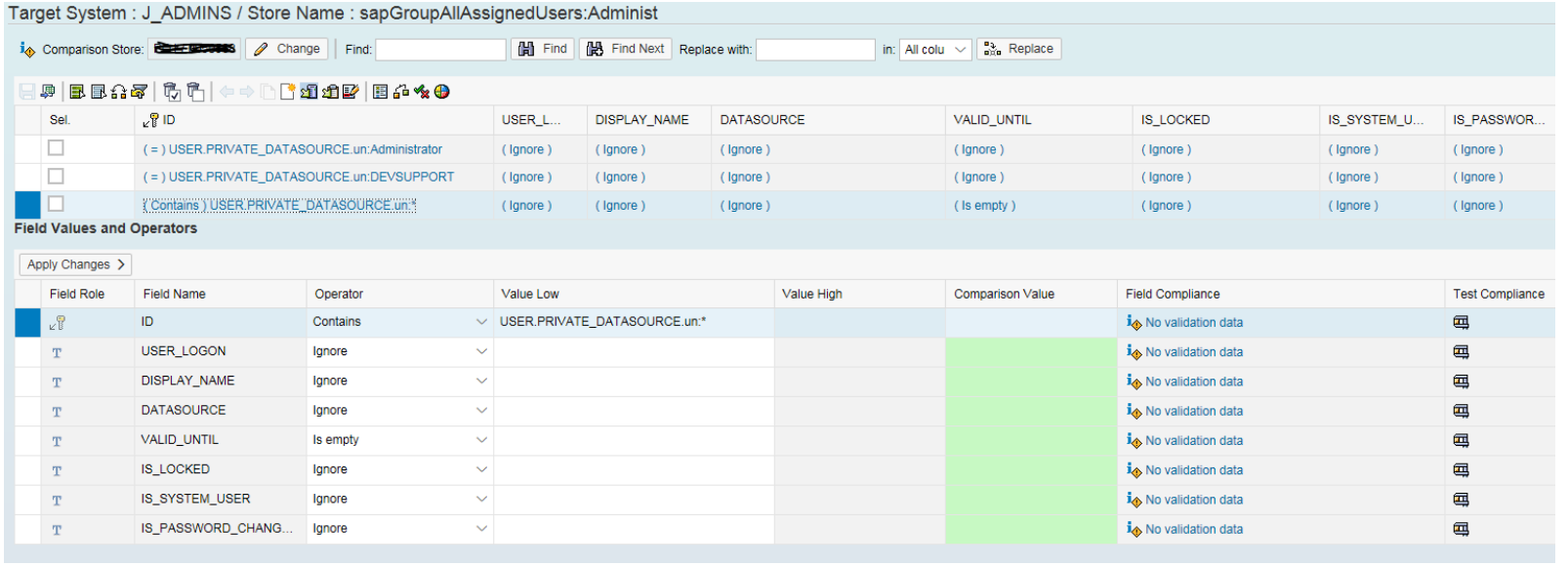
Configuration stores:

`sapGroupAllAssignedUsers:<group>`
`sapRoleAllAssignedUsers:<role>`
`sapRoleAssignedActions:<action>`
`sapUserProperties:<user>`

Documentation how to setup SPML based extractors for CCDB:
[Configuration Validation Wiki]

Caution: You man need to repeat the configuration after a Support Package upgrade of the SAP Solution Manager





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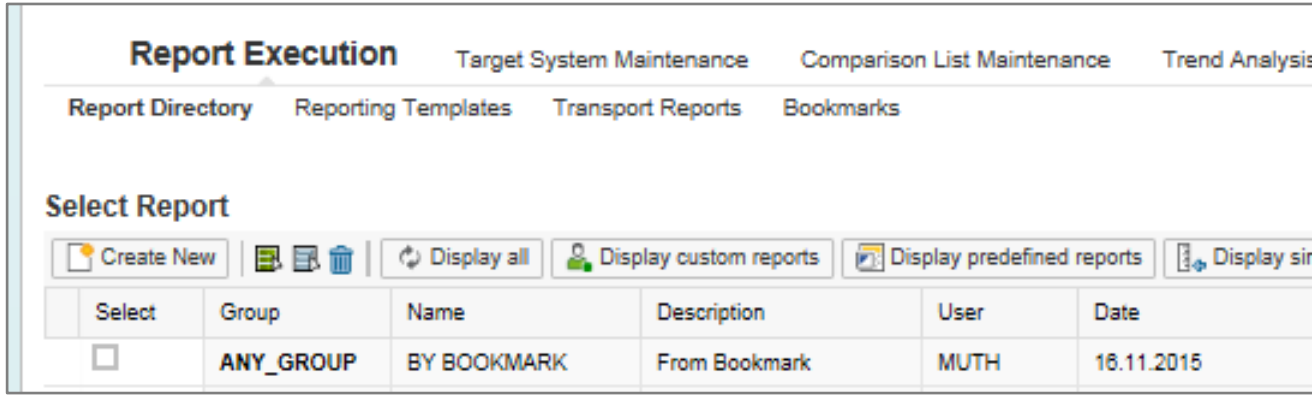
What's new in Configuration Validation
SolMan 7.2 SP 3: UI related features

Reporting directory

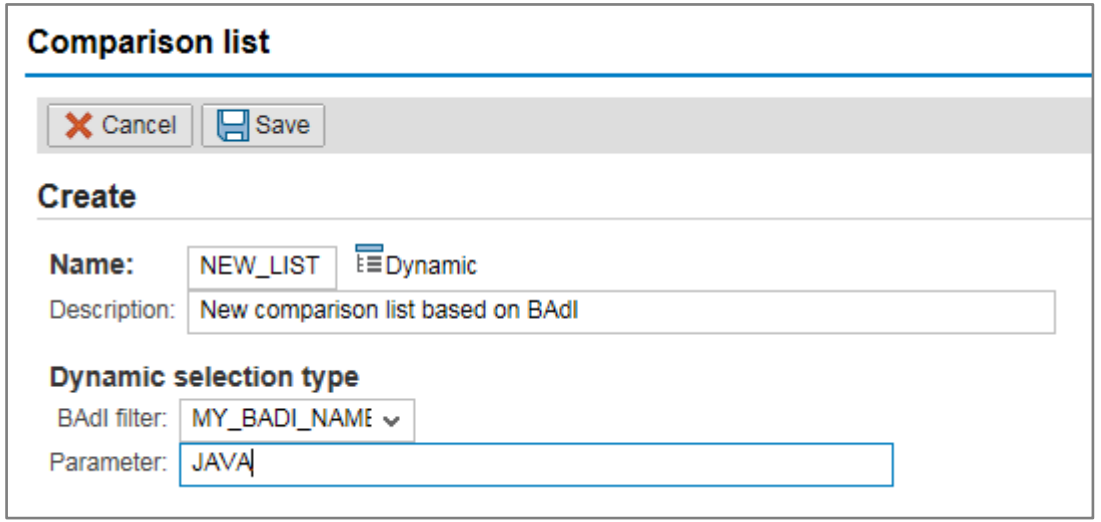
includes Bookmark now



Comparison Lists

Badi Implementation to build dynamic comparison list base on the BAdI enhancement `DIAGCV_ES1_SYSTEM_LIST`

For more information see note 2365039



BI Reporting

Larger Strings in columns (up to 250 chars instead of 60 chars)

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What's new in Configuration Validation
SolMan 7.2 SP 3: Send Configuration Validation reports via email

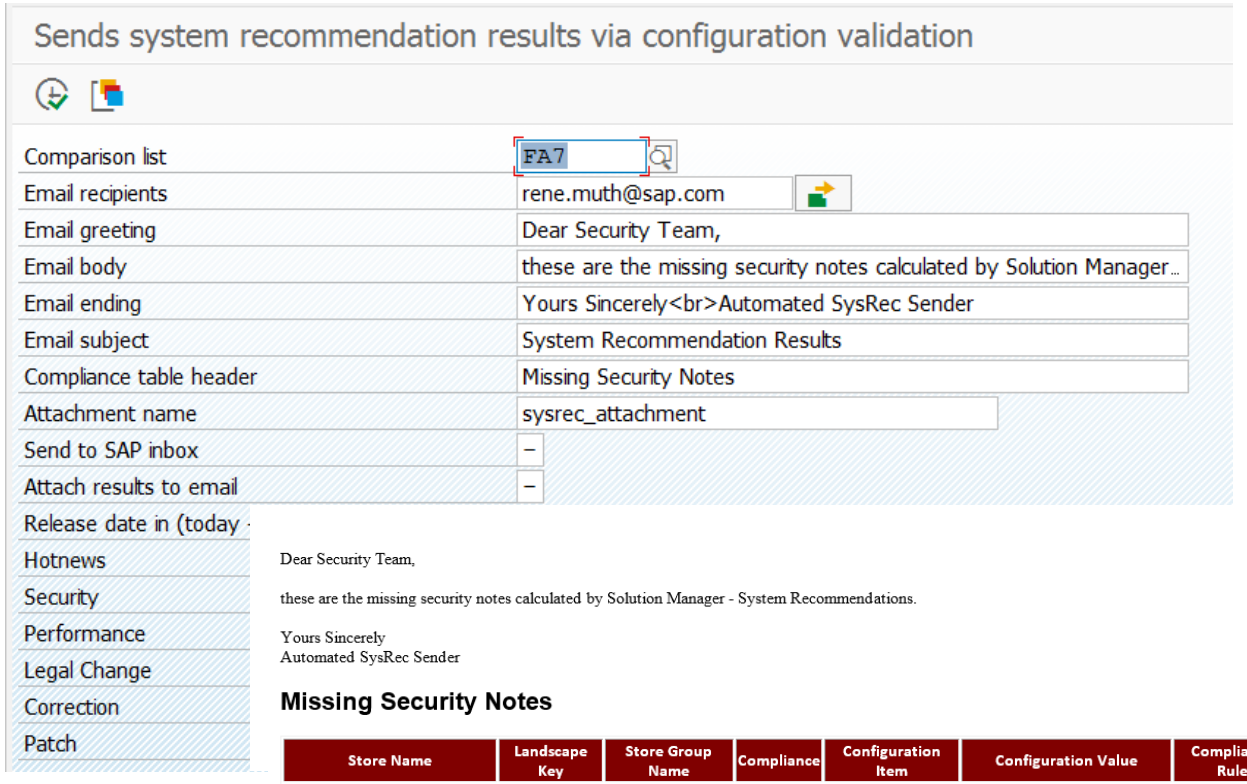
BW Information Broadcasting is not longer supported in SAP BW 7.40 (Note 2020590)

Conclusion: You cannot schedule broadcast notifications for the System Recommendations BW report in SAP Solution Manager 7.2 anymore

New reports to send Configuration Validation results via email:

Configuration Validation
`DIAGCV_SEND_CONFIG_VALIDATION`

System Recommendation Report
`DIAGCV_SEND_SYSREC`



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What's new in Configuration Validation
SolMan 7.2 SP 3: Send Configuration Validation reports via email

On SolMan 7.2 SP 3-4 you have to install following notes to get these reports:

Note 2427770 - Configuration Validation: Sending compliance results via email

Note 2401878 - ST7.20 SP03/04 Configuration Validation - Send mail with system recommendation results

On SolMan 7.2 SP 6-7 install following note, too:

Note 2639106 - Configuration Validation: Sending compliance results via email to several recipients fails

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What's new in Configuration Validation
SolMan 7.2 SP 5: Merge Target Systems

Report to merge several target systems into a new one:

`DIAGCV_MERGE_TARGET_SYSTEMS`

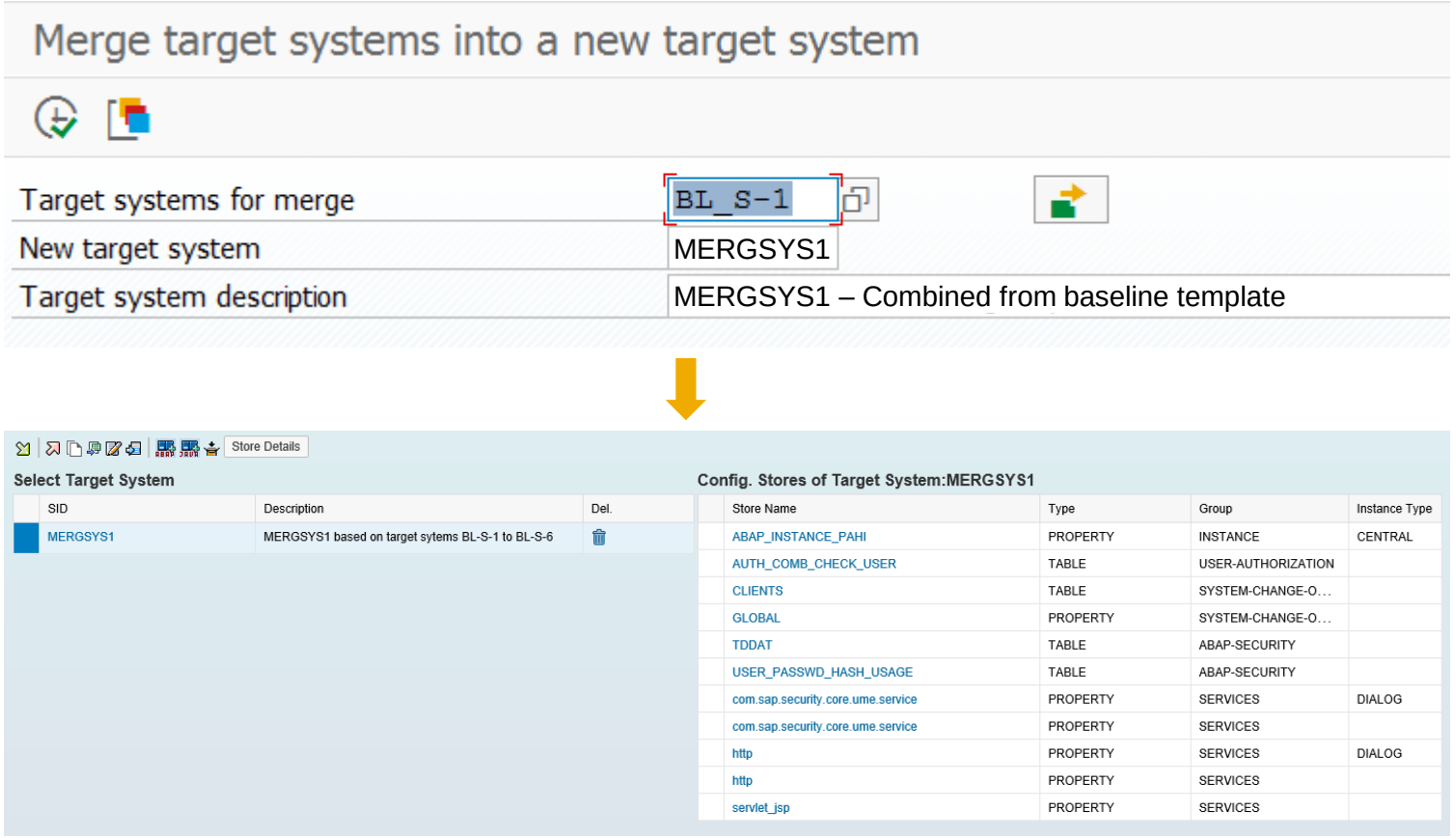
Usage:

Create several small target systems representing individual KPIs.

Use these target systems e.g. to create a Dashboard.

Merge these target systems into one for reporting.

Example: Merge the SAP Security Baseline target systems into one combined target system



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What's new in Configuration Validation
SolMan 7.2 SP 5: New key operator for table stores: regex

New key operator (regex) for table stores

CLIENT	USER	PASSWORD_STATUS	EXISTS	LOCKED
(=) 000	(=) TMSADM	(=) CHANGED	(=) X	(Not equal) X
(Contains) 002	(=) TMSADM	(=) CHANGED	(Ignore)	(=) X
(Contains) 002*	(=) TMSADM	(Ignore)	(Not equal) X	(Ignore)
(Contains) 003	(=) TMSADM	(=) CHANGED	(Ignore)	(=) X
(Contains) 003*	(=) TMSADM	(Ignore)	(Not equal) X	(Ignore)
(Contains) 004	(=) TMSADM	(=) CHANGED	(Ignore)	(=) X
(Contains) 004*	(=) TMSADM	(Ignore)	(Not equal) X	(Ignore)
(Contains) 005	(=) TMSADM	(=) CHANGED	(Ignore)	(=) X
(Contains) 005*	(=) TMSADM	(Ignore)	(Not equal) X	(Ignore)
(Contains) 006	(=) TMSADM	(=) CHANGED	(Ignore)	(=) X
(Contains) 006*	(=) TMSADM	(Ignore)	(Not equal) X	(Ignore)
(Contains) 007	(=) TMSADM	(=) CHANGED	(Ignore)	(=) X
(Contains) 007*	(=) TMSADM	(Ignore)	(Not equal) X	(Ignore)
(Contains) 008	(=) TMSADM	(=) CHANGED	(Ignore)	(=) X
(Contains) 008*	(=) TMSADM	(Ignore)	(Not equal) X	(Ignore)
(Contains) 009	(=) TMSADM	(=) CHANGED	(Ignore)	(=) X
(Contains) 009*	(=) TMSADM	(Ignore)	(Not equal) X	(Ignore)
(Contains) 01*	(=) TMSADM	(Ignore)	(Not equal) X	(Ignore)
(Contains) 01**	(=) TMSADM	(=) CHANGED	(Ignore)	(=) X
(Contains) 02*	(=) TMSADM	(Ignore)	(Not equal) X	(Ignore)
(Contains) 02**	(=) TMSADM	(=) CHANGED	(Ignore)	(=) X
(Contains) 03*	(=) TMSADM	(Ignore)	(Not equal) X	(Ignore)
(Contains) 03**	(=) TMSADM	(=) CHANGED	(Ignore)	(=) X
(Contains) 04*	(=) TMSADM	(Ignore)	(Not equal) X	(Ignore)
(Contains) 04**	(=) TMSADM	(=) CHANGED	(Ignore)	(=) X
(Contains) 05*	(=) TMSADM	(Ignore)	(Not equal) X	(Ignore)
(Contains) 05**	(=) TMSADM	(=) CHANGED	(Ignore)	(=) X
(Contains) 06*	(=) TMSADM	(Ignore)	(Not equal) X	(Ignore)
(Contains) 06**	(=) TMSADM	(=) CHANGED	(Ignore)	(=) X
(Contains) 07*	(=) TMSADM	(Ignore)	(Not equal) X	(Ignore)
(Contains) 07**	(=) TMSADM	(=) CHANGED	(Ignore)	(=) X

Example: Configuration Store `STANDARD_USERS`:

The simplified check rules for user `TMSADM` which identify entries in other clients than client `000` uses the simple regular expression `[1-9][0-9][0-9]|0[1-9][0-9]|0[0-9][1-9]`

The result is ‘compliant’ if…

a) `PASSWORT_STATUS=CHANGED` and `LOCKED=X` or

b) the user does not exists

Target System : BL_O-1b / Store Name : STANDARD_USERS

Comparison Store: SAP / 5427FE(Change | Find: Find Find Next Replace with:

	S...	CLIENT	USER	PASSWORD_STATUS	EXISTS	LOCKED
	☐	(=) 000	(=) TMSADM	(=) CHANGED	(=) X	(Not equal) X
	☐	(Regex) [1-9][0-9][0-9]|0[1-9][0-9]|0[0-9][1-9]	(=) TMSADM	(Ignore)	(Not equal) X	(Ignore)
	☐	(Regex) [1-9][0-9][0-9]|0[1-9][0-9]|0[0-9][1-9]|a	(=) TMSADM	(=) CHANGED	(=) X	(=) X

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What's new in Configuration Validation
SolMan 7.2 SP 5: New Configuration Stores and Fields

New Configuration Store

History	PARAMETER	VALUE
	icm/server_port_0	PROT=HTTP, PORT=50000, PROCTIMEOUT=300, TIMEOUT=300
	icm/server_port_1	PROT=HTTPS, PORT=44300, PROCTIMEOUT=300, TIMEOUT=300
	icm/server_port_2	PROT=SMTP, PORT=25000, PROCTIMEOUT=300, TIMEOUT=300
	icm/server_port_3	
	icm/server_port_4	
	icm/server_port_ALL	{PROT=HTTP, PORT=50000, PROCTIMEOUT=300, TIMEOUT=300}{PROT=HTTPS, PORT=44300, PROCTIMEOUT=300, TIMEOUT=300}{PROT=SMTP, PORT=25000, PROCTIMEOUT=300, TIMEOUT=300}{}{}

New Field `TRAIL_TYPE` in Configuration Store `AUDIT_POLICIES` (HANA) with values `TABLE` | `SYSLOG` | `CSV`

History	AUDIT_POLICY_NAME	AUDIT_POLICY_OID	EVENT_ACTION	TRAIL_TYPE
5	SAPDLM Audit - Change System Configuration	499099	SYSTEM CONFIGURATION CHANGE	SYSLOG
5	SAPDLM Audit - Create or Drop Role	499101	CREATE ROLE	TABLE
5			DROP ROLE	TABLE
3	SAPDLM Audit - Execution of Procedure 001_dlm_start_procedure	2283841	EXECUTE	TABLE

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What's new in Configuration Validation
SolMan 7.2 SP 5: New Configuration Stores and Fields

New Configuration Store (ABAP):
Count of users per security policy

`SECURITY_POLICY_USAGE`

	History	SECURITY_POLICY	USER_COUNT
	31		2002
		EMERGENCY	1
		DDIC	1

New Field `RFCTCDCHK` for Configuration Store `RFCSYSACL`

Use this field to check if the transaction flag is active for Trusted RFC definitions.

See note 2413716 - Setup of Trusted RFC in GRC Access Control EAM

RFCSYSID	TLICENSE_NR	RFCTRUSTSY	RFCDEST	RFCTCDCHK	RFCSNC	RFCSLOPT
FQ7	0020270862	FA7	SM_FQ7_TRUSTED_BACK		X	
FT7		FA7	SM_FT7_TRUSTED_BACK		X	
HF2		FA7	CWBADM_HF2_200		X	2

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What's new in Configuration Validation
SolMan 7.2 SP 5: New Configuration Stores for HANA XSA

The new Store Group `XSA_STOREGROUP` contains several Configuration Stores about the HANA XSA application configuration

Store Path	Store Name	Group Name
auditlog-broker	brokeruser	XSA_STOREGROUP
	serviceurl	XSA_STOREGROUP
auditlog-odata	DEPLOY_ATTRIBUTES	XSA_STOREGROUP
	MTA_METADATA	XSA_STOREGROUP
	MTA_MODULE_METADATA	XSA_STOREGROUP
	MTA_MODULE_PROVIDED_DEPENDENCIES	XSA_STOREGROUP
	MTA_SERVICES	XSA_STOREGROUP
	TARGET_RUNTIME	XSA_STOREGROUP
auditlog-ui	DEPLOY_ATTRIBUTES	XSA_STOREGROUP
	MTA_METADATA	XSA_STOREGROUP
	MTA_MODULE_METADATA	XSA_STOREGROUP
	MTA_MODULE_PROVIDED_DEPENDENCIES	XSA_STOREGROUP
	MTA_SERVICES	XSA_STOREGROUP
	destinations	XSA_STOREGROUP
component-registry-db	DEPLOY_ATTRIBUTES	XSA_STOREGROUP
	DEPLOY_ID	XSA_STOREGROUP
	MTA_METADATA	XSA_STOREGROUP
	MTA_MODULE_METADATA	XSA_STOREGROUP
	MTA_MODULE_PROVIDED_DEPENDENCIES	XSA_STOREGROUP
	MTA_SERVICES	XSA_STOREGROUP

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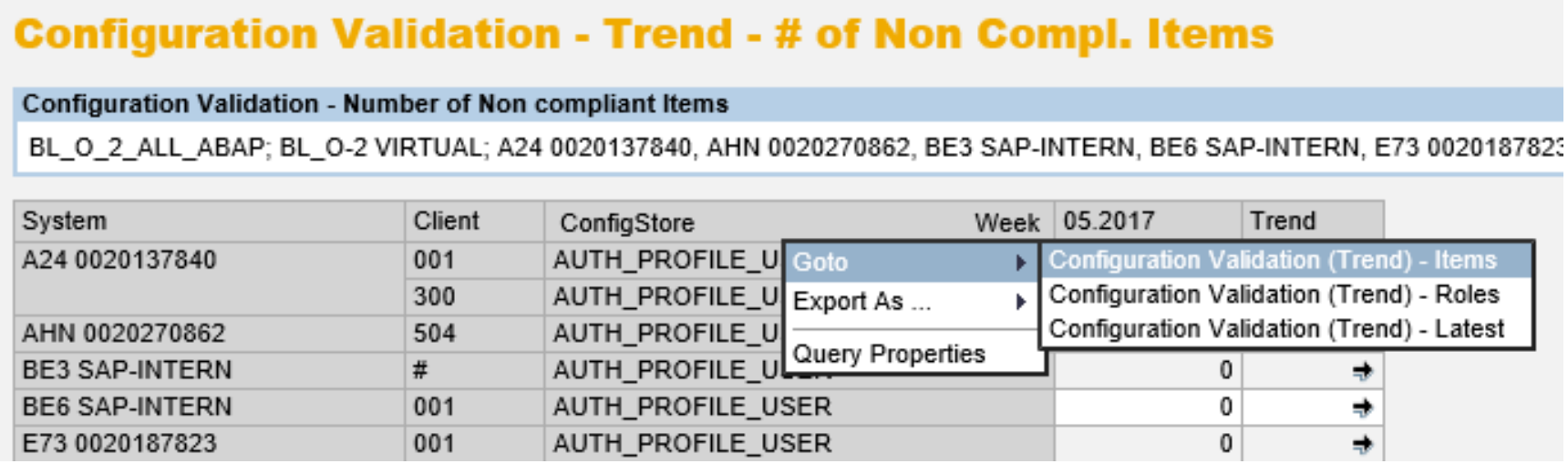
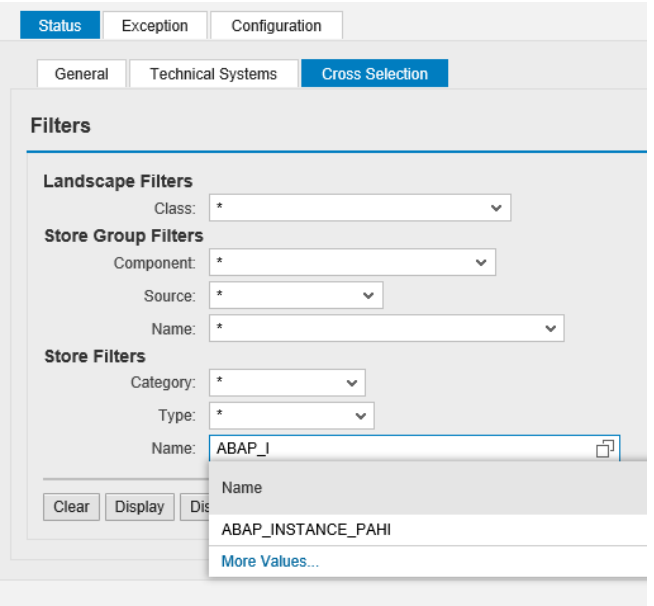
What's new in Configuration Validation SolMan 7.2 SP 5: Miscellaneous

Navigation within Validation to Trend Analysis (Items, Roles, and Query showing latest data)



Interactive search help in CCDB Administration and Configuration



Validation: Additional search indexes to improve performance for Configuration Stores with more than 4 key fields

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What's new in Configuration Validation
SolMan 7.2 SP 5: Dashboard Builder Integration

New interfaces to Dashboard Builder

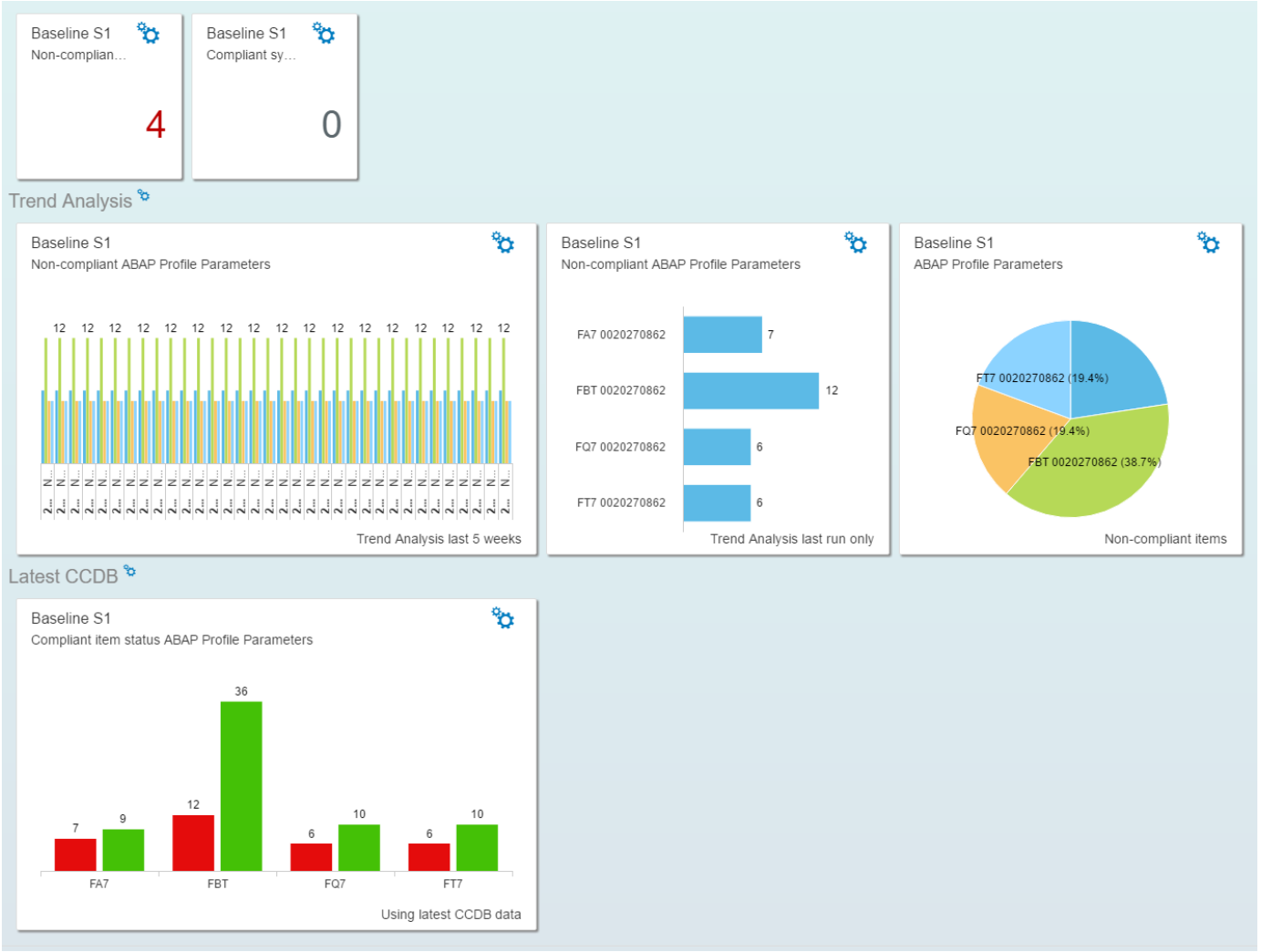
Trend Analysis based on various queries:

Overview:
`0SMD_CVA2_TR_SYSTEMS_DSH`

Details:
`0SMD_CVA2_TR_ITEMS_DSH`

Last results:
`0SMD_CVA2_TR_NC_ITEMS_LAST_DSH`

Configuration Validation based on function
`DIAGCPL_CV_DSH`



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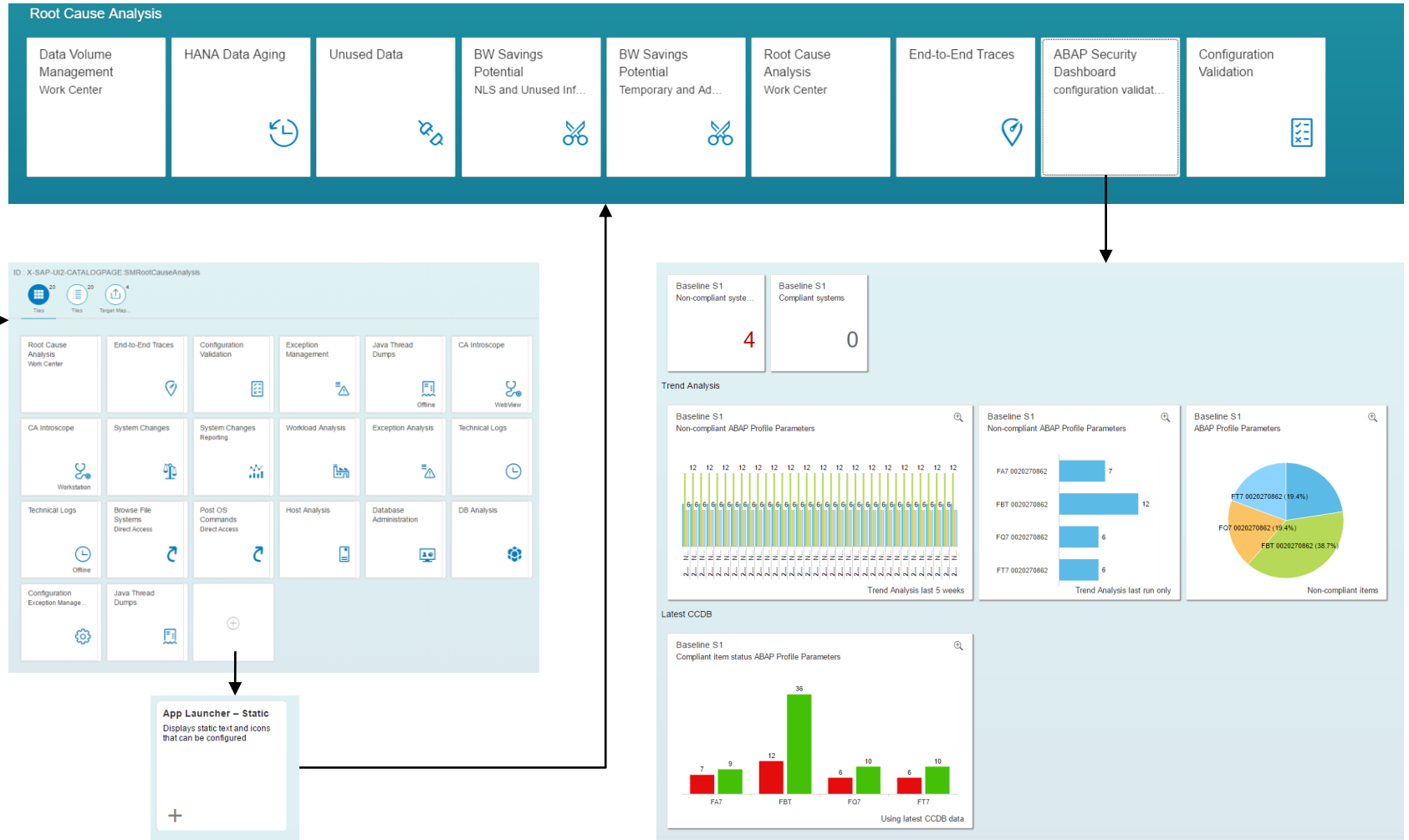
What's new in Configuration Validation
SolMan 7.2 SP 5: Dashboard Builder Integration

Dashboard Tile

Via Launchpad Designer and “App Launcher static” a tile could be added to the launchpad to start directly the configuration validation dashboard from there



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What's new in Configuration Validation
SolMan 7.2 SP 5: Dashboard Builder Integration

Online Help: Dashboard Builder
https://help.sap.com/viewer/82f6dd44db4e4518aad4dfce00116fcf/7.2.05/en-US/d0c91556d22c0033e10000000a44538d.html

Blog: SAP Solution Manager 7.2 – Dashboard Builder
https://blogs.sap.com/2017/02/28/sap-solution-manager-7.2-dashboard-builder/

Blog: SAP Solution Manager 7.2 – Dashboard Builder configuration
https://blogs.sap.com/2017/05/16/sap-solution-manager-7.2-dashboard-builder-configuration/

KPI Catalog
https://go.support.sap.com/kpicatalog

SAP Security Baseline Template Version 1.9 (including ConfigVal Package version 1.9_CV-4)
https://support.sap.com/content/dam/support/en_us/library/ssp/offerings-and-programs/support-services/sap-security-optimization-services-portfolio/Security_Baseline_Template.zip

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What‘s new in System Recommendation

If a Software Components are not part of ABAP/JAVA/HANA systems in SLD/LMDB you do not find corresponding notes in System Recommendation.

Special Software Components:

BC-FES-GUI	**added to all ABAP systems as a virtual software component of type ‘Support Package Independent‘ as of May 2017**
CRYPTOLIB 8 SP000	**added to ABAP and JAVA systems as a virtual software component as of July 2017**
SAPHOSTAGENT	**not covered yet**

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Note 2394536 - URL Redirection vulnerability in Knowledge Management and Collaboration and Web Page Composer

“Solution: The fix is provided in patches for KMC-CM and KMC-WPC components.

The portal has to be restarted after deploying the patches, and all XMLForms projects have to be regenerated.”

- **Note 2342421 - How to Regenerate XML Form Projects**
  1. **Access the xfbuilder by Navigating to Content Management → Forms Builder**
  2. **Once the XML Forms builder application has loaded go to 'File → Open Project‘ Note - Here, you should see a list of the projects available in this portal environment**
  3. **Select the project you wish to regenerate and click 'open'**
  4. **Once the project is loaded you will see a folder icon in the top toolbar - hovering the mouse over this icon will display the tooltip 'Generate Project'**
  5. **Click this button to regenerate the project**
  6. **Once the regeneration is complete you should see the message 'Project has been successfully generated' displayed along the base of the window**

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Note 2216306 - S_RFC check and profile parameter auth/rfc_authority_check

By default you do not need authentication and no authorization to call one of the RFC enabled function of function group SRFC:

RFC_PING

RFC_SYSTEM_INFO — shows release info

RFC_GET_LOCAL_DESTINATIONS

RFC_GET_LOCAL_SERVERS

RFC_PUT_CODEPAGE

SYSTEM_FINISH_ATTACH_GUI

SYSTEM_INVISIBLE_GUI

SYSTEM_PREPARE_ATTACH_GUI

SYSTEM_RFC_VERSION_3_INIT

The note recommends to close down some of these functions:
"We recommend the use of the value 6 [for profile parameter auth/rfc_authority_check] after the definition of the required authorizations for all users that use RFC across system borders."

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Note 2216306 - S_RFC check and profile parameter auth/rfc_authority_check

If you change profile parameter `auth/rfc_authority_check`, you have to analyze which roles require additional authorizations for `S_RFC`. In case of values `2`, `4`, `6`, or `9` you may have to add authorizations for `S_RFC FUGR SRFC` respective for `S_RFC FUNC <list of required functions of function group SRFC>`

0 = No authorization check

1 = (default) Authorization check active (no check for same user; no check for same user context and SRFC-FUGR)

2 = Authorization check active (no check for SRFC-FUGR)

3 = Logon required for all function modules except RFC_PING and RFC_SYSTEM_INFO (no authorization check)

4 = Authorization check required for all function modules except RFC_PING and RFC_SYSTEM_INFO

5 = Logon required for all function modules except RFC_PING (no authorization check)

6 = Authorization check required for all function modules except RFC_PING

8 = Logon required for all function modules (no authorization check)

9 = Authorization check active (SRFC-FUGR also checked)

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Note 2216306 - S_RFC check and profile parameter auth/rfc_authority_check

Several SAP standard roles need to be updated adding authorizations for `S_RFC`, too:

Role	Required functions
`SAP_BC_BGRFC_SUPERVISOR`	...
`SAP_BI_CALLBACK`	...
`SAP_SOLMAN_BI_READ`	...
`SAP_SOLMAN_READ`	...
`SAP_SOLMAN_READ_702`	...
`SAP_SOLMAN_TMW`	...
`SAP_SECURITY_OPTIMIZATION`	`RFC_PING RFC_SYSTEM_INFO` (see note 696478)

To define roles you should list function names using `S_RFC` with `FUNC` instead of groups using `S_RFC` with `FUGR`

You can use the Workload Statistics (Transaction `ST03N`) → RFC Server Profile or transaction `STRFCTRACE` to verify if these functions are used in RFC scenarios (or you use report `ZRFC_STATRECS_SUMMARY`).

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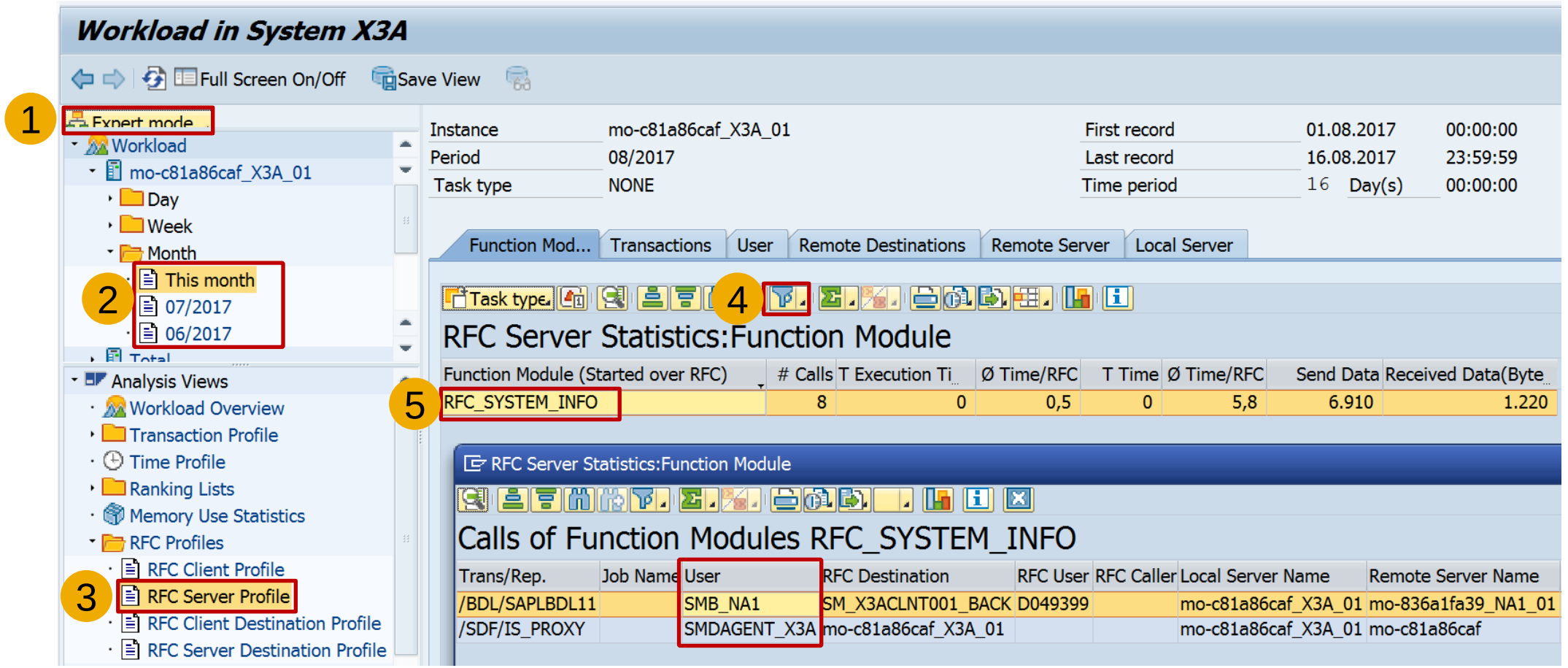
Note 2216306 - S_RFC check and profile parameter auth/rfc_authority_check

Workload Statistics (Transaction `ST03N`) → RFC Server Profile
shows a cross-client list of users (but not the client) who might need additional authorizations



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Note 2216306 - S_RFC check and profile parameter auth/rfc_authority_check

Transaction `STRFCTRACE`
or report `ZRFC_STATRECS_SUMMARY`
show a cross-client list of users including available respective missing authorizations for `S_RFC`

1. **User has authorizations for `S_RFC FUNC`**
2. **User does not need authorizations for `S_RFC`**
3. **User has no authorizations for `S_RFC`**
4. **User has critical authorizations for `S_RFC *`**
5. **User has authorizations for `S_RFC FUGR`**

Record	Date	Clie	Account	User type	Userid	Target	Remote instance	RFC Function	Gro	Authorizations	Σ # Calls
SV	01.06.2017	001	SMB_NA1	B System	D049399	SM_X3ACLNT001_BACK	mo-1ddad0fe9_NA1_01	RFC_SYSTEM_INFO	SRFC	RFC_SYSTEM_INFO	4
SV	01.06.2017	001	SMB_XS2	B System	D049399	SM_X3ACLNT001_BACK	mo-1ea744416_XS2_00	RFC_SYSTEM_INFO	SRFC	RFC_SYSTEM_INFO	3
SV	01.06.2017	000	SMDAGENT_X3A	B System		mo-c81a86caf_X3A_01	mo-c81a86caf.mo.sap.corp	RFC_SYSTEM_INFO	SRFC	*	12
SV	01.06.2017	001	BGRFC_SUSR	S Service	SOLMAN_BTC	BGRFC_SUPERVISOR	mo-c81a86caf_X3A_01	RFC_SYSTEM_INFO	SRFC		1
SV	01.06.2017	000	SAPSYS		SOLMAN_BTC	SM_X3ACLNT000_TRUSTED	mo-c81a86caf_X3A_01	RFC_SYSTEM_INFO	SRFC		1
SV	01.06.2017	000	SAPSYS		SOLMAN_BTC	SM_X3ACLNT001_TRUSTED	mo-c81a86caf_X3A_01	RFC_SYSTEM_INFO	SRFC		1
SV	01.06.2017	000	SAPSYS		SOLMAN_BTC	TRUSTING@X3A_X3A_0020230702	mo-c81a86caf_X3A_01	RFC_SYSTEM_INFO	SRFC		1
SV	01.06.2017	000	SAP_WSRT	B System	SOLMAN_BTC	WS_SRV_SAP_WSRT000	mo-c81a86caf_X3A_01	RFC_SYSTEM_INFO	SRFC		1
SV	01.06.2017	000	TMSADM	B System	SOLMAN_BTC	TMSADM@X3A.DOMAIN_X3A	mo-c81a86caf_X3A_01	RFC_SYSTEM_INFO	SRFC		1
SV	01.06.2017	001	D019687	A Dialog	D019687	NONE	mo-c81a86caf_X3A_01	RFC_SYSTEM_INFO	SRFC	*	87
SV	01.06.2017	001	D019687	A Dialog	D019687	X3ACLNT001	mo-c81a86caf_X3A_01	RFC_SYSTEM_INFO	SRFC	*	1
SV	01.06.2017	001	SM_BW_ACT	B System	SM_BW_ACT	X3ACLNT001	mo-c81a86caf_X3A_01	RFC_SYSTEM_INFO	SRFC	SRFC	1
SV	01.06.2017	001	BI_CALLBACK	B System	SOLMAN_BTC	SM_X3ACLNT001_CALLBACK	mo-c81a86caf_X3A_01	RFC_SYSTEM_INFO	SRFC	SRFC	1
SV	01.06.2017	001	SMB_X3A	B System	SOLMAN_BTC	SM_X3ACLNT001_BACK	mo-c81a86caf_X3A_01	RFC_SYSTEM_INFO	SRFC	RFC_SYSTEM_INFO	1

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Note 2417020 - Cross-Site Scripting (XSS) vulnerability in SAP NetWeaver Business Client for HTML

No change?

No change by this note, however, several prerequisite notes are listed → important is that the (re)-implementation of note 2453955 - SAP NWBC ABAP Runtime Patch 58 gets triggered.

→ If you are using the SAP NetWeaver Business Client than go for periodic maintenance activities concerning SAP NWBC ABAP Runtime:

```
*&---------------------------------------------------------------------*
*& CLASS LCL_NWBC_URL_HANDLER IMPLEMENTATION
*&---------------------------------------------------------------------*
...
        et_post_parameter      = et_post_parameter ).

    if ev_url cs 'javascript:'.
*>>>> START OF DELETION <<<<<
      raise exception type /ui2/cx_nwbc
*>>>> END OF DELETION <<<<<<<

*>>>> START OF INSERTION <<<<<
      "Don't allow any URL that might perform JavaScript
      raise exception type /ui2/cx_nwbc
*>>>> END OF INSERTION <<<<<<
```

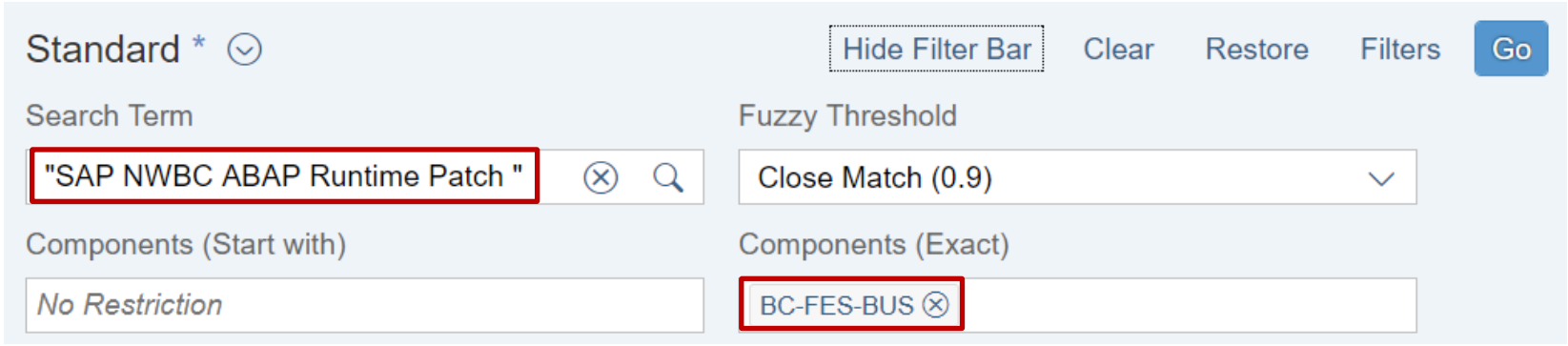
```
*&---------------------------------------------------------------------*
*& Object          METH CL_NWBC_HTML_BASE
*&                      RENDER_REDIRECT_2_EXTERNAL_APP
*& Object Header   CLAS CL_NWBC_HTML_BASE
*&---------------------------------------------------------------------*
...
  method render_redirect_2_external_app.

"This is a hook for note 2453955!
*>>>> START OF DELETION <<<<<

*>>>> END OF DELETION <<<<<<<

*>>>> START OF INSERTION <<<<<
"The fish took the bite!

*>>>> END OF INSERTION <<<<<<
```



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Note 2024431 - TDDAT adjustment in customer landscape (reloaded) Comparison of Table Authorization Group Assignment

As part of standard corrections using SAP Notes or Support Packages, adjustments to table authorization group assignments were delivered.

However, it is not possible for SAP to change existing table entries by means of a Support Package.

The report `TDDAT_COMPARE` compares the table authorization group assignments delivered by SAP by means of Support Packages with the data in your system.
In addition to the comparison state, the result list displays the relevant SAP Note number and the corresponding application component. We recommend that you use this report after importing a Support Package to check the table authorization group assignment.

Status	Object Name	Short Description	Authoriz.	Authoriz.	SAP Note	SAP group	Appl. Component
≠	SCPRSTRANSP	Switch BC Sets: Transport Recording Tables	B0SD	SBCA	865234	SCPR	BC-CUS-TOL-BCD
≠	USH02	Change history for logon data	SC	SPWD	1484692	SUSR_KRN	BC-SEC-LGN
≠	USR02	Logon Data (Kernel-Side Use)	SC	SPWD		SUSR_KRN	BC-SEC-LGN
≠	USRPWDHISTORY	Password History	SC	SPWD		SUSR_KRN	BC-SEC-LGN
≠	VUSER001	Generierte Tabelle zu einem View	SC	SPWD		SUSR	BC-SEC-USR-ADM
≠	ECCUST_ET	Customizing Table for External Test Tools	&NC&	ECCU	1896642	SECATT_DDIC	BC-TWB-TST-ECA

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Note 2024431 - TDDAT adjustment in customer landscape (reloaded) Comparison of Table Authorization Group Assignment

Get updates regularly and then execute report `TDDAT_COMPARE` again:

Note 2383438 - TDDAT_COMPARE | Enhancement of comparison list (Oct. 2016)
Update of Table Authorization Group Assignments

Note 2290977 - TDDAT_COMPARE | Enhancement of comparison list (March 2016)
Update of Table Authorization Group Assignments

Note 2273583 - TDDAT_COMPARE | Error in database update
Correction

Note 2079497 - Table authorization group assignment in user and authorization management
Update of Table Authorization Group Assignments (Nov. 2015)

Note 2024431 - TDDAT adjustment in customer landscape (July 2015)
Framework and Update of Table Authorization Group Assignments

(Older notes are prerequisites of newer notes → it's sufficient to implement the newest note.)

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Note 2356982 - SE54 | Maintenance of table authorization groups
Note 1645260 - Extended maintenance of table authorization groups

When checking for authorizations in transactions like `SE16`, `SM30`, `SM31`, `SM34` on the authorization object `S_TABU_DIS`, a table authorization group is checked for authorization to access tables or views.

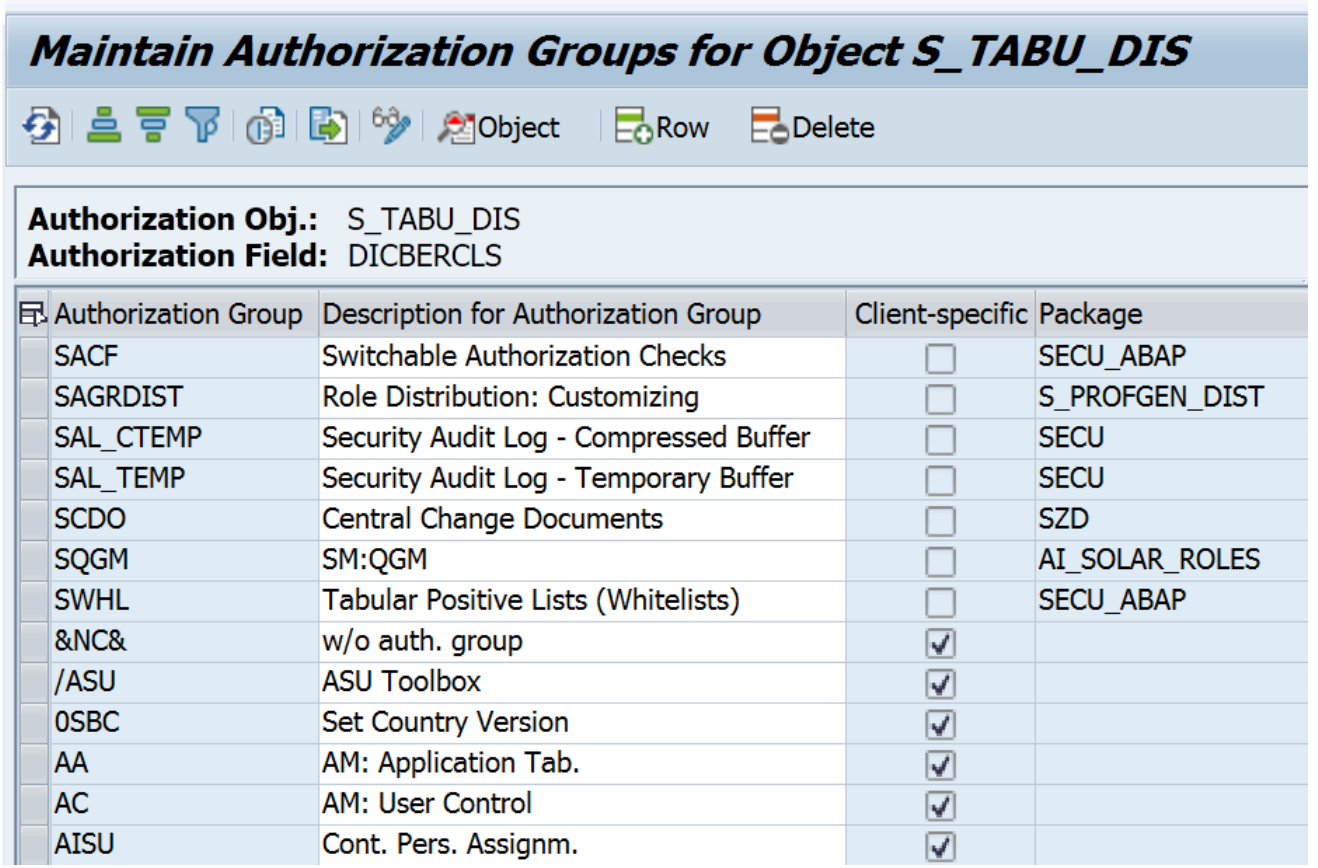
Maintain client independent table authorization group definitions

- **Transaction `STBRG`**

Assign client independent table authorization group definitions

- **Transaction `STDDAT`**

Anyway: Go for `S_TABU_NAM` instead of `S_TABU_DIS` (see FAQ note 1434284)



Authorization Group	Description for Authorization Group	Client-specific	Package
SACF	Switchable Authorization Checks	☐	SECU_ABAP
SAGRDIST	Role Distribution: Customizing	☐	S_PROFGEN_DIST
SAL_CTEMP	Security Audit Log - Compressed Buffer	☐	SECU
SAL_TEMP	Security Audit Log - Temporary Buffer	☐	SECU
SCDO	Central Change Documents	☐	SZD
SQGM	SM:QGM	☐	AI_SOLAR_ROLES
SWHL	Tabular Positive Lists (Whitelists)	☐	SECU_ABAP
&NC&	w/o auth. group	☑	
/ASU	ASU Toolbox	☑	
0SBC	Set Country Version	☑	
AA	AM: Application Tab.	☑	
AC	AM: User Control	☑	
AISU	Cont. Pers. Assignm.	☑	

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July 2017

Topics July 2017

Notes about SAP ONE Support Launchpad

Transport-Based Correction Instructions (TCI)

Note 1920522 - Unauthorized modification of stored content in SCM-BAS-UIF

Note 2416119 - Improved security for outgoing HTTPS connections in SAP NetWeaver

Note 2442993 - Malicious SAP Host Agent Shutdown without Authentication

Note 2459319 - Weak encryption used in SAP Netweaver Data Orchestration Engine

Note 1854252 - Missing authorization-check in BC-SRV-ALV

Note 2252890 - User TMSADM_WF with standard password
Note 2285744 - TMS_UPDATE_PWD_OF_TMSADM_WF - password not allowed

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Notes about SAP ONE Support Launchpad

Note 2371996 - SAP Security Notes app - SAP ONE Support Launchpad
https://support.sap.com/securitynotes

Note 2361791 - How to filter SAP Legal Change Notes, Security Notes and HotNews on SAP ONE Support Launchpad
Description how to filter the notes by systems in the tile 'SAP Security Notes', 'SAP HotNews‘, and 'SAP Legal Change Notes'. The system filter contents are maintained in the System Data application. You need to mark systems in the System Data application as 'Favorite'.

Note 2388433 - Expert Search for SAP Notes & KBAs - SAP ONE Support Launchpad
https://support.sap.com/notes → Expert Search

Note 2348668 - How to activate a tile from the tile catalogue - ONE Support Launchpad
List of all Launchpad tiles currently available
https://support.sap.com/support-programs-services/about/help-index/tile-overview.html

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Note 2416119 - Improved security for outgoing HTTPS connections in SAP NetWeaver

The property `UrlCheckServerCertificate` of the outgoing HTTP Provider service exists on Java systems only. It controls if the SSL certificate of the server gets validated by the client.

The property is maintained in the configtool, which can be found under `\usr\sap\<SID>\<Instance>\j2ee\configtool`, running the correct script in regards to the underlying OS.

Upon execution, in the GUI of the tool, from the left menu, navigate to `cluster-data` → `template-Usage_Type_All_in_One` → `services` → `http`

The property itself should be visible in the list on the right.
Click on it at "set a custom Value" to set the value `true`.

It is strongly recommended to switch the value of the property to "true" even if you are not making any outgoing http(s) calls at present. Note that after enabling this property certain scenarios involving outgoing **https calls to other resources will fail unless you have maintained proper and valid certificates for the requested resources** in the client system's keystore.

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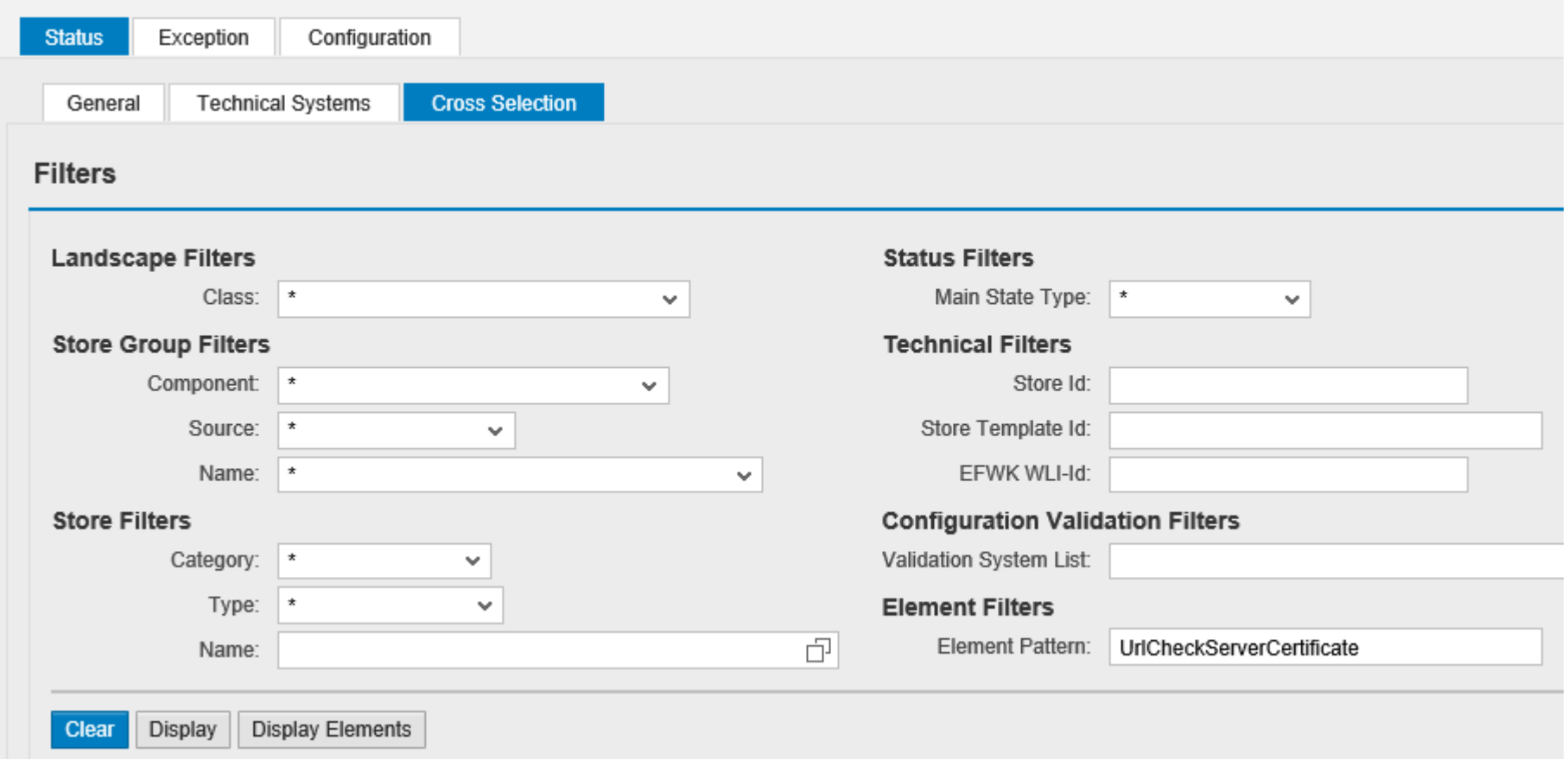
Note 2416119 - Improved security for outgoing HTTPS connections in SAP NetWeaver

How to find the property `UrlCheckServerCertificate` in Configuration Validation – just try it: Transaction `CCDB`



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Transport-Based Correction Instructions (TCI)

This new method “Transport-Based Correction Instructions” (TCI) for shipping corrections is used in case of components which had published large updates regularly, e.g. the component for Unified Rendering. This way we can avoid long lists of prerequisite notes which had produced trouble regularly.

Wiki Page:
https://wiki.scn.sap.com/wiki/x/eoWgGg

SAP Note Transport-Based Correction Instructions
https://help.sap.com/saphelp_nw74/helpdata/en/d2/05d6942286460 4a487c67472cdd4ff/frameset.htm

SAP Note Transport-Based Correction Instructions
https://help.sap.com/viewer/9d6aa2385820426789 52ab3b4aa5cc71/7.31.19/en-US/81a0376ed9b64194b8ecff6f02f32652.html

SAP Notes: Introducing Transport-Based Correction Instructions (Recording)
https://service.sap.com/sap/bc/bsp/spn/esa_redirect/index.htm?gotocourse=X&courseid=70295008

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Transport-Based Correction Instructions (TCI)

SAP Note transport-based correction instructions (TCI) have the following benefits compared to SAP Notes with correction instructions (CI):

- **Fast consumption of consolidated CIs**
- **Support of all transport-enabled SAP ABAP objects such as DDIC, Table Content, and MIME**
- **No adjustment activities during SP import and upgrade for SAP standard objects.**
- **Clear functional focus and less side-effects.**

Caution: When you have implemented a TCI, you can currently not deimplement it. To delete the TCI from the system, you must revert your system to the status it had before you implemented the TCI. This procedure necessarily requires a system backup.

Note 2187425 - Information about SAP Note Transport based Correction Instructions (TCI)
Note 1995550 - Enabling SNOTE for transport based correction instruction
Note 2345669 - Limitations/Known issues in TCI
Note 2347322 - Note Status of the TCI note is not shown correctly in the subsequent systems

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Transport-Based Correction Instructions (TCI)
Unified Rendering

Note 2090746 - Unified Rendering Notes - Which One To Apply - Instructions And Related Notes.

Example: Note 2493427 - Correction for Unified Rendering SAP_UI NW740 TCI 009
This note contains a TCI (=sar-file) which you can download at section “Correction Instruction” instead of a normal ABAP automatic correction instruction.

SAP Note 2187425 describes how to prepare your system and how this SAP Note can be used in the SAP Notes Assistant (transaction SNOTE) .

If your SP level is under SAPKB740SP12 SAP_UI , please upgrade your SP version first.

Prerequisiste:
SPAM needs to be updated to SPAM version 63.
Additional SPAM authorization required, see new roles `SAP_OCS_STD` and `SAP_OCS_TCI_IMPORT`

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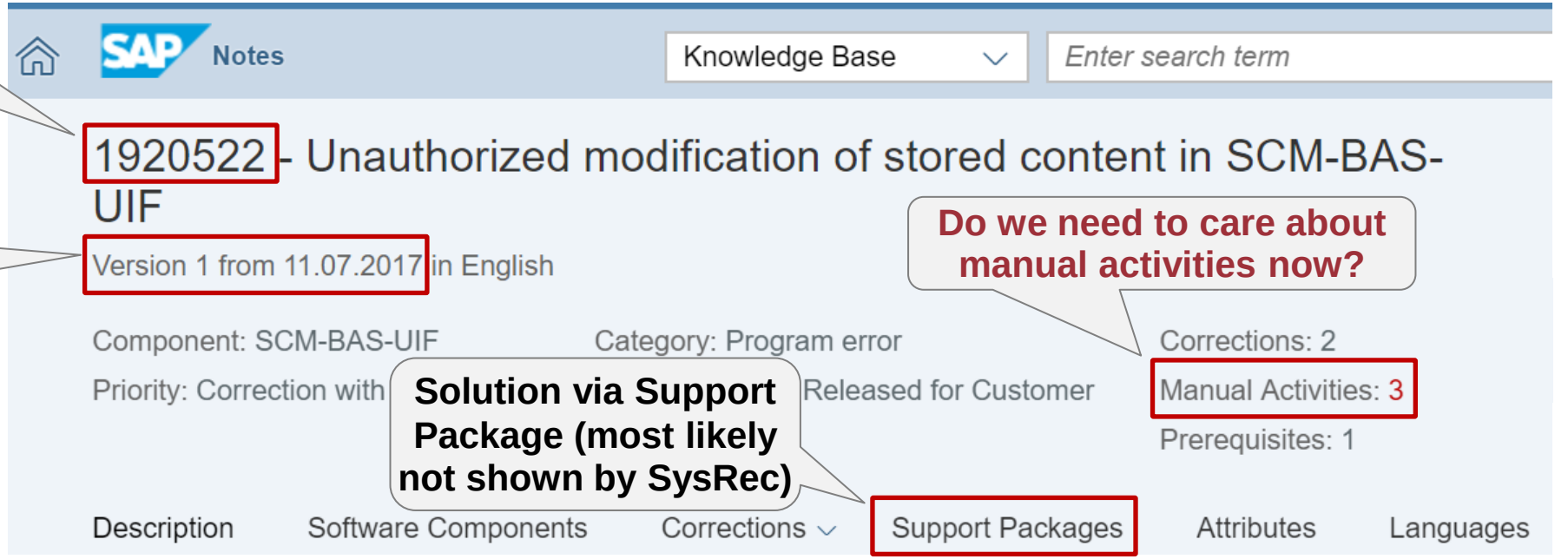
Note 1920522 - Unauthorized modification of stored content in SCM

Small number = very old note

Original version published now



Possible answers:

- ✓ **"No",** because note is old and we already have the Support Package and the manual activity is only required if you install the note via `SNOTE`
- ✓ **"Yes",** because the manual activity is required in any case even in new systems
- ✓ **"It depends",** because the manual activity is required even in new systems but only if you use the application

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Note 1920522 - Unauthorized modification of stored content in SCM

Pre-Imp. / Post-Imp.
=
Weak indication that it‘s only relevant for implementation via SNOTE

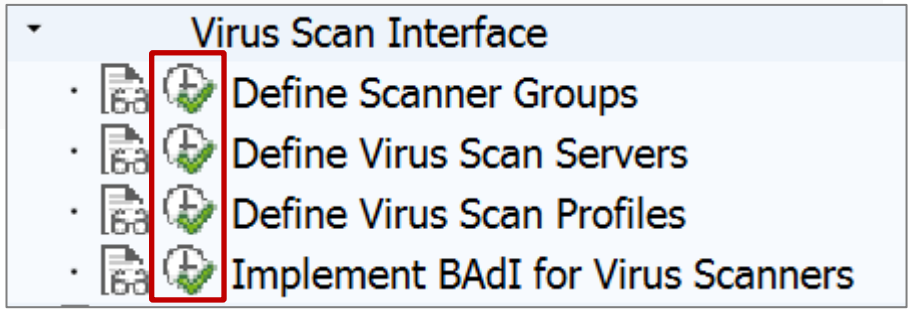
To-SP limited
=
Strong indication that it‘s only relevant for implementation via SNOTE

Customizing transaction
=
Very strong indication that you need it in any case or if you are using the application

```
---------------------------------------------------------------------
|Manual Pre-Implement.                                              |
---------------------------------------------------------------------
|VALID FOR
|Software Component   SCMSNC                          Supply Network.
| Release 702          SAPK-70201INSCMSNC - SAPK-70212INSCMSNC
| Release 712          Until SAPK-71207INSCMSNC
---------------------------------------------------------------------

Log in to the SNC system in English, and perform the following steps:
Start transaction SPRO
Navigate to Sap NetWeaver -> Application Sever -> System Administration -> Virus Scan Interface
Execute Define Virus Scan Profiles
Select Create New Entries

Enter /SCA/DM_BRANDING/UPLOAD_FILE for Scan Profile
```



Result: If you are using the application you should consider to execute additional steps: install a Virus Scanner and activate the application specific Virus Scan Profile

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Note 2442993 - Malicious SAP Host Agent Shutdown without Authentication

SAP Host Agent runs on all SAP supported platforms, i.e. ABAP, JAVA, HANA.

The issue is fixed with SAP Host Agent 721 PL25.
see
Note 1031096 - Installing Package SAPHOSTAGENT

Which SAP Notes are important for SAP Host Agent?
Note 1031096 - SAP Host Agent Installation
Note 1473974 - SAP Host Agent Auto upgrade
Note 927637 - Web service authentication in sapstartsrv
Note 1907566 - SAP Host Agent Documentation
Note 2130510 - SAP Host agent 7.21

The SAP Host Agent is part of a SAP HANA installation, too.
You can update the SAP Host Agent on HANA according to Note 1031096, too

The SAP Host Agent in SAP HANA has been updated with

- **revision 122.10 (for SAP HANA1.00 SPS12, 2017-07-01),**
- **revision 2.02 (for SAP HANA2.0 SPS00, 2017-07-06), and**
- **revision 12 (for SAP HANA2.0 SPS01, 2017-06-27).**

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SAP Host Agent - Frequently Asked Questions

https://wiki.scn.sap.com/wiki/display/ATopics/SAP+Host+Agent+-+Frequently+Asked+Questions

How to determine the version of SAP Host Agent installed?

The SAP Host Agent is usually located in folder `/usr/sap/hostctrl/exe/`
see profile parameter `DIR_SAPHOSTAGENT`

`/usr/sap/hostctrl/exe/`**`hostexecstart –version`**

Using this command, you can use report `RSBDCOS0` to check the version of SAPHOSTAGENT

```
************************** Component ********************
/usr/sap/hostctrl/exe/saphostexec: 721, patch 814, changelist 1744524, linuxx86_
/usr/sap/hostctrl/exe/sapstartsrv: 721, patch 814, changelist 1744524, linuxx86_
/usr/sap/hostctrl/exe/saphostctrl: 721, patch 814, changelist 1744524, linuxx86_

SAPHOSTAGENT information

kernel release                721
kernel make variant           721_REL
compiled on                   Linux GNU SLES-9 x86_64 cc4.1.2  for linuxx86_64
compiled for                  64 BIT
compilation mode              Non-Unicode
compile time                  Dec 24 2016 07:36:39
patch number                  22
```

The user root (but not <sid>adm) can use these commands, too:

`saphostexec –version`

or

`saphostctrl -host <hostname> -function ExecuteOperation -name versioninfo`

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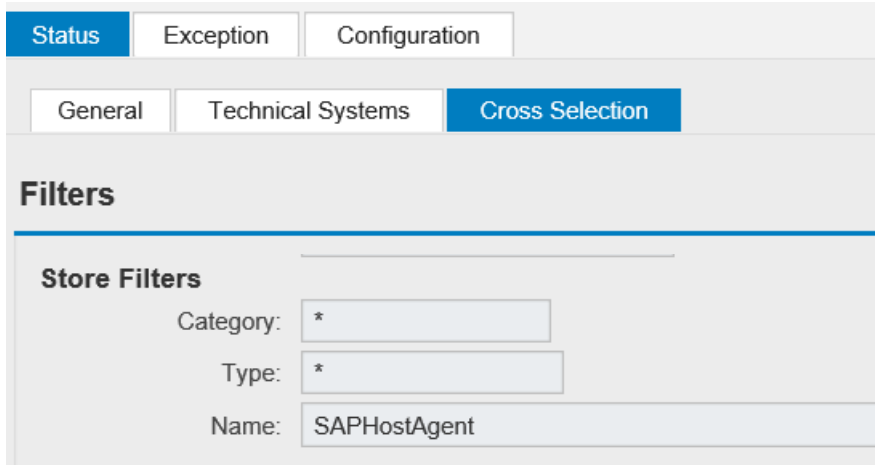
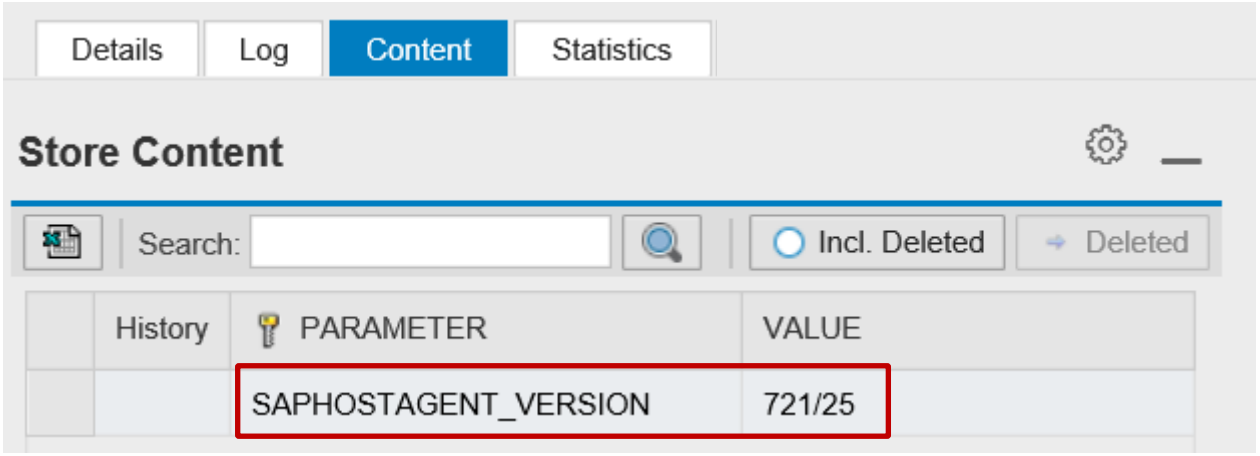
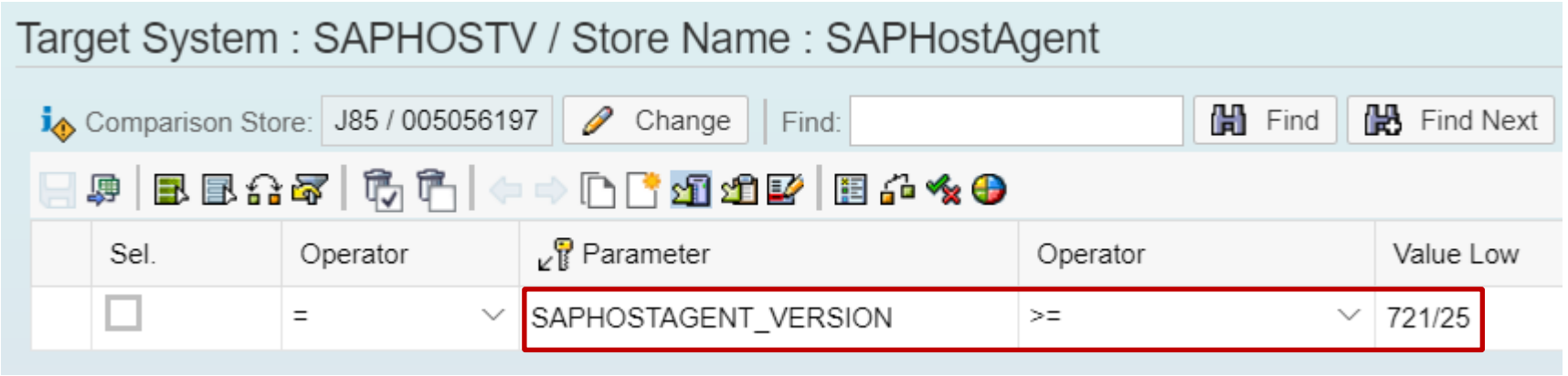
SAP Host Agent
Validate the version using Configuration Validation

Transaction `CCDB` showing Configuration Store `SAPHostAgent` with Configuration Item `SAPHOSTAGENT_VERSION`





Target System to check for a specific version:



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SAP Host Agent
Validate the version using Configuration Validation

Result of Configuration Validation for Configuration Store `SAPHostAgent`

Configuration Items

System	Host Name	Config. Item	Config. Item Value	Cv. DataOperator	Compliance	Compliant (1=Yes, -1=No, ' '=Not valuated)
HRX	ldcih	SION	720/205	>= 721/25	No	-1
IN1	atgvmls5	SION	721/28	>= 721/25	Yes	1
	atgvmls5	VERSION	721/28	>= 721/25	Yes	1
	dfgwd01527	SAPHOSTAGENT_VERSION	720/197	>= 721/25	No	-1
	o-fbab0393f	Content out-of-date	Days: 481	#	Item not found	-1
M	hs0037	SAPHOSTAGENT_VERSION	#	>= 721/25	Item not found	-1
M	lddbmw5	SAPH SION	#	>= 721/25	Item not found	-1
N4Q	lddbn4q	SAPH SION	#	>= 721/25	Item not found	-1
N75	ldcin75	SAPHOSTAGENT_VERSION	721/28	>= 721/25	Yes	1
	lddbn75	SAPHOSTAGENT_VERSION	721/28	>= 721/25	Yes	1
PJ2	vmw4307	SAPHOSTAGENT_VERSION	721/28	>= 721/25	Yes	1
PJ3	vmw4308	Content out-of-date	Days: 344	#	Item not found	-1
PJ4	vmw4309	SAPHOSTAGENT_VERSION	721/29	>= 721/25	Yes	1
PO1	nced60229921a	SAPHOSTAGENT_VERSION	721/22	>= 721/25	No	-1

Content out of date

Multiple hosts per system

No data

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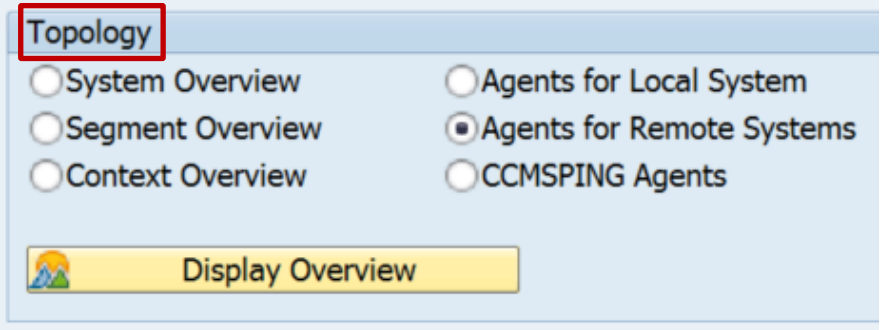
SAP Host Agent
What else to do?

Do you have enabled SSL for the Host Agent?

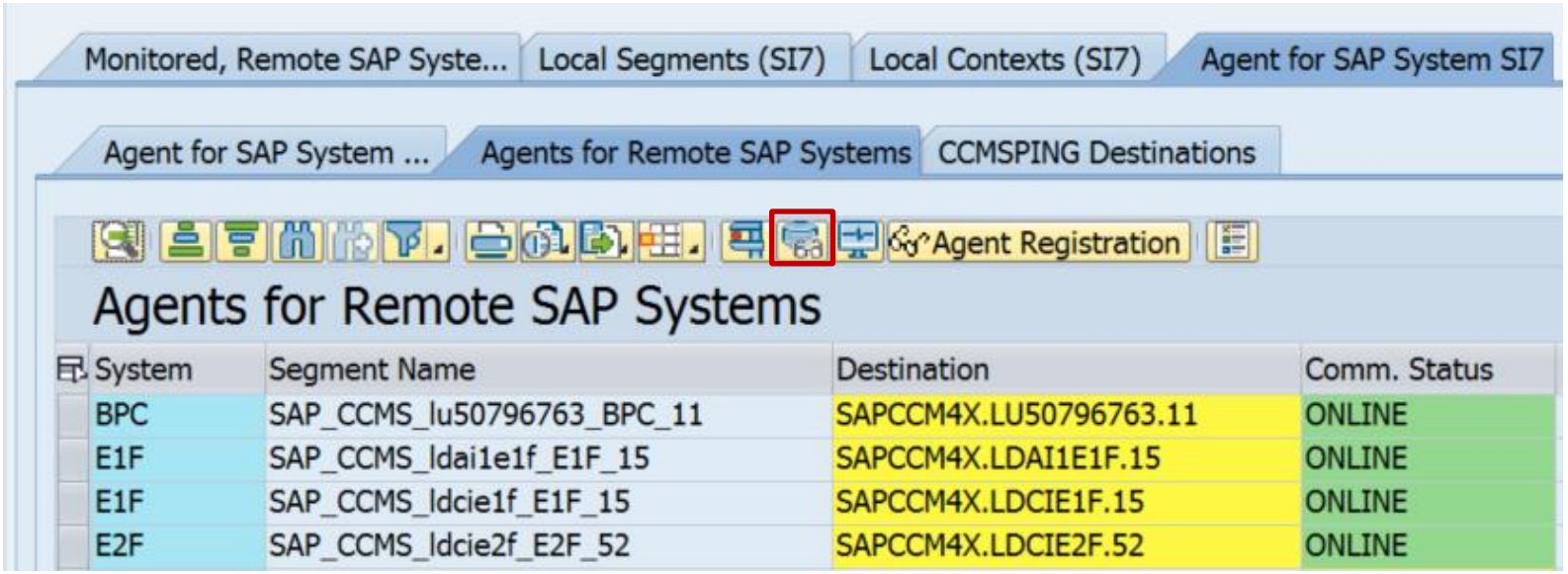
Do you have enabled Audit Logging for the Host Agent?

Check for parameters `ssl/server_pse` and `service/auditlevel` and `service/logfile_*` in file `/usr/sap/hostctrl/exe/host_profile`

Use Configuration Store `host_profile` to check these parameters in application Configuration Validation.



Transaction `RZ21`
→ Agent Working Directory



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Note 2459319 - Weak encryption used in SAP Netweaver Data Orchestration Engine

Deactivation of obsolete code, no test required.

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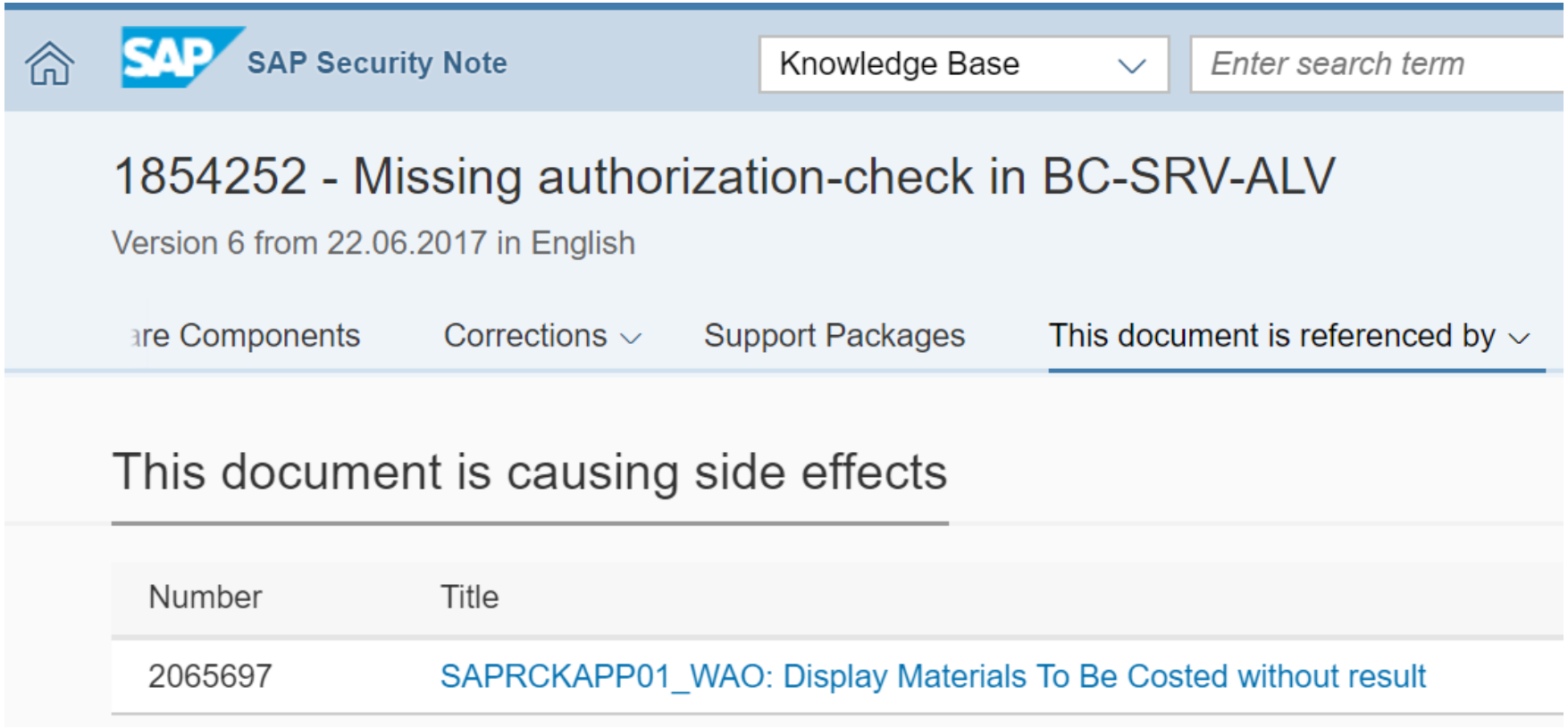
Note 1854252 - Missing authorization-check in BC-SRV-ALV

Very old note, not relevant anymore for (most) systems

Deactivation of obsolete (?) code about usage of the “MiniALV”

However, some MiniALV applications had still been in use some years ago:

See side-effect solving note 2065697 - SAPRCKAPP01_WAO: Display Materials To Be Costed without result



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Note 2252890 - User TMSADM_WF with standard password
Note 2285744 - TMS_UPDATE_PWD_OF_TMSADM_WF

The standard user `TMSADM_WF` only exists if you are using the TMS Workflow.

It will be created with proper profile assignments but with an standard password.

see SAP Library at
Basis Components → Change and Transport System → Transport Management System → Configuring TMS → Configuring the Transport Workflow → Resetting User TMSADM_WF

Use report `TMS_UPDATE_PWD_OF_TMSADM_WF` to check the profile assignments and to change the password of user `TMSADM_WF` in the whole domain.

Ensure that this user has only profile assignments for `S_A.TMSADM` and `S_A.TMSWF`.

Take care to execute this inside the TMS Workflow Engine and that TMS Workflow is active.

You can change the password of user `TMSADM_WF` manually as well if you maintain the stored password in RFC destination `TMSWF@WORKFLOW_ENGINE`, too.

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Note 2252890 - User TMSADM_WF with standard password
Note 2285744 - TMS_UPDATE_PWD_OF_TMSADM_WF

Tipp:

Despite the validity information in the note you do not need to apply the manual correction instructions of note 2252890 about modifying a message class and about creating a function group if you update the support package.

However, after creating the function group manually you get a warning during implementation with `SNOTE` – in this case, ensure to set the checkbox for overwriting object `REPS SAPLCTW_CONFIG`.

Implement note 2285744, too, to solve an error in this report.

In case of errors while activating TMS workflow:

Note 2191190 - Could not create user TMSADM_WF error configuring workflow

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June 2017

Topics June 2017

What's new in System Recommendations SolMan 7.2

Note 2461414 - SysRec: notes for obsolete kernel versions are displayed on SolMan 7.2

Note 2380277 - Memory Corruption vulnerability in IGS

Priority changes because of CVSS, e.g. Notes 2235513, 2235514, 2235515

Reloaded: How to define cipher suites for SSL/TLS

Security notes for the Web Dispatcher
Note 2423429 - Code Injection vulnerability in SAP Web Dispatcher

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What's new in System Recommendations SolMan 7.2 SP 3
Send Configuration Validation reports via email

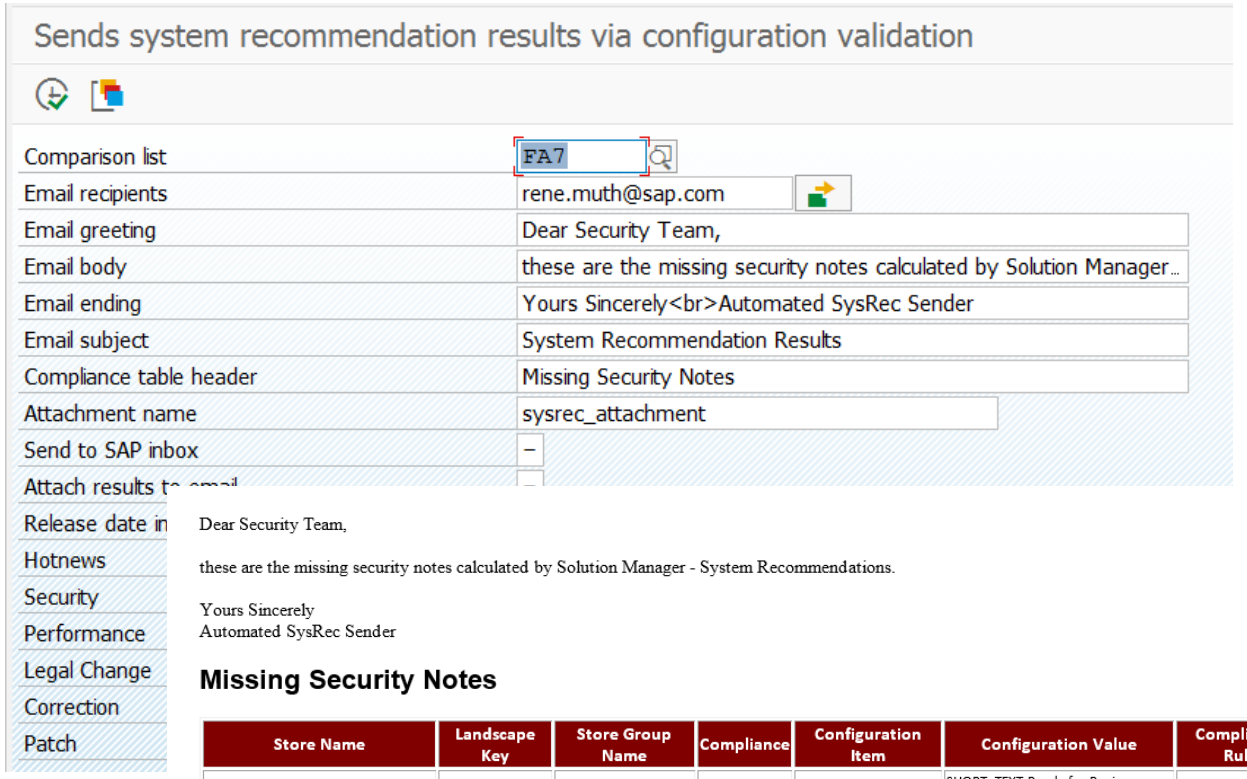
BW Information Broadcasting is not longer supported in SAP BW 7.40 (Note 2020590)

Conclusion: You cannot schedule broadcast notifications for the System Recommendations BW report in SAP Solution Manager 7.2 anymore

New reports to send Configuration Validation results via email:

Configuration Validation
`DIAGCV_SEND_CONFIG_VALIDATION`

System Recommendation Report
`DIAGCV_SEND_SYSREC`



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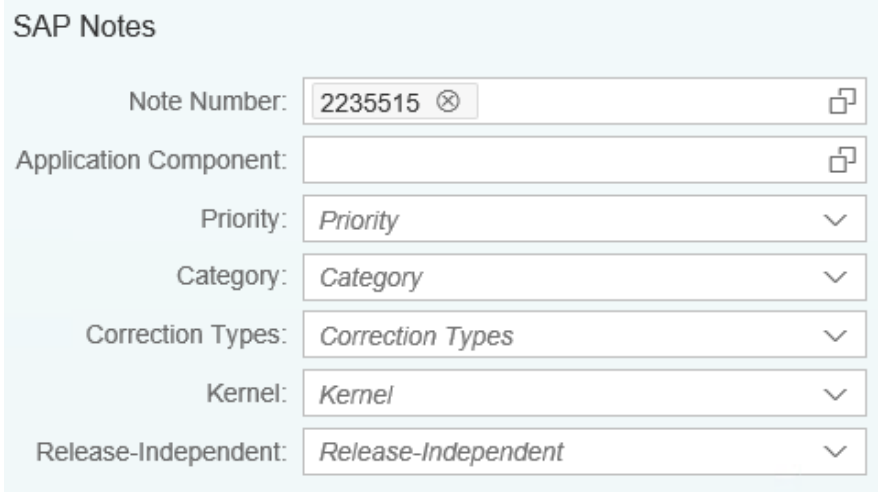
What's new in System Recommendations SolMan 7.2 SP 5

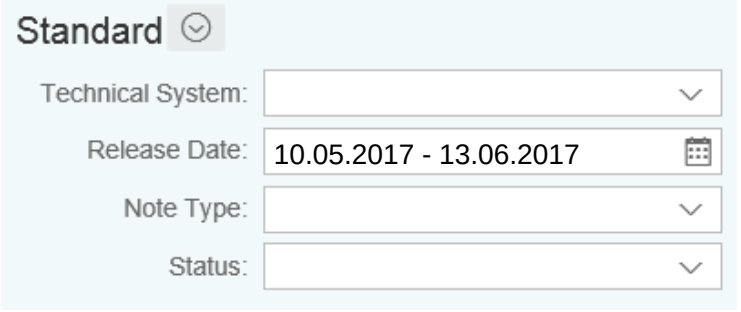
New in SolMan 7.2 SP 5
(SP Schedule see https://service.sap.com/~sapidb/011000358700000588032013E)

- ✓ **New filter option for notes:**
  Navigate to a notes list and adjust the filter entering individual note numbers.



- ✓ **Tip for using the date filter**

Starting from:	**enter a date**	**01.01.2017 - 31.12.9999**
Range:	**enter a range**	**10.05.2017 - 13.06.2017**
One day:	**use a range**	**13.06.2017 - 13.06.2017**



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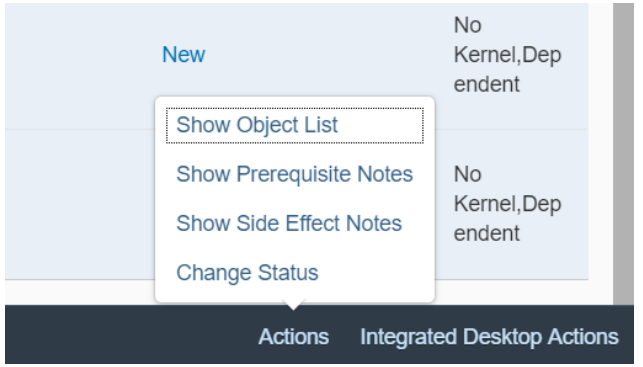
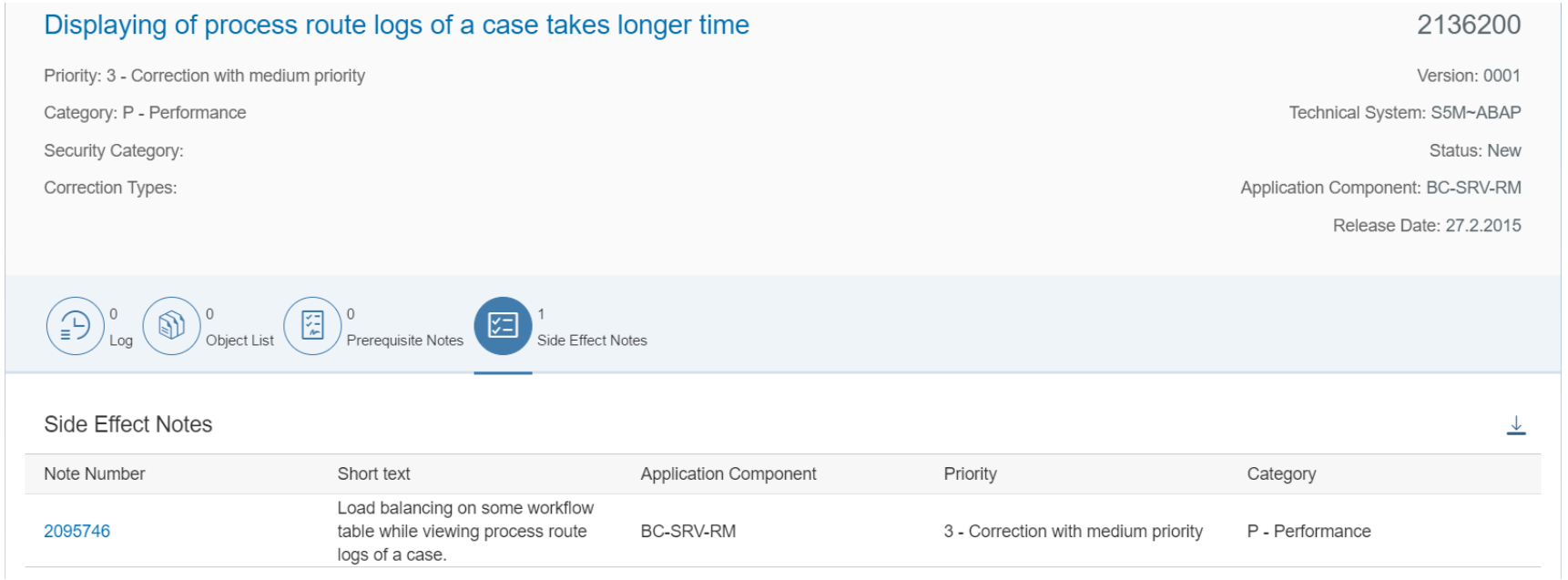
What's new in System Recommendations SolMan 7.2 SP 5

Show side effect solving notes for selected list of notes:



Show side effect solving notes on detail screen of notes:

Recommendation: Implement side effect solving notes right after implementation of the original notes



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Note 2461414 - SysRec: notes for obsolete kernel versions are displayed on SolMan 7.2

System Recommendations might shows too many Kernel notes for ABAP and JAVA systems

Example for an ABAP system with Kernel 7.45 patch 412 and SAP_BASIS 7.50 SP 4:

Note 2074736 (only kernel up to 7.42 are affected)
Note 1553180 (only kernel up to 7.20 or SAP_BASIS up to 7.31 are affected)
Note 1453325 (only kernel up to 7.20 or SAP_BASIS up to 7.20 are affected)
[…]

Note 2461414 version 4 is required to solve the issue

After implementing the note you have to clear the buffers and re-run the System Recommendations background job according to note 2449853

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Note 2380277 - Memory Corruption vulnerability in BC-FES-IGS

Which version of IGS is currently installed?

- See note 931900 - Finding the IGS patch level
- **Run transaction `SIGS` (= report `GRAPHICS_IGS_ADMIN`)**
- **Use transaction `AL11` to view file `igsmanifest.mf` in folder `DIR_CT_RUN` respective `DIR_EXECUTABLE`**
- **Use report `RSDBCOS0` to execute one of the commands:**
  `igswd_mt -version`
  `igsmux_mt -version`
  `igspw_mt -version`

SAP Internet Graphics Service

Version	7200.0.12.1
Build Date	Jun 14 2016

```
Directory:    /usr/sap/X3A/SYS/exe/uc/linuxx86_64
Name:         igsmanifest.mf
```

```
Manifest-Version: 1.0

keyname: BC-FES-IGS
keyvendor: sap.com
keylocation: SAP AG

igs os: linuxx86_64

igs release: 720
make variant: 720_EXT_REL
igs patch number: 12
```

```
R/3  X3A 001       User     D019687      Date  22.05.2017 Time 14:12:47
Host mo-c81a86caf  User     x3aadm
Path /usr/sap/X3A/DVEBMGS01/work
```

```
Execute history command number with next command
!!..    Execute last command from history with trailing ..
$(name) replaced by logical OS commands and profile parameters
```

```
[1]igswd_mt -version
[1]ReturnCode=  1 d_mt -version
Version of igswd_mt = 7200.0.12.0 - 630676 - Jun 14 2016
```

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Note 2380277 - Memory Corruption vulnerability in BC-FES-IGS

Can you update IGS independently from the whole Kernel?

- **The standalone IGS needs to be updated separately in any case.**

  The integrated Internet Graphics Service (IGS) exists on every SAP Web AS machine and is started and stopped with SAP WebAS. However, IGS is not part of the Kernel which means it has to be patched separately.
  see note 896400 - Upgrade your integrated IGS 7.x installation
  https://help.sap.com/doc/saphelp_nw74/7.4.16/en-US/4e/193dbeb5c617e2e10000000a42189b/frameset.htm

Do you need downtime?

- **Yes, the new version of the integrated IGS is up and running after restarting the server.**

Do you need to update the SAPGUI to solve this vulnerability?

- **As for the SAPGUI, it depends on the use case. Most business scenario uses the IGS server to render graphics.**
  In some business use cases, the SAPGUI uses an IGS-based activeX control to render charts directly in SAPGUI. For those use case, you should upgrade the SAPGUI version.

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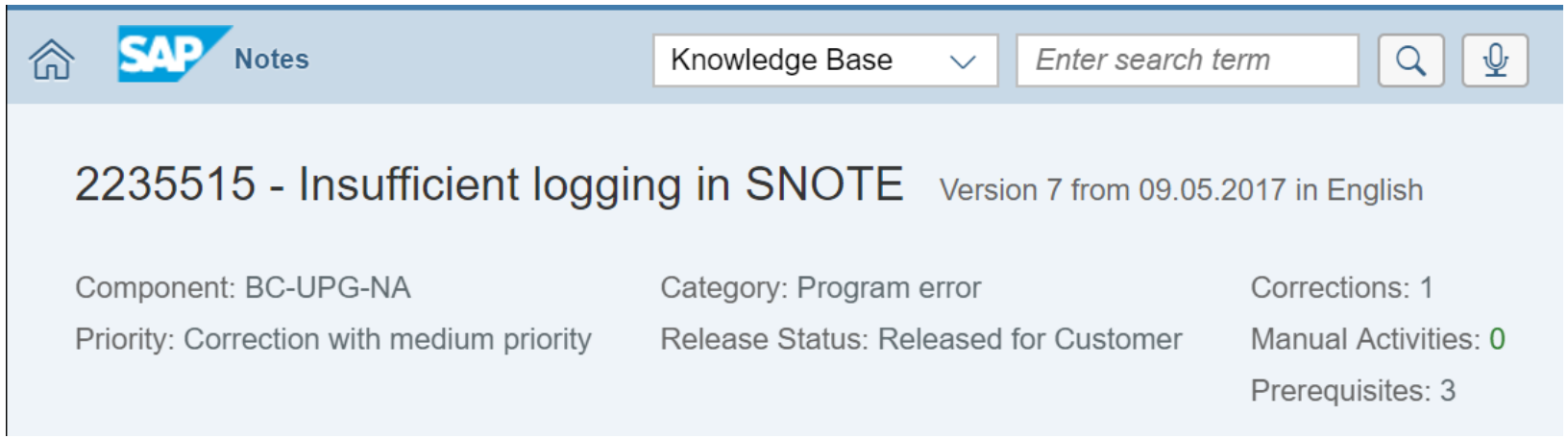
Priority changes because of CVSS, e.g. Notes 2235513, 2235514, 2235515

Notes 2235513, 2235514, 2235515 had been published in 2015 with a priority which was calculated based on CVSS 2.0.

Note 2235515 was changed in April 2017 to adjust prerequisites of the correction instruction.

This triggered re-calculation of priority based on CVSS 3.0.
Now, the priority is set to medium with CVSS v3 Base Score 4.3 NLLN|U|LNN



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Reloaded: How to define cipher suites for SSL/TLS
more samples

SAP ASE
Note 2478377 - Exposure to Sweet32 vulnerability in multiple SAP Sybase products
https://help.sap.com/doc/a6115f7abc2b1014bf21a063974f889e/16.0.2.5/en-US/Security_Administration_Guide_en.pdf
→ Cipher Suites

SAP Mobile Platform Server
Configuring TLS Protocol Versions and Cipher Suites for HTTPS Connections
https://help.sap.com/doc/saphelp_smp3010svr/3.0.10/en-US/f3/755604d74941938fec25691e90e9cd/frameset.htm

SuccessFactors
Note 2383957 - Supported Cipher Suites

SAP Replication Agent for Oracle
Note 2458049 - Support for the TLS v1.2 Protocol

SAP JVM
Note 2193460 - SSLv3 is disabled in SAP JVM version 4.1, 5.1, 6.1, 8.1

SAP WEB AS JAVA 6.40 / 7.0x
Note 1648045 - Remove particular Ciphers from the Cipher Suite

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Security notes for the Web Dispatcher

Note 2423429 - Code Injection vulnerability in SAP Web Dispatcher

You *can* register a Web Dispatcher at the SLD, connect it to the SAP Solution Manager as a technical system with system type WEBDISP, and enable it in System Recommendations. This way you get *some* recommendations about the Web Dispatcher.

However, I guess to get a complete picture about security of the Web Dispatcher you need more than that.

Keep in mind, that the Web Dispatcher

- **rarely gets connected to the SolMan as described above,**
- **could be used in front of ABAP, Java, and HANA systems,**
- **is a component which is independent from the Kernel,**
- **is a component which is an internal part of HANA,**
- **it is very similar to the Internet Communication Manager (ICM) which is part of the Kernel, and**
- **usually requires not only software updates but requires configuration as well to solve security issues.**

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Security notes for the Web Dispatcher

Note 2423429 - Code Injection vulnerability in SAP Web Dispatcher

Let's check the Support Portal to find security Notes about the Web Dispatcher (19.06.2017):
https://support.sap.com/notes → Expert search

a) Search by Application Component of the Web Dispatcher
Component (exact): BC-CST-WDP
→ 12 Security Notes

b) Search by Application Component of the Internet Communication Manager (ICM)
Component (exact): BC-CST-IC
→ 32 Security Notes

c) Search by Software Component of the Web Dispatcher
Software Component: WEBDISP
→ 6 Security Notes

Combining all results you find 39 Security Notes

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Security notes for the Web Dispatcher

Note 2423429 - Code Injection vulnerability in SAP Web Dispatcher

Only few of these 39 Security Notes have assignments to

- **Software Component WEBDISP, or**
- **Support Package Patches of type “SAP WEB DISPATCHER <release> <patch>.**

I would expect that only these notes could be found by System Recommendations.

And not all of these notes have assignments to both, the Software Component and the Patch, which would be required for System Recommendations to produce an exact result at least for the software level (System Recommendations cannot check the configuration anyway).

Therefore, my recommendation is the following:

Whenever you see a Security Note for any of your systems of type ABAP, Java or HANA which deals with the Web Dispatcher or the Internet Communication Manager (ICM), you should check if this note could be relevant for all your installations of the Web Dispatcher, too.

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May 2017

Topics May 2017

WannaCrypt ransomeware

Remote Code Execution vulnerability in SAP GUI

SNC Client Encryption – Do it!

Note 2443673 - Filter Incoming Serialization Data (JVM)

Disable start of transactions with OKCode skipping the first screen

Note 2062885 - SU01/SU10: New user documentation function
Note 2203672 - SU01/SU10: New user documentation function II

Several notes about SAL | Filter selection by user group

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WannaCrypt ransomeware

Note 2473454 - Customer Guidance for WannaCrypt attacks

Note 2476242 - Disable windows SMBv1

Note 2473904 - Does RemoteWare have any patches required for the WannaCrypt ransomware attack?

Note 2473914 - Does SAP Mobile Platform impacted by WannaCrypt?

Note 2474540 - Afaria and WannaCrypt

Summary:

- **This cyber attack uses a SMB protocol bug (SMB version 1.0) in most unpatched Microsoft Windows versions to spread out in an internal network**
- **SAP Systems on Windows and of course Windows based clients could be affected**
- **Implement the patches from Microsoft which blocks spreading of the ransomeware**
- **We do not have any reports that these patches have any negative influence to SAP Systems**
- As a workaround, you can disable the support for SMB v1 to directly block this ports in the firewall, however, this might affect interfaces to other partner systems. Careful testing required!

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Note 2407616 - Remote Code Execution vulnerability in SAP GUI
Note 1768979 - Changes to the SAP GUI security rules file saprules.xml

Security Module Disabled

-- No Security, should be avoided

Security Module Enabled with SAP Standard Administrator Rules and default Action “Allow”

\+ Easiest option to improve security without disturbing users

Security Module Enabled with SAP Standard Administrator Rules and default Action “Ask”

O Easy option to improve security but annoying for users who get trained to click on “Allow”

Security Module Enabled with optimized Administrator Rules and default Action “Allow”

++ Option to improve security without disturbing users but lacking of feedback to stay clean

Security Module Enabled with optimized Administrator Rules and default Action “Ask”

+++ Option for strong security but takes most effort, feedback should be used for further optimization

Security Module Enabled (with optimized Administrator Rules) and default Action “Deny”

\- Only usable in very stable environments

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SNC Client Encryption – Do it!
SNC Client Encryption 2.0: Licensing

Previous status

- **When installing SNC Client Encryption 1.0, the setup displays the following license disclaimer: *“SNC Client Encryption allows you to encrypt the communication between application server and client, and is part of your SAP NetWeaver Application Server license. Adding Single Sign-On capabilities requires an additional license, for SAP NetWeaver Single Sign-On. […]”***

- **Similar disclaimers are published on the service market place and in a number of notes**

Update

✓ **The license disclaimer will be updated and the restriction to non-SSO scenarios will be removed: *“SNC Client Encryption allows you to encrypt the communication between application server and client, and is part of your SAP NetWeaver Application Server license.”***

✓ **The Support Portal and the notes will be updated accordingly**

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SNC Client Encryption – Do it!
Free encryption: A word of caution

In the past, some customers pointed out that it didn't seem right to demand a license for a scenario that combines two free technologies, namely SNC Client Encryption and SAP Logon Tickets. With SNC Client Encryption, the combination with Logon Tickets does no longer require a license.

However!

- **Combining SNC Client Encryption with Logon Tickets is not a valid alternative for single sign-on solutions based on Kerberos or X.509 certificates**
- **As Logon Tickets are cookies, there are multiple ways to attack them, e.g. using vulnerable servers or browsers**
- **Logon Tickets have a very broad validity, so attacks on Logon Tickets may have severe consequences**

SAP recommends that customers rely on more secure technologies whenever implementing single sign-on!

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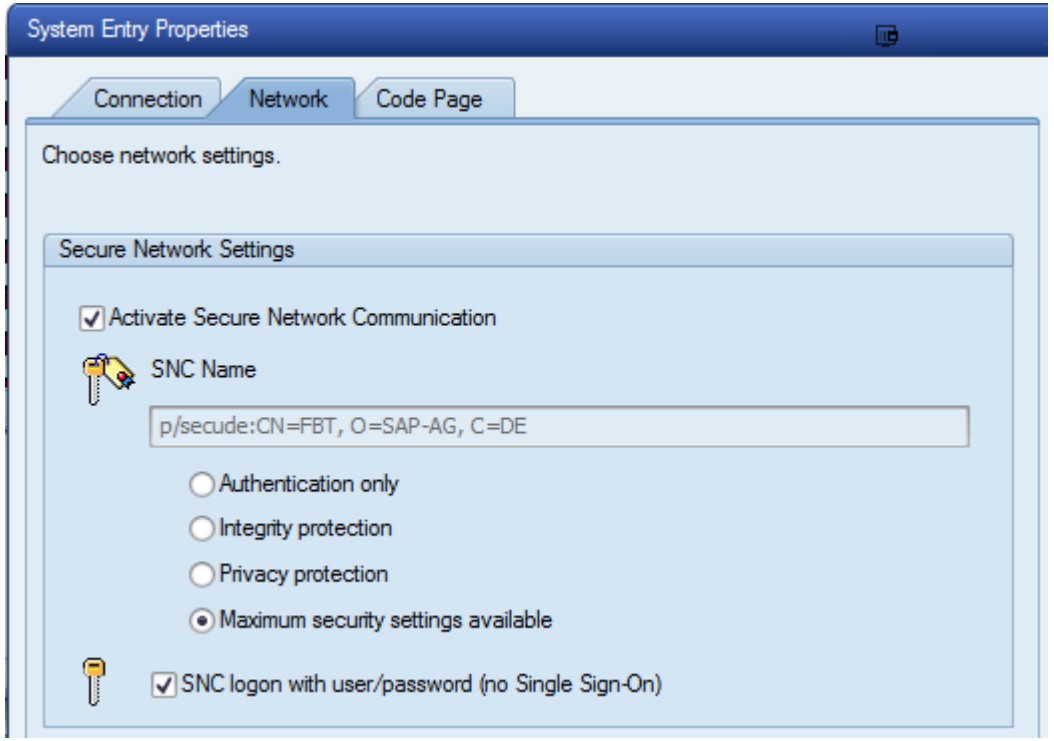
SNC Client Encryption – Do it!
SNC Client Encryption 2.0: Supported Clients

Previous status

- **SNC Client Encryption 1.0 only supports 32bit client applications such as SAP GUI**
- **64bit clients were only supported by the Secure Login Client, requiring an SAP Single Sign-On license**



Update

- ✓ **SNC Client Encryption 2.0 will add support for 64bit applications, such as Eclipse**

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SNC Client Encryption – Do it!

SNC Client Encryption 2.0: Support a TLS-like enablement of encryption

Previous status

- **SNC Client Encryption 1.0 required a Kerberos token to enable encryption**
- **In landscapes that could not rely on Kerberos, encryption was only possible based on the encryption-only mode of the Secure Login Client 3.0**

Update

- ✓ **SNC Client Encryption 2.0 will establish an encrypted connection to a backend system based on a trusted server certificate**
- ✓ **As for TLS, the required steps to configure encryption are:**
  - For each server enable protocol on the server side and install PKI signed server certificate(s) → Can be simplified by using Secure Login Server as PKI and Certificate Lifecycle Management
  - For each desktop roll-out PKI root certificate(s) and activate SNC settings

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SNC Client Encryption – Do it!
SNC Client Encryption 2.0: Shipment

SNC Client Encryption 2.0 stand-alone installer

- **Windows version available as of April 2017 from the SAP Software Download Center Section „SNC CLIENT ENCRYPTION 2.0“ in „Installations & Upgrades“**
- **macOS version planned to become available by end of 2017**
- **Requires CommonCryptoLib 8.4.x or 8.5.x (preferred: 8.5.11 or newer)**

SAP GUI option

- **SNC Client Encryption 2.0 is integrated in SAP GUI 7.50**
- **Shipment as of May 2017**

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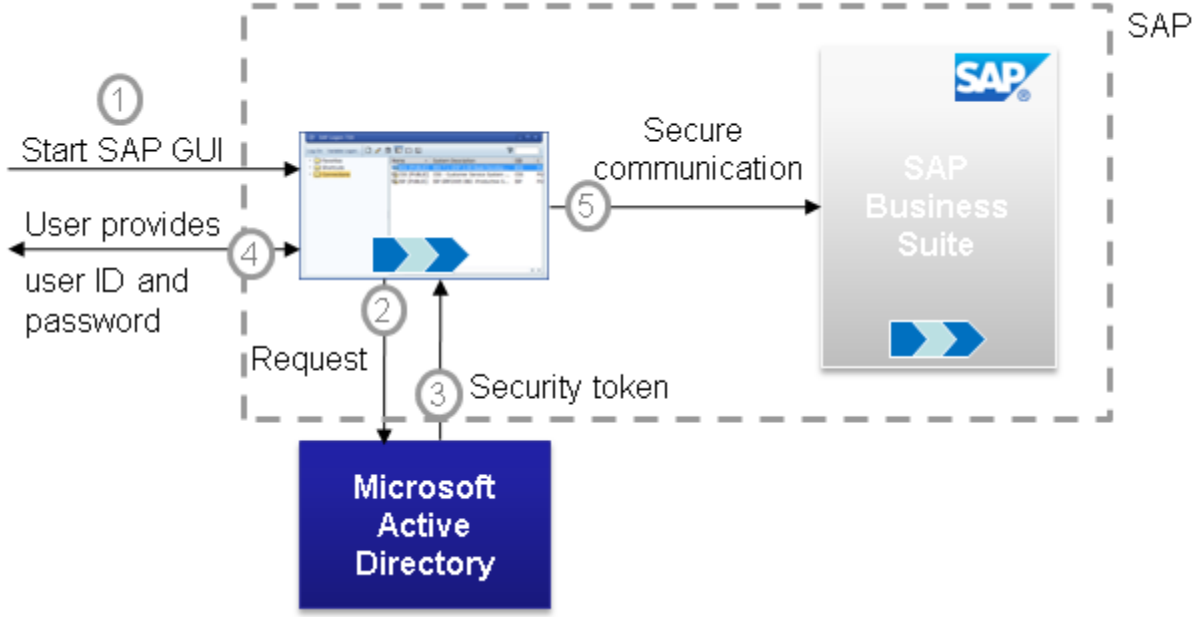
SNC Client Encryption – Do it!
Architecture using Kerberos

This is the architecture of SNC Client Encryption 1.0

Still supported with version 2.0



While Kerberos is given in standard Microsoft Domain landscapes, it requires that clients and users are members of the respective domain. However, at least the servers do not need to be domain members.

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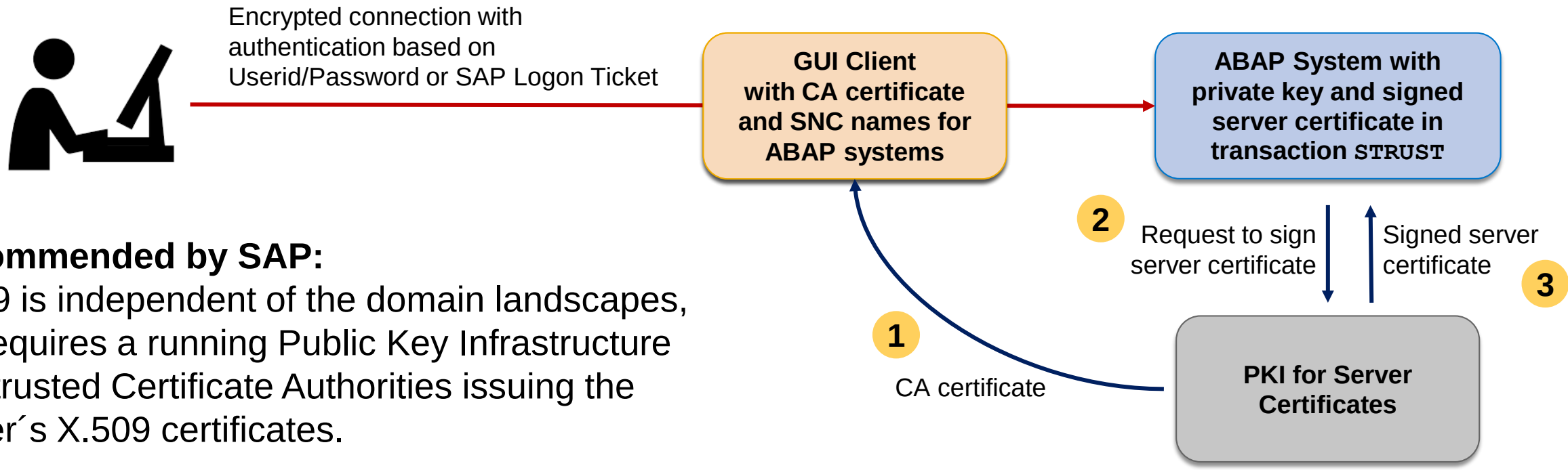
SNC Client Encryption – Do it!

Architecture using signed server certificates in version 2.0



Recommended by SAP:
X.509 is independent of the domain landscapes, but requires a running Public Key Infrastructure with trusted Certificate Authorities issuing the server´s X.509 certificates.

SAP recommends to choose X.509, as it allows a simplified client roll-out comparable to Web browsers and HTTPS server authentication.

Installation using stand-alone-installer or as part of SAPGUI 7.50

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SNC Client Encryption – Do it!
Questions

One historical problem with enforcing SNC is that if you activated it to be required, SAP could no longer sign on to your system to provide support. Has this issue been resolved?

- ✓ **The local SAPGUI installation on clients owned by SAP is not trusted by your environment, therefore SAP support cannot connect with SNC. This means you can *enable* SNC but you cannot *enforce* it for *all* connections. This requires to set `snc/only_encrypted_gui = 0`**

- ✓ **Using `snc/accept_insecure_gui = U` you can define a (short) list of users who are allowed to connect without SNC.**

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SNC Client Encryption – Do it!
Questions

For SNC, is there an easy way to force users to use it and is there documentation somewhere?

- **Use Logon Pad or central XML Configuration File on Server and disable editing of connection entries.**

SAP GUI for Windows 7.40 Administration Guide
https://www.sap.com/documents/2014/10/5c33d352-5a7c-0010-82c7-eda71af511fa.html

Chapter 7 Registry Values and Read-Only Feature of SAP GUI Options Dialog

7.2.34 SAP Logon Options - General Page

Disable editing of connection entries
[HKEY_CURRENT_USER\Software\SAP\SAPLogon\Options]
“NoEditFunctionality” (REG_DWORD) [Default: ”0”] {0 = inactive; 1 = active}

7.2.36 Server Configuration Files Page

XML Configuration File on Server

Notes:
Note 2107181 - SAP Logon (Pad) 7.40: Collective SAP Note regarding SAP UI Landscape format
Note 2075150 - SAP Logon (Pad) 740: New format of configuration files as of SAP GUI for Windows 7.40
Note 2075073 - SAP Logon (Pad) 740: create/distribute server configuration file in the SAP UI landscape format
Note 2175351 - SAP Logon (Pad) 740: create/distribute the administrative core configuration file in the SAP UI landscape format

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SNC Client Encryption – Do it!
Questions

How can we check if connections are encrypted?

- **The transactions SM04 and AL08 show currently active connections, however, you do not find information about SNC status easily.**
  You can use a custom variant of SM04 which shows the SNC status, too: Get report ZSM04000_SNC
- **You can uns the SMOD / CMOD user exit after logon SUSR0001 to check the status using function SNC_GET_MY_INFO and store the result in a custom table.**
- **You can use the Security Audit Log (SM19 / SM20) message BUJ to log unencrypted communication for SAPGUI and RFC (prerequisite note 2122578 etc).**

✗ Client <> 000
✗ User missing
✓ Terminal

Creation Date	Date/Time	Cl.	User	Terminal name	Audit Log Msg. Text	Proc.	WP	Data	variable data
06.04.2017	08:12:35	000		dewdfm0055	Non-encrypted SAPGUI communication (TOLERATED)	D	002	SAPGUI	TOLERATED
06.04.2017	11:31:11	000		dewdfm0055	Non-encrypted SAPGUI communication (TOLERATED)	D	005	SAPGUI	TOLERATED
06.04.2017	14:43:41	000		HAJN34052233A	Non-encrypted SAPGUI communication (TOLERATED)	D	005	SAPGUI	TOLERATED
06.04.2017	15:45:18	000		dewdfm0055	Non-encrypted SAPGUI communication (TOLERATED)	D	005	SAPGUI	TOLERATED
10.04.2017	10:46:26	000		WDFN33778176A	Non-encrypted SAPGUI communication (TOLERATED)	D	007	SAPGUI	TOLERATED
18.04.2017	13:49:04	000		WDFN33778176A	Non-encrypted SAPGUI communication (TOLERATED)	D	001	SAPGUI	TOLERATED

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SNC Client Encryption – Do it!
References about version 2.0

SAP Single Sign-On
https://help.sap.com/sso20

SAP Single Sign-On Community
https://www.sap.com/community/topic/sso.html

Note 2440692 - Central Note for SNC Client Encryption 2.0
Note 2425150 - Release Note SNC Client Encryption 2.0

In case you encounter problems when installing, upgrading or running SNC CLIENT ENCRYPTION 2.0, report an incident using component `BC-IAM-SSO-CCL`

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SNC Client Encryption – Do it!
References about version 1.0

Using SNC Client Encryption 1.0 for Password Logon
https://help.sap.com/saphelp_nw70ehp2/helpdata/en/38/ac67ee22ef49b5818b574956532f27/frameset.htm

SNC Client Encryption 1.0
https://wiki.scn.sap.com/wiki/display/Security/SNC+Client+Encryption

Note 1643878 - Release Notes for SNC Client Encryption 1.0
https://launchpad.support.sap.com/#/notes/1643878

Note 1682957 - Downloading Patches for SNC Client Encryption 1.0
https://launchpad.support.sap.com/#/notes/1682957

Note 1684886 - License conditions of SNC Client Encryption 1.0
https://launchpad.support.sap.com/#/notes/1684886

Note 2057374 - Securing SAP GUI connections with SNC Client Encryption 1.0
https://launchpad.support.sap.com/#/notes/2057374

Note 2185235 - Using SNC Client Encryption 1.0 for Encrypting SAP GUI Connection with CommonCryptoLib
https://launchpad.support.sap.com/#/notes/2185235

Note 1690662 - Option: Blocking unencrypted SAPGUI/RFC connections
https://launchpad.support.sap.com/#/notes/1690662

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Note 2443673 - Filter Incoming Serialization Data (JVM)

Recommendations:

- **Patch the JVM regularly from SAP Service Marketplace. Unless you haven't custom code in your system, you don't need to configure anything.**

- **For custom code, check whether you require additional filter patterns to be configured according to JDK Enhancement-Proposal (JEP) 290 and Oracle's blog post.**

  A process-wide filter is configured via a system property or a configuration file. The system property, if supplied, supersedes the security property value.

  - System property `jdk.serialFilter`
  - Security property `jdk.serialFilter` in `conf/security/java.properties`

  A filter is configured as a sequence of patterns, each pattern is either matched against the name of a class in the stream or a limit.

  See Secure Coding Guidelines for Java SE, too.

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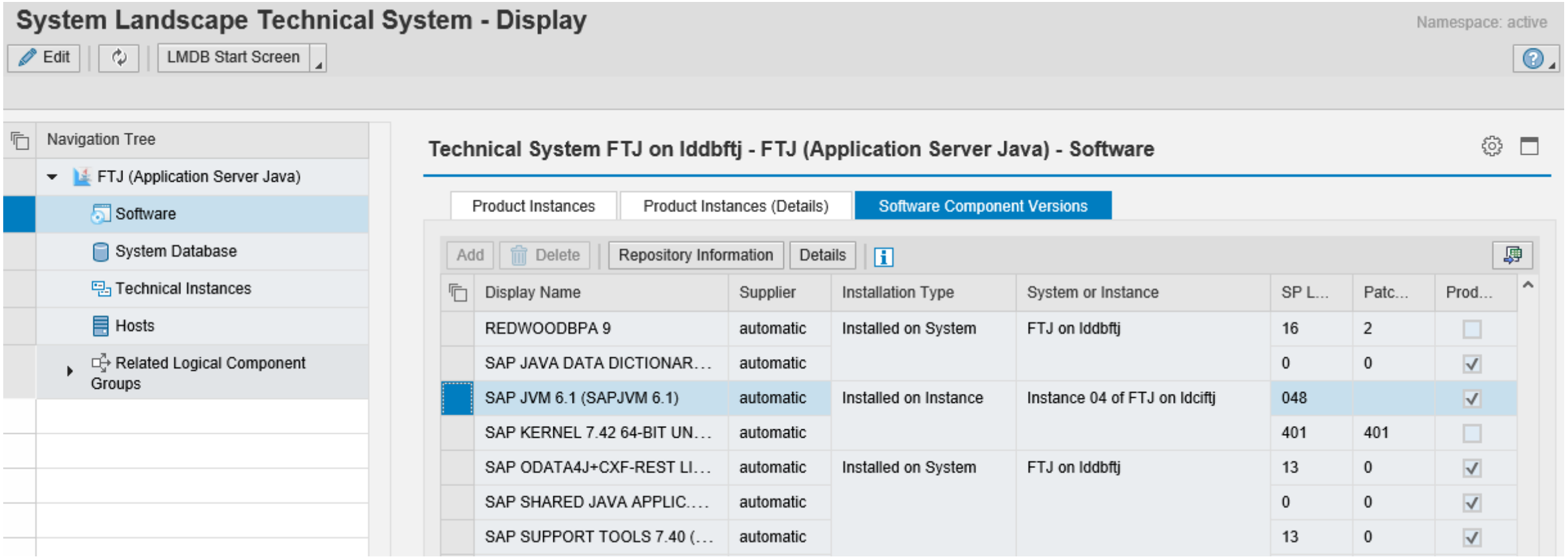
Note 2443673 - Filter Incoming Serialization Data (JVM)

You can verify the version of the JVM of a managed system in transaction `LMDB` in the SAP Solution Manager:



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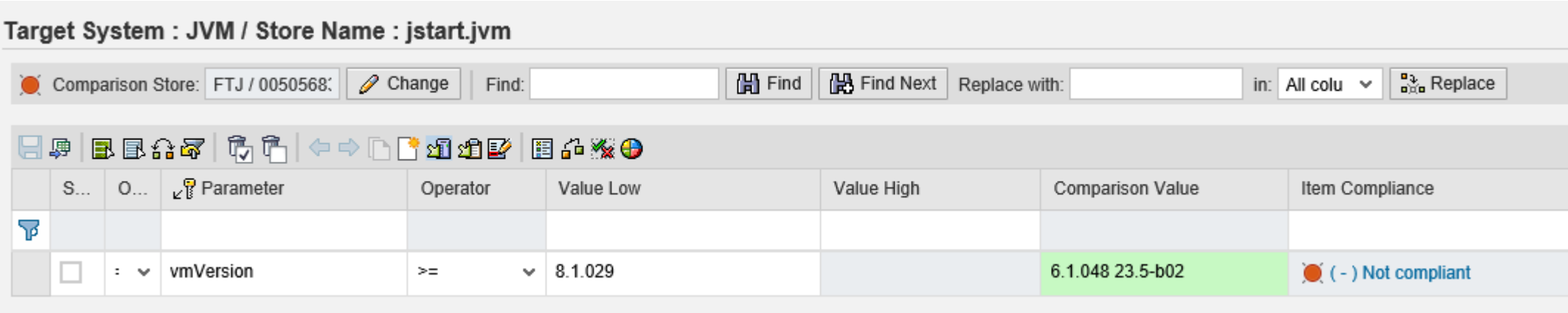
Note 2443673 - Filter Incoming Serialization Data (JVM)

You can verify the version of the JVM using Configuration Validation by checking configuration item `vmVersion` within configuration store `jstart.jvm`

Limitation: For the operator >= you can only enter one target value, like 8.1.029 in this example:
(It seems that you need an additional leading space character “ 8.1.029” for the value low field.)



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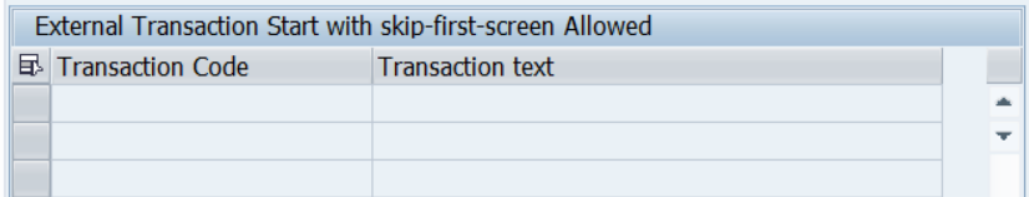
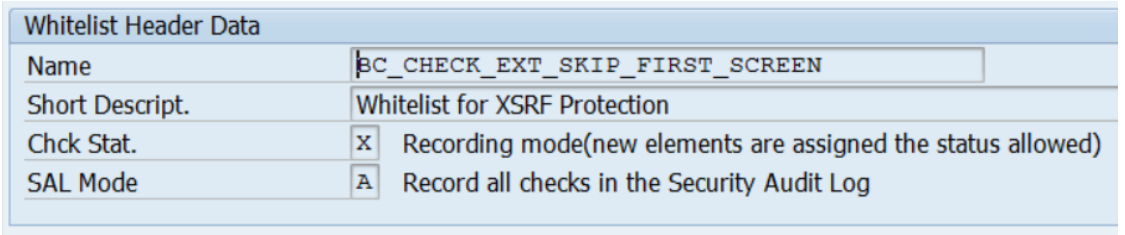
Disable start of transactions with OKCode skipping the first screen

1st test: Profile Parameter dynp/checkskip1screen



- Customizing view V_TSTCS
- Cancel message 131(00)
- General Settings for Calling Transactions
  https://help.sap.com/saphelp_nwes72/helpdata/en/48/10a676486b3d1be10000000a42189d/frameset.htm
- Note 1399324 - Profile parameter dynp/checkskip1screen
- Note 1157137 - SAPShortcut: Security issue in SAPShortcut login

2nd test: Profile Parameter dynp/confirmskip1screen



- Logging option
- SLDW allowlist BC_CHECK_EXT_SKIP_FIRST_SCREEN
- Popup respective cancel message 840(00)
- (no documentation on help.sap.com)
- Note 1973081 - XSRF vulnerability: External start of transactions with OKCode
- Note 1956086 - Profile parameter for XSRF protection

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Note 2062885 - SU01/SU10: New user documentation function
Note 2203672 - SU01/SU10: New user documentation function II

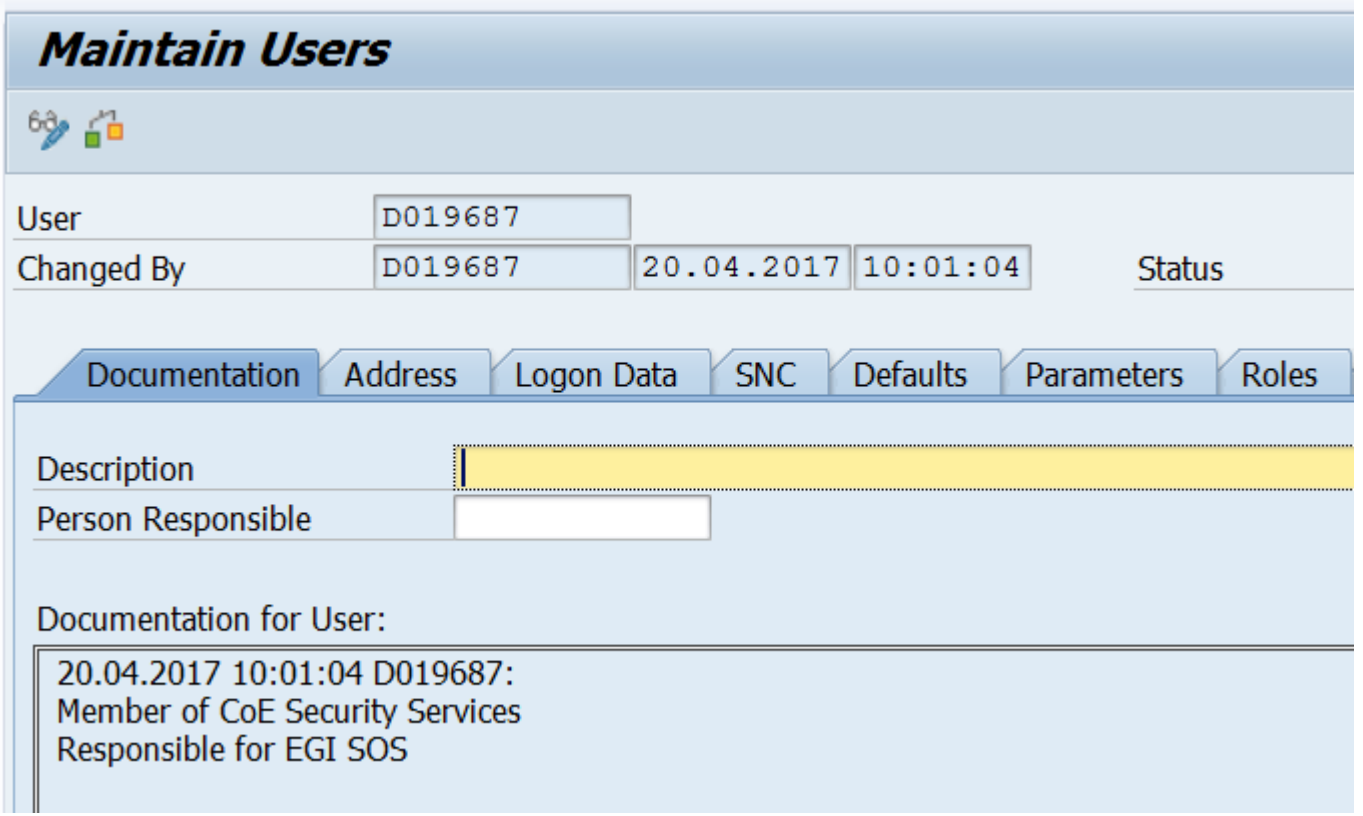
New tab about Documentation in transaction `SU01`
available as of SAP_BASIS 7.31 SP 15 (optimized in SP 17) and 7.40 SP 10 (optimized in SP 13)

You can manage the fields “Description” and “Responsible” using the Central User Administration (CUA), too.

The field “Documentation” is available locally only.

You can add comments but not change or delete parts of it.

Use report `RSUSR_DELETE_USERDOCU` to delete field “Documentation” from selected users.



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Several notes about SAL | Filter selection by user group

The feature requires multiple notes for the Security Audit Log on SAP_BASIS 7.40 and 7.50:

Note 2285879 / 2090487- SAL | Filter selection by user group

- You can select by user group instead of by user in your filters
- The number of maintainable filters per profile increases from 10 to 15
- Requires `SAP_BASIS` SP 15 or 7.50 SP 4 plus Kernel 7.41 patch 210, 7.42 patch 29, or 7.43 patch 4

Note 2300741 - SAL | Filter selection by user group (2)

- Extension and correction of the new feature
- The change introduces a side-effect error in `SM19` on `SAP_BASIS` 7.40 SP 15-17 and 7.50 up to SP 7:
  You cannot save multiple filters with mixed filter type (class based filter plus detail filter)

Note 2463168 - SM19 | Error when you save the configuration

- Correction (even required if you do not have the new Kernel and do not use the new feature)

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April 2017

Topics April 2017

SAP Support Portal – What's New?
Notifications and SAP EarlyWatch Alert in the cloud

Note 2456553 - Frequently Asked Questions on note 2407616 - SAPGUI
Note 2407616 - Remote Code Execution vulnerability in SAP GUI for Windows
Note 1768979 - Changes to the SAP GUI security rules file saprules.xml

Note 2458890 - SYSREC: support of SAP GUI security notes

Note 2378090 - Missing Authorization check in Solution Manager

Notes 1329326 1616535 1823687 1914778 2012562 2045861
Server Information Disclosure

Note 2423486 - Missing Authorization check in ADBC Demo

Note 2417355 - Missing Authorization check in RFC Destination Maintenance

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SAP Support Portal – What's New?
Notifications and SAP EarlyWatch Alert in the cloud

Highlights of the April 2017 Launchpad Release

On April 6th, 2017, many new features went live, some of them after successful tests with pilot customers, all of them based on your feedback:

The *Notification Area* gives you an overview of notifications from various sources, such as your incidents or important SAP Notes.

Documents stored in the redesigned SAP Help Portal can now be found through the central launchpad search.

The new application *My SAP EarlyWatch Alert Reports* provides the complete SAP EarlyWatch Alert report for ABAP on SAP HANA systems.

For pilot customers: SAP Notes and KBAs that are opened in new browser windows or tabs got a new stand-alone layout.

For pilot customers: Reports allow you to check the authorizations of users.

Learn more by clicking through the following pages. All changes are listed in our April 2017 release notes.

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SAP Support Portal – What's New?
Notifications

Notifications

Notifications offer you access to system-driven information that helps you become aware of critical real-time information. After a successful pilot phase, the SAP ONE Support Launchpad notification area has now become available to all visitors. It is the place where you can get an overview of notifications from various sources, such as your incidents or important SAP Notes, and take immediate action. Notifications can be sorted and grouped by date, priority, or application. If activated, notifications can call your attention to

- Incident status changes
- Changed SAP Notes or Knowledge Base Articles that you had marked as favorites
- New matches for one of your saved Expert Search queries

You can manage your notifications and select the applications you are interested in. Furthermore, for favorite notes and Expert Search results, you can opt in to receive e-mail notifications. Please make sure to maintain your user profile and specify an e-mail address.

Blog: SAP HotNews, Security or Legal Change Notes – Get notified about basically anything
https://blogs.sap.com/2017/04/27/sap-hotnews-security-or-legal-change-notes-get-notified-about-basically-everything/

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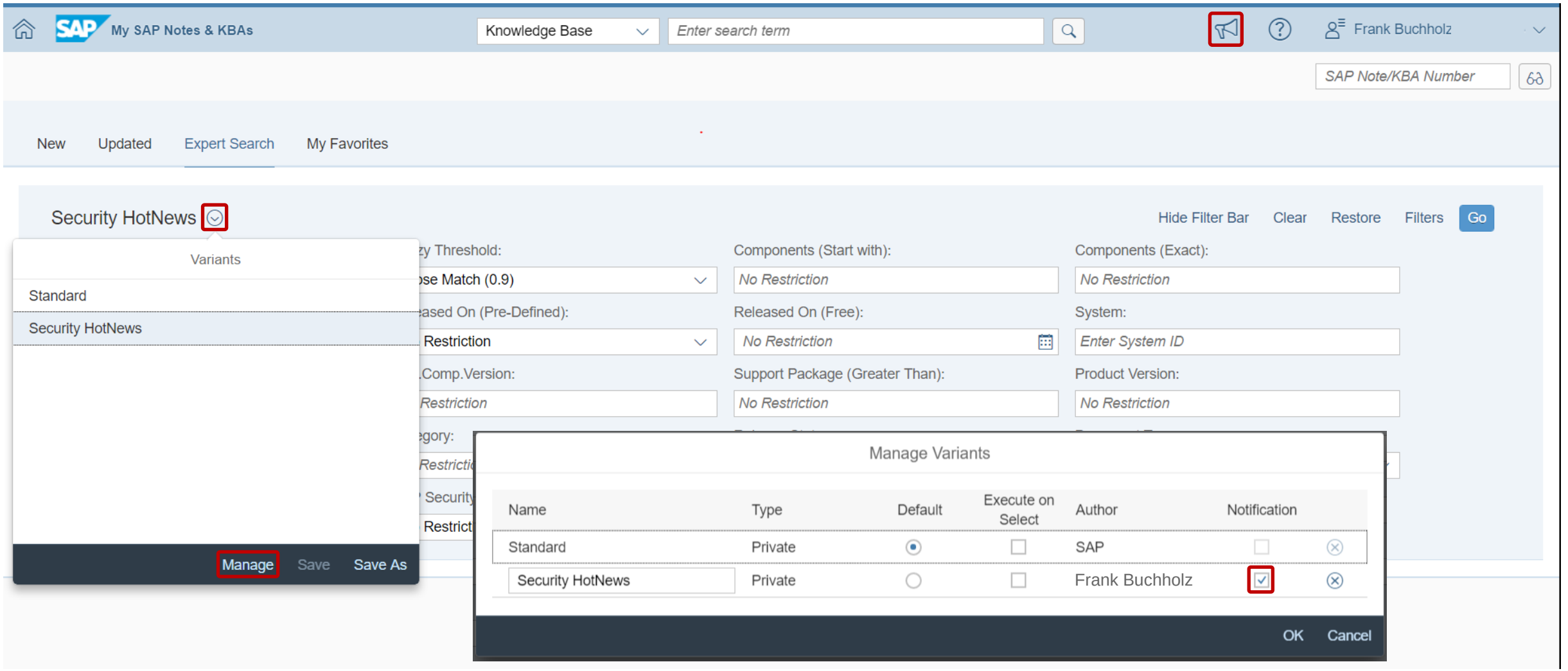
SAP Support Portal – What's New?
Notifications at Notes Expert Search



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SAP Support Portal – What's New?
SAP EarlyWatch Alert in the cloud (for SAP HANA systems)

My SAP EarlyWatch Alert Reports: You can read the EWA report in a complete new format that can be personalized with favorite systems and favorite topics. All details on alerts and recommendations are provided. The EWA Chapter about Security is included!

SAP EarlyWatch Alert – Analytical Dashboard: You can gain an overview on the system status with the most important KPIs from your SAP ABAP system and the SAP HANA database. KPI history of up to 12 months is available in drill-downs. (No security specific KPIs)

You require the SAP ONE Support Launchpad authorization "Service Reports & Feedback" to see data in these applications for the systems of the customer numbers to which your S-user is assigned.
To request it, contact one of your company's user administrators.

Either add the two new tiles to your SAP One Support Launchpad or use these direct links to the applications:

- https://launchpad.support.sap.com/#/ewaviewer
- https://launchpad.support.sap.com/#/ewadashboard

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SAP Support Portal – What's New?
My SAP EarlyWatch Alert Reports (for SAP HANA systems)

The application **My SAP EarlyWatch Alert Reports** provides the complete SAP EarlyWatch Alert report for ABAP on SAP HANA systems (and systems having an additional database connection to a separate SAP HANA database). You can easily monitor the alerts and find out how to improve the system stability, performance or security.

- Check the ratings for those systems for which an SAP EarlyWatch Alert service is active.
- Check the SAP EarlyWatch Alert report for a system and the ratings of its topic or subtopic.
- In a topic or subtopic, view detailed information.
- Use favorites to keep track of the systems you want to monitor frequently, or of the topics and subtopics you visit often.
- Customize your views through a variety of sorting, grouping and filter criteria, e.g. the rating or the reports' generation date.

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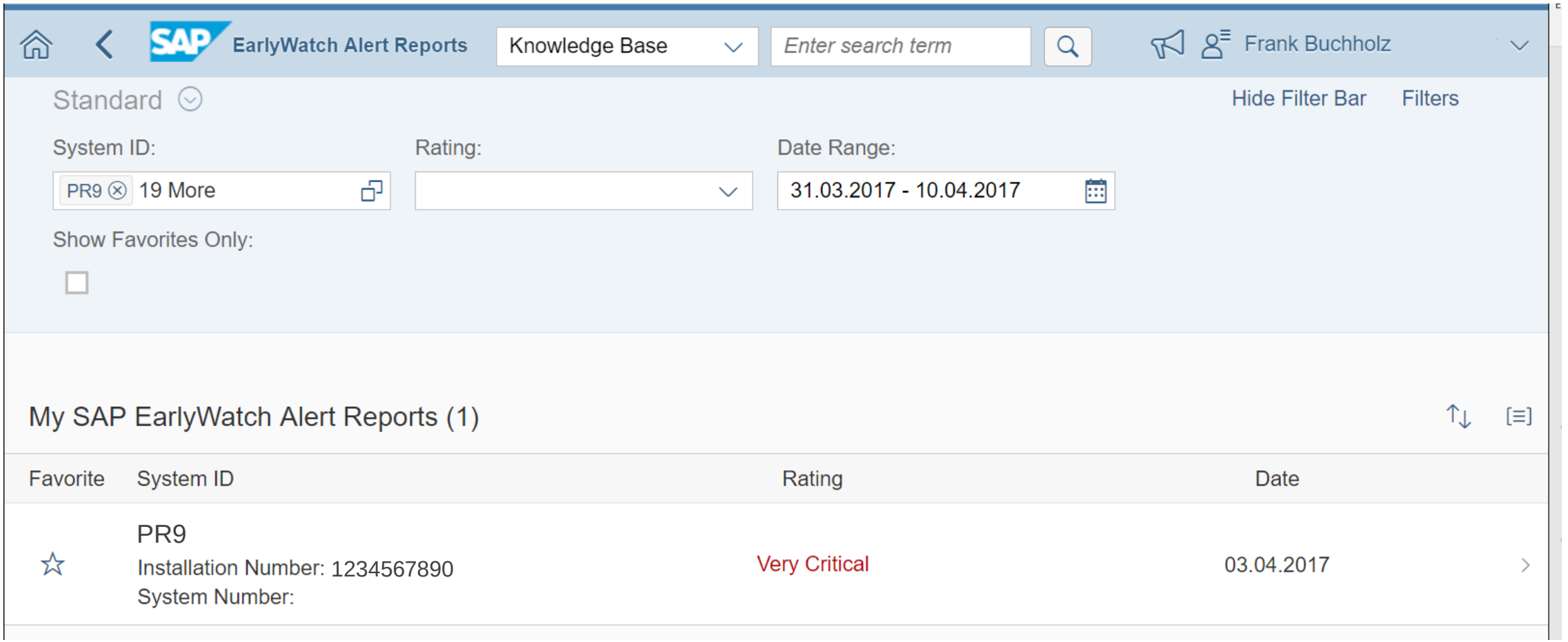
SAP Support Portal – What's New?
My SAP EarlyWatch Alert Reports (for SAP HANA systems)



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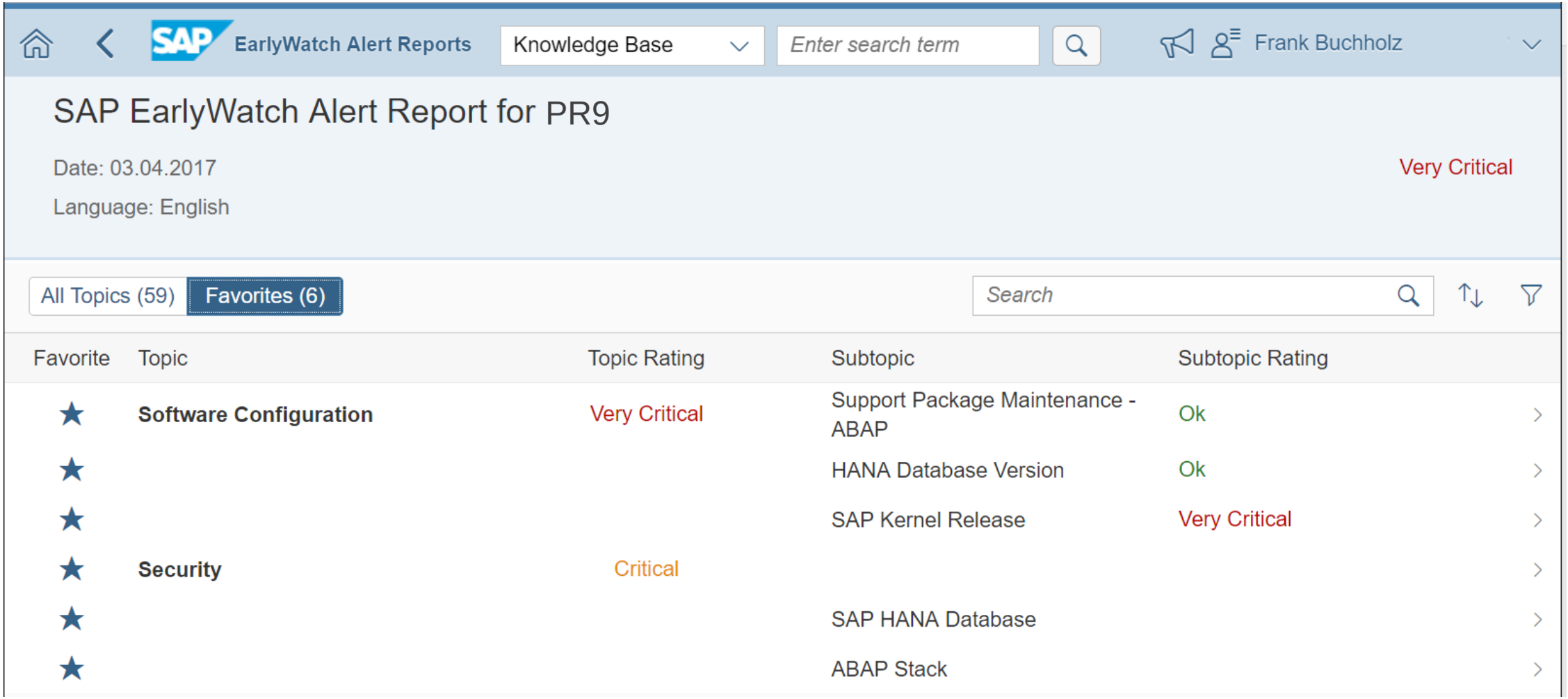
SAP Support Portal – What's New?
My SAP EarlyWatch Alert Reports (for SAP HANA systems)



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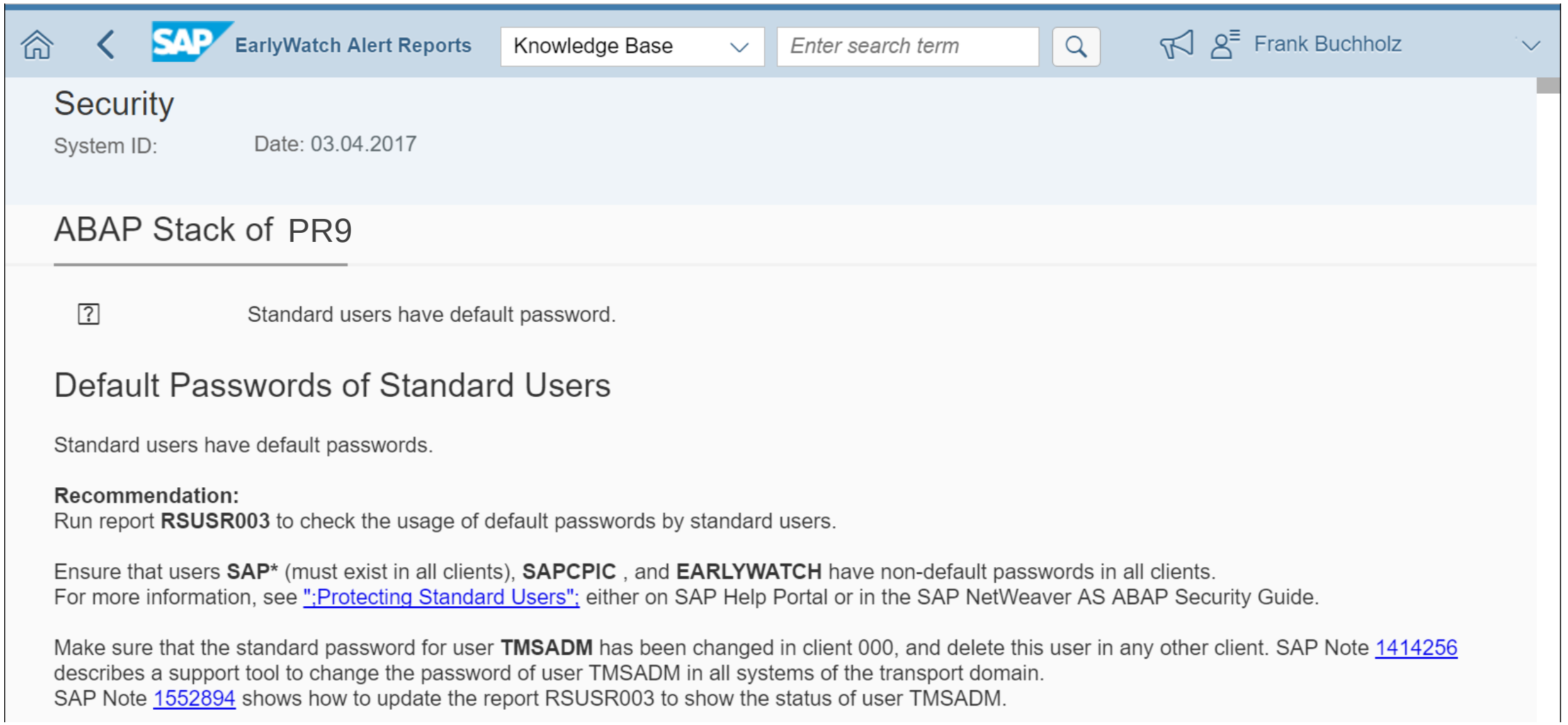
SAP Support Portal – What's New?
My SAP EarlyWatch Alert Reports (for SAP HANA systems)



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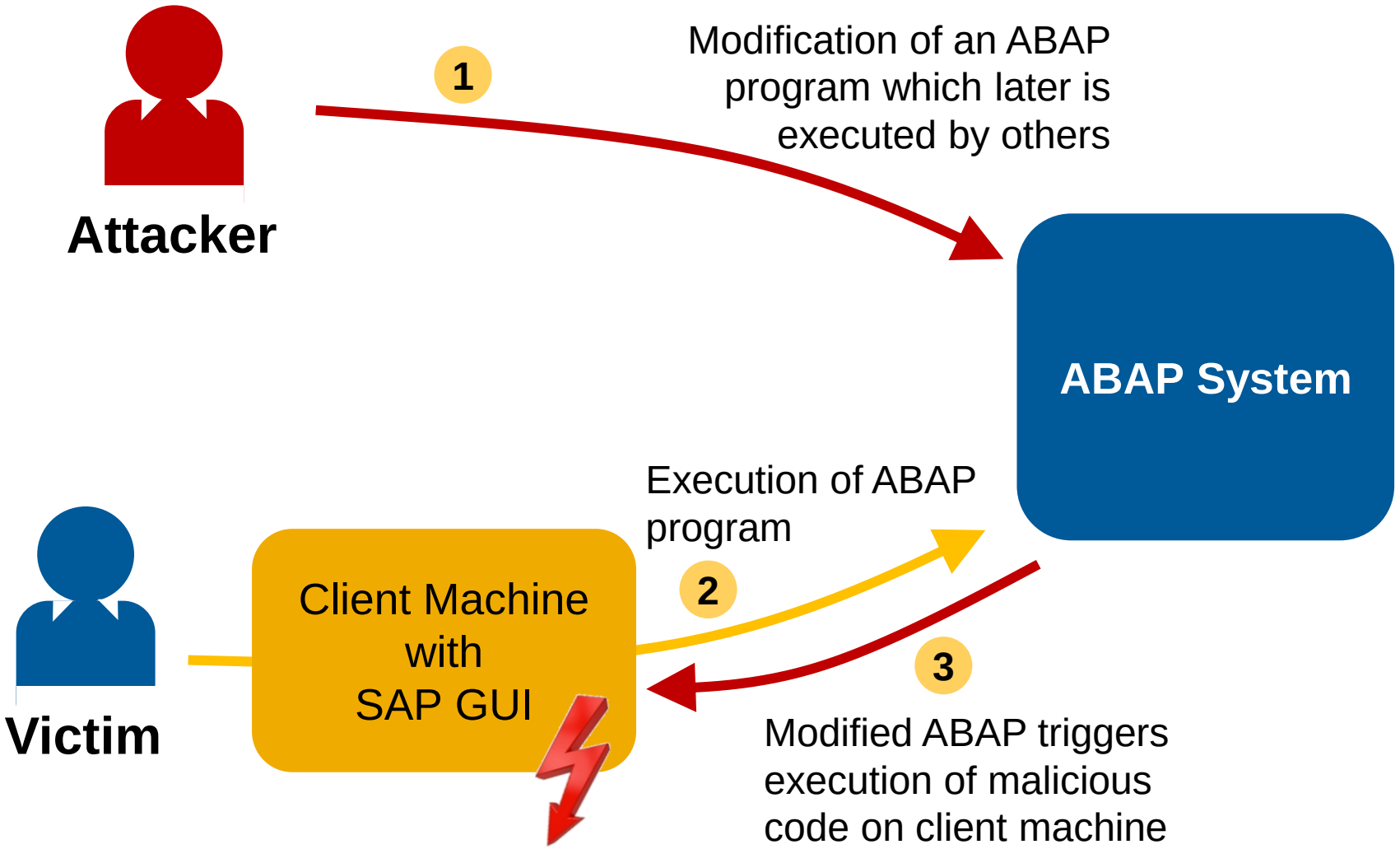
Note 2407616 - Remote Code Execution vulnerability in SAP GUI

Note 1768979 - Changes to the SAP GUI security rules file saprules.xml



This issue is related to execution of a file/executable on the client PC via ABAP programs triggering SAP GUI commands. The impact is on the client PC and not on the SAP System.

The client machines trust the ABAP servers unless the Security Module of the SAP GUI enforces strict security rules.

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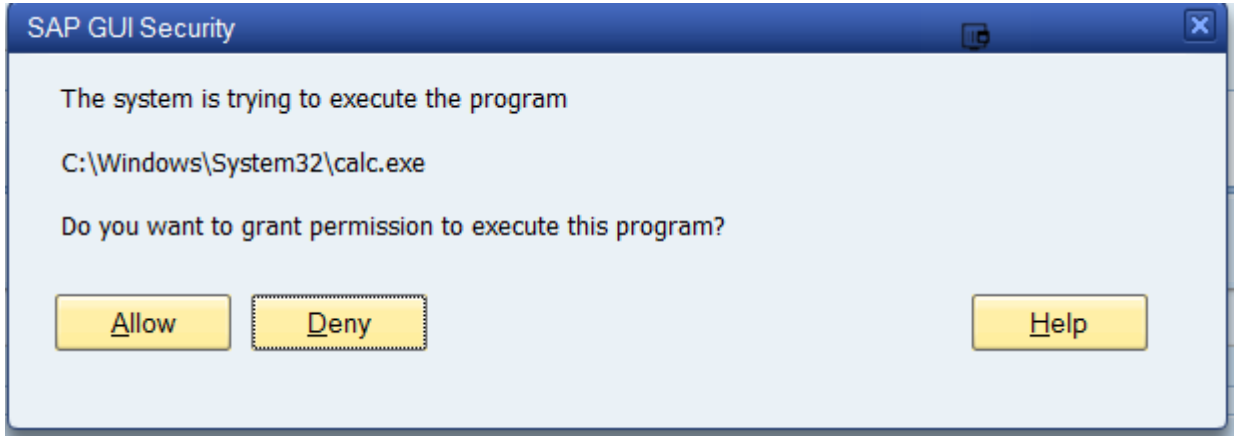
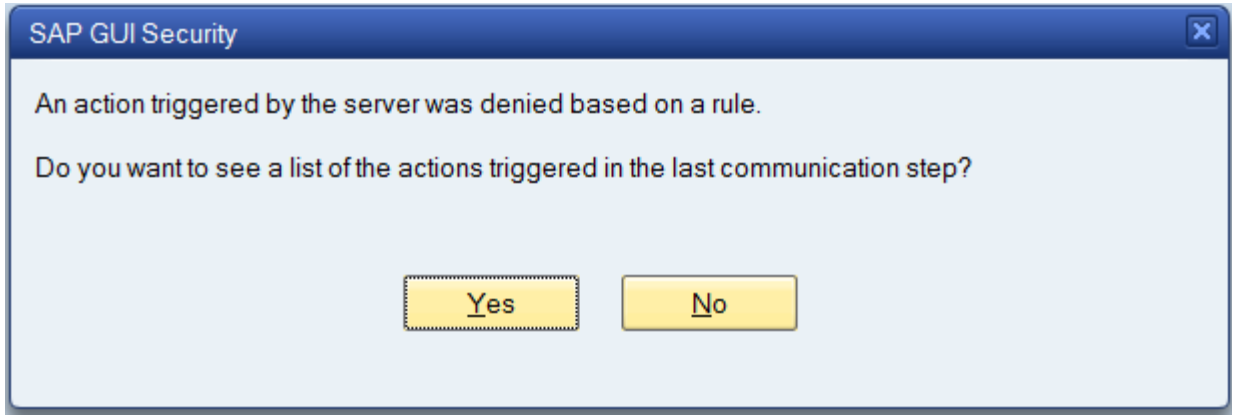
Note 2407616 - Remote Code Execution vulnerability in SAP GUI
Note 1768979 - Changes to the SAP GUI security rules file saprules.xml

Example if there does not exist any rule (respective if the rule enforces “Ask”):

Do not train your employees to click on “Allow” always → prepare reasonable Admin rules for your organization.



Example if there exist an explicit Deny rule:



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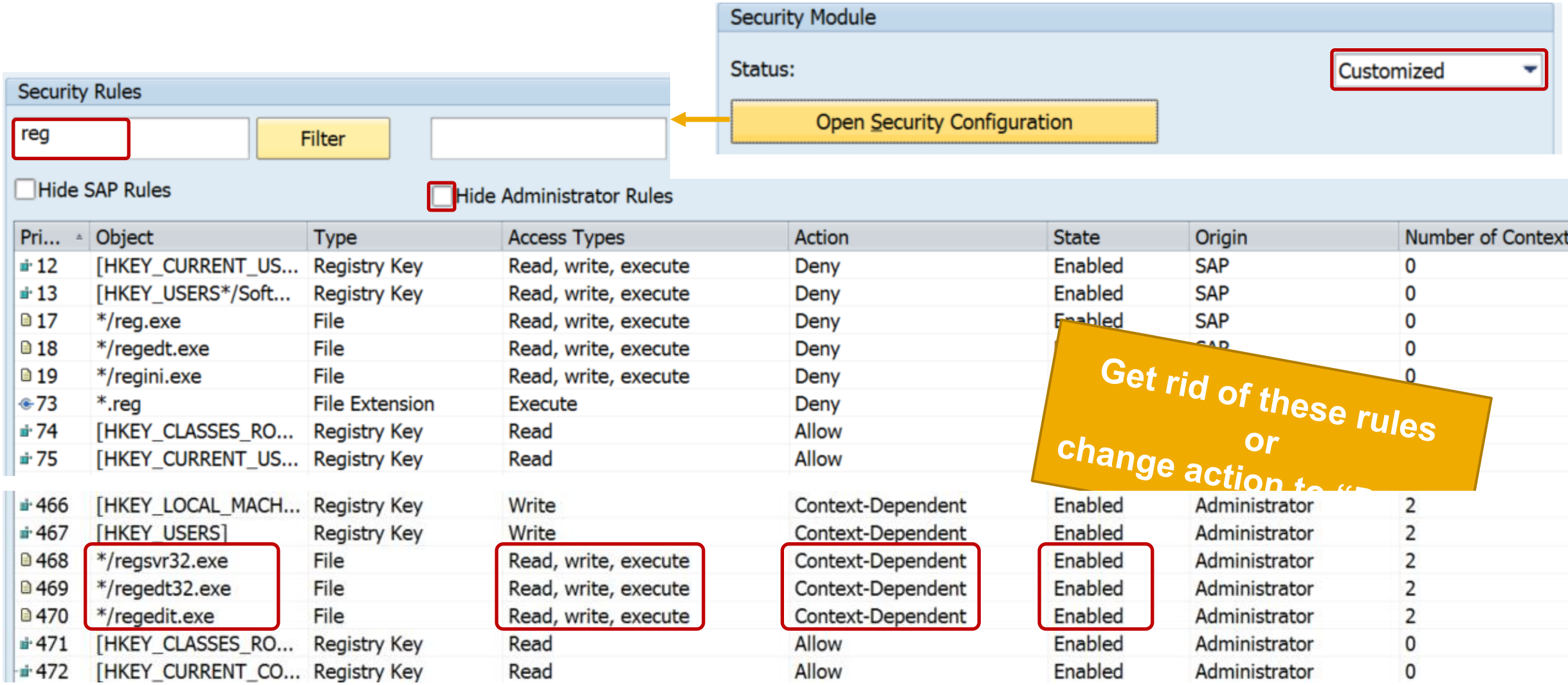
Note 2407616 - Remote Code Execution vulnerability in SAP GUI

Note 1768979 - Changes to the SAP GUI security rules file saprules.xml



Pri...	Object	Type	Access Types	Action	State	Origin	Number of Contexts
12	[HKEY_CURRENT_US...	Registry Key	Read, write, execute	Deny	Enabled	SAP	0
13	[HKEY_USERS*/Soft...	Registry Key	Read, write, execute	Deny	Enabled	SAP	0
17	*/reg.exe	File	Read, write, execute	Deny	Enabled	SAP	0
18	*/regedt.exe	File	Read, write, execute	Deny			0
19	*/regini.exe	File	Read, write, execute	Deny			0
73	*.reg	File Extension	Execute	Deny			
74	[HKEY_CLASSES_RO...	Registry Key	Read	Allow			
75	[HKEY_CURRENT_US...	Registry Key	Read	Allow			
466	[HKEY_LOCAL_MACH...	Registry Key	Write	Context-Dependent	Enabled	Administrator	2
467	[HKEY_USERS]	Registry Key	Write	Context-Dependent	Enabled	Administrator	2
468	*/regsvr32.exe	File	Read, write, execute	Context-Dependent	Enabled	Administrator	2
469	*/regedt32.exe	File	Read, write, execute	Context-Dependent	Enabled	Administrator	2
470	*/regedit.exe	File	Read, write, execute	Context-Dependent	Enabled	Administrator	2
471	[HKEY_CLASSES_RO...	Registry Key	Read	Allow	Enabled	Administrator	0
472	[HKEY_CURRENT_CO...	Registry Key	Read	Allow	Enabled	Administrator	0

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Note 2407616 - Remote Code Execution vulnerability in SAP GUI
Note 1768979 - Changes to the SAP GUI security rules file saprules.xml

All releases of the SAP GUI are affected. You can use this updated file `saprules.xml` for old releases 7.20 or 7.30 of the SAP GUI, too.

You have to enable the Security Module of the SAP GUI to get any protection – this usually requires that you have collected and optimized "Administrator" rules first, which prevent that your users get annoyed by numerous popups (which simply would train them to click on "Allow" always).

It is not sufficient for users to add private "User" rules which deny the execution of the registry programs – you have to get rid of the false "Administrator" rules or change them into "Deny" rules.

You do not need to update the complete SAP GUI installation. It would be sufficient to prepare and distribute a new version of file `saprules.xml` either based on the version which is available as an attachment of note 1768979 or which is part of the SAP GUI as of release 7.40 patchlevel 12. Ensure to include your existing own "Administrator" rules.

Caution: The false "Administrator" rules are removed, which means that users usually get a popup asking for „Allow" or „Deny". You may want to use explicit „Deny" rules instead.

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Note 2407616 - Remote Code Execution vulnerability in SAP GUI
Note 1768979 - Changes to the SAP GUI security rules file saprules.xml

You find files `saprules.xml` at two locations:

- **Administrator Rules**
  `%ProgramFiles(x86)%\SAP\FrontEnd\SAPgui = C:\Program Files (x86)\SAP\FrontEnd\SAPgui`

- **User Rules**
  `%APPDATA%\SAP\Common = C:\Users\<..>\AppData\Roaming\SAP\Common\`

You might want to collect the User Rules from an educated group of your users to produce Administrator Rules which match to the requirements of all users in your organization.

System Recommendations does not show this note for any system because the software component BC-FES-GUI is not part of the technical ABAP system.

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Note 2407616 - Remote Code Execution vulnerability in SAP GUI
Note 1768979 - Changes to the SAP GUI security rules file saprules.xml

Conclusion:

- **If you (= all users in your organization) are already using the Security Module of the SAP GUI, you should update the SAP GUI client installation respective replace file `saprules.xml`**

- **If you (= no or not all users in your organization) do not use the Security Module of the SAP GUI yet, you should consider to run a security optimization project to prepare "Administrator" rules for your organization and to enforce that the Security Module gets activated**

SAP GUI 7.40 Security Guide
https://www.sap.com/documents/2016/06/047de85d-7a7c-0010-82c7-eda71af511fa.html

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Note 2456553 - Frequently Asked Questions on note 2407616

Frequently asked questions regarding SAP Note 2407616:

1. We do not have a saprules.xml file, and we are not using SAPGUI 7.4 patch 12. Does this issue affect us?
2. The SAPGUI 7.4 patch 12 is not currently installed. However, if SAPGUI 7.4 patch 12 is installed in one test box and it creates a saprules.xml files that is pushed to all users, will the security vulnerability described in note 2407616 be solved?
3. Can SAP support check our saprules.xml file to determine if the security vulnerability described in note 2407616 is solved?
4. Which is a better solution: 1) Pushing saprules.xml or 2) Installing SAPGUI 7.4 patch 12?
5. What is the implication of this security issue?
    1. Will this issue affect the backend server as well?
    2. Or, is this totally frontend related?
    3. Can someone get access to the backend through this frontend security issue?

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What about SAPGUI for Java?

SAPGUI for Java is different and not affected by this vulnerability, however, there exist Security Policy settings as well:

User Guide - SAP GUI for the Java Environment
Document Version: 7.40 – 2016-07-13
https://assets.cdn.sap.com/sapcom/docs/2016/07/58d5dc32-7d7c-0010-82c7-eda71af511fa.pdf

Chapter 5.1.3 Security Policy

The SAP GUI for Java 7.40 is running with a security manager enabled. It loads its policy information from several different locations.

```
<system preferences>/SAPGUI.policy
<user preferences>/SAPGUI.policy
<system preferences>/trustClassification
<user preferences>/trustClassification
<user preferences>/settings
```

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Note 2458890 - SYSREC: support of SAP GUI security notes

System Recommendations does not show pure notes about the SAP GUI for any system because the software component BC-FES-GUI respective the SP software component “SAP GUI FOR WINDOWS n.nn CORE” is not part of the technical ABAP system.

https://support.sap.com/notes
→ Expert Search
Components (Exact): BC-FES-GUI
Document Type: SAP Security Note

Solved with note 2458890 - SYSREC: support of SAP GUI security notes

With this note all ABAP systems show SAPGUI notes, too.

Result: 37 Notes in total (some of them might be visible for ABAP systems because they are assigned to other software components, too). You find 2 notes as of 2016:

SAP Component	Number	Version	Title	Category	Priority	Released On
BC-FES-GUI	2407616	3	Remote Code Execution vulnerability in SAP GUI for Windows	Program error	Correction with high priority	14.03.2017
BC-FES-GUI	2361671	3	Information Disclosure in SAP GUI for Windows	Program error	Correction with medium priority	11.10.2016
BC-ABA-SC	1973081	2	XSRF vulnerability: External start of transactions with OKCode	Consulting	Correction with medium priority	05.01.2016
BC-CCM-PRN	**2235795**	**1**	**Potential information disclosure relating to SAP Cloud Print Manager for S/4HANA Cloud Edition**	**Program error**	**Correction with medium priority**	**10.11.2015**

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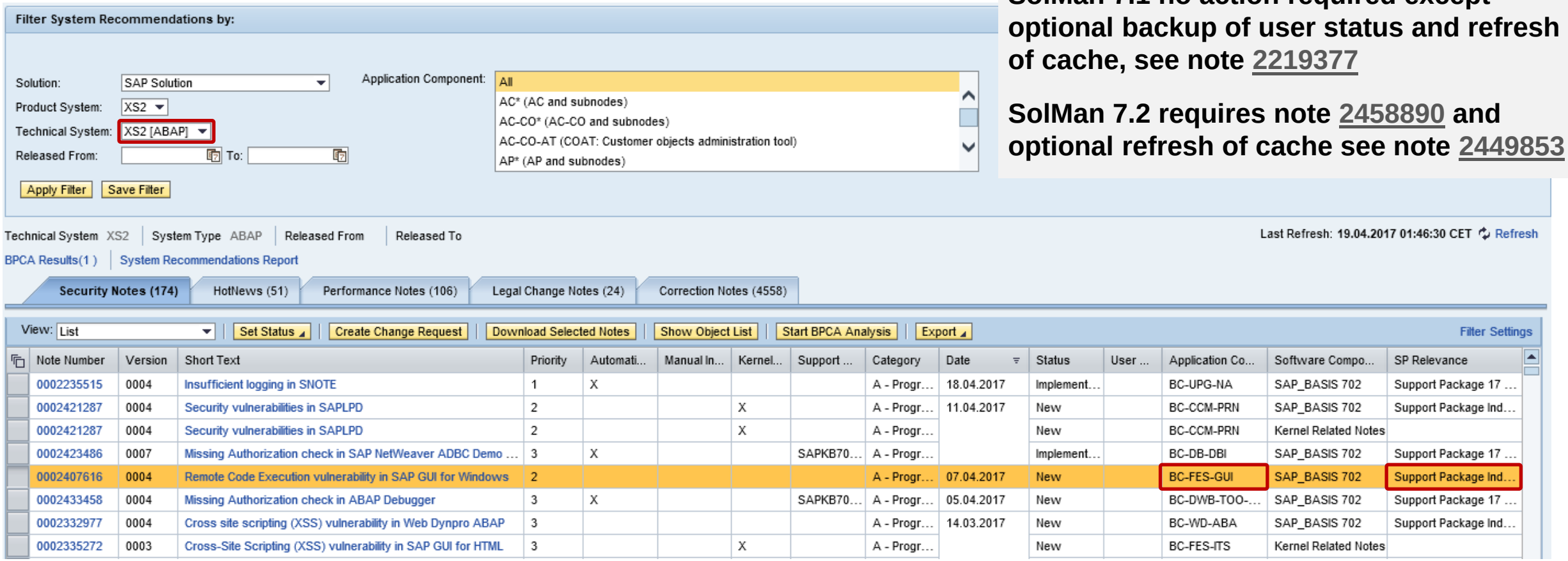
Note 2458890 - SYSREC: support of SAP GUI security notes

Notes with application component BC-FES-GUI are now shown for all ABAP systems as “Support Package Independent” notes.

SolMan 7.1 no action required except optional backup of user status and refresh of cache, see note 2219377

SolMan 7.2 requires note 2458890 and optional refresh of cache see note 2449853



Note Number	Version	Short Text	Priority	Automati...	Manual In...	Kernel...	Support ...	Category	Date	Status	User ...	Application Co...	Software Compo...	SP Relevance
0002235515	0004	Insufficient logging in SNOTE	1	X				A - Progr...	18.04.2017	Implement...		BC-UPG-NA	SAP_BASIS 702	Support Package 17 ...
0002421287	0004	Security vulnerabilities in SAPLPD	2			X		A - Progr...	11.04.2017	New		BC-CCM-PRN	SAP_BASIS 702	Support Package Ind...
0002421287	0004	Security vulnerabilities in SAPLPD	2			X		A - Progr...		New		BC-CCM-PRN	Kernel Related Notes	
0002423486	0007	Missing Authorization check in SAP NetWeaver ADBC Demo ...	3	X			SAPKB70...	A - Progr...		Implement...		BC-DB-DBI	SAP_BASIS 702	Support Package 17 ...
0002407616	0004	Remote Code Execution vulnerability in SAP GUI for Windows	2					A - Progr...	07.04.2017	New		BC-FES-GUI	SAP_BASIS 702	Support Package Ind...
0002433458	0004	Missing Authorization check in ABAP Debugger	3	X			SAPKB70...	A - Progr...	05.04.2017	New		BC-DWB-TOO-...	SAP_BASIS 702	Support Package 17 ...
0002332977	0004	Cross site scripting (XSS) vulnerability in Web Dynpro ABAP	3					A - Progr...	14.03.2017	New		BC-WD-ABA	SAP_BASIS 702	Support Package Ind...
0002335272	0003	Cross-Site Scripting (XSS) vulnerability in SAP GUI for HTML	3			X		A - Progr...		New		BC-FES-ITS	Kernel Related Notes	

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Note 2378090 - Missing Authorization check in Solution Manager

An unconditional authorization check is added to the collection of Service Data (download) in Service Data Control Center (SDCCN). If the background user is provided with the obsolete authorization object `S_SDCC` only, the collection fails. If SDCCN was setup with the standard role `SAP_SDCCN_ALL`, the required authorization was already granted to the right user. This is e.g. the case, if SDCCN was activated with the managed system setup in Solution Manager.

The authorization is required for the user running program `/BDL/TASK_SCHEDULER` in job `/BDL/TASK_PROCESSOR`. You can see the user also in logs of transaction `SDCCN`.

Solution: Note 2330065 - ST-PI 740 SP05, ST-PI 2008_1_7xx SP15: Enhancements

Add an authorization for `S_SDCC_ADD` with `SDCC_RUN_N` = `WRITE` and `SDCC_DEV_N` = `READ` to the existing role or assign the role `SAP_SDCCN_ALL` to the user.

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Notes 1329326 1616535 1823687 1914778 2012562 2045861 Server Information Disclosure

Note 1329326 - Configuration of server header in HTTP response

`is/HTTP/show_server_header` = `false` (default)

As a work-around, set parameters `is/server_name` (default: “SAP NetWeaver Application Server ”) and `is/server_version` (default: Kernel release) to an arbitrary value.

Note 1616535 - Secure configuration of ICM for the ABAP application server
Note 1914778 - Potential information disclosure relating to HANA host names
`is/HTTP/show_detailed_errors` = `false` (default)

Note 1823687 - Potential information disclosure relating to user existence
`login/show_detailed_errors` = `0` (Only display general error message)

Note 2012562 - Tracing HTTP information for problem analysis

`rdisp/TRACE_HIDE_SEC_DATA` = `on` (default)

Note 2045861 - Hiding release information from the SMTP server banner

`icm/SMTP/show_server_header` = `false`

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Note 2423486 - Missing Authorization check in ADBC Demo

Install the note to protect several reports all belonging to report authorization group ADBC_Q

```
ADBC_DEMO
ADBC_DEMO_LOBS_ORA
ADBC_DEMO_METADATA
ADBC_QUERY
ADBC_TEST_CONNECTION
```

Take care about critical authorizations because report ADBC_QUERY still offers unrestricted cross-client view on all database content (= cross-client version of SE16).

Instead of S_TABU_DIS / S_TABU_NAM following authorization checks are executed – treat this combination s critical as S_TABU_DIS with full read-access (or deactivate the report):

S_PROGRAM with P_GROUP=ADBC_Q and P_ACTION=SUBMIT

S_DBCON with DBA_DBHOST=' ', DBA_DBSID=DEFAULT, DBA_DBUSER= '', and ACTVT= 03

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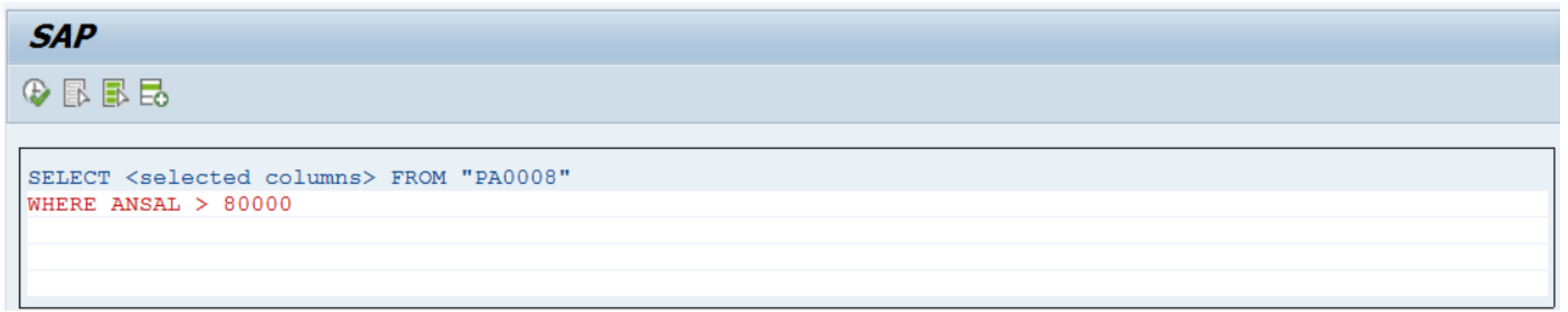
Note 2423486 - Missing Authorization check in ADBC Demo

Example: Cross-client access to basis salary (table PA0008)



MAN	PERNR	SUBT	OB	S	ENDDA	BEGDA	SEQ	AEDTM	UNAME	H	I	R	O	IT	PR	F	F	F	F	RE	RE	GRPV	TR	TR	TRFGR	TR
STVOR	OR	PA	WAERS	VG	VG	VGLGR	VG	VGLSV	BSGRD	DIVGV	ANSAL					FALGK				FALGR		LGA0				
BET01		ANZ01		EIN	O	LGA0	BET02			ANZ02		EIN	O	LGA0	BET03					ANZ03		EIN	O	LGA0		
800	00002120	0			99991231	19991001	000	20030225	HEATWOLE													01	02	GRD05		1
00000000		GBP					00000000	100,00	162,50		110.000,00											1002				
	9.166,67		0,00					0,00	0,00							0,00				0,00						
	0,00		0,00					0,00	0,00							0,00				0,00						
800	00007012	0			99991231	19940112	000	19960201	SCHMIDT													01	01	GRD01		
00000000		CAD					00000000	0,00	0,00		85.000,00											M003				
	3.541,67		0,00					0,00	0,00							0,00				0,00						
	0,00		0,00					0,00	0,00							0,00				0,00						

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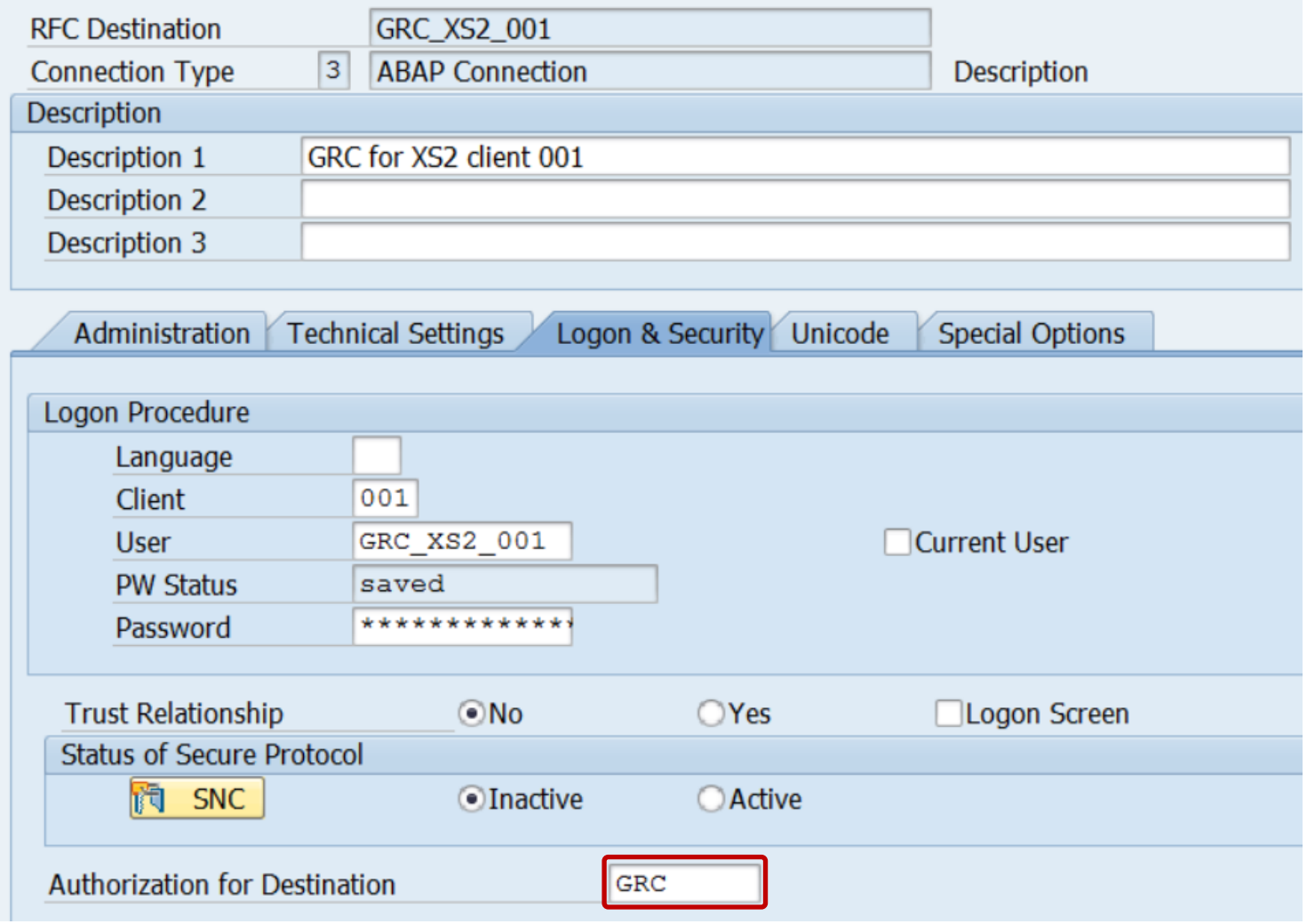
Note 2417355 - Missing Authorization check in RFC Maintenance



So far the authorization field was mainly checked while *using* the RFC destination. In this case an authorization check for `S_ICF` with `ICF_FIELD` = `DEST` and `ICF_VALUE` = <value> is executed.

Now it's checked within transaction `SM59` while *working* (change, delete) with an RFC destination, too. In this case an authorization check for `S_RFC_ADM` with `ICF_VALUE` = <value> is executed.

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March 2017

Topics March 2017

Support Portal relaunch

Support Tools for System Recommendations
Note 2427140 / 2423962 - SYSREC: Support tool for Solution Manager
Note 2418578 - Report to batch download solution manager trace files

Notes 2424120 2424173 2426260 2428811 2429069 about HANA

Note 1570399 - Solution Manager BI reporting (7.1)

Notes 1594475 1712860 XML External Entities (XXE)

Note 2433458 - Missing Authorization check in ABAP Debugger

Note 2088593 - Potential disclosure of persisted data in LO-MD-BP-CM & LO-MD-BP-VM

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Support Portal relaunch

The new Support Portal will be launched on March 31th, 2017

You can already test it at http://support.sap.com/beta

It will replace the current Support Portal as of April 26th, 2017

The DSAG offers a Webinar about the new Support Portal on April 4th 2017 (English)
https://www.dsag.de/veranstaltungen/2017-04/webinar-neues-sap-support-portal

You find our page /sos at
→ Offerings & Programs → Support Services → SAP Security Optimization Services

The SAP ONE Support Launchpad is not influenced by the new Support Portal.
https://launchpad.support.sap.com

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Support Tools for System Recommendations

Note 2427140 / 2423962 - SYSREC: Support tool for Solution Manager

The new report **AGSNO_RPT_EASY_SUPPORT** records the same data sent from your solution manager system to SAP backend during note calculation but in a readable format which is more appropriate for analysis on SAP backend.

Execution of Report:

1. Run report `AGSNO_RPT_EASY_SUPPORT` and choose the system ID and the system type (e.g. `ABAP` or `JAVA`)
2. Save the generated xml file in your local directory. You can inspect the xml file with any xml viewer.
3. Compress the xml file into a `.zip` file using the common zip program
4. Create a support ticket on component `SV-SMG-SR` and add the zip file as an attachment.

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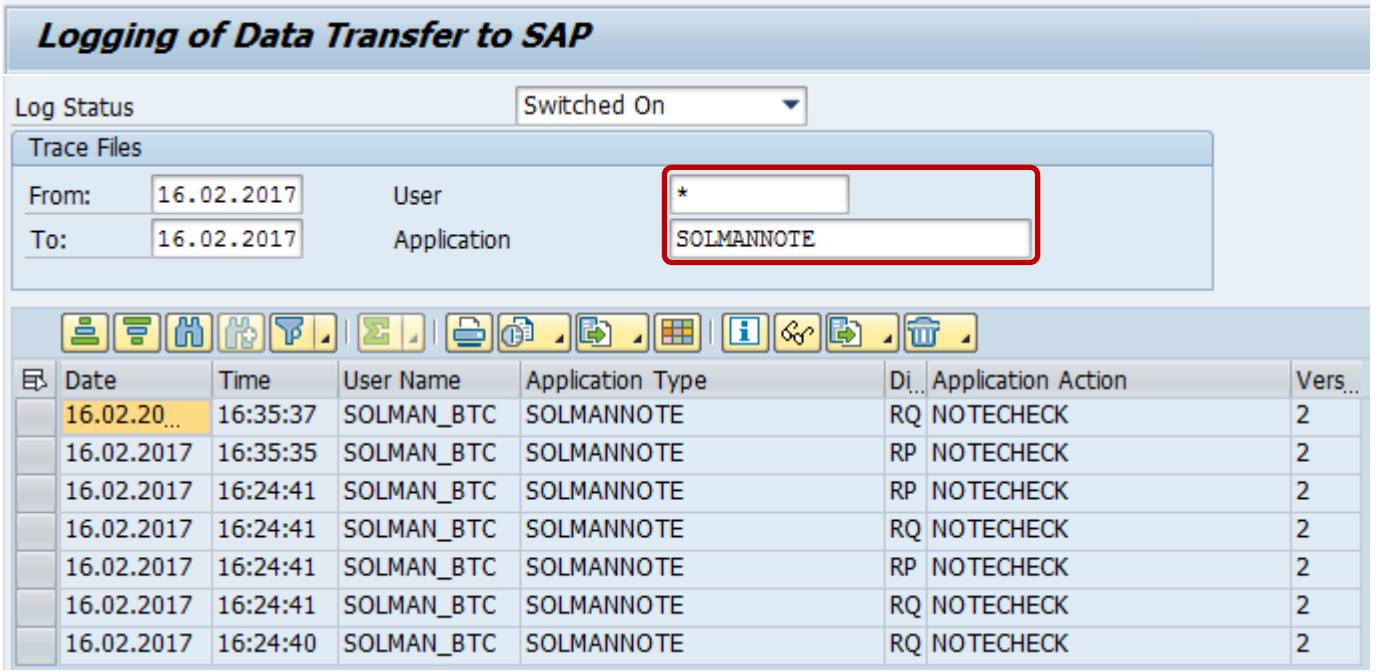
Support Tools for System Recommendations

Note 2418578 - Report to batch download solution manager trace files

You use program **SMBI_TRACE** (see note 1394862) to trace the communication between your SAP Solution Manager system and the SAP Backbone system.

Some applications like System Recommendations (which has the application code SOLMANNOTE) may generate many trace files within a single transaction and it's difficult to manually download all trace files and analyze their content.



Date	Time	User Name	Application Type	Di...	Application Action	Vers...
16.02.20...	16:35:37	SOLMAN_BTC	SOLMANNOTE	RQ	NOTECHECK	2
16.02.2017	16:35:35	SOLMAN_BTC	SOLMANNOTE	RP	NOTECHECK	2
16.02.2017	16:24:41	SOLMAN_BTC	SOLMANNOTE	RP	NOTECHECK	2
16.02.2017	16:24:41	SOLMAN_BTC	SOLMANNOTE	RQ	NOTECHECK	2
16.02.2017	16:24:41	SOLMAN_BTC	SOLMANNOTE	RP	NOTECHECK	2
16.02.2017	16:24:41	SOLMAN_BTC	SOLMANNOTE	RQ	NOTECHECK	2
16.02.2017	16:24:40	SOLMAN_BTC	SOLMANNOTE	RQ	NOTECHECK	2

You use the new report **AGSNO_RPT_TRACE_DOWN** to batch download these trace files and to extract information from them into additional log files. An authorization to read trace file is required to run this report.

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Notes 2424120 2424173 2426260 2428811 2429069 about HANA

Blog on https://hana.sap.com/security

Helping Customers Keep Their SAP HANA Systems Secure – Latest Security Updates
Posted by Holger Mack in March 2017

https://blogs.saphana.com/2017/03/13/helping-customers-keep-their-sap-hana-systems-secure-latest-security-updates/

[…]

with the latest SAP Security Patch Day, on March 14th, 2017 SAP released five security notes for SAP HANA.

Of the five security notes, only two are rated with a Very High and High criticality. These criticality ratings indicate that affected customer systems could be at serious risk if an attacker exploits one of these vulnerabilities. Both issues affect only customers who:

- Are running on a specific version of the SAP HANA software, or
- Have enabled and exposed an optional component that is disabled by default

We expect few SAP HANA customers to be affected by these issues.

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Notes 2424120 2424173 2426260 2428811 2429069 about HANA

Note 2424120 - Information disclosure in SAP HANA cockpit for offline administration

The improvements are included in SAP HANA revision 122.07 for SAP HANA 1.00 SPS 12 and revision 001 for SAP HANA 2.0 SPS 00.
The <sid>adm of an SAP HANA system is a very powerful user. Ensure that this user and the SAP HANA cockpit for offline administration are secured and only usable in emergency situations.

Note 2424173 - Vulnerabilities in the user self-service tools of SAP HANA

The vulnerabilities have been fixed with revision 122.07 for SAP HANA 1.00 SPS 12 and revision 001 for SAP HANA 2.0 SPS 00.
Alternatively, the user self-services can be deactivated if the service is not needed or as temporary workaround.

Note 2426260 - SQL Injection vulnerability in SAP HANA extended application services, classic model

The vulnerability has been fixed with Revision 122.07 for SAP HANA 1.00 SPS 12 and Revision 001 for SAP HANA 2.0 SPS 00.
Workaround: Revoke the role "sap.hana.xs.formLogin::ProfileOwner" from users.

Note 2428811 - SQL Injection vulnerability in SAP HANA Web Workbench

The issue has been fixed with Revision 122.06 for SAP HANA 1.00 SPS 12 and Revision 001 for SAP HANA 2.0 SPS 00.

Note 2429069 - Session fixation vulnerability in SAP HANA extended application services, classic model

HANA 1.00 is not affected. The vulnerability has been fixed with revision 001 for SAP HANA 2.0 SPS 00

All solutions are part of

- **HANA 1.0 SPS12 Revision 122.07**
- **HANA 2.0 SPS00 Revision 001**

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Notes 2424173 - Vulnerabilities in User Self-Services of SAP HANA

External Blog of Onapsis:

https://www.onapsis.com/threat-report-understanding-sap-hana-user-self-service-vulnerability

The User Self-Services have been introduced with SPS 09 (out of maintenance):

SAP HANA SPS 09: New Developer Features; XS Admin Tools
https://blogs.sap.com/2014/12/09/sap-hana-sps-09-new-developer-features-xs-admin-tools/

SAP HANA SPS 09 - What's New about Security?
https://cloudplatform.sap.com/content/dam/website/saphana/en_us/Technology%20Documents/SPS09/SAP%20HANA%20SPS%2009%20-%20Security.pdf

Example how to activate and use User Self Service:

SAP Hana User Self-Service Configuration
https://blogs.sap.com/2016/11/09/sap-hana-user-self-service-configuration/

Vulnerability

The vulnerability allows an attacker to take control of the system. However, this affects only customers if the optional User Self Service component (**disabled by default**) has been enabled and exposed to an untrusted network.

The solution is part of HANA 1.0 SPS12 (in maintenance) Revision 122.07

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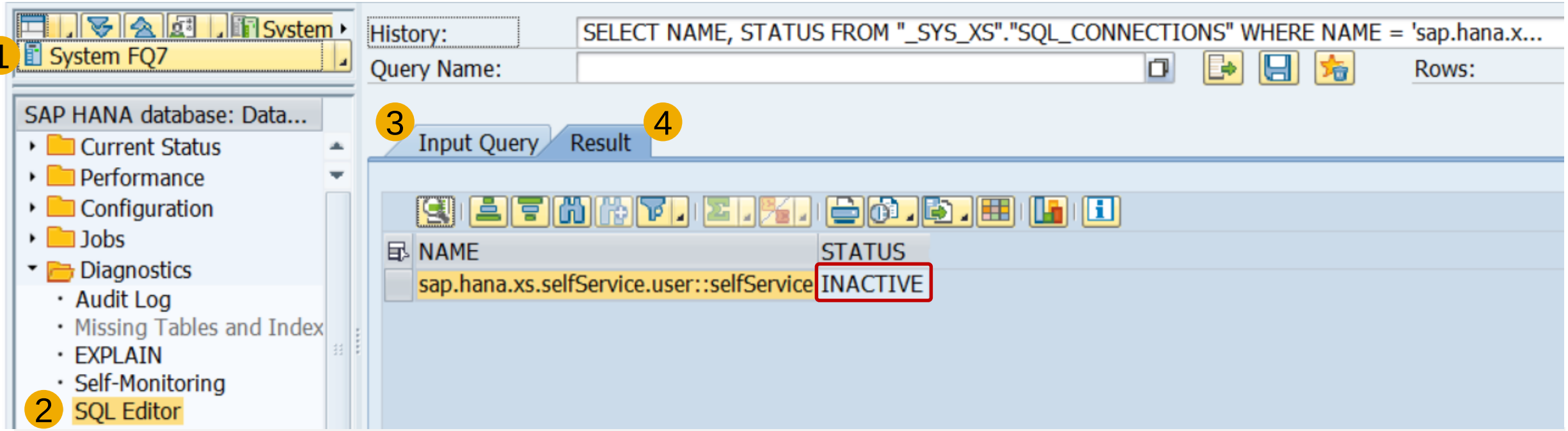
Notes 2424173 - Vulnerabilities in user self-services of SAP HANA

Check if a system is affected

As described in the note check if the component is active using following SQL statement:

```
SELECT NAME, STATUS FROM "_SYS_XS"."SQL_CONNECTIONS"
WHERE NAME = 'sap.hana.xs.selfService.user::selfService'
```

Use the HANA Studio or transaction DBACOCKPIT:



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Notes 2424173 - Vulnerabilities in user self-services of SAP HANA

Check if a system is affected (continued)

Administrators are assigned to role
`sap.hana.xs.selfService.user.roles::USSAdministrator`
and a technical user exists which is assigned to role
`sap.hana.xs.selfService.user.roles::USSExecutor`
according to the Documentation about User Self-Service Roles
https://help.sap.com/doc/1c837b3899834ddcbae140cc3e7c7bdd/1.0.11/en-US/ab4837b5fe3e41b0ad2a5319e1593b2b.html

Workaround

- Disable user self-services as described in the note via
  https://<hostname>:43<xx>/sap/hana/xs/admin/#/package/sap.hana.xs.selfService.user/sqlcc/selfService
- Block user self-service using an URL filter behind the TLS endpoint:
  https://<hostname>:<port>/sap/hana/xs/selfService/user/requestAccount.html?...
  https://<hostname>:<port>/sap/hana/xs/selfService/user/verifyAccount.html?...

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Note 1570399 - Solution Manager BI reporting (7.1)

This note contains SAP Standard Roles which get updated regularly.

Version 51 takes away full `S_RFC *` authorizations from role `SAP_SM_TWB_EXTRACTOR`.

This role (copied to a Z role) is assigned to user `SM_EFWK` automatically in SAP Solution Manager Basic Configuration.

Steps to perform in SAP Solution Manager:

- **Delete roles `SAP_SM_TWB_EXTRACTOR` and `ZSAP_SM_TWB_EXTRACTOR`**
- **Upload the role `SAP_SM_TWB_EXTRACTOR` from the file attachment of the note.**
- **Rerun the step „Maintain Users“ in SAP Solution Manager Basic Configuration (or copy the role and assign it manually)**

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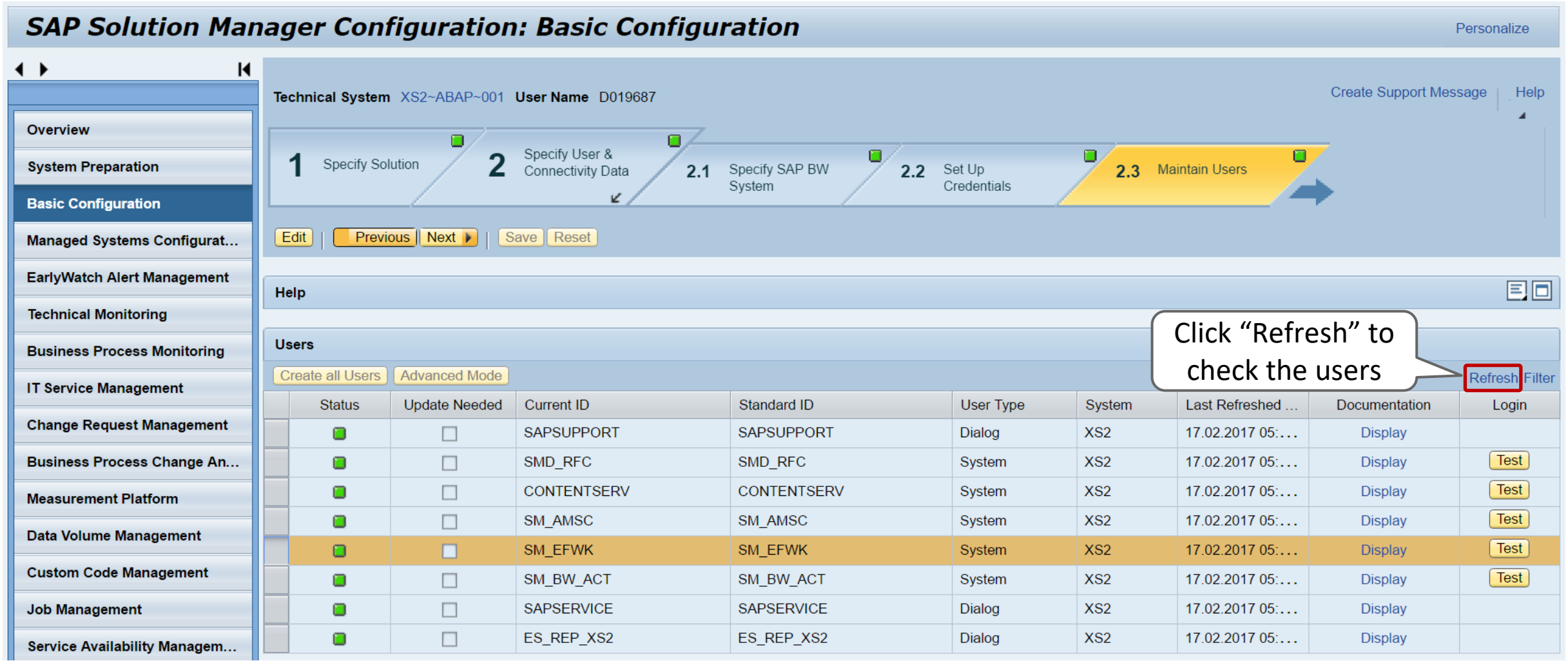
Note 1570399 - Solution Manager BI reporting (7.1)



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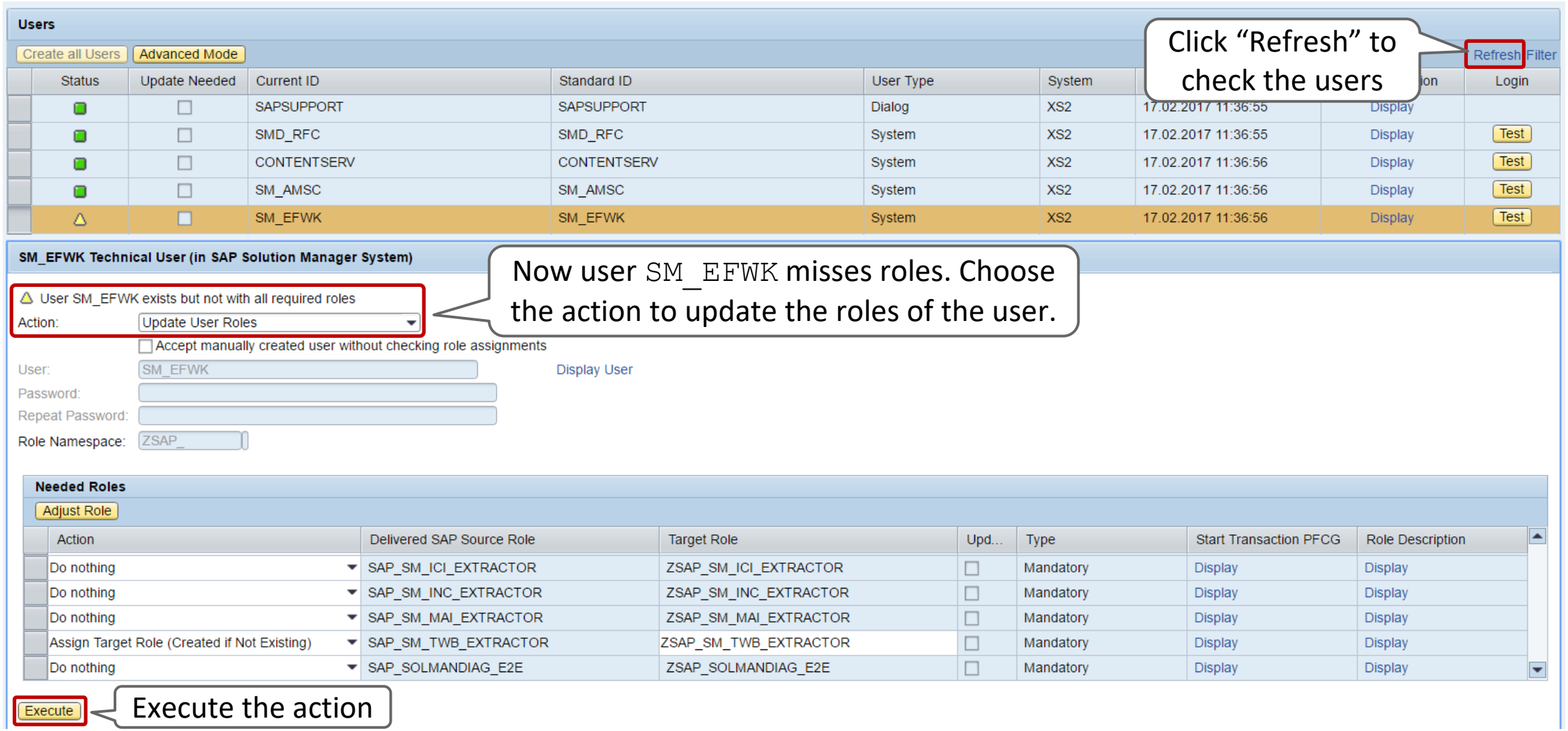
Note 1570399 - Solution Manager BI reporting (7.1)



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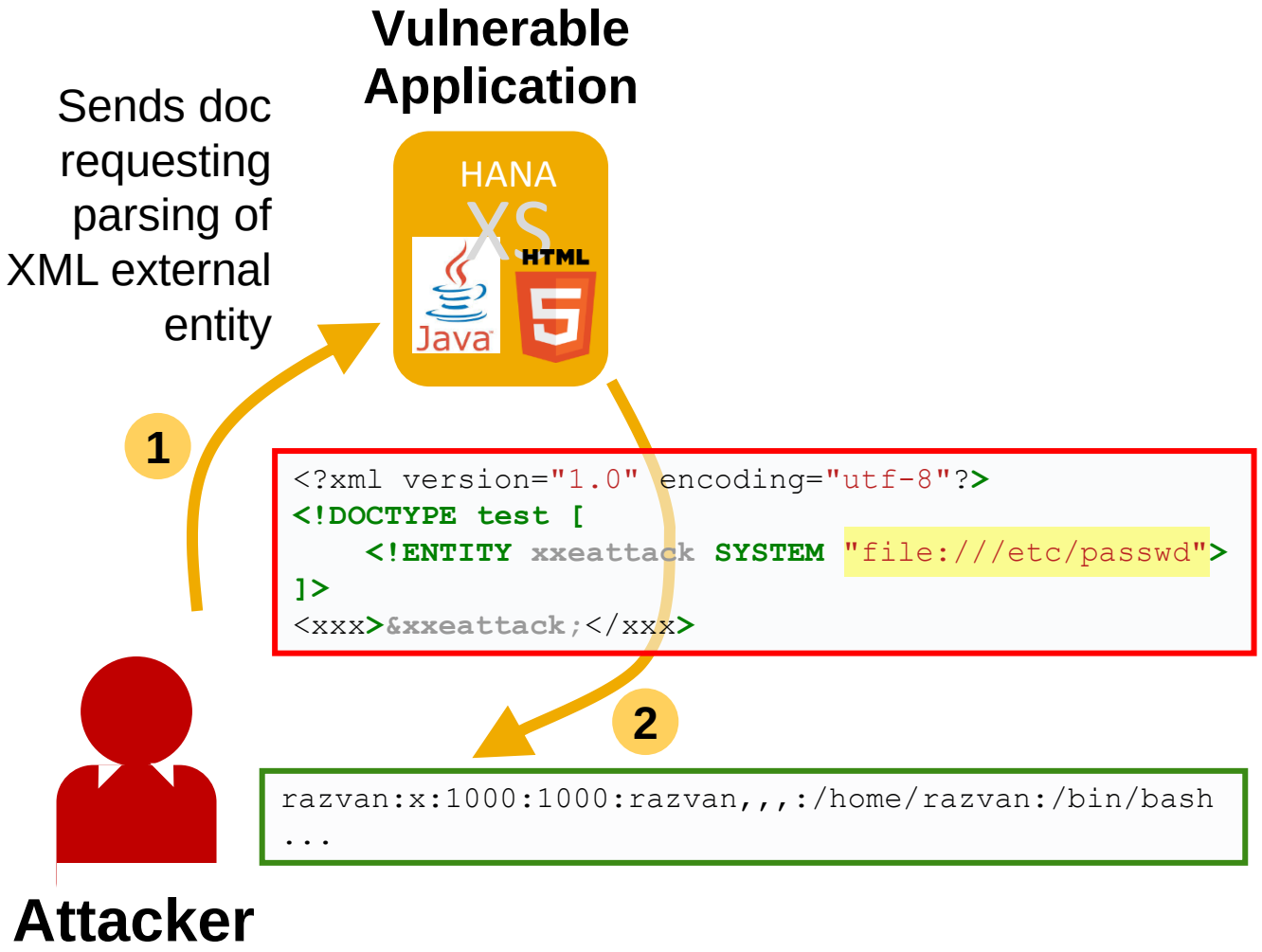
Notes 1594475 1712860 XML External Entities (XXE)

Vulnerability synopsis



The XML standard includes the idea of an external general parsed entity (an external entity). During parsing of the XML document, the parser will expand these links and include **the content of the URI** in the returned XML document.

External Entity Attacks allow an adversary to **disclose sensitive data stored on filesystem and network level**. Furthermore, excessive resource consumption is possible when accessing special files and running XML bombs.

➔ **Critical data leaked**

➔ **Denial of service**

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Notes 1594475 1712860 XML External Entities (XXE)

Solution concept (ABAP)

SAP NetWeaver ABAP provides the option of prohibiting the use of a DTD in XML or activating a heuristic to automatically identify a potential attack via an XML bomb:

Profile parameter:

`ixml/dtd_restriction`

Values: **`none`** – no DTD restriction

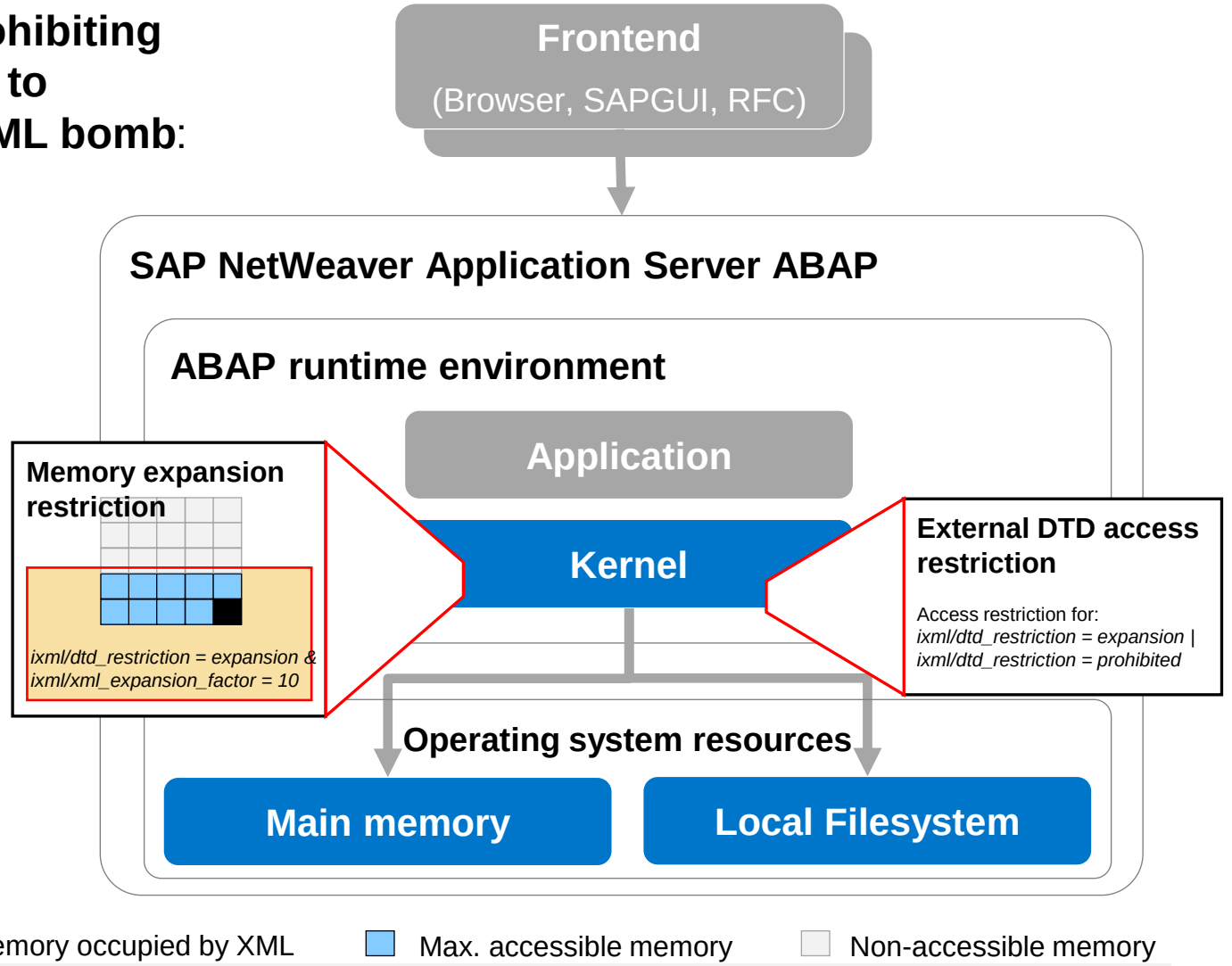
`expansion` – expansion of XML is limited*

`prohibited` – DTDs are prohibited**

* Default value for Kernel >=7.45

** External DTD can be programmatically granted by adapted application coding:

```
DATA l_dtd type string value '\\myserv\mydtd.dtd'.
DATA lo_istream_2 TYPE REF TO if_ixml_istream.
lo_istream->set_dtd_restriction( level =
if_ixml_istream=>DTD_RESTRICTED ).
lo_istream_2 = lo_stream_factory->create_istream_uri(
system_id = l_dtd ).
lo_parser->register_entity( istream = lo_istream_2
public_id = '' system_id = l_dtd ).
```



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Notes 1594475 1712860 XML External Entities (XXE)

Required actions in a nutshell (ABAP)

Pre-consideration

Check system requirements according to note 1594475

Solution is active by default for kernel versions >= 7.45 (value `expansion`)

Run your XML processing scenarios in test environment before activating in productive landscape

Custom code

Custom code using full capabilities of XML DTD processing or external DTDs requires adaption according to note 1712860

Configuration settings

Set profile parameter:

`ixml/dtd_restriction`:	`none`
	`expansion`
	`prohibited`

`ixml/xml_expansion_factor`:	<numeric value> (default `10`)

Additional information

Enable error logging (available for kernel versions >=7.45):

Syslog `A35`: DTD parsing attempt forbidden by configuration

Syslog `A36`: DTD expansion exceeds valid limit

SAL `FU2`: Parsing of a XML document stopped because of security reasons

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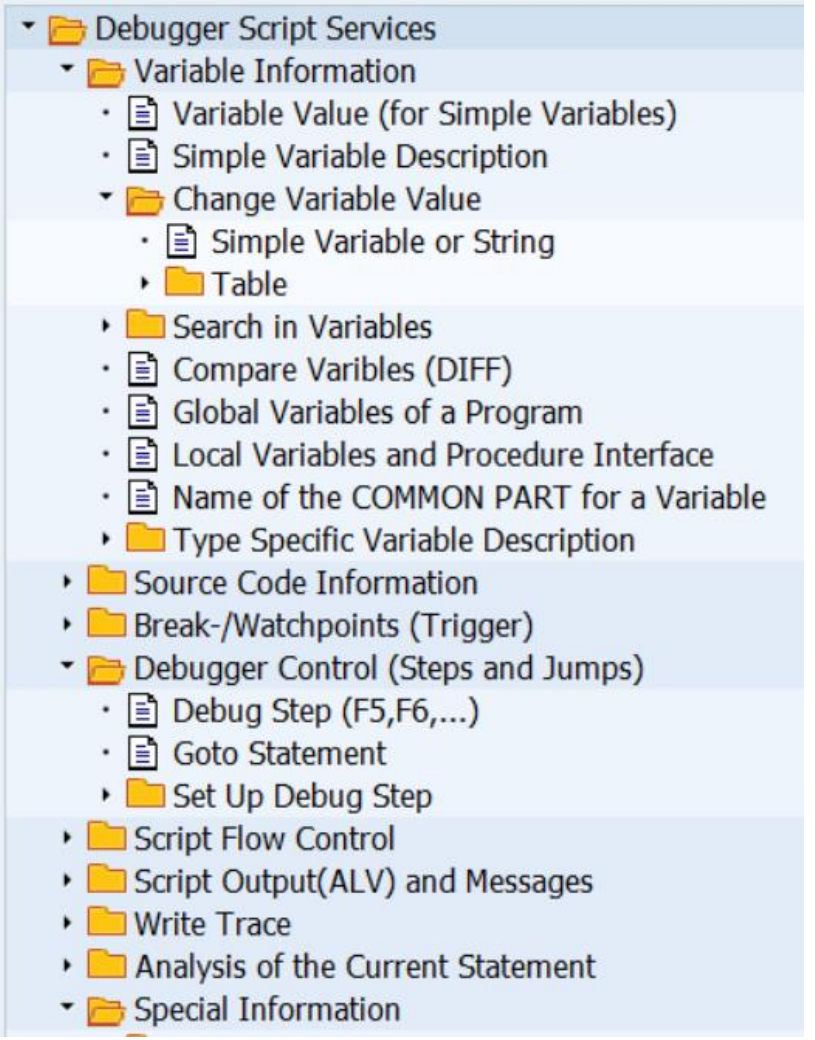
Note 2433458 - Missing Authorization check in ABAP Debugger

New authorization check for executing scripts within ABAP Debugger:

```
AUTHORITY-CHECK OBJECT 'S_DEVELOP'
        ID 'DEVCLASS' DUMMY
        ID 'OBJTYPE' FIELD 'DEBUG'
        ID 'OBJNAME' FIELD i_name
        ID 'P_GROUP' DUMMY
        ID 'ACTVT' FIELD '16'.
```

Check roles, i.e. for developers in development systems and emergency users in production systems, containing authorizations **debug-display** (`S_DEVELOP DEBUG 03`), or **debug-change** (`S_DEVELOP DEBUG 02`) if authorizations for **debug-execute** should be added or removed – and treat this authorization as critical as debug-change.



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Note 2433458 - Missing Authorization check in ABAP Debugger

Transactions SAS can be used to manage debugger scripts

Blogs:

ABAP Debugger Scripting: Basics
https://blogs.sap.com/2010/12/14/abap-debugger-scripting-basics/

ABAP Debugger Scripting: Advanced
https://blogs.sap.com/2010/12/14/abap-debugger-scripting-advanced/

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Note 2088593 - Potential disclosure of persisted data in LO-MD-BP

The solution combines two security configuration methods:

- **Switchable Authorization Checks for RFC Functions (SACF)**
  `FI_AP_VENDOR_BAPI` authorization for `F_LFA1_GEN` in function `BAPI_VENDOR_FIND`
  `FI_AR_CUSTOMER_BAPI` authorization for `F_KNA1_GEN` in function `BAPI_CUSTOMER_FIND`

- **Switchable allowlist (SLDW)**
  `LO_MD_BP_VENDOR_BAPI` for table search in function `BAPI_VENDOR_FIND`
  `LO_MD_BP_CUSTOMER_BAPI` for table search in function `BAPI_CUSTOMER_FIND`

Recommendation: Implement the note and activate the SACF and SLDW scenarios but adjust authorization roles and maintain the allowlist only if you are using these functions via RFC.

You can use the Workload Statistics (Transaction `ST03N`) → RFC Profiles or transaction `STRFCTRACE` to verify if these functions are used in RFC scenarios (or you use report `ZRFC_STATRECS_SUMMARY`).

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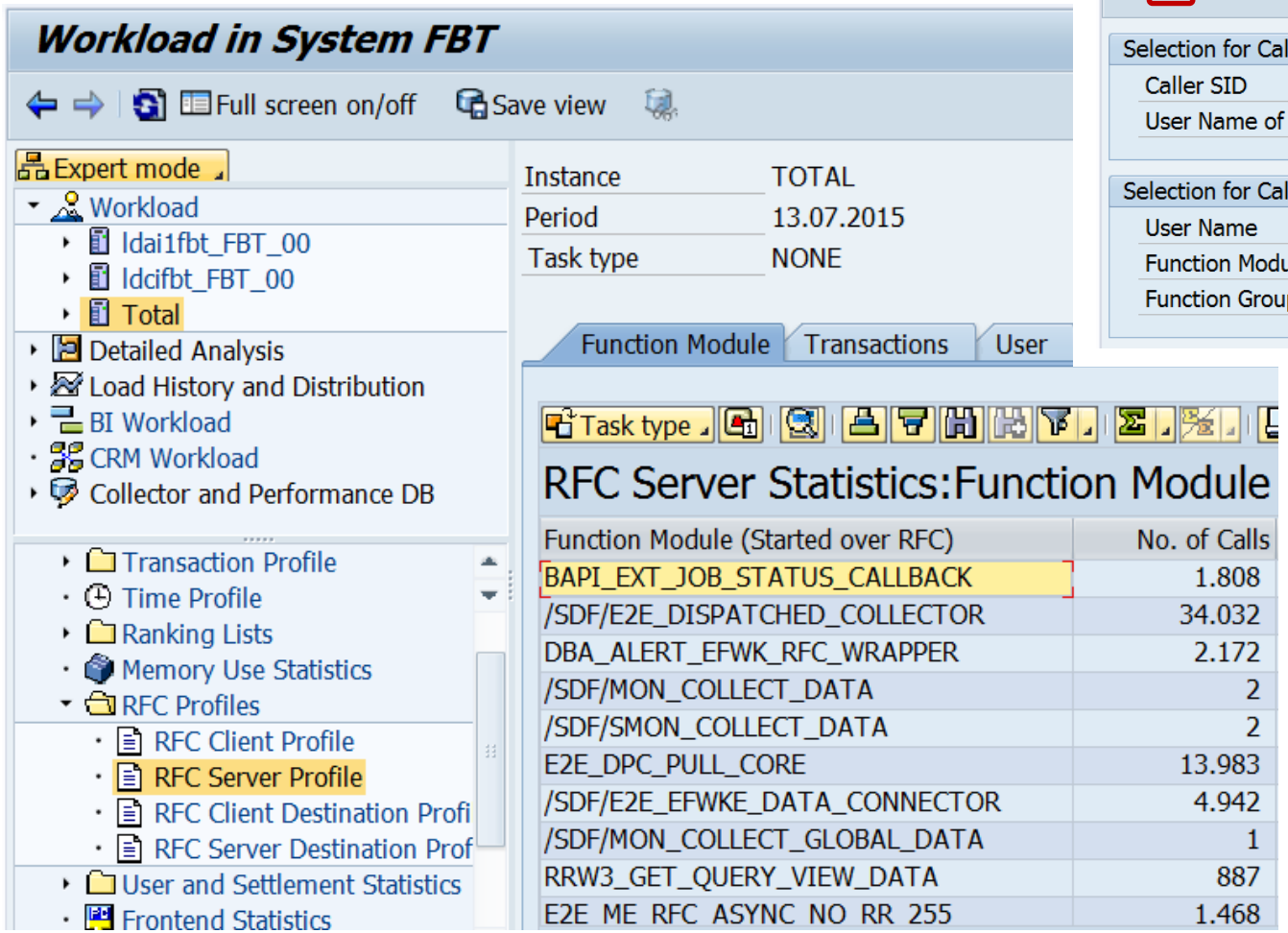
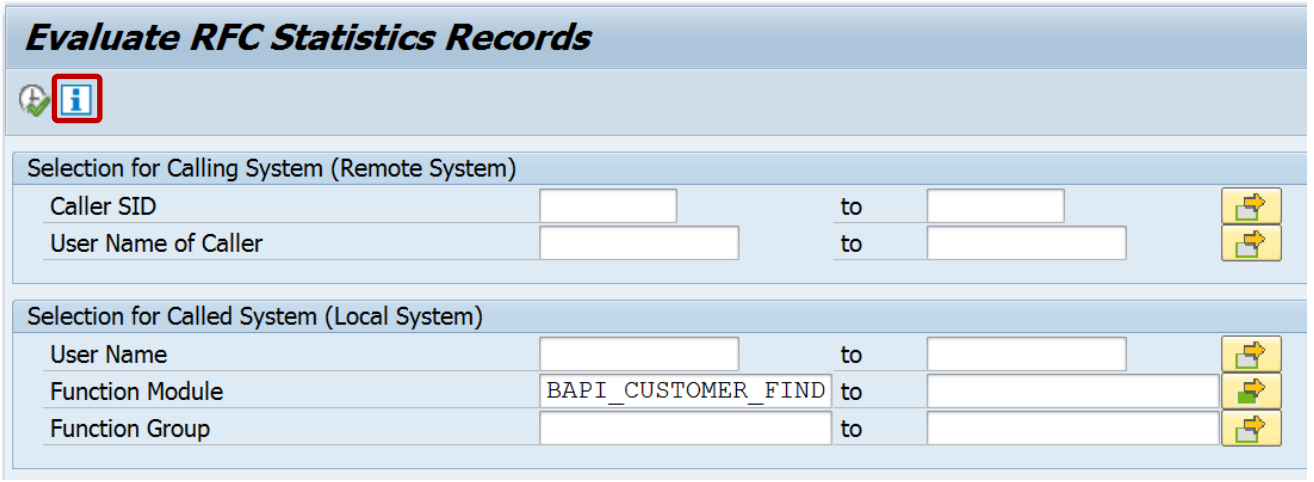
Note 2088593 - Potential disclosure of persisted data in LO-MD-BP

Transaction ST03N

(no specific prerequisites)





Transaction STRFCTRACE

(Verify prerequisites as described in the information)

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February 2017

Topics February 2017

System Recommendations failure – solved as of 21.02.2017

Note 2418823 - Update 1 to Note 2319506

Note 2413716 - Setup of Trusted RFC in GRC Access Control EAM

Note 2374165 - Missing Authorization check in BW-BPS

Note 2405256 - PFCGMASSVAL: Adding a manual authorization

The SAP Security Baseline Template & Configuration Validation

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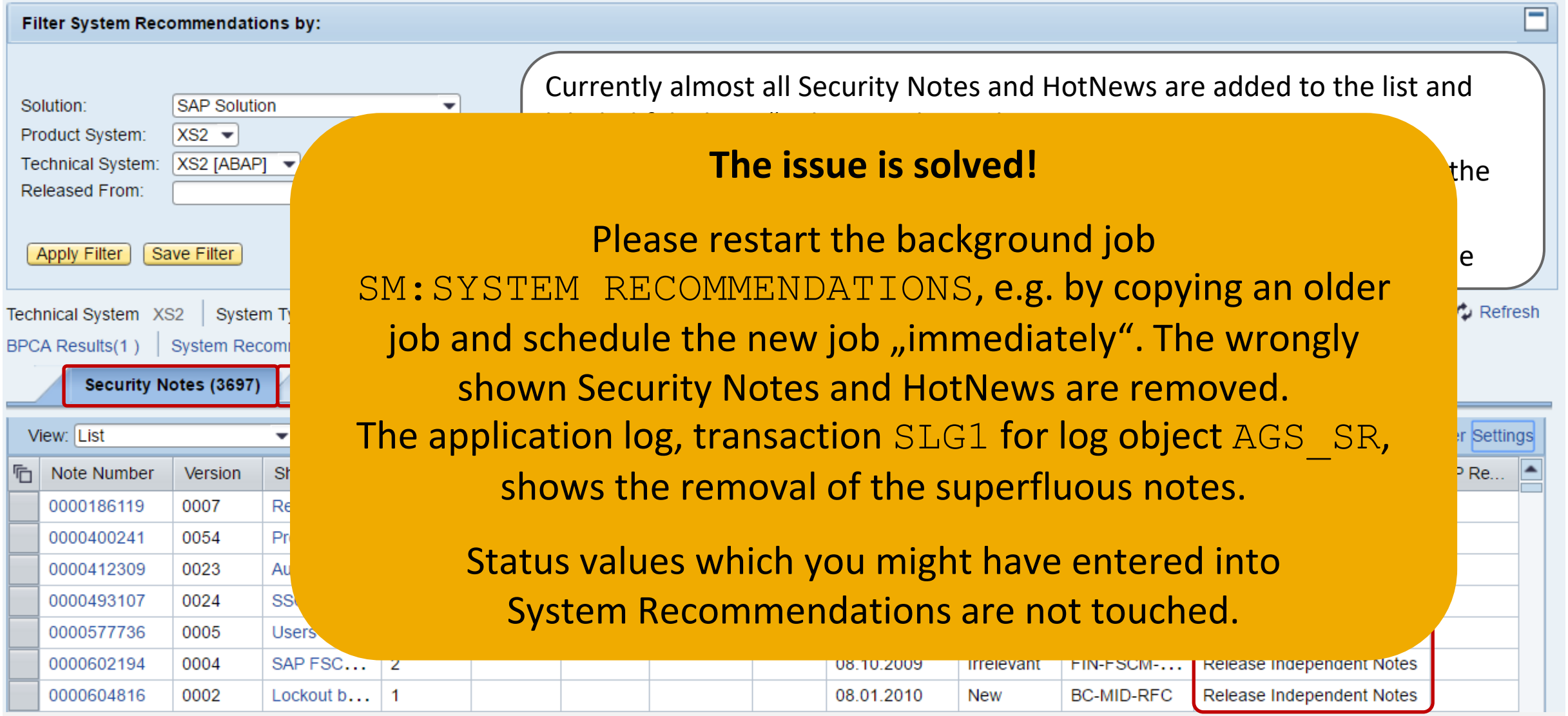
System Recommendations failure – solved as of 21.02.2017



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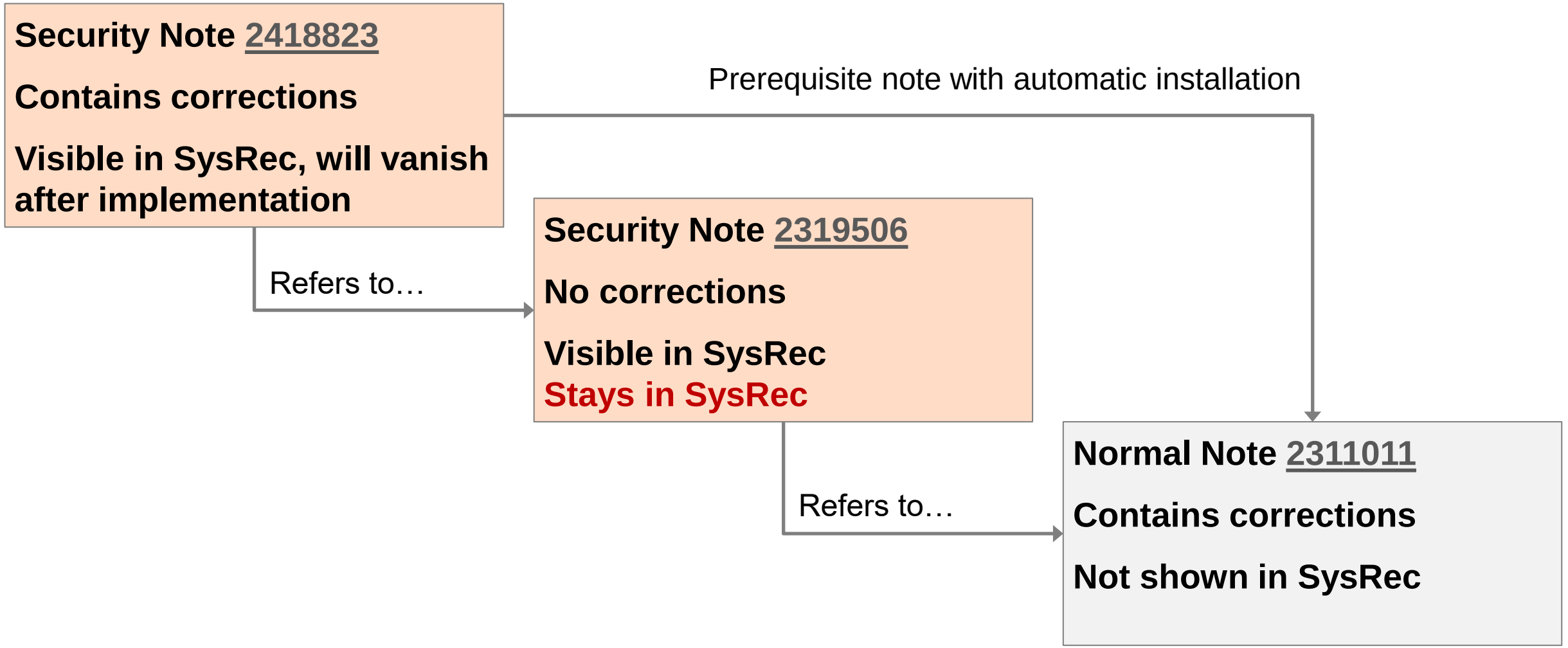
Note 2418823 - Update 1 to Note 2319506



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Note 2418823 - Update 1 to Note 2319506

Is the vulnerability limited to ORA? (Can I omit implementation in case of other databases?)

Yes, because of tests like this:

```
IF SY-DBSYS(3) <> 'ORA'.
  RAISE WRONG_DATABASE.
ENDIF.
```

… but this test is commented in one of the functions.

Yes, because the following fails if ORA specific table V$INSTANCE does not exists:

```
EXEC sql .
  select instance_name
  into :localdbname
  from V$INSTANCE
ENDEXEC .
```

… but I do not like to rely on this in case of very critical `INSERT REPORT … PERFORM IN PROGRAM …`

➡ **Implement such corrections in any case.**

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Note 2413716 - Setup of Trusted RFC in GRC Access Control EAM

This how-to note (which is based on updated material from this webinar from October 2016) replaces and corrects old note 1694657.

To secure Trusted RFC for GRC Access Control EAM you should execute following configuration changes:

1. Enhance the trust relationship to transmit the transaction code of the calling transaction
2. Maintain authorizations for authorization object `S_RFCACL` in managed systems
3. Adjust RFC destinations to utilize the authorization object `S_ICF` to secure the usage of RFC destinations
4. Deactivate the password of FFIDs
5. Strictly control critical basis authorizations for managing trust relationships and RFC destinations
6. Restrict authorizations for `S_RFC` included in SAP roles from GRC

See Blog: Secure Trusted RFC in GRC Access Control EAM and other Applications
https://blogs.sap.com/2017/02/14/secure-trusted-rfc-in-grc-access-control-eam-and-other-applications

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Note 2374165 - Missing Authorization check in BW-BPS

This is just another example about potential critical functions and methods which could be misused if you do not control development authorizations.

You easily can apply the note, just do it,…

… but it is more important to

- **strictly control access to `SE37` and to authorizations for `S_DEVELOP` for object type `FUGR` and activity `16` = execute (and all change activities)**
- **strictly control access to `SE24` and to authorizations for `S_DEVELOP` for object type `CLAS` and activity `16` = execute (and all change activities)**

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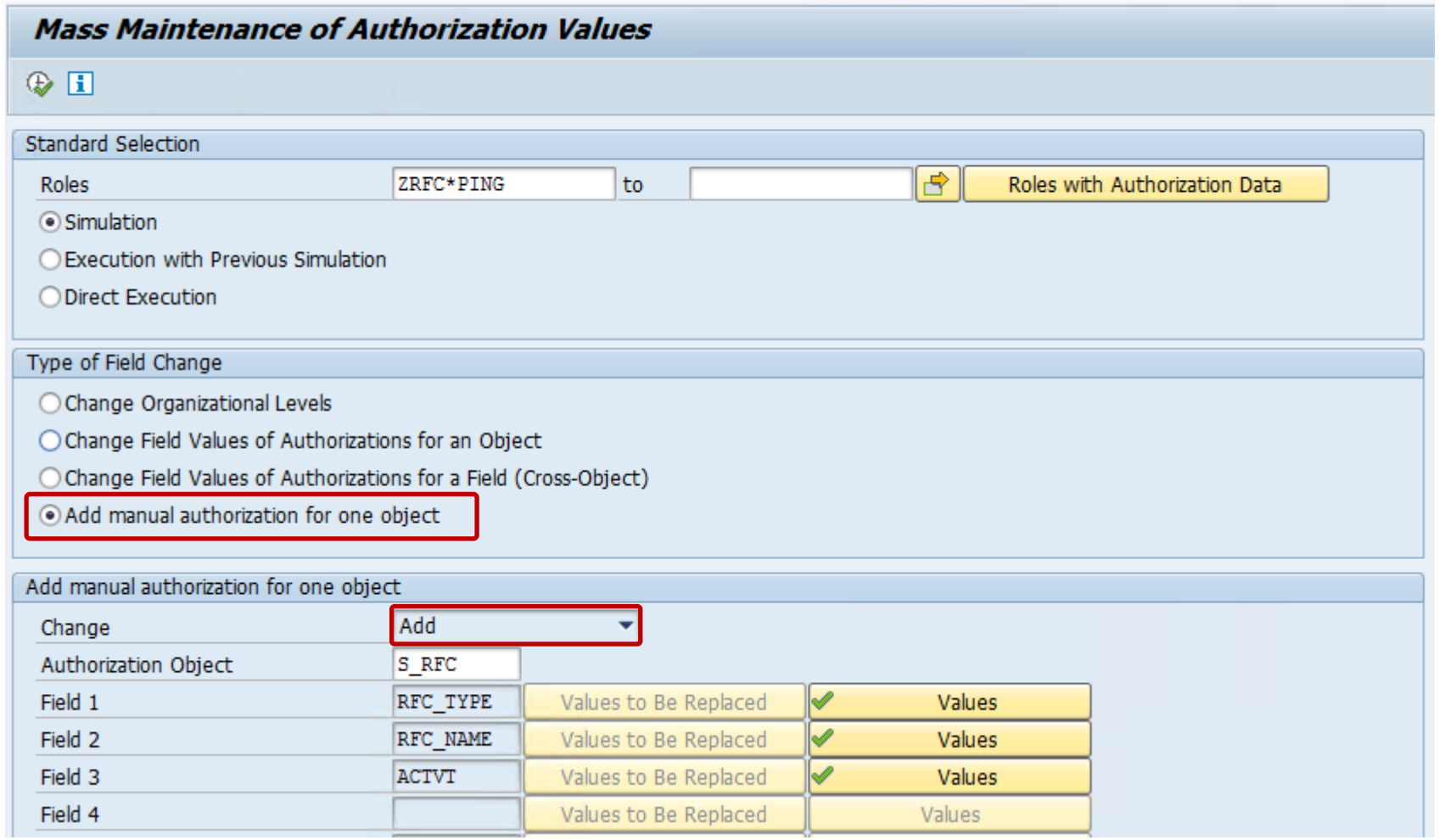
Note 2405256 - PFCGMASSVAL: Adding a manual authorization



New option to add an authorization manually

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KBA 2253549 - The SAP Security Baseline Template & ConfigVal

An SAP Security Baseline is a regulation on minimum security requirements to be fulfilled for all SAP systems in your organization.

"Baseline" means: These requirements must be fulfilled by all SAP systems regardless of any risk assessments. They are general best practices and apply to all systems, regardless of their security level.

The SAP Security Baseline Template is a template document provided by SAP on how an organization-specific SAP Security Baseline could be structured. It is pre-filled with selected baseline-relevant requirements and corresponding concrete values as recommended by SAP.

https://support.sap.com/sos
→ Media Library

CoE Security Services - Security Baseline Template Version
https://support.sap.com/dam/library/SAP%20Support%20Portal/support-programs-services/support-services/security-optimization-service/media/Security_Baseline_Template.zip.

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KBA 2253549 - The SAP Security Baseline Template & ConfigVal

The package contains files to configure the application Configuration Validation according to the SAP Security Baseline Template.

The basics of Configuration Validation are described here:

https://support.sap.com/sos
→
SAP CoE Security Services – Checking Security Configuration and Authorization

Wiki:

https://wiki.scn.sap.com/wiki/display/TechOps/ConfVal_Home

Select Target System

SID	Description
BL_I-13	SAP HANA Security
BL_I-5	Web Dispatcher Security
BL_O-1	Handling of ABAP Default Users in ABAP Systems
BL_O-2	No use of authorization profiles SAP_ALL and other critical
BL_O-3	Segregation of Basis and Business Authorizations
BL_O-4	Restricted Assignment of Critical Basis Authorizations
BL_O-5	RFC Authorizations
BL_O-6	Java Systems Administrators
BL_O-8	Security Audit Log (ABAP)
BL_O_8_0	Security Audit Log (ABAP) Switch
BL_O_8_1	Security Audit Log (ABAP) slot for SAP(*) users
BL_S-1	ABAP Profile Parameters
BL_S-2	Protection of Password Hashes in ABAP Systems
BL_S-3	Modification Protection for Production Systems
BL_S-4	Secure Configuration of Java Systems

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January 2017

Topics January 2017

News from SAP Support Portal – Filter for Security Notes

System Recommendations – Silent migration to new SAP backbone

How to analyze unimportant updates

Note 2379540 - User defined HTTP logging with TLS information

Note 2265385 - Switchable authorization checks for RFC in Product Catalog

Overview about Authorization Trace Options
Note 1854561 - Authorization trace with filter
Note 2220030 - STUSERTRACE: User trace for authorization checks

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News from SAP Support Portal – Filter for Security Notes

My SAP Notes & KBAs Application https://support.sap.com/notes → **Expert Search**

- **New Filters: The Expert Search in the My SAP Notes & KBAs application now features even more filter options:**
  - Document Type with the options SAP Notes, SAP Knowledge Base Articles, **SAP Security Notes**, and SAP Partner Notes;
  - SAP Security Patch Day with the options Patch Day SAP Security Notes and Support Package SAP Security Notes.
  - Using these filters (in combination with others like Priority), you can easily identify SAP HotNews, SAP Security Notes, SAP Legal Change Notes and more and save these queries (as so-called “variants”) for future reuse.

SAP Security Notes Application https://support.sap.com/securitynotes

- **The status handling for work lists has been improved: It is possible to move for example an Security Note from status ‘Confirmed’ back to status ‘To Be Reviewed’**

- **The comma-separated value (CSV) file that you can download to your local computer now includes the URLs to the notes in the list.**

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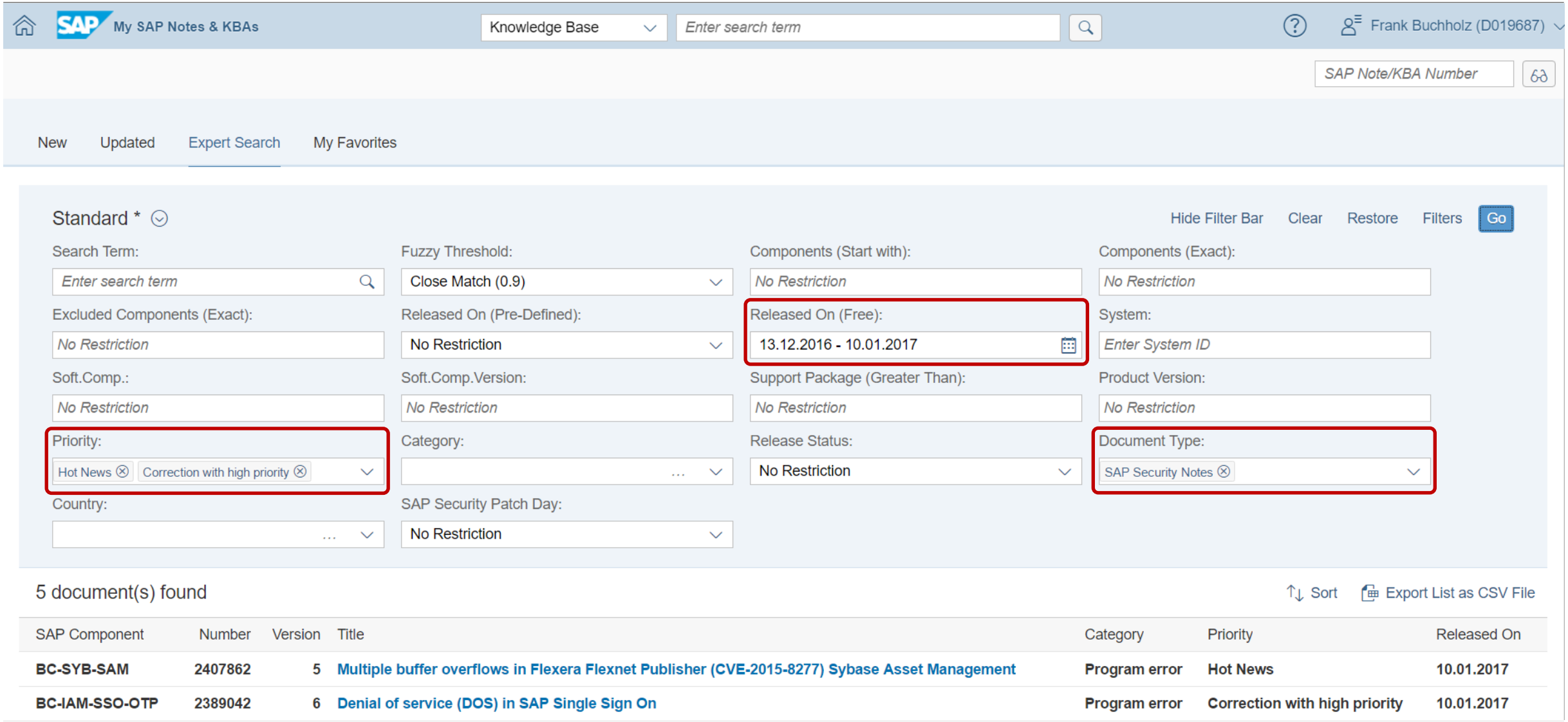
News from SAP Support Portal – Filter for Security Notes

https://support.sap.com/notes → Expert Search



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System Recommendations – Silent migration to new SAP backbone

Due to technical reasons SAP starts a silent, staged migration to a new SAP backbone which calculates results for System Recommendations.

The old backbone does not get information about latest Support Packages anymore which lead to incorrect results (too many notes = false-positive). Example: After upgrading a system to SAP_BASIS 7.20 SP 16, which was recently released to customers in November 2016, you see several superfluous notes in System Recommendations.

Please raise a ticket on component SV-SMG-SR if you face any issues about

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How to analyze unimportant updates

Use the ‘Compare version’ function to analyze changes on Support Portal:

Note 2319172 - Whitelist based Clickjacking Framing Protection in SAP GUI for HTML

Version	12	**Type**	SAP Security Note
Language	English	**Master Language**	English
Component	BC-FES-ITS (SAP Internet Transaction Server)	**Released On**	1218.0701.20162017

- **No change**

Note 1541716 - Potential Denial of Service in translation tools funct.

Version	24	**Type**	SAP Security Note
Language	English	**Master Language**	English
Component	BC-DOC-TTL (Translation Tools)	**Released On**	1317.1201.20122017

Software Component	Release
SAP_BASIS	702 - 702
SAP_BASIS	711 - 730
SAP_BASIS	72L - 800

- **Unimportant change (removal on superfluous release assignment)**

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Note 2379540 - User defined HTTP logging with TLS information

Security Optimization Projects often show two stages:

(1) Enable improved security

Install software, configure logging / simulation mode, prepare configuration, still accept insecure processing

(2) Enforce improved security

Log errors only, disable simulation mode, finalize configuration, refuse insecure processing

How to decide when you can enter stage (2)?

Example project “Encrypt all communication channels” for work stream “web based communication”.

First you enable TLS on all servers and clients and start encrypting http sessions.
You enter stage (2) as soon as you can prove, that all (important business relevant) communication channels are in fact using https.
How can you log if and which encryption schema is in use?

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Note 2379540 - User defined HTTP logging with TLS information

Use profile parameters `icm/HTTP/logging_<xx>` (incoming) and `icm/HTTP/logging_Client_<xx>` (outgoing) to log information about TLS properties of established TLS sessions.
Available as of Kernel 7.22 patch 223, 7.45 patch 410, or 7.49 patch 111

Example:

```
icm/HTTP/logging_2 = PREFIX=/,LOGFILE=ssl_info.log,LOGFORMAT=%a %y1 %y2
```

This could lead to following log entries (the 1st line shows a non-encrypted connection):

```
10.97.12.81 - -
10.97.12.81 TLSv1.0 TLS_RSA_WITH_AES128_CBC_SHA
10.97.10.26 TLSv1.2 TLS_ECDHE_RSA_WITH_AES128_CBC_SHA
10.97.10.26 TLSv1.2 TLS_ECDHE_RSA_WITH_AES128_GCM_SHA256
```

Documentation of placeholders for profile parameter `icm/HTTP/logging_<xx>`
https://help.sap.com/saphelp_nw75/helpdata/en/48/442541e0804bb8e10000000a42189b/frameset.htm

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Note 2379540 - User defined HTTP logging with TLS information

Proposal (If the string is too long for entering it in RZ10, then maintain the profile file directly):

```
icm/HTTP/logging_0 =
PREFIX=/,
LOGFILE=access-$(SAPSYSTEMNAME)-$(SAPLOCALHOST)-%y-%m-%d.log,
MAXSIZEKB=1500000,SWITCHTF=day,
LOGFORMAT=%t %a %y1 %y2 %u "%r" %s %b %L %{Host}i %w1 %w2
```

Explanation:

%t	Time specification in CLF format: [15/Dec/2007:16:18:35 +0100]
%a	IP address of the remote host (this might the a load balancer, therefore we add placeholder %{Host}i)
%y1	TLS protocol version (only useful if SSL termination happens here)
%y2	TLS cipher suite as string (only useful if SSL termination happens here)
%u	User name of a basic authentication or the "common name“ of an X.509 certificate
%r	First line of an HTTP request with the original path and form fields
%s	OK code of the response
%b	Length of the response in bytes
%Lms	The duration of a request in milliseconds (followed by “ms”
%{Host}i	Name of a request header field
%w1	SID of the back-end system (from wdisp/system) to which an HTTP request was sent.
%w2	Instance of the back-end system to which an HTTP request was sent.

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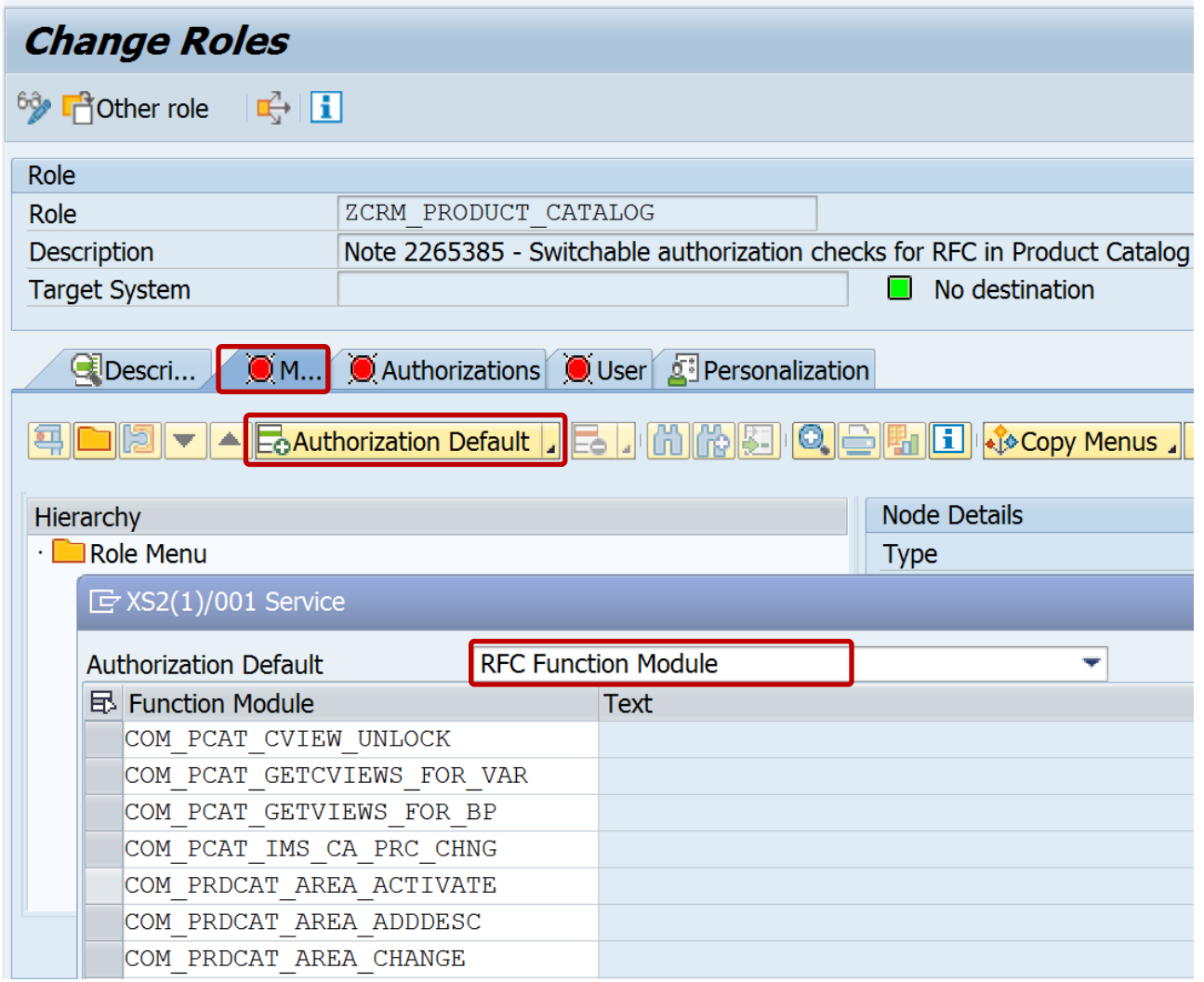
Note 2265385 - Switchable authorization checks for RFC in Product Catalog

Step 5: Maintain RFC Function Modules default values using transaction SU22/SU24

… instructions for many functions …

This step is only required if you plan to maintain roles using authorization defaults for RFC enabled functions.

Adding RFC functions to a role menu allows to pull authorization defaults into the role.



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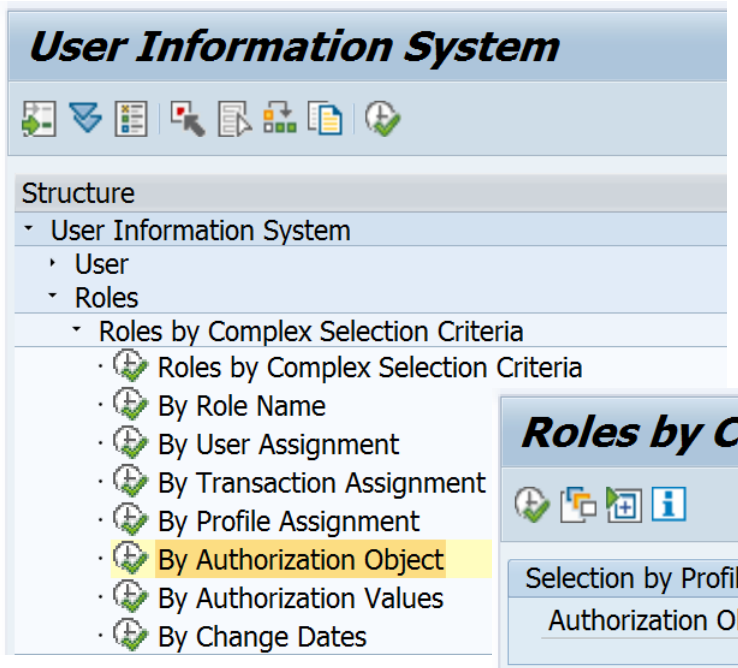
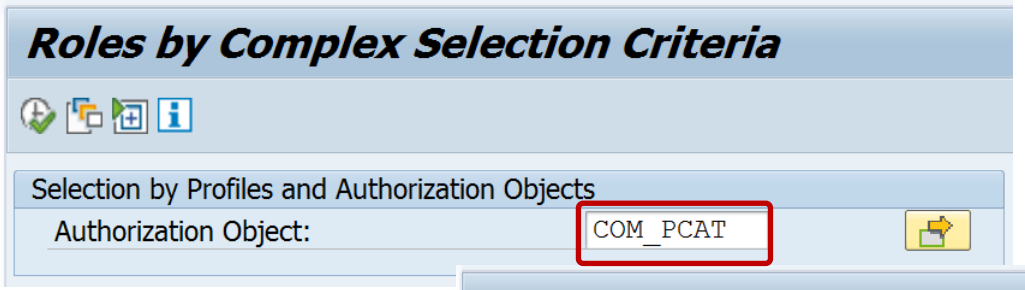
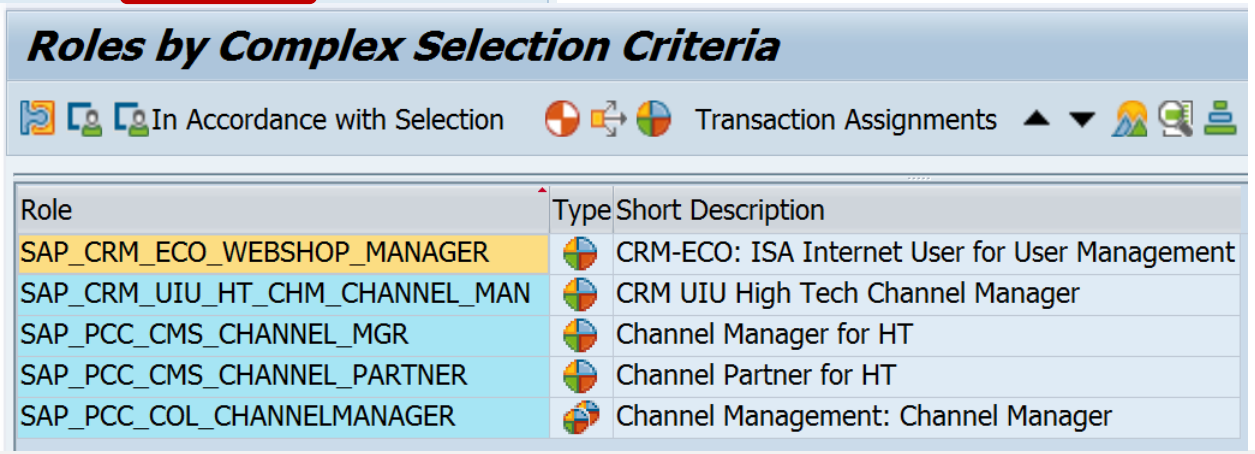
Note 2265385 - Switchable authorization checks for RFC in Product Catalog



Another option is to find and analyze existing roles containing these authorization objects.





Role	Type	Short Description
SAP_CRM_ECO_WEBSHOP_MANAGER		CRM-ECO: ISA Internet User for User Management
SAP_CRM_UIU_HT_CHM_CHANNEL_MAN		CRM UIU High Tech Channel Manager
SAP_PCC_CMS_CHANNEL_MGR		Channel Manager for HT
SAP_PCC_CMS_CHANNEL_PARTNER		Channel Partner for HT
SAP_PCC_COL_CHANNELMANAGER		Channel Management: Channel Manager

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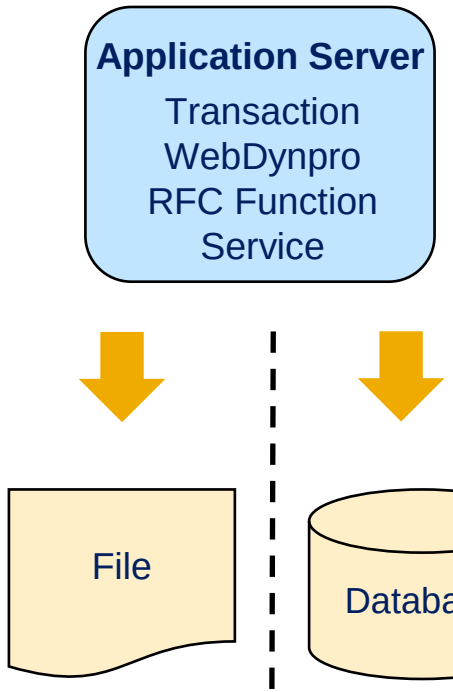
Overview about Authorization Trace Options

Transaction

STAUTHTRACE

Systemtrace

- **Storage in file**
- **Current application server or all servers**
- **Client specific**
- **User specific**
- **Every authorization check gets logged with time stamp**



Transaction

STUSOBTRACE

Authorization trace

- **Storage in table USOB_AUTHVALTRC**
- **All servers**
- **All clients**
- **All users**
- **Every authorization check in program gets logged once**

Transaction

STUSERTRACE

Authorization trace

- **Storage in table SUAUTHVALTRC**
- **All servers**
- **Client specific**
- **User specific**
- **Every authorization check in program gets logged with time stamp once per client and user**

Transaction

STRFCTRACE

Analysis of statistic records for RFC

- **All servers**
- **Client specific**
- **User specific**
- **Logging of external RFC calls**

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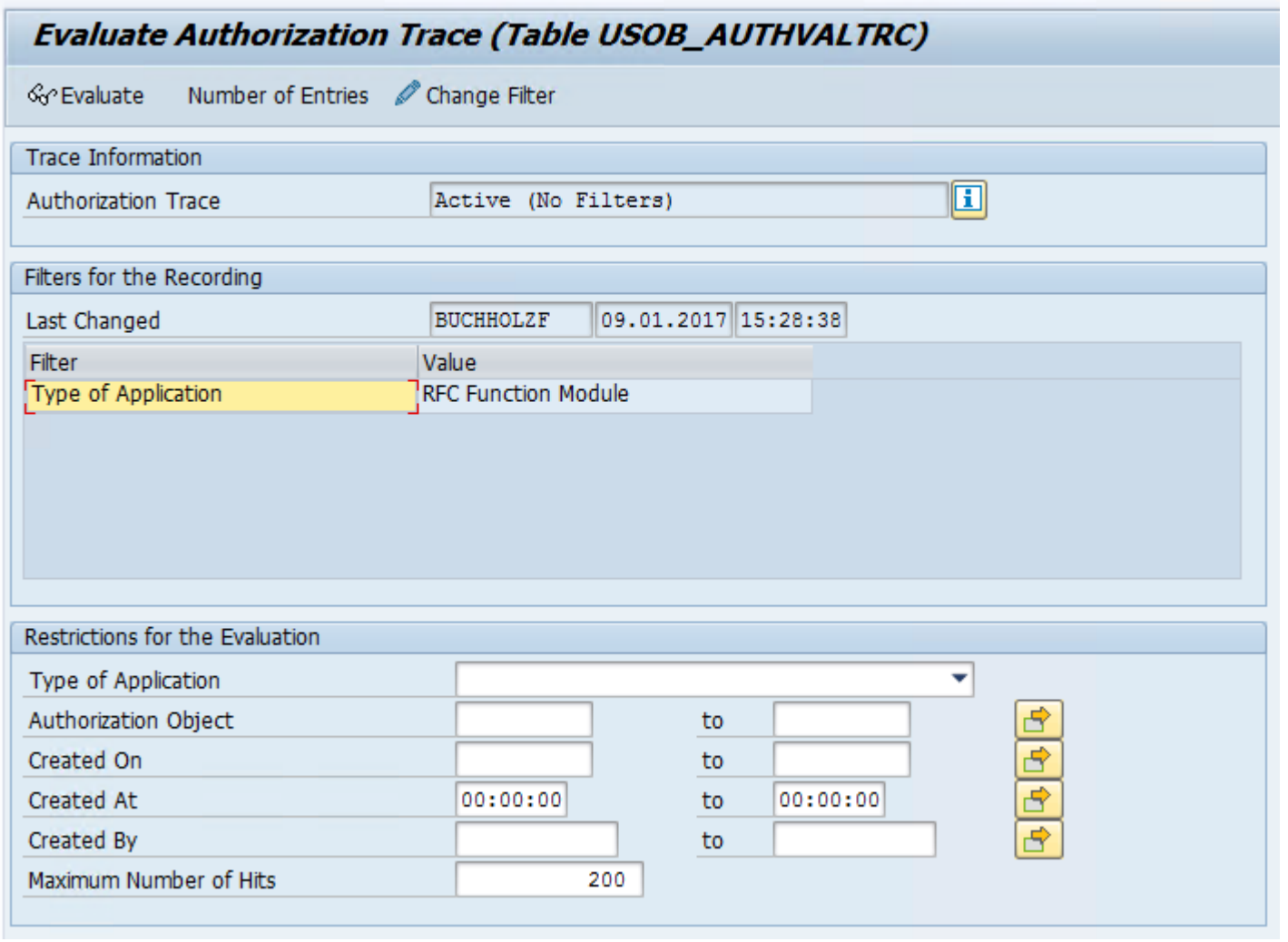
Note 1854561 - Authorization trace with filter

Transaction `STUSOBTRACE` requires activation using profile parameter `auth/authorization_trace`

- **Storage in table `USOB_AUTHVALTRC`**
- **All servers**
- **All clients**
- **All users**
- **Every authorization check in program gets logged once**



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Note 2220030 - STUSERTRACE: User trace for authorization checks

The long-term trace collects data for all clients and all users and stores it in the database.

It is available as of **SAP_BASIS 7.40 SP 14** or **7.50 SP 02** and requires **Kernel 7.45 patch 112**.
Note 2220030 is required to activate the transaction on the lowest of these SP.

During the execution of a program, each authorization check is recorded with the name and type of the running application, the location in the program, the authorization object, the checked authorization values, and the result exactly once for each user. This is done with the first time stamp.

The authorization trace is activated using the **profile parameter `auth/auth_user_trace`**.
You can switch the profile parameter dynamically.

You can activate the trace either completely or only for selected authorization checks using a filter indicator. Application type, user, and authorization objects can be used as filters. In this way, you can examine special scenarios, such as RFC programs or batch jobs, over a longer period of time.

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Note 2220030 - STUSERTRACE: User trace for authorization checks

Note 2220030 is required to activate the transaction on the lowest of these SP:

```
...
*&---------------------------------------------------------------------*
form init.

*>>>> START OF DELETION <<<<<
  " Transaction not active
  message i319(01) with 'Transaction is not active.' 'Please refer to SAP Note 2220030.' space space ##NO_TEXT .
  leave program.

  " New authorization check for user trace
*>>>> END OF DELETION <<<<<<

*>>>> START OF INSERTION <<<<<
  " New authorization check for user trace
*>>>> END OF INSERTION <<<<<<

...
```

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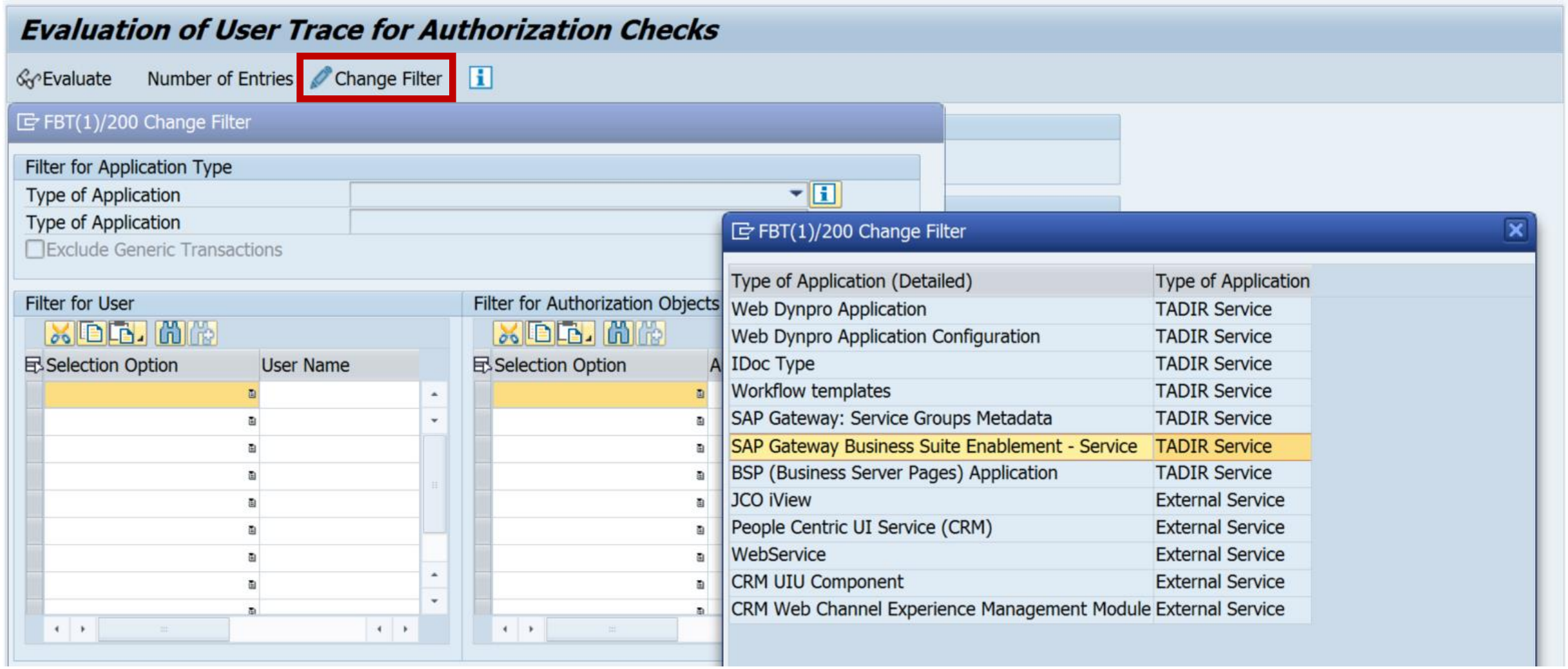
Note 2220030 - STUSERTRACE: User trace for authorization checks



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Note 2220030 - STUSERTRACE: User trace for authorization checks

Result for calling the Fiori Launchpad and the Fiori App System Recommendations

User Trace for Authorization Checks: 34 Hits

Time	Type of Application	Application Name	Result	Resu	Object	Field 1	Value 1	Field 2	Value
12:18:30	SAP Gateway Business Suite Enablement - Service	/UI2/PAGE_BUILDER_PERS 0001	0	Auth	S_SERVICE	SRV_NAME	DE0699A8407F658	SRV_TYPE	HT
	SAP Gateway: Service Groups Metadata	ZPAGE_BUILDER_PERS_0001	0	Auth	S_SERVICE	SRV_NAME	E50E80F6434D75C	SRV_TYPE	HT
12:18:31	SAP Gateway Business Suite Enablement - Service	/UI2/PAGE_BUILDER_PERS 0001	0	Auth	/UI2/CHIP	/UI2/CHIP	X-SAP-UI2-CHIP*	ACTVT	03
	SAP Gateway Business Suite Enablement - Service	/UI2/PAGE_BUILDER_PERS 0001	0	Auth	/UI2/CHIP	/UI2/CHIP	X-SAP-UI2-PAGE*	ACTVT	03
12:18:35	SAP Gateway Business Suite Enablement - Service	/UI2/INTEROP 0001	0	Auth	S_SERVICE	SRV_NAME	A15F5E180FD9799	SRV_TYPE	HT
	SAP Gateway: Service Groups Metadata	ZAGS_FLP_INTEROP_0001	0	Auth	S_SERVICE	SRV_NAME	A3B118EC9607F7F	SRV_TYPE	HT
12:18:45	SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV 0001	0	Auth	AI_LMDB_OB	ACTVT	03	LMDB_DOMA	LDB
	SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV 0001	0	Auth	COM_IL	ACTVT	01	RELTYPE	PRDBP
	SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV 0001	0	Auth	COM_IL	ACTVT	02	RELTYPE	PRDBP
	SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV 0001	0	Auth	COM_IL	ACTVT	03	RELTYPE	PRDBP
	SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV 0001	0	Auth	S_SERVICE	SRV_NAME	8A5C52B04A84DA	SRV_TYPE	HT
	SAP Gateway: Service Groups Metadata	ZAGS_SYSREC_SRV_0001	0	Auth	S_SERVICE	SRV_NAME	92AA3BAD7AC812	SRV_TYPE	HT
12:18:46	SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV 0001	0	Auth	AI_LMDB_OB	ACTVT	03	LMDB_DOMA	LDB
	SAP Gateway Business Suite Enablement - Service	AGS_SYSREC_SRV 0001	0	Auth	AI_LMDB_OB	ACTVT	03	LMDB_DOMA	LDB

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December 2016

Topics December 2016

Transparent Software Vulnerability Disclosure - SAP as a CVE Naming Authority

Patch Day Notes vs. Support Package Implementation Notes (reloaded)

Note 2351486 - SAP HANA cockpit: Information disclosure in offline administration

Authorizations for SAP Solution Manager RFC users
Notes 2257213 for SolMan 7.2, note 1830640 for SolMan 7.1, (and old note 1572183)

How to manage RFC Gateway Access Control lists as of SAP_BASIS 7.40

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SAP to become a CVE Naming Authority for SAP issues
Tentative Proposal

Proposal – For Customer Feedback

Soenke Eggers

Product Security Response Team
December, 2016

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Common Vulnerabilities and Exposures (CVE)

CVE is a dictionary of publicly known information security vulnerabilities and exposures.

CVE’s common identifiers enable data exchange between security products and provide a baseline index point for evaluating coverage of tools and services.

The MITRE Corporation maintains CVE, manages the compatibility program, oversees the CVE Numbering Authorities (CNA), and provides impartial technical guidance to the CVE Editorial Board throughout the process to ensure CVE serves the public interest.

MITRE is a not-for-profit organization that operates research and development centers sponsored by the United States federal government.

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A CVE entry example

Common Vulnerabilities and Exposures

The Standard for Information Security Vulnerability Names

Full-Screen View

CVE-ID	
CVE-2016-4249	at National Vulnerability Database (NVD) • Severity Rating • Fix Information • Vulnerable Software Versions • SCAP Mappings
Description	
Heap-based buffer overflow in Adobe Flash Player before 18.0.0.366 and 19.x through 22.x before 22.0.0.209 on Windows and OS X and before 11.2.202.632 on Linux allows attackers to execute arbitrary code via unspecified vectors.	
References	
Note: References are provided for the convenience of the reader to help distinguish between vulnerabilities. The list is not intended to be complete.	
• CONFIRM:https://helpx.adobe.com/security/products/flash-player/apsb16-25.html	
Date Entry Created	
20160427	Disclaimer: The entry creation date may reflect when the CVE-ID was allocated or reserved, and does not necessarily indicate when this vulnerability was discovered, shared with the affected vendor, publicly disclosed, or updated in CVE.
Phase (Legacy)	
Assigned (20160427)	
Votes (Legacy)	

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Define CNA

CVE Numbering Authorities (CNAs) are major OS vendors, security researchers, and research organizations that assign CVE Identifiers to newly discovered issues without directly involving MITRE in the details of the specific vulnerabilities, and include the CVE Identifiers in the first public disclosure of the vulnerabilities.

Some Software Vendors who are CNAs for their own issues

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Not every software vendor is a CNA…but

Rank	Organisation	Revenue**	FY	Market cap**	Publish to CVE?	Security Notice available to Public?
1	Microsoft	$93.58	2015	$439	Y	Y
2	Oracle	$38.27	2015	$194.7	Y	Y
3	SAP	$23.3	2015	$94.5	N – researcher publishes	N? Login Required?
4	Salesforce.com	$6.61	2015	$52.9	N	N/A
5	Symantec	$6.58	2015	$17.7	Y	Y
6	VMware	$6.57	2015	$20.82	Y*	Y
7	Fiserv	$5.25	2015	$21.53	N	N/A
8	CA Technologies	$4.26	2015	$112.59	Y	Y
9	Intuit	$4.19	2015	$26.0	N – researcher publishes	N – no note or advisory
10	Amadeus IT Group	$4.1	2013	$17.7	N	N

Top 10 public software vendors by revenue (Forbes 2000)

*Not a recognized CNA

** in USD Billion

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SAP mention in CVE

SAP products are mentioned in CVE Data Sources and Coverage:

https://cve.mitre.org/cve/data_sources_product_coverage.html

TOTAL CVE-IDs: 77028

RESULTS

Search Results

There are **326** CVE entries that match your search.

Name	Description
CVE-2016-4018	The Data Provisioning Agent (aka DP Agent) in SAP HANA does not properly restrict access to service functionality, which allows remote attackers to obtain sensitive information, gain privileges, and conduct unspecified other attacks via unspecified vectors, aka SAP Security Note 2262742.
CVE-2016-4017	The Data Provisioning Agent (aka DP Agent) in SAP HANA allows remote attackers to cause a denial of service (process crash) via unspecified vectors, aka SAP Security Note 2262710.
CVE-2016-4016	Cross-site scripting (XSS) vulnerability in SAP Manufacturing Integration and Intelligence (aka MII, formerly xMII) allows remote attackers to inject arbitrary web script or HTML via vectors related to UR Control, aka SAP Security Note 2201295.
CVE-2016-4015	The Enqueue Server in SAP NetWeaver JAVA AS 7.1 through 7.4 allows remote attackers to cause a denial of service (process crash) via a crafted request, aka SAP Security Note 2258784.
CVE-2016-4014	XML external entity (XXE) vulnerability in the UDDI component in SAP NetWeaver JAVA AS 7.4 allows remote attackers to cause a denial of service via a crafted XML request, aka SAP Security Note 2254389.
CVE-2016-3980	The Java Startup Framework (aka jstart) in SAP JAVA AS 7.4 allows remote attackers to cause a denial of service via a crafted HTTP request, aka SAP Security Note 2259547.

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When we do not submit, our researchers do…

Printer-Friendly View

CVE-ID	
CVE-2016-4018	Learn more at National Vulnerability Database (NVD) • Severity Rating • Fix Information • Vulnerable Software Versions • SCAP Mappings

Description

The Data Provisioning Agent (aka DP Agent) in SAP HANA does not properly restrict access to service functionality, which allows remote attackers to obtain sensitive information, gain privileges, and conduct unspecified other attacks via unspecified vectors, aka SAP Security Note 2262742.

References

Note: References are provided for the convenience of the reader to help distinguish between vulnerabilities. The list is not intended to be complete.

- MISC:https://erpscan.com/press-center/blog/dos-vulnerabilities-on-the-rise-sap-security-notes-april-2016/

Date Entry Created	
20160414	Disclaimer: The entry creation date may reflect when the CVE-ID was allocated or reserved, and does not necessarily indicate when this vulnerability was discovered, shared with the affected vendor, publicly disclosed, or updated in CVE.

Researchers control how to describe a SAP vulnerability.

Always point to their blogs for marketing purposes

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Always point to the researcher's blog in CVE…

HOME

SAP Security Notes April 2016 – DoS vulnerabilities on the rise

April 12, 2016/Blog

Tweet

SAP has released the monthly critical patch update for April 2016. This patch update closes 26 vulnerabilities in SAP products including 19 SAP Security Patch Day Notes and 7 Support Package Notes. 8 of all Notes were released after the second Tuesday of the previous month and before the second Tuesday of this month.

10 of all closed SAP Security Notes have a high priority rating. The highest CVSS score of the vulnerabilities is 7.5.

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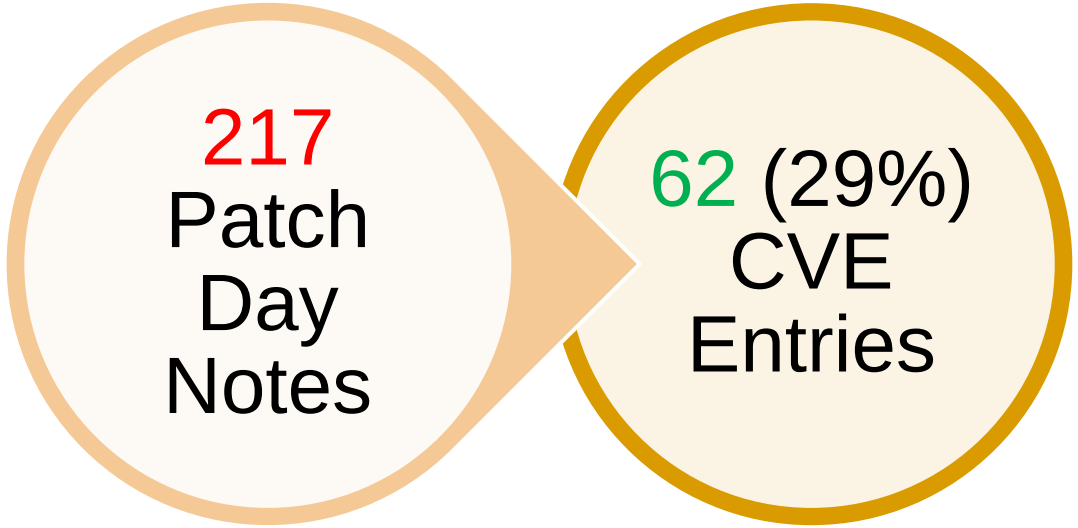
Stacking up the numbers…in 2015

Researchers don’t submit all SAP vulnerabilities to CVE, especially those with little marketing values to them.



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Our customers and researchers *demand* change
- Just some examples

Citi has a requirement for all vendors to follow Responsible Vulnerability disclosure as described within the Citi Information Security Standards (CISS). All vendors must follow these disclosure processes to notify the global public of vulnerability releases as outlined in the links below. Once these procedures are followed, our content provider can then collect this data and provide to us. Privately disclosing vulnerabilities creates exponential amounts of unnecessary work for everyone in Citi because this information is not freely available.

- Citi escalation to SAP in regards to our 'lack of' CVE submission

We are interested in knowing when would SAP releases CVE.

- Northrop Grumman question in an ASUG webcast on CVSS

We are constantly working on preventing and responding to (possible) cyber security incidents for the Dutch government and vital infrastructure…1) Is there any additional information available with more information about products and vulnerabilities? 2) Could you share that information with us?

- Dutch National Cyber Security Centre on sec. note transparency

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Our customers and researchers *demand* change
- Just some examples

I'm not seeing corresponding CVE numbers on SAP for reported vulnerabilities. Where do I find this. For example, for ASE file creation vulnerability I found this CVE in google : https://www.trustwave.com/Resources/SpiderLabs-Blog/SAP-ASE-file-creation-vulnerability-(CVE-2016-6196)/

However, we don't see it in Imperva. We also do not see a CVE mentioned in the notes: https://launchpad.support.sap.com/#/notes/2329738

*- E*TRADE FINANCIAL comment on CVE compatibility*

After the issue will be resolved it is possible to ask MITRE for a CVE-ID? It is very important for me to have it for my resume.

- A researcher's response after SAP confirmation of his reported vulnerability.

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Anticipated benefit of adopting CVE

Benefits to:	Customer	SAP
Transparent communication on security patches		☀ ☀
Standardize vulnerability notification and formatting		☀ ☀
Better integration in to customer's existing risk management tools and processes		☀
Align with industry peers as CVE is the industry standard to publish vulnerabilities		☀
Increase awareness and adoption of SAP published security notes		☀
Reduce or eliminate communication overhead by adopting standard channels		☀ ☀
Ensure SAP's position on vulnerabilities is represented (and not interpreted by Onapsis, ERPScan etc.)		☀
Allow SAP to scale out vulnerability management (e.g. cloud data centers)		☀ ☀

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To summarize…

1. We adopt CVE to be in line with industry standard
2. CVE-ID is an addition to our landscape/tools of vulnerability notification
3. There is a 1:1 relationship between CVE and SAP vulnerabilities disclosed
4. We expect the adoption of CVE will benefit customers, and SAP
5. We expect the adoption of CVE will increase awareness of SAP security patches and customer satisfaction

By moving to CVE:

1. We want to be transparent.
2. We want to take control of our vulnerability disclosure.
3. We want our customers to apply patches.

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This is a tentative proposal.
We welcome your feedback.

Contact information:

Vic Chung
vic.chung@sap.com

SAP Product Security Response

Transparent Software Vulnerability Disclosure
SAP as a CVE Naming Authority

Common Vulnerabilities and Exposures

The Standard for Information Security Vulnerability Names

Current status:

SAP does not produce CVE records but others create advisories about SAP

Home | CVE IDs | About CVE | Com

HOME > CVE > SEARCH RESULTS

Section Menu

CVE IDs
- Coverage Goals
- Reference Key/Maps
- Updates & Feeds

CVE List (all existing CVE IDs)
- Downloads
- Search CVE List
- Search Tips
- View Entire CVE List (html)

NVD Advanced CVE Search
- CVE ID Scoring Calculator

Request a CVE ID
- CVE Numbering Authorities (CNAs)

Search Results for "SAP"

There are **350** CVE entries that match your search.

Name	Description
CVE-2016-7437	SAP Netweaver 7.40 improperly logs (1) DUI and (2) DUJ events in the SAP Security Audit Log as non-critical, which might allow local users to hide rejected attempts to execute RFC function callbacks by leveraging filtering of non-critical events in audit analysis reports, aka SAP Security Note 2252312.
CVE-2016-7435	The (1) SCTC_REFRESH_EXPORT_TAB_COMP, (2) SCTC_REFRESH_CHECK_ENV, and (3) SCTC_TMS_MAINTAIN_ALOG functions in the SCTC subpackage in SAP Netweaver 7.40 SP 12 allow remote authenticated users with certain permissions to execute arbitrary commands via vectors involving a CALL 'SYSTEM' statement, aka SAP Security Note 2260344.
CVE-2016-6150	The multi-tenant database container feature in SAP HANA does not properly encrypt communications, which allows remote attackers to bypass intended access restrictions and possibly have unspecified other impact via unknown vectors, aka SAP Security Note 2233550.
CVE-2016-6149	SAP HANA SPS09 1.00.091.00.14186593 allows local users to obtain sensitive information by leveraging the EXPORT statement to export files, aka SAP Security Note 2252941.
CVE-2016-6148	SAP HANA DB 1.00.73.00.389160 allows remote attackers to cause a denial of service (process termination) or execute arbitrary code via vectors related to an IMPORT statement, aka SAP Security Note 2233136.

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Transparent Software Vulnerability Disclosure
SAP as a CVE Naming Authority

Proposal asking for Customer Feedback

SAP Product Security Response
Email: vic.chung@sap.com

Adopting Public Disclosure via CVE

- Transparent communication on security patches
- Standardize vulnerability notification and formatting
- Better integration in to customer's existing risk management tools and processes
- Reduce or eliminate communication overhead by adopting standard channels
- Allow SAP to scale out vulnerability management (e.g. cloud data centers)

By adopting CVE:

- SAP will comply with an industry standard and customer expectation on software vulnerability disclosure
- SAP will not replace any existing mechanism, rather encourage the adoption of critical security notes
- We increase awareness on SAP security patches, especially to vulnerabilities known to external sources

Common Vulnerabilities and Exposures (CVE) is an industry standard in sharing information on software vulnerabilities

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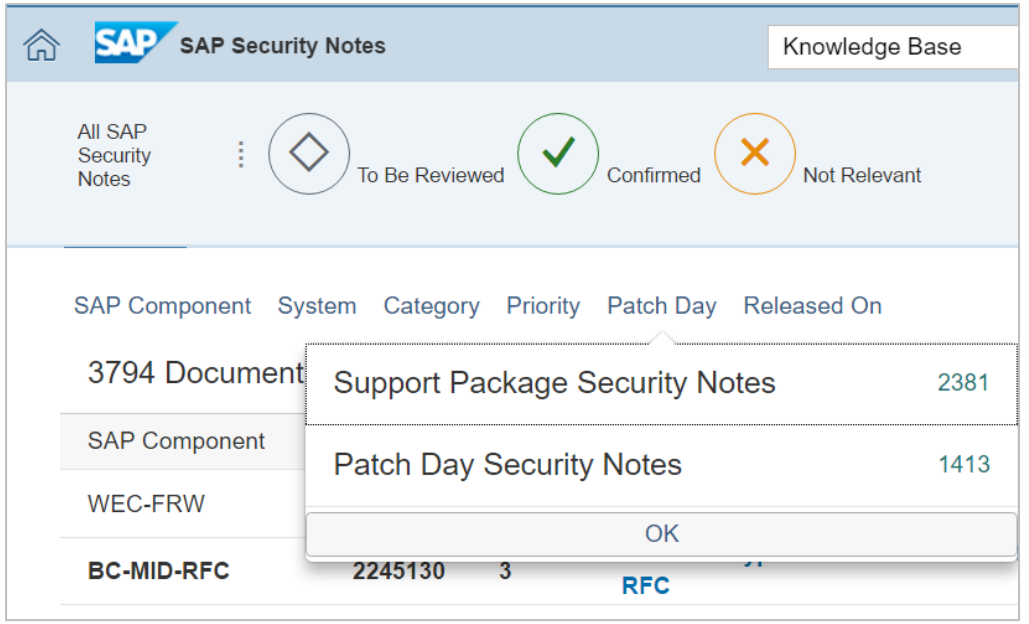
Patch Day Notes vs. Support Package Implementation Notes (reloaded)

Patch Day Notes

- SAP Security Notes mostly published on Security Patch Day
- Contain very important security corrections
  or
  address security issues reported from external sources
- Have CVSS scoring in most cases



Re-classification in March 2016 covering "minor, medium or high"

SPIN

- Typically address security issues of minor impact which are found SAP internally
- Should not be published in the first place but just be contained in Support Packages
- Have to be published as notes and often outside the Patch Day schedule if some customer production issue depended on it to be implemented first
- SPIN might be published on Patch Day dates as well!

https://blogs.sap.com/2016/10/12/sap-security-patch-day-october-2016/

* Patch Day Security Notes are all notes that fix vulnerabilities reported by external sources and internal findings with priority "Very High".
* Support Package Security Notes fix vulnerabilities found internally with priority "Low", "Medium" and "High".

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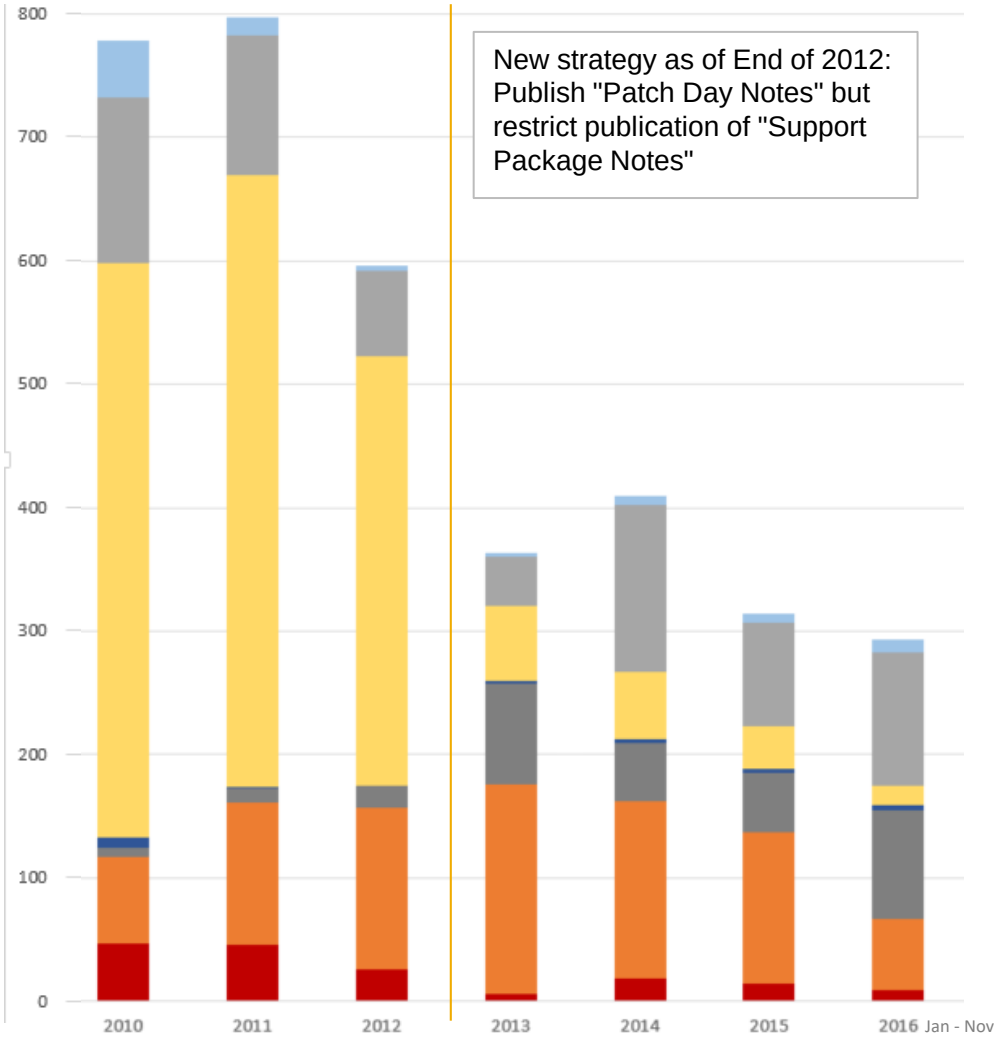
Patch Day Notes vs. Support Package Implementation Notes (reloaded)



Are Support Package Implementation Notes really different … as soon as they are published?

➔

Use Priority, CVSS, and risk assessment to judge about notes but don’t use the type as a major differentiator.

- SPIN Priority low
- SPIN Priority medium
- SPIN Priority high
- PatchDay priority low
- PatchDay priority medium
- PatchDay priority high
- PatchDay priority very high

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Note 2351486 - SAP HANA cockpit: Information disclosure in offline administration

The "SAP HANA cockpit for offline administration" is a tool to solve emergency issues only which only should be used if HANA is offline. In such a case it's acceptable to login using the very powerful <sid>adm user.

This user has access to all server-local resources of the SAP HANA system. Only the emergency administrators of the database should know the credentials of this user. A user who knows the password of the <sid>adm user can directly log into the server at operating system level.

During normal operation administrators can use the HANA Studio using their personal users instead to view trace files of the database.

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Authorizations for SAP Solution Manager RFC users

The template roles `SAP_SOLMAN_READ` and `SAP_SOLMAN_TMW` for the managed systems and the role `SAP_SOLMAN_BACK` for the SAP Solution Manager are updated regularly. In addition to extensions which are required to run new scenarios, we reduce the authorizations, too, omiting critical authorizations which are not needed (anymore).

Review the notes regularly and use transaction `SOLMAN_SETUP` to update your Z-roles:

- **Note 2257213 - Authorizations for RFC users as of SAP Solution Manager 7.2 SP02**
- **Note 1830640 - Authorizations for SAP Solution Manager RFC users 7.1 SP09**
- **Ignore old note 1572183**

Example: you might want to update role `Z_SOLMAN_BACK` in the SAP Solution Manager ensuring that there are no active authorizations for `S_BTCH_ADM`, `S_RZL_ADM`, `S_TABU_CLI`, `S_TABU_DIS`, or `S_USER_GRP` for activity `05`.

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How to manage RFC Gateway Access Control lists as of SAP_BASIS 7.40

Note 1989587 - GW: Interface for maintenance of gateway security files
Note 2325191 - GW: Maintenance of gateway ACL files

Use transaction `SMGW` → Goto → External Security → Maintenance of ACL Files

or (if this navigation path is not available)

use transaction `SA38` to submit report `RSMONGWY_ACL_FILES_ALV` directly.

The new report is available as of new Support Packages
SAP_BASIS 7.40 SP 16 and SAP_BASIS 7.50 SP 05

Comments:

- The SP assignment in note 1989587 seems to be wrong as the new report is available as of SP 16.
- The profile parameter `gw/display_acl_new` (with values 0 / 1) and the Kernel patch mentioned in note 1989587 do not seem to be important.

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How to manage RFC Gateway Access Control lists as of SAP_BASIS 7.40

Project plan:

1. Preparation in transaction `SMGW` → Goto → Expert functions → Logging (=report `RGWMON_LOGGING`)
   - Activate `logging gw/logging = ACTION=SZ` (example)
   - Activate simulation mode `gw/sim_mode = 1`
   - Then remove any * entries from the ACL files
   - Restart the system once during logging phase to trigger re-registration of external server programs

2. Maintain ACL entries regularly
   - Use relaxed rules for IP-ranges instead of host names and generic rules for users
   - You will observe that the count of new log entries showing active simulation mode decrease down to zero

3. Switch to production mode
   - Optional: Reduce `logging gw/logging = ACTION=SsZ` (example)
   - Deactivate simulation mode `gw/sim_mode = 0`
   - Validate simulation mode parameter using Configuration Validation

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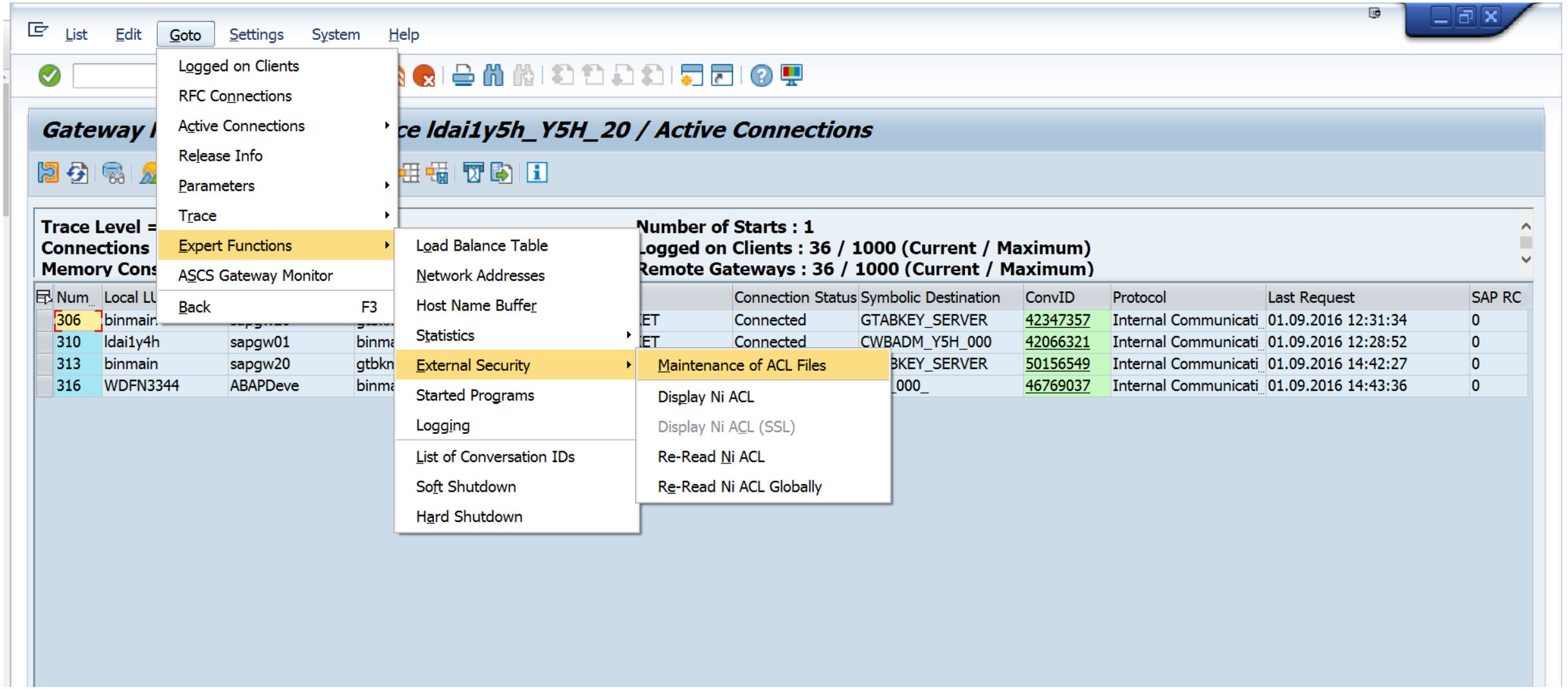
How to manage RFC Gateway Access Control lists as of SAP_BASIS 7.40



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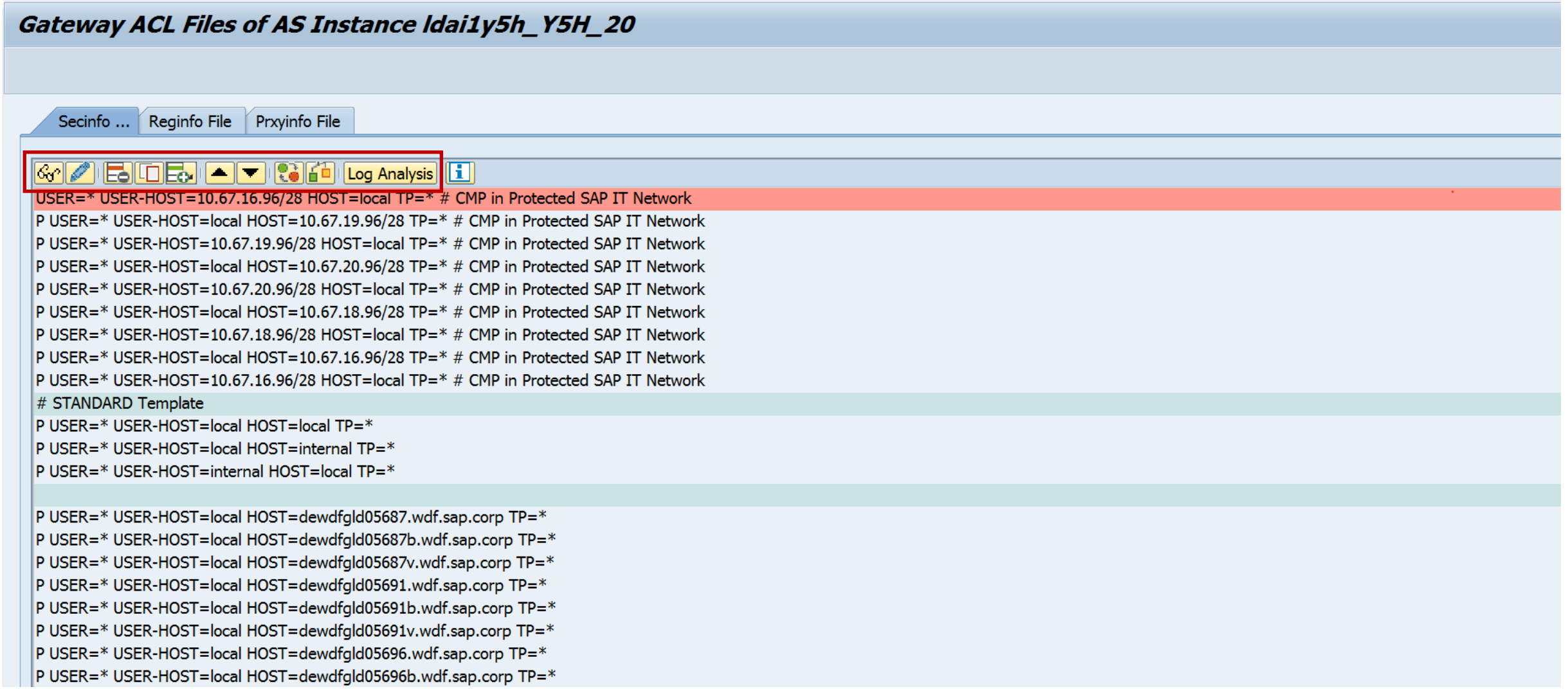
How to manage RFC Gateway Access Control lists as of SAP_BASIS 7.40



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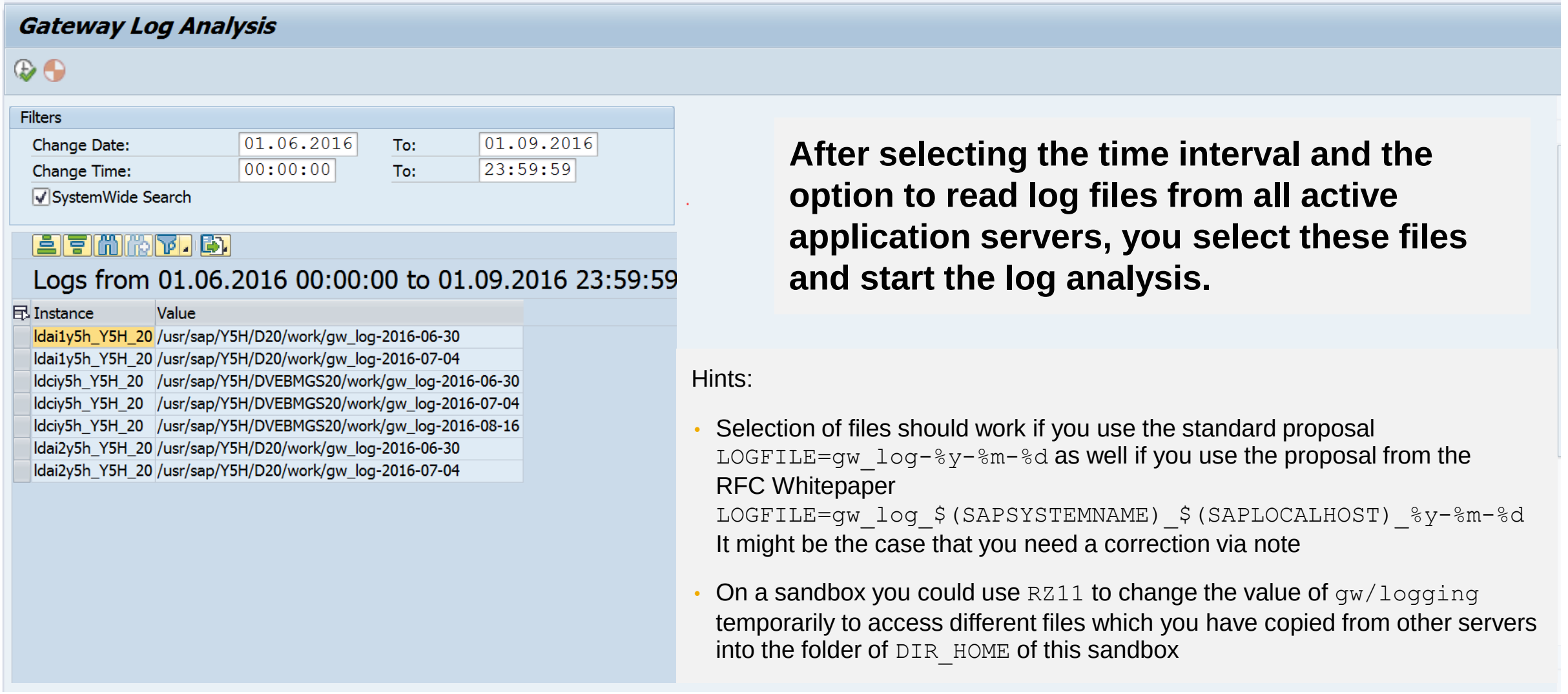
How to manage RFC Gateway Access Control lists as of SAP_BASIS 7.40



After selecting the time interval and the option to read log files from all active application servers, you select these files and start the log analysis.

Hints:

- Selection of files should work if you use the standard proposal `LOGFILE=gw_log-%y-%m-%d` as well if you use the proposal from the RFC Whitepaper `LOGFILE=gw_log_$(SAPSYSTEMNAME)_$(SAPLOCALHOST)_%y-%m-%d` It might be the case that you need a correction via note
- On a sandbox you could use `RZ11` to change the value of `gw/logging` temporarily to access different files which you have copied from other servers into the folder of `DIR_HOME` of this sandbox

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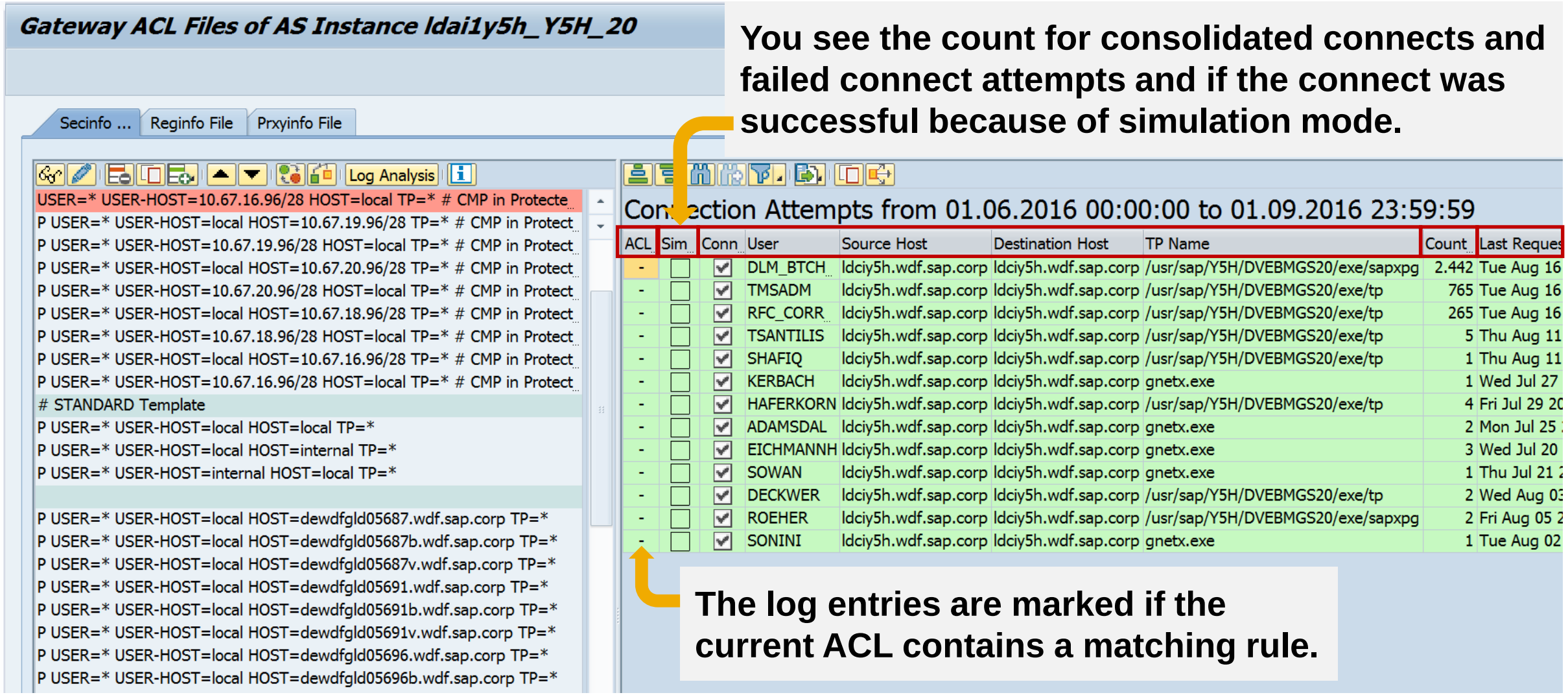
How to manage RFC Gateway Access Control lists as of SAP_BASIS 7.40



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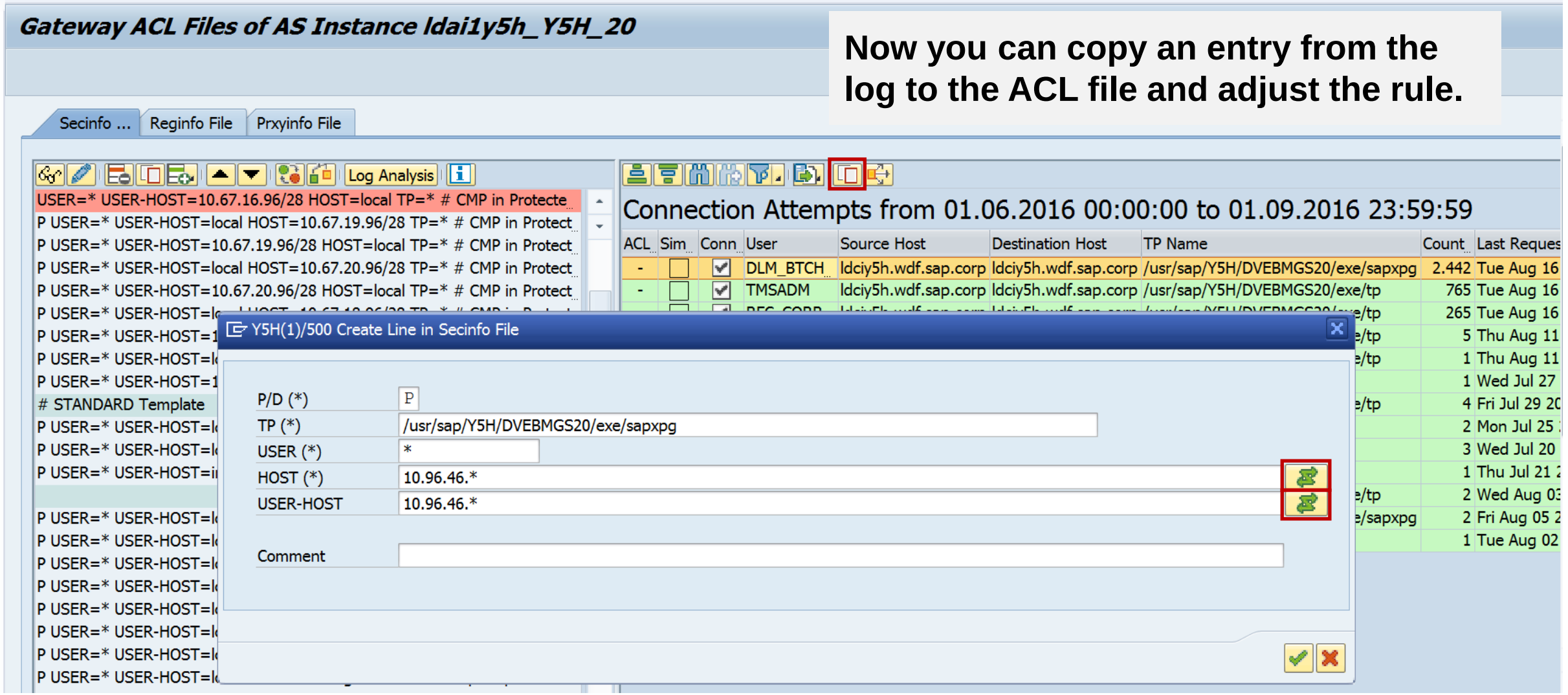
How to manage RFC Gateway Access Control lists as of SAP_BASIS 7.40



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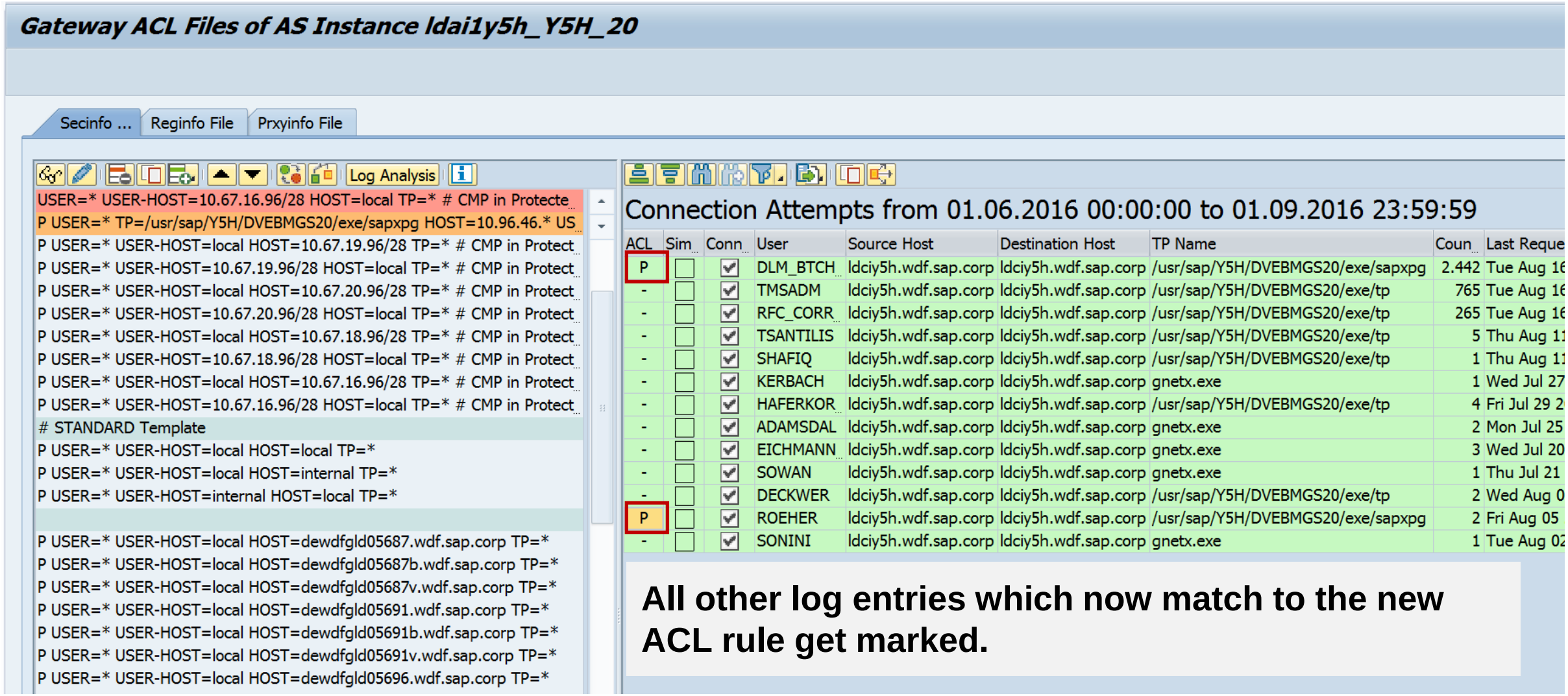
How to manage RFC Gateway Access Control lists as of SAP_BASIS 7.40



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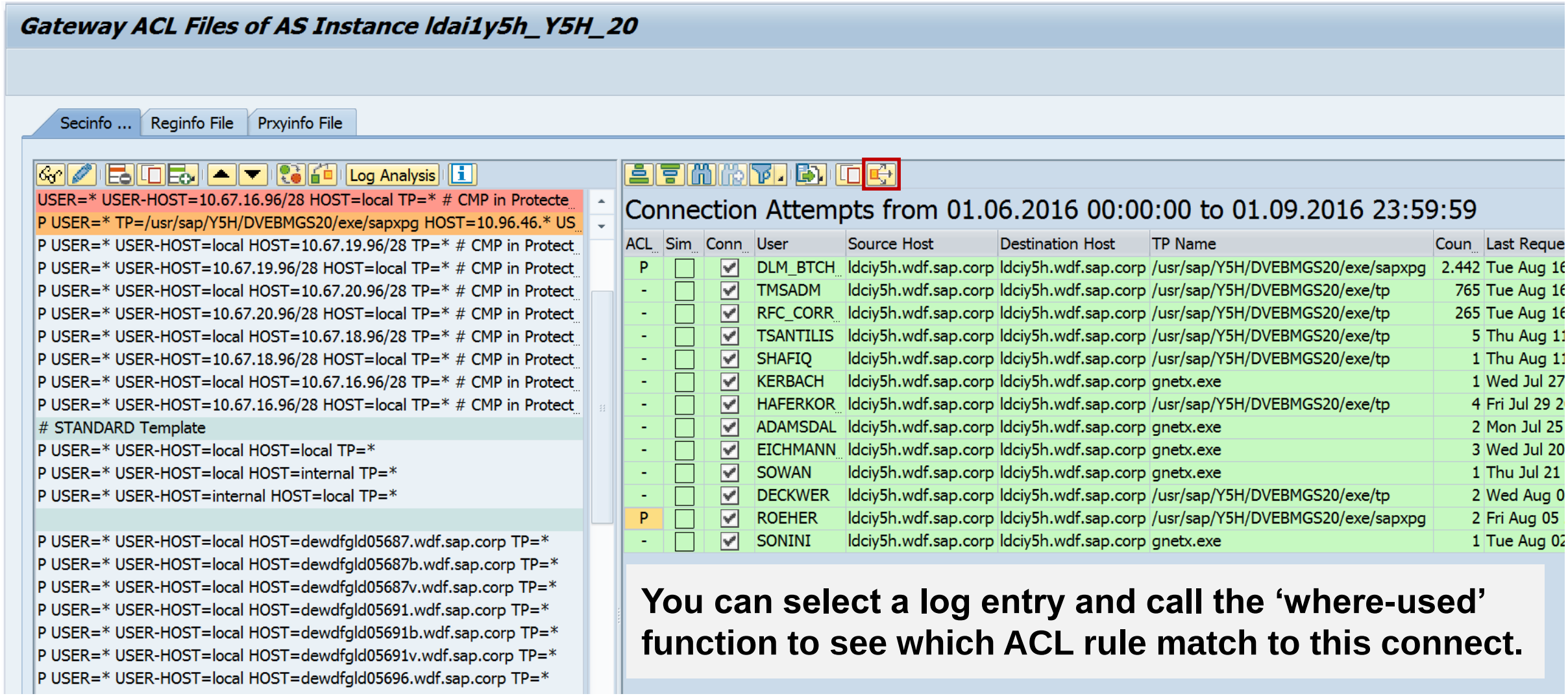
How to manage RFC Gateway Access Control lists as of SAP_BASIS 7.40



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How to manage RFC Gateway Access Control lists in older ABAP releases or in Java

The same profile parameters, ACL files, and log files are used in ABAP releases below SAP Basis 7.40 or in Java, however, you have to analyze the logs manually to find necessary ACL entries.

Keep in mind that you only need ACL entries in `secinfo` or `reginfo` if the caller is external relative to the current system. All servers which belong to the current system are covered by the `internal` rule.

Hints:

- Selection of files should work if you use the standard proposal `LOGFILE=gw_log-%y-%m-%d` as well if you use the proposal from the RFC Whitepaper
  `LOGFILE=gw_log_$(SAPSYSTEMNAME)_$(SAPLOCALHOST)_%y-%m-%d`
  It might be the case that you need a correction via note
- On a sandbox you could use `RZ11` to change the value of `gw/logging` temporarily to access different files which you have copied from other servers into the folder of `DIR_HOME` of this sandbox

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How to manage RFC Gateway Access Control lists

Dynamic Log Settings: SMGW → Goto → Expert functions → Logging

Profile parameter gw/logging

ACTION=…

Log Events

T	Network	P	Dynamic Parameter Changes
X	Start/Stop/Signals	O	Open RFC Connection
S	Security	C	RFC Actions (Open/Close/Send/Receive)
Ss	(denied accesses only)	E	External Programs
Z	(denied accesses without rules)	R	Registered Programs
M	Monitoring Commands	V	Create/Delete Conversation IDs

Toggle Criteria

SWITCHTF=[hour|day|week|year] — Time-Driven Toggle

MAXSIZEKB=<value> — Maximum Size of File (KByte)

MAXSIZEKB=on — Describe Old File Again (No new file created)

Simulation Mode

All programs are permitted provided no explicit rule is defined

On / Off

Profile parameter gw/sim_mode

Profile parameter gw/logging_name = file name pattern with special characters for generating file name:
%y=year, %m=month, %d=day, %h=hour, %t=minute, %s=second

Note 910919

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How to manage RFC Gateway Access Control lists

Related tools:

- Report `RSGWREGP` lists currently gateway-registered external server programs
- Report `RSGWRLST` lists all RFC Gateways addressed by this system
- Report `RSMONGWY_REGINFO` creates ACL File for registered servers
- Report `RSMONGWY_SECINFO` creates ACL File for started servers

Configuration Validation

- Configuration Store `ABAP_INSTANCE_PAHI` to validate profile parameters
- Configuration Store `GW_REGINFO`
- Configuration Store `GW_SECINFO`

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November 2016

Topics November 2016

News about the Support Launchpad: How to define the filter for Security Notes

SAP Solution Manager 7.2 - What's new in Configuration Validation

Note 2288631 - Fixes in CommonCryptoLib 8.5.4

Note 2356480 - GW: Several Fixes in RFC Gateway

Note 2367193 - Missing Authorization check in Cash Flow Statement report

Note 2197830 - Missing authorization check in Account Management

Note 2368873 - Missing Authorization check in Banking Services / Standing Order

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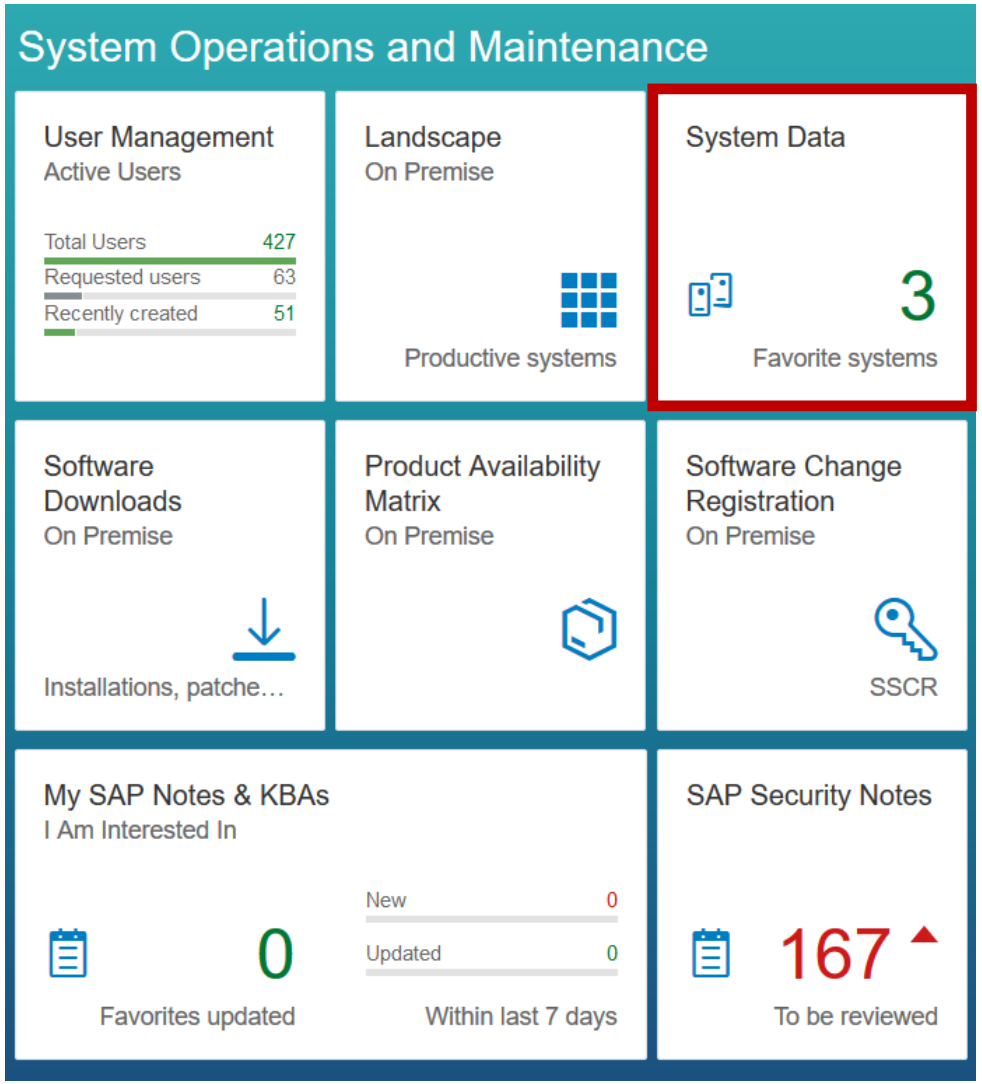
News about the Support Launchpad: How to define the filter for Security Notes



Choose your Favorites at "System Data"

Prerequisites:

- **Connect Systems to the SAP Support Portal**
- **Ensure to have enabled "Automated Update" of data (for example through an SAP EarlyWatch Alert service).**
- **Ensure to see up-to-date information about**
  - Product Versions & Usage Types
  - Kernel
  - Software Component Version and Support Packages

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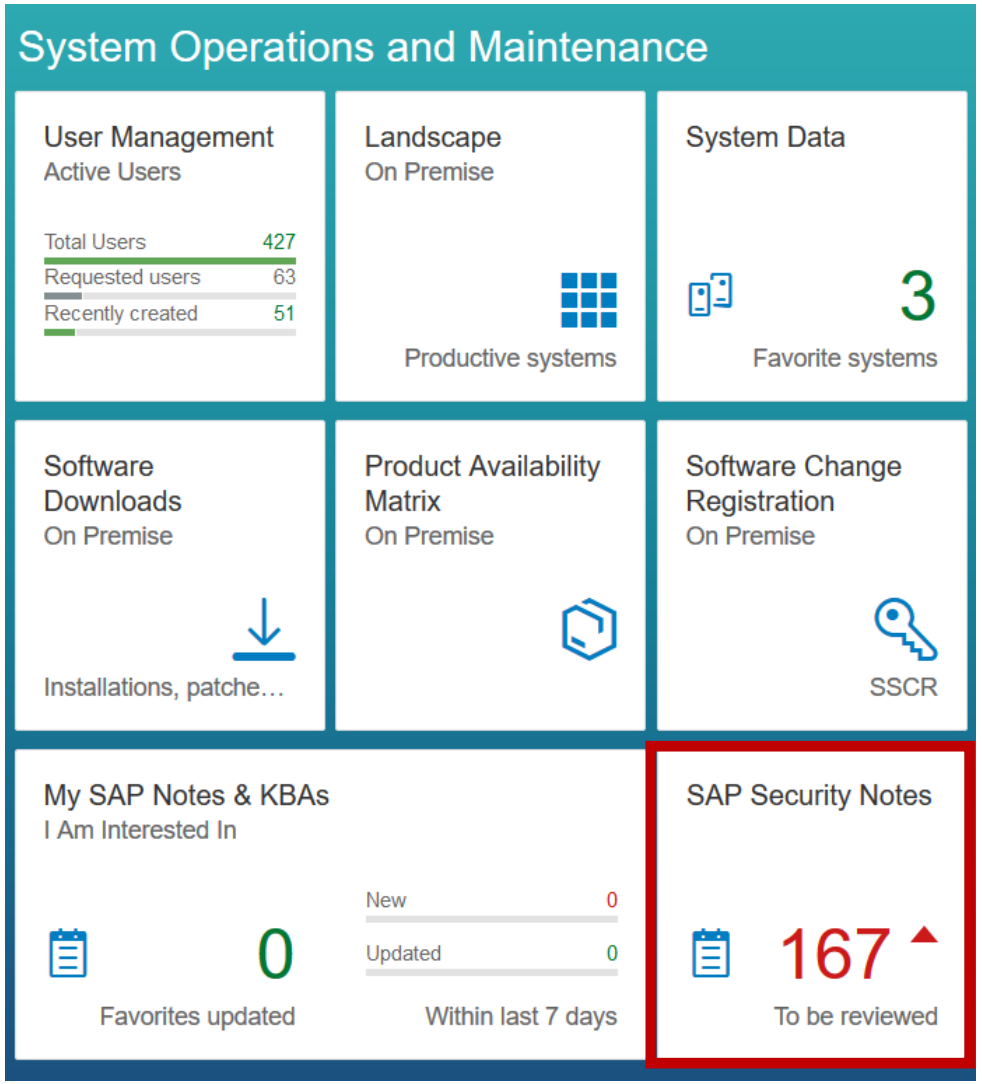
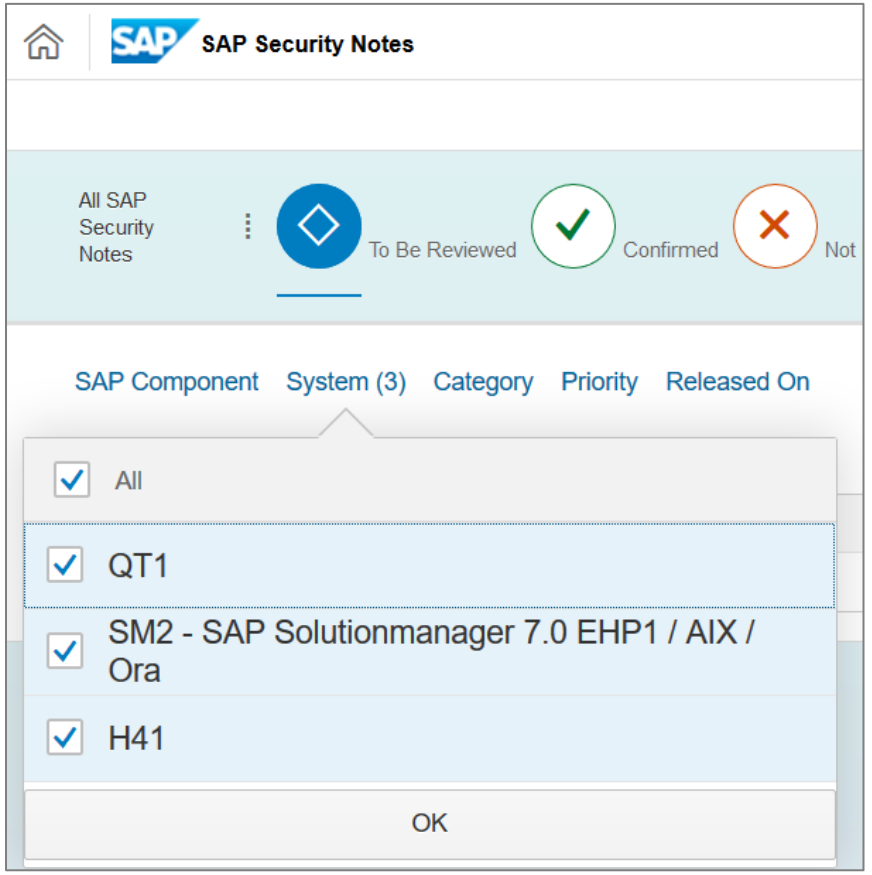
News about the Support Launchpad: How to define the filter for Security Notes



Now you can choose Systems from the Favorites at “SAP Security Notes”:



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SAP Solution Manager 7.2 SP 3
What's new in Configuration Validation

In a nutshell: We basically kept Configuration Validation as in SAP Solution Manager 7.1.

- New Configuration Stores in CCDB Content / Monitoring and Alerting
  - LOCKED_TRANSACTIONS
  - VSCAN_GROUP, VSCAN_SERVER
  - GLOBAL_CHANGE_LOG, COMPONENTS_CHANGE_LOG, NAMESPACE_CHANGE_LOG, AUTH_PROFILE_USER_CHANGE_DOC
  - SYSTEM_TIMEZONE
  - SAPUI5_LIBS, SAPUI5_VERSION
  - Java: critical group and role assignments, critical user names, critical actions in roles
- Configuration Validation UI
  - BW Reporting Templates allow strings up to 250 chars
  - Reporting Directory including Bookmarks
- Comparison Lists
  - Implemented a Badi to build dynamic comparison lists based on customer attributes. See note 2365039
- Fiori Launchpad
  - Using SAP Solution Manager 7.2 Launchpad navigate to group *Root Cause Analysis* or to group *SAP Solution Manager Administration*

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Note 2288631 - Fixes in CommonCryptoLib 8.5.4

CommonCryptoLib default configuration does no longer support 3DES because 3DES was downgraded to configuration string "`MEDIUM`".

When using a customized cipher suite configuration using profile parameters `ssl/ciphersuites` and `ssl/client_ciphersuites` you should prevent using configuration strings less than `HIGH` and you should not include `e3DES`.

For any version of CommonCryptoLib you can block 3DES if you append `!e3DES` to your current cipher suite string, e.g. `HIGH:!e3DES`

Check your customized string with
`sapgenpse tlsinfo <cipher_suite_configuration_string>`

So far there does not exist a log option to show which cipher suites are actually used. This is going to become changed.

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Note 2356480 - GW: Several Fixes in RFC Gateway

The Kernel default is still `gw/reg_no_conn_info` = 1

→ You should set your own value in all instance profiles.

Depending on the release and patch level of the Kernel, some of the flags are not used (anymore). It does not matter if you set or not set these flags.

You can activate even higher flags to activate every future option. You would get a trace message telling about it.

→ You can always use the value 255 to activate all flags, i.e. for newly installed systems.

Other notes:

Note 1444282 - gw/reg_no_conn_info settings
Note 2123405 - GW: gw/reg_no_conn_info in 74X kernel releases
Note 2269642 - GW: Validity of parameter gw/reg_no_conn_info as of kernel release 74X

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Note 2356480 - GW: Several Fixes in RFC Gateway

Overview (based on my own research – which is maybe not exact):

Value	Note	Description	721	740	741
+1	1298433	Bypassing security in reginfo & secinfo			
+2	1434117	Bypassing sec_info without reg_info USER-HOST mandatory if flag +1 is set			
+4	1465129	CANCEL of reg. by any program	not used	not used	not used
+8	1473017	Uppercase/lowercase in the files reg_info and sec_info		not used	not used
+16	1480644 2123409	"gw/acl_mode" and "gw/reg_no_conn_info" GW: reg_no_conn_info 16 for dynamic change			not used
+32	1633982	ACCESS Option in reginfo file		not used	not used
+64	1697971	GW: Enhancement when starting external programs			
+128	1848930	GW: Strong gw/proxy_check			

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Note 2367193 - Missing Authorization check in Cash Flow Statement report

Good news:

- **“Solution: […] No new authorization checks added, no need to update roles.”**

  The authorization check for `F_BKPF_BUK` is moved from `FORM BUILD_DOCUMENT_LIST` to the beginning of `START_OF_SELECTION`.

But:

- **29 other notes are prerequisites. 6 of them are newer than 1 year.**

  → Business might be affected. Testing is recommended.

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Note 2197830 - Missing authorization check in Account Management

Bad news:

- **Several prerequisites**
- **Manual modification of DDIC structure**
- **Manual creation of authorization object `F_RFC` in old BANK-TRBK release 40**
  In this case you have to update roles if you are using this scenario. It does not matter if you install the note or if you upgrade the support package.
  (That's not a *"Manual Pre-Implement."* action.)

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Note 2368873 - Missing Authorization check in Banking Services / Standing Order

This is an application specific correction for application component FS-AM-OM-SO.

Transaction BCA_SO_CHANGE (Standing Order Change), and similar functions now run an unconditional authorization check for authorization object F_SOR_TRT which checks for the org. unit of the employee i.e. for users with active flag "employee authority check on account level".

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October 2016

Topics October 2016

News about the Support Launchpad and System Recommendations:
Released On = Latest change date

Note 2141744 - SysRec: manual status is lost and replaced with status 'new'

News about the Security Community

Note 2078596 - Further improvements for RFC security (reloaded)
Switchable authorization checks (SACF)
plus 24 + 7 more notes

Note 2029397 - Missing authorization checks for RFC in E-commerce ERP applications

Note 1694657 - GRC SPM RFC Destination Call and FFID Passwords

Note 1498973 - Renewing trust relationships to a system

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News about the Support Launchpad and System Recommendations: Released On = Latest change date

„SAP has changed its way to show release dates for Security Notes in the SAP Support Launchpad Security Notes Search, compared to the old Support Portal Security Notes Search. The Notes are now shown with the date of the last update SAP has released."

The tool System Recommendations still show the first released as a security note dates known from the Service Marketplace, but will change its result as soon as caches are resetted and SysRec refreshes the calculation.

If a customer wants to base any information or reporting on the very date on which SAP has first published a vulnerability, he may do so with own custom tools. He may also look into each Note individually for the first released version, but this information is not reliable either. Customers should not work with any "first released" date of Security Notes at all. They should adapt their processes to consume the "last updated" date only.

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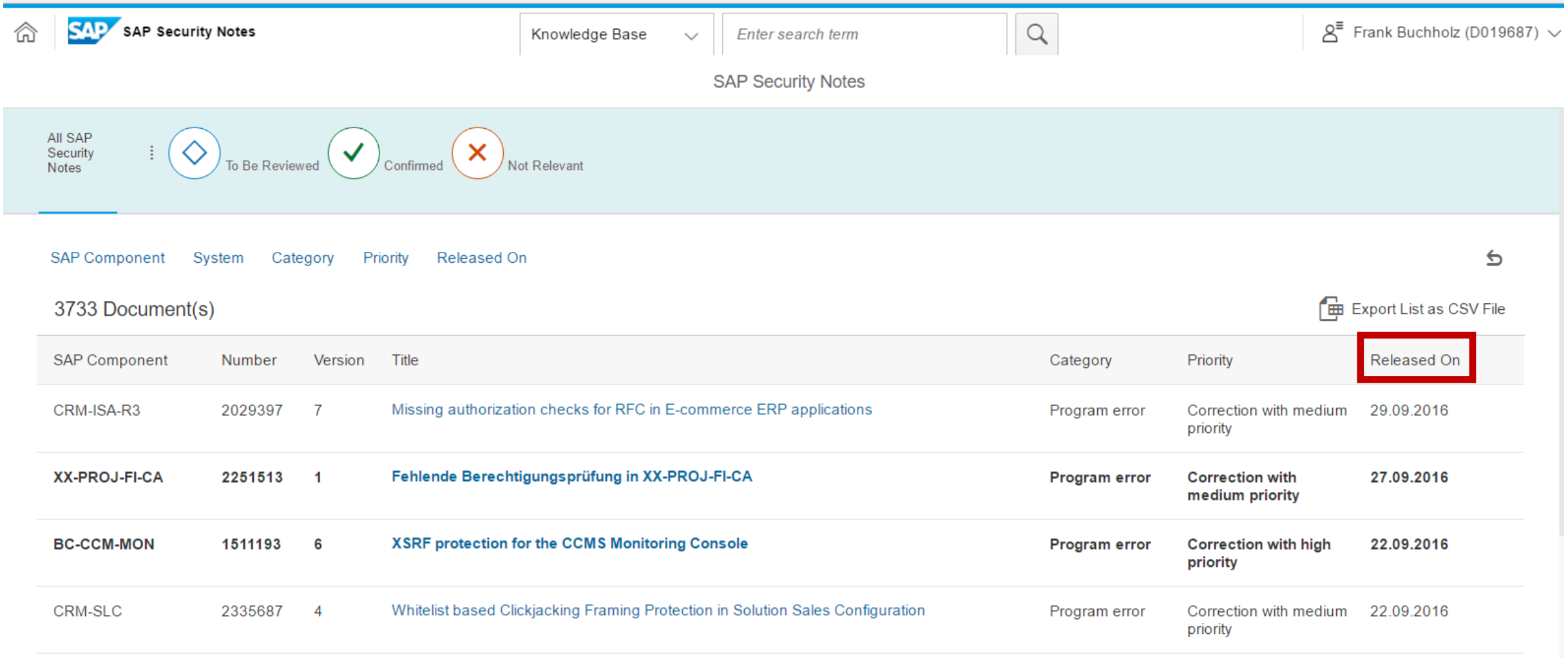
News about the Support Launchpad
Released On = Latest change date



SAP Component	Number	Version	Title	Category	Priority	Released On
CRM-ISA-R3	2029397	7	Missing authorization checks for RFC in E-commerce ERP applications	Program error	Correction with medium priority	29.09.2016
XX-PROJ-FI-CA	**2251513**	**1**	**Fehlende Berechtigungsprüfung in XX-PROJ-FI-CA**	**Program error**	**Correction with medium priority**	**27.09.2016**
BC-CCM-MON	**1511193**	**6**	**XSRF protection for the CCMS Monitoring Console**	**Program error**	**Correction with high priority**	**22.09.2016**
CRM-SLC	2335687	4	Whitelist based Clickjacking Framing Protection in Solution Sales Configuration	Program error	Correction with medium priority	22.09.2016

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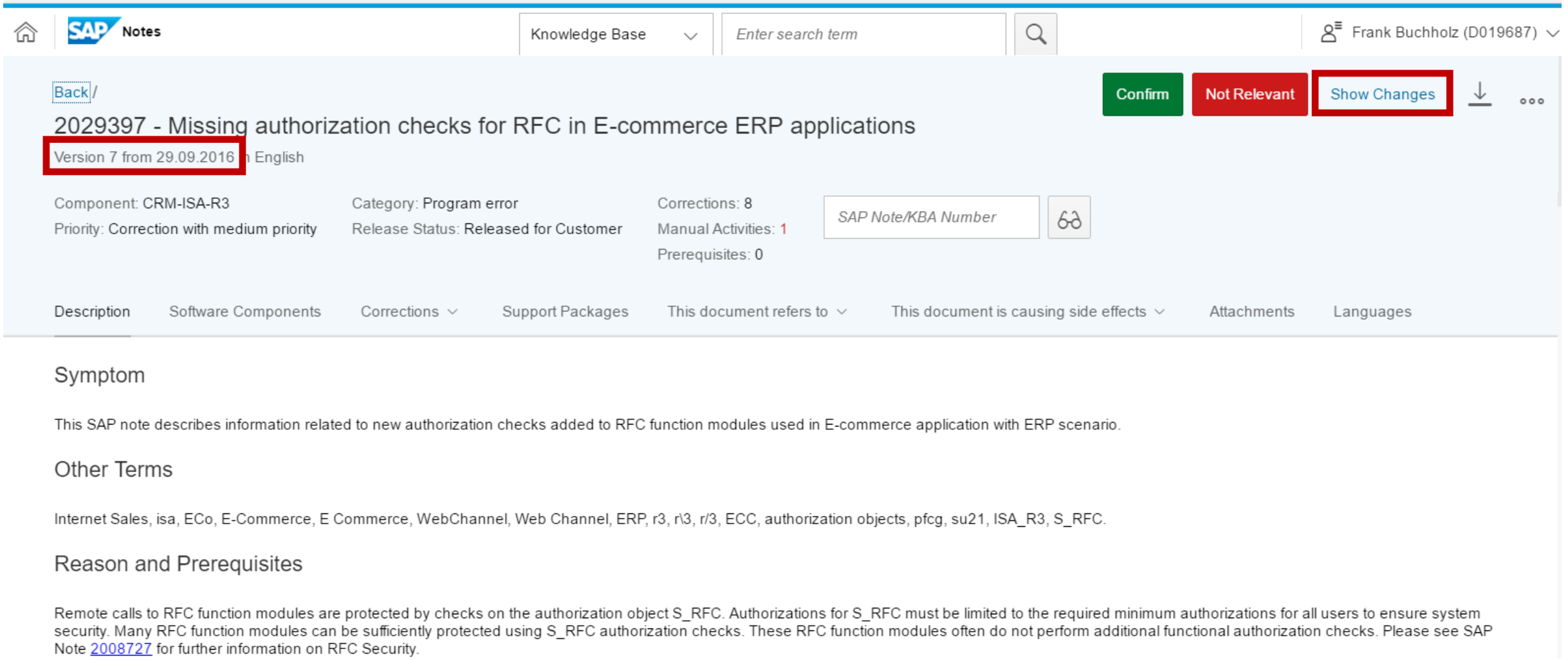
News about the Support Launchpad
Released On = Latest change date



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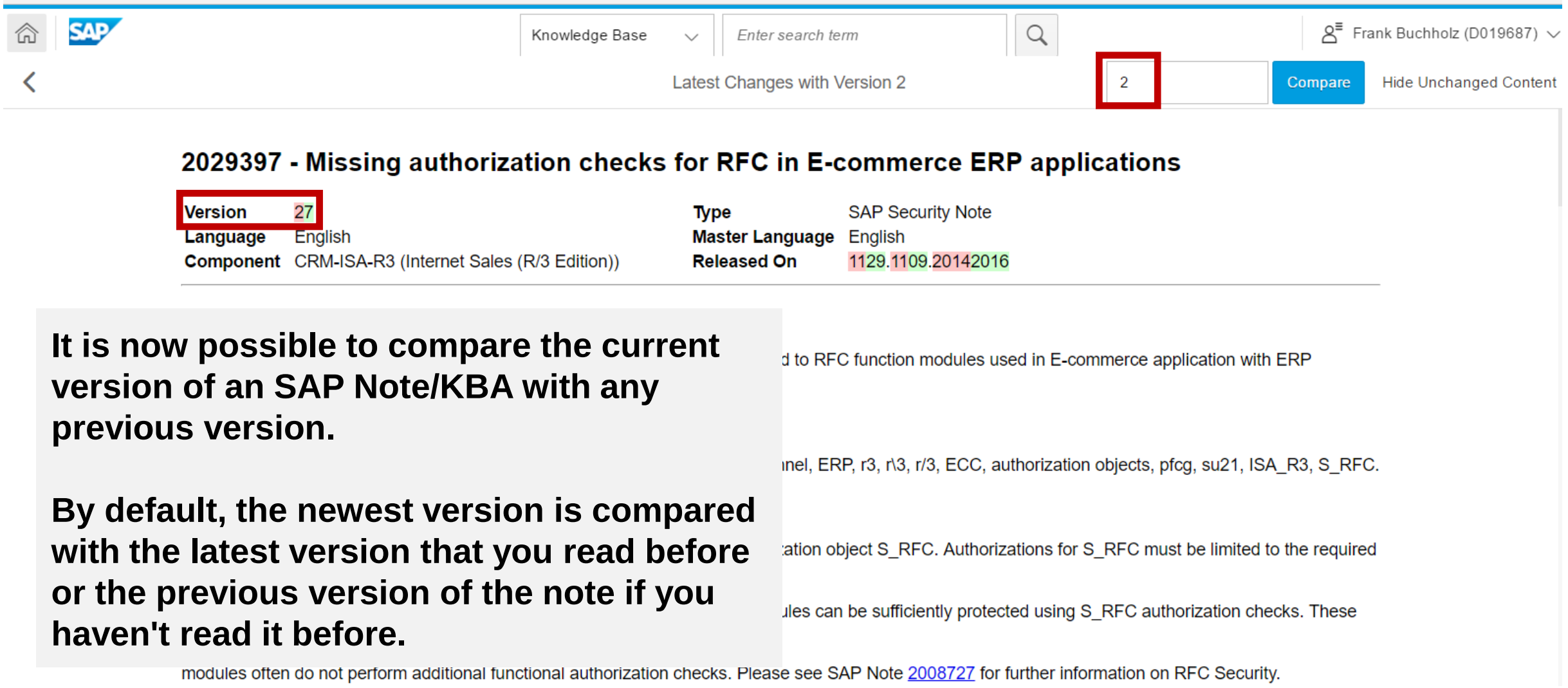
News about the Support Launchpad
Compare versions



It is now possible to compare the current version of an SAP Note/KBA with any previous version.

By default, the newest version is compared with the latest version that you read before or the previous version of the note if you haven't read it before.

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News about System Recommendations in SolMan 7.1

About “status management” with System Recommendations in SolMan 7.1

Note 2141744 - SysRec: manual status is lost and replaced with status 'new'
New version 4 from 28.07.2016

Limitation: This correction cannot give you status values back which you already have lost.

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News about the Security Community
http://go.sap.com/community/topic/security.html

ANNOUNCEMENT:The SCN space retired on October 10.

On October 10, a new community platform has replaced SCN. Spaces will not be part of this new community experience. Instead, the community platform will categorize and consolidate content using tags. In some cases, these tags will be associated with community topic pages dedicated to a specific subject. Due to its popularity, the Security space has a dedicated community topic page, Security Community, that will include highlights, related resources, and the latest blogs and questions about security.

In addition, you'll be able to follow the associated tag “Security”. This will allow you to get notifications whenever someone publishes content with this tag. You can also search for other tags and related content on the Browse Community page:

SAP Identity Management

SAP Single Sign-On

Security

SAP Solution Manager

SAP TechEd

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News about the Security Community
My Blogs about Security

Security Patch Process FAQ
https://blogs.sap.com/2012/03/27/security-patch-process-faq/

How to remove unused clients including client 001 and 066
https://blogs.sap.com/2013/06/06/how-to-remove-unused-clients-including-client-001-and-066/

Life (profile SAP_NEW), the Universe (role SAP_NEW) and Everything (SAP_ALL)
https://blogs.sap.com/2014/02/17/life-profile-sapnew-the-universe-role-sapnew-and-everything-sapall/

Analysis and Recommended Settings of the Security Audit Log (SM19 / SM20)
https://blogs.sap.com/2014/12/11/analysis-and-recommended-settings-of-the-security-audit-log-sm19-sm20/

SAP CoE Security Services – Tools
https://wiki.scn.sap.com/wiki/display/Snippets/SAP+AGS+Security+Services+-+Tools

How to get RFC call traces to build authorizations for S_RFC for free!
https://blogs.sap.com/2010/12/05/how-to-get-rfc-call-traces-to-build-authorizations-for-srfc-for-free/

Export/Import Critical Authorizations for RSUSR008_009_NEW
https://blogs.sap.com/2012/08/14/exportimport-critical-authorizations-for-rsusr008009new/

Authorizations for user DDIC?
http://archive.sap.com/discussions/thread/3171373

SAP HANA Audit Trail - Best Practice
http://archive.sap.com/documents/docs/DOC-51098

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News about the Security Community
Other Blogs about Security

Secure Your System Communications with Unified Connectivity
http://scn.sap.com/docs/DOC-53844

Securing Remote Function Calls (RFC) at https://support.sap.com/securitywp
https://support.sap.com/dam/library/SAP%20Support%20Portal/kb-incidents/notes-knowledge-base-notification/security-notes/white-papers/securing_remote-function-calls.pdf

This is still a hot topic but not new, see
RFC Security v1.1 from 2004
http://go.sap.com/docs/download/2016/08/7e5ba4c9-817c-0010-82c7-eda71af511fa.pdf

Why you should really get rid of old password hashes *NOW*
https://blogs.sap.com/2014/05/08/why-you-should-really-get-rid-of-old-password-hashes-now/

Configuration Validation
http://wiki.sdn.sap.com/wiki/display/TechOps/ConfVal_Home

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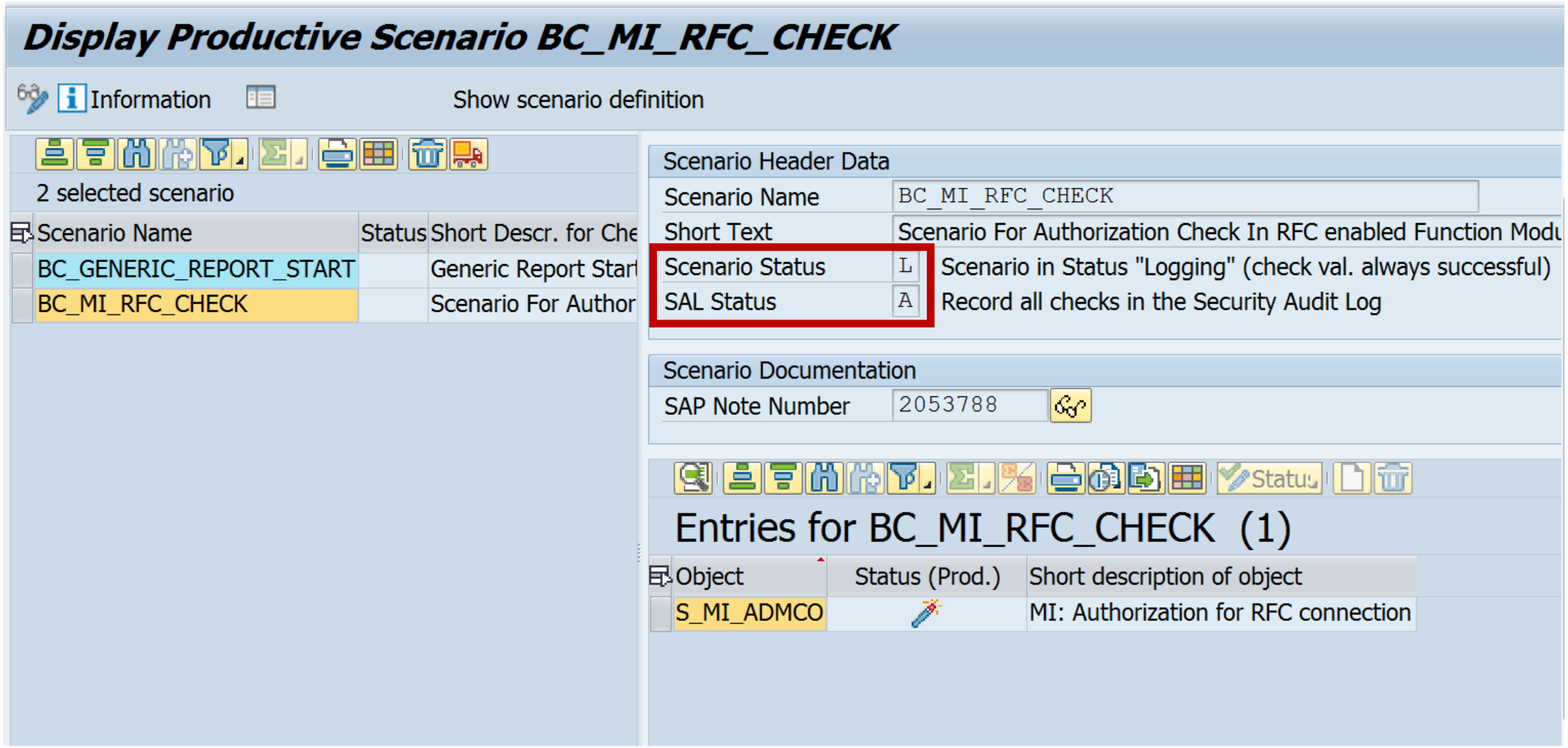
Note 2078596 - Further improvements for RFC security (reloaded) Switchable authorization checks (SACF)



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Note 2078596 - Further improvements for RFC security (reloaded) Switchable authorization checks (SACF)

The following SAP Notes contain new switchable authorization checks in RFC functions

October 2016:

2266687	CRM-BF	Switchable authorization checks for RFC in CRM Counters
2255642	CRM-BF-BRF	Switchable authorization checks for RFC in Rule Builder BRFplus
2276601	CRM-IM	Switchable authorization checks for RFC in CRM-Sales of Subscription based Series
2248790	CRM-IM-IPM	Switchable authorization checks for RFC in Intellectual Property Management
2265976	CRM-ISA	Switchable authorization checks for RFC in Internet Sales
2265385	CRM-ISA-CAT	Switchable authorization checks for RFC in Product Catalog
2252568	CRM-ISE	Switchable authorization checks for RFC in Internet Service
2273147	CRM-IT-BTX	Switchable authorization checks for RFC in CRM-IT-BTX
2258027	CRM-ITT-ETC-BTX	Switchable authorization checks for RFC in CRM-Travel&Transportation-Electronic Toll Collection-Business Transaction
2271839	CRM-IU	Switchable authorization checks for RFC in CRM-IU
2233831	CRM-LAM	Switchable authorization checks for RFC in Leasing / Account Origination
2303421	CRM-LOY	Switchable authorization checks for RFC in Loyalty Management (CRM-LOY)
2272055	CRM-MD-CON-XIF	Switchable authorization checks for RFC in Conditions Master Data
2271802	CRM-MKT-EAL	Switchable authorization checks for RFC in External List Management (CRM-MKT-EAL)
2262131	CRM-MSA	Switchable authorization checks for RFC in CRM-MSA-ADP and CRM-MT-MAS-ARS
2261768	CRM-MW-ADM	Switchable authorization checks for RFC in CRM-MW-ADM
2275009	CRM-MW-ADP	Switchable authorization checks for RFC in CRM-MW-ADP
2264976	CRM-MW-BDM	CRM_Switchable authorization checks for RFC in CRM-MW-BDM
2266040	CRM-MW-CCO	Switchable authorization checks for RFC in CRM-MW-CCO
2264949	CRM-MW-GEN	Switchable authorization checks for RFC in CRM-MW-GEN
2268252	CRM-MW-GWI-GWA	Switchable authorization checks for RFC in CRM-MW-GWI-GWA
2270084	CRM-MW-MFW	Switchable authorization checks for RFC in CRM-MW-MFW
2266967	CRM-MW-MON	Switchable authorization checks for RFC in CRM-MW-MON
2264948	CRM-MW-SRV	Switchable authorization checks for RFC in CRM-MW-SRV

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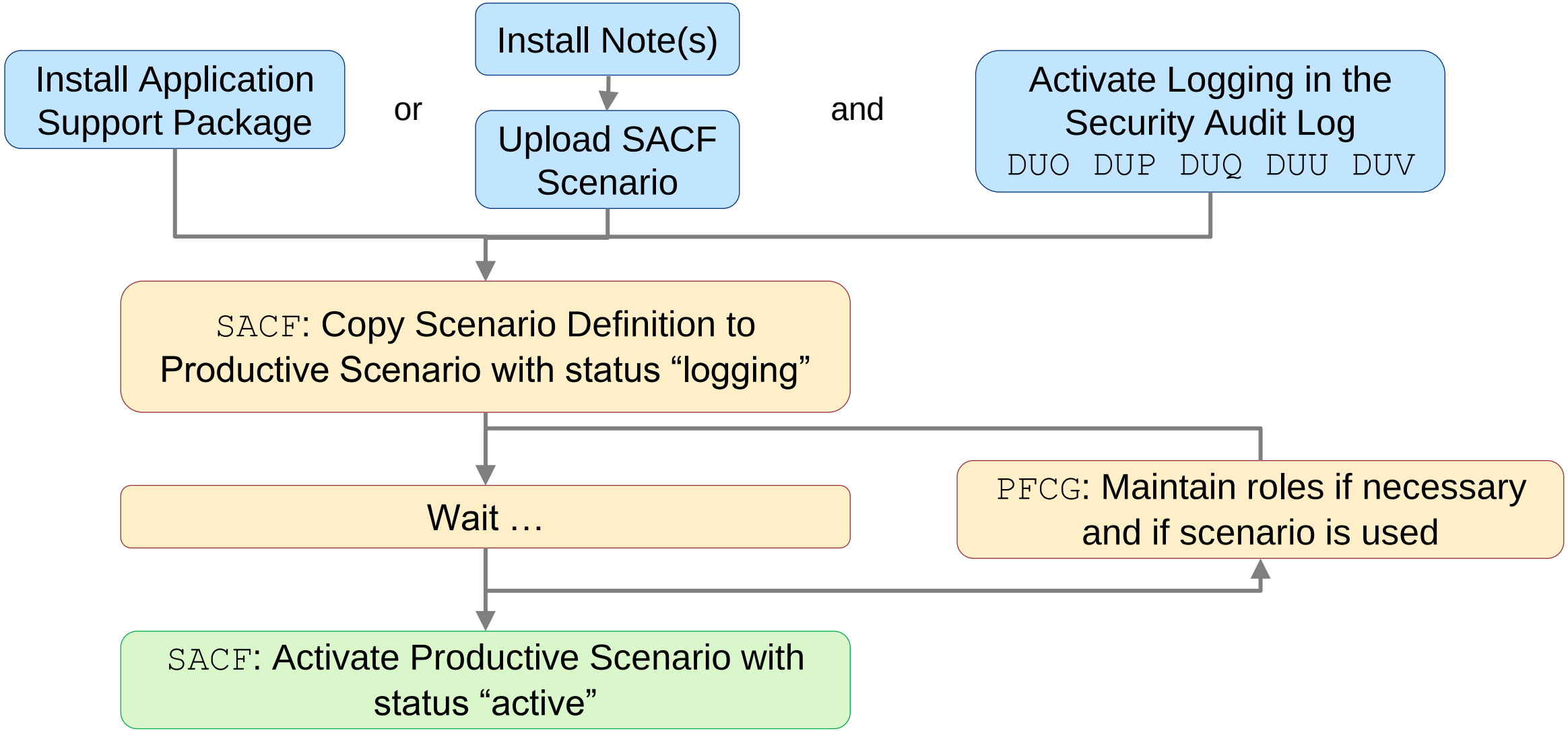
Note 2078596 - Further improvements for RFC security (reloaded) Switchable authorization checks (SACF)



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Similar Transactions / Similar Projects
Switchable Allowlists (SLDW) and Authorization Checks (SACF)

Similar transactions for SACF and SLDW:

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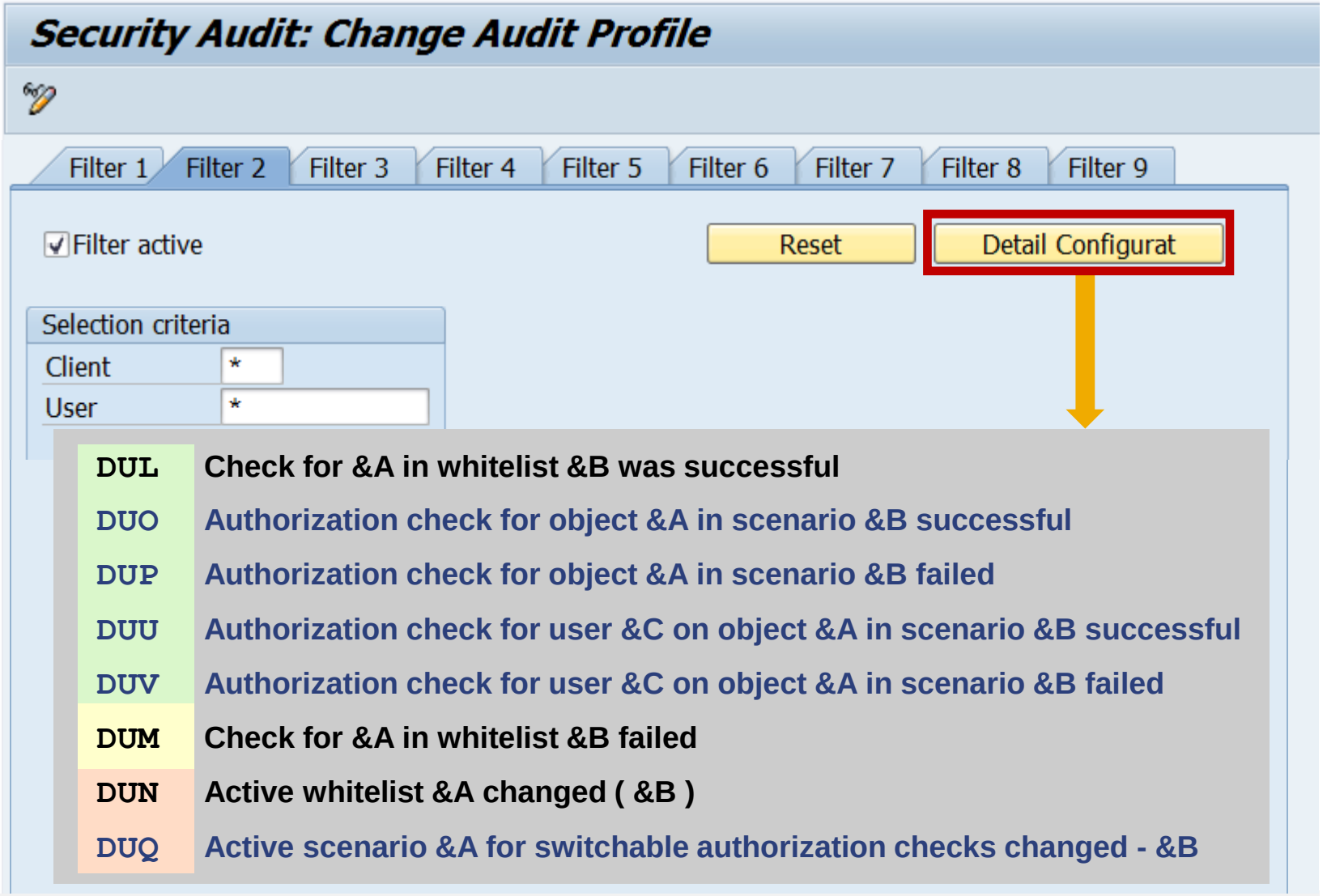
Activate logging via Security Audit Log for Switchable Allowlists (SLDW) and Authorization Checks (SACF)

Messages are only written if the Security Audit Log is active and the current filter settings contain the required messages. You can activate and check this with transaction SM19.

Choose 'Detail Configuration', sort the entries, and select messages DUL, DUM and DUN for Switchable Allowlists (SLDW) and DUO, DUU, DUP, DUV, and DUQ for Authorization Checks (SACF). You find all messages in section "Other Events"



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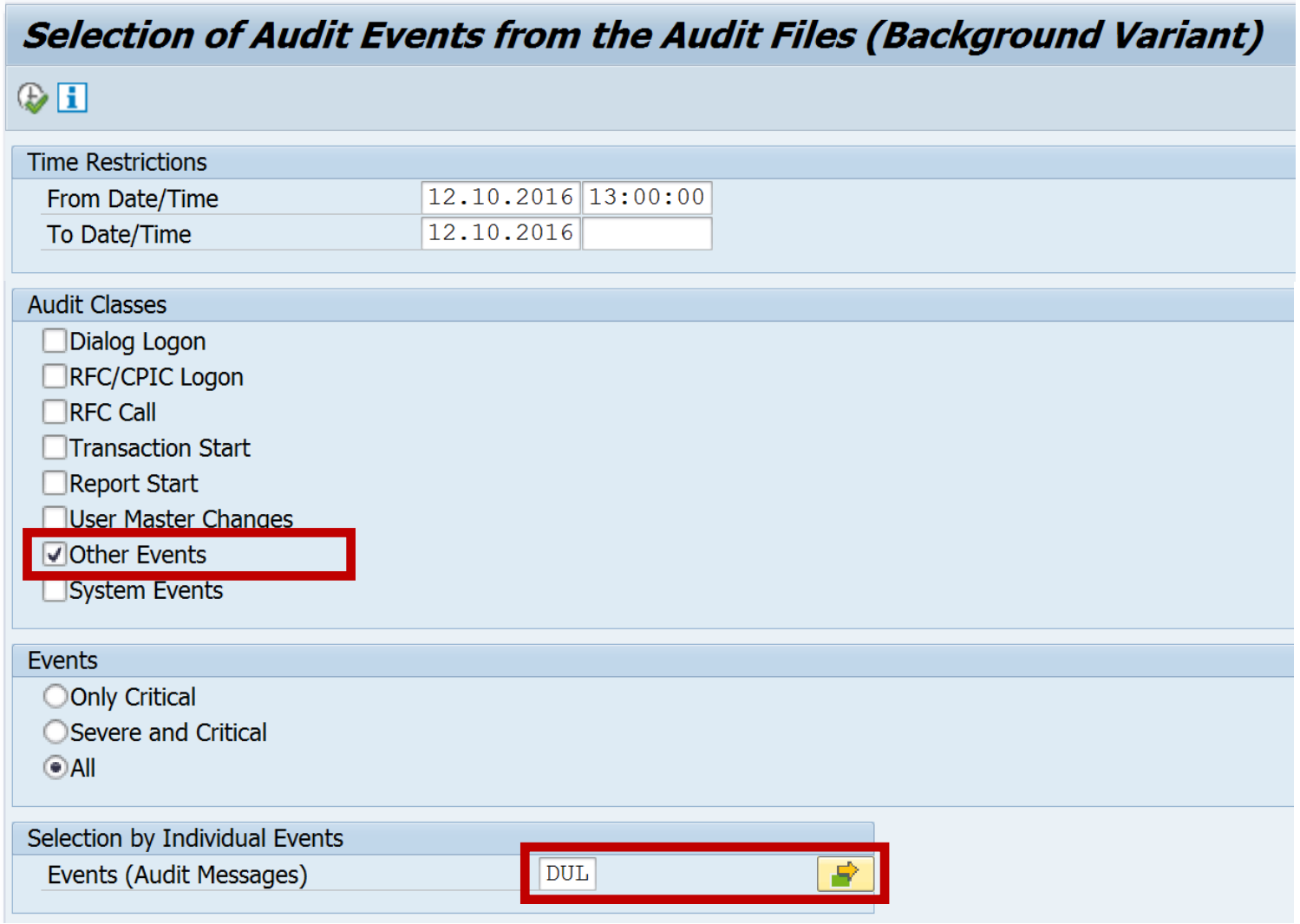
Activate logging via Security Audit Log for Switchable Allowlists (SLDW) and Authorization Checks (SACF)



Use report `RSAU_SELECT_EVENT` to show the log.

`SLDW`: Use the results about missing but accepted entries to update allowlists.

`SACF`: Use the results about failed but accepted authorization checks to update existing roles respective new roles which you create for groups of scenarios.

Keep on working this way until you do not get these log messages anymore. Then turn the allowlist / the scenario into active state.

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Note 2078596 - Further improvements for RFC security (reloaded)

The following SAP Notes provides solution which do not require a switch:
October 2016:

2257328	CRM-BF	Missing authorization checks in CRM Portal Content function modules
2271018	CRM-BF-CFG	Missing authorization checks in function modules related to CRM knowledgebases for configurable products
2246269	CRM-BTX	Missing authorization check in CRM-BTX
2271740	CRM-BTX-LEA	Missing authorization check in CRM-BTX-LEA
2263132	CRM-CHM	Missing authorization check in CRM-CHM
2276488	CRM-IC-HCM-BF	Missing authorization check in CRM-IC-HCM
2241871	WEC-APP-SRV	Missing authorization check in WEC-APP

No adjustment of authorization concept (roles) necessary. The solution is either different than introducing authorization checks or uses an authorization check which can be fulfilled by all legal users.

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Note 2078596 - Further improvements for RFC security (reloaded) Comments about unconditional authorization checks

Note 2257328 – CRM-BF Missing authorization checks in CRM Portal Content function modules

`MESSAGE TYPE 'E'` without `RAISING` in a function, therefore I expect trouble (runtime error) if a user does not have required authorizations.

Note 2263132 – CRM-CHM Missing authorization check in CRM-CHM

Missing authorization checks were implemented using Access Control Engine (ACE). The RFC user might need such authorizations.

Note 2276488 CRM-IC-HCM-BF Missing authorization check in CRM-IC-HCM

Authorization for `CRM_ORD_OP` with `PARTN_FCT = '*'` and `PARTN_FCTT = '*'` for activity `03`=display required.

See also:

Note 2251513 – Missing Authorization Check in XX-PROJ-FI-CA

Exceptions of `CALL FUNCTION 'AUTHORITY_CHECK_TCODE'` are not catched, therefore I expect trouble (runtime error) if a user does not have required authorizations.

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Note 2029397 - Missing authorization checks for RFC in E-commerce ERP applications (reloaded)

Which changes had happened between current version 7 (October 2016) and previous published version 5 (October 2015)?

- **Text changes: yes, but not important**
- **ABAP correction instructions: No**

All support packages are from May 2015 or older.

→ No need to install the note.

But: You need the described authorizations if you are using the application.

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Note 2029397 - Missing authorization checks for RFC in E-commerce ERP applications (reloaded)

No change between version 5 (October 2015) and version 7 (October 2016)

Software Component	From	To	Version	Changed on	ID
SAP_APPL	600604600	6042	3	2812.0805.2014 19:2015 18:1144:56	0001796923 0001796927
SAP_APPL	606600606	6003	2	1228.0508.2015 2014 19:18:41:4211	0001796940 0001796923
SAP_APPL	602606602	6062	3	2812.0805.2014 192015 18:2441:1342	0001796924 0001796940
SAP_APPL	617602617	6023	2	1228.0508.2015 182014 19:3824:3613	0001796942 0001796924
SAP_APPL	603617603	6172	3	2812.0805.2014 192015 18:2738:3536	0001796925 0001796942
SAP_APPL	616603616	6033	2	1228.0508.2015 182014 19:3927:4635	0001797916 0001796925
SAP_APPL	604616604	616	3	12.05.2015 18:4439:5646	0001796927 0001797916
SAP_APPL	605	605	4	25.09.2015 15:09:39	0001796939

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Note 1694657 - GRC SPM RFC Destination Call and FFID Passwords

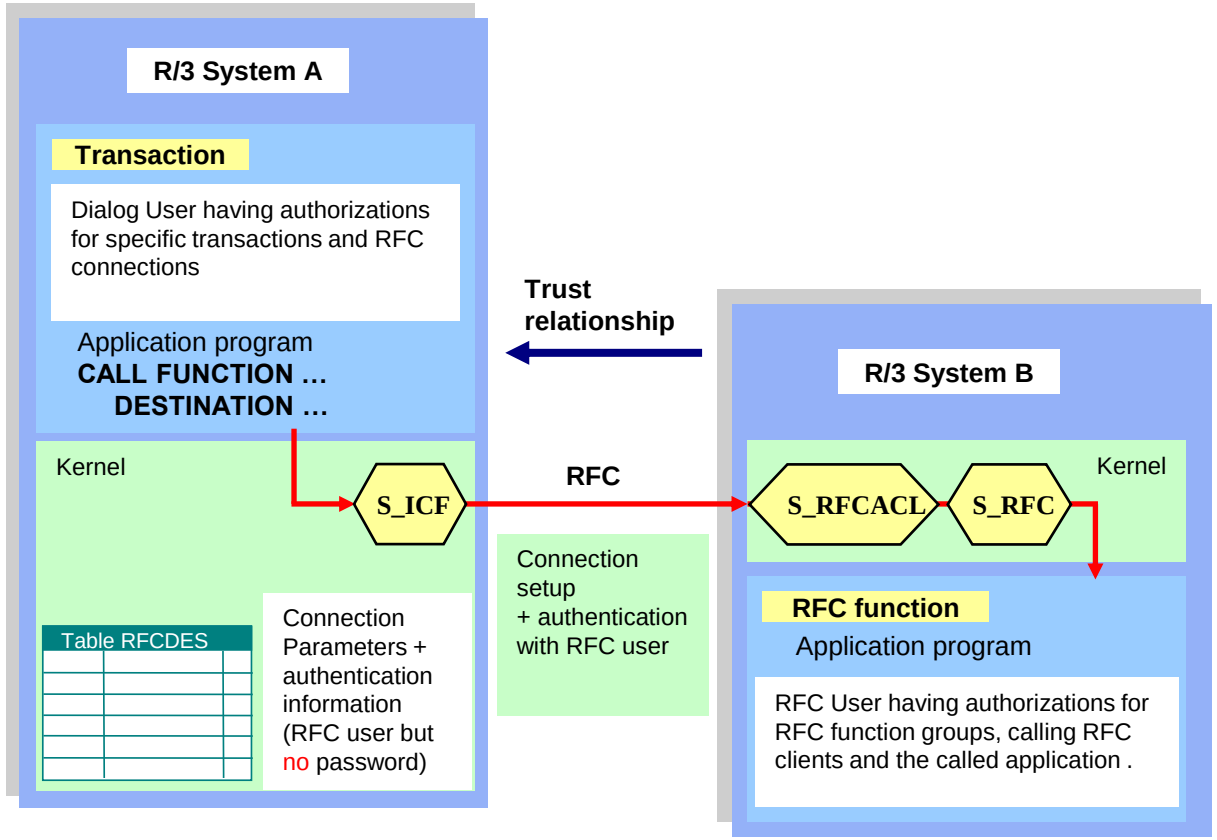
The note describes additional settings to secure the usage of FireFighters of GRC AC (5.3).

- However, most parts are valid for GRC 10.x as well.

- **Implement the Code fixes from SNOTE 1690942**
  - The software updates described in this note are old and most likely are not required anymore.

- **Main idea (see note 128447):**
  Implement a strict authorization concept about authorization objects `S_ICF` and `S_RFCACL`

- **Side comment:**
  Take special care about authorizations for `S_ADMI_FCD` with value `NADM`, `S_RFC_ADM` (maintain RFC Destinations), and `S_RFC_TT` (maintain trust relationship)



Source: Presentation RFC Security v1.1 from 2004

respective Teched 2012 session SIS264 Securing RFC

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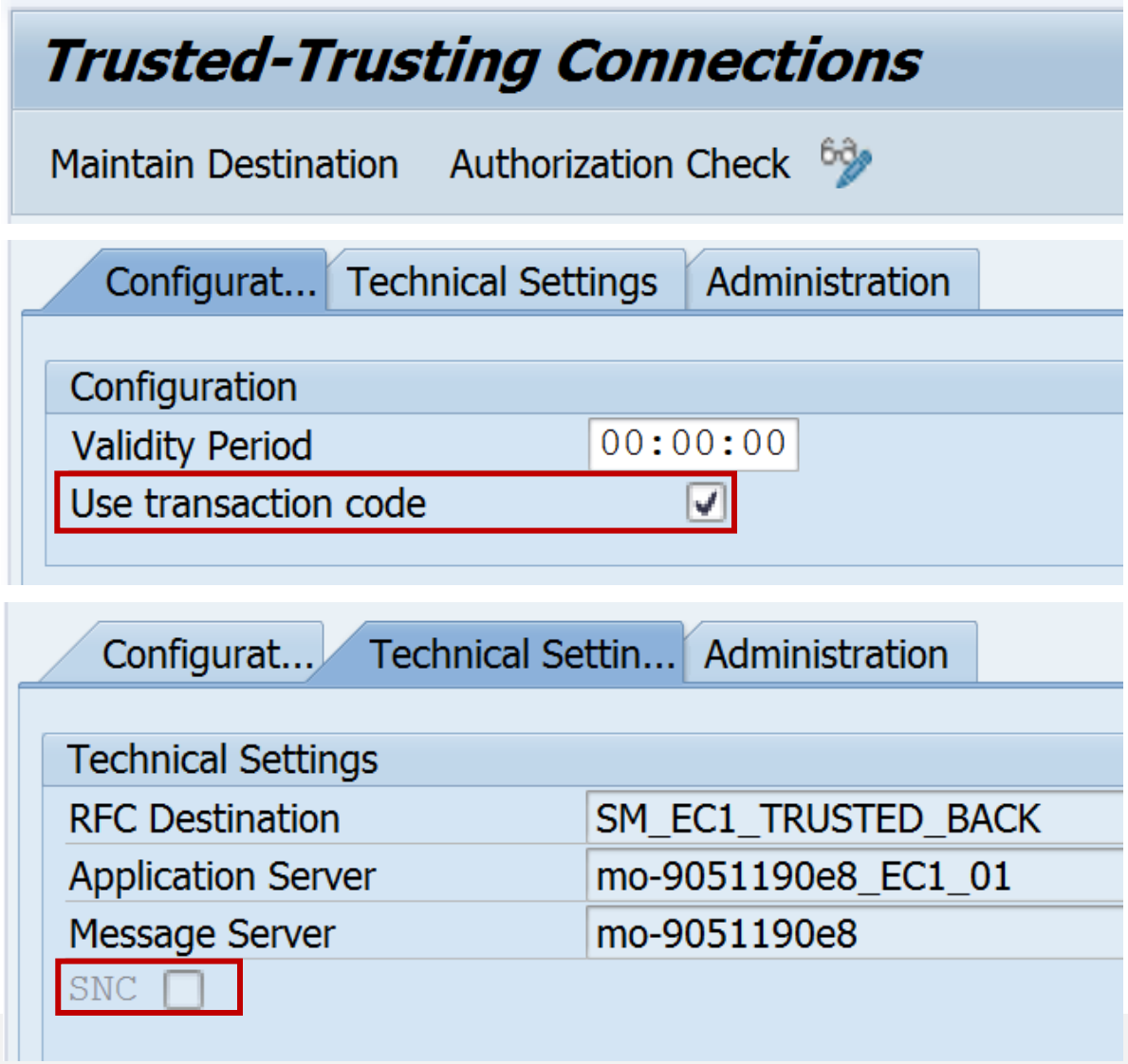
Note 1694657 - GRC SPM RFC Destination Call and FFID Passwords

On the GRC Box (local / central):

- **Modifications to Trust Relationship in transaction `SMT1`**
  - Activate the setting which enables sending the transaction code
  - You can check this with transaction `SE16` for table `RFCSYSACL` with field `RFCTCDCHK` = `X`
  - Optionally, you can enable SNC



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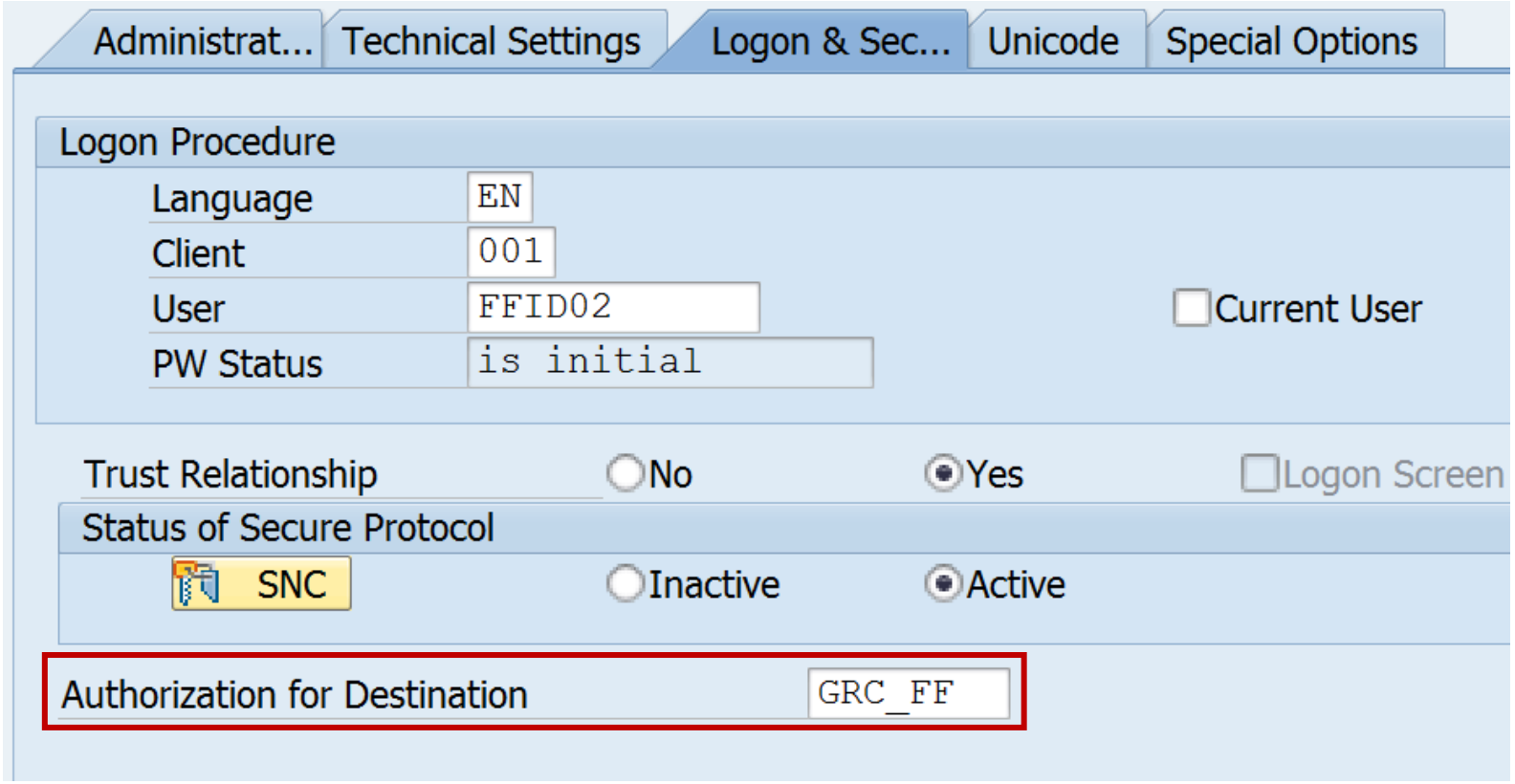
Note 1694657 - GRC SPM RFC Destination Call and FFID Passwords

On the GRC Box (local / central):

- **Modifications to RFC Destinations in transaction SM59**
  - You do not need to switch off SNC
  - Use the field 'Authorization for Destination' to utilize authorization object **S_ICF**.
    Enter a specific value, e.g. **GRC_FF**
  - Add authorizations for **S_ICF** to the role of the Firefighters
    Do not enter * values for this authorization!
    Enter '**DEST**' for field **ICF_FIELD** and enter the name, which you have chosen for 'Authorization for Destination', for field **ICF_VALUE**, e.g. '**GRC_FF**'.



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Note 1694657 - GRC SPM RFC Destination Call and FFID Passwords

On the managed systems:

- **De-activate the password for FFIDs**
  - These users get called via Trusted-RFC and therefore do not need a password
- **Add authorizations for S_RFCACL to the role of FFIDs**
  - Role `Z_SAP_GRC_SPM_FFID` (respective the role which you define in parameter `4010` in the GRC box)

Do not enter full * authorizations - this would kill security.

Fields of the authorization object:

RFC_SYSID :	**SID of the calling system. Do not enter a * value!**
RFC_CLIENT:	**Client of the calling system. Do not enter a * value!**
RFC_USER:	**User ID of the calling users – these are the users which calls the RFC destination. Usually the full authorization '*' is used for this field in case of RFC_EQUSER = 'N', because it is too costly to determine the list of calling users and to keep is up to date.**
RFC_EQUSER:	**Flag that indicates whether the user can be called by a user with the same ID (Y = Yes, N = No) Do not enter a * value! GRC FF uses dedicated FireFighter-IDs, therefore enter 'N'.**
RFC_TCODE:	**Calling transaction code – the transaction in the GRC application. Do not enter a * value! Prerequisite: Activate the use of the transaction code in transaction SMT1. Depending on the operation mode different transactions are used: 5.3: `/VIRSA/VFAT` , 10.x decentral: `/GRCPI/GRIA_EAM` , 10.x central: `GRAC_EAM`**
RFC_INFO :	**Installation number of the calling system (as of SAP_BASIS release 7.02). The installation number is shown in the calling system in transaction `SMT1`. If there is no value here, then `RFC_INFO` is not used to check the authorization. We already have field `RFC_SYSID`, therefore we can treat this field less important. Use the field but I would accept it if you enter a * here.**
ACTVT:	**Activity. Currently, this field can take the value `16` (Execute).**

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Note 1694657 - GRC SPM RFC Destination Call and FFID Passwords

Authorizations for `S_RFCACL` on the managed systems:

Do not enter `*` values for `RFC_SYSID`, `RFC_CLIENT`, `RFC_EQUSER`, and `RFC_TCODE` !

	AC 5.3	AC 10.x, decentral	AC 10.x, central
Role	/VIRSA/Z_VFAT_FIREFIGHTER	Z_SAP_GRC_SPM_FFID	
RFC_SYSID	<local SID>	<local SID>	<SID of GRC box>
RFC_CLIENT	<local client>	<local client>	<client of GRC box>
RFC_USER	*	*	*
RFC_EQUSER	N	N	N
RFC_TCODE	/VIRSA/VFAT	/GRCPI/GRIA_EAM	GRAC_EAM
RFC_INFO	* (or local installation number)	* (or local installation number)	* (or installation number of GRC box)
ACTVT	16	16	16

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Note 1694657 - GRC SPM RFC Destination Call and FFID Passwords

Authorizations for `S_RFCACL` on the managed systems:

Do not enter * values for `RFC_SYSID`, `RFC_CLIENT`, `RFC_EQUSER`, and `RFC_TCODE` !

	AC 5.3	AC 10.x, decentral	AC 10.x, central
Role	/VIRSA/Z_VFAT_FIREFIGHTER	Z_SAP_GRAC_SUPER_USER_MGMT_USER	
RFC_SYSID	SAME_SYSTEM	SAME_SYSTEM	<SID of GRC box>
RFC_CLIENT	SAME_CLIENT	SAME_CLIENT	<client of GRC box>
RFC_USER	*	*	*
RFC_EQUSER	N		
RFC_TCODE	/VIRSA/V		RAC_EAM
RFC_INFO	SAME_LICENCE_NR	SAME_LICENCE_NR	* (or installation number of GRC box)
ACTVT	16	16	16

Alternate solution if Note 2150269 - SAME_SYSTEM for S_RFCACL-RFC_SYSID in trusted RFC does not work can be extended and downported

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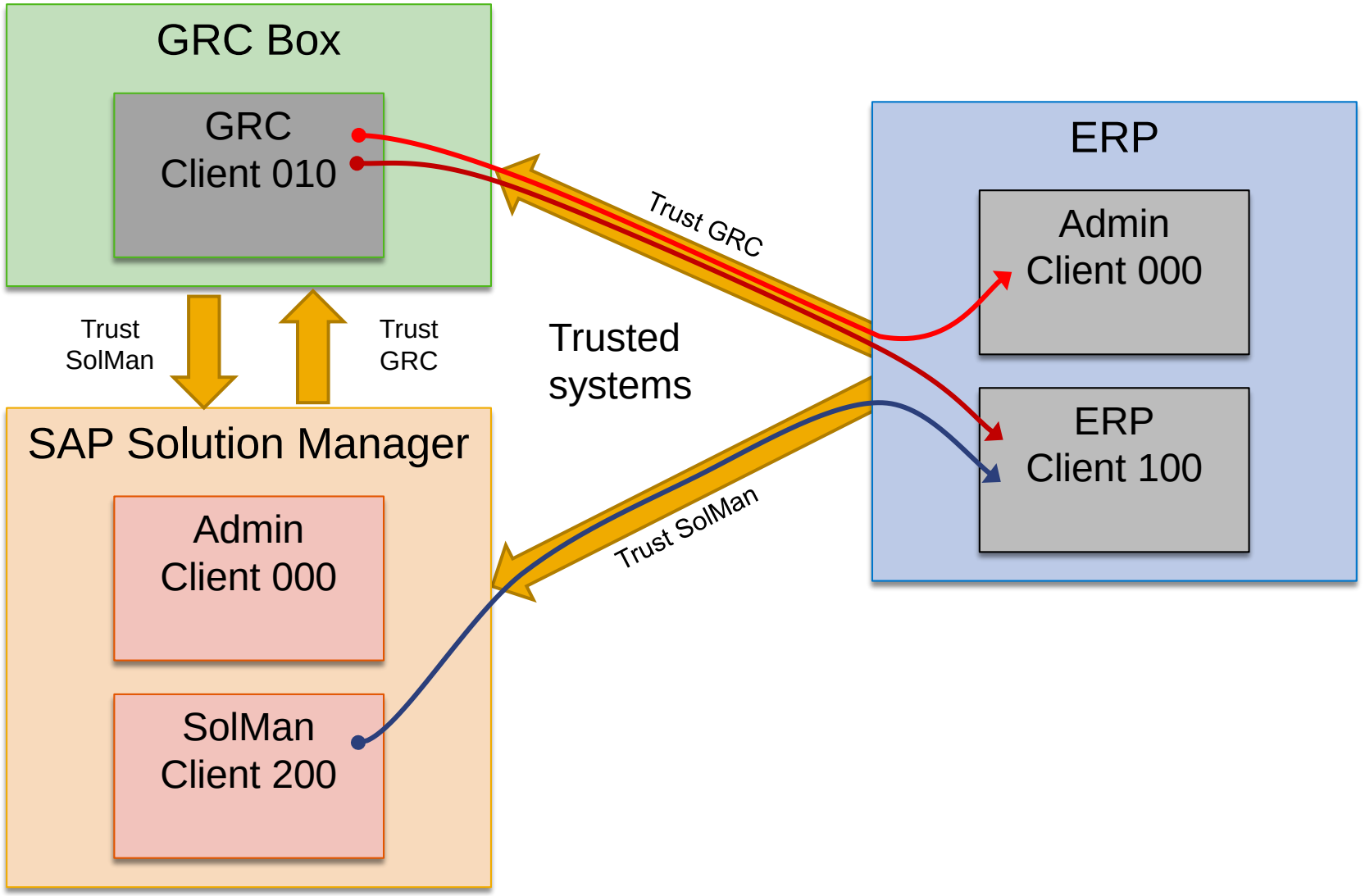
System Landscape – SolMan and Central FireFighter



FireFighter:
Identical authorizations for `S_RFCACL` in all clients in all systems:

```
RFC_SYSTEM  = GRC  (GRC system)
RFC_CLIENT  = 010  (GRC client)
RFC_EQUSER  = N
RFC_USER    = *
RFC_TCODE   = GRAC_EAM
```

SolMan Admin Users:
Identical authorizations for `S_RFCACL` in all clients in all systems:

```
RFC_SYSTEM  = SOL  (SolMan system)
RFC_CLIENT  = 200  (SolMan client)
RFC_EQUSER  = Y
RFC_USER    = ' '
RFC_TCODE   = *
```

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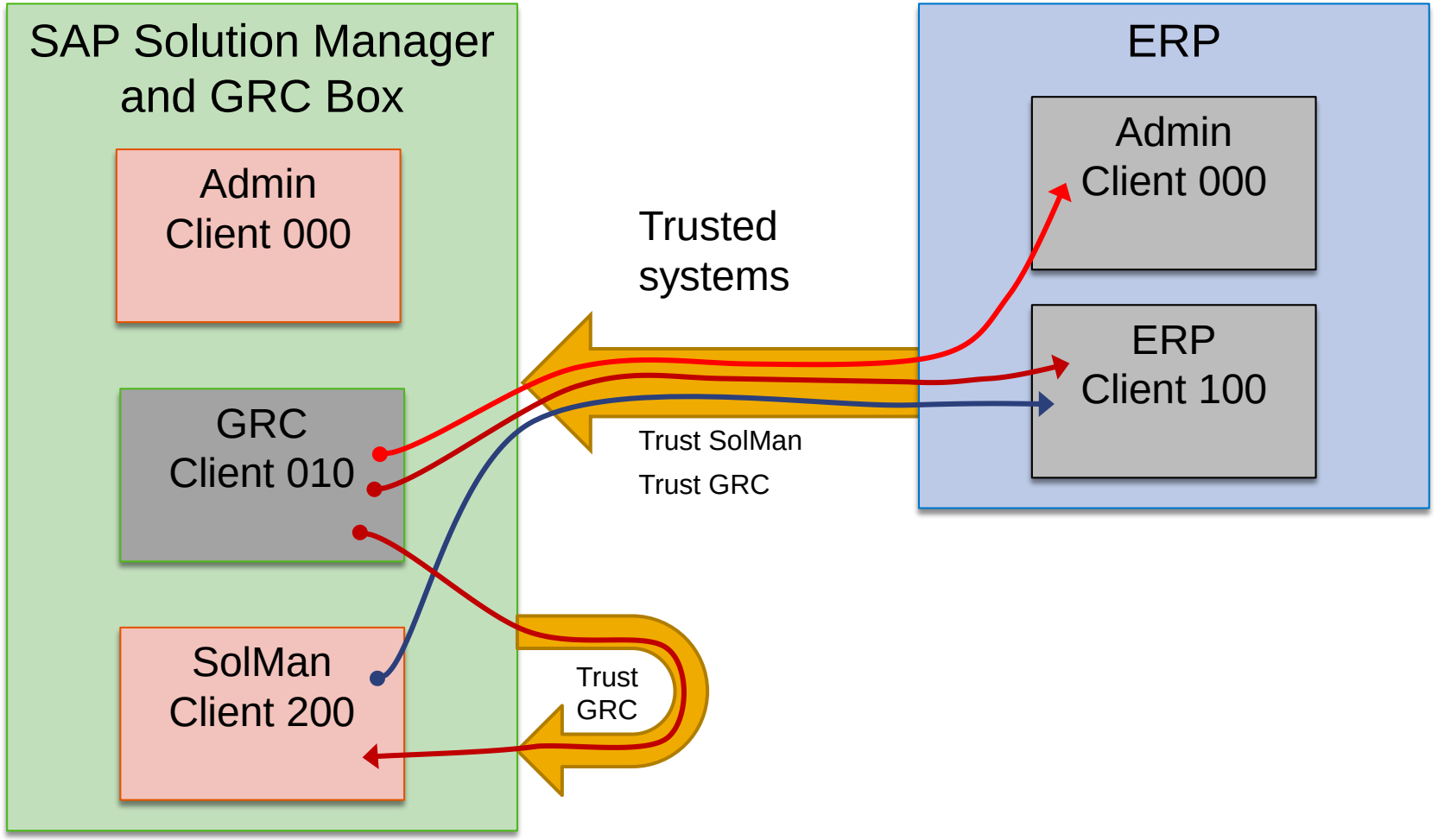
System Landscape – SolMan and Central FireFighter



FireFighter:
Identical authorizations for `S_RFCACL` in all clients in all systems:

```
RFC_SYSTEM  = SOL  (SolMan system)
RFC_CLIENT  = 010  (GRC client)
RFC_EQUSER  = N
RFC_USER    = *
RFC_TCODE   = GRAC_EAM
```

SolMan Admin Users:
Identical authorizations for `S_RFCACL` in all clients in all systems:

```
RFC_SYSTEM  = SOL  (SolMan system)
RFC_CLIENT  = 200  (SolMan client)
RFC_EQUSER  = Y
RFC_USER    = ' '
RFC_TCODE   = *
```

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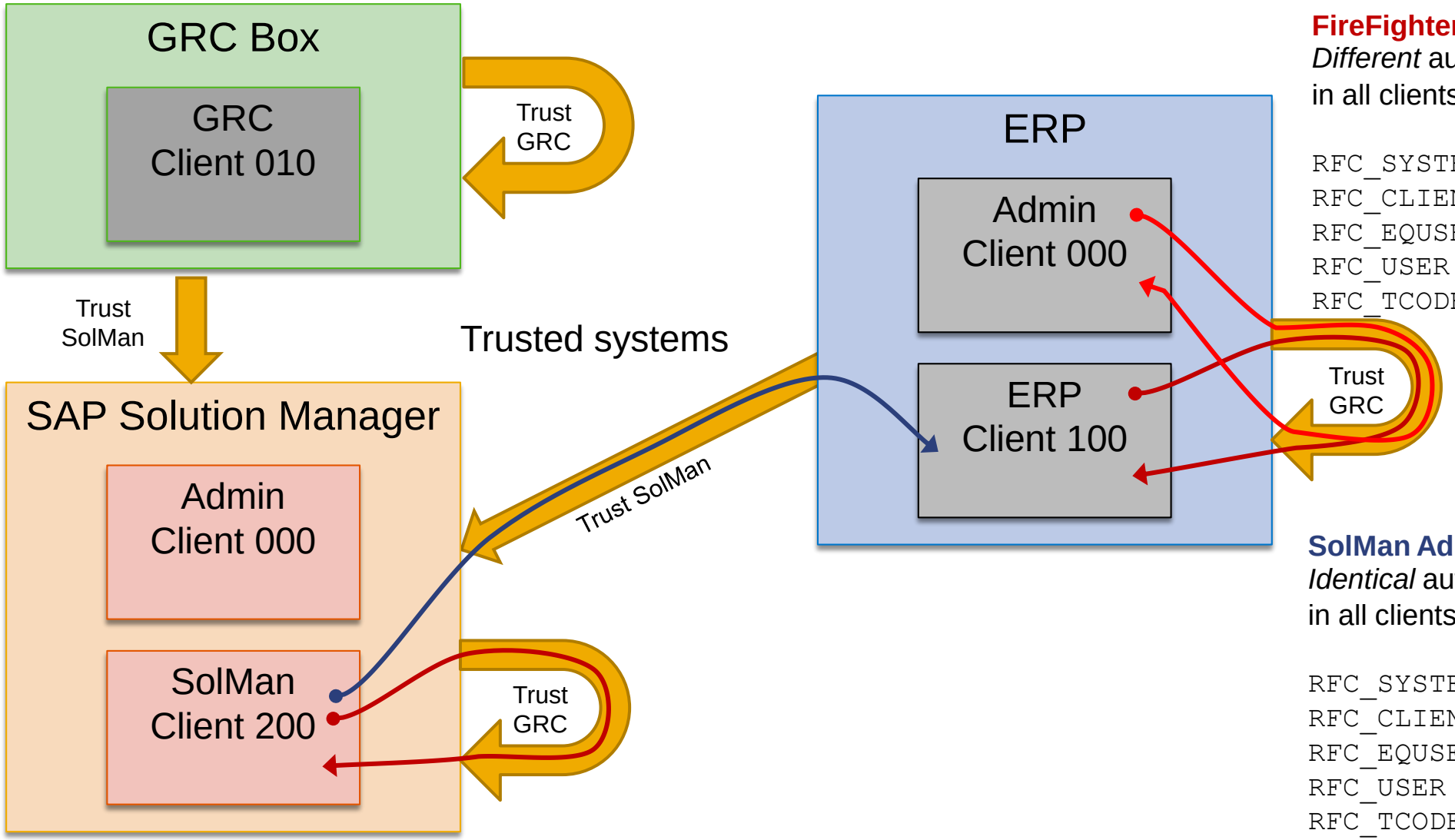
System Landscape – SolMan and decentral FireFighter



FireFighter:
Different authorizations for `S_RFCACL` in all clients in all systems:

```
RFC_SYSTEM   = <current system>
RFC_CLIENT   = <current client>
RFC_EQUSER   = N
RFC_USER     = *
RFC_TCODE    = /GRCPI/GRIA_EAM
```

SolMan Admin Users:
Identical authorizations for `S_RFCACL` in all clients in all systems:

```
RFC_SYSTEM   = SOL  (SolMan system)
RFC_CLIENT   = 200  (SolMan client)
RFC_EQUSER   = Y
RFC_USER     = ' '
RFC_TCODE    = *
```

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Note 1498973 - Renewing trust relationships to a system

Report `RS_SECURITY_TRUST_RELATIONS`

The report lists all trust relationships

a) to system trusted by the current system (first list, left of screen)

b) from systems that trust the current system (second list, right of screen).

For each trust relationship, the report specifies the security procedure used, either security procedure 1 (not recommended) with a red light or security procedure 2 (recommended) with a green light. The procedure-1 relationships to trusted systems (left list) can be deleted by double-clicking the delete icon in the "Delete" column. Procedure-1 relationships to systems that trust the current system, on the other hand, can be updated by running the report `RS_UPDATE_TRUST_RELATIONS`.

XS2/0020230702 trusts these systems:

System	Install.no	Security Method	Evaluation	Delete
EC1	SAP-INTERN	Security Method 1 (Not Recommended)		
NA1	INITIAL	Security Method 1 (Not Recommended)		
XS2	SAP-INTERN	Security Method 2 (Recommended)		

These systems trust XS2/0020230702:

System	Install.no	Security Method	Evaluation
EC1	SAP-INTERN	Security Method 1 (Not Recommended)	
NA1	INITIAL	Security Method 1 (Not Recommended)	
XS2	SAP-INTERN	Security Method 1 (Not Recommended)	

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August 2016

no Webinar

September 2016

live from TechEd Las Vegas (Frank Buchholz):
Wednesday, September 21, 2016 02:00 PM-04:00 PM
respective on DSAG Jahreskongress Donnerstag, 22.9.2016 (Birger Toedtmann)

Topics September 2016

Onapsis Issues 15 Advisories Affecting SAP HANA and SAP Trex

Note 1477597 - Unauthorized modification of stored content in NW KMC

Old Update Notes

Note 2227969 - SAP_NEW profile exists despite SAP Note 1711620
Note 1711620 - Role SAP_NEW replaces profile SAP_NEW

Reloaded: How to define cipher suites for SSL/TLS in ABAP, Java, and HANA

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Onapsis Issues 15 Advisories Affecting SAP HANA and SAP Trex

http://www.onapsis.com/onapsis-issues-15-advisories-affecting-sap-hana-and-sap-trex

In SAP HANA SPS 11 and above all coding correction corresponding to these advisories are already included.

Additionally the parameters `password_lock_for_system_user` (*) and `detailed_error_on_connect` in section `[password_policy]` according to SAP Note 2216869 and parameter `file_security` in section `[import_export]` according to note 2252941 are available in the configuration file `indexserver.ini` and need to be configured for corresponding protection.

You can check these parameters using application Configuration Validation in the SAP Solution Manager, too. The parameters are stored in the configuration store `HDB_PARAMETERS`.

(*) Keep in mind that user `SYSTEM` should be deactivated in production systems anyway

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Onapsis Issues 15 Advisories Affecting SAP HANA and SAP Trex

http://www.onapsis.com/onapsis-issues-15-advisories-affecting-sap-hana-and-sap-trex

Use the following sql statement in the HANA studio to check all three parameters:

```
SELECT 'indexserver.ini' AS FILE_NAME, LAYER_NAME, 'password_policy' AS SECTION,
'password_lock_for_system_user' AS KEY, VALUE
  FROM DUMMY D LEFT OUTER JOIN M_INIFILE_CONTENTS P ON
  P.file_name = 'indexserver.ini' AND p.section = 'password_policy' AND p.key =
'password_lock_for_system_user'
UNION
SELECT 'indexserver.ini' AS FILE_NAME, LAYER_NAME, 'password_policy' AS SECTION,
'detailed_error_on_connect' AS KEY, VALUE
  FROM DUMMY D LEFT OUTER JOIN M_INIFILE_CONTENTS P ON
  P.file_name = 'indexserver.ini' AND p.section = 'password_policy' AND p.key =
'detailed_error_on_connect'
UNION
SELECT 'indexserver.ini' AS FILE_NAME, LAYER_NAME, 'import_export' AS SECTION, 'file_security'
AS KEY, VALUE
  FROM DUMMY D LEFT OUTER JOIN M_INIFILE_CONTENTS P ON
  p.file_name = 'indexserver.ini' AND p.section = 'import_export' AND p.key = 'file_security'
```

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Onapsis Issues 15 Advisories Affecting SAP HANA and SAP Trex

http://www.onapsis.com/onapsis-issues-15-advisories-affecting-sap-hana-and-sap-trex

More details as well as coverage for lower SPS can be found in following notes:

2176128 - Potential information disclosure relating to server information (solution with revision 95)

2148905 - Potential information disclosure relating to passwords in SAP Web Dispatcher trace files (solution with rev. 97)

2197459 - Potential log injection vulnerability in SAP HANA audit log (solution with rev. 85.05, rev. 97.02, rev. 102)

2216869 - Security improvement of HANA authentication (solution with rev. 97.03, rev. 102)

2233136 - Potential termination of running processes triggered by IMPORT statement (solution with rev. 102.02, rev. 110)

2252941 - Potential information disclosure relating to files exported from SAP HANA with EXPORT statement (solution with rev. 102.03, rev. 110)

2233550 - Communication encryption for HANA multi tenant database containers does not work as expected (solution with rev. 102.02, rev. 110)

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Note 1477597 - Unauthorized modification of stored content in NW KMC

Update note 2351001 points out that there is a new manual activity in this old note for all Java Systems having NW KMC for all releases and SP:

Navigate to "System Administration → System Configuration → Knowledge Management → Content Management → Protocols → (Show Advanced Options) → WebDAV" in the portal, open "WebDAV Protocol" configuration for edit and activate parameter "**Force Text Download**".

When parameter "Force Text Download" is activated, the system does not allow you to open files containing executable scripts with your Web browser, thus preventing the execution of potentially malicious scripts. Instead, when trying to open the file with a Web browser, you are prompted to choose between “Open”, “Download” or “Cancel”.

This setting is described in the documentation:

WebDAV Protocol
https://help.sap.com/saphelp_nw74/helpdata/en/95/c3744f7143426e8f99c362244e0b55/content.htm

→ Force Text Download

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Note 1477597 - Unauthorized modification of stored content in NW KMC

Alternate solution:

If a **malicious script filter** is activated for the repository containing the file with executable script, this parameter “Force Text Download” is ignored. For more information, see

Malicious Script Filter
https://help.sap.com/saphelp_nw74/helpdata/en/84/4da32a99254685aa62aedf6f132429/content.htm

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Old Update Notes

Old Update Notes my miss validity information about the relevant software component versions. System Recommendations shows such notes for all systems.

Some of these notes are corrected now using the text similar to this: “This note has been re-released after adding the required validity. The update contains no new corrections.”

Examples:

Note 1540408 - Update #1 for security Note 1505368
Note 1542033 - Update #1 for security note 1497003
Note 1678072 - Update #1 to Security Note 1579673
Note 1724922 - Update 1 to Security Note 1653474
Note 1727640 - Update 1 to security note 1520101

Limitation: The validity information for SP ranges is not added (only for software component and release).

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Note 2227969 - SAP_NEW profile exists despite SAP Note 1711620
Note 1711620 - Role SAP_NEW replaces profile SAP_NEW

The composite profile SAP_NEW is obsolete (no longer required with the use of transactions PFCG and SU25) and should no longer be used.
However, if you still require the SAP_NEW algorithm, use the program REGENERATE_SAP_NEW and create a corresponding role SAP_NEW.

The rules of the game:

- Forget profile SAP_NEW as it is critical and outdated
- Inspect role SAP_NEW to optimize your active roles during upgrade preparation
- Do not assign the profile or the role to users

See blog
Life (profile SAP_NEW), the Universe (role SAP_NEW) and Everything (SAP_ALL)
http://scn.sap.com/community/security/blog/2014/02/17/life-profile-sapnew-the-universe-role-sapnew-and-everything-sapall

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Reloaded: How to define cipher suites for SSL/TLS in ABAP, Java, and HANA

Note 2110020 is a how-to guide about the configuration of desired cipher suites.

ABAP (ICM, Web Dispatcher, MSG Server, SAP_HTTP) and Java *incoming* connections (ICM)

- You can configure the desired cipher suites through the two profile parameters `ssl/ciphersuites` and `ssl/client_ciphersuites` according to the description and recommended settings in Section 7 of note 510007 respective in note 2253695.
- Example to use TLS 1.2 only: `ssl/ciphersuite` = `544:HIGH`

Java *outgoing* connections

- You can configure the desired cipher suites through the two configuration properties `client.minProtocolVersion` and `client.maxProtocolVersion` according to the description and recommended settings in note 2284059.

HANA

- Note 2312071 describes how to define the profile parameter `ssl/ciphersuites` for the web dispatcher of HANA

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July 2016

Topics July 2016

News about the SAP ONE Support Launchpad

News about System Recommendations in SolMan 7.1

Security Whitepaper: SAP's Standards, Processes, and Guidelines for Protecting Data and Information

Note 2220030 - STUSERTRACE: User trace for authorization checks

Tips for the Upgrade of a system with a CUA central system
i.e. if CUA main system is still running on SolMan 7.1

Note 2288530 - System internal logons are not properly logged in Security Audit Log

Note 2223635 - Fixes in CommonCryptoLib 8.4.43

Note 991968 - List of values for "login/password_hash_algorithm"

Clickjacking (~~25~~ 38 notes)

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News about the SAP ONE Support Launchpad

Since April 2016, the new SAP ONE Support Launchpad is the default for users accessing SAP support applications online. The links to legacy applications will remain in place until August 15th, 2016 to accommodate any major feature gaps or access issues that may arise in the meantime.

The SAP Support Portal (support.sap.com) will continue to be the main entry point for all customers but will now seamlessly direct the customer into their new Launchpad and redesigned applications. Traditional support applications that do not yet have a replacement, will continue to be accessible in the SAP Support Portal.
More information can be found on SAP ONE Support Launchpad Application Overviews.

Report issues with Launchpad and new applications using the Feedback button or create an incident:

https://support.sap.com/contactus
→ Report an incident for component XX-SER-SAPSMP-LAUNCH

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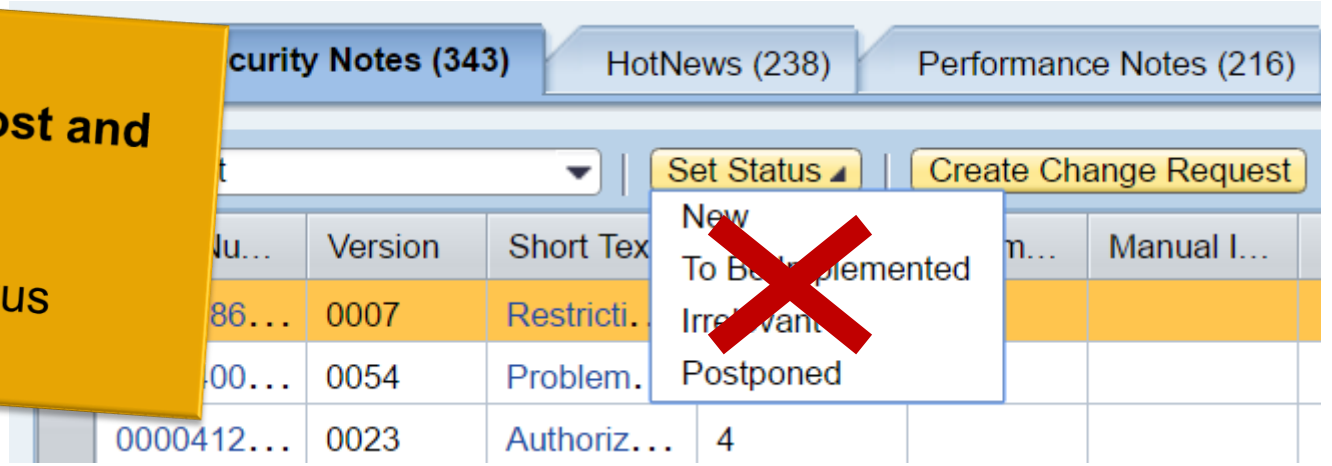
News about System Recommendations in SolMan 7.1

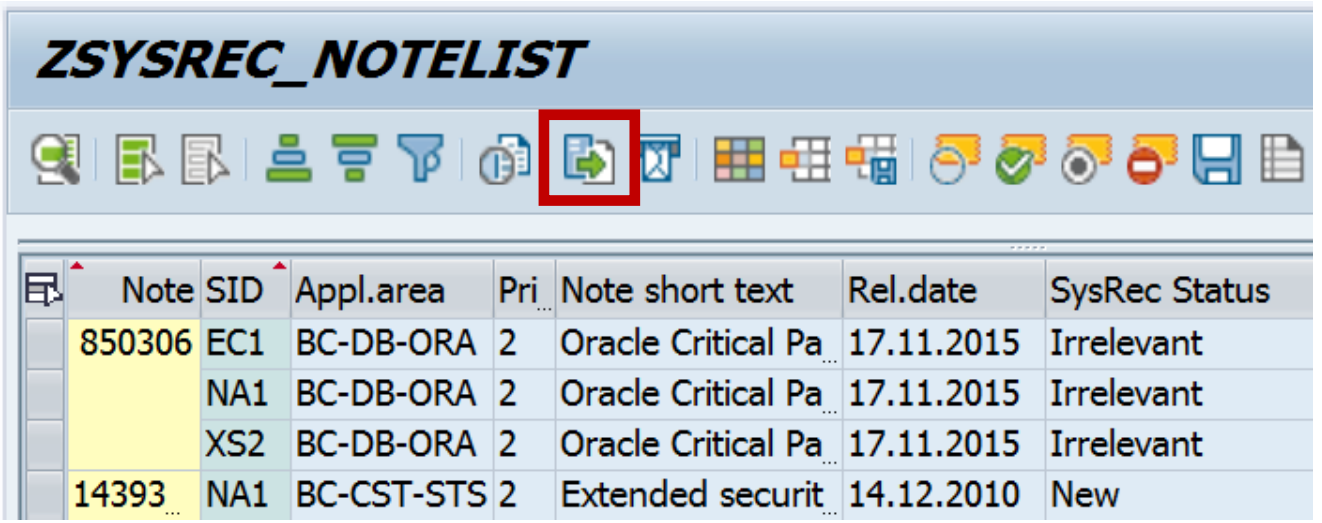
Update:
Note 2141744 - SysRec: manual status is lost and replaced with status 'new,
New version 4 from 28.07.2016
Limitation: This correction cannot give you status values back which you already have lost.

Use
to id
note
"sta
Rec

(SysRec in SolMan 7.2 is fine)



If you have used it, try to safe your work with report ZSYSREC_NOTELIST downloading the complete list.



Reason: SysRec on SolMan 7.1 does not handle the user status for **updated ABAP** notes correctly – you might loose any user status which you have entered earlier. Unfortunately many notes get touched these days because of some technical updates.

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Security Whitepaper: SAP's Standards, Processes, and Guidelines for Protecting Data and Information

Security Whitepapers: https://support.sap.com/securitywp

SAP's Standards, Processes, and Guidelines for Protecting Data and Information
https://support.sap.com/dam/library/SAP%20Support%20Portal/kb-incidents/notes-knowledge-base-notification/security-notes/white-papers/ags-sec-mgmt_en.pdf

Table of Contents

- Security as a Top Priority at SAP
- General Security at SAP
- Security Management at SAP
- Security in the SAP Digital Business Services Organization
- Appendix - Relevant Security Certifications / Important Links / FAQ

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Note 2220030 - STUSERTRACE: User trace for authorization checks

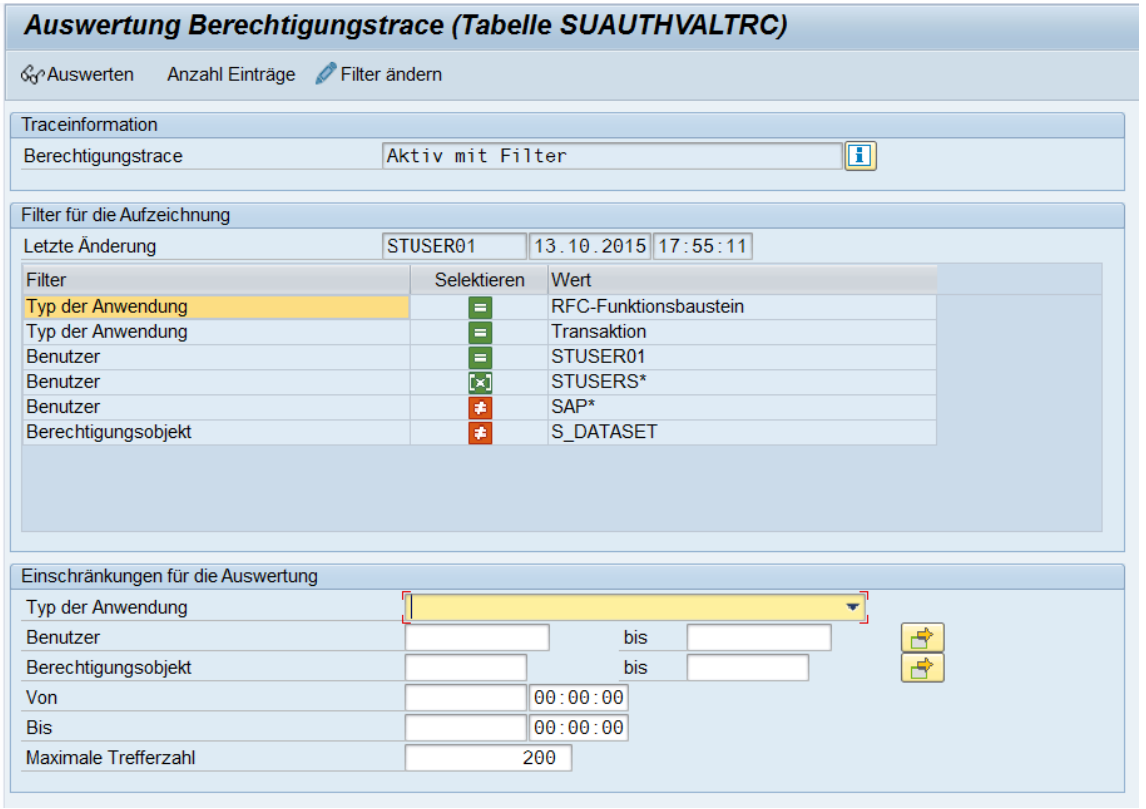
New transaction `STUSERTRACE` as of SAP_BASIS 7.40 SP 14 or 7.50 SP 03 with Kernel as of 7.45 patch 112 allows a long-time trace for authorization checks of an user.

Each authorization check is recorded only once with the first time stamp for each user!

You can (de)-activate the authorization trace using the profile parameter `auth/auth_user_trace`. The profile parameter can be switched dynamically.

You can activate the trace either completely or for a filter about application type, user, or authorization objects. This way, you can examine special scenarios, such as RFC programs or batch jobs, over a longer period of time.

The trace is stored in table `SUAUTHVALTRC`



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Tips for the Upgrade of a system with a CUA central system

If CUA main system is still running on SolMan 7.1 you should consider an upgrade to SolMan 7.2 to get the latest updates for the CUA. (The same is true for any other system with SAP_BASIS 7.02 or older.)

https://wiki.scn.sap.com/wiki/display/Security/Upgrade+of+a+system+where+a+CUA+central+system+resides

Summary:

An upgrade of the CUA main system to SAP_BASIS 7.40 or higher is valuable to get

- better performance (delta data distribution instead of full data distribution)
- better user interface in SU01
- new option to add documentation to users

Do not forget to open the CUA landscape in transaction `SCUA` and simply save it to activate some of these new features.

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Note 2288530 - System internal logons are not properly logged in Security Audit Log

Internal logon	Profile parameter	Comment
AutoABAP	`rdisp/autoabapuser`	Empty user in client `000`!
Server Startup Procedure	`rdisp/server_startup/user`	
SAP Startservice	`rdisp/start_service_user`	
Java Virtual Machine	`rdisp/autojavauser`	
BGRFC Watchdog	`rdisp/bgrfc_watchdog_user`	

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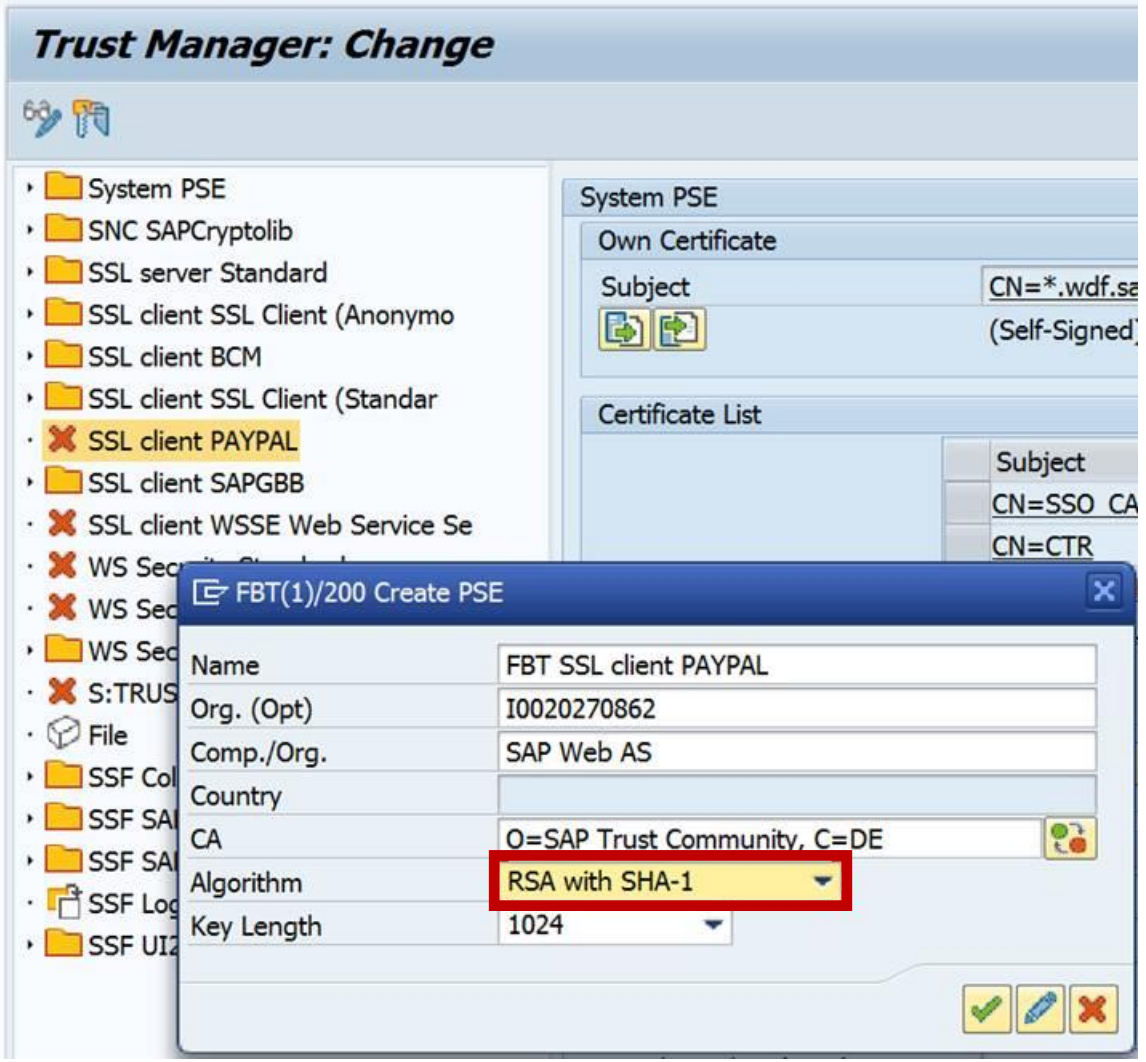
Note 2223635 - Fixes in CommonCryptoLib 8.4.43

To strengthen encryption, i.e. with SNC or SSL, you may want to choose a stronger encryption algorithm.

Note 2223635 claims that the default algorithm is changed:

“4. A PSE is created with transaction STRUST, but the outdated SHA-1 hash algorithm was used as default. Default is SHA-256 now.”

However, the note updates the CommonCryptoLib but not the ABAP coding of transaction STRUST: You still need to choose the algorithm “RSA with SHA-256” manually while creating new PSEs.



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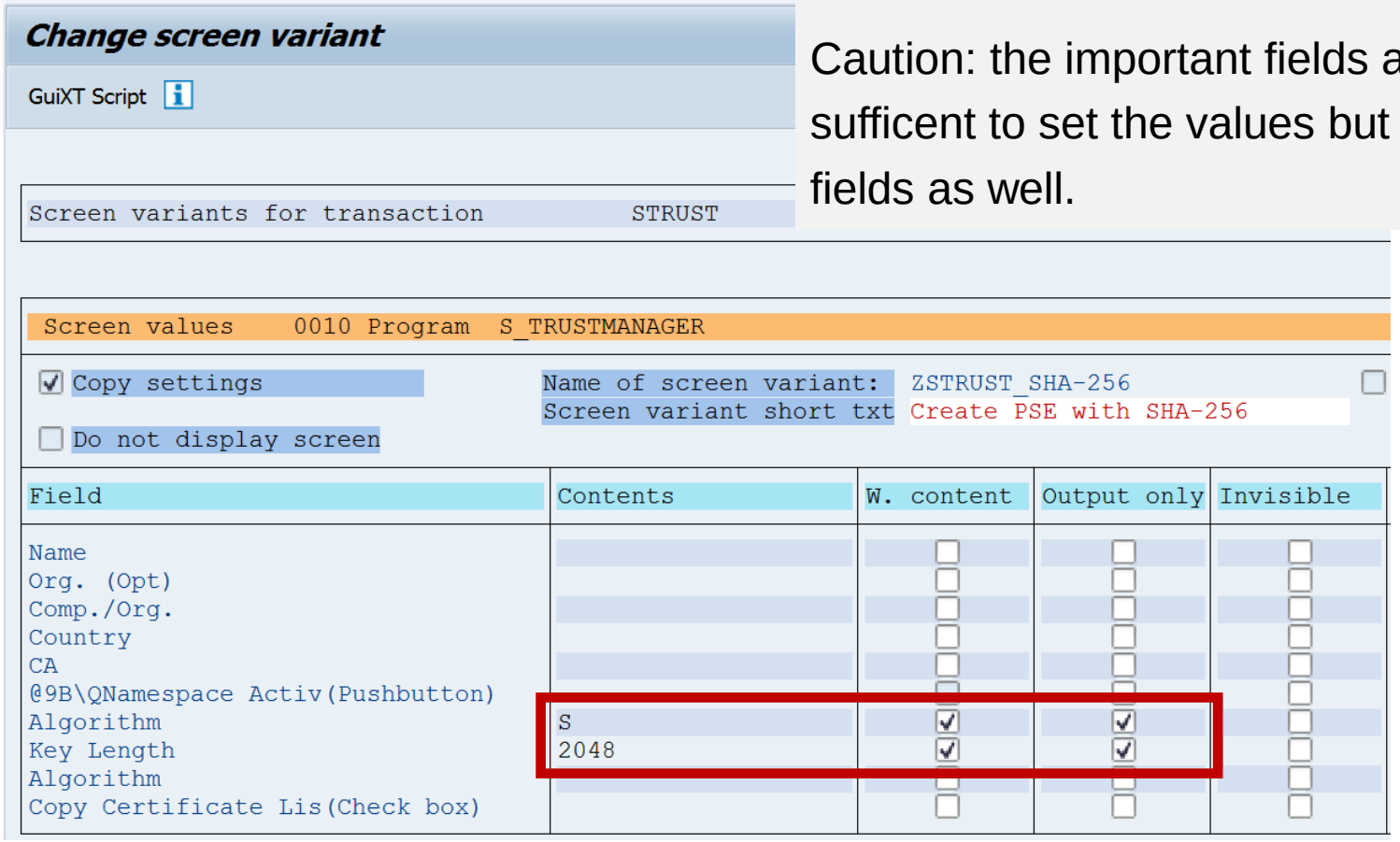
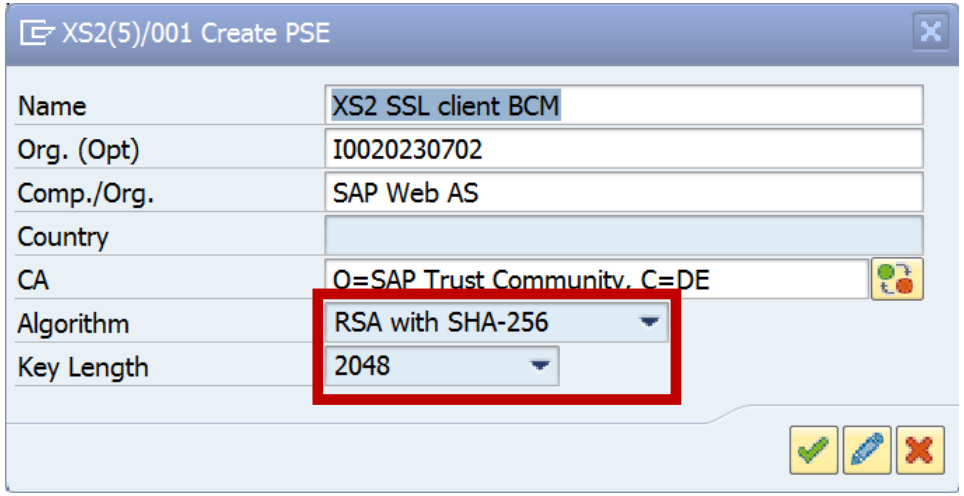
Note 2223635 - Fixes in CommonCryptoLib 8.4.43

Tipp from an ASUG Member:

Use transaction `SHD0` to create the „Standard Transaction Variant“ (respective use GUIXT) which forces `STRUST` to use a different default.

Caution: the important fields are prefilled by ABAP, therefore it is not sufficent to set the values but you have to turn the fields into output-only fields as well.





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Note 991968 - List of values for "login/password_hash_algorithm"

For password hashing you can keep on using SHA-1 but you may want to make it harder for an attacker to perform brute-force or dictionary attacks by increasing the count of iterations.

Profile parameter `login/password_hash_algorithm` denotes which password hash algorithm is used for new / changed passwords.

Note 991968 - List of values for "login/password_hash_algorithm"
Note 2076925 - Additional SHA password hash algorithms supported
Note 2140269 - ABAP password hash: supporting salt sizes up to 256 bits

Online Help

Value ranges:

Encoding:	RFC2307		
Algorithm:	iSSHA-1 | iSSHA-256 | iSSHA-384 | iSSHA-512	default = iSSHA-1	is ok
Iterations:	1 – 4294967294 (2^{32})	default = 1024	→ 10000
Saltsize:	32 – 256 (divisible by 8)	default = 96	is ok

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Clickjacking Overview

https://www.owasp.org/index.php/Clickjacking

Test page file:///C:/temp/clickjack_test.htm

```
<html>
   <head>
     <title>Clickjack test page</title>
   </head>
   <body>
     <h1>Clickjack test page</h1>
     <p style="color:#FF0000;">The website in the frame below is vulnerable to clickjacking!</p>
     <iframe src="http://www.target.site" width="1200" height="800"></iframe>
   </body>
</html>
```

Use such a test page to validate your configuration or use the Transaction Launcher URL IFAME Testing

Central note with overall description of the protection framework

- Note 2319727 - Clickjacking protection framework in SAP Netweaver AS ABAP and AS Java

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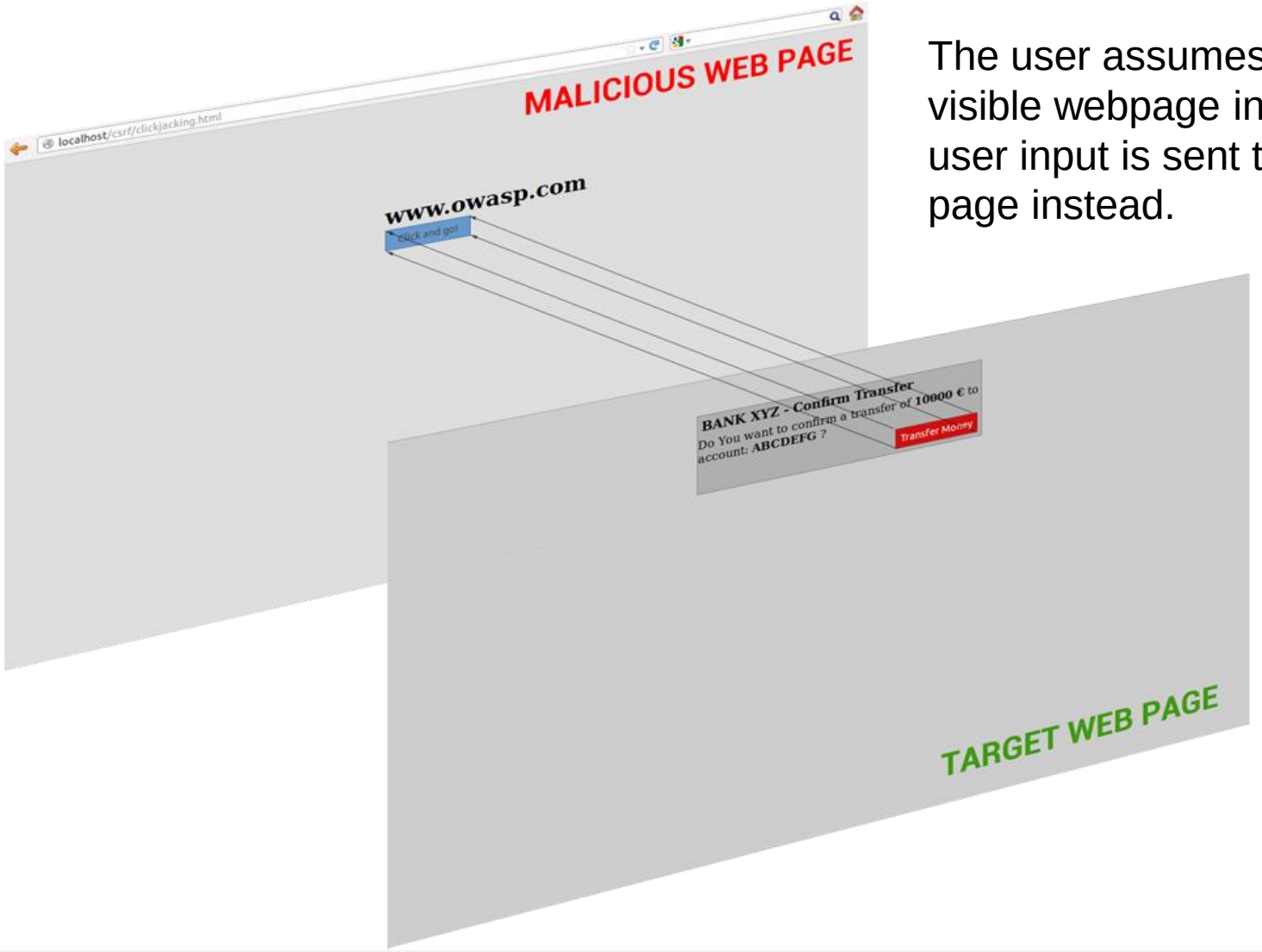
Clickjacking
Example (variant with victim on top)



The user assumes to interact with the visible webpage in the background, but his user input is sent to the invisible target web page instead.

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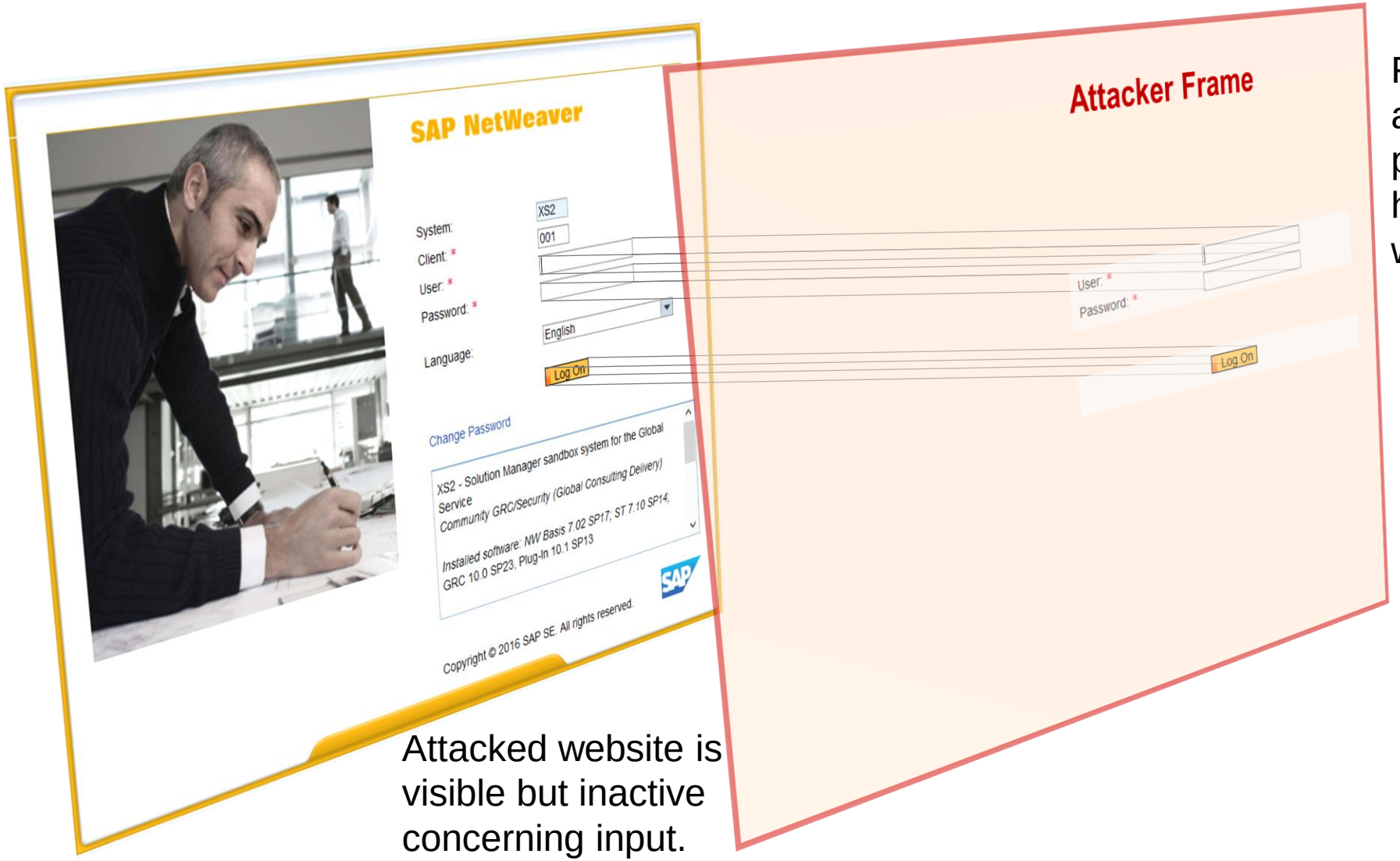
Clickjacking
Example (variant with attacker on top)



Attacked website is visible but inactive concerning input.

Fake input controls on attacker frame are positioned above the hijacked controls of the webpage.

Victim provides data, e.g. username and password, which is hijacked by the frame of the attacker.

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Clickjacking

new notes (compared with first publication in July 2016; marked red on next slide)

Note 1888001 - Error “This content cannot be displayed in a frame” is shown on CRM WebUI page
Note 2299560 - Issue with the SHL report creation
Note 2350711 - Targetgroup List of Hybris Marketing can't be displayed inside CRM

Note 2080913 - Error "This content cannot be displayed in a frame" on SRM-MDM in Internet Explorer

Note 2242128 - Clickjacking protection works only with limitations

Note 2354565 - ClickJacking notes for Fiori and downloading UI NW Add-On
Note 2327506 - Shared Service Framework: Enabling SAP Fiori Transaction Launch

More notes (not checked yet)

Note 2321867 - Extending or replacing functionalities in Web Channel / E-Commerce
Note 2327541 - Configuring ClickJacking protection in Web Channel / E-Commerce applications (HTMLB)

Note 2325497 - Clickjacking Framing Protection in MII (JSP)
Note 2338446 - Clickjacking Framing Protection in MII (JSP)

Note 2337225 - Clickjacking vulnerability in LSO Content Player

Note 2339506 - Whitelist based Clickjacking Framing Protection in Utility Customer E-Services

[…]

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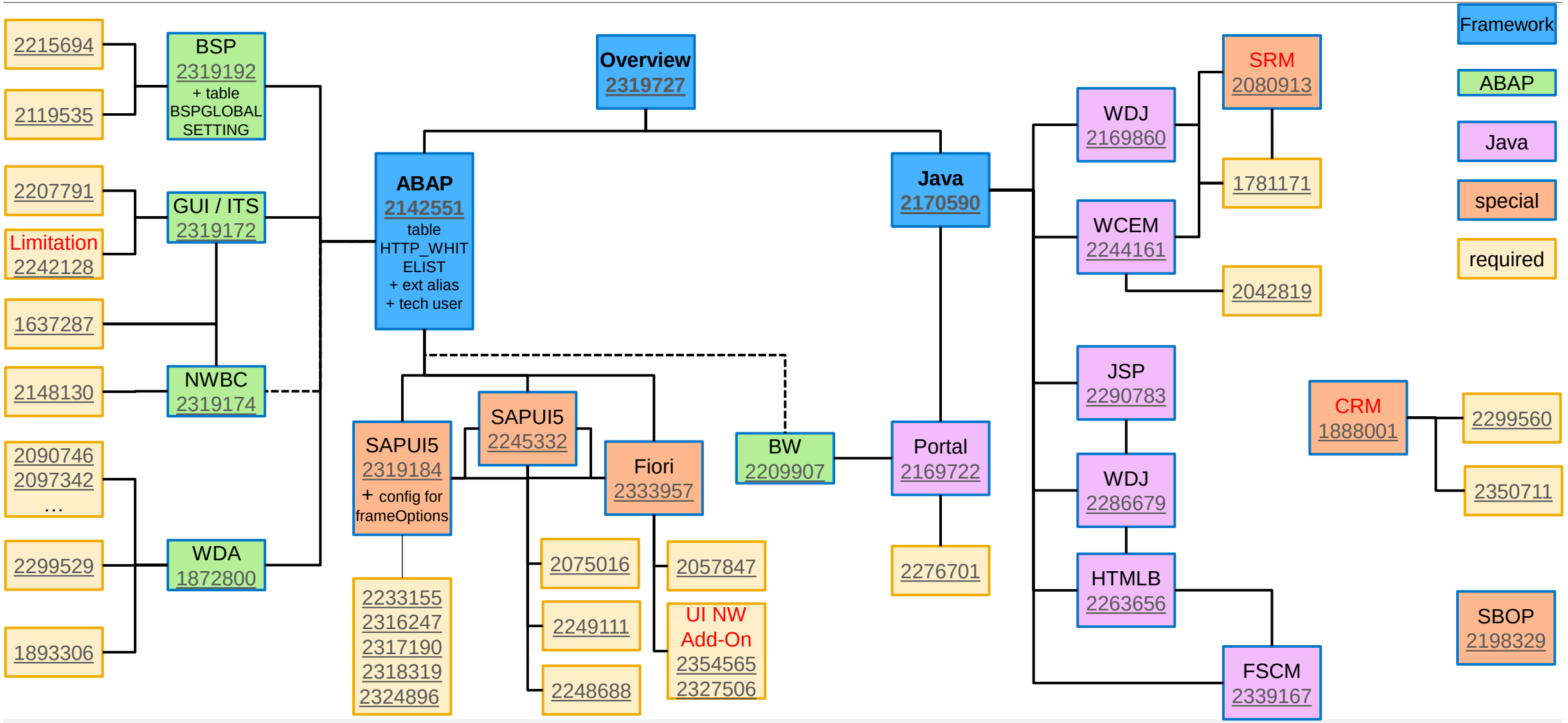
Clickjacking

Relationship between notes



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Clickjacking
ABAP

Note 2142551 - Whitelist service for Clickjacking Framing Protection in AS ABAP

- Note 1872800 - Whitelist based Clickjacking Framing Protection in Web Dynpro ABAP
- Note 2245332 - Automatic usage of Whitelist Service for Clickjacking Framing Protection in SAPUI5 Apps
- Note 2319172 - Whitelist based Clickjacking Framing Protection in SAP GUI for HTML
- Note 2319174 → 2148130 - Whitelist based Clickjacking Framing Protection in NWBC for HTML
- Note 2319192 - Whitelist based Clickjacking Framing Protection in BSP
- and Note 2090746 - Unified Rendering Notes - Which One To Apply - Instructions And Related Notes
- Note 2242128 - Clickjacking protection works only with limitations
- Note 2354565 - ClickJacking notes for Fiori and downloading UI NW Add-On
- Note 2350711 - Targetgroup List of Hybris Marketing can't be displayed inside CRM

mandatory settings

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Clickjacking
General switch / allowlist

Table `HTTP_WHITELIST` field `ENTRY_TYPE` (maintenance using `SE16` only)

01	HTTP Framework to filter for valid URLs (Note 853878)
02	Exit URL for parameter `sap-exiturl`
03	NWBC runtime
10	WebDynpro Resume URL (Note 2081029)
11	Web Dynpro Redirect URL (Note 2081029)
20	Redirect URL for parameter `sap-mysapred` of ICF (Note 612670)
21	Redirect URL for parameter `redirectURL` of ICF (Note 1509851)
30	Clickjacking protection (Note 2142551)
40	Suite Redirect
99	Generic

You can use report `RS_HTTP_WHITELIST` instead, too, which shows the value help for the entry type field.

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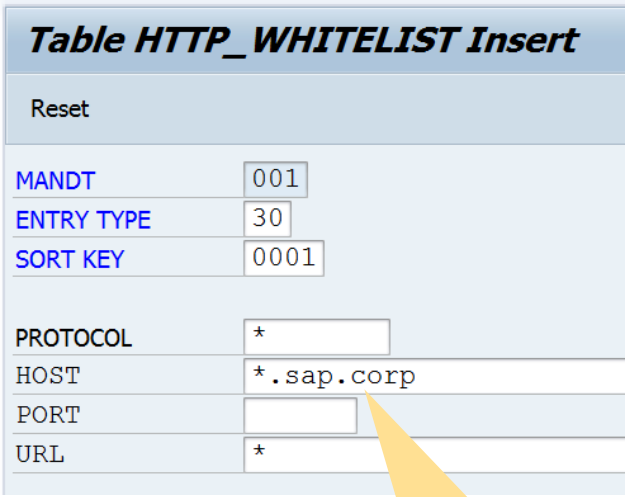
Clickjacking
Recommended SP for ABAP

Required SP for ABAP (mainly according to notes 2142551 and 2319184)
„Implementing UR SAP Notes via SNOTE may be a time consuming process."

SAP_BASIS	700	SAPKB70033
SAP_BASIS	701	SAPKB70118
SAP_BASIS	702	SAPKB70218
SAP_BASIS	710	SAPKB71021
SAP_BASIS	711	SAPKB71116
SAP_BASIS	730	SAPKB73015
SAP_BASIS	731	SAPKB73118
SAP_BASIS	740	SAPKB74014
SAP_BASIS	750	SAPK-75002INSAPBASIS

SAP_UI	740	SAPK-74016INSAPUI	with SAPUI5 version 1.28.35
SAP_UI	750	SAPK-75003INSAPUI	with SAPUI5 version 1.36.11
UISAPUI5	100	SAPK-10016INUISAPUI5	with SAPUI5 version 1.28.35
UI_700	200	SAPK-20003INUI700	with SAPUI5 version 1.36.11

Now you can activate Clickjacking protection via SE16 for client specific table HTTP_WHITELIST with ENTRY_TYPE = 30
Some UI frameworks require additional activation



Tipp: This should not be the domain of the PC network

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Clickjacking
Additional Information for ABAP

About note 2142551 - Whitelist service for Clickjacking Framing Protection in AS ABAP

a) **The manual prerequisite “create package `SUICS`” leads to the error “Transport layer `SDWB` does not exist”. Solution: Use transport layer `SAP` instead.**

b) **The manual post installation step requires to create services in transaction `SICF`.
Use package `SUICS` to create these services.**

c) **Activate the created services `/sap/bc/uics` and `/sap/bc/uics/whitelist` in transaction `SICF`**

d) **Choose user type “System” to create the technical user for the external alias.
Keep in mind that you have to create the same user with same password in all clients which you want to protect.**

e) **Step a) – d) are only relevant if you apply the note but not if you get the SP. Later, after the next upgrade you can remove both services, the external alias and the technical user because you get different public services with the SP.**

f) **You have to create an entry in `HTTP_WHITELIST` with `ENTRY_TYPE` = `30` in all clients which you want to protect - including client `000`. You have to run this step in any case, i.e. even if you upgrade the Support Package or the Release instead of applying the note**

g) **Consider to set the undocumented profile parameter `abap/http/whitelist_strict_check` = `X`**

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Clickjacking
Additional Information for ABAP

Note 1872800 requires Unified Rendering note 2090746 which might require many other notes.

Note 2319172 might require to create empty methods `BUILD_HTML_FRAMESETPAGE` and `START_TRANSACTION` in class `CL_HTTP_EXT_ITS` using transaction `SE80` as a preparation.

Notes 2319192 and 2327506 requires additional activation in table `BSPGLOBALSETTING` with an entry showing `CLICKJACKING` = `ON`

Note 2327506 asks for a generic * entry in table `HTTP_WHITELIST` with `ENTRY_TYPE` = `30` which (as I assume) would mage Clickjacking Protection worthless. Do not create such entry.

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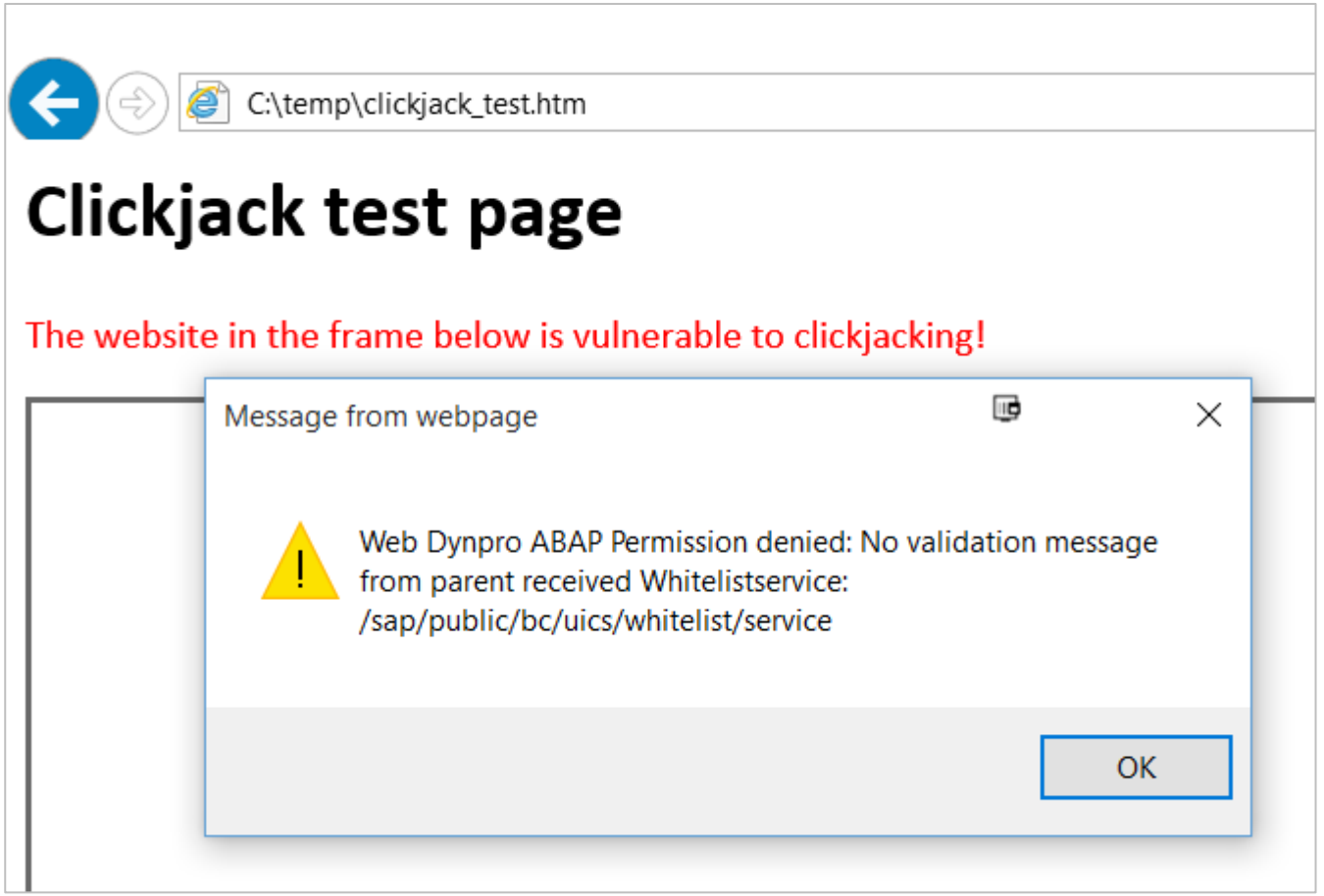
Clickjacking
Result for WebDynpro ABAP

Depending on the UI Framework you get either an empty frame or an error message if Clickjacking Protection blocks rendering a page.

Here is the error message show by WebDynpro ABAP:



Limitation: It seems that the logon page is not protected.

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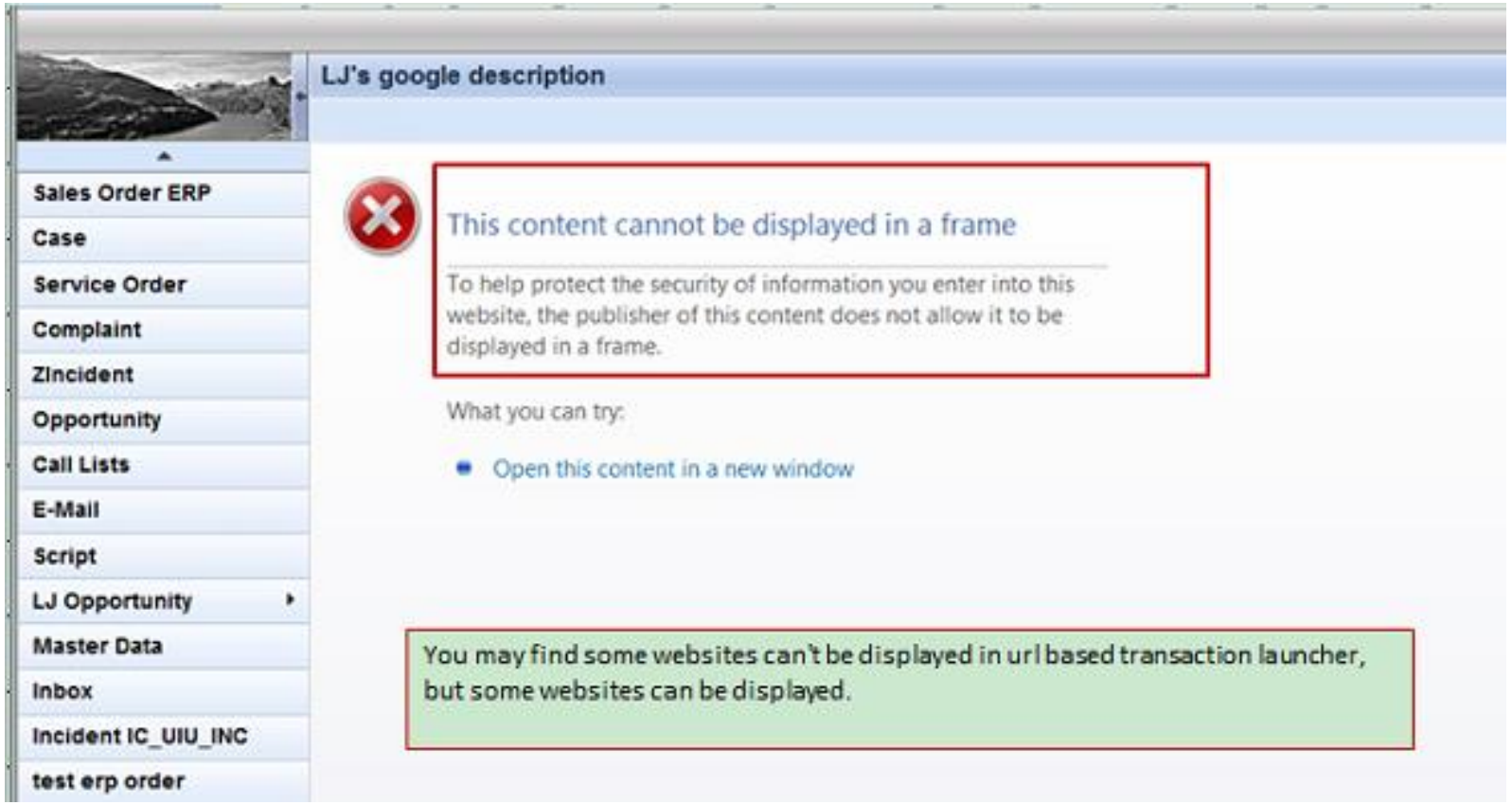
Clickjacking

Result for CRM Widget, Web Links or URL based transaction launcher

When launching an external website(For example: www.google.com) in CRM Widget, Web Links or URL based transaction launcher, you may not be able to display the content due to following error:



Before adding a URL to a Widget or the Transaction Launcher, you need to make sure it can be run by the Iframe.

Try the Transaction Launcher URL IFAME Testing

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ClickJacking Notes
Additional information for Java

Note 2170590 - Whitelist service for Clickjacking Framing Protection in AS JAVA

- Note 2169860 - Whitelist based Clickjacking Framing Protection in Web Dynpro Java
- Note 2169722 - Whitelist based Clickjacking Framing Protection in Enterprise Portal
  - Note 2276701 - BCM Not showing messages after upgrade
- Note 2290783 - Whitelist based Clickjacking Framing Protection for Java Server Pages
- Note 2244161 - Clickjacking Protection in Web Channel Experience Management (WCEM)
- Note 2286679 - Whitelist Service API required for the Clickjacking Framing Protection in JAVA
- Note 2263656 - Whitelist based Clickjacking Framing Protection in HTMLB Java
- Note 1781171 - ClickJacking vulnerability in WebDynpro Java
- Note 2042819 - ICM - HTTP Response Header Rewriting
- Note 2198329 - Clickjacking issue in CMC- Security Issue
- Note 2339167 - Whitelist based Clickjacking Framing Protection in FSCM Biller Direct
- Note 2080913 - Error "This content cannot be displayed in a frame" on SRM-MDM

Not checked yet

mandatory settings

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ClickJacking Notes
Additional information for Java

Note 2170590 - Whitelist service for Clickjacking Framing Protection in AS JAVA

- Set the Java System Property `ClickjackingProtectionService` = `true` of application `tc~lm~itsam~service~clickjacking`
- Maintain the ClickJacking Whitelist Configuration at NWA application → Configuration → Security

Note 2169722 - Whitelist based Clickjacking Framing Protection in Enterprise Portal

- Set the property `EPClicjackingProtectionEnabled` = `true` of the service `EPClicjackingProtectionService` in application `com.sap.portal.runtime.clickjackingprotection`

Note 2169860 - Whitelist based Clickjacking Framing Protection in Web Dynpro Java

- Set the property `ClickjackingProtection` = `true` of the Application Module `tc~wd~dispwda`
- Maintain the ClickJacking Whitelist Configuration at NWA application → Configuration → Security

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ClickJacking Notes
Additional information for Java

Note 2290783 - Whitelist based Clickjacking Framing Protection for Java Server Pages

- Adopt the impacted custom application based on JSP

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ClickJacking Notes

Additional information for Java

Question: What about notes which do not match to my release or SP – are they relevant?

Example: Do I need note 2263656 for a system which runs with LIFECYCLE MGMT TOOLS 7.01 SP 17 (to take one of the components as an example)?

Answer: Yes, older SP are usually also affected by security vulnerabilities (and older Releases often, too)!

The note offers patches for following releases and SP:

Release	SP	Patch
LIFECYCLE MGMT TOOLS 7.00	SP033	000002
LIFECYCLE MGMT TOOLS 7.00	SP034	000000
LIFECYCLE MGMT TOOLS 7.01	SP018	000002
LIFECYCLE MGMT TOOLS 7.01	SP019	000000
LIFECYCLE MGMT TOOLS 7.02	SP018	000003
LIFECYCLE MGMT TOOLS 7.02	SP019	000000

On 7.01 there is a patch for SP 18 available and SP 19 contains the solution. SP 17 is affected as well – especially in case of a general issue like Clickjacking, however, you have to run an SP upgrade to get the solution.

On the other hand, newer releases could be safe automatically – but only if only software updates give you the complete solution. A manual configuration step most likely is relevant for newer releases as well!

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June 2016

Topics June 2016

Security Notes on the Support Portal and the Launchpad – Reloaded

Note 2021789 - SAP HANA revision und maintenance strategy

How to use SAP HANA Mini Checks for Security Validation

Note 2252312 - Insufficient logging of RFC in SAL

Note 2306709 - Code Injection vulnerability in Documentation and Translation Tools

Note 2160790 - Missing authorization check in FS-CML

Note 2195409 - Potential modif./disclosure of persisted data in SAP CPQ Solution Configuration

Note 1882254 - Authorization check for logon data not based on passwords

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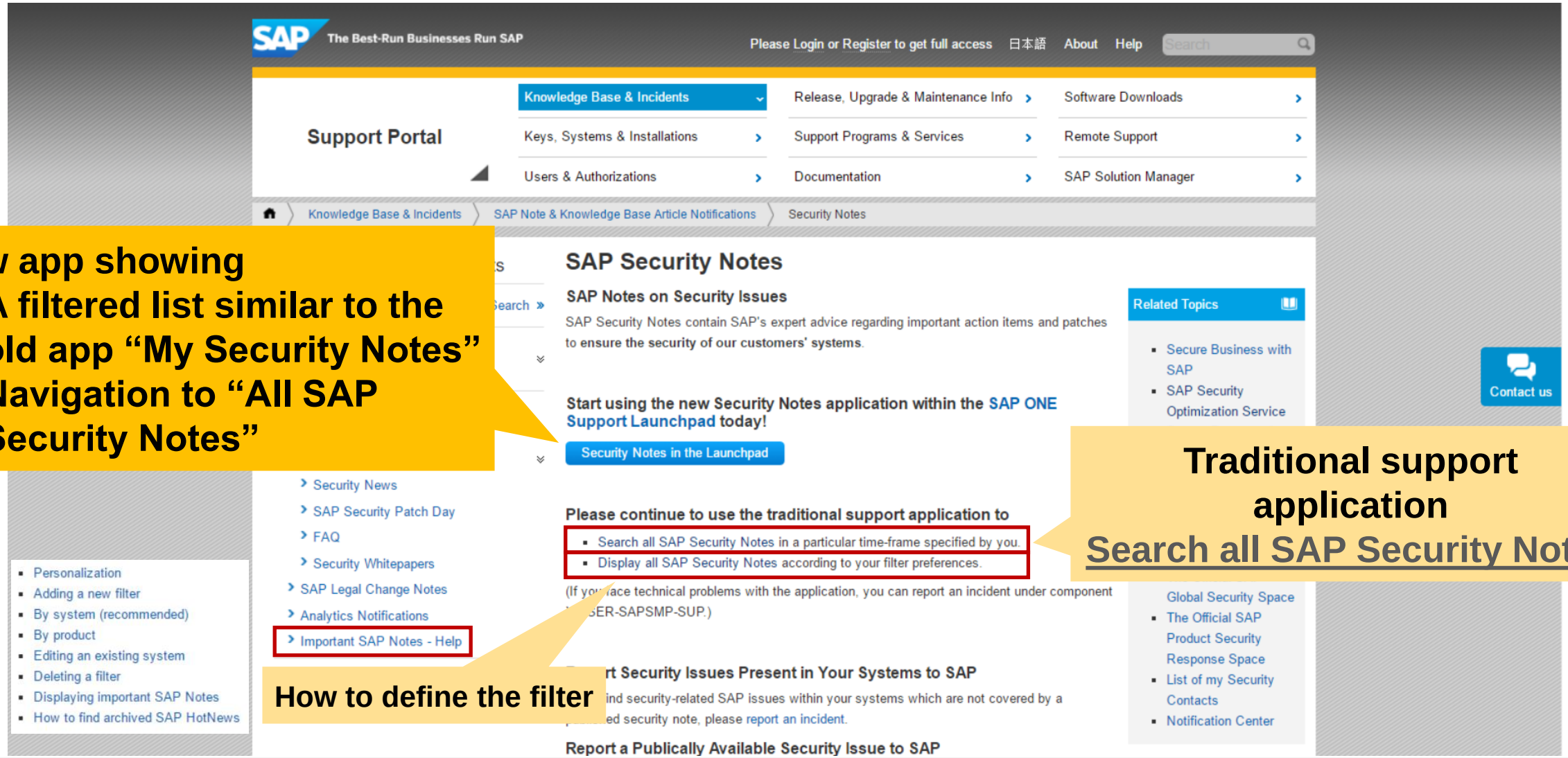
Security Notes on the Support Portal
https://support.sap.com/securitynotes



New app showing

- **A filtered list similar to the old app “My Security Notes”**
- **Navigation to “All SAP Security Notes”**

How to define the filter

Traditional support application
Search all SAP Security Notes

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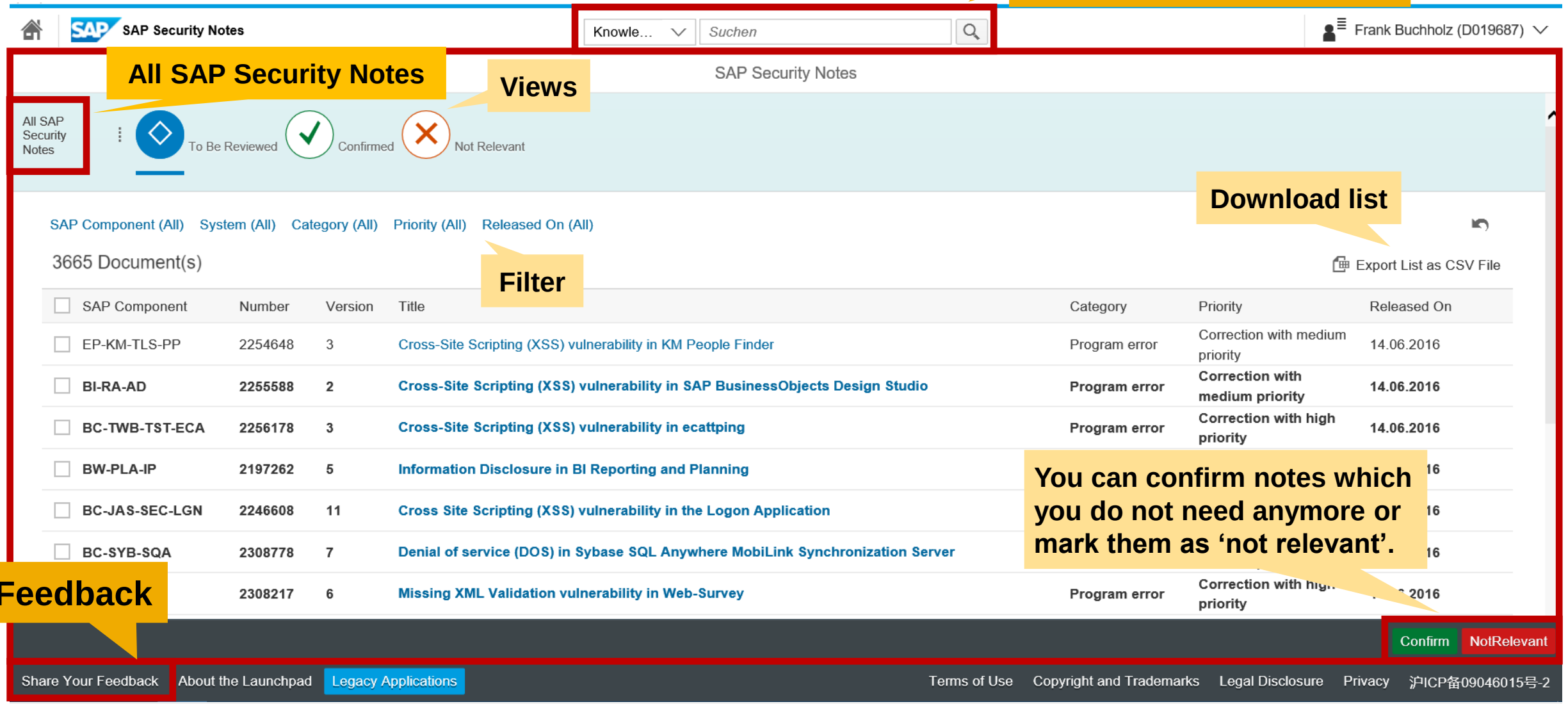
Security Notes in the Launchpad



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SAP HANA Security
Maintenance Strategy, Revision Management and Patching

Holger Mack, SAP SE

June 2016

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HANA Patching – Customer Questions & Pain-Points

Could we have individual security patches?

How to find HANA security patches?

What is the HANA security patching approach?

Could you provide workarounds?

It is difficult to assess impact of security issue?

We struggle to apply patches due required downtime and mandated testing?

What is the HANA maintenance strategy?

What are the HANA maintenance timelines?

HANA SPS maintenance window is too short?

How can we patch without downtime!

How can we reduce efforts/risks or applying patches?

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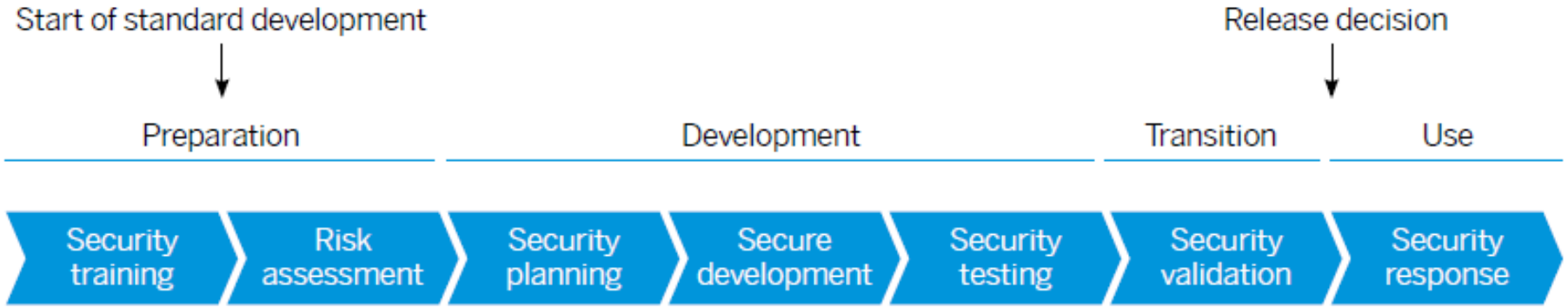
Maintain security of your SAP HANA systems and stay up-to-date

Prevent – Detect – React

- SAP secure software development lifecycle (secure SDL)
- Security patches and updates
- Security services by SAP



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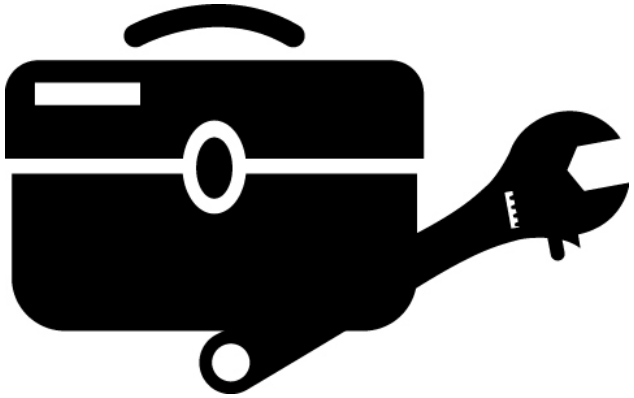
Security patches

Keep up to date by installing the latest security patches and monitoring SAP security notes



Security improvements/corrections ship with SAP HANA revisions

- Installed using SAP HANA's lifecycle management tools
- See also SAP Note 2021789 – SAP HANA revision und maintenance strategy

SAP security notes contain further information

- Affected SAP HANA application areas and specific measures that protect against the exploitation of potential weaknesses
- Released as part of the monthly **SAP Security Patch Day**
- See also https://support.sap.com/securitynotes and SAP Security Notes – Frequently asked questions

Operating system patches

- Provided by the respective vendors SuSE/Redhat

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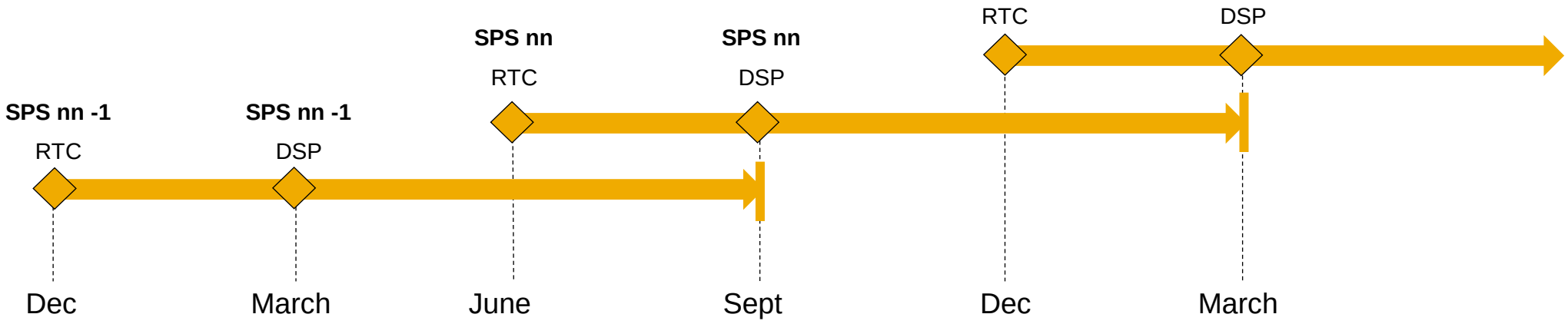
SAP HANA Maintenance Strategy
Overview Timeline

- New capabilities are introduced twice a year, every time a new SAP HANA **Support Package Stack** (SPS) is released. This happens normally in December and June
- **Datacenter Service Point** is declared about 3 month after RTC, normally in March and September
- SAP is not providing maintenance revisions for previous SPS anymore once the DSP of the next SPS is declared
- Critical bug fixes and security patches are provided as SAP HANA revisions for all HANA SPS that are still in maintenance
- We recommend that maintenance timelines and project go live dates are adjusted to this release schedule



See SAP Note 2021789 for further details

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SAP HANA Maintenance Strategy

Overview SAP Note 2021789

2021789 - SAP HANA Revision and Maintenance Strategy

Version 29 | Gültigkeit: 27.05.2016 - aktiv | Sprache Englisch (Master) | Änderungsprotokoll anzeigen | Versionen vergleichen | Download | Korrekturanleitung ausblenden

Inhalt: Übersicht | Kopfdaten | Gültigkeit | Referenzen

Support Package Stack	**Start Revision**	**Revision as of Datacenter Service Point - DSP Revision** (SAP production system verified SAP HANA Revision)	**Last revision in SPS** (before switch to Maintenance Revision)	**Last Maintenance Revision in SPS**
SAP HANA Platform SPS 06 Release Note 1848976	SAP HANA Revision 60	n.A.	SAP HANA Revision 69	SAP HANA Revision 69.07 (final)
SAP HANA Platform SPS 07 Release Note 1921675	SAP HANA Revision 70	SAP HANA Revision 73	SAP HANA Revision 74	SAP HANA Revision 74.04 (final)
SAP HANA Platform SPS 08 Release Note 2004651	SAP HANA Revision 80	SAP HANA Revision 82	SAP HANA Revision 85	SAP HANA Revision 85.05 (final)
SAP HANA Platform SPS 09 Release Note 2075266	SAP HANA Revision 90	SAP HANA Revision 96	SAP HANA Revision 97	SAP HANA Revision 97.03 (final)
SAP HANA Platform SPS 10 Release Note 2165826	SAP HANA Revision 100	SAP HANA Revision 102	SPS10 DSP Revision: SAP HANA Revision 102	SAP HANA Revision 102.06 (final)
SAP HANA Platform SPS 11 Release Note 2227464	SAP HANA Revision 110	SAP HANA Revision 112	SPS11 DSP Revision: SAP HANA Revision 112	SAP HANA SPS11 Database Maintenance Revision 112.03
SAP HANA Platform SPS 12 Release Note 2298750	SAP HANA Revision 120	n.A.	n.A.	n.A.

As part of its Going Live Service SAP offers continuous SAP HANA quality checks services for planned go lives and upgrades. Please refer to SAP Note 1892593 for more preperation details.

SAP further recommends to ensure that SAP EarlyWatch Alert (EWA) has been activated in your SAP HANA environment to ensure that you will get the latest up-to-date technical recommendation related to your SAP HANA landscape. For more information, please refer to SAP Note 1958910.

For any emergency corrections, please report the issue by sending the related incident ticket back to SAP. Any open issues and questions in regards to whether upgrading to a certain release or upgrading to a certain SAP HANA Maintenance Revision, please open a customer message under component XX-SER-RU-SHIP.

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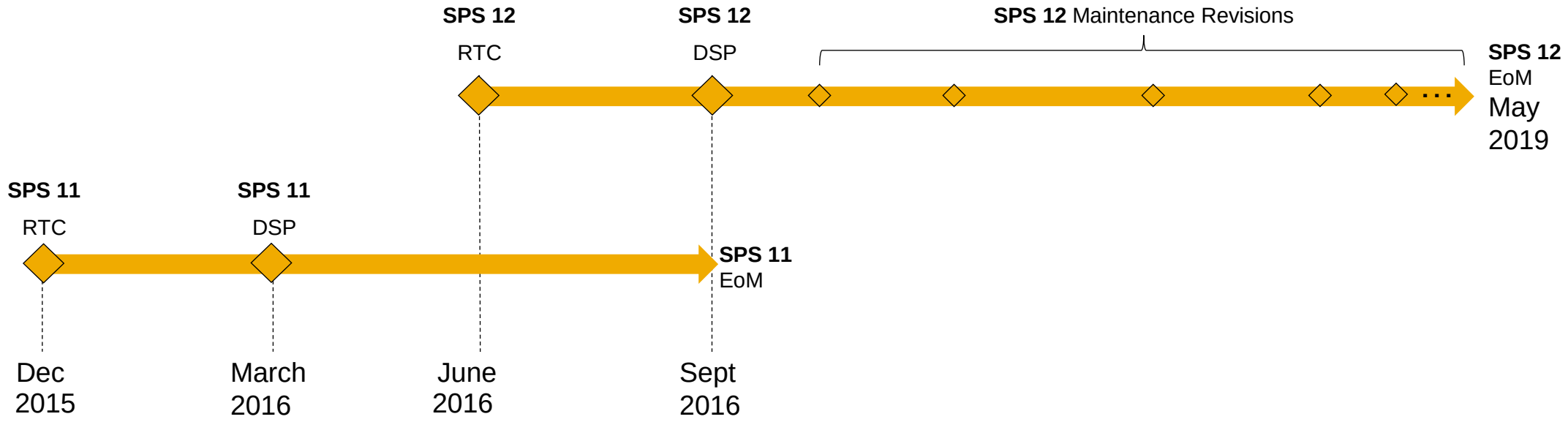
SAP HANA Maintenance Strategy
Revision Strategy for SPS12

Customers running mission critical systems demand a *longer provisioning of Maintenance Revisions*

For SAP HANA SPS12:

- SAP will provide Maintenance Revisions for a period of *3 years* after SPS12 RTC
- There will be regular upgrade paths from SPS12 to any newer SPS



- See SAP Note 2021789 for further details

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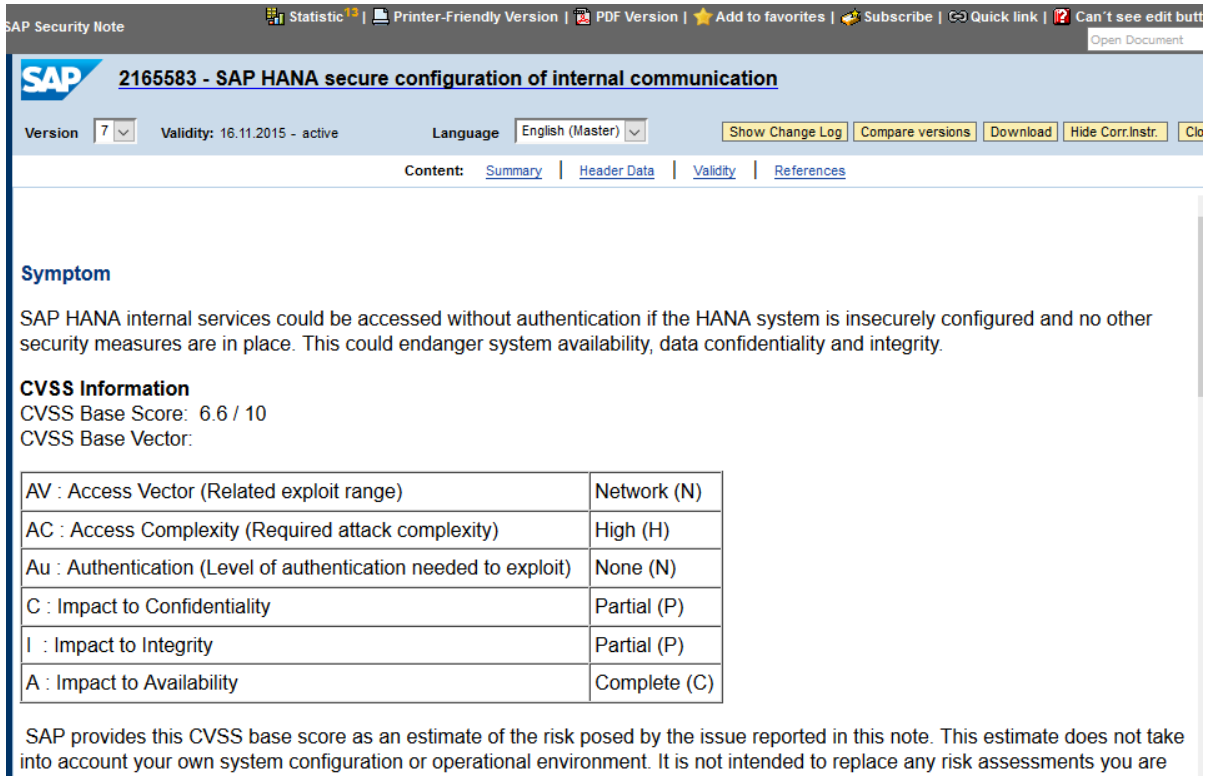
HANA Security Note Example (1/2)



SAP Security Note | Statistic | Printer-Friendly Version | PDF Version | Add to favorites | Subscribe | Quick link | Can't see edit butt

Open Document

2165583 - SAP HANA secure configuration of internal communication

Version 7 | Validity: 16.11.2015 - active | Language English (Master) | Show Change Log | Compare versions | Download | Hide Corr.Instr. | Clo

Content: Summary | Header Data | Validity | References

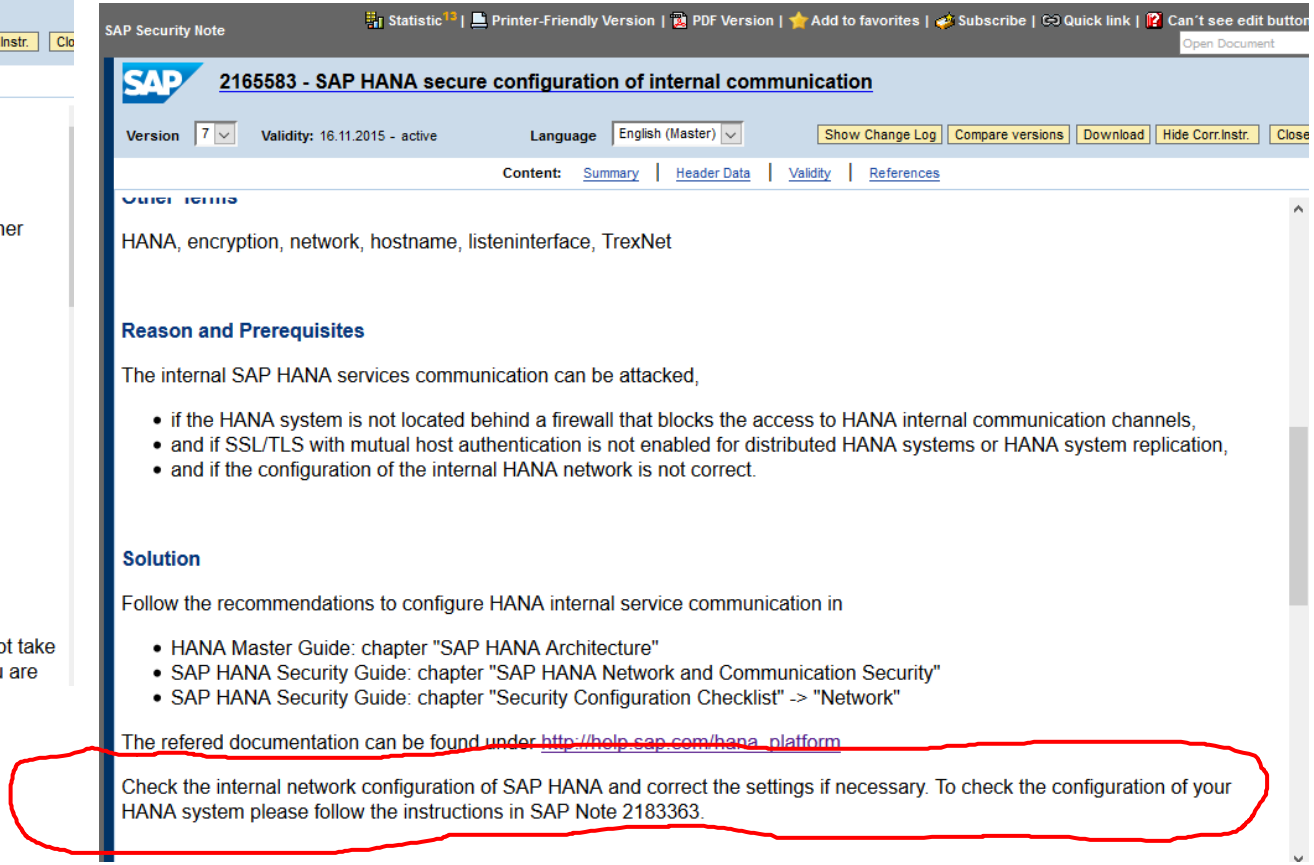
Symptom

SAP HANA internal services could be accessed without authentication if the HANA system is insecurely configured and no other security measures are in place. This could endanger system availability, data confidentiality and integrity.

CVSS Information
CVSS Base Score: 6.6 / 10
CVSS Base Vector:

AV : Access Vector (Related exploit range)	Network (N)
AC : Access Complexity (Required attack complexity)	High (H)
Au : Authentication (Level of authentication needed to exploit)	None (N)
C : Impact to Confidentiality	Partial (P)
I : Impact to Integrity	Partial (P)
A : Impact to Availability	Complete (C)

SAP provides this CVSS base score as an estimate of the risk posed by the issue reported in this note. This estimate does not take into account your own system configuration or operational environment. It is not intended to replace any risk assessments you are



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2165583 - SAP HANA secure configuration of internal communication

Version 7 | Validity: 16.11.2015 - active | Language English (Master) | Show Change Log | Compare versions | Download | Hide Corr.Instr. | Close

Content: Summary | Header Data | Validity | References

HANA, encryption, network, hostname, listeninterface, TrexNet

Reason and Prerequisites

The internal SAP HANA services communication can be attacked,

- if the HANA system is not located behind a firewall that blocks the access to HANA internal communication channels,
- and if SSL/TLS with mutual host authentication is not enabled for distributed HANA systems or HANA system replication,
- and if the configuration of the internal HANA network is not correct.

Solution

Follow the recommendations to configure HANA internal service communication in

- HANA Master Guide: chapter "SAP HANA Architecture"
- SAP HANA Security Guide: chapter "SAP HANA Network and Communication Security"
- SAP HANA Security Guide: chapter "Security Configuration Checklist" -> "Network"

The refered documentation can be found under http://help.sap.com/hana_platform

Check the internal network configuration of SAP HANA and correct the settings if necessary. To check the configuration of your HANA system please follow the instructions in SAP Note 2183363.

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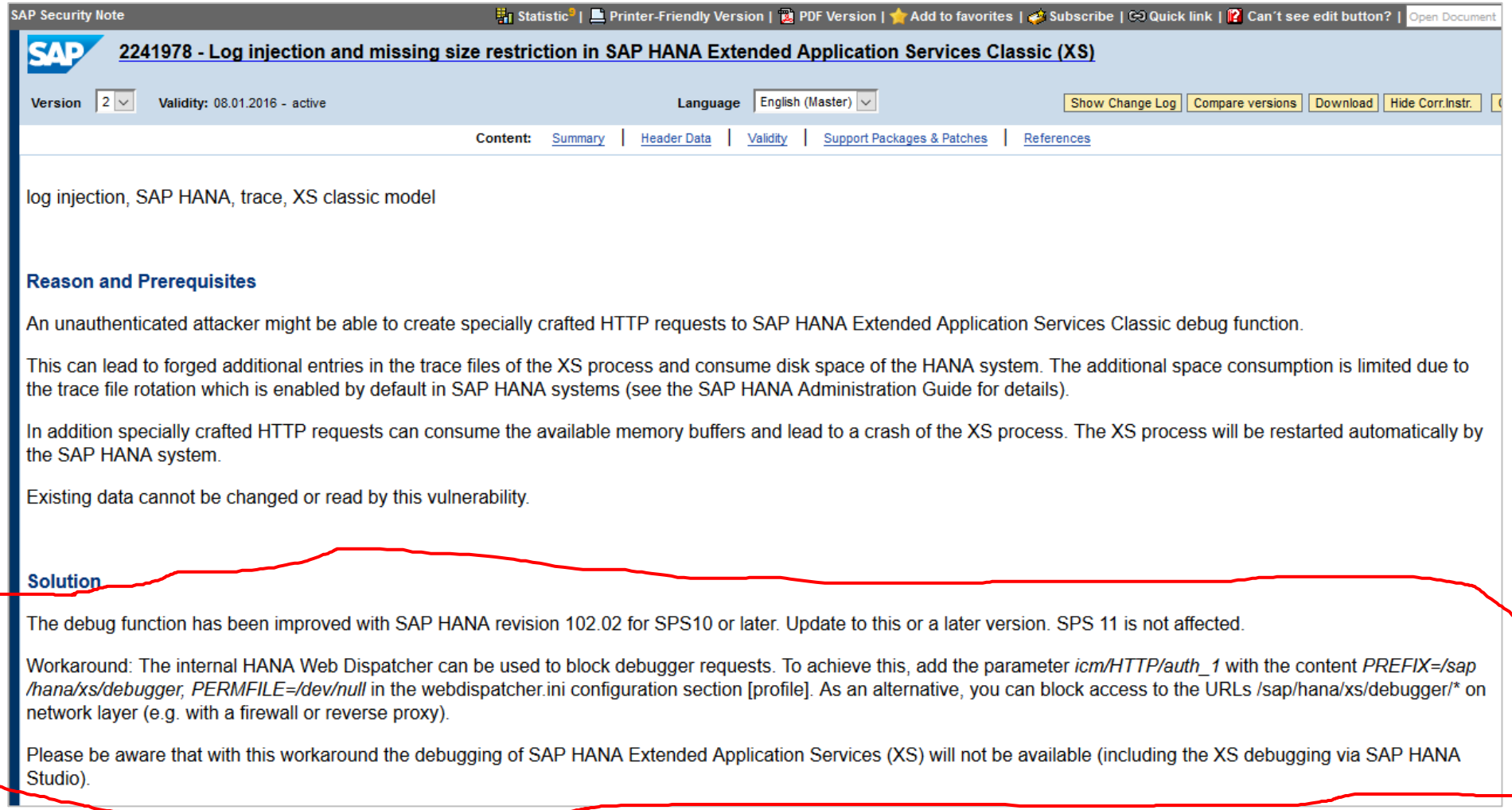
HANA Security Note Example (2/2)



SAP Security Note | Statistic | Printer-Friendly Version | PDF Version | Add to favorites | Subscribe | Quick link | Can't see edit button? | Open Document

2241978 - Log injection and missing size restriction in SAP HANA Extended Application Services Classic (XS)

Version 2 | Validity: 08.01.2016 - active | Language English (Master) | Show Change Log | Compare versions | Download | Hide Corr.Instr.

Content: Summary | Header Data | Validity | Support Packages & Patches | References

log injection, SAP HANA, trace, XS classic model

Reason and Prerequisites

An unauthenticated attacker might be able to create specially crafted HTTP requests to SAP HANA Extended Application Services Classic debug function.

This can lead to forged additional entries in the trace files of the XS process and consume disk space of the HANA system. The additional space consumption is limited due to the trace file rotation which is enabled by default in SAP HANA systems (see the SAP HANA Administration Guide for details).

In addition specially crafted HTTP requests can consume the available memory buffers and lead to a crash of the XS process. The XS process will be restarted automatically by the SAP HANA system.

Existing data cannot be changed or read by this vulnerability.

Solution

The debug function has been improved with SAP HANA revision 102.02 for SPS10 or later. Update to this or a later version. SPS 11 is not affected.

Workaround: The internal HANA Web Dispatcher can be used to block debugger requests. To achieve this, add the parameter *icm/HTTP/auth_1* with the content *PREFIX=/sap /hana/xs/debugger, PERMFILE=/dev/null* in the webdispatcher.ini configuration section [profile]. As an alternative, you can block access to the URLs /sap/hana/xs/debugger/* on network layer (e.g. with a firewall or reverse proxy).

Please be aware that with this workaround the debugging of SAP HANA Extended Application Services (XS) will not be available (including the XS debugging via SAP HANA Studio).

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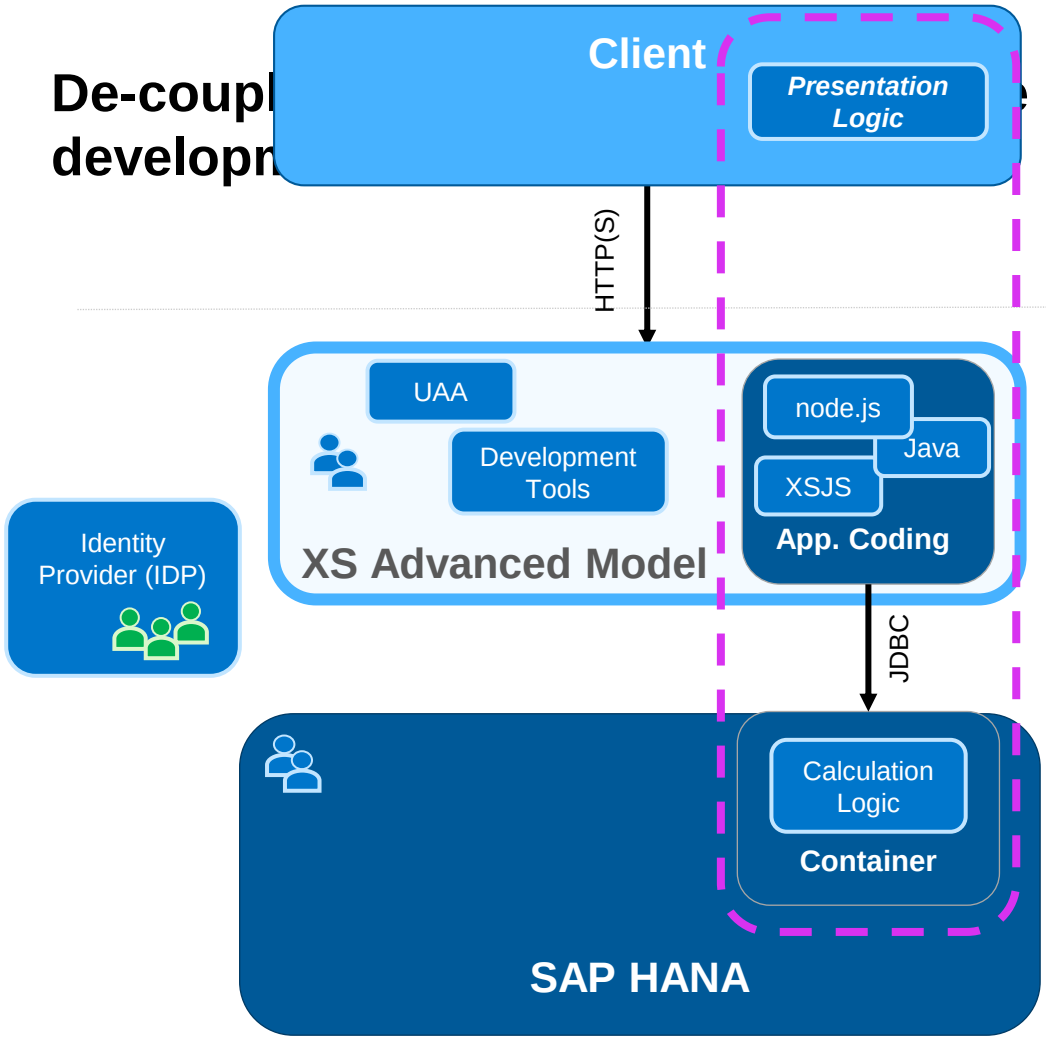
Applications built on SAP HANA XS advanced model (SPS11)

De-coupl **patching of database, application server and developn**



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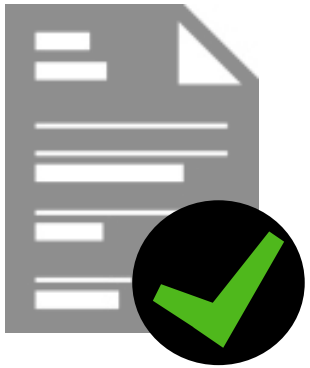
What is preventing you from upgrading your systems?

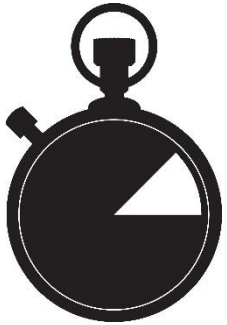
SAP HANA offers features that support you in making revision upgrades as painless as possible

Reduced testing effort



- **Capture and replay**

No/reduced downtime



- **SAP HANA zero downtime maintenance (based on system-replication)**
- **Upgrade by moving tenants (based on multi-tenant database container scenarios)**

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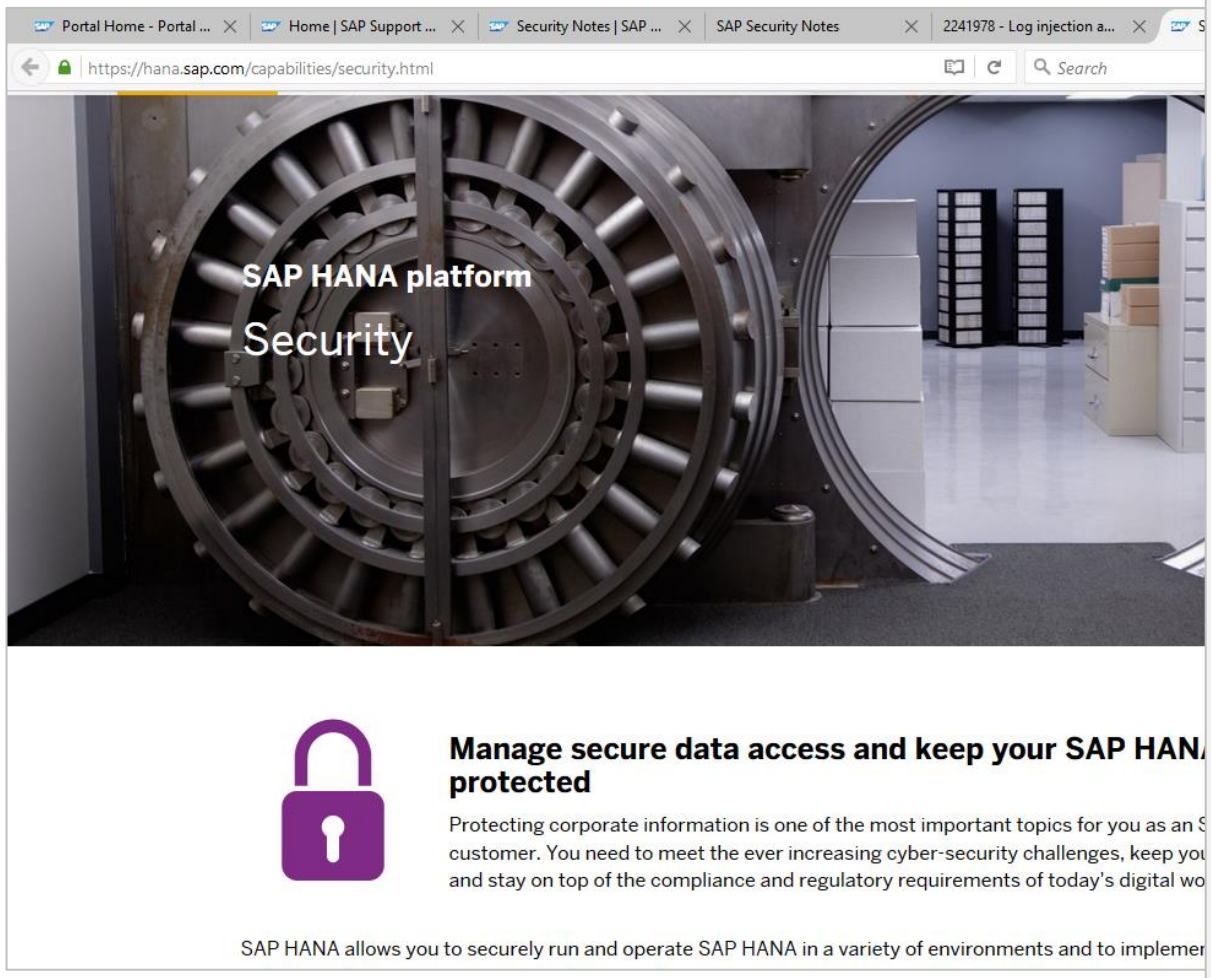
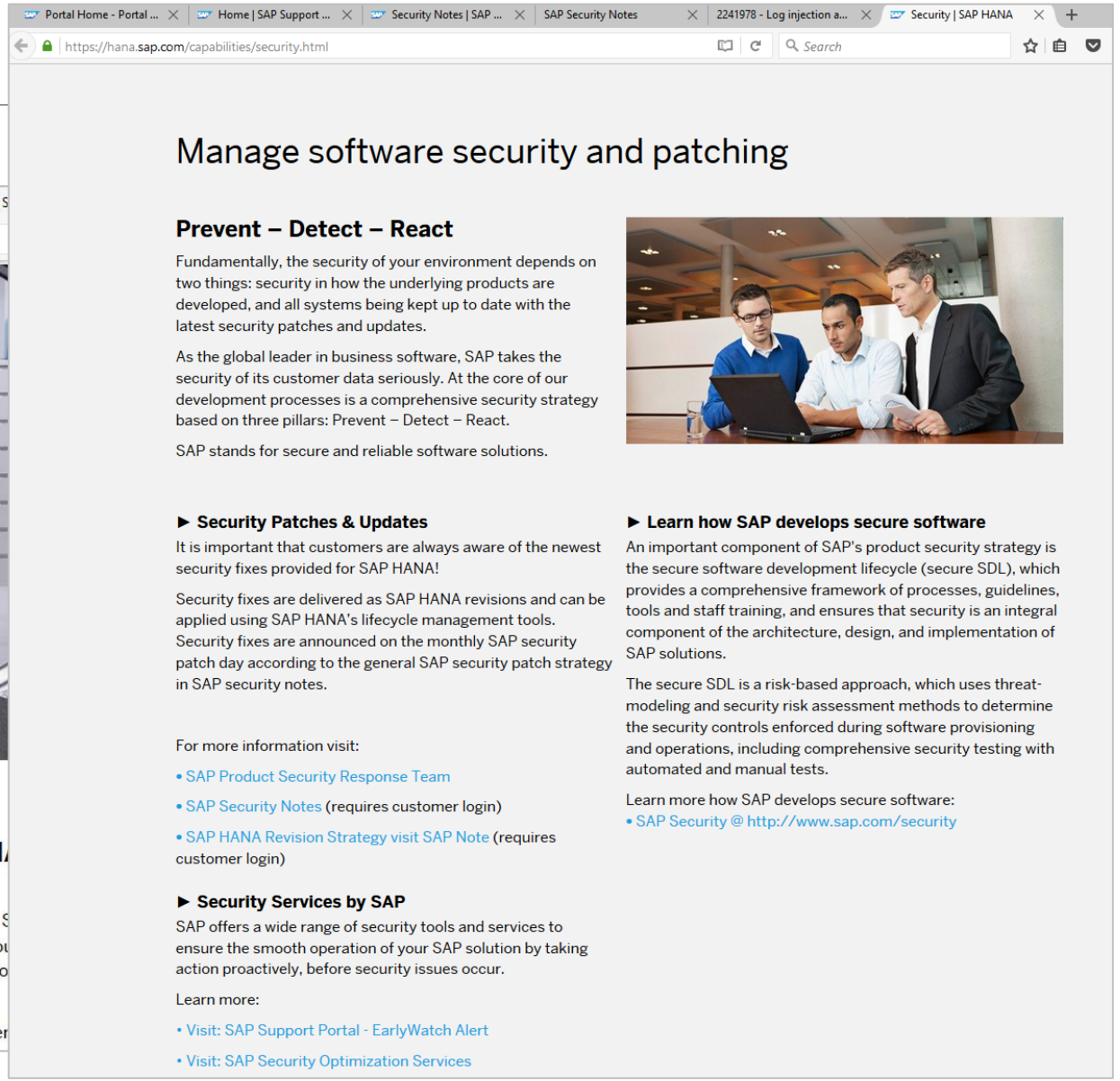
Stay Informed!

http://hana.sap.com/security





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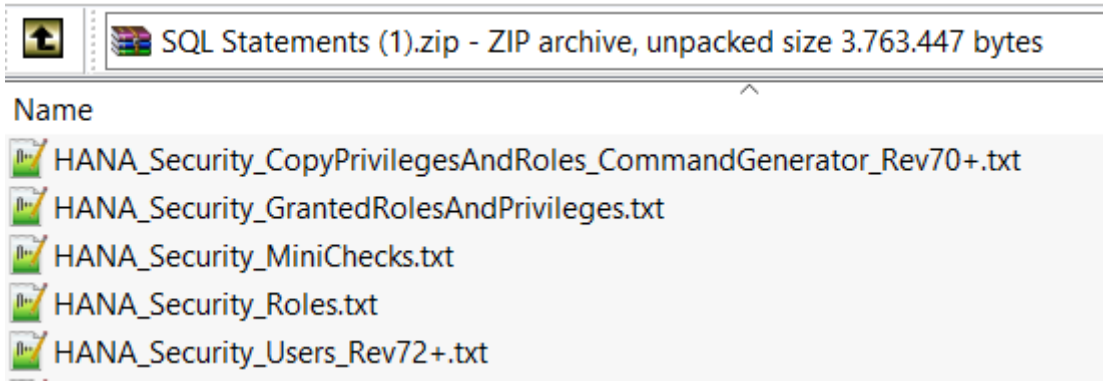
How to use SAP HANA Mini Check for Security Validation

SAP HANA Security Checklists and Recommendations For SAP HANA Database
http://help.sap.com/hana/SAP_HANA_Security_Checklists_and_Recommendations_en.pdf

Note 1969700 - SQL statement collection for SAP HANA

see files HANA_Security_*.txt



Note 1999993 - How-To: Interpreting SAP HANA Mini Check Results

see Area SECURITY

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Note 2252312 - Insufficient logging of RFC in SAL

This note has several other notes as prerequisites (2176138, 2128095, 2124538, 2025307, 1970644, 1968729, …)

Most likely you will run into trouble if note 2025307 is required. This note is related to note 1970644 and vice versa and it‘s quite difficult to implement both together.

Recommendation: Get at least the Support Packages of note 2025307:

700 SAPKB70032
701 SAPKB70117
702 SAPKB70217
710 SAPKB71019
711 SAPKB71114
730 SAPKB73013
731 SAPKB73115
740 SAPKB74010

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Note 2306709 - Code Injection vulnerability in Documentation and Translation Tools

Deactivation of critical but obsolete coding.

Logical filename `BC_T9N_EXT` is used in this report `TERM_TBX_IMPORT` which creates a log file.

Not relevant for Windows Servers:

Unix command `chmod 666` set file permission to „all users can read and write the file (but cannot execute it)”

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Note 2160790 - Missing authorization check in FS-CML

Standard authorization checks for `S_TCODE` added in case of `CALL TRANSACTION`

→ ok, we do not expect that roles have to be changed. In case users need new authorizations they usually get a nice error message.

However, take care with this note as the correction is untypical: some calls do not show error messages in case of missing authorizations.

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Note 2195409 - Potential modif./disclosure of persisted data in SAP CPQ Solution Configuration (SME)

Authorization check for `S_TABU_NAM` added (instead of calling function `VIEW_AUTHORITY_CHECK` which checks for `S_TABU_DIS` and `S_TABU_NAM`).

Manual activity to update specific roles – is it correct that the validity is restricted? Maybe…

Keep in mind that you have to deal with your roles in the customer name space as well.

Strange: one of the forms is called `UPDATE_TABLE` but the authorization check is for activity `03` = display.

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Note 1882254 - Authorization check for logon data not based on passwords

Normal note – not a security note!

The note introduces a customizing switch `CHECK_NONPW_LGNDATA` in customizing table `USR_CUST` to separate authorization checks within `SU01` / `SU10`:

Change of passwords	`S_USER_GRP` activity `05` = change password
New: Change of other authentication related data like SNC name or certificate mapping	`S_USER_GRP` activity `36` = extended maintenance
Change of other user account data	`S_USER_GRP` activity `02` = change

The customizing tables `PRGN_CUST`, `SSM_CUST`, and `USR_CUST` contain several security related customizing switches. Use table `SSM_CID` to show the complete value help for all customizing switches. Have a close look to switches which show a note number in the short text.

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Note 1882254 - Authorization check for logon data not based on passwords

Samples for PRGN_CUST

ASSIGN_ROLE_AUTH	**ASSIGN** (Default), CHANGE: Checks When Assigning Users to Functions (Note 312682)
CHECK_S_USER_SAS	**YES** (Default), NO - Activation of Authorization Object S_USER_SAS (Note 536101)
GEN_PSW_MAX_DIGITS	Values between login/min_password_digits and 40 (default) - max. number of digits in generic password (Note 662466)
GEN_PSW_MAX_LENGTH	Values between login/min_password_lng - 40 (default)- max. password length of generated password (Note 915488)
GEN_PSW_MAX_LETTERS	Values between login/min_password_letters and 40 (default) - max. number of letters in generated password (Note 662466)
GEN_PSW_MAX_SPECIALS	Values between login/min_password_specials and 40 (default) - max.number of special characters in generated password (Note 662466)
REF_USER_CHECK	W (Default), **E**, S, I (Ignore) - Message Type When Assigning Reference Users with Other User Type (Note 513694)

Samples for USR_CUST

CHECK_NONPW_LGNDATA	<SPACE> (default), '**X**' - Check for activity 36 during change of non-password-based logon data (Note 1882254)
USER_GRP_REQUIRED	Default user group; due to this, the user group becomes a required entry field (Note 1663177)

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May 2016

Topics May 2016

News about invoker servlet (TA16-132A)

Introduction to CVSS v3

Security Notes on the Support Portal and the Launchpad

Note 2264239 - Failed Trusted System logon is reported as successful logon in the audit log

How to analyze old Support Package Notes which become visible now

RFC Gateway Settings
Note 1444282 - gw/reg_no_conn_info settings

Note 1933375 - RU ERP for Banking. Missing authorization check. Potential modification of persisted data

Note 2051717 - [MUNICH] Review of Testcase 100 / Report RSORAVCR of component BC-CCM-MON-ORA

Note 2195409 - Potential modif./disclosure of persisted data in SAP CPQ Solution Configuration (SME)

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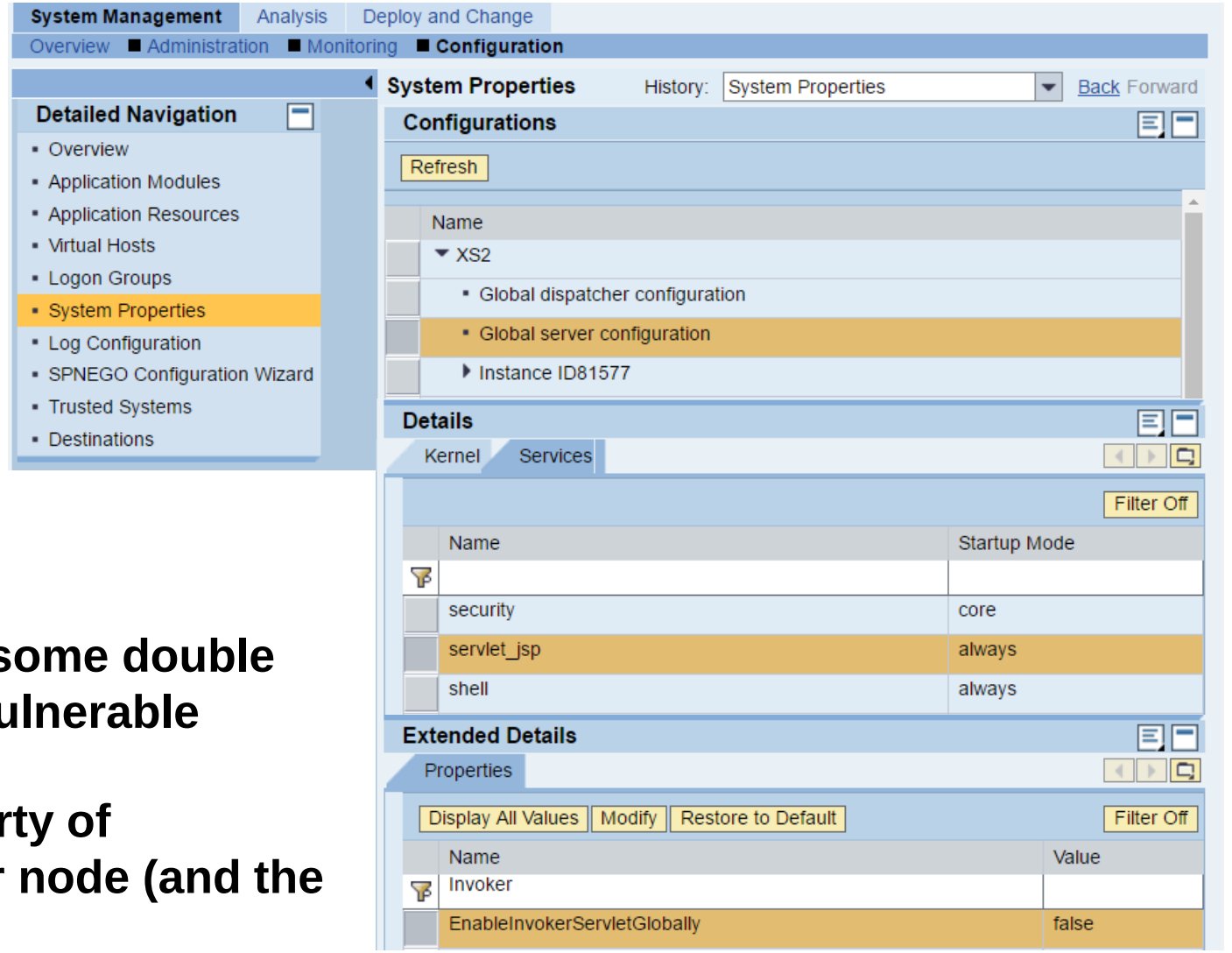
News about invoker servlet Alert (TA16-132A)

Alert (TA16-132A)
Exploitation of SAP Business Applications
https://www.us-cert.gov/ncas/alerts/TA16-132A

Solution from 2010:
Note 1445998 - Disabling invoker servlet

Good news: The Invoker Servlet has been disabled by default as of release 7.20.

But: In case of older systems – including some double stack systems – you have to disable the vulnerable feature manually by changing the value of `EnableInvokerServletGlobally` property of `servlet_jsp` service on the global server node (and the instance server nodes) to `false`.



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News about invoker servlet
Related notes

Old applications - either from SAP or created as a custom application - may rely on using the invoker servlet. The attachment of note 1445998 describes how to identify such use of the invoker servlet.

After disabling the invoker servlet you may get the following 403 response code:
Error: Servlet with class <class name> cannot be loaded.

SAP had updated several applications to use individual servlets instead and does not use it anymore for productive applications:

Note 1460635 - RWB link "Index Administration" shows error 403 - forbidden
Note 1463661 - Open SQL monitors: Servlets cannot be loaded
Note 1467771 - Disabling invoker servlet in the portal
Note 1488846 - CRM ECO. Security - Invoker Servlet
Note 1535301 - Invoker Servlet Fix for IS-M/AMC
Note 1537663 - Biller Direct, Security - Invoker Servlet
Note 1589525 - Verb Tampering issues in CTC
Note 1598246 - Servlet declaration missing for LWC SOAP Dispatcher servlet
Note 1802092 - PDF display error due to invoker servlet disabled in NW 7.3
Note 1900752 - VSCANTEST Application returns 403 response code

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News about invoker servlet
Remote Java SOS

The parameter is checked by the Remote SOS Java (no Self-Service; not in EWA):

Invoker Servlet (JE165)

Procedure:
1. NWA: → Configuration → Infrastructure → Java System properties.
2. Select the "Services" tab.
3. Search for the Web Container (`servlet_jsp`).
4. Find the parameter `EnableInvokerServletGlobally`.

You may want to validate this file, too.

Evaluated Risk - High

Description: The invoker servlet is intended only to be used for rapid prototyping and allows HTTP clients to invoke servlets that have not been declared in the application's `/WEB-INF/web.xml` file.

A specially crafted URL using the invoker servlet feature can allow unauthenticated access to arbitrary servlets. In addition, there is no authentication needed in order to invoke these servlets.

Recommendation: The invoker servlet feature should be disabled to close the security gap described above.

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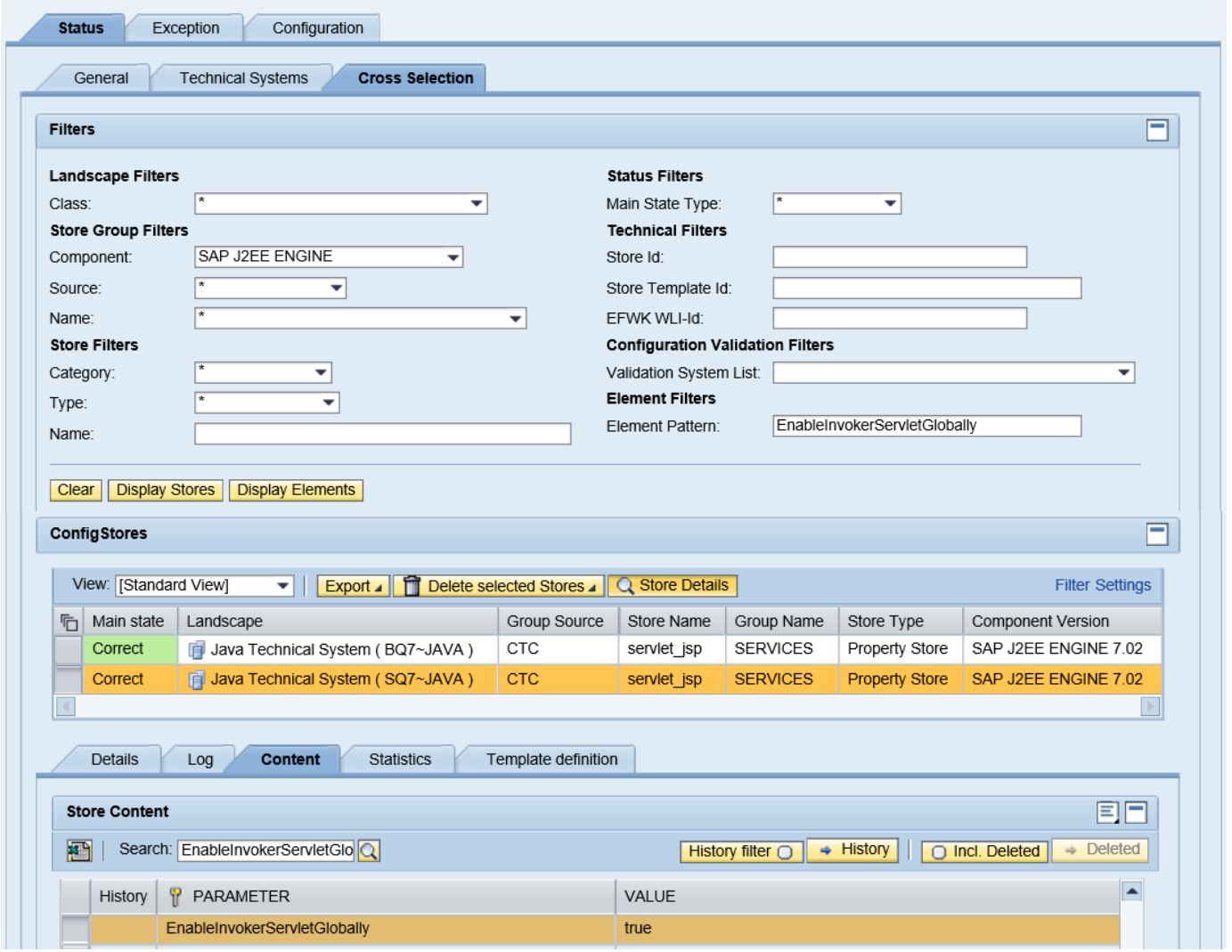
News about invoker servlet
SAP Solution Manager - Configuration Store

How to find elements in a Configuration Store:

- **Transaction `CCDB` → Cross Selection**
- **Enter search term(s)**
- **Choose configuration store**
- **Show Store Details**
- **Search for element**

Now, knowing the Configuration Store `servlet_jsp` we can construct a Target System for Item `EnableInvokerServletGlobally` in Configuration Validation



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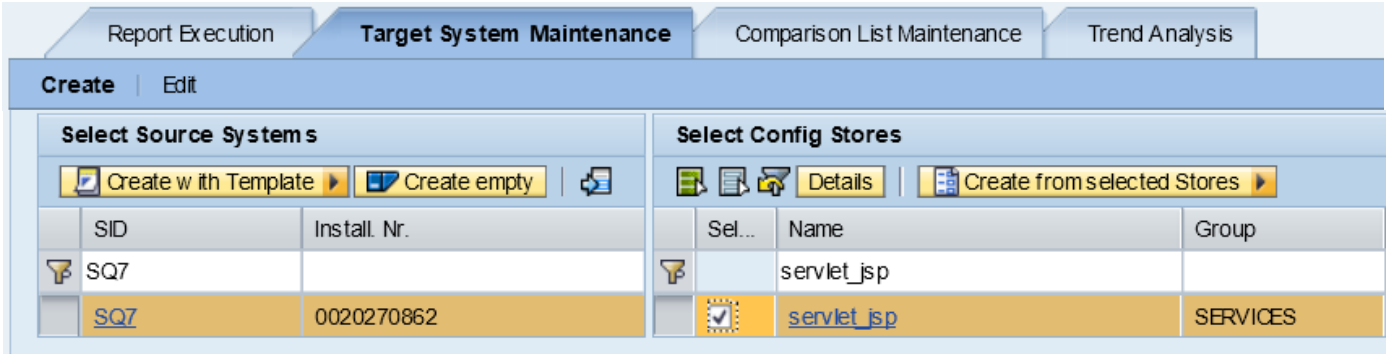
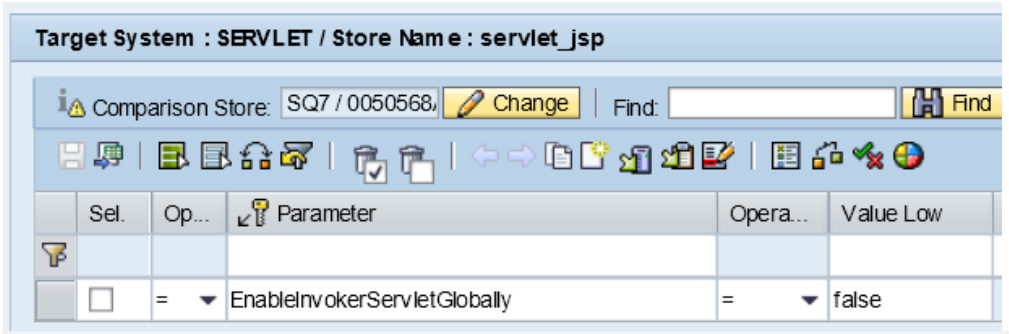
News about invoker servlet
SAP Solution Manager - Configuration Validation

Create Target System from selected store



Maintain Target System:

- **Remove all other parameters**
- **Set target value**



Reporting, e.g. using a 'dynamic comparision list' for systems having the store `servlet_jsp`

Configuration Items

SAP System ID	ConfigStore Name	Config. Item	Config. Item Value	Value of Target System	Compliance	Compliant (1=Yes, -1=No, ' '=Not valuated)
CCC	servlet_jsp	EnableInvokerServletGlobally	#	false	Item not found	-1
PJ2	servlet_jsp	EnableInvokerServletGlobally	false	false	Yes	1
SQ7	servlet_jsp	EnableInvokerServletGlobally	true	false	No	-1
U3Y	servlet_jsp	EnableInvokerServletGlobally	#	false	Item not found	-1
X3E	servlet_jsp	EnableInvokerServletGlobally	#	false	Item not found	-1

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Introduction to CVSS v3

As of March 01, 2016, SAP Security Note prioritization is based on CVSS v3 Base score. The revised prioritization scheme is aligned with the industry's best practice, and to provide better transparency to our customers.

From March 2016 security patch day, all *patch day security notes* will carry CVSS v3 Base score and vector information to assist our customers in their risk assessment.

For further details, please refer to our blog on CVSS v3.

Security Note Priority	CVSS v3 Base score
Low	0.1 - 3.9
Medium	4.0 - 6.9
High	7.0 - 8.9
Hot News	9.0 - 10.0

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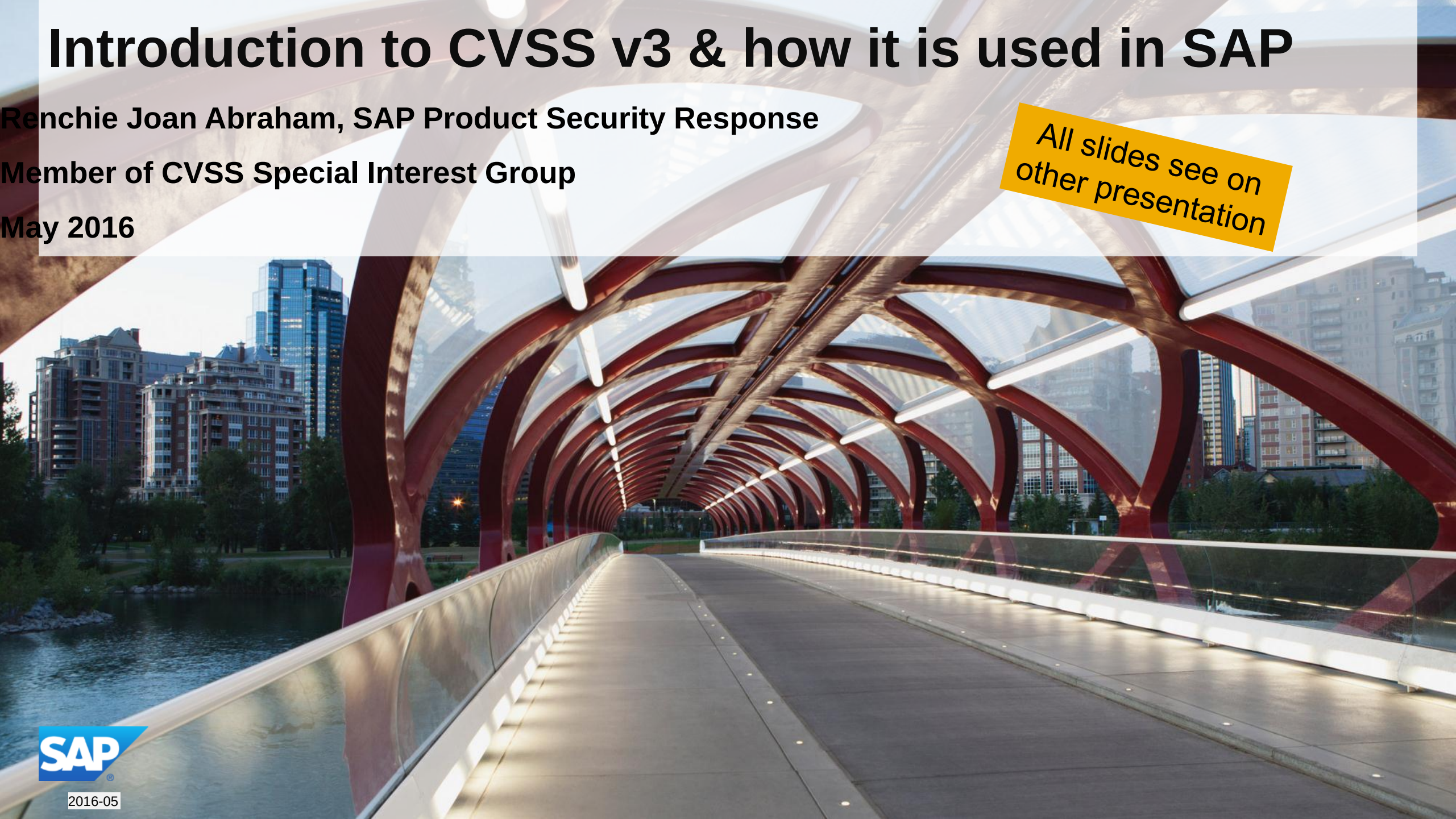
Introduction to CVSS v3 & how it is used in SAP

Renchie Joan Abraham, SAP Product Security Response

Member of CVSS Special Interest Group

May 2016

All slides see on other presentation



2016-05

Base metric scoring changes in CVSS v3 (compared to CVSS v2)

CVSS v2 Base Scoring

Metric Group	Metric Values
Access Vector (AV):	Local, Adjacent Network, Network
Access Complexity (AC):	High, Medium, Low
Authentication (Au):	Multiple, Single, None
Confidentiality Impact (C):	None, Partial, Complete
Integrity Impact (I):	None, Partial, Complete
Availability Impact (A):	None, Partial, Complete

CVSS v3 Base Scoring

Metric Group	Metric Values
Attack Vector (AV): NEW	Physical, Local, Adjacent Network, Network
Attack Complexity (AC): NEW	High, Low
Privileges required (PR): NEW	High, Low, None
User Interaction (UI): NEW	None, Required
Scope (S): NEW	Unchanged, Changed
Confidentiality (C):	None, Low, High NEW
Integrity (I):	None, Low, High NEW
Availability (A):	None, Low, High NEW

- Revision in base metric group
- Significant changes in the meaning of CIA impact metric vectors
  - CVSS v3 considers data privacy in impact calculation, which affects the resulting CVSS score (For example, Heartbleed)

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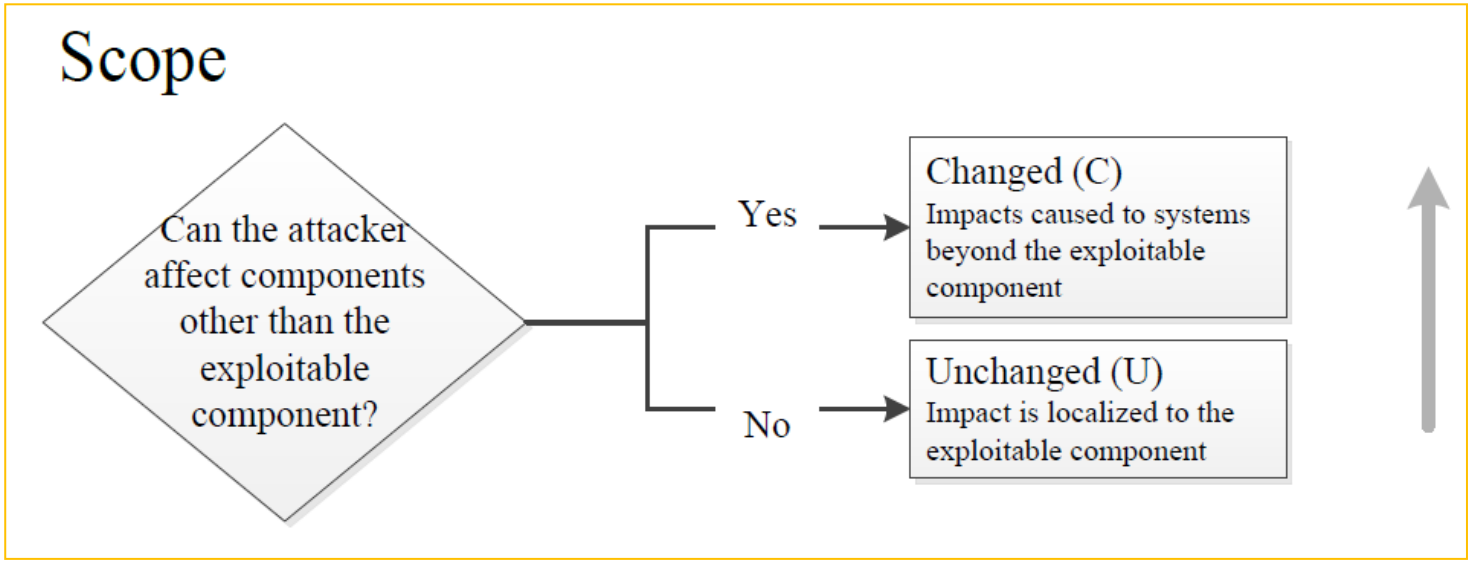
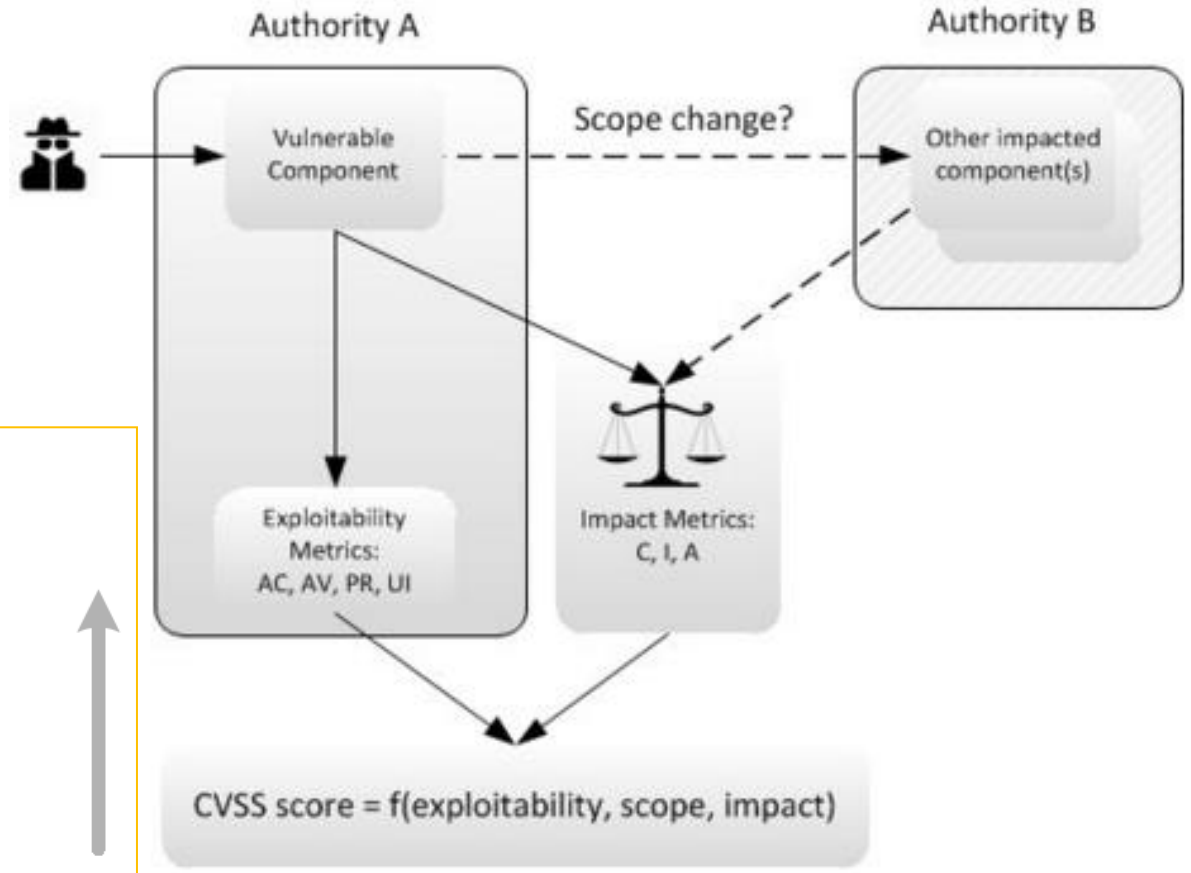
Key conceptual changes in CVSS v3: Introduction of Scope metric

- Vulnerability scores are more specific now, not scored against the entire host OS
  - The score factors in, the impact on the component having the vulnerability & the impact on component(s) affected by the vulnerability.





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How CVSS v3 is used in SAP ?

The security note priority is now calculated entirely based on CVSS v3 Base metric score.

Note Priority	CVSS v3 Base score
Low	0.1 - 3.9
Medium	4.0 - 6.9
High	7.0 - 8.9
Hot News	9.0 - 10.0

Simple and transparent prioritization scheme based on an open standard.

CVSS has 2 additional sets of metric groups, which can be derived by SAP customers using tools by FIRST or NVD:

Temporal: represents the characteristics of a vulnerability that change over time but not among user environments.
Environmental: represents the characteristics of a vulnerability that are relevant and unique to a particular user's environment.

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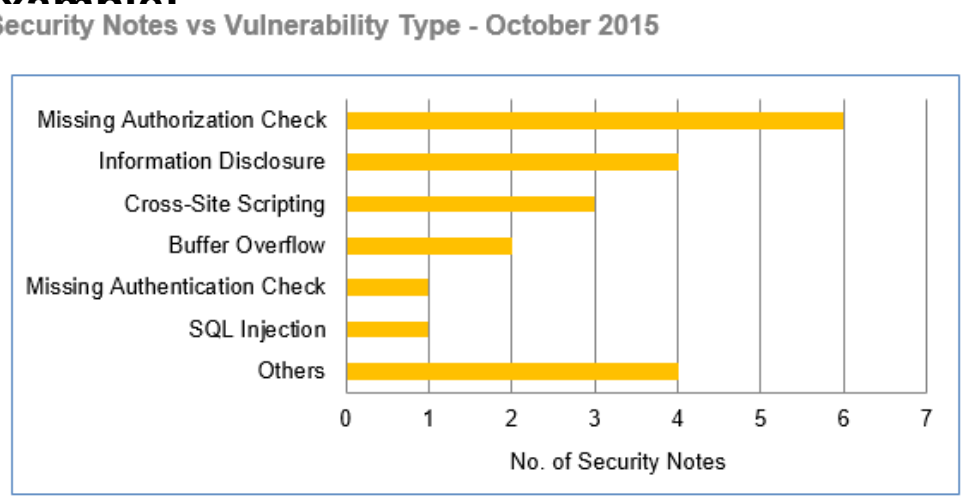
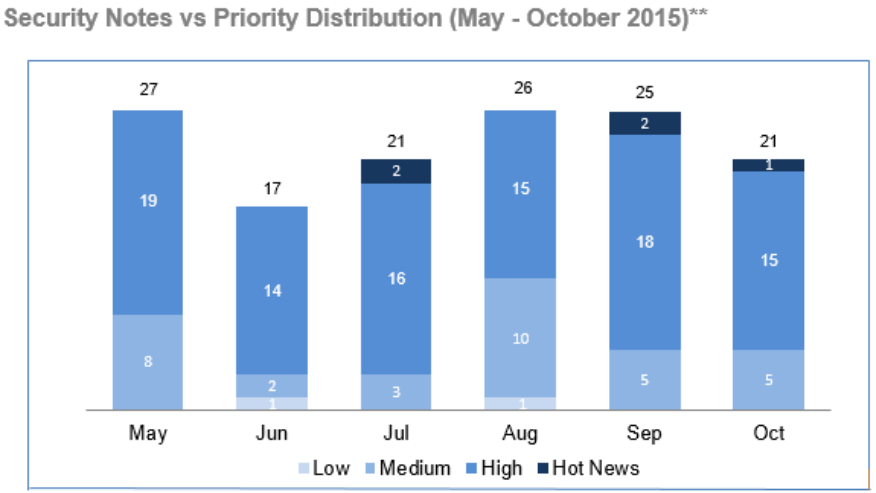
Publications by PSRT:

1. **The Official SAP Product Security Response Space**
   https://scn.sap.com/docs/DOC-65837

Example:





2. **CVSS blog posts**
   https://scn.sap.com/community/security/blog/2016/04/12/introduction-to-cvss-how-sap-uses-it
   https://scn.sap.com/community/security/blog/2016/04/15/changes-to-cvss-in-version-30
   https://scn.sap.com/community/security/blog/2016/04/20/how-to-interpret-saps-cvss-score

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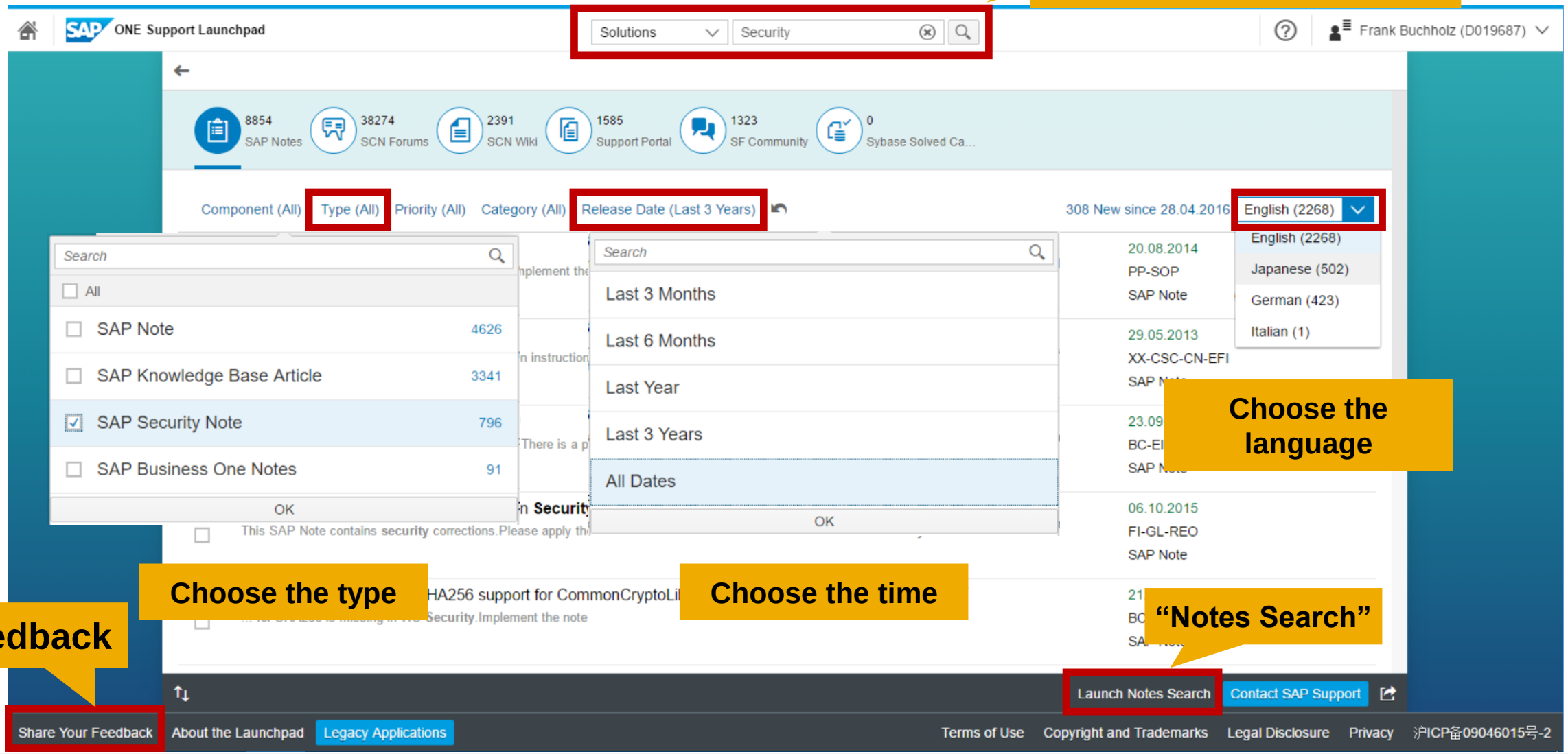
“General Search” on the Launchpad



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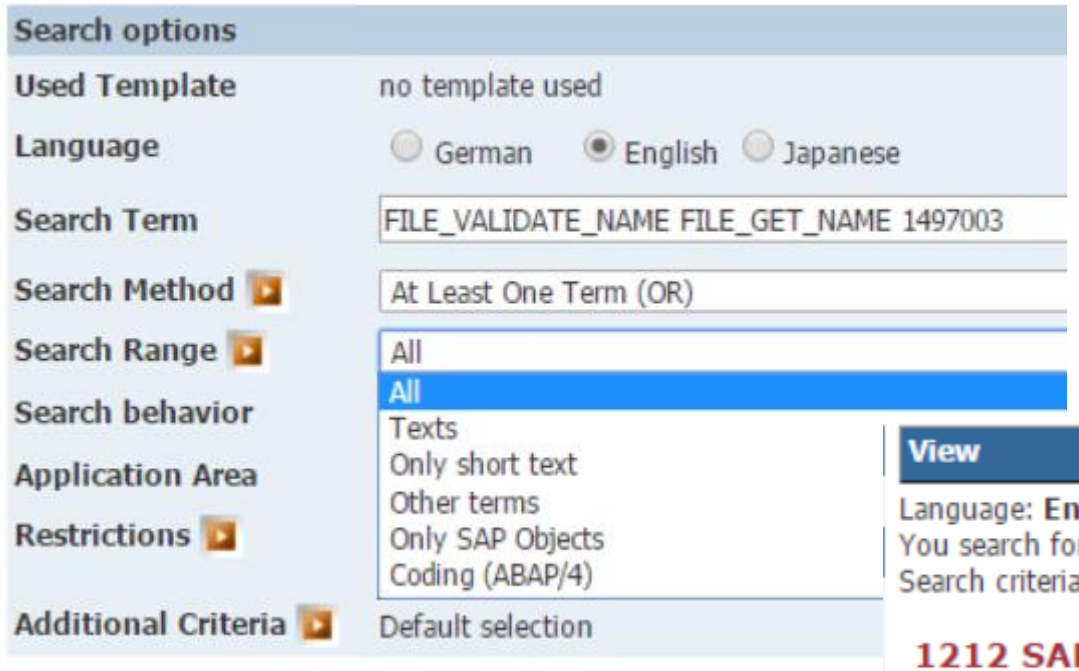
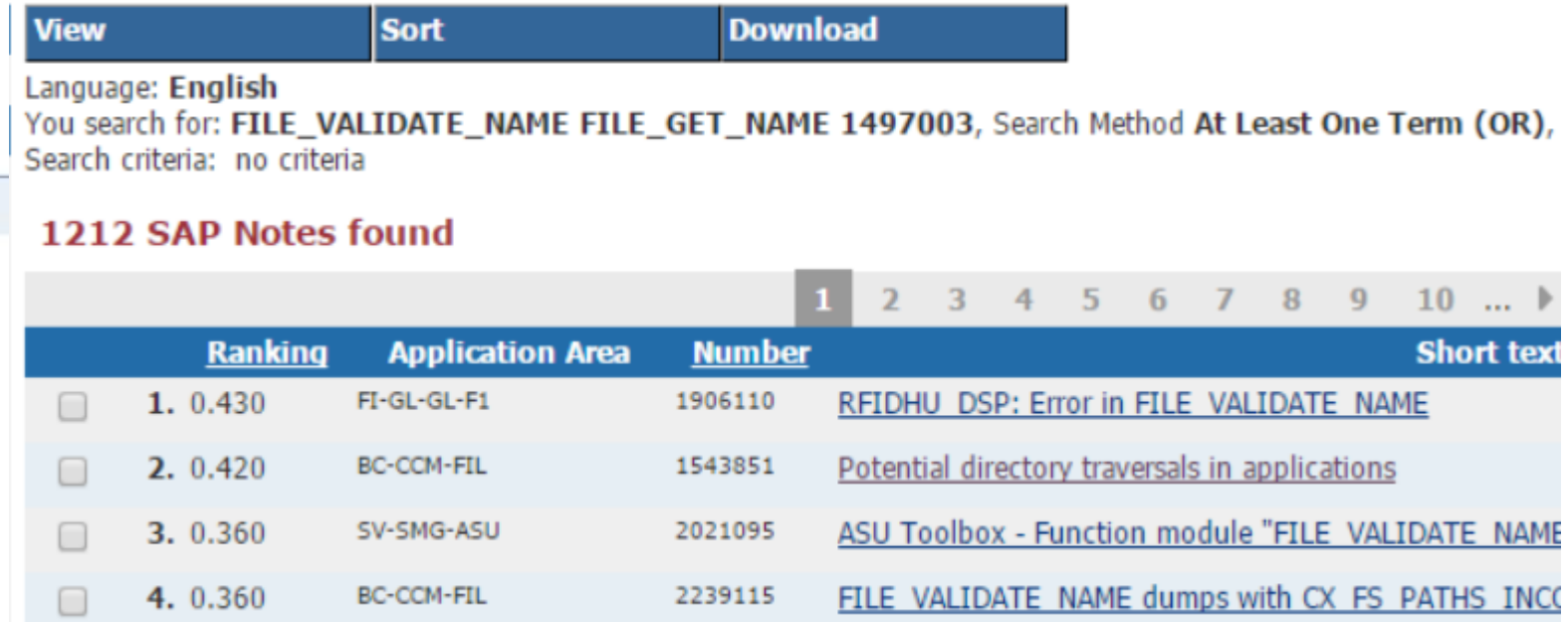
“Notes Search” in the Support Portal
https://support.sap.com/notes



Example to identify notes related to a Directory Traversal project by searching for:

```
FILE_VALIDATE_NAME FILE_GET_NAME 1497003
```

This traditional support app searches in ABAP correction instructions, too.



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Note 2264239 - Failed Trusted System logon is reported as successful logon in the audit log

Issue: Last logon date (table `USR02` / report `RSUSR200`) is updated in case of an unsuccessful Trusted-RFC connection because of missing authorizations for `S_RFCACL`

The Kernel patch solves the issue
The ABAP corrections updates the Security Audit Log

Related note:
Note 320991 - Error codes during logon (list)

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How to analyze old Support Package Notes which become visible now

Filter criteria

Released On
- All Time
- In the Last 30 Days
- From 13.04.2016 To

Category
- Patch Day Notes
- Support Package Notes
- Both Types

Search

Released SAP Security Notes list based on the date range selected

10 SAP Security Note(s) found.

Number	Application Area	Short text	Priority	Released On
			*	*
1444282	BC-CST-GW	gw/reg_no_conn_info settings	Correction with medium priority	29.04.2016
1850010	CRM-CM	Potential modif./disclosure of persisted data in CRM-CM	Correction with medium priority	27.04.2016
1933375	XX-CSC-RU-FI	RU ERP for Banking. Missing authorization check. Potentential modification of persisted data	Correction with medium priority	25.04.2016
2043447	SV-SMG-TWB-BCA	Missing authorization check in SV-SMG-BPCA	Correction with medium priority	22.04.2016
2051717	BC-CCM-MON-ORA	[MUNICH] Review of Testcase 100	Correction with medium priority	21.04.2016
2195409	LO-SLC	Potential modif./disclosure of persisted data in SAP CPQ Solution Configuration (SME)	Correction with medium priority	06.05.2016
2201916	XX-CSC-IN-FI	Missing authorization check in XX-CSC-IN-FI	Correction with medium priority	21.04.2016

date with “Valid from” date

ne visible now and
are re-released

Translation is possibly not up-to-date

SAP Security Note

1444282 - gw/reg_no_co

Version 11 **Validity:** 29.04.2016 active

SAP Security Note

1850010 - Potential mod

Version 2 **Validity:** 19.06.2013 active

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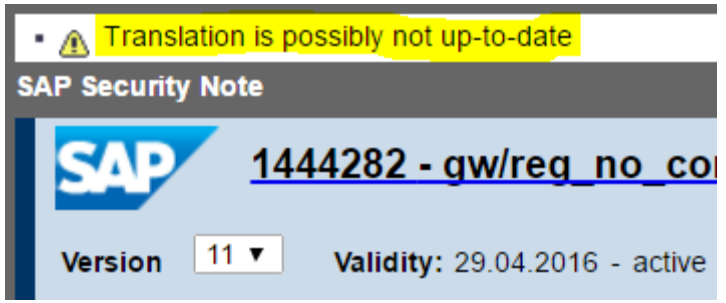
RFC Gateway Settings
Note 1444282 - gw/reg_no_conn_info settings



Re-released note to describe new setting with value 128 according to note 1848930 - Strong gw/prxy_info check (June 2013)

- **Maintain file `/usr/sap/<SID>/<instance>/data/prxyinfo` to use RFC Gateway proxy rules (respective the file defined by `gw/proxy_info`)**

- **Set `gw/reg_no_conn_info settings` = 255 to activate all RFC Gateway security settings**

Configuration Parameters (incl. `gw/proxy_info`)
https://help.sap.com/saphelp_nw70ehp2/helpdata/en/48/b0e64ba49c2883e10000000a42189c/content.htm

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Note 1933375 - RU ERP for Banking. Missing authorization check. Potential modification of persisted data

This is an old note which is completely part of a Support Package.

The note solves a vulnerability issue about `CALL TRANSACTION` (plus some more) but introduces a new error which was solved with normal note 1946751. Do not forget to to implement this 2nd note if you apply the 1st note.

Later we see normal note 2033155 changing the correction.

All theses notes are old notes, which are completely part of a Support Package.

→ not important anymore

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Note 2201916 - Missing authorization check in XX-CSC-IN-FI

The note solves a vulnerability issue about `CALL TRANSACTION` but introduces a new error which was solved now with normal note 2304353. Do not forget to to implement this 2nd note if you apply the 1st note.

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Note 2051717 - [MUNICH] Review of Testcase 100 / Report RSORAVCR of component BC-CCM-MON-ORA

This seems to be an Oracle specific note. Do you need it if you use another database?

Using this report you execute following fixed database statements for the local or a remote database via ADBC calls:

```
analyze index <owner>."<segname>" validate structure
alter index <owner>."<segname>" coalesce
alter index <owner>."<segname>" rebuild online
```

The security vulnerability allows to modify these statements. Can you prove that your other database is not affected if such statements are executed?

→ Implement the note independently from your database

Tipp: Secure SA38, SE38 etc. as this report does not contain any authorization check.

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Note 2195409 - Potential modif./disclosure of persisted data in SAP CPQ Solution Configuration (SME)

Strange correction:

- **Authorization check for a generic authorization object instead of an application specific authorization object**
- **Authorization check for S_TABU_NAM instead of calling function VIEW_AUTHORITY_CHECK**
- **Forms are called UPDATE_TABLE and similar but the authorization check is about activity 03=display**

→ **If you implement this note then adjust roles for modelers that export configuration knowledge bases from the solution modeling environment into ECC**
Or wait – maybe there will be an update … or create a ticket to ask for advice

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April 2016

Topics April 2016

Note 2293011 - Upgrade Information: Default Users within SAP Solution Manager

Note 2285879 - SAL | Filter selection by user group as of NetWeaver 7.40
Note 2090487 - SAL | Enable recording of user groups (kernel part)

Note 2191612 - FAQ | Use of Security Audit Log as of NetWeaver 7.50

Note 2201295 - Unauthorized modification of displayed content in UR Control

Note 2284952 - Update 2 to Security Note 1971238

Note 2221657 - Code injection vulnerability in SAP Internet Communication Manager

How to identify HANA Security Notes

Note 2277492 - Configuration Validation: How-to transport Target Systems

Note 2177996 - Transaction PFCGMASSVAL Mass maintenance of authorization values in roles

Release 7.31 & 7.40: Improvement for ABAP Role Management

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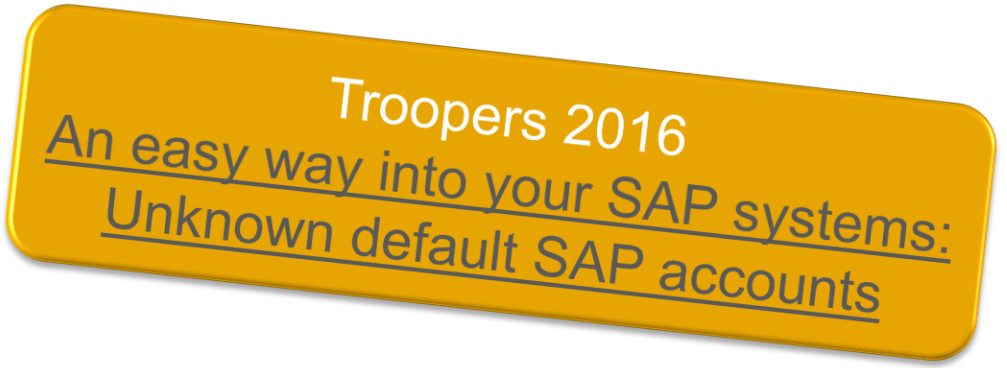
Note 2293011 - Upgrade Information: Default Users within SAP Solution Manager

About SAP Solution Manager 7.1 and 7.2 (if system was upgraded from older release)

The default passwords of the users being created by the former *Diagnostics Configuration* wizard (7.0) or transaction `SOLMAN_SETUP` (with 7.0 EHP1) are commonly known and might not have been changed in your system.



On the Solution Manager system

- `SOLMAN_BTC` (type system user)
- `CONTENTSERV` (type system user)
- `SMD_RFC` (type system user)
- `SMD_ADMIN` (type system user)
  Delete this user if you run SolMan 7.1 SP10 or higher. For lower version see note 2119627.

On the Managed systems (including the Solution Manager system itself)

- `SMDAGENT_<SAPSolutionManagerSID>` (type system user)
- `SAPSUPPORT` (type dialog)

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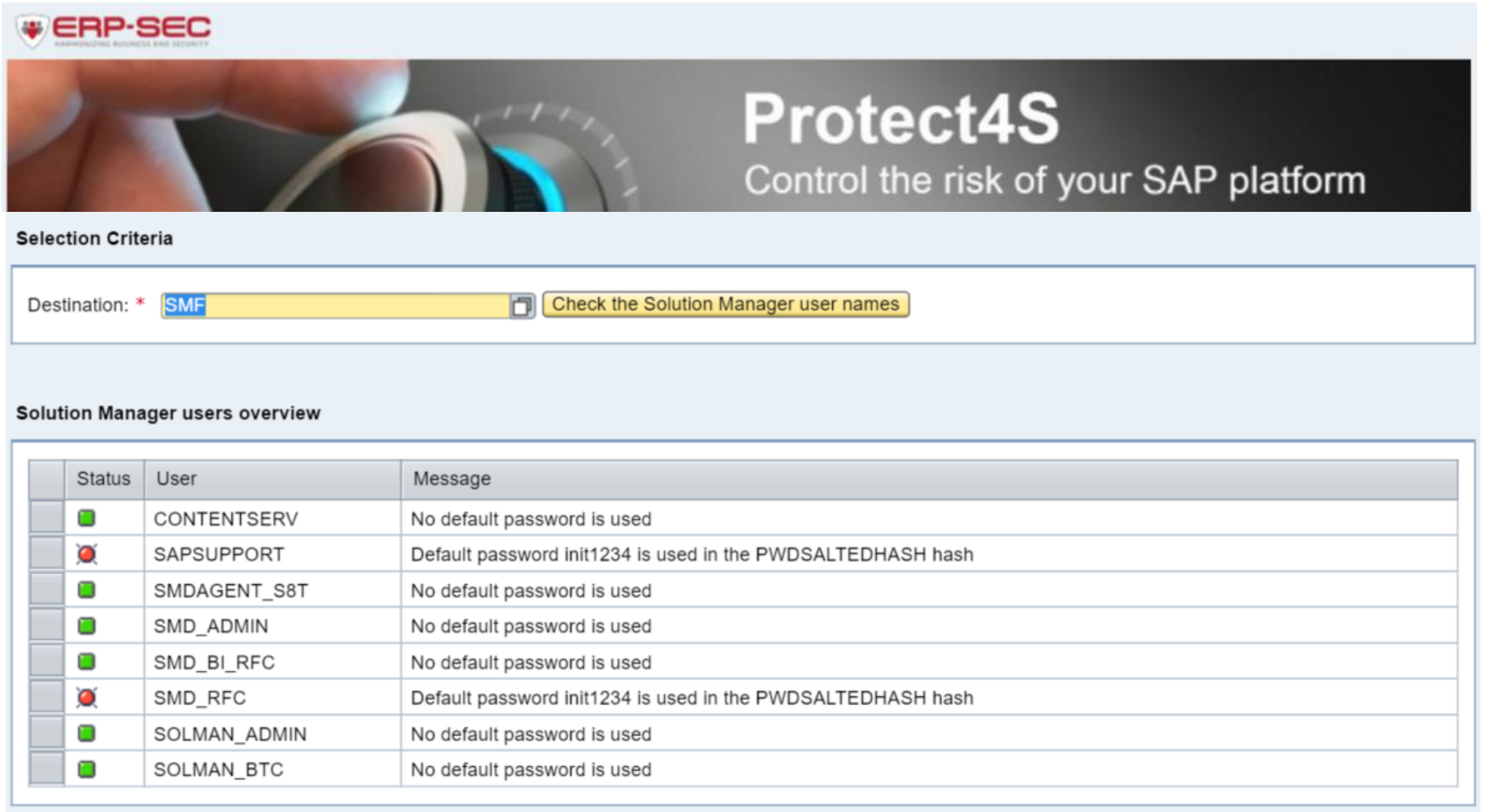
Note 2293011 - Upgrade Information: Default Users within SAP Solution Manager

ERP-SEC released a free tooling to check your SAP platform for default Solution Manager user passwords

March 9, 2016

https://protect4s.com/erp-sec-releases-free-tooling-check-sap-platform-default-solution-manager-users/



Status	User	Message
	CONTENTSERV	No default password is used
	SAPSUPPORT	Default password init1234 is used in the PWDSALTEDHASH hash
	SMDAGENT_S8T	No default password is used
	SMD_ADMIN	No default password is used
	SMD_BI_RFC	No default password is used
	SMD_RFC	Default password init1234 is used in the PWDSALTEDHASH hash
	SOLMAN_ADMIN	No default password is used
	SOLMAN_BTC	No default password is used

(The program works only if default of profile parameter `login/password_hash_algorithm` was used while creating the users.)

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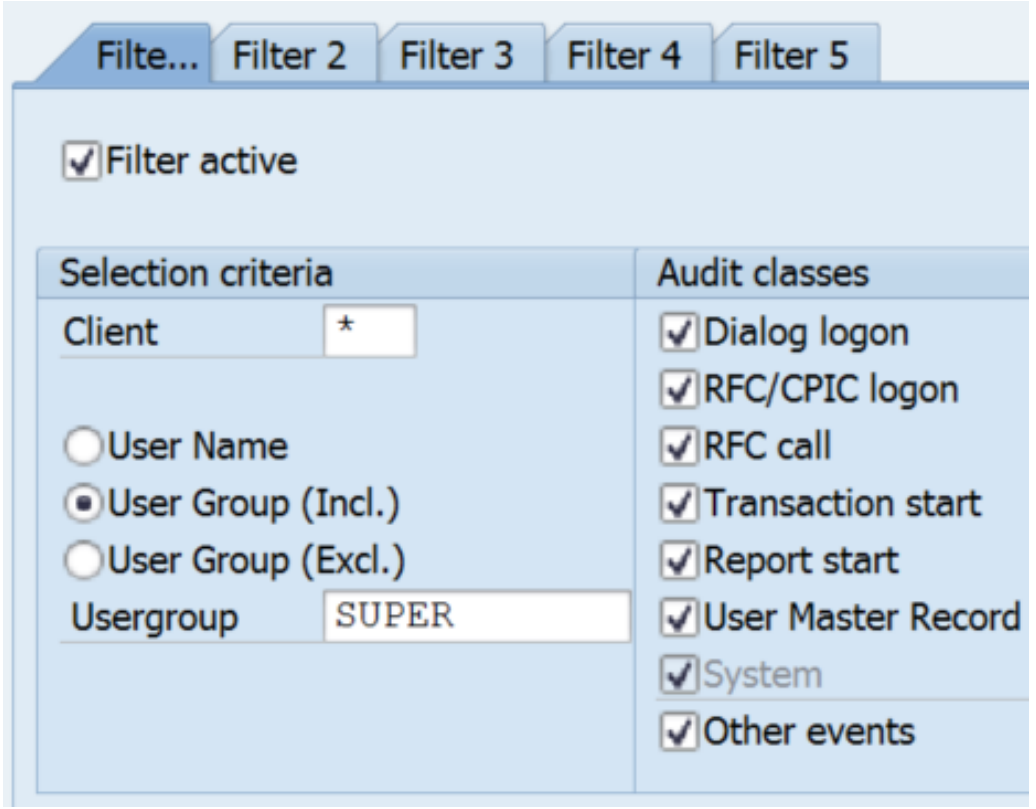
Note 2285879 - SAL | Filter selection by user group, NetWeaver 7.40
Note 2090487 - SAL | Enable recording of usergroups (kernel part)

Prerequisites:

- Note 2285879 - SAL | Filter selection by user group
  SAP_BASIS 7.40 SP 15 (no implementation via `SNOTE`)
  SAP_BASIS 7.50 SP 04
- Note 2090487 - SAL | Enable recording of user groups (kernel)
  Kernel 7.41 patch 210
  Kernel 7.42 patch 29
  Kernel 7.43 patch 4

Comments:

- Patterns for users are possible (`FF*` , `SAP#*`)
- Patterns for user groups are not possible
- You can include or exclude a user group
- You can define up to 15 filters
- Kernel parameters replace the profile parameters



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Note 2191612 - FAQ | Use of Security Audit Log as of NetWeaver 7.50

Configuration (Transaction RSAU_CONFIG)

The configuration of the Security Audit Log (SAL) takes place via the maintenance of general parameters and the maintenance of the events to be logged in profiles.

Administration of log data (Transaction RSAU_ADMIN)

Use this transaction to configure integrity protection for file-based log data and to reorganize obsolete files. In accordance with the parameterization of the recording type in the database, you can use this tool to reorganize the table RSAU_BUF_DATA by means of deletion or archiving.

Evaluation of log data (Transaction RSAU_READ_LOG)

Use this application to evaluate the logs both online and in the background.

Archived log data is read with transaction RSAU_READ_ARC.

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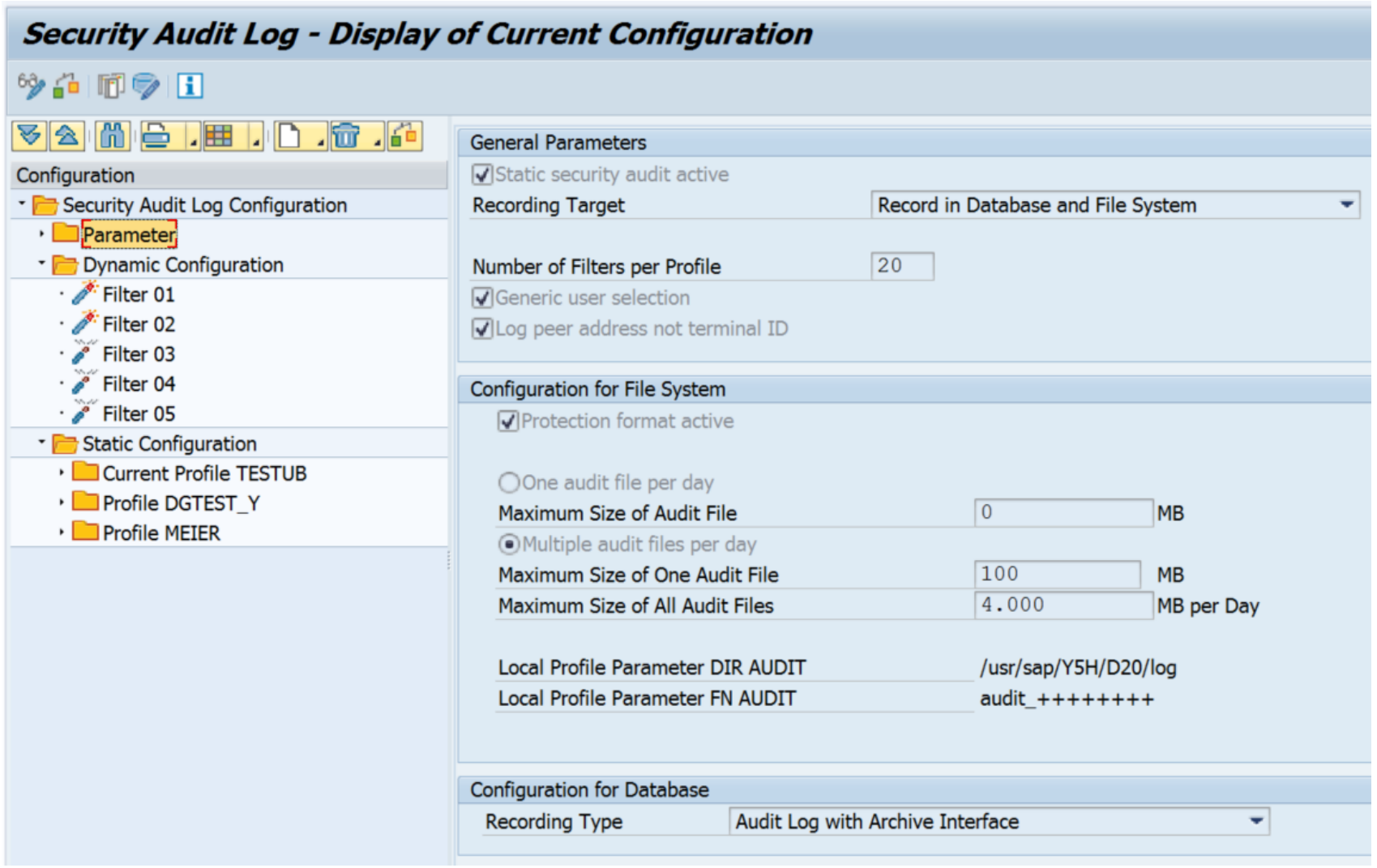
SAL: Configuration (Transaction RSAU_CONFIG)



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Note 2201295 - Unauthorized modification of displayed content in UR Control

This corrections contain parts for Web Dynpro ABAP, Web Dynpro JAVA and the Kernel and settings.

a) Web Dynpro ABAP

7.50: note 2207387, 7.40: note 2154957, 7.31: note 2156710, 7.30: note 2454726
7.11: note 2159126, 7.02: note 2097342, 7.01: note 2154821,
Each note points to several other notes containing ABAP parts and recommends a manual task.

b) Web Dynpro JAVA

This note 2201295 shows required Java patches

c) SAP GUI for HTML / Kernel

SAP kernel 745/742/722: note 2203088

SAP kernel 721: note 2214695

Conclusion:

- get latest ABAP SP of SAP_UI, Java patches, and Kernel and consider to adjust memory settings as described by note 2180736.

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Note 2284952 - Update 2 to Security Note 1971238

It’s a side-effect note: This note does not solve an additional security vulnerability but corrects an error introduced with previous note.

Note 1971238 March 2014 → Note 2017050 March 2016 → Note 2284952 April 2016

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Note 2221657 - Code injection vulnerability in SAP Internet Communication Manager (and WebDispatcher)

ICM of the Kernel and Webdispatcher are very similar

Set profile parameter `icm/HTTP/allow_invalid_host_header` to activate the settings

Combining both notes 2221657 and 2256185 you get following required patch level for disp+work respective the WebDispatcher:

SAP KERNEL 7.21 patch 623
SAP KERNEL 7.22 patch 110 — see also Note 2292019 - SAP Support Package Stack Kernel 7.22 (EXT) Patch Level 101
SAP KERNEL 7.42 patch 325
SAP KERNEL 7.44 patch 39
SAP KERNEL 7.45 patch 100 — see also Note 276394 - SAP Support Package Stack Kernel 7.45 Patch Level 100
SAP KERNEL 7.46 patch 25
SAP KERNEL 7.47 patch 12
SAP KERNEL 8.04 patch 110

respective

SAP WEB DISPATCHER 7.42 patch 319
SAP WEB DISPATCHER 7.45 patch 31

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Note 2221657 - Code injection vulnerability in SAP Internet Communication Manager (and WebDispatcher)

Now let's check another release of the WebDispatcher:

https://support.sap.com/patches → Search for Software → SAP WEB DISPATCHER → e.g. SAP WEB DISPATCHER 7.21 → choose any OS → show Info file

The following objects are available for download:

	File Type	Download Object	Title	Patch Level	Info File	File Size [kb]	Last Changed
	SAR	SAPWEBDISP_SP_623-20009446.SAR	SAP WEB DISPATCHER 7.21	623	Info	49183	04.03.2016
	SAR	SAPWEBDISP_SP_624-20009446.SAR	SAP WEB DISPATCHER 7.21	624	Info	49333	20.03.2016
	sar	sapwebdisp_624-20009446.sar	sapwebdisp	624	Info	49333	20.03.2016

Result:

both notes 2221657 and 2256185 are part of the patch for 7.21, too

```
(104) ( 0.620) Loss of icm/server_port_XX specific CIPHERS settings on SS (note 2259889)
(105) ( 0.621) Potential denial of service in SAP Internet Communication (note 2256185)
(106) ( 0.621) Dispatcher and ICM get blocked (note 2267327)
(107) ( 0.622) Content Filter match traced wrong data (note 2271975)
(108) ( 0.623) Code injection vulnerability in SAP Internet Communication (note 2221657)
(109) ( 0.624) Request (type DIA) cannot be processed due to mode 0 in st (note 2240265)
```

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How to identify HANA Security Notes

Number	Application Area	Short text	Priority	Released On
	?		*	*
2262742	HAN-DP-SDI	Missing Authentication check in HANA DP Agent	Correction with high priority	12.04.2016
2262710	HAN-DP-SDI	Denial of service (DOS) vulnerability in HANA DP Agent	Correction with high priority	12.04.2016
2258784	BC-CST-EQ	Denial of service (DOS) vulnerability in Enqueue Server	Correction with high priority	12.04.2016
2254389	BC-ESI-UDDI	XXE vulnerability in SAP UDDI	Correction with high priority	12.04.2016
2252191	BC-XS-JAS	Deserialization of untrusted data in SAP HANA XS Advanced Java Runtime	Correction with high priority	12.04.2016
2201295	BC-WD-UR	Cross-Site Scripting (XSS) vulnerability in UR Control.	Correction with medium priority	12.04.2016
2280054	HAN-DP-SDI	Information Disclosure in Data Provisioning Agent	Correction with medium priority	12.04.2016
2274560	BC-CST-GW	Arbitrary Log File Injection vulnerability in SAP Gateway	Correction with medium priority	12.04.2016

Which of these notes are relevant for the HANA database installation?

BC-XS is in, HAN-DP is out.

Security Notes per Application Component:

BC-XS	1
HAN-AS	15
HAN-DB	18
HAN-LM	1
HAN-WDE	6
(HAN-DP	3)

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Note 2277492 - Configuration Validation: How-to transport Target Systems

You want to transport custom defined Target Systems of the application Configuration Validation in the SAP Solution Manager.

The required transport keys are described in the wiki: ConfigVal: Transport Target Systems

Use this new report `DIAGCV_TRANSPORT_TARGET_SYSTEM` to add custom defined Target Systems to a transport order.

Do you know the Security Baseline Template Version 1.8 at the media library of https://support.sap.com/sos ?

The new version 2 of the corresponding ConfigVal Package offers transport files to import the template target systems easily.

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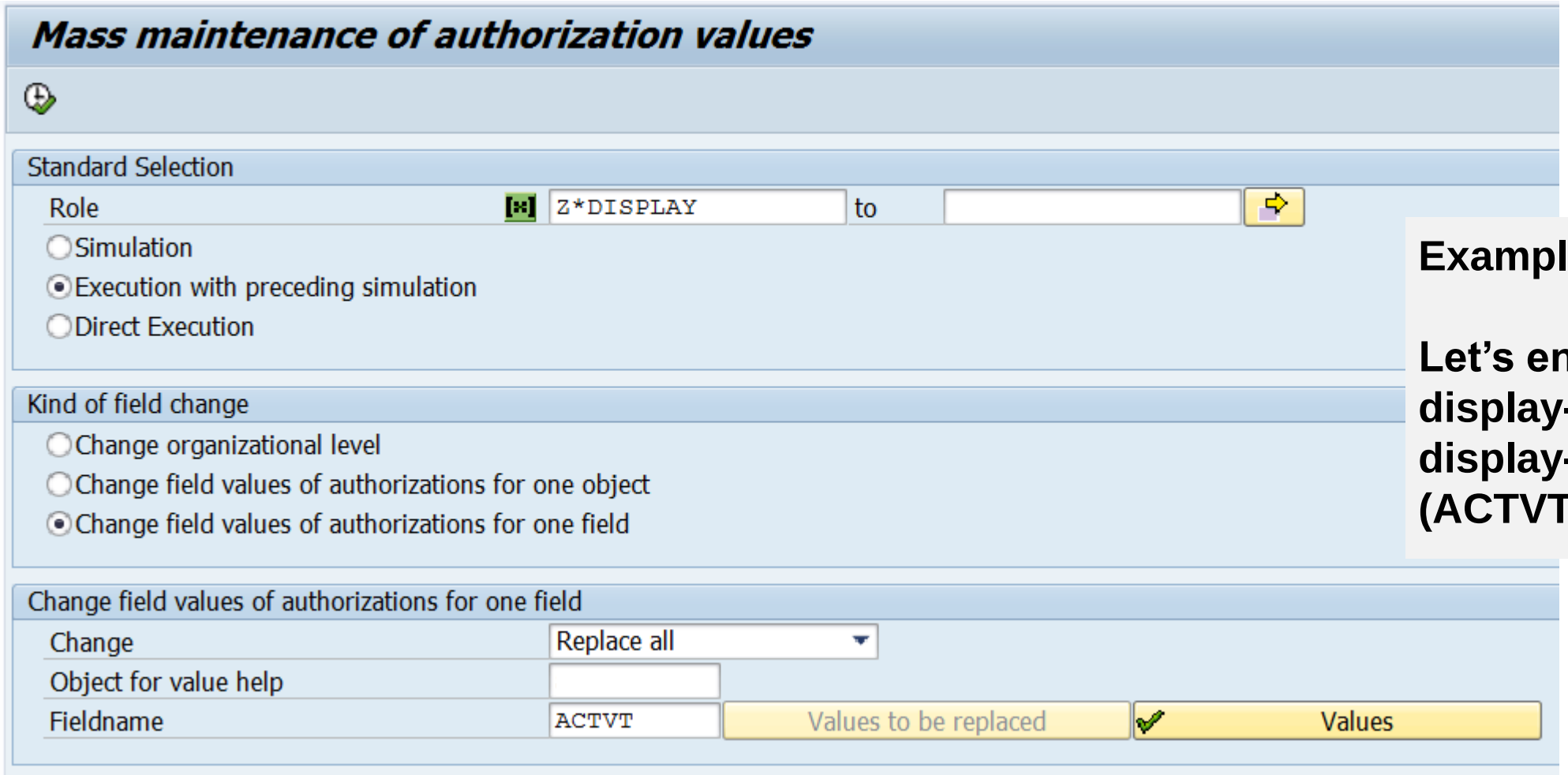
Note 2177996 – Transaction PFCGMASSVAL
Mass maintenance of authorization values



Example:

Let's ensure, that display-roles have display-activities (ACTVT = 03) only.

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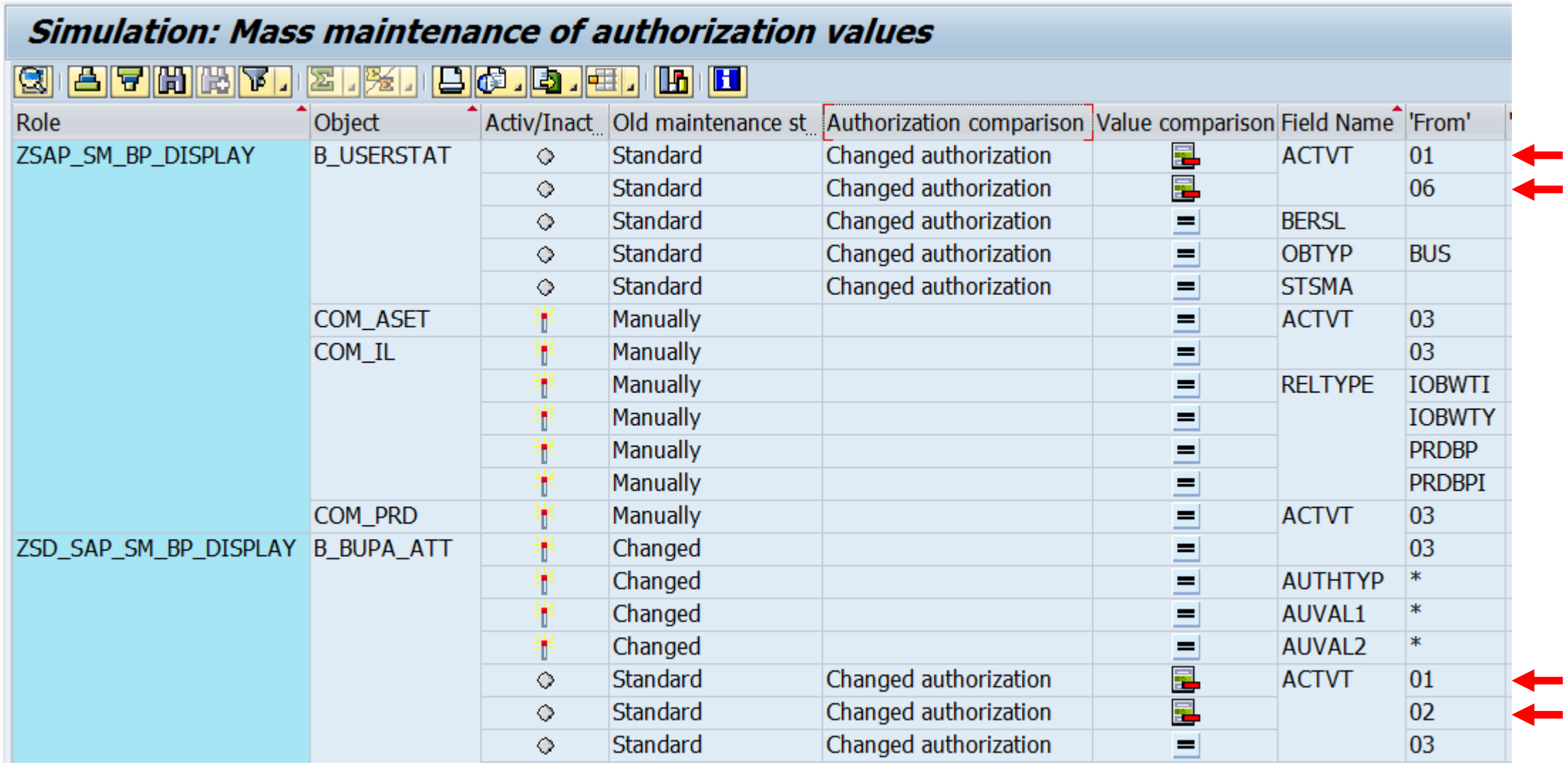
Note 2177996 – Transaction PFCGMASSVAL
Mass maintenance of authorization values



Role	Object	Activ/Inact	Old maintenance st	Authorization comparison	Value comparison	Field Name	'From'
ZSAP_SM_BP_DISPLAY	B_USERSTAT	◇	Standard	Changed authorization		ACTVT	01
		◇	Standard	Changed authorization			06
		◇	Standard	Changed authorization	=	BERSL	
		◇	Standard	Changed authorization	=	OBTYP	BUS
		◇	Standard	Changed authorization	=	STSMA	
	COM_ASET		Manually		=	ACTVT	03
	COM_IL		Manually		=		03
			Manually		=	RELTYPE	IOBWTI
			Manually		=		IOBWTY
			Manually		=		PRDBP
			Manually		=		PRDBPI
	COM_PRD		Manually		=	ACTVT	03
ZSD_SAP_SM_BP_DISPLAY	B_BUPA_ATT		Changed		=		03
			Changed		=	AUTHTYP	*
			Changed		=	AUVAL1	*
			Changed		=	AUVAL2	*
		◇	Standard	Changed authorization		ACTVT	01
		◇	Standard	Changed authorization			02
		◇	Standard	Changed authorization	=		03

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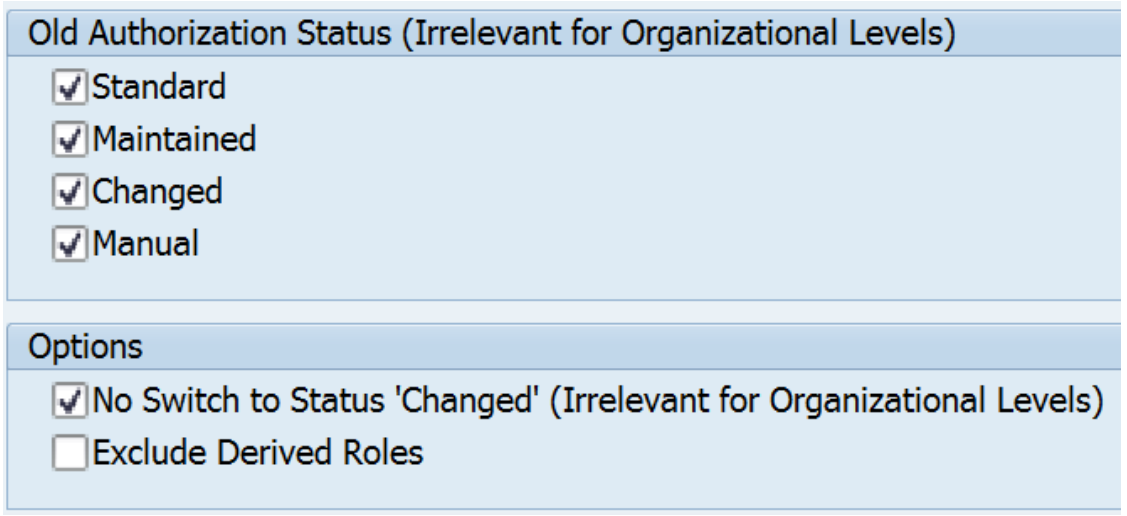
Note 2177996 – Transaction PFCGMASSVAL
Mass maintenance of authorization values in roles

Caution:

- **Run Simulation first always**
- **Use the selection options carefully – most likely you do not want to turn status ‚Standard' and ‚Maintained' into ‚Changed'.**
- **You can adjust derived roles using PFCG → Authorizations → Adjust derived roles**



Available with Support Packages for SAP_BASIS:

- 7.02 SP 18
- 7.31 SP 18
- 7.40 SP 14
- 7.50 SP 02
- Implement note 2263899, too.

Or use SNOTE plus manual modifications as of:

- 7.02 SP 14
- 7.31 SP 09
- 7.40 SP 04
- 7.50 SP –
- see note 1842231

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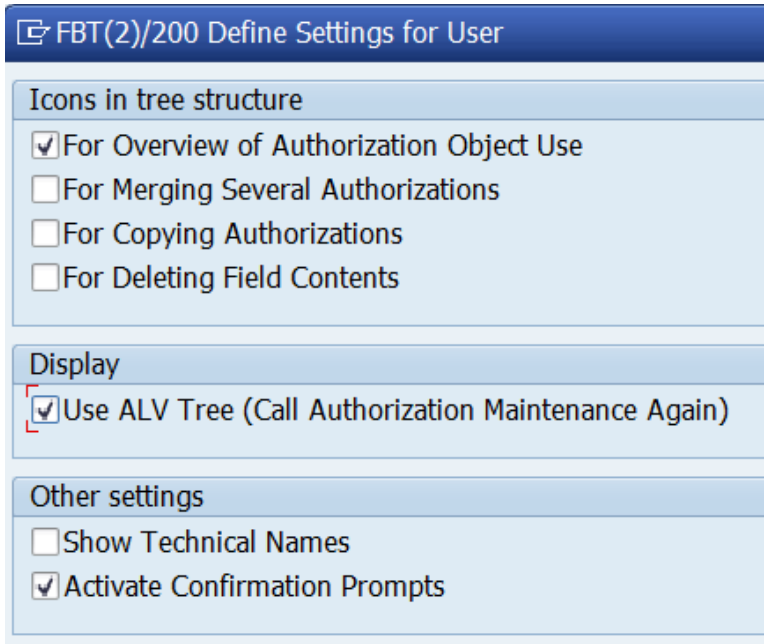
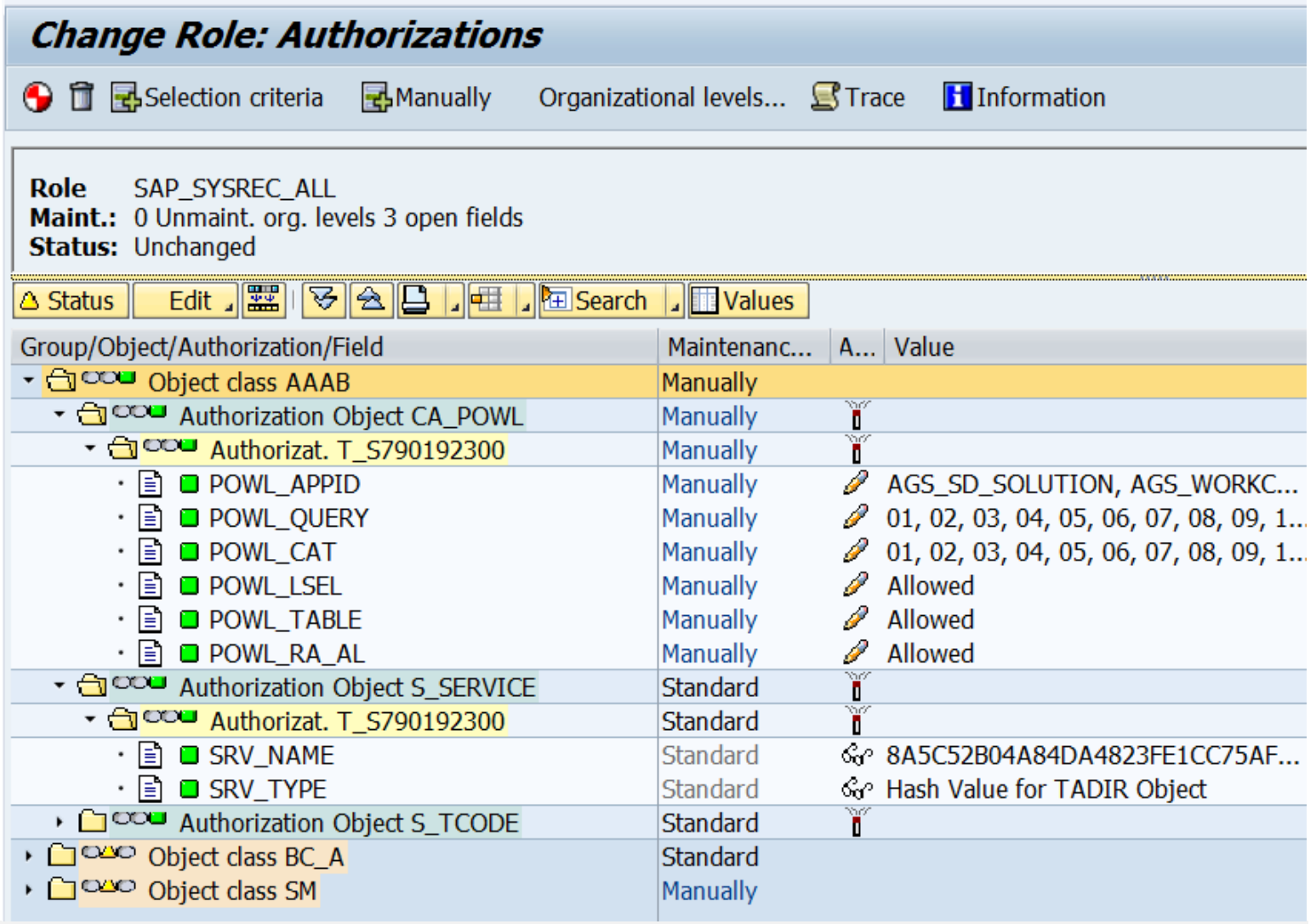
Release 7.31 & 7.40: Improvement for ABAP Role Management

New ALV Tree User Interface in transaction PFCG

→ Utilities → Settings
→ Set the option to use ALV Tree





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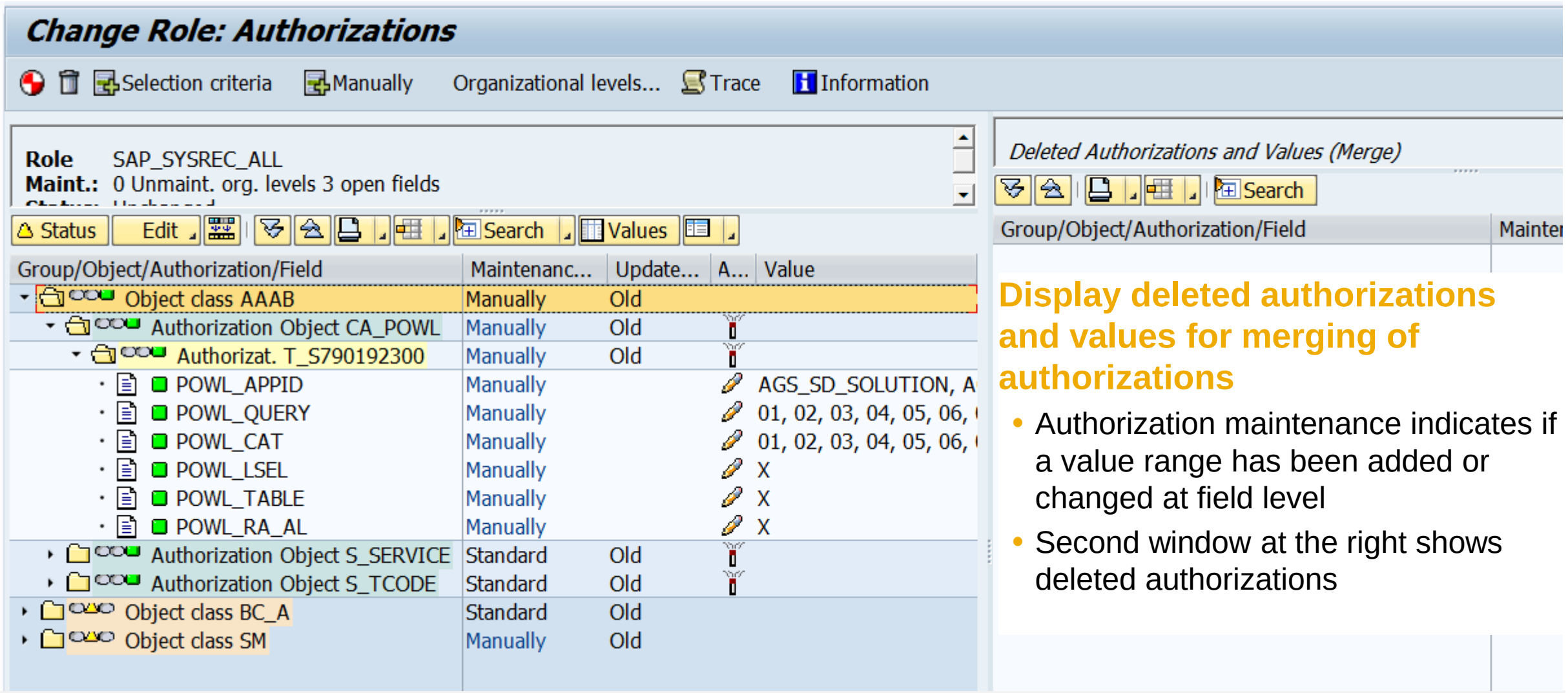
Release 7.31 & 7.40: Improvement for ABAP Role Management

Note 2086293 - PFCG: Display of deleted authorizations and values for merging of authorizations



Display deleted authorizations and values for merging of authorizations

- Authorization maintenance indicates if a value range has been added or changed at field level
- Second window at the right shows deleted authorizations

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Release 7.31 & 7.40: Improvement for ABAP Role Management

In addition to the standard subtree options Collapse/Expand, Print, and Layout, the toolbar of the ALV tree contains the following pushbuttons:

- **Edit: A submenu with various functions appears, depending on the selected row. The most significant of these are:**
- **Mass Changes for Authorizations: You can use mass maintenance to change the field values of multiple authorizations for an authorization field, with the exception of authorization objects and authorization fields whose authorizations can only be maintained using special dialogs.**
- **Search & Expand: You use this function to search for authorization objects or fields. The authorizations that are found are automatically expanded. You also have the option of expanding all 'Open', 'New', 'Changed', or 'Maintained' authorizations.**
- **Table View of Authorization Values: All authorization values of a field are displayed in a row. However, each from-to value is displayed in its own row in the table view.**
- **Full Screen On/Off: When authorization data is merged, an additional window is displayed with deleted authorizations and values. You can hide or show the window and define whether to arrange it vertically or horizontally.**

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Release 7.31 & 7.40: Improvement for ABAP Role Management

Drag and Drop

In change mode it is possible to copy field values of an authorization to another authorization using drag and drop. For example, you can copy values that were deleted by the merge into an existing authorization. However, copying the data in this way is only possible under the following conditions:

- **The authorization field of the data source is identical to the target.**
- **The 'Activity' field of the object must also be identical.**
- **The authorization field must be able to be changed using a standard dialog.**

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March 2016

Topics March 2016

Switchable Allowlists (SLDW)
Note 1973081 - XSRF vulnerability: External start of transactions with OKCode

Note 870127 - Security note for SAP Web Dispatcher
Note 2260323 - Internet Communication Manager (ICM) 7.20 security settings
Note 2258786 - Potential information disclosure relating to SAP Web Administration Interface

Note 2260344 - Code injection vulnerability in SCTC_* Function modules

Note 2251231 - File validation enforcement switch for empty physical path

Note 2282338 = 2235412 = 2074276 - SAP Download Manager Password Weak Encryption

Note 1553180 - Missing authorization check in TH_POPUP
Note 1488609 - Missing Authorization Check in remote ABAP Config Access

Optimizing `SACF`

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Switchable Allowlists (SLDW)
Note 1973081 - XSRF vulnerability: External start of transactions with OKCode

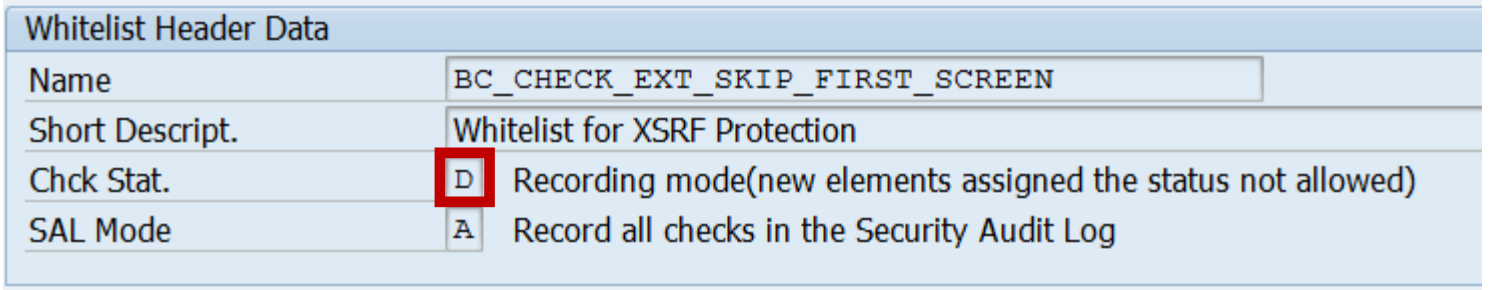
Allowlist `BC_CHECK_EXT_SKIP_FIRST_SCREEN`

Purpose: Disable start of transactions with OKCode skipping the first screen.
All GUI variants are affected: SAPGUI fur Windows (SAP Shortcuts), SAPGUI for Java, HTML-GUI

Allow listing is available in NetWeaver 740 SP08 and for releases 700 to 731 by
Note 2055468 - XSRF protection downport (SAP_BASIS Support Package + Kernel as of 7.21)

For documentation refer to
Note 1956086 - Profile parameter for XSRF protection (`dynp/confirmskip1screen` = `ALL`)

Recommendation: Activate empty allowlist with status `D` (All transactions and function codes that are executed using shortcuts, start transactions, and URLs in the system are logged. New entries are flagged as not permitted.)



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Spotlight News

Important security fixes for Startup Service, Startup Framework and Internet Communication Manager (March 2016)

In an upcoming IT- Security Conference this week (Troopers, 14th – 18th March 2016), there is a presentation planned on vulnerabilities affecting SAP NetWeaver.

SAP Security Note 2259547 – Potential Denial of Service in jstart

An attacker can remotely exploit jstart, rendering it, and potentially the resources that are used to serve jstart, unavailable.

SAP Security Note 2256185 – Potential Denial of Service in SAP Internet Communication Manager

An attacker can remotely exploit SAP Internet Communication Manager, rendering it, and potentially the resources that are used to serve SAP Internet Communication Manager, unavailable.

Important security fix for SAP Visual Enterprise Author, Generator, and Viewer 8.0 (February 2016)

2281195 - Potential remote termination of running processes in SAP Visual Enterprise Author, Generator and Viewer

An attacker can remotely exploit SAP Visual Enterprise Author, Generator and Viewer version 8.0, which may lead to application termination.

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Notes 870127 2260323 2258786 - Internet Communication Manager (ICM)

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Note 2260344 - Code injection vulnerability in SCTC_* Function modules

The prerequisite notes 1454575 and 1454576 are quite old .

Therefore, you easily can apply the note, just do it,…

… but it is more important to

- **strictly control access to `SE37` and to authorizations for `S_DEVELOP` for object type `FUGR` and activity `16` = execute (and all change activities)**
- **strictly control access to `SE24` and to authorizations for `S_DEVELOP` for object type `CLAS` and activity `16` = execute (and all change activities)**

Similar case from November 2015: Note 2197100 - OS injection through call of function by SE37

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Note 2251231 - File validation enforcement switch for empty physical path

Project “Secure File Access”

By default all pathes and filenames are accepted within a scenario if you do not have maintained the corresponding logical path and logical filename. It is not possible to block all unmaintained entries.

Using this note – which is only available via support package - you can change the default:

Maintain new table `FILECMCUST` (customizable table for `FILE` configuration) using transaction `SM30` and add there a new entry with

SFIL Customizing Parameter = `REJECT_EMPTY_PATH`

and

SFIL Customizing Value = `ON`.

Use the Security Audit Log with messages `CUQ CUR CUS CUT DU5` to trace sucessful and unsucessful file access.

Available with SAP_BASIS	
700	SAPKB70033
701	SAPKB70118
702	SAPKB70218
710	SAPKB71021
711	SAPKB71116
730	SAPKB73015
731	SAPKB73118
740	SAPKB74015
750	SAPK-75003INSAPBASIS

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Note 2251231 - File validation enforcement switch for empty physical path

1. **Project “Secure File Access” according to note** 1497003
2. **Activate logging using Security Audit Log :**

Other events	CUQ	Severe	Logical file name &A not configured. Physical file name &B not checked.
Other events	CUR	Severe	Physical file name &B does not fulfill requirements from logical file name &A
Other events	CUS	Severe	Logical file name &B is not a valid alias for logical file name &A
Other events	CUT	Severe	Validation for logical file name &A is not active
RFC Function Call	DU5	Critical	There is no logical file name for path &A

3. **Decide about new file access strategy:**
   - Which applications use / should use which folders?
   - Change processes, interfaces, customizing, scripts etc. based on new file access strategy
4. **Maintain logical pathes and files in transaction `FILE` for active scenarios**
5. **Change the default to block unmaintained entries**

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Note 2282338 = 2235412 = 2074276 - SAP Download Manager Password Weak Encryption

Both notes basically ask for the same like note 2233617 - **Security Vulnerabilities in SAP Download Manager**:

Tell your IT team

- to delete / deinstall any existing version `DLManager.jar` of the SAP Download Manager from their PCs

and

- get and use only the new version from https://support.sap.com/software/download-manager.html

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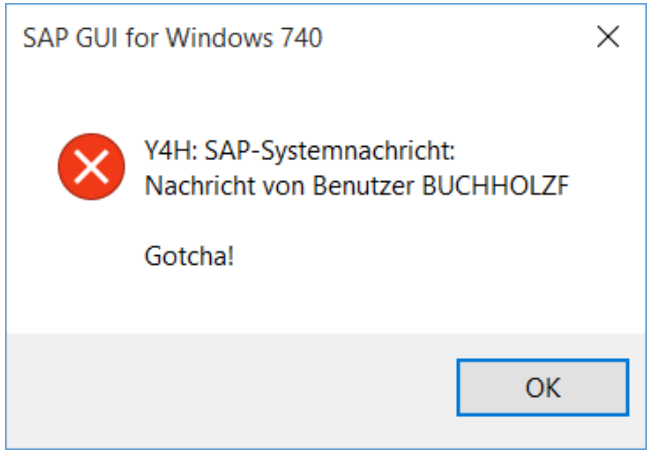
Note 1553180 - Missing authorization check in TH_POPUP

ABAP note with

a) automatic correction instruction

b) manual pre-implementation correction instruction to maintain dictionary
(In this special case no harm would be done if this is done after implementing the note with SNOTE.)

c) manual description in text to maintain profile parameter



What to do now?

- Automatic correction instruction and manual pre-implementation correction are covered by Support Package or Release upgrade.
(Hints to judge on this: Same SP validity as the automatic correction instruction. Change will be recorded on a transport.)
- Profile parameter `rdisp/th_popup/strict_check` needs to be set to `1` to activate the authorization check for `S_ADMI_FCD` while sending taskhandler popup messages to other users.
- The profile parameter is still not documented within the system!

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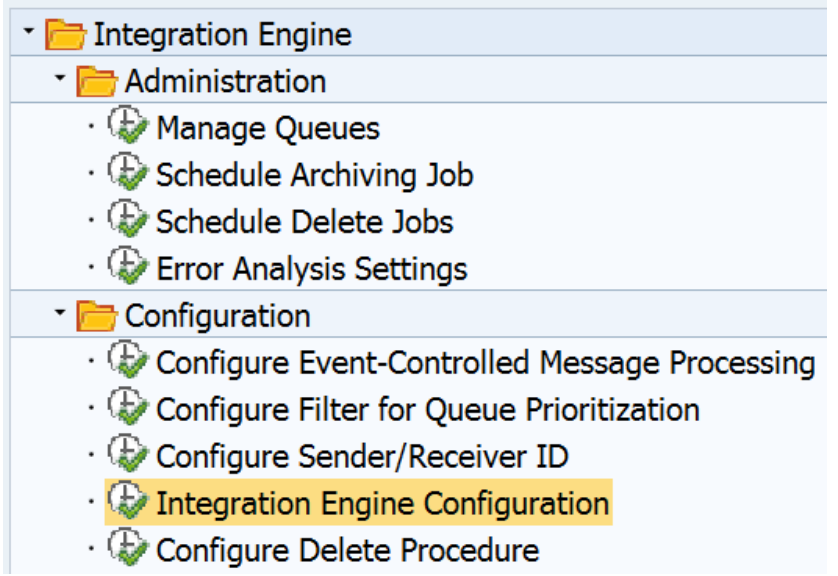
Note 1488609 - Missing Authorization Check in remote ABAP Config Access

ABAP note with

a) automatic correction instruction

b) manual pre-implementation correction instruction
(In this special case no harm would be done if this is done after implementing the note with SNOTE.)

c) manual description in text to maintain profile parameter



What to do now?

- Automatic correction instruction and manual pre-implementation correction are covered by Support Package or Release upgrade.
  (Hints to judge on this: Same SP validity as the automatic correction instruction. Change will be recorded on a transport.)
- Use transaction `SXMB_ADM` → Integration Engine Configuration → Specific Configuration to set `RUNTIME` parameter `EX_PROFILE_READ_AUTH` = `1`
- Documentation in the system may be misleading if it claims to have active default settings!

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Optimizing SACF

Implement recent functional notes of component BC-SEC-AUT to improve transaction SACF:

Note 2253930 - SACF | Error in scenario status check

Note 2248439 - SACF | Database problems for update of table SACF_ALERT

Note 2241352 - SACF | Optimization of input help and documentation

Note 2225225 - SACF | New attribute for default scenario status

Note 2124003 - SACF | Optimization of log function

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February 2016

Topics February 2016

Note 2141744 - SysRec: manual status is lost and replaced with status 'new‘
Note 2281111 - SysRec: recover the status

Note 2236289 BC-DB-MSS Missing authorization check in SMSS_GET_DBCON

Notes 1491645 1498973 2187502 - Renewing RFC trust relationships

Note 2266565 - SAPSSOEXT process crash during ticket verification

Note 2024431 - TDDAT adjustment in customer landscape

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Note 2141744 - SysRec: manual status is lost and replaced with status 'new'
Note 2281111 - SysRec: recover the status (if possible)

Within application System Recommendations of the SAP Solution Manager 7.1 you have set manually the status of a note to status 'to be implemented', 'irrelevant', or 'postponed'. After some time the status is resetted to status 'new'.

You manual status is lost if following events had happened:

1. You set the status manually in SysRec.
2. SAP changes the note (with or without creating a new version of the note).
3. SAP triggers full re-calculation for SysRec on the SAP backbone.
4. The background job of SysRec is executed in the SAP Solution Manager.

Solution:

- Implement the note correction or update the support package.
- No manual status is touched anymore with following exception for notes having automatic correction instructions for ABAP: If you have implement a specific version of a note using the Note Assistant, transaction SNOTE, you will get the status 'implemented (new version available)'.

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Note 2236289 BC-DB-MSS Missing authorization check

New check for S_TCODE for transaction DBACOCKPIT?

```
FUNCTION SMSS_GET_DBCON.
*>>>> START OF DELETION <<<<<
  SELECT * FROM DBCON INTO TABLE MSS_DBCON
*>>>> END OF DELETION <<<<<<<

*>>>> START OF INSERTION <<<<<

  authority-check object 'S_TCODE'
    id 'TCD' field 'DBACOCKPIT'.                    "#EC NOTEXT
```

No, there is another correction instruction:

```
FUNCTION SMSS_GET_DBCON.

*>>>> START OF DELETION <<<<<
  authority-check object 'S_TCODE'
    id 'TCD' field 'DBACOCKPIT'.                    "#EC NOTEXT
*>>>> END OF DELETION <<<<<<<

*>>>> START OF INSERTION <<<<<
  authority-check object 'S_RZL_ADM'
    id 'ACTVT' field '03'.                          "#EC NOTEXT
*>>>> END OF INSERTION <<<<<<
```

Missing authorizations stop the calling program, e.g. in case of report MSSINJECT.

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Notes 1491645 1498973 2187502 - Renewing RFC trust relationships

Report RS_SECURITY_TRUST_RELATIONS shows the existing RFC trust relationships of and for the system with the specification of the security level and the option to delete individual trust relationships to systems that your own system trusts.

Report RS_UPDATE_TRUST_RELATIONS renews (converts) the trust relationships of systems that trust your own system. Prerequisites get checked automatically.

Status	System ID	Install.no	Precheck Result	Information / Recommendation
	FB7	0020270862	Already updated	Trust relationship already updated
	FBT	0020270862	Already updated	Trust relationship already updated
	SQ7	0020270862	Ready to update	To update, choose "Update"
	ST7	0020270862	Ready to update	To update, choose "Update"
	CXG		Connection Error	To display details, select a line and choose "Error Details"
	MW3		Connection Error	To display details, select a line and choose "Error Details"
	A24		Logon error	To log on, select a line and choose "Manual Logon"
	AHN		Logon error	To log on, select a line and choose "Manual Logon"

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Note 2266565 - SAPSSOEXT process crash during ticket verification

Single Sign-On to Non-SAP Systems and Applications
http://help.sap.com/saphelp_nw70ehp2/helpdata/en/12/9f244183bb8639e10000000a1550b0/content.htm

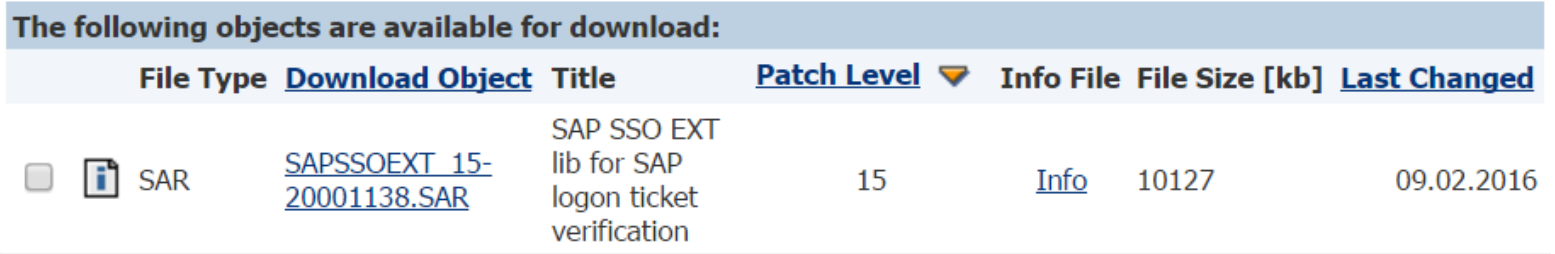
The problem occurs in SAPSSOEXT version prior to patch 15. If you use SAPSSOEXT as library in a non-SAP environment you can check for the version with API method "**MySapGetVersion**".

Maybe it's faster to check the file version, e.g. for Win 64 Release 721:

- sapssoext version 14 = file version 7210.617.24.58424 changelist 1631288
- sapssoext version 15 = file version 7210.621.25.4608 changelist 1643008

The library API is compatible to older versions, therefore you can simply replace the shared library "sapssoext.dll" (windows) / "libsapssoext.so" (linux/unix) in your system. See also SAP Note 304450.

https://support.sap.com/swdc
→ Support Packages and Patches
→ Browse our Download Catalog
→ SAP Technology Components
→ SAPSSOEXT



The following objects are available for download:

File Type	Download Object	Title	Patch Level	Info File	File Size [kb]	Last Changed
SAR	SAPSSOEXT_15-20001138.SAR	SAP SSO EXT lib for SAP logon ticket verification	15	Info	10127	09.02.2016

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Note 2024431 - TDDAT adjustment in customer landscape Comparison of Table Authorization Group Assignment

As part of standard corrections using SAP Notes or Support Packages, adjustments to table authorization group assignments were delivered.

However, it is not possible for SAP to change existing table entries by means of a Support Package.

The report `TDDAT_COMPARE` compares the table authorization group assignments delivered by SAP by means of Support Packages with the data in your system.
In addition to the comparison state, the result list displays the relevant SAP Note number and the corresponding application component. We recommend that you use this report after importing a Support Package to check the table authorization group assignment.

Status	Object Name	Short Description	Authoriz.	Authoriz.	SAP Note	SAP group	Appl. Component
≠	SCPRSTRANSP	Switch BC Sets: Transport Recording Tables	B0SD	SBCA	865234	SCPR	BC-CUS-TOL-BCD
≠	USH02	Change history for logon data	SC	SPWD	1484692	SUSR_KRN	BC-SEC-LGN
≠	USR02	Logon Data (Kernel-Side Use)	SC	SPWD		SUSR_KRN	BC-SEC-LGN
≠	USRPWDHISTORY	Password History	SC	SPWD		SUSR_KRN	BC-SEC-LGN
≠	VUSER001	Generierte Tabelle zu einem View	SC	SPWD		SUSR	BC-SEC-USR-ADM
≠	ECCUST_ET	Customizing Table for External Test Tools	&NC&	ECCU	1896642	SECATT_DDIC	BC-TWB-TST-ECA

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Note 2024431 - TDDAT adjustment in customer landscape Comparison of Table Authorization Group Assignment

Correction notes:

Note 2273583 - TDDAT_COMPARE | Error in database update

Note 2079497 - Table authorization group assignment in user management and authorization management

Note 1645260 - Extended maintenance of table authorization groups

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Note 2024431 - TDDAT adjustment in customer landscape Comparison of Table Authorization Group Assignment

For more fine granular access control we recommend to remove authorization on S_TABU_DIS for business users at all and use the authorization object S_TABU_NAM instead.

Related notes:
1481950 - New authorization check for generic table access

1434284 - FAQ| Authorization concept for generic table access

1500054 - Additional tools for S_TABU_NAM authorization concept

Report SUSR_TABLES_WITH_AUTH shows which tables can be accessed by a user (if SE16 can be called).

Transaction SU24_S_TABU_NAM reduces the effort required for maintaining authorization default values during the introduction of an authorization concept with S_TABU_NAM.

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Note 2024431 - TDDAT adjustment in customer landscape Comparison of Table Authorization Group Assignment

Report RDDPRCHK (or old report RDDTDDAT_BCE) or checks technical properties of tables and views.

If you maintain assignments to table authorization groups, we recommend to have a look to the environment of the tables as well:

- Check not only specific tables but all tables of a package or application component
- The authorization groups of views usually should match to the authorization groups of the corresponding base tables
- Validate assignment of table authorization group (Which authorization gets checked for S_TABU_DIS? – But go for S_TABU_NAM anyway.)
- Validate table maintenance options (Can you use SE16/SM30 to maintain table content?)
- Validate table logging settings (see profile parameter rec/client)

Important packages:

SUSR*	User account data including password hash
SCRX	RFC Destinations including secret key for Trusted RFC
SECF	Content of PSEs

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January 2016

Topics January 2016

KBA 2253549 - The SAP Security Baseline Template & ConfigVal

Switchable Allowlists (SLDW)

Note 1976303 - Missing authorization check in BW-BEX-OT

Notes 1972646, 1971397 - Potential modif./disclosure of persisted data in BW-BEX-OT

Note 1973081 - XSRF vulnerability: External start of transactions with OKCode

Note 2248735 - Code injection vulnerability in System Administration Assistant

Note 2221986 - Too many privileges assigned to HANA hdbrole

Note 2151237 - Potential remote code execution in SAP GUI for Windows

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KBA 2253549 - The SAP Security Baseline Template & ConfigVal

An SAP Security Baseline is a regulation on minimum security requirements to be fulfilled for all SAP systems in your organization.

"Baseline" means: These requirements must be fulfilled by all SAP systems regardless of any risk assessments. They are general best practices and apply to all systems, regardless of their security level.

The SAP Security Baseline Template is a template document provided by SAP on how an organization-specific SAP Security Baseline could be structured. It is pre-filled with selected baseline-relevant requirements and corresponding concrete values as recommended by SAP.

https://support.sap.com/sos
→ Media Library

CoE Security Services - Security Baseline Template Version
https://support.sap.com/dam/library/SAP%20Support%20Portal/support-programs-services/support-services/security-optimization-service/media/Security_Baseline_Template.zip.

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KBA 2253549 - The SAP Security Baseline Template & ConfigVal

The package contains files to configure the application Configuration Validation according to the SAP Security Baseline Template.

Select Target System

SID	Description
BL_I-13	SAP HANA Security
BL_I-5	Web Dispatcher Security
BL_O-1	Handling of ABAP Default Users in ABAP Systems
BL_O-2	No use of authorization profiles SAP_ALL and other critical
BL_O-3	Segregation of Basis and Business Authorizations
BL_O-4	Restricted Assignment of Critical Basis Authorizations
BL_O-5	RFC Authorizations
BL_O-6	Java Systems Administrators
BL_O-8	Security Audit Log (ABAP)
BL_O_8_0	Security Audit Log (ABAP) Switch
BL_O_8_1	Security Audit Log (ABAP) slot for SAP(*) users
BL_S-1	ABAP Profile Parameters
BL_S-2	Protection of Password Hashes in ABAP Systems
BL_S-3	Modification Protection for Production Systems
BL_S-4	Secure Configuration of Java Systems

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Switchable Allowlists (SLDW)
Project plan

1. Get Framework (via SP)
2. Activate logging via Security Audit Log
3. Copy SAP definition to active allowlist and adjust log settings (log all / accept)
4. …
5. Check recorded allowlist entries, and adjust log settings (log error / do not accept)

Some scenarios come with a complete allowlist → go to step 5. at once

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Switchable Allowlists (SLDW)
Get Framework

Documentation note 1922712 - SLDW: FAQ: Supplementary notes for whitelist maintenance

and http://help.sap.com/saphelp_nw74/helpdata/en/0d/4e0a72085a43a08d66e1e128365156/content.htm

Installation instructions:

note 1919573 - SLDW: Environment for maintaining switchable whitelists
note 1922705 - SLDW: Supplementary corrections
note 2054522 - SP implementation dependency with BASIS (SACF) corrections
note 2061628 - SLDW: Transport connection for new whitelists

(You may want to implement

note 2211884 - SLDW|Optimization when saving whitelists

on top of it.)

These notes lead to following minimal `SAP_BASIS` Support Packages which give you the complete framework:

SAP_BASIS
SLDW framework

700 SAPKB70032 (33)
701 SAPKB70117 (18)
702 SAPKB70217 (18)
710 SAPKB71019 (21)
711 SAPKB71114 (16)
730 SAPKB73013 (15)
731 SAPKB73114 (18)
740 SAPKB74009 (14)
750 SAPK-75001INSAPBASIS

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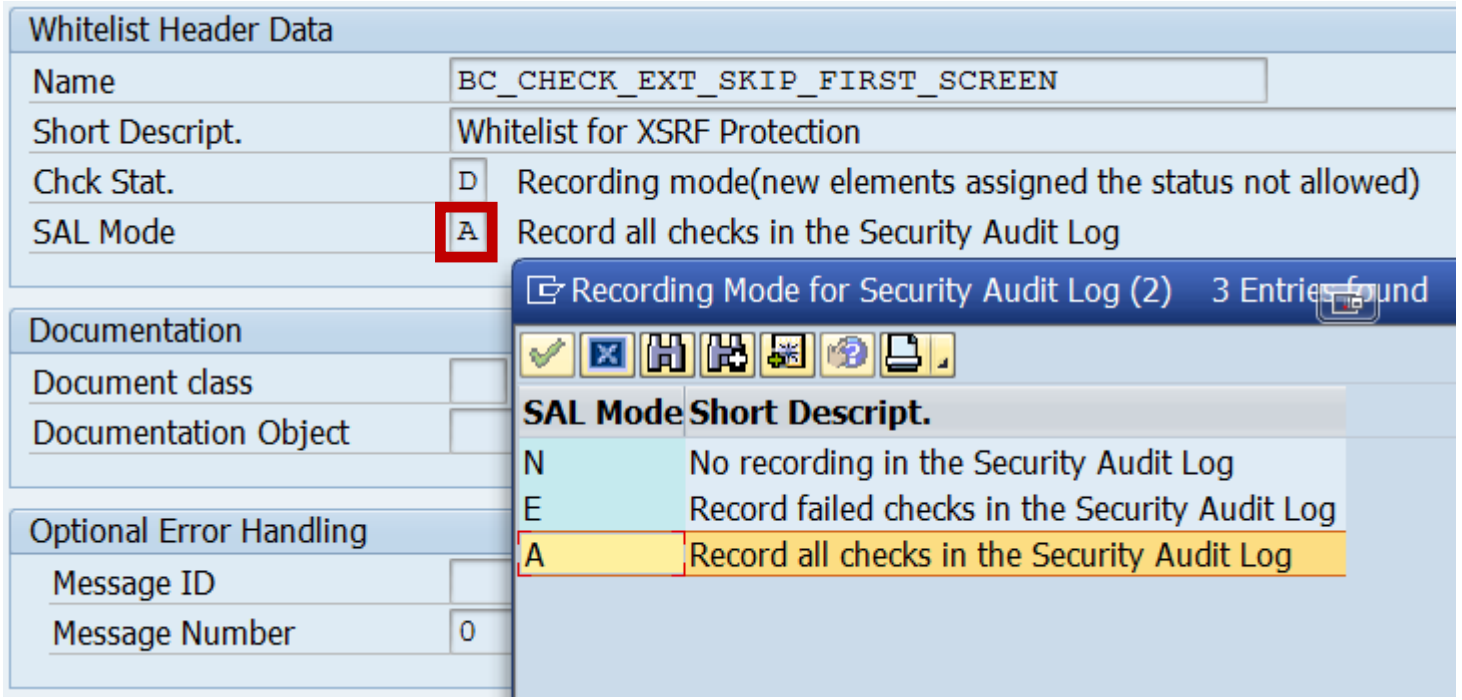
Switchable Allowlists (SLDW)
Activate logging via Security Audit Log

Messages are only written if the Security Audit Log is active and the current filter settings contain the required messages. You can activate and check this with transaction SM19.



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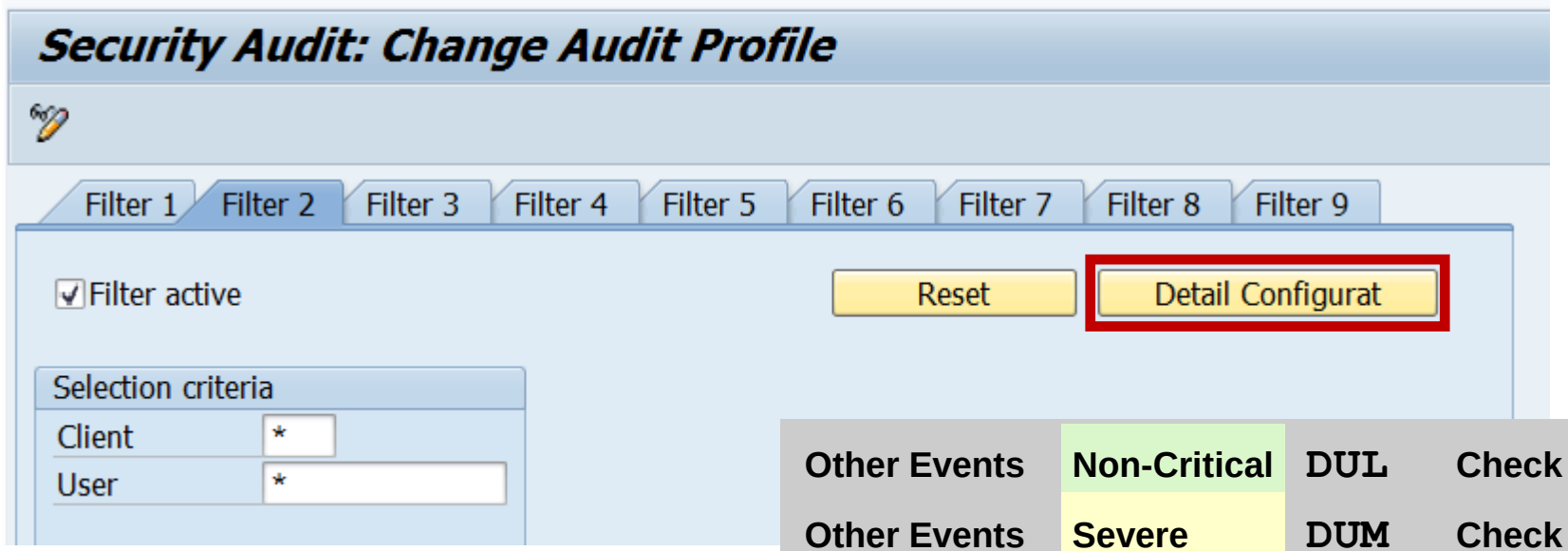
Switchable Allowlists (SLDW)
Activate logging via Security Audit Log

Messages are only written if the Security Audit Log is active and the current filter settings contain the required messages. You can activate and check this with transaction `SM19`.

Choose 'Detail Configuration', sort the entries, and select messages `DUL`, `DUM` and `DUN`.



Other Events	Non-Critical	DUL	Check for &A in whitelist &B was successful
Other Events	Severe	DUM	Check for &A in whitelist &B failed
Other Events	Critical	DUN	Active whitelist &A changed (&B)

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Switchable Allowlists (SLDW)
Copy SAP definition to active allowlist and adjust log settings

Transaction `SLDW`	View / maintain allowlist (definition from SAP / active allowlist of customer)
Transaction `SLDW_COMPARE`	Modification adjustment You can use transaction `SLDW_COMPARE` to create active versions of an allowlist from an existing SAP definition and to adjust them to the local application scenario.
Transaction `SLDW_TRANSFER`	Upload / Download You log data in test systems and production systems but you construct allowlists in development systems. Use transaction `SLDW_TRANSFER` to transfer data from test or production to development.
Transaction `SLDW_INFO`	Infosystem

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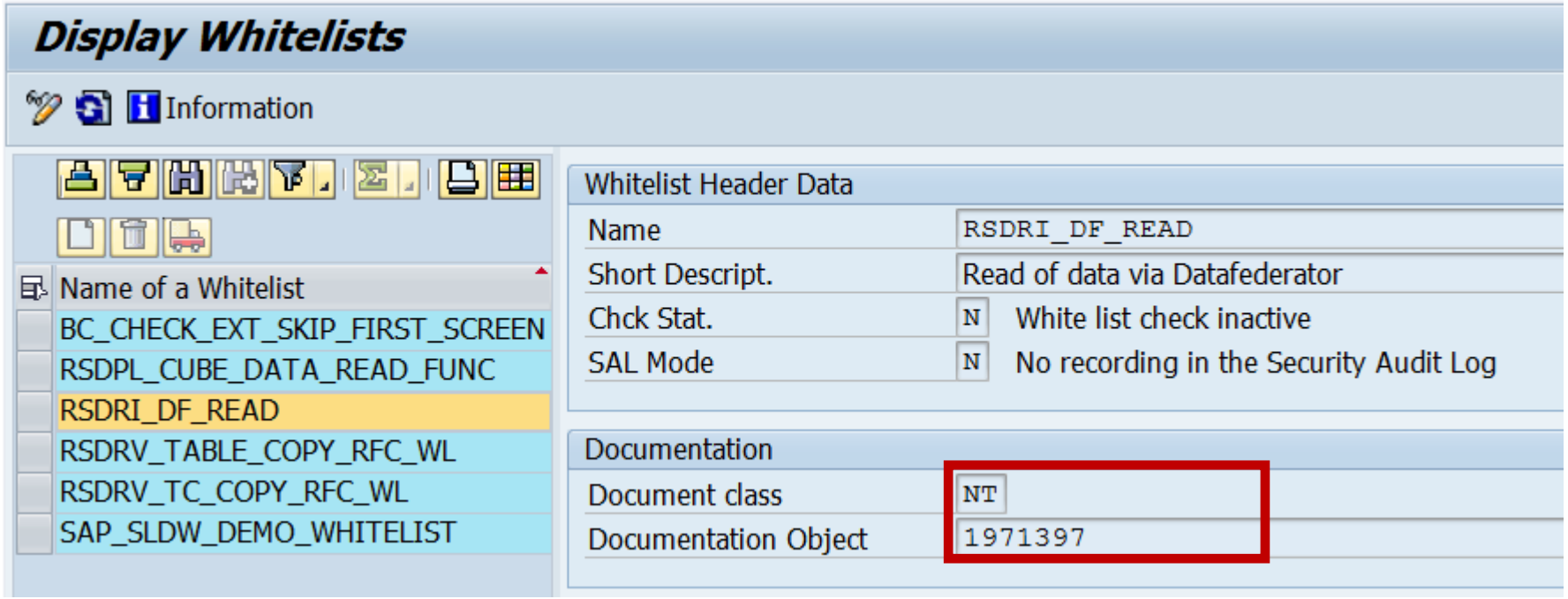
Switchable Allowlists (SLDW)
How to identify notes for installed scenarios

Transaction `SLDW` shows notes respective documentation:



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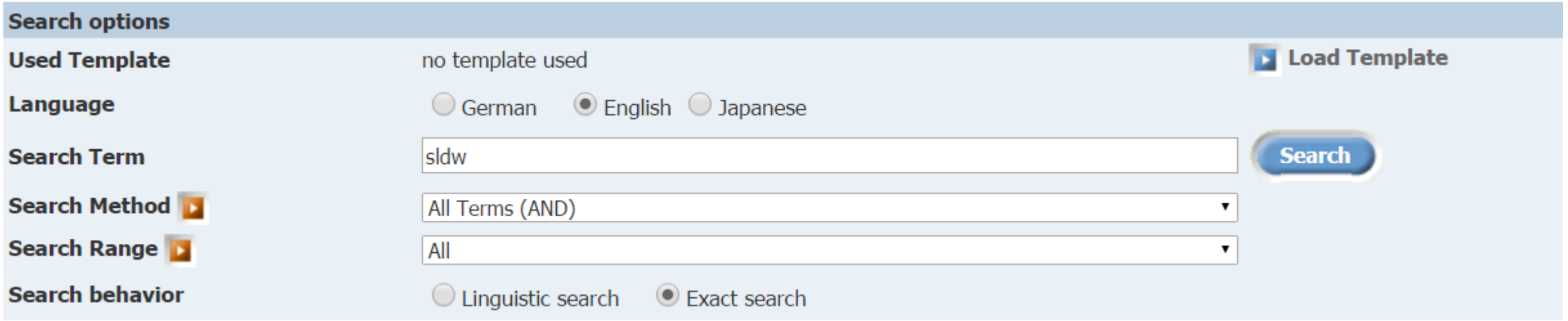
Switchable Allowlists (SLDW)
How to identify notes for not installed scenarios

If you do not have the Support Package yet, you can search notes for `sldw` or `cl_sldw` or `check_white_list`



Typical ABAP call:

```
IF cl_sldw=>check_white_list( id_wl_name  = '<name>'
                              id_wl_ename = lv_string
                              id_silent   = 'X'       ) NE 0.
```

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Switchable Allowlists (SLDW)
Applications using SLDW

Note	Scenario `allowlist`	Recommendation Chck Stat. / SAL Mode

1976303	Missing authorization check in BW-BEX-OT
	`RSDPL_CUBE_DATA_READ_FUNC`
	`RSDRI_DF_READ`
		analyze first
		X / A

1972646
1971397
	Potential modif./disclosure of persisted data in BW-BEX-OT
	`RSDRV_TABLE_COPY_RFC_WL`
	`RSDRV_TC_COPY_RFC_WL`
		activate entries
		A / E

1956086	Profile parameter for XSRF `BC_CHECK_EXT_SKIP_FIRST_SCREEN`	activate empty list D / A

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Switchable Allowlists (SLDW)
Note 1973081 - XSRF vulnerability: External start of transactions with OKCode

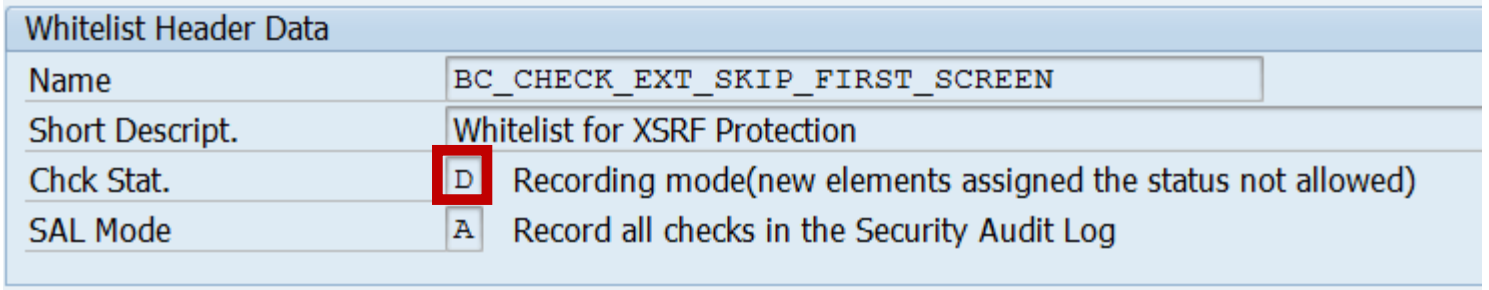
Allowlist `BC_CHECK_EXT_SKIP_FIRST_SCREEN`

Purpose: Disable start of transactions with OKCode skipping the first screen.
All GUI variants are affected: SAPGUI fur Windows (SAP Shortcuts), SAPGUI for Java, HTML-GUI

Allow listing listing is available in NetWeaver 740 SP08 and for releases 700 to 731 by
Note 2055468 - XSRF protection downport (SAP_BASIS Support Package + Kernel as of 7.21)

For documentation refer to
Note 1956086 - Profile parameter for XSRF protection (`dynp/confirmskip1screen` = `ALL`)

Recommendation: Activate empty allowlist with status `D` (All transactions and function codes that are executed using shortcuts, start transactions, and URLs in the system are logged. New entries are flagged as not permitted.)



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Note 2248735 - Code injection vulnerability in System Administration Assistant

Deactivation of obsolete code.

Transaction `SSAA_TOP`

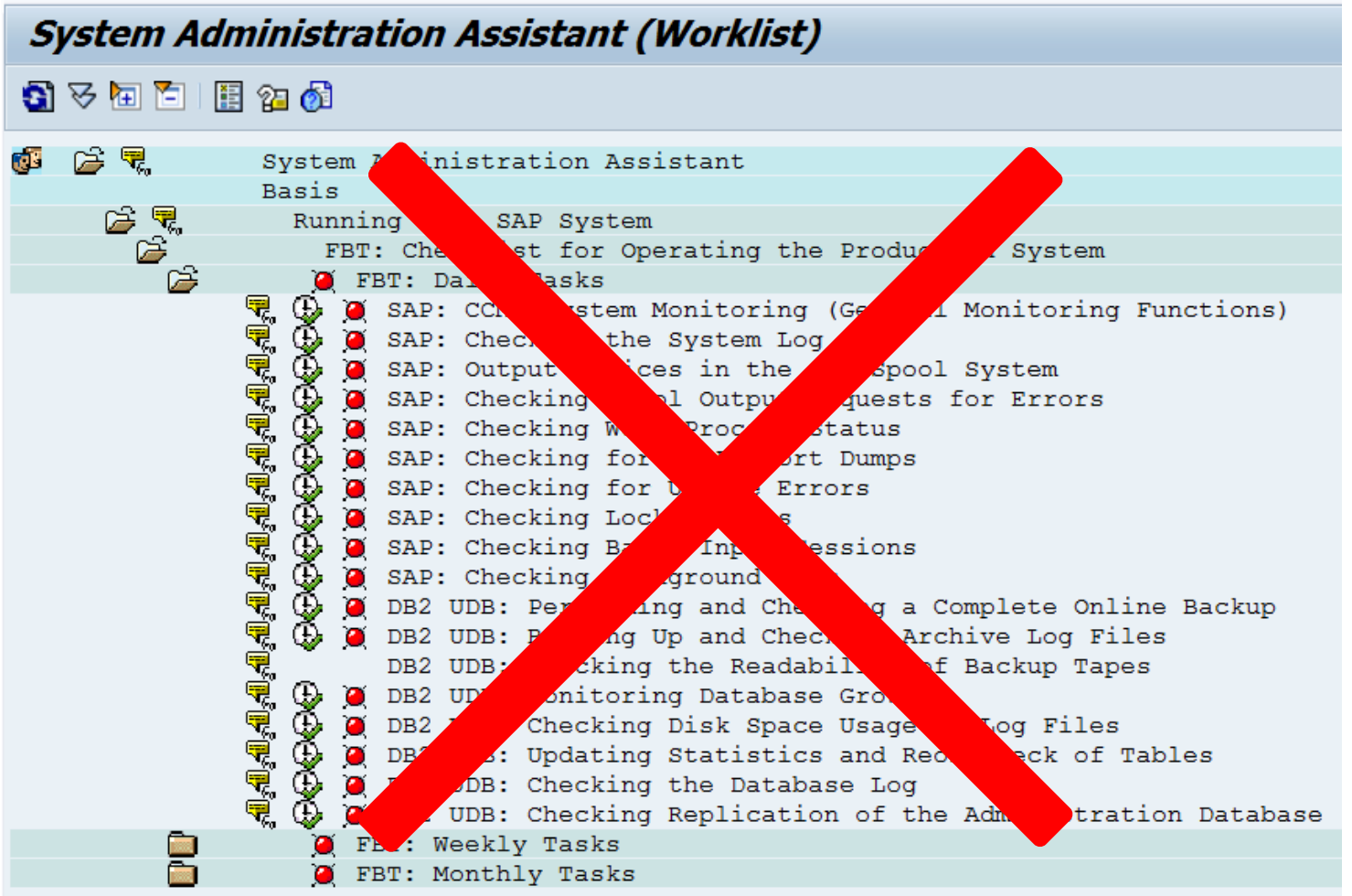
Transaction `SSPC` = Report `RSSPECCA`

Report `RSRRRSAA`

Report `RSSAA_CALLEXTERN`

Report `SAPSAA_HELP`

...



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Tipp: Performing Configuration Tasks with Task Manager Transaction STC01

Perform configuration tasks in an automated way by using the task manager for technical configuration (task manager). The task manager guides you through extensive configuration processes by means of predefined task lists and offers the possibility to customize them according to your needs.

Automated Initial Setup of ABAP-Based Systems
http://scn.sap.com/docs/DOC-41405

Note 1923064 - Initial Setup: System Configuration using ABAP Task Manager

Transaction STC01, STC02

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Note 2221986 - Too many privileges assigned to HANA hdbrole

Different software component HCO_RULE_FW (instead of HDB)

Different software component version HANA RULES FRAMEWORK 1.0 (instead of SAP HANA DATABASE 1.00).

- You install the SAP HANA Rules Framework add-on on top of SAP HANA platform.
- You can install or upgrade it independently from a HANA revision upgrade.
- References:

  Note 2219894 - SAP HANA Rules Framework 1.0 SPS06 Release Note

  Documentation about SAP HANA Rules Framework incl. Installation & Upgrade Guide and Security Guide
- System Recommendations may or may not know about the software component and therefore may not show the note.

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Note 2151237 - Potential remote code execution in SAP GUI for Windows

SAP uses libraries from Microsoft (Windows common controls) which are bundled with the SAPGUI installation.

Related Microsoft Security Bulletin: MS12-060

More security notes about SAPGUI:

- Note 1564042 - Security Module: Registry WRITE enabled by default
- Note 1678732 - SAP GUI for Windows 7.20: Client Side Remote Execution
- Note 1770722 - Potential logon information disclosure in SAP GUI
- Note 1771201 - Potential logon information disclosure in SAP Portal & WinGUI
- Note 2124806 - Potential remote termination of running processes in SAP GUI

➢ **Schedule regular SAPGUI updates**

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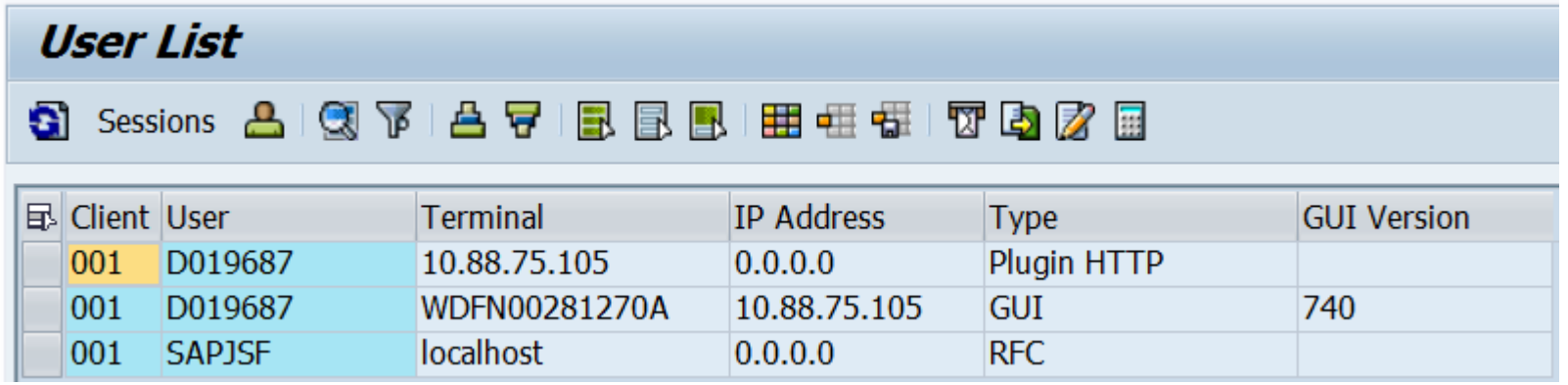
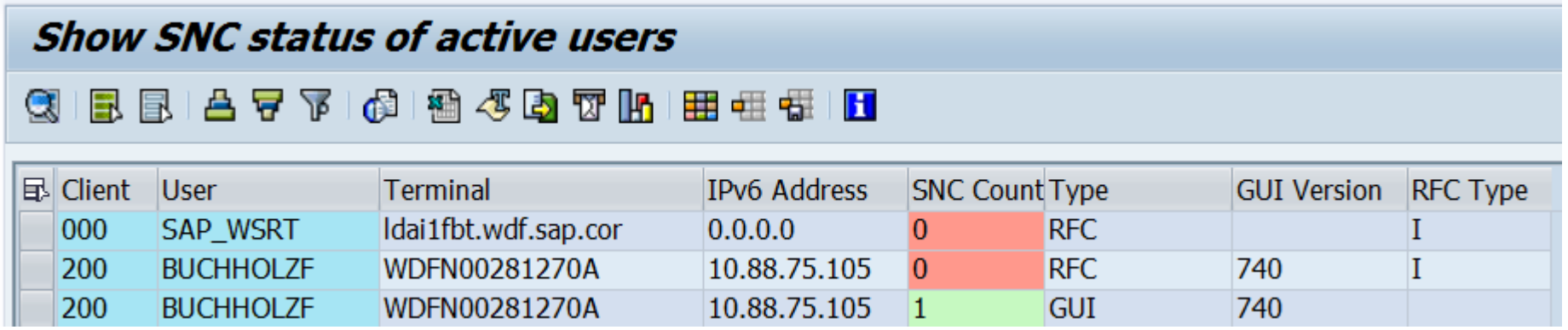
Note 2151237 - Potential remote code execution in SAP GUI for Windows
How to check SAPGUI version

Transaction `SM04` = report `RSM04000_ALV` respective `RSM04000_ALV_NEW`



Client	User	Terminal	IP Address	Type	GUI Version
001	D019687	10.88.75.105	0.0.0.0	Plugin HTTP	
001	D019687	WDFN00281270A	10.88.75.105	GUI	740
001	SAPJSF	localhost	0.0.0.0	RFC	

Report `ZSM04000_SNC` from SCN Blog



Client	User	Terminal	IPv6 Address	SNC Count	Type	GUI Version	RFC Type
000	SAP_WSRT	ldai1fbt.wdf.sap.cor	0.0.0.0	0	RFC		I
200	BUCHHOLZF	WDFN00281270A	10.88.75.105	0	RFC	740	I
200	BUCHHOLZF	WDFN00281270A	10.88.75.105	1	GUI	740	

Limitation: The reports inspects the current sessions on the current application server only.

… or use z-reports from note 748424 - Evaluation of SAP GUI versions and patches

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December 2015

Topics December 2015

System Recommendations in SAP Solution Manager 7.2

How to transport note implementation status for SNOTE?

KBA 2253549 - The SAP Security Baseline Template

Note 2233617 - Security Vulnerabilities in SAP Download Manager (reloaded)

Note 2108479 - Missing authorization check in FI-GL-GL-G

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Latest questions

Note 2234226 - TREX / BWA: Potential technical information disclosure / host OS compromise

No patch available; use separated network segments to protect internal communication between parts of the server

Note 2204160 - Unauthorized modification of displayed content in SAPUI5

The note does not contain any ABAP correction – you cannot implement it with SNOTE.

The note shows links to Java patches for SAPUI5 CLIENT RT AS JAVA and references related notes having patches for SAPUI5 CLIENT RUNTIME.

Note 850306 - Oracle Critical Patch Update Program

Yes, this collective note get's updated whenever SAP creates a new (normal) note about security of the Oracle DB.

General rule: There might exist more security advisories for the DB which you can get directly from the DB vendor.

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Ramp-Up for SAP Solution Manager 7.2

SAP Solution Manager 7.2 Product Roadmap

https://service.sap.com/roadmaps
→ Product and solution roadmaps → Database and Technology → Platform → SAP Solution Manager.

Direct link (Road Map Revision 15.10.2015):

https://service.sap.com/~sapidb/011000358700001435482012E.pdf

SAP EARLY ADOPTER CARE PROGRAM

SAP Solution Manager 7.2

Contact the Early Adoption Program Lead: Tim Steuer

Regional contacts:
Ursula Glas (EMEA/MEE), Lee Gutherman (US/LA), Helen Ding (APA), Imari Okamoto (Japan),

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System Recommendations in SAP Solution Manager 7.2

- User Interface based on Fiori
- Individual views and selections as Fiori tiles
- Cross-system view
- Customizing for status values
- Status with history and cumulative comments
- Hide Application Components which do not match to used DB or OS installations
- General Customizing and Personalization
- Online Documentation

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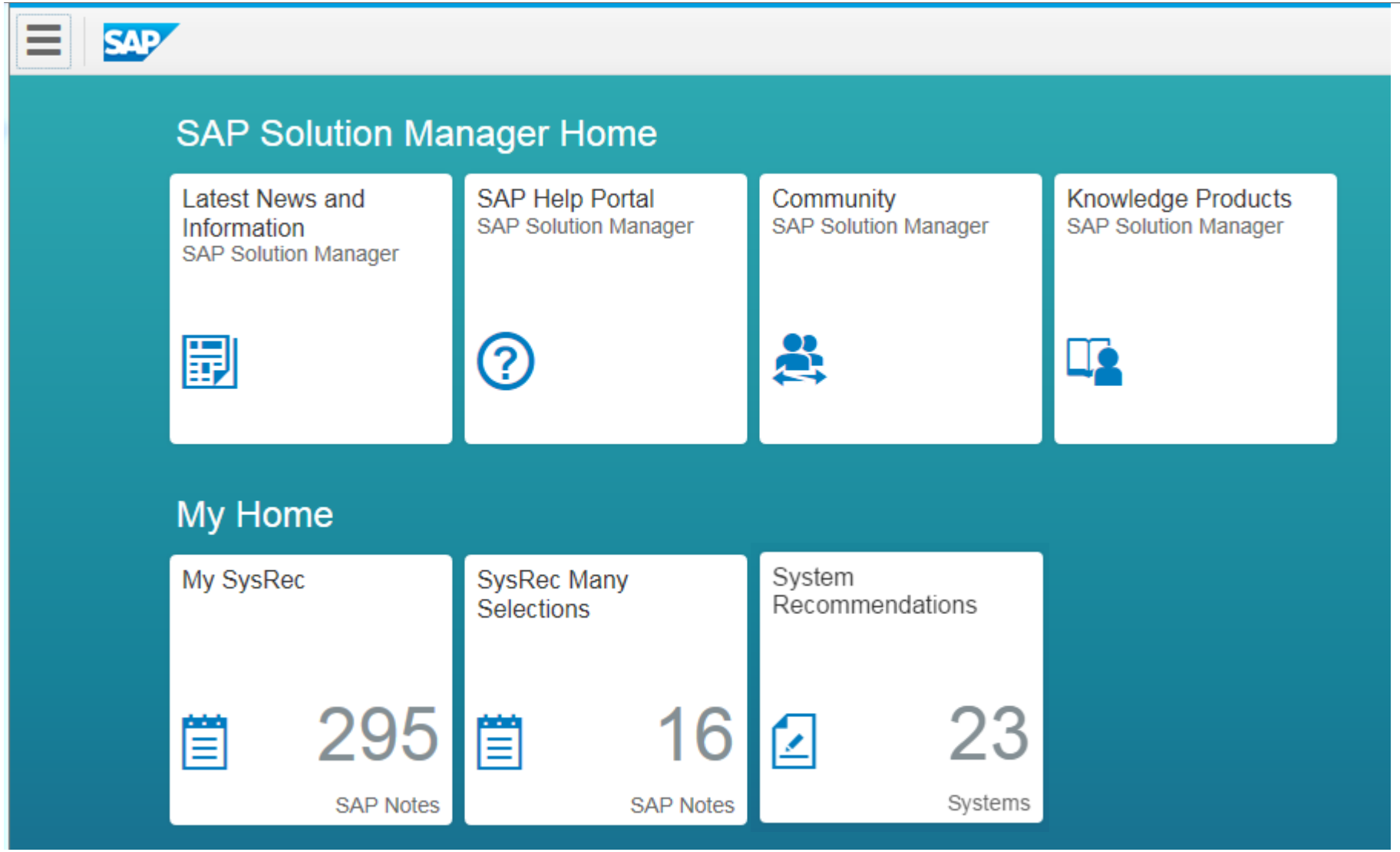
System Recommendations in SAP Solution Manager 7.2 Personnel Launchpad



You can store individual views and selections as Fiori tiles.

The example shows security notes for these systems for which you are responsible having selected status values ('new').

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System Recommendations in SAP Solution Manager 7.2
System Overview

23 All	12 ABAP	5 HANADB	3 JAVA	1 BOBJ	2 ATC

System

Technical System	IT Admin Role	Priority	Security Notes	Hot News	Performance Notes	Legal Change Notes	Favorite
SD7~ABAP	Undefined	Undefined	295	202	343	64	☆
FBT~ABAP	Production System	Undefined	189	189	189	30	★
A24~ABAP	Undefined	Undefined	637	239	363	84	☆
WNX~ABAP	Development System	Medium	462	222	455	89	☆
HRX~HANADB	Test System	Medium	54	58	11	0	☆
HRX~ABAP	DEVELOP	Undefined	313	212	759	61	★
SMA~ABAP	Undefined	Undefined	758	244	809	105	★
ZQX~ABAP	DEVELOP	Undefined	899	283	1664	4999	☆
ZNX~ABAP	Undefined	Undefined	900	285	1664	4999	★
FQJ~JAVA	DEVELOP	Undefined	177	198	77	1	★
FQ7~ABAP	Demo System	Very High	206	202	192	31	★

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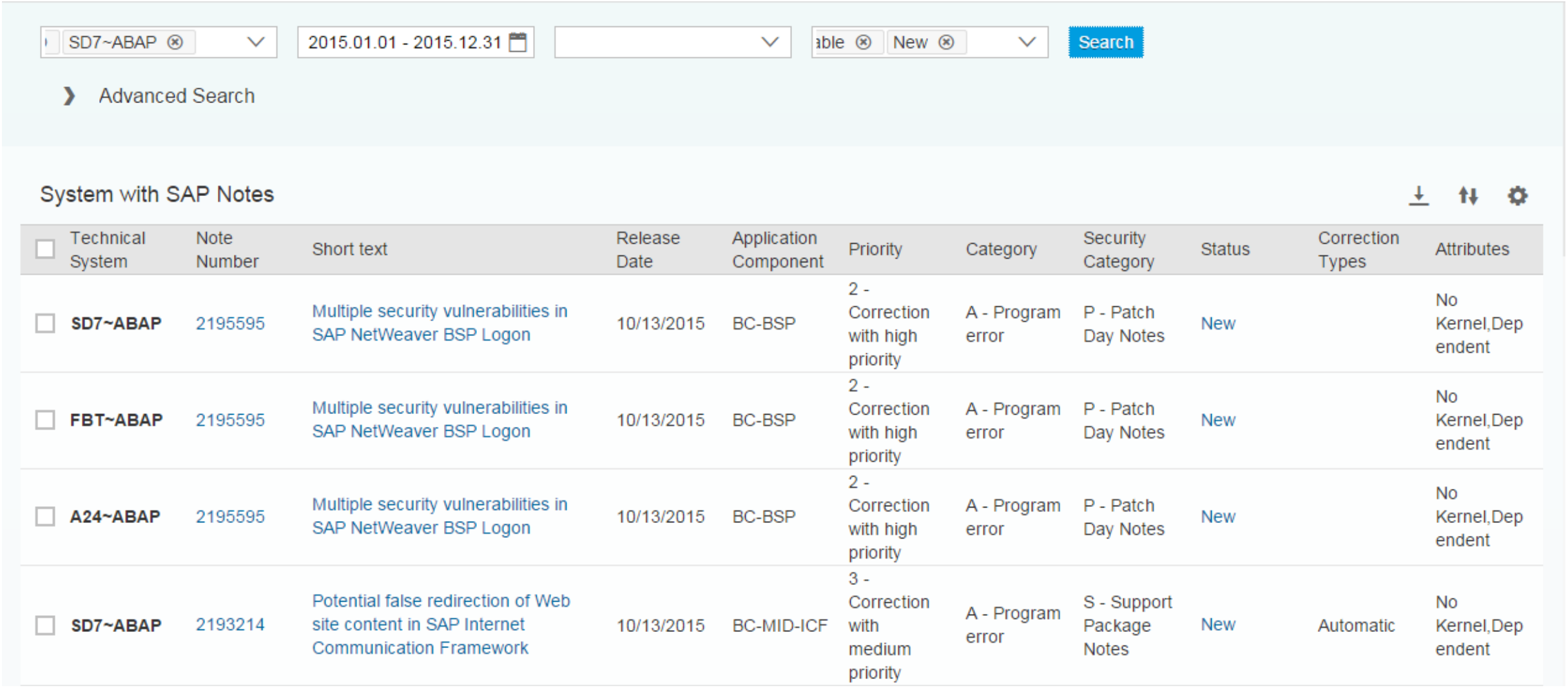
System Recommendations in SAP Solution Manager 7.2
Note Overview



Technical System	Note Number	Short text	Release Date	Application Component	Priority	Category	Security Category	Status	Correction Types	Attributes
SD7~ABAP	2195595	Multiple security vulnerabilities in SAP NetWeaver BSP Logon	10/13/2015	BC-BSP	2 - Correction with high priority	A - Program error	P - Patch Day Notes	New		No Kernel,Dependent
FBT~ABAP	2195595	Multiple security vulnerabilities in SAP NetWeaver BSP Logon	10/13/2015	BC-BSP	2 - Correction with high priority	A - Program error	P - Patch Day Notes	New		No Kernel,Dependent
A24~ABAP	2195595	Multiple security vulnerabilities in SAP NetWeaver BSP Logon	10/13/2015	BC-BSP	2 - Correction with high priority	A - Program error	P - Patch Day Notes	New		No Kernel,Dependent
SD7~ABAP	2193214	Potential false redirection of Web site content in SAP Internet Communication Framework	10/13/2015	BC-MID-ICF	3 - Correction with medium priority	A - Program error	S - Support Package Notes	New	Automatic	No Kernel,Dependent

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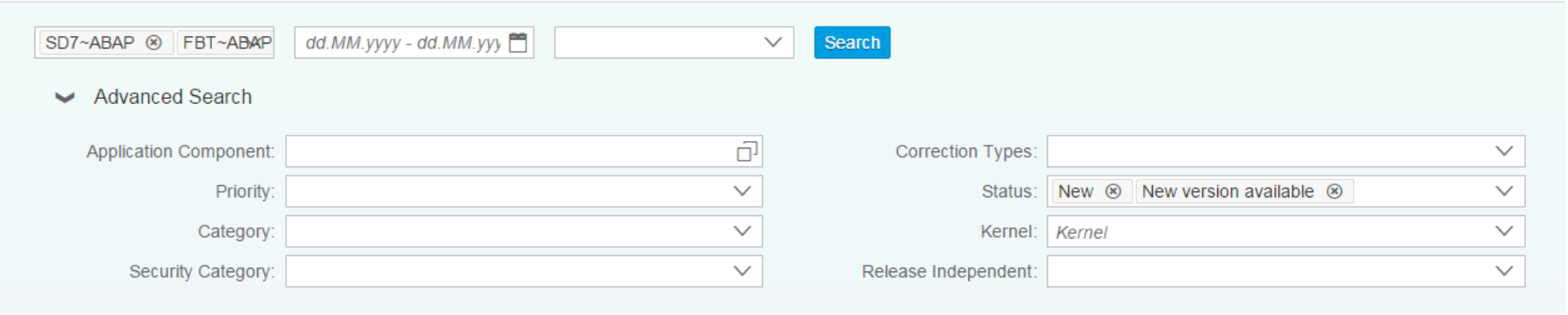
System Recommendations in SAP Solution Manager 7.2 Advanced Search



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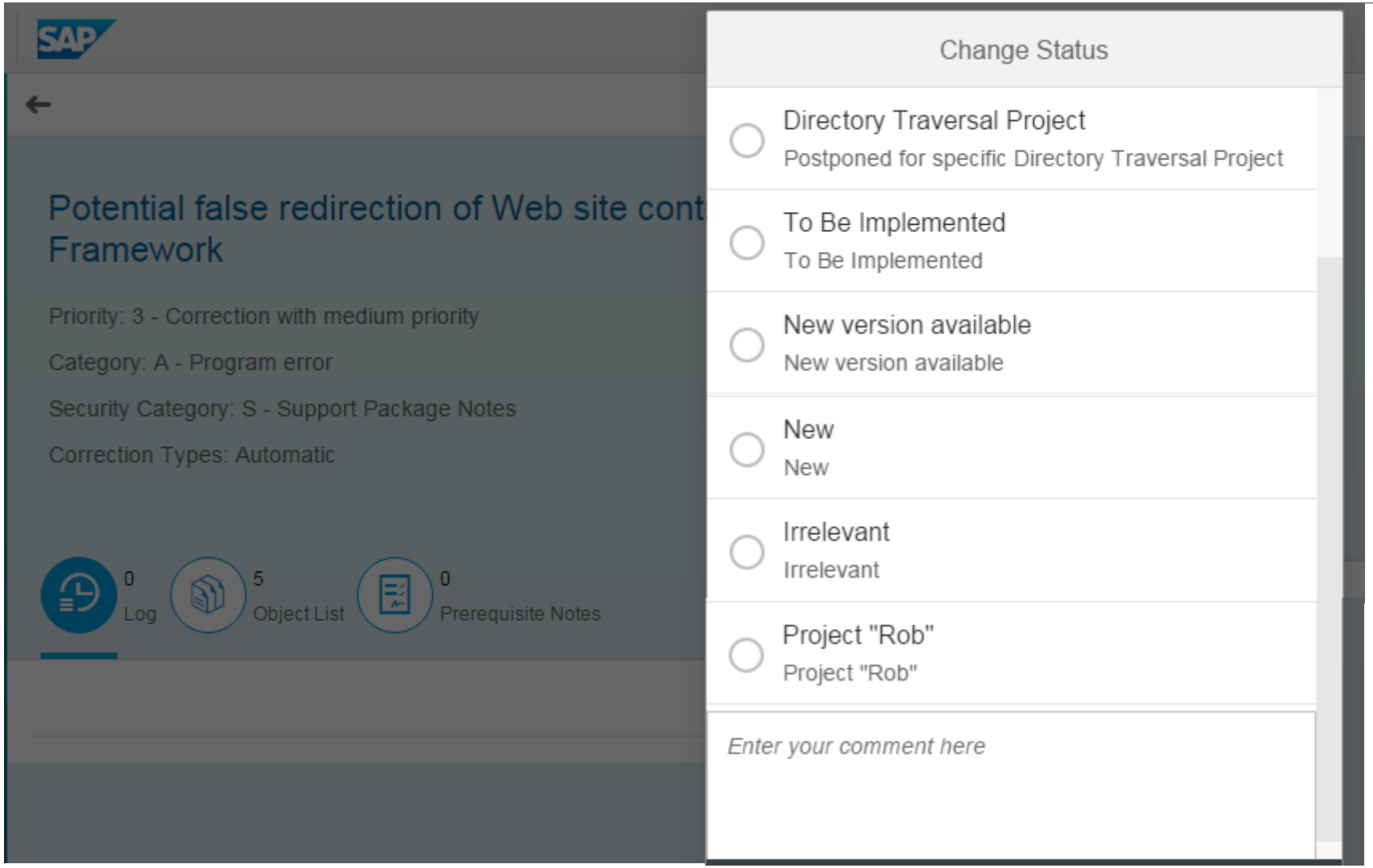
System Recommendations in SAP Solution Manager 7.2 Status and Comments



Individual and cross-system mass status management possible

You can customize user status values, e.g. for ‘fast track transport’, ‘normal transports’, or specific projects.

Status records and comments are stored with timestamp and user and never get modified or deleted.

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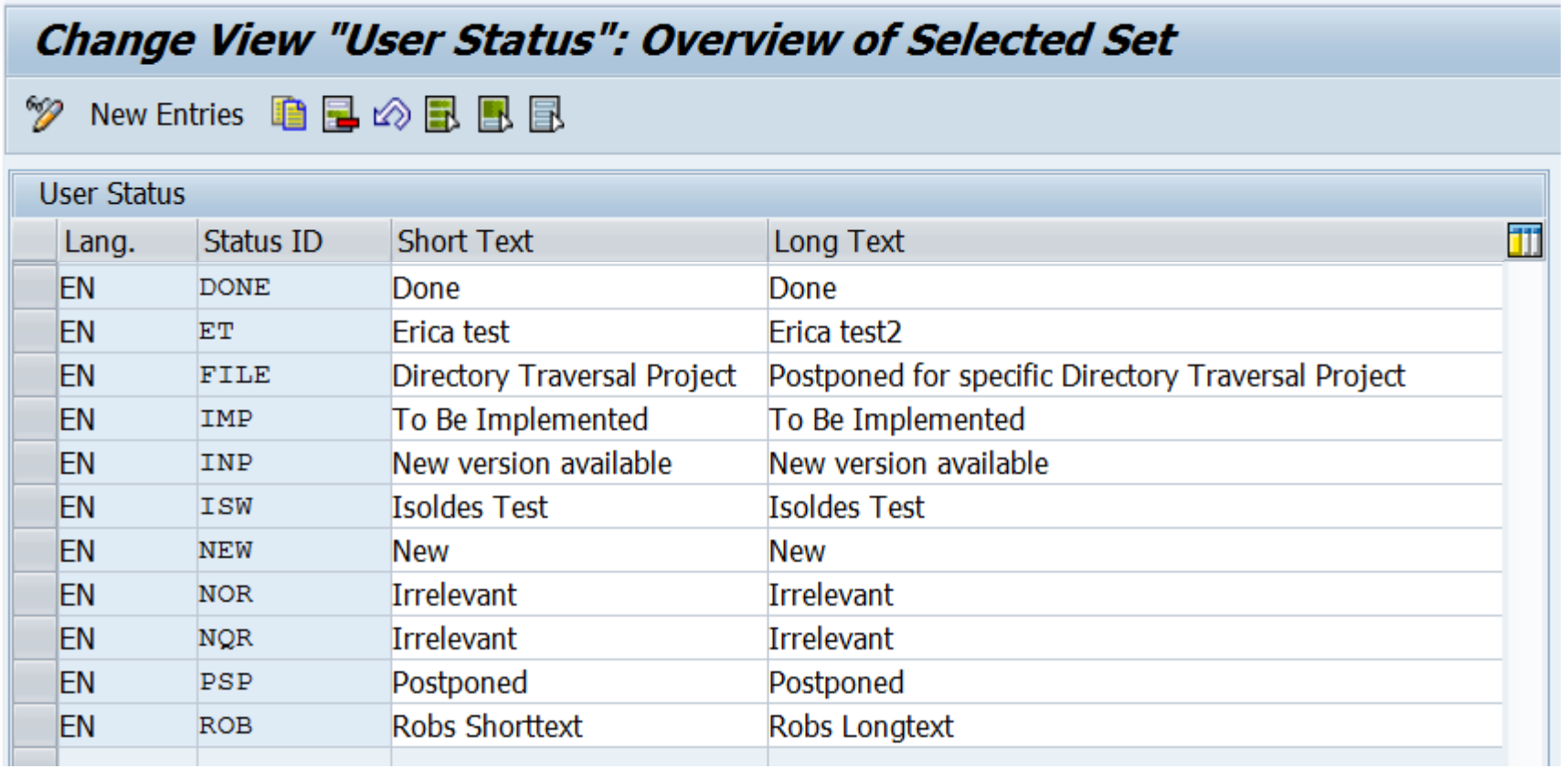
System Recommendations in SAP Solution Manager 7.2
Status and Comments



Change View "User Status": Overview of Selected Set

New Entries

User Status

Lang.	Status ID	Short Text	Long Text
EN	DONE	Done	Done
EN	ET	Erica test	Erica test2
EN	FILE	Directory Traversal Project	Postponed for specific Directory Traversal Project
EN	IMP	To Be Implemented	To Be Implemented
EN	INP	New version available	New version available
EN	ISW	Isoldes Test	Isoldes Test
EN	NEW	New	New
EN	NOR	Irrelevant	Irrelevant
EN	NQR	Irrelevant	Irrelevant
EN	PSP	Postponed	Postponed
EN	ROB	Robs Shorttext	Robs Longtext

Customizing table
`AGSSR_STATUS`

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System Recommendations in SAP Solution Manager 7.2
Status and Comments

Mockup
Table AGSSR_SYSNOTEC

Show System Recommendations results 1

0001487330	FBT	ABAP	NEW	ROB	SR_TST_01	04.09.2015 14:41:24	test with rob#
0001487606	SD7	ABAP	NEW	ET	SR_TST_01	12.08.2015 14:59:15	
0001488406	SD7	ABAP	NEW	ET	SR_TST_01	12.08.2015 14:59:15	
0001490172	SD7	ABAP	NEW	ET	SR_TST_01	12.08.2015 14:59:15	
0001494879	FBT	ABAP	NEW	PSP	SAVELSBERGW	21.06.2015 17:37:57	please postpone this note..
	SD7	ABAP	PSP	PSP	SR_TST_01	16.07.2015 11:14:33	
			PSP	PSP	SR_TST_01	16.07.2015 11:12:27	
			PSP	PSP	SR_TST_01	16.07.2015 11:12:05	
			PSP	PSP	SR_TST_01	16.07.2015 11:11:48	
			NEW	PSP	SAVELSBERGW	21.06.2015 17:37:57	please postpone this note..
0001497104	SD7	ABAP	NEW	ET	SR_TST_01	12.08.2015 14:59:15	
			NEW	NEW	SR_TST_01	24.06.2015 12:12:58	The change request 8000005935 is created for the following
0001501945	FQJ	JAVA	NEW	ET	SR_TST_01	12.08.2015 14:59:15	
	SD7	ABAP	NEW	ET	SR_TST_01	12.08.2015 14:59:15	
0001502781	FBT	ABAP	NEW	ROB	SR_TST_01	04.09.2015 14:41:24	test with rob#
0001507721	SD7	ABAP	NEW	ET	SR_TST_01	12.08.2015 14:59:15	
0001509604	FBT	ABAP	NEW	ROB	SR_TST_01	04.09.2015 14:41:24	test with rob#
	FQJ	JAVA	NEW	ET	SR_TST_01	12.08.2015 14:59:15	
	SD7	ABAP	NEW	ET	SR_TST_01	12.08.2015 14:59:15	
			NEW	NEW	SR_TST_01	24.06.2015 12:12:58	The change request 8000005935 is created for the following
0001523254	SD7	ABAP	NEW	ET	SR_TST_01	12.08.2015 14:59:15	
0001523839	FBT	ABAP	NEW	NEW	LUANE	10.11.2015 14:44:51	A change impact analysis has been started in Business Proc
0001526853	SD7	ABAP	NEW	IMP	SR_TST_01	23.06.2015 10:15:25	Implement me! :)
0001528905	FQ7	HANADB	NEW	NEW	SR_TST_02	11.09.2015 13:11:46	Der Änderungsauftrag 8000011640 wird für die folgenden SAP
0001542033	FQJ	JAVA	NEW	ET	SR_TST_01	12.08.2015 14:59:15	
	SD7	ABAP	NEW	ET	SR_TST_01	12.08.2015 14:59:15	
0001543851	SD7	ABAP	NEW	ET	SR_TST_01	12.08.2015 14:59:15	
0001550925	SD7	ABAP	NEW	NEW	SR_TST_01	24.06.2015 12:12:58	The change request 8000005935 is created for the following
0001552405	FBT	ABAP	NEW	NEW	LUANE	10.11.2015 14:44:51	A change impact analysis has been started in Business Proc
0001555144	SD7	ABAP	NEW	PSP	SR_TST_01	23.06.2015 14:42:52	Das ist ein Test von Gordon - zurück auf New... dann New v
			ISW	NEW	SR_TST_01	23.06.2015 14:42:29	Das ist ein Test von Gordon - zurück auf New... dann New v
			INP	ISW	SR_TST_01	23.06.2015 14:41:46	Das ist ein Test von Gordon - zurück auf New... dann New v

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System Recommendations in SAP Solution Manager 7.2
Usage count from UPL/SCMON

HTTP_SERVER_GROUPS: Funktionsbaustein liest am Datenbankpuffer vorbei 2198564

Priority: 3 - Correction with medium priority
Category: P - Performance
Security Category:
Correction Types: Automatic

Version: 0002
Technical System: FBT~ABAP
Status: New
Application Component: BC-MID-ICF
Release Date: 8/26/2015

0 Log | 1 Object List | 0 Prerequisite Notes

Object List

Transport Program ID	Transport Object Type	Transport Object Name	Program ID(TADIR)	Object Type(TADIR)	Object Name(TADIR)	Usage count
LIMU	FUNC	HTTP_GET_SERVER_GROUPS	R3TR	FUGR	HTTPTREE	3742

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Hide Application Components which do not match to used DB or OS installations

SysRec: OS/DB Filter

Typ	Pattern	Application Component	Vendor	Active
Database	DB6	BC-DB-DB6	SAP	Active
Database	DB6	BW-SYS-DB-DB6	SAP	Active
Database	HDB	BC-DB-HDB	SAP	Inactive
Database	HDB	BW-SYS-DB-HDB	SAP	Inactive
Database	HDB	HAN-DB	SAP	Inactive
Database	INF	BC-DB-INF	SAP	Inactive
Database	INF	BW-SYS-DB-INF	SAP	Inactive
Database	LVC	BC-DB-LVC	SAP	Inactive
Database	MSS	BC-DB-MSS	SAP	Inactive
Database	MSS	BW-SYS-DB-MSS	SAP	Inactive
Database	ORA	BC-DB-ORA	SAP	Inactive
Database	ORA	BW-SYS-DB-ORA	SAP	Inactive
Operation System	AIX	BC-OP-AIX	SAP	Inactive
Operation System	AIX	BC-OP-BUL	SAP	Inactive
Operation System	HP-UX	BC-OP-HPX	SAP	Inactive
Operation System	LINUX	BC-OP-LNX	SAP	Active
Operation System	LINUX	BC-OP-PLNX	SAP	Active
Operation System	LINUX	BC-OP-ZLNX	SAP	Active
Operation System	LINUX OS/3	BC-OP-LNX	SAP	Inactive

Customizing table
`AGSSR_OSDB`

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Overview about Application Components for DB/OS:

Databases

ADA	BC-DB-SDB
ADA	BW-SYS-DB-SDB
DB2	BC-DB-DB2
DB2	BC-DB-DB2-CCM
DB2	BW-SYS-DB-DB2
DB4	BC-DB-DB4
DB4	BW-SYS-DB-DB4
DB6	BC-DB-DB6
DB6	BW-SYS-DB-DB6
HDB	BC-DB-HDB
HDB	BW-SYS-DB-HDB
HDB	HAN-DB
INF	BC-DB-INF
INF	BW-SYS-DB-INF
LVC	BC-DB-LVC
MSS	BC-DB-MSS
MSS	BW-SYS-DB-MSS
ORA	BC-DB-ORA
ORA	BW-SYS-DB-ORA
SAP	BC-DB-SDB
SAP	BW-SYS-DB-SDB
SYB	BC-DB-SYB
SYB	BW-SYS-DB-SYB
TD	BC-DB-TD
TD	BW-SYS-DB-TD

Operating Systems

AIX	BC-OP-AIX
AIX	BC-OP-BUL
HP-UX	BC-OP-HPX
LINUX	BC-OP-LNX
LINUX	BC-OP-LNX-SUSE
LINUX	BC-OP-PLNX
LINUX	BC-OP-ZLNX
LINUX OS/3	BC-OP-LNX
LINUX OS/3	BC-OP-LNX-SUSE
LINUX OS/3	BC-OP-PLNX
LINUX OS/3	BC-OP-ZLNX
OS/400	BC-OP-AS4
SINIX	BC-OP-FSC-REL
SOLARIS	BC-OP-FSC-SOL
SOLARIS	BC-OP-SUN
SUNOS	BC-OP-SUN
TRU64-UNIX	BC-OP-CPQ
TRU64-UNIX	BC-OP-TRU64
UNIX	BC-OP-CPQ
UNIX	BC-OP-TRU64
WIN-NT	BC-OP-NT
Z/OS	BC-OP-S390

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General Customizing and Personalization
Transaction SM30_DNOC_USERCFG_SR

SYSREC_STATUS_FILTER (*)	Defines which SAP Notes are counted on the overview page: By default it only shows notes with status 'new' or 'new version available' (in use up to 7.2 SP 6).
SYSREC_UPL_ACTIVE (*)	Activate/deactivate the integration with UPL/SCMON while showing the object list of ABAP notes.
SYSREC_UPL_MONTH (*)	Count of month for which UPL/SCMON data get loaded. The default is 2 which represents the current and the previous month.
SYSREC_NOTE_TYPES	Defines for which types of notes the application calculates results. Enter the list of characters representing the note types HotNews, Security, Performance, Legal Change, Correction, and License Audit.
SYSREC_LAST_MONTHYEAR	Defines the earliest calculated notes. By default the application calculates all SAP Notes which were released between January 2009 and the current month.
SYSREC_BPCA_USER	Defines if the current user should be added as selection for BPCA.
SYSREC_BPCA_DATE	Defines the earliest filter for BPCA results. You can change the start date for this period.
SYSREC_CHARM_LOG_TYPE	Defines the text id according to table TTXID for the text object CRM_ORDERH.
SYSREC_CHARM_USER	Defines if the current user should be added as selection for ChaRM.
SYSREC_CHARM_DATE	Defines the earliest filter for ChaRM results. You can change the start date for this period.
SYSREC_OBJECT_EXP	Lifetime of the cache which contains the object list of notes. The default is 14 days.
SYSREC_REQ_EXP	Lifetime of the cache which contains the required notes of notes. The default is 14 days.
SYSREC_SIDE_EFFECT	Lifetime of the cache which contains the side-effect notes of notes. The default is 14 days.
SYSREC_UNSUPPORTED_SYSTEM (*)	System types which you want to block from SysRec (one entry per system type)
SYSREC_UNUSED_SUBHR	Calculate results for unused HR components (see note 2712210)

(*) User specific personalization

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System Recommendations in SAP Solution Manager 7.2 Online Documentation

You find the Online Documentation about System Recommendations in the App section for Fiori

Navigation path, e.g. starting at SolMan documentation:

System Recommendations in SolMan 7.2
http://help.sap.com/saphelp_sm72_sp03/helpdata/en/61/d626565b13e121e10000000a4450e5/frameset.htm

→ Fiori
http://help.sap.com/solman_fiori

→ Application Help → SAP Solution Manager Fiori Apps →

System Recommendations
https://help.sap.com/saphelp_smfiori_102/helpdata/en/cb/e401557f614c55e10000000a4450e5/frameset.htm

SAP Support Portal https://support.sap.com/sysrec

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How to transport note implementation status for SNOTE for notes which cannot be implemented via SNOTE?

Preparation: Ensure that note 1788379 is installed in the system.

1. **Load note into SNOTE. You observe that you cannot implement the note.**
2. **Set status manually to ‚completed‘**
3. **Run report `SCWN_TRANSPORT_NOTES` to add notes to an existing or new transport.**
4. **Export the transport and import it into the target system.**

You will see the following in the transport log (table `CWBNTCUST` contains the implementation status in field `NTSTATUS`):

```
Start export R3TRNOTE0001584548 ...
 1 entry from TADIR exported (R3TRNOTE0001584548  ).
 3 entries from CWBNTCI exported (0001584548*).
 0 entries from CWBNTCONT exported (0001584548*).
 1 entry from CWBNTCUST exported (0001584548*).
 3 entries from CWBNTDATA exported (NT0001584548*).
 […]
End of export R3TRNOTE0001584548
```

Manual transport (but without correction instructions):

Create workbench-transport or transport-of-copies and add the transport keys manually (including leading zeroes).

Example:

```
R3TR  NOTE  0001584548
R3TR  NOTE  0001628606
R3TR  NOTE  0001631072
etc.
```

5. **Run the note browser of `SNOTE`, report `SCWN_NOTE_BROWSER`, and validate the implementation status.**
6. **With the next run of SysRec‘s background job the note will vanish from the result list.**

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KBA 2253549 - The SAP Security Baseline Template

An SAP Security Baseline is a regulation on minimum security requirements to be fulfilled for all SAP systems in your organization.

"Baseline" means: These requirements must be fulfilled by all SAP systems regardless of any risk assessments. They are general best practices and apply to all systems, regardless of their security level.

The SAP Security Baseline Template is a template document provided by SAP on how an organization-specific SAP Security Baseline could be structured. It is pre-filled with selected baseline-relevant requirements and corresponding concrete values as recommended by SAP.

https://support.sap.com/sos
→ Media Library

CoE Security Services - Security Baseline Template Version
https://support.sap.com/dam/library/SAP%20Support%20Portal/support-programs-services/support-services/security-optimization-service/media/Security_Baseline_Template.zip.

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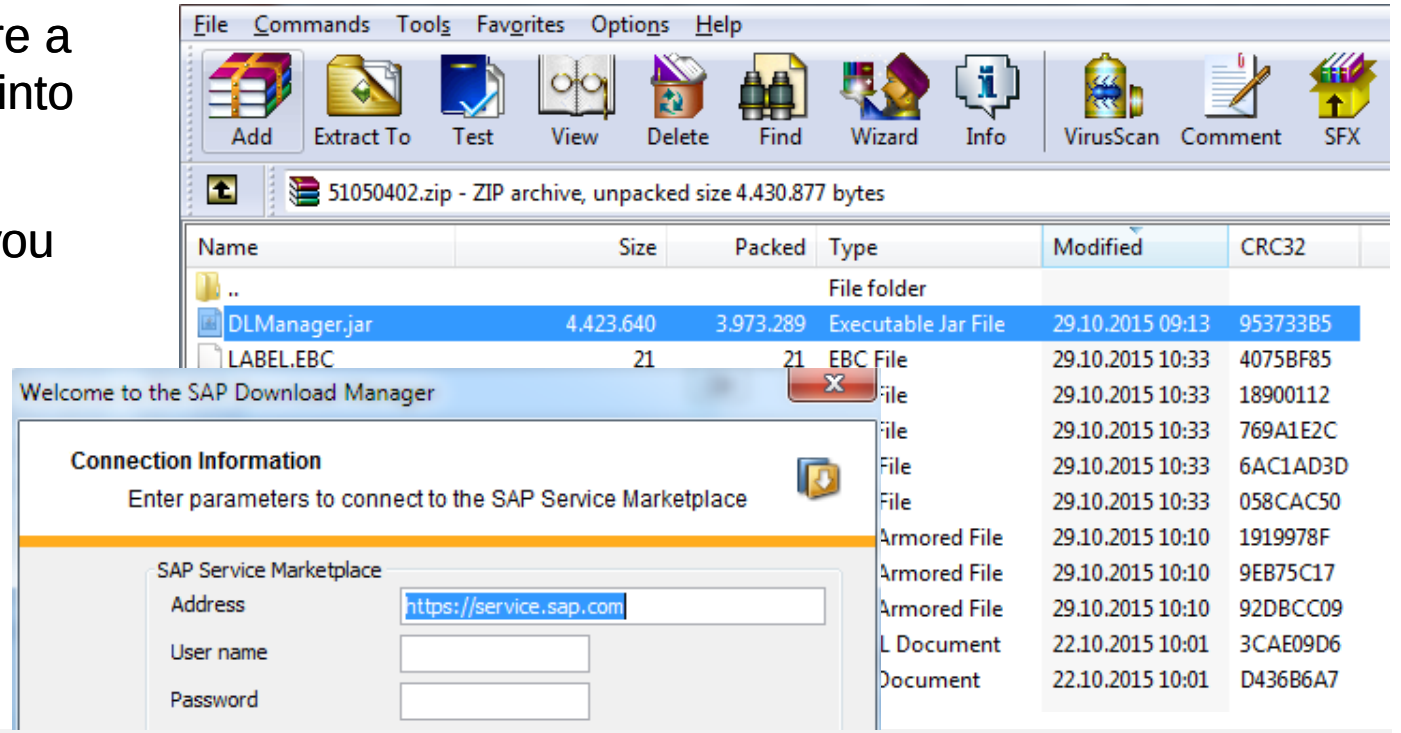
Note 2233617 - Security Vulnerabilities in SAP Download Manager (reloaded)

These vulnerabilities can potentially be abused by an attacker to launch man-in-the-middle attacks. Attackers thus could tamper with the content of software downloads and submit malware of their own while the administrator assumes to get software from SAP.

Employees who are using the SAP Download Managers should deinstall the existing version and get the new version from https://support.sap.com/software/download-manager.html

This is a executable jar-file which does not require a special installation procedure – you simply put it into any folder:

The most visible change (among others) is that you connect to the Service Marketplace via an SSL encrypted channel and that you cannot store the password anymore (no SSO available):



In addition users can validate the digital signatures of downloads as described in note 2178665.

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Note 2108479 - Missing authorization check in FI-GL-GL-G

Relevant for application New General Ledger Accounting

Report `FAGL_YEC_POSTINGS_EHP4` = transaction `FAGL_<country>_02`
gets new authorization checks

for `F_BKPF_BUK` activities `03` and `10`
and
for `F_BKPF_BLA` activity `10`
and
via BAdI `FAGL_AUTHORITY_CHECK` (optional)
respective for authorization object `F_FAGL_LDR` activities `03` and `01`.

An error message stops the report for the first missing authorization check.

(In classic General Ledger Accounting report `RFSUMB00` is used which is not touched by this note.)

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November 2015

Topics November 2015

ONAPSIS Advisories 2015 up to 044 about SAP HANA (TrexNet)

Security Fixes to Vulnerabilities Reported in SNOTE Application

Note 2233617 - Security Vulnerabilities in SAP Download Manager

Note 2197428 - Potential remote code execution in HANA

Note 2197100 - OS injection through call of function module by SM37

Note 1611408 - Missing authorization check in SD-SLS

Delta-mode vs. full calculation in System Recommendations

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ONAPSIS Advisories 2015 about SAP HANA (TrexNet)

The solutions are available with several notes:

Older notes 2140700 2153765 2153892 2153898

Note 2148854 - Potential information disclosure relating to server information, July 2015
Solution: (SPS 8 is not affected), revision 97 for SPS 9, or SPS 10

Note 2165583 - SAP HANA secure configuration of internal communication, August 2015
Release independent solution according to manual instruction, see note 2183363, too

Note 2175928 - Potential remote termination in SAP HANA text engine, August 2015
Solution: revision 85.05 for SPS 8, revision 95 for SPS 9, or SPS 10

Note 2197397 - Potential remote code execution in SAP HANA XS, September 2015
Solution: revision 85.05 for SPS 8, or revision 92 for SPS 9, (SPS 10 is not affected)

Note 2197428 - Potential remote code execution in HANA, October 2015
Solution: no fix for SPS 8, revision 97.03 for SPS 9, or revision 102.01 for SPS 10

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Note 2165583 / 2183363 – Secure Configuration of SAP HANA internal network

The EarlyWatch Alert checks for the SAP HANA Network Settings for Internal Services since mid of 2015 (see EWA note 863362):

10.1.5 SAP HANA Network Settings for Internal Services

Rating	File Name	Layer	Section	Key	Current Value
	global.ini	SYSTEM	communication	listeninterface	.global
	global.ini	DEFAULT	internal_hostname_resolution		

Your system internal network configuration is not secured against unauthorized access. Immediate action is required.

Recommendation: Follow the instructions in the SAP Note 2183363.

10.1.6 SAP HANA SSFS Master Encryption Key

The parameter *ssfs_key_file_path* is not set in the section *[cryptography]* of the *global.ini* file. Most likely your SSFS Master Encryption Key has not been changed from its default value.

Recommendation: Change your SSFS Master Encryption Key as described in SAP Security Note 2183624 and SAP HANA Administration Guide, Section 'Change the SSFS Master Key'.

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Note 2165583 / 2183363 – Secure Configuration of SAP HANA internal network

The EarlyWatch Alert checks for the SAP HANA Network Settings for Internal Services since mid of 2015 (see EWA note 863362):

The settings for the internal network must be configured in accordance with SAP Note 2183363 for systems on one or several hosts. The check checks for obvious violations against these recommendations.

The parameter `listeninterface` in the section `[communication]` must have neither the value `.global` nor the value `.all`. If `listeninterface` has the value `.internal`, in the section `[internal_host_resolution]`, no IP addresses must be maintained that can be reached externally.

The check is carried out by comparing against the values of `net_publicname` in the view `M_HOST_INFORMATION`.

The check triggers EWA alert 21 “SAP HANA Internal Network Configuration is insecure” (red rating), respective 22 “SAP HANA Internal Network Configuration may lead to future security risks” (yellow rating).

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Note 2197428 - Potential remote code execution in HANA

Fixing the issue requires to upgrade at least to revision 97.03 or 102.1 or higher.

However, in the interim time, the risk can be mitigated by the following measures:

- **If possible, block direct user access to the HANA system on the network layer**, e.g. by appropriate firewall configuration.
  - This especially is normally possible for scenarios in which only indirect access to the HANA system is required e.g. via Business Suite or NetWeaver Gateway.
  - To our knowledge, attackers who want to exploit the corresponding vulnerabilities, require direct access to the SAP HANA system, which can be blocked if users need only indirect access via NetWeaver Work Processes (e.g. Business Suite or BW) or via NetWeaver Gateway.
- **Actively monitor and respond to HANA dumps**.
  - Attackers are likely to try several attempts which may lead to dumps and thus allow to get alerted on such activities.
- **Configure, actively monitor and respond to suspicious activities recorded in the HANA Audit Trail**.
  - Unexpected or malicious activities can be discovered and suitable countermeasures can be taken, if the HANA Audit Trail (best practice) is set-up and monitored properly.

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Security Fixes to Vulnerabilities Reported in SNOTE Application

Customers are advised to implement these notes immediately.

Note 2235513 - External RFC callback to customer systems in SNOTE

Note 2235514 - Standard RFC destination for note download can be overridden
Table CWBRFCUSR is not used in customer systems anymore

Note 2235515 - Insufficient logging in SNOTE

These corrections are in the same SP per release:

700 SP 33	701 SP 18	702 SP 18	710 SP 21	
711 SP 16	730 SP 15	731 SP 18	740 SP 14	750 SP 2

Re-run of SysRec background job necessary because validity of correction instructions was updated.

For obvious reasons: No testing in test systems or production systems necessary.

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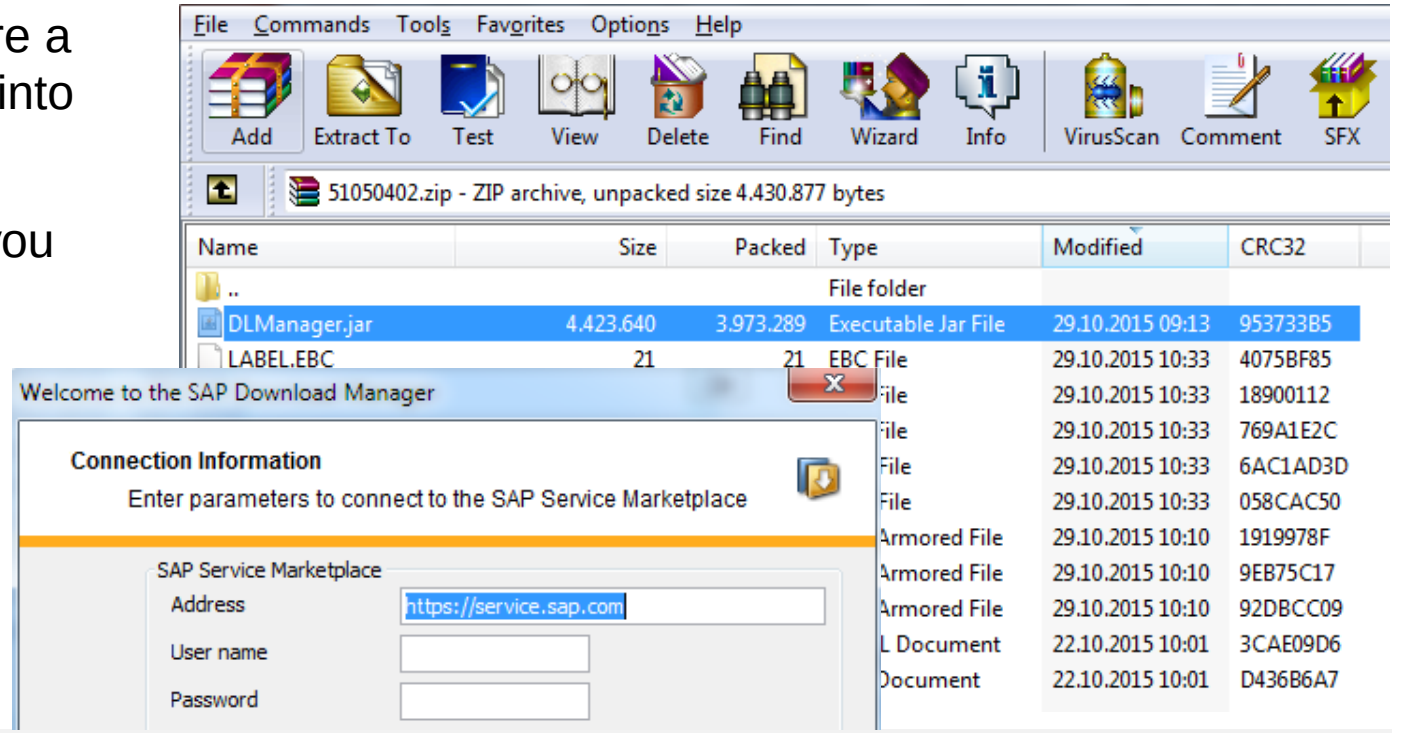
Note 2233617 - Security Vulnerabilities in SAP Download Manager

These vulnerabilities can potentially be abused by an attacker to launch man-in-the-middle attacks. Attackers thus could tamper with the content of software downloads and submit malware of their own while the administrator assumes to get software from SAP.

Employees who are using the SAP Download Managers should deinstall the existing version and get the new version from https://support.sap.com/software/download-manager.html

This is a executable jar-file which does not require a special installation procedure – you simply put it into any folder:

The most visible change (among others) is that you connect to the Service Marketplace via an SSL encrypted channel and that you cannot store the password anymore (no SSO available):



In addition users can validate the digital signatures of downloads as described in note 2178665.

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Note 2197100 - OS injection through call of function by SE37

Should you implement this note (see note 2039075) as described?

Is this function the only one which executes OS commands?

Is this function much more dangerous than the other multiple 100.000 function modules and class methods?

Think big: “No development activities or low level test tools in production systems”

- Strictly control access to `SE37` and to authorizations for `S_DEVELOP` for object type `FUGR` and activity `16` = execute (and all change activities)
- Strictly control access to `SE24` and to authorizations for `S_DEVELOP` for object type `CLAS` and activity `16` = execute (and all change activities)
- Control access to authorization object `S_C_FUNCT` and function name `SYSTEM`
- Try to control access to authorization object `S_DATASET` (but that’s a quite different story)

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Note 1611408 - Missing authorization check in SD-SLS

SysRec showed the note as false-positive in release ECC SAP_APPL 606.

Old version 1 was relevant for this release.

Current version 2 is not relevant for this release anymore but SysRec still showed the note if it was on the list with version 1.

SAP triggered re-calculation in the SAP backbone on 15.10.2015.

This note and other similar notes should have vanished after the next run of the background job.

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Delta-mode vs. full calculation in System Recommendations

Usually System Recommendations runs in delta-mode and checks new notes since previous run of the job only:

If necessary SAP triggers a full calculation on the SAP backbone which replaces all data:

See application log, transaction `SLG1` for log object `AGS_SR`

Example for the log of a daily job:

Type	Message Text
	Start the automatic check for technical system XS2-ABAP on 14.10.2015 23:02:38 CET
	Read RFC destination SM_XS2CLNT000_READ is used for technical system XS2-ABAP
	Notes from 20151013 to 20151014 are calculated for technical system XS2-ABAP
	End the automatic check for technical system XS2-ABAP on 14.10.2015 23:03:06 CET

Type	Message Text
	Start the automatic check for technical system XS2-ABAP on 15.10.2015 15:21:03 CET
	Read RFC destination SM_XS2CLNT000_READ is used for technical system XS2-ABAP
	XS2-ABAP: reupdate security notes and hotnews for2015
	XS2-ABAP: reupdate security notes and hotnews for2014
	XS2-ABAP: SAP Note 0002064610 is obsolete according to the calculation
	XS2-ABAP: reupdate security notes and hotnews for2013
	XS2-ABAP: reupdate security notes and hotnews for2012
	XS2-ABAP: reupdate security notes and hotnews for2011
	XS2-ABAP: reupdate security notes and hotnews for2010
	XS2-ABAP: reupdate security notes and hotnews for2009
	Notes from 20151014 to 20151015 are calculated for technical system XS2-ABAP
	End the automatic check for technical system XS2-ABAP on 15.10.2015 15:22:07 CET

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October 2015

Topics October 2015

Note 1677810 - Unauthorized modification in ITS-Service in IS-U-WA

Note 2189853 - SAP Internet Communication Framework fails to validate HTTP_WHITELIST

Note 2103389 - Missing authorization check in BC-VMC

Example for very old note having manual instructions:
Note 1445998 - Disabling invoker servlet

Note 2192982 - Potential information disclosure relating to TLS 1.1/1.2

Note 2080378 - Transaction STRFCTRACE: Evaluation of RFC statistic records

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Note 1677810 - Unauthorized modification in ITS-Service in IS-U-WA

- **Note about security vulnerability in a web interface of an Industry Solution**
- **Solution published via Support Package in March 2012**
  - The related note refer to Kernel Patches from 2010 and 2011
- **Update in September 2015 to tell that the repair report which you get via the note has to be executed (if you do not use the Support Package)**
  - Only necessary in development system because the correction will be added to a transport
  - Do not use the XPRA tip at all (I guess it will not work for this note anyway)
- **If you never have installed a Support Package since 3 years, you have many more security risks than this one**
- **Conclusion: Nothing to do now – except to check if you regularly run Support Package upgrades**

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Note 2189853 - SAP Internet Communication Framework fails to validate HTTP_WHITELIST

“Attention: Before applying the correction make sure that the configuration of table HTTP_WHITELIST in the target clients other than client "000" meets your requirements!”

- Check entries in client 000 using SE16(*) and decide which you have to move to the productive client(s).
- Keep in mind that public services from node default_host/sap/public stay in client 000 !

Note 853878 - HTTP WhiteList Check (Introduction to the topic)

WebDynpro ABAP - Security Risk List
https://help.sap.com/saphelp_nw70ehp2/helpdata/en/48/69f794e8a607d6e10000000a42189c/content.htm

NWBC - 7.9.2 Defining Whitelist in HTTP_WHITELIST in ABAP Back-End
http://help.sap.com/saphelp_nw70ehp3/helpdata/EN/ee/984daaa3834eeaa77d5edb822570f6/content.htm

(*) SM30 does not work for tables containing string fields. Instead of SE16 you can use report RS_HTTP_WHITELIST as of release 7.31.

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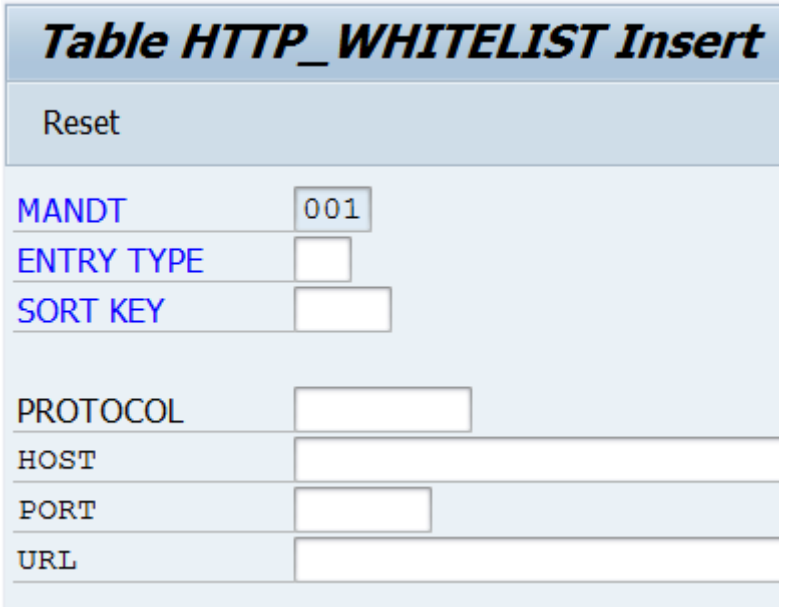
Note 2189853 - SAP Internet Communication Framework fails to validate HTTP_WHITELIST

Related notes:

- Note 2032237 - Using CHECK_HTTP_WHITELIST for server-relative URLs
- Note 2193214 - Potential false redirection of Web site content in SAP Internet Communication Framework
- Note 2223891 - How to configure HTTP_WHITELIST table for public services

Available entry types:

- 01 Portal CSS Theme URL
- 02 sap-exiturl
- 03 NWBC (*open a ticket if you need this for release <= 7.02)*
- 10 Web Dynpro Resume URL
- 20 Redirect URL for /sap/public/myssocntl (Note 612670)
- 21 Redirect URL for /sap/public/bc/icf/logoff (Note 1509851)



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Note 2103389 - Missing authorization check in BC-VMC

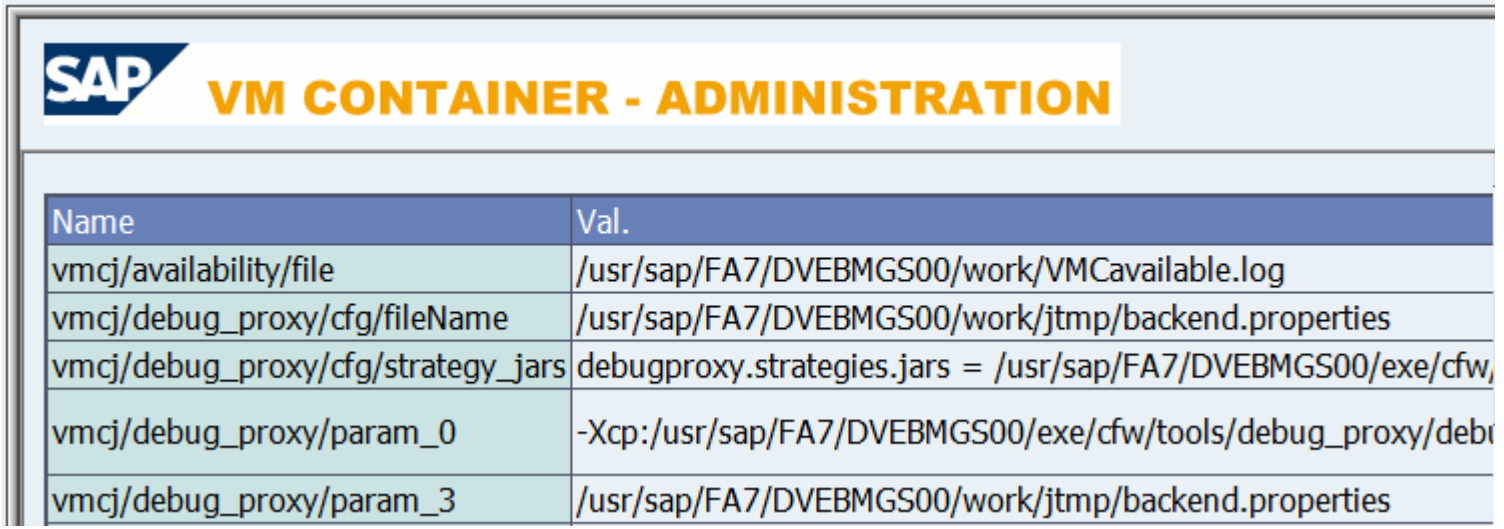
Solution:

- **Kernel patch as of release 7.21**
- **Set profile parameter `vmcj/property/Admin_Security_Active = on`**

The profile parameter is not documented in transaction RZ11

Transaction SM53 would show it:

The authorization check gets added on the Java part of that transaction.



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Example for very old note having manual instructions: Note 1445998 - Disabling invoker servlet

HotNews from 2010 – Is it still valid?

Good news: The Invoker Servlet has been disabled by default as of release 7.20.

But: In case of older systems you have to disable the vulnerable feature manually by changing the value of `EnableInvokerServletGlobally` property of `servlet_jsp` service on the server nodes to `false`.

Open questions:

- **How to ensure security in old systems?**
- **How to identify old security notes which are still relevant?**
- **How to identity manual configuration steps in general?**

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Note 2192982 - Potential information disclosure relating to TLS 1.1/1.2

Solution:

“To fix the vulnerability of CommonCryptoLib version 8.4.38, install CommonCryptoLib version 8.4.39 or later. CommonCryptoLib versions 8.4.37 or previous are not affected.”

Comments:

Only a single version of the CommonCryptoLib is affected.

The application System Recommendations cannot show this note because the CommonCryptoLib is not known in LMDB/SLD.

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Note 2080378 - Transaction STRFCTRACE
Evaluation of RFC statistic records

Do you know the Blog How to get RFC call traces to build authorizations for S_RFC for free!

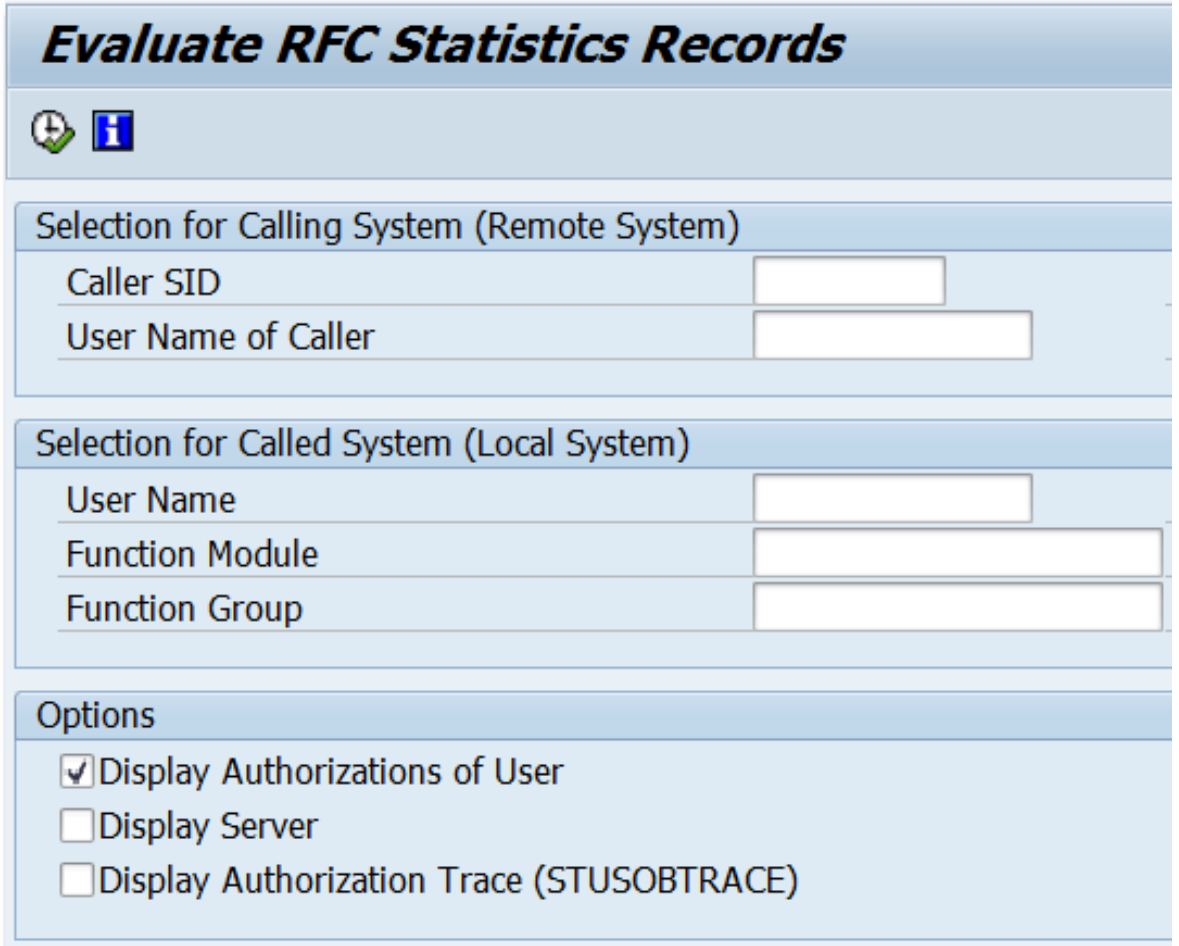
with the report ZRFC_STATRECS_SUMMARY ?

Now you can use the standard transaction

STRFCTRACE

if you have SAP_BASIS 700 SP 32, 701 SP 17, 702 SP 17, 730 SP 13, 731 SP 15, or 740 SP 10 and Kernel 721 patch 411

The system checks whether the start authorization check for the RFC function module was recorded using the authorization trace (transaction STUSOBTRACE).
See SAP Note 1847663.



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Note 2080378 - Transaction STRFCTRACE
Evaluation of RFC statistic records

Remote RFC client calls local RFC function module

Called System SID:FBT Client:200 (Local Server)
Profile Parameter auth/rfc_authority_check=1

Caller	Caller	User (Caller)	Caller Destination	User (Executing)	User Type	Called RFC Function Module	Function Group (Called Function)	Functi	Group	In	Information	# Calls
			ldcifbt_F	SMD_RFC_TEST	B System	FM_DIAGLS_GET_TECH_SYST	FG_DIAGLS_LANDSCAPE	☐	☐	!	Generic Authoriz	103
			ldcifbt_F	SMD_RFC_TEST	B System	FM_DIAGLS_GET_TECH_SYST_F_I	FG_DIAGLS_LANDSCAPE	☐	☐	!	Generic Authoriz	16
			ldcifbt_F	SMD_RFC_TEST	B System	FM_GET_ISEMS	FG_DIAGSTP_WILY	☐	☐	!	Generic Authoriz	2
			ldcifbt_F	SMD_RFC_TEST	B System	RFC_GET_FUNCTION_INTERFACE	RFC1	☐	☑			3
			ldcifbt_F	SMD_RFC_TEST	B System	SYSTEM_RESET_RFC_SERVER	SYSU	☐	☑			354
			ldcifbt_FBT_00	SMD_RFC_TEST	B System	RFCPING	SYST	☐	☑			1
		SAPJSF	UMEBackendConnection	SAPJSF	B System	BAPI_USER_EXISTENCE_CHECK	SU_USER	☐	☑			75
		SAPJSF	UMEBackendConnection	SAPJSF	B System	BAPI_USER_GET_DETAIL	SU_USER	☐	☑			75
		SAPJSF	UMEBackendConnection	SAPJSF	B System	PRGN_J2EE_USER_GET_ROLENAM	PRGN_J2EE	☐	☑			50
		SAPJSF	UMEBackendConnection	SAPJSF	B System	RFCPING	SYST	☐	☑			3
CTR	001	D007157	0050569B02731ED58DA	SM_ADMIN_CTR	B System	RFCPING	SYST	☐	☑			25
CTR	001	D007157	0050569B02731ED58DA	SM_ADMIN_CTR	B System	RFC_READ_TABLE	SDTX	☐	☑			13
CTR	001	D007157	0050569B02731ED58DA	SM_ADMIN_CTR	B System	RFC_SYSTEM_INFO	SRFC	☐	☐		No Check (SRFC)	8
CTR	001	D007157	0050569B02731ED58DA	SM_ADMIN_CTR	B System	SUSR_GENERATE_PASSWORD	SUSO	☐	☑			2
CTR	001	D007157	0050569B02731ED58DA	SM_ADMIN_CTR	B System	/SDF/RFC_READ_R3_DESTINATION	/SDF/COMUSER_UPDATE	☐	☑	!	Generic Authoriz	1
CTR	001	D007157	0050569B02731ED58DA	SM_ADMIN_CTR	B System	FUNCTION_EXISTS	SUNI	☐	☑			1
CTR	001	D007157	0050569B02731ED58DA	SM_ADMIN_CTR	B System	RFCPING	SYST	☐	☑			1
CTR	001	D007157	0050569B02731ED58DA	AGS_SM_SETUP	S Service	RFCPING	SYST	☐	☐	STOP	Full Authorization	1
CTR	001	D007157	0050569B02731ED58DA	AGS_SM_SETUP	S Service	SUSR_LOGIN_CHECK_RFC	SUSO	☐	☐	STOP	Full Authorization	1
CTR	001	D007157	0050569B02731ED58DA	AGS_SM_SETUP	S Service	/SDF/DELETE_USER_ROLES	/SDF/COMUSER_UPDATE	☐	☐	STOP	Full Authorization	1

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August 2015

Topics August 2015

Some words about System Recommendations

SAP Note Enhancer

Note 1611408 - Missing authorization check in SD-SLS

Note 1922205 - Authorization default value in component BC-XI-IS-WKB

Note 1952092 - Code injection vulnerability in IDES systems

Note 2179384 - Traffic control: Wrong request transfer rate calculation

Note 2182842 - Potential information disclosure relating to SAP Customizing

SAP Security Notes Advisory by SAP Consulting

Note 1830797 - Missing authorization check in BC-MID-ICF

Note 2174357 - Reflected File Download Vulnerability in KM Documents Servlet

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Some words about System Recommendations

Q: Can I use SysRec to find all missing notes?

Frank: Yes, if you just use ABAP, Java and HANA but for other types of systems you still have to check the Support Portal at https://support.sap.com/securitynotes

Q: Can I use SysRec to create worklists for IT basis to implement notes?

Frank: Well, you can use the status field and the integration with ChaRM, but that does not replace some more sophisticated worklist management. Therefore I would use the Excel export as a starting point. (But stay tuned for next version of SolMan.)

Q: Can I use SysRec to verify if notes have been implemented in production?

Frank: Partially, it works fine for notes having exact patch information like ABAP notes having automatic correction instructions, or Kernel or Java or HANA patches but not for other notes.

Q: Can I use SysRec to verify service level agreements about the speed on notes implementation?

Frank: Not without some manual activities

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Some words about System Recommendations

Q: Which worklists should I feed with notes?

Frank: Use a bunch of them, e.g. the following:

1. ABAP Notes having automatic correction instructions which should reach productions as fast as possible using a separate security patch transport
2. ABAP Notes having correction instructions which should reach productions as part of your normal transport cycle
3. ABAP Notes which require extensive testing because of potential influence to business
4. ABAP Notes which require update of roles first, i.e. notes about SACF
5. Notes which describe postponed security optimization activities which you can do during next maintenance activity
6. Kernel notes just for information as there is a scheduled update of the Kernel anyway (same for Java or HANA)
7. Special project ‘Directory Traversal’ to collect notes which you may implement and configure later
8. Notes which you can ignore and for which you want to document this decision
9. Selected critical notes for which audit should get reports after some time, that production is safe

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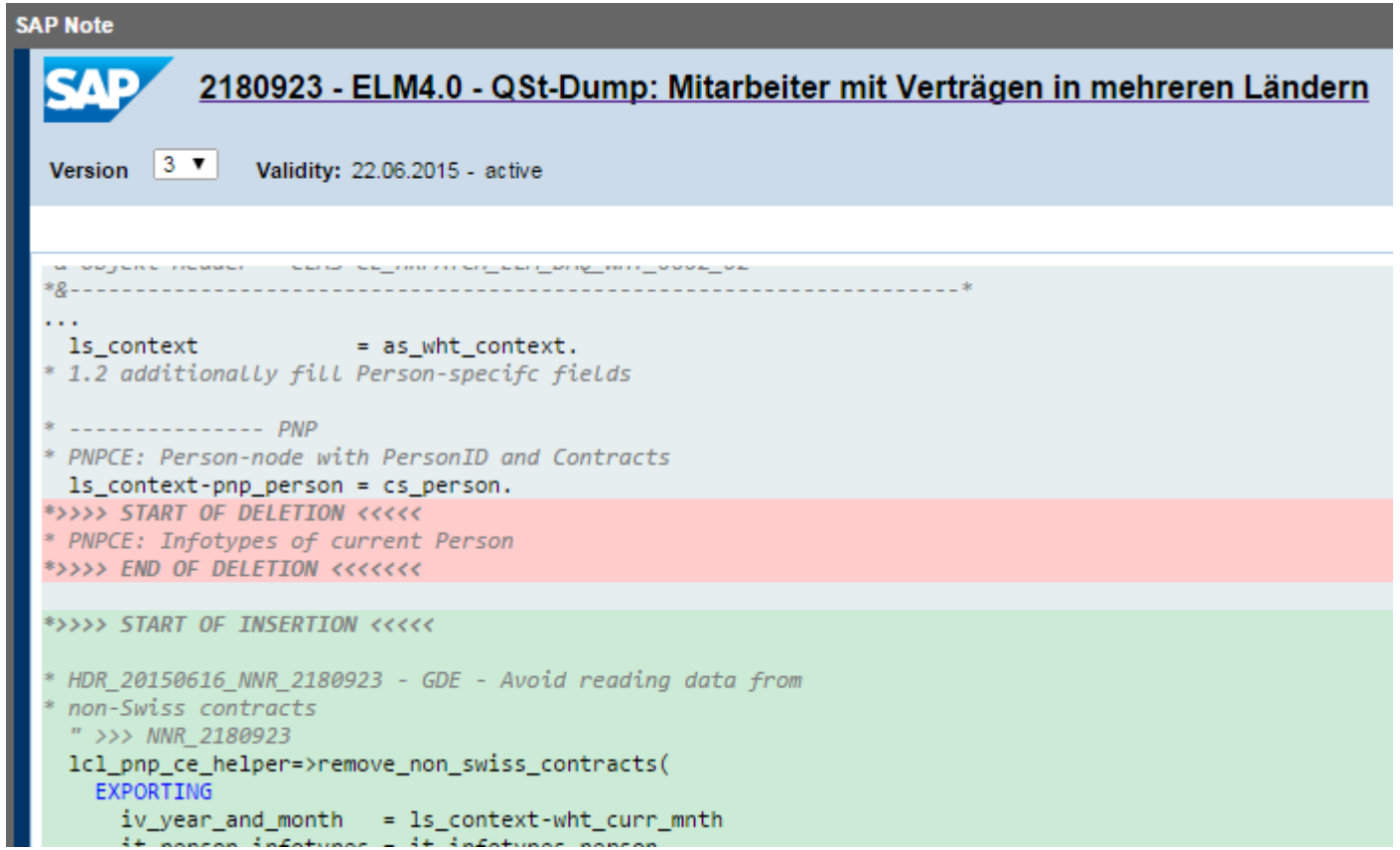
SAP Note Enhancer

This Google Chrome extension enhances the visualization of correction instructions of notes when viewed in the SAP Marketplace.

The ABAP portions of the correction instructions are highlighted and the background of insertions and deletions are shown in different colors.

This makes it easier to understand the involved code changes.



https://scn.sap.com/community/abap/blog/2015/06/28/chrome-extension-to-highlight-abap-correction-instructions-in-sap-notes

https://chrome.google.com/webstore/detail/sap-note-enhancer/keibkcomemkcceddcddjdlncidohgedk

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Note 1611408 - Missing authorization check in SD-SLS

Deletion of obsolete but critical parameter transactions `OVRC`, `OVRE`

Valid for Software Component `SAP_APPL`

Release 31I	Until SAPKH31IB8
Release 40B	Until SAPKH40B88
Release 45B	Until SAPKH45B66
Release 46B	Until SAPKH46B61
Release 46C	Until SAPKH46C62
Release 470	Until SAPKH47036
Release 500	SAPKH50001 - SAPKH50025
Release 600	SAPKH60001 - SAPKH60020
Release 602	Until SAPKH60209
Release 603	Until SAPKH60308
Release 604	SAPKH60401 - SAPKH60409
Release 605	Until SAPKH60505
~~Release 606~~	~~From SAPKH60601~~

The note was re-released because the false assignment for release 606 was deleted

→ Very old note, no need to care about it anymore

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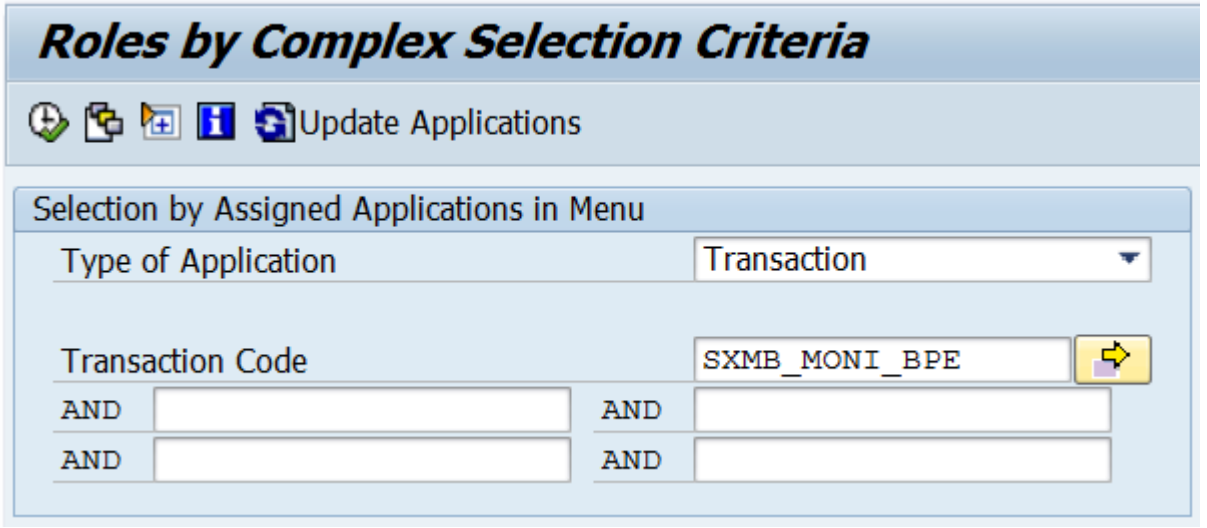
Note 1922205 - Authorization default value in BC-XI-IS-WKB

Correction of authorization proposals for transaction SXMB_MONI_BPE .

If you don’t apply the note but upgrade the Support Package you get the new authorization proposals only into the SAP tables (transaction SU22 only but not SU24).

Changing authorization proposals has only an effect if you re-generate standard authorization values in roles via PFCG. You can search for such roles having transaction SXMB_MONI_BPE in the role menu using transaction SUIM:



The only change is that you get S_TCODE authorizations for transaction SU01D instead of SU01 but both still require additional authorizations for S_USER_GRP which are not part of the authorization proposals.

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Note 1952092 - Code injection vulnerability in IDES systems

Only relevant for IDES Demo Systems.

The correction deletes report `ZVUJLOG0`, however, there are many hundreds of other Z-reports in an IDES Demo Systems.

Did you ever have applied security patches or other security controls to such systems?

Depending on the answer, you know what to do with this note.

General rule for Demo Systems: No connections in `SM59` from/to productive systems

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Note 2179384 - Traffic control: Wrong request transfer rate calculation

J. G.: Hallo Herr Buchholz, beim letzten Webinar im April hatten wir über den Hinweis 1981955 - "Minimale Datenübertragungsraten für Anfragen in SAP Web Dispatcher und ICM erzwingen" gesprochen. Anfang Juni habe ich vom AGS die Aussage, dass die Implementierung seit ihrer Auslieferung fehlerhaft ist. Die Übertragungsrate wird nicht korrekt ermittelt und somit werden die meisten Verbindungen mit "Traffic control condition" (im dev_icm) abgeblockt. Der Hinweis ist immer noch verfügbar und noch nicht aktualisiert.

Updated correction for

Note 1981955 - Enforcing minimal request transfer rates in SAP Web Dispatcher and ICM

SAP KERNEL
7.21 patch 523
7.22 patch 10
7.42 patch 210
7.43 patch 26
7.44 patch 14
7.45 patch 3

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Note 2182842 - Potential information disclosure relating to SAP Customizing

Security Note 2182842 refers to normal note 1859065 which undo's the critical change made by note 1814956.

If you haven't implements note 1814956 you need note 1859065 only in SAP_BASIS release 731 SP 8 and 740 SP 3 because both notes are part of the same SP in other releases:

Support Package assignments:

Note 1814956	**Note 1859065**	
700 SAPKB70029	700 SAPKB70029	
701 SAPKB70114	701 SAPKB70114	
702 SAPKB70214	702 SAPKB70214	
710 SAPKB71017	710 SAPKB71017	
711 SAPKB71112	711 SAPKB71112	
720 SAPKB72008	720 SAPKB72008	
730 SAPKB73010	730 SAPKB73010	
731 SAPKB73108	731 SAPKB73109	→ SP 8 is affected
740 SAPKB74003	740 SAPKB74004	→ SP 3 is affected

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SAP Security Notes Advisory by SAP Consulting

When publishing Security Notes on https://support.sap.com/securitynotes, SAP also publishes a prioritization. This prioritization is based on certain criteria from a development / product point of view, also incorporating CVSS scores where applicable.

With the **SAP Security Notes Advisory**, SAP Global Service & Support offers an additional prioritization.

This prioritization is no contradiction to the original priorities given by the SAP product development. It supplements these priorities with a field view, adding experiences from both practical security and implementation of SAP applications and operation of systems by SAP Global Service & Support. The Advisory also gives hints on side-effects to expect and recommends an implementation approach for the Security Notes published each month.

Important note: This service is delivered by the SAP Consulting (part of SAP Global Service & Support). Please address any questions about this Advisory to **security.consulting@sap.com**

If you have issues with individual SAP Note implementation steps, please open a message on the component of the SAP Note.

You can find the latest version of the Advisory on SAP Support Portal /sos
https://support.sap.com/sos
→ Media Library → SAP Security Notes Advisory

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Note 1830797 Missing authorization check in BC-MID-ICF

Authorization check for authorization object `S_ICF_ADM` changed in transaction `SICF`.

It's a functional note as just non-existing activity `04` get replaced with activity `06`=delete.

You do not have to update roles as your administrators most likely have authorizations for all activities for that authorization object `S_ICF_ADM` anyway.

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Note 2174357 - Reflected File Download Vulnerability in KM Documents Servlet

Note shows “Causes – Side Effects”:

Causes - Side Effects

Notes / Patches corrected with this note					
Note Reason	From Version	To Version	Note Solution	Version	Support Package
The table does not contain any entries					

The following SAP Notes correct this Note / Patch					
Note Reason	From Version	To Version	Note Solution	Version	Support Package
2174357	0	0	2199306	1	

Go for the Support Packages as listed in note 2199306:

KMC CONTENT MANAGEMENT 7.00 SP033 patch 0
KMC CONTENT MANAGEMENT 7.01 SP018 patch 0
KMC CONTENT MANAGEMENT 7.02 SP018 patch 0
KMC CONTENT MANAGEMENT 7.30 SP015 patch 0
KMC CONTENT MANAGEMENT 7.31 SP018 patch 0
KMC CONTENT MANAGEMENT 7.40 SP013 patch 0

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July 2015

Topics July 2015

Note 2122578 - New: Security Audit Log event for unencrypted GUI / RFC connections

Note 2029397 - Missing authorization checks for RFC in E-commerce ERP applications

Note 2057982 - Hardcoded credentials in BC-SRV-DX-DXW
Note 2059659 - Hardcoded credentials in BC-CUS-TOL-CST

Note 2122247 - Data missing from table TCDOB following import of EHPs

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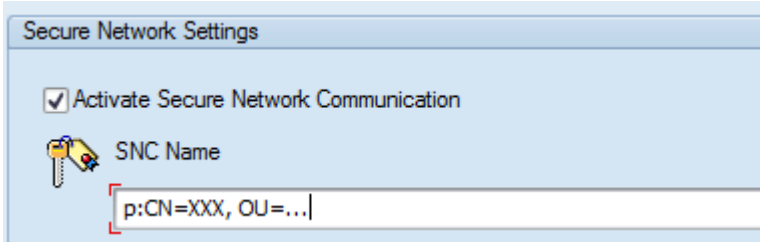
Note 2122578 - Security Audit Log event for unencrypted GUI / RFC

Let's assume you run a staged project to encrypt all communication channels (Example: GUI):

1. Enable servers to accept encrypted communication requests
   … but unencrypted communication is still allowed
   (`snc/enable` = 1 and `snc/accept_insecure_gui` = 1)
2. Enable clients to initiate encrypted communication requests
   … but unencrypted communication is still allowed
3. After checking that all communication channels are encrypted:
   Enforce servers to only accept encrypted communication requests
   (`snc/enable` = 1 and `snc/accept_insecure_gui` = 0)



How can you verify if all SAPGUI sessions use SNC?

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Note 2122578 - Security Audit Log event for unencrypted GUI / RFC

Transaction SM04 → User → Technical Information shows the SNC status of active connections on one application server.

Detailed User Info

Field	Value
iaddr (gui host)	10.16.33.178
recv_count	28
send_count	30
snc_count	1
auto_logout	36000
server_plugin_protocol	DP_PLUGIN_PROTOCOL_NONE

Show SNC status of active users

Clnt	Benutzer	SNC Cou...	Type	Version	RFC T...
000	PFEIFFERT	1	GUI	720	
000	REDWOOD	0	RFC		E
000	SAMDANI	0	Plugin HTTPS		
000	SAP_WSRT	0	RFC		I
000	SAP_WSRT	0	RFC		I
000	SEIFERTHA	0	Plugin HTTPS		
000	SEIFERTHA	9	GUI	730	
000	SIEGMUNDS	0	RFC		I
000	WF-BATCH	0	RFC		I
000	WF-BATCH	0	RFC		I
000	WOJCICKA	1	GUI	730	
000	ZABLOTSKIY	0	RFC	730	I
000	ZABLOTSKIY	4	GUI	730	

The custom reports ZSM04000_SNC (based on SM04) and ZRSUSR000_620 (based on AL08) which you can find on SCN show an overview about the SNC status but have the same restrictions as the original transactions.

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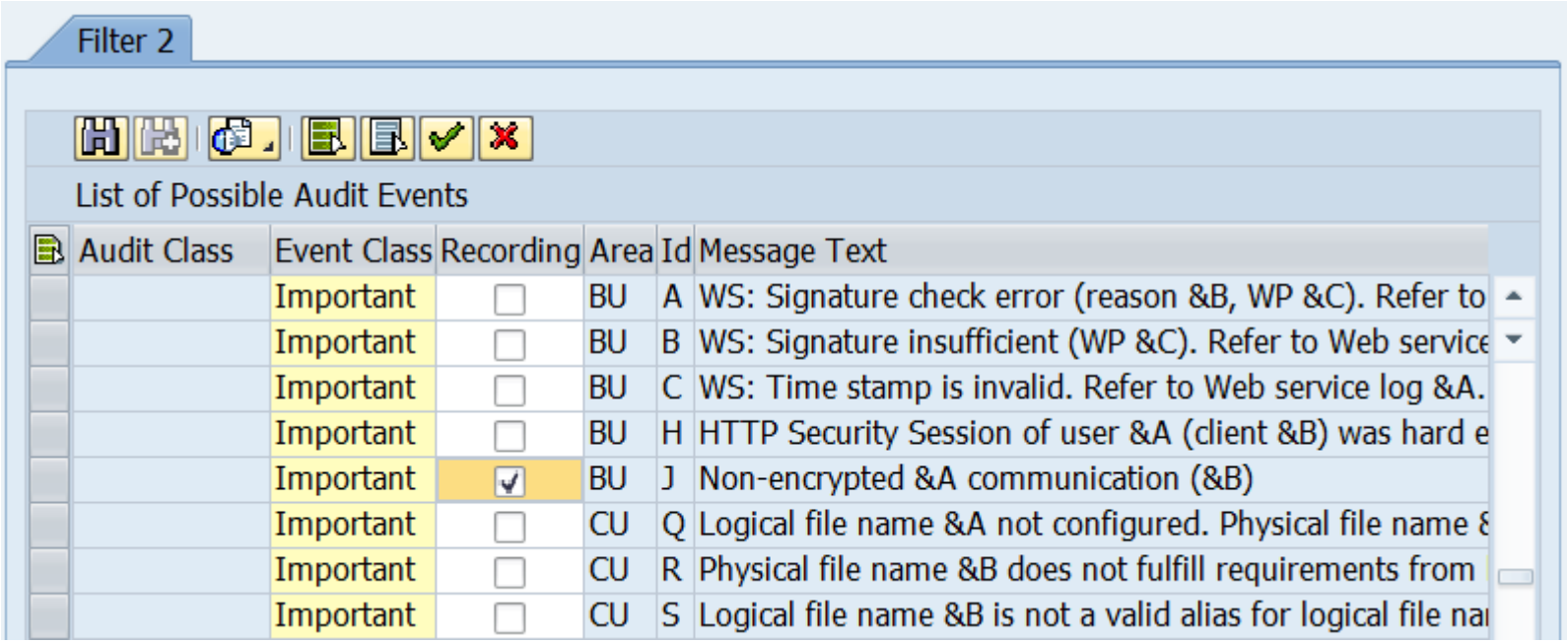
Note 2122578 - Security Audit Log event for unencrypted GUI / RFC

Now you can use the Security Audit Log (SM19 / SM20) to log unencrypted communication for SAPGUI and RFC.

Transaction SM19
→ …
→ Detailed Configuration
→ Log Message BUJ



Prerequisite: Note 2104732 - SAL - event definition for SNC client encryption

Analysis and Recommended Settings of the Security Audit Log (SM19 / SM20)
http://scn.sap.com/docs/DOC-60743

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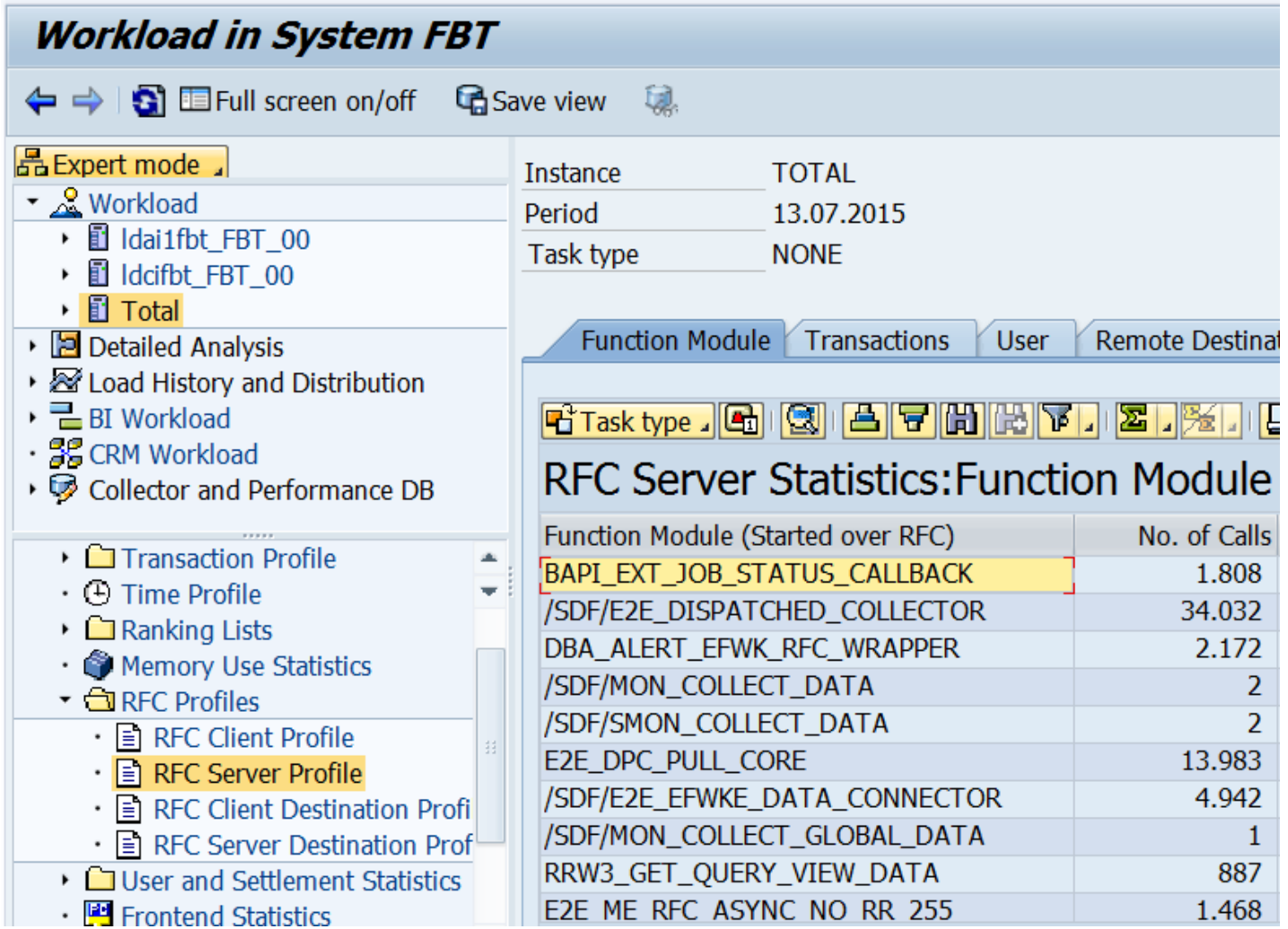
Note 2029397 - Missing authorization checks for RFC in E-commerce ERP applications

New authorization concept for remote access to E-commerce.

- Various RFC enabled functions
- Multiple authorization objects including a new one

Use Workload Statistics, transaction `ST03N`, or **transaction `STRFCTRACE`** to verify if some of the listed RFC functions have been executed.

You can use UCON as well.



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Note 2057982 - Hardcoded credentials in BC-SRV-DX-DXW
Note 2059659 - Hardcoded credentials in BC-CUS-TOL-CST

Deactivation of obsolete, unused code.

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Note 2122247 - Data missing from table TCDOB and TDDAT following import of EHPs

Table TCDOB Change document object definition

Table TDDAT Assignments of tables and views to table authorization groups
Fallback: Unassigned tables and views are checked with `S_TABU_DIS` for group `&NC&`
You should use authorizations for `S_TABU_NAM` instead of `S_TABU_DIS` anyway.

Solution

Use at least SUM 1.0 SP12 Patch Level 4 or a higher SUM version.

If you are affected, change documents may be incomplete, as well as the authorization checks for generic table access. In this case, contact SAP Support directly.

Logging of table access using standard tools like `SE16`, `SM30`, `SM31`, `SM34`, `SQVI`:
Activate the message `DU9` (of group transaction start, not critical) in the Security Audit Log.
Message: „Generic table access call to &A with activity &B (auth. check: &C)”

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June 2015

Topics June 2015

Note 2183624 - Potential information leakage using default SSFS master key in HANA

Note 1997734 - Missing authorization check in Trusted-RFC runtime

Note 2144333 - Missing authorization check in CRM-LAM

Note 2163306 - Fixing FREAK vulnerability in CommonCryptoLib and SAPCRYPTOLIB

Note 2099484 - Missing authorization check in Payment Engine

Note 1749142 - How to remove unused clients including client 001 and 066

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Note 2183624 - Potential information leakage using default SSFS master key in HANA

Spotlight-News

Last week we saw a conference talk and a few press articles related to an alleged default security configuration in SAP HANA installations.

Our recommendation is to change the default main keys that are issued with SAP HANA installations as described in SAP security note 2183624. This is valid as of HANA SPS 06.

The SSFS main key is used to encrypt the root encryption keys of your SAP HANA database. It is a default key that is the same for all installations unless explicitly changed. SAP therefore highly recommends that you change this key immediately after installation or after you have received SAP HANA pre-installed from a database vendor.

If the key was not changed after installation, we recommend that you perform the key change in the next available maintenance window.

For more detailed information we recommend you create a customer incident on component HAN-DB-SEC. Customers requiring consulting support in regards to their installations are welcome to contact SAP Security Consulting following SAP Note 114045.

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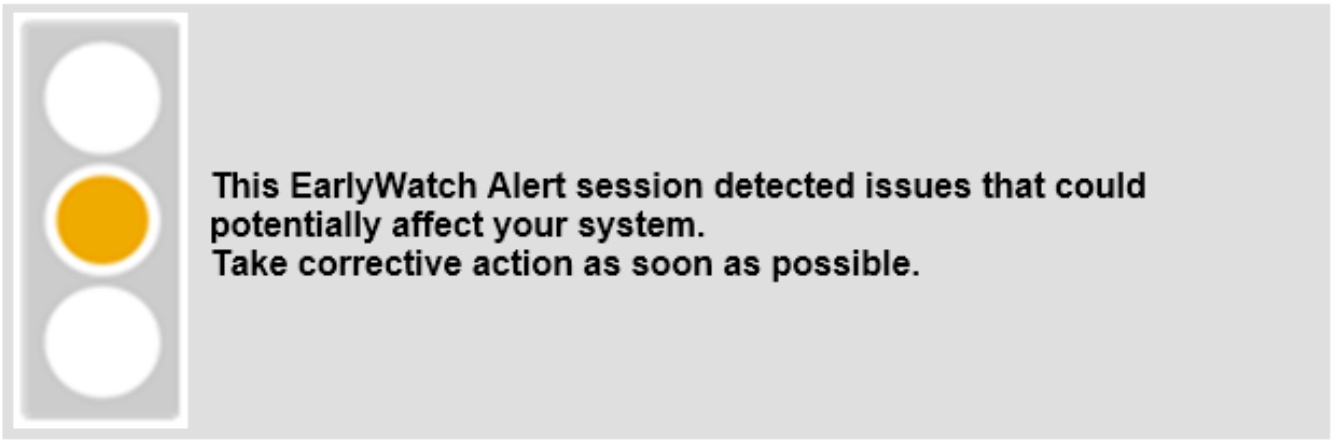
Note 2183624 - Potential information leakage using default SSFS master key in HANA

The EarlyWatch Alert (EWA) checks if the parameter *ssfs_key_file_path* is not set in the section *[cryptography]* of the *global.ini* file. If this is the case most likely your SSFS Main Encryption Key has not been changed from its default value.

See:

Note 863362 - Security checks in SAP EarlyWatch Alert, EarlyWatch and GoingLive sessions

1 Service Summary



This EarlyWatch Alert session detected issues that could potentially affect your system.
Take corrective action as soon as possible.

ALERT OVERVIEW

!	SAP HANA SSFS Master Encryption Key is not changed

CHECK OVERVIEW

Topic Rating	Topic	Subtopic Rating	Subtopic
!	Security		
		!	SAP HANA System Privilege DATA ADMIN
		✓	SAP HANA Password Policy
		!	SAP HANA Audit Trail
		✓	SAP HANA SQL Trace Level
		!	SAP HANA SSFS Master Encryption Key

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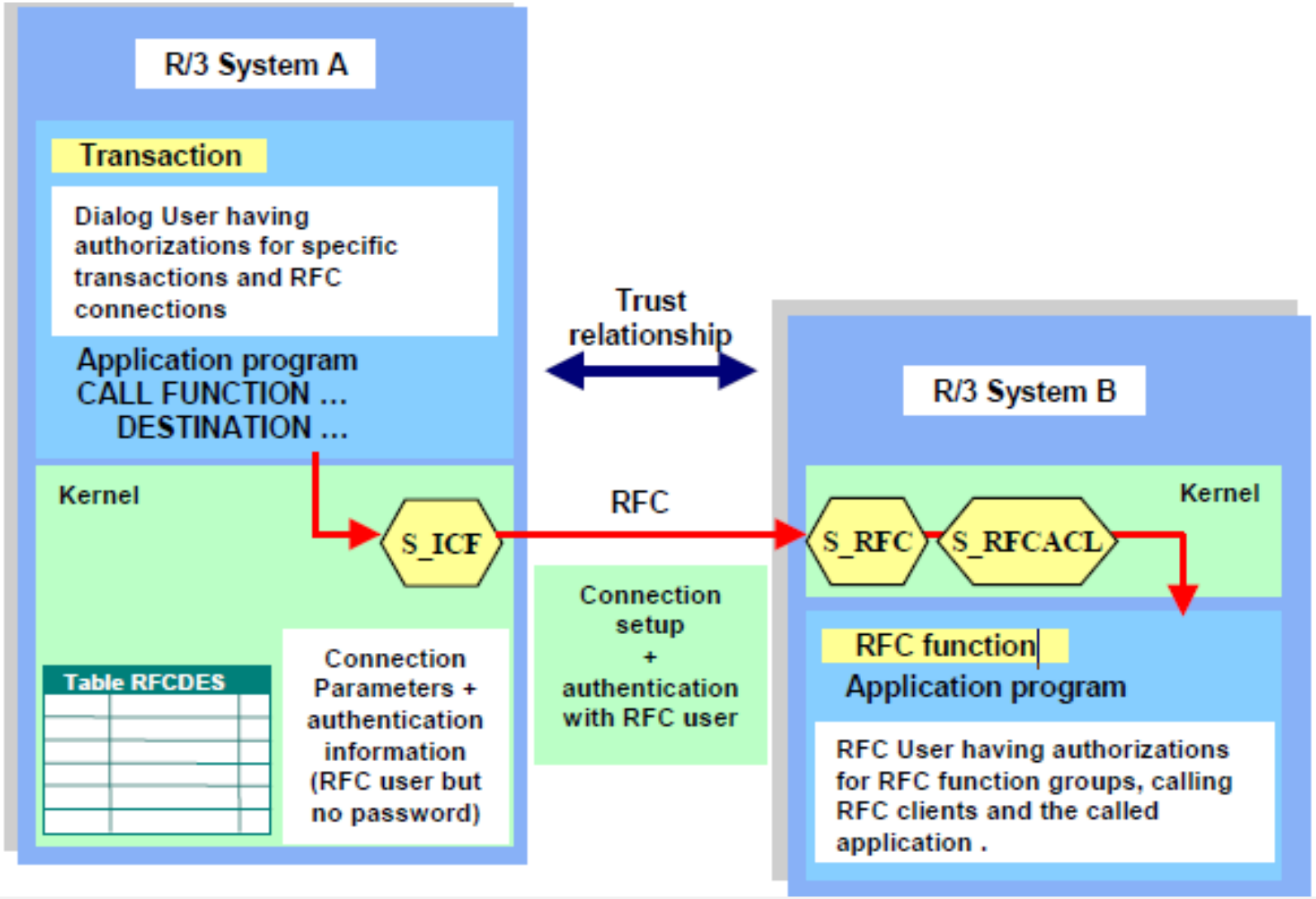
Note 1997734 - Missing authorization check in Trusted-RFC runtime



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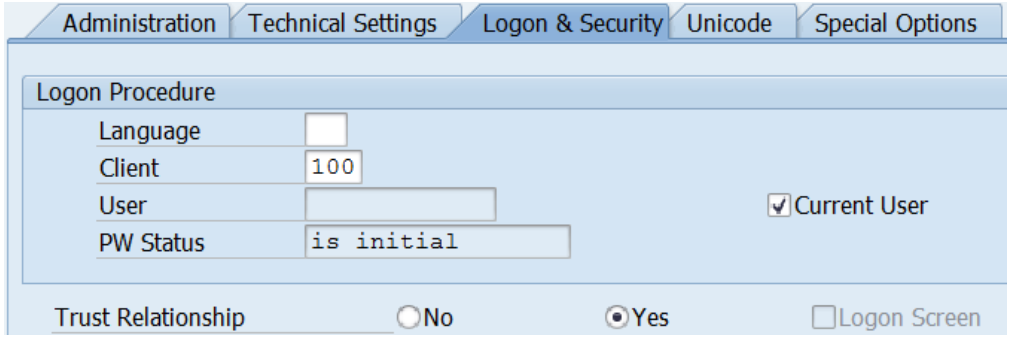
Note 1997734 - Missing authorization check in Trusted-RFC runtime

There exist two working modes with Trusted-RFC:

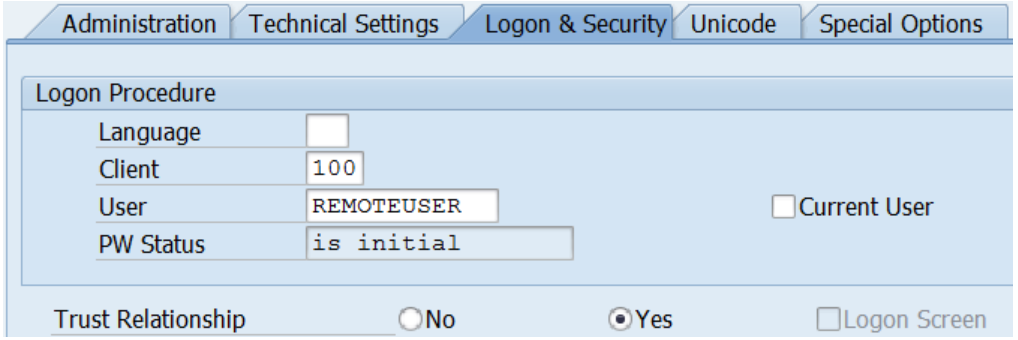
1. Trusted-RFC with same-user

```
AUTHORITY-CHECK OBJECT 'S_RFCACL'
         ID 'RFC_SYSID' FIELD <sysid>
         ID 'RFC_CLIENT' FIELD <cclient>
         ID 'RFC_USER' DUMMY
         ID 'RFC_EQUSER' FIELD 'Y'
         ID 'RFC_TCODE' DUMMY       "respective FIELD <tcode>
         ID 'RFC_INFO' DUMMY        "respective FIELD <license_nr>
         ID 'ACTVT' FIELD '16'.
```



2. Trusted-RFC with dedicated user as defined in the RFC destination

```
AUTHORITY-CHECK OBJECT 'S_RFCACL'
         ID 'RFC_SYSID' FIELD <sysid>
         ID 'RFC_CLIENT' FIELD <cclient>
         ID 'RFC_USER' FIELD <whoami>
         ID 'RFC_EQUSER' FIELD 'N'   "this was not checked (dummy)
         ID 'RFC_TCODE' DUMMY        "respective FIELD <tcode>
         ID 'RFC_INFO' DUMMY         "respective FIELD <license_nr>
         ID 'ACTVT' FIELD '16'.
```



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Note 1997734 - Missing authorization check in Trusted-RFC runtime

Authorization Field	Meaning
ACTVT	Activity 16=Execute
RFC_SYSID	Caller system id (SID) **Avoid * entry!**
RFC_INFO	Optional caller license number (provided both communication partners are at least 7.02 SAP_BASIS Release)
RFC_CLIENT	Caller client. **Avoid * entry!**
RFC_USER	Caller user. **Avoid * entry for RFC_EQUSER = N**
RFC_EQUSER	'Y' Same user (RFC_USER not considered) 'N' Dedicated user (RFC_USER is checked) **Avoid * entry!**
RFC_TCODE	Optional caller transaction code, checked if „Use transaction code“ is activated in SMT1 (Trust Configuration).

Note that due to its highly critical nature, S_RFCACL is not part of SAP_ALL.

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Note 1997734 - Missing authorization check in Trusted-RFC runtime

Example: Trusted-RFC-same-User

Authorization Field	Authorization Value
ACTVT	Activity: 16=Execute
RFC_SYSID	S1P, S2P, …
RFC_INFO	*
RFC_CLIENT	200
RFC_USER	' '
RFC_EQUSER	Y
RFC_TCODE	*

Example: RFC-user for specific application

Authorization Field	Authorization Value
ACTVT	Activity: 16=Execute
RFC_SYSID	S1P, S2P, …
RFC_INFO	*
RFC_CLIENT	200
RFC_USER	USER1, USER2, …
RFC_EQUSER	N
RFC_TCODE	*

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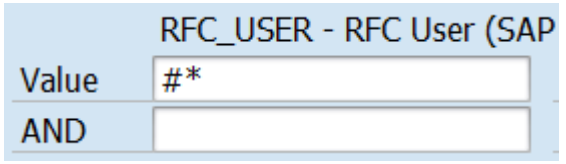
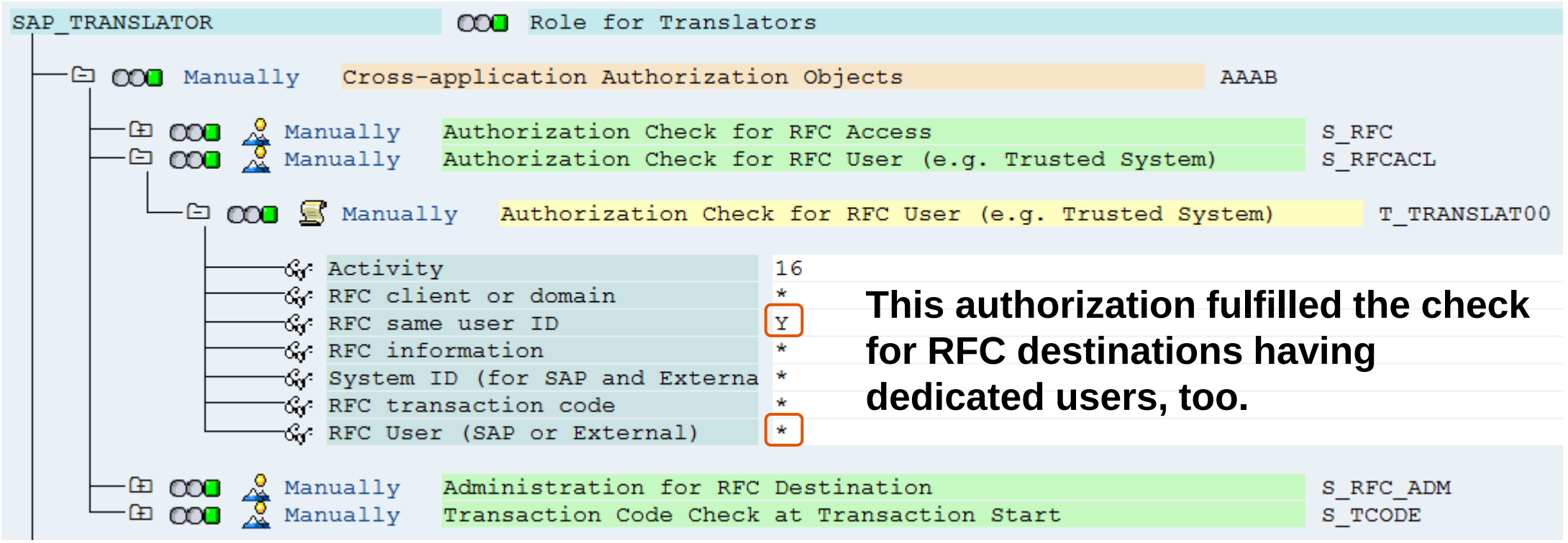
Note 1997734 - Missing authorization check in Trusted-RFC runtime

How to find critical authorizations, profiles, roles, uses:

Use transaction SUIM and search for authorization values #*





This authorization fulfilled the check for RFC destinations having dedicated users, too.

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Note 1997734 - Missing authorization check in Trusted-RFC runtime

Note 2008727 - Whitepaper: Securing Remote Function Calls
http://scn.sap.com/docs/DOC-60424

Check reports about RFC:

RSRFCCHK

RS_SECURITY_TRUST_RELATIONS

RS_UPDATE_TRUST_RELATIONS (see note 1491645)

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Note 2144333 - Missing authorization check in CRM-LAM

The note introduces the transaction start authority check for S_TCODE for some reports which have corresponding report transactions.

Report	New authorization check for Transaction	
CRM_FS_ASSET_CREATE	CRM_FS_ASSET	Asset Handling and Depreciation
CRM_FS_CALC_CASH_FLOW	CRM_FS_CALC	Calculation of Cash Flow
CRM_FS_FRA_EXECUTE	CRM_FS_FRA	Floating Rate Adjustment
CRM_FS_INTEREST_ADJUSTMENT	CRM_FS_INTADJ	Interest Rate Adj. of Leasing Docs
CRM_FS_INTADJ_ANALYSIS_DISPLAY	CRM_FS_INTADJ_DISP	Disp. Eval. for Interest Rate Adj.
CRM_FS_TQ_MASS_RUN	CRM_FS_TQ_MASS_RUN	Mass Run for Termination Quotation
CRM_FS_MASS_CHANGE	CRMC_FS_MASS_CHANGE	Start Mass-Changes

Other security note about same topic “Report Transactions”: Note 2157877, 2157877

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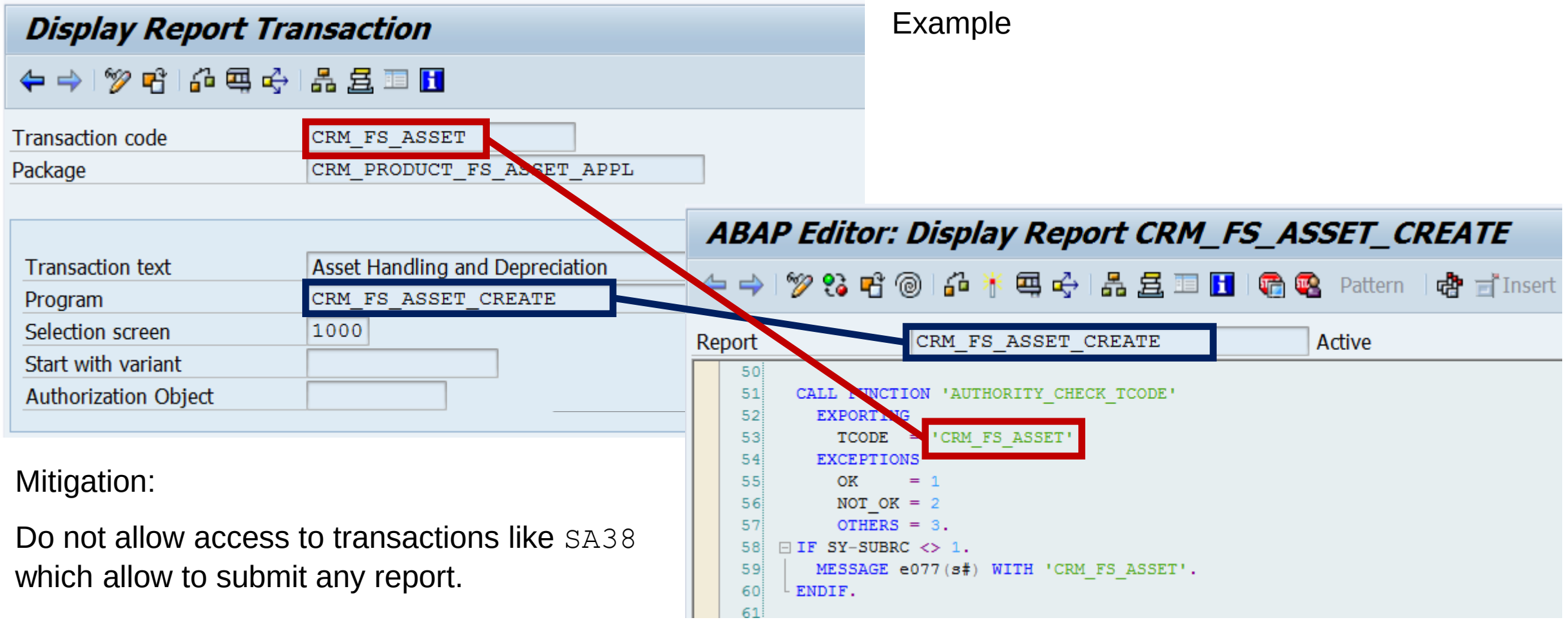
Note 2144333 - Missing authorization check in CRM-LAM

Example



Mitigation:

Do not allow access to transactions like `SA38` which allow to submit any report.

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Note 2163306 - Fixing FREAK vulnerability in Crypto-Library

Assigned Software Component: CRYPROLIB
(but not KERNEL or HANA in opposite to similar note 2067859)
→ not visible in System Recommendations

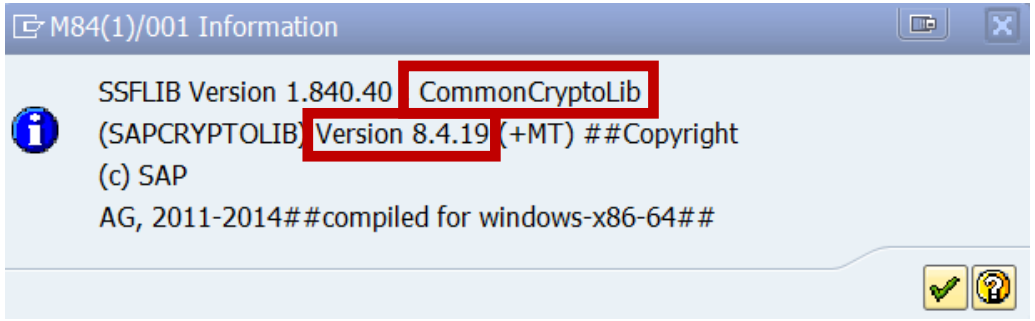
Affected products:

- NetWeaver AS ABAP, any version
- NetWeaver AS Java, version 7.1x and higher
- SAP HANA XS, any version

Solution:

- CommonCryptoLib 8.4.36
- SAPCRYPTOLIB 5.5.5 PL39
  (use it only if system currently uses SAPCRYPTOLIB 5.5.5)
- It is sufficient to replace these libraries.
  You do not need to update the complete Kernel.

Determine the type and release of the SAP Cryptographic Library on your system using transaction `STRUST` → Environment → Display SSF Version



Other Products:
Note 2152703 - Fixing FREAK vulnerability in Sybase Products

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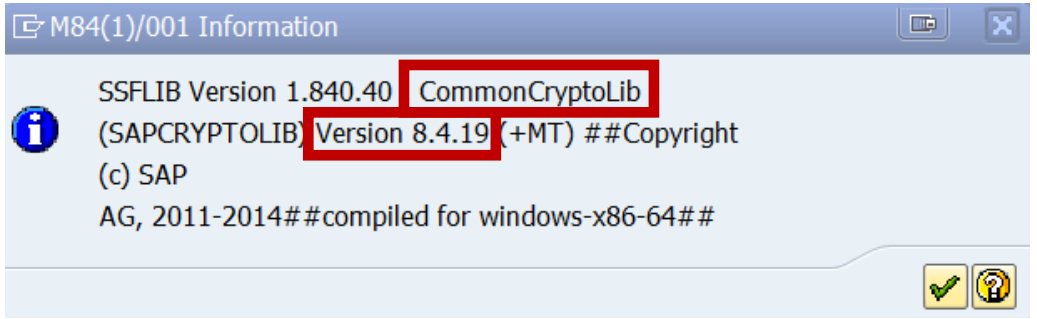
Note 2067859 - Potential Exposure to Digital Signature Spoofing

There is a critical vulnerability in versions of SAPCRYPTOLIB, SAPSECULIB and CommonCryptoLib components of SAP NetWeaver AS for ABAP and SAP HANA applications. The vulnerability may enable an attacker to spoof system digital signatures based on the DSA algorithm.

Determine the type and release of the SAP Cryptographic Library on your system using transaction `STRUST` → Environment → Display SSF Version. If your version is lower than those versions listed below, then replace your SAP Cryptographic Library.



Replace the affected libraries.

- SAPCRYPTOLIB, upgrade to version 5.5.5.38 or later.
- SAPSECULIB, upgrade to SAPCRYPTOLIB
- CommonCryptoLib, upgrade to version 8.4.30 or later.

It is sufficient to replace these libraries – you do not need to update the complete Kernel.

The main preventive measure is to replace the libraries. Do this first.
You may consider to renew DSA keys, too. See note 2068693.

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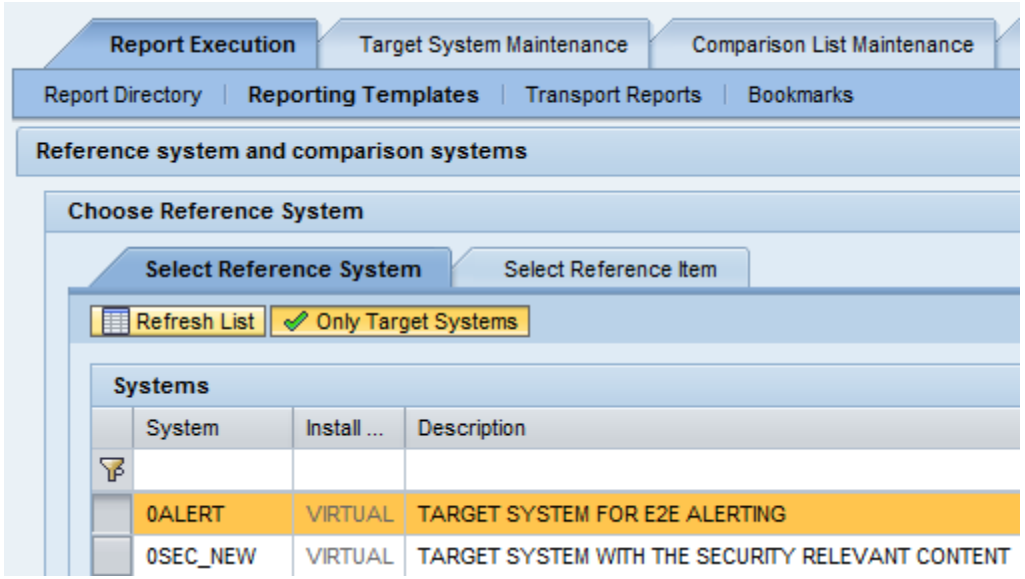
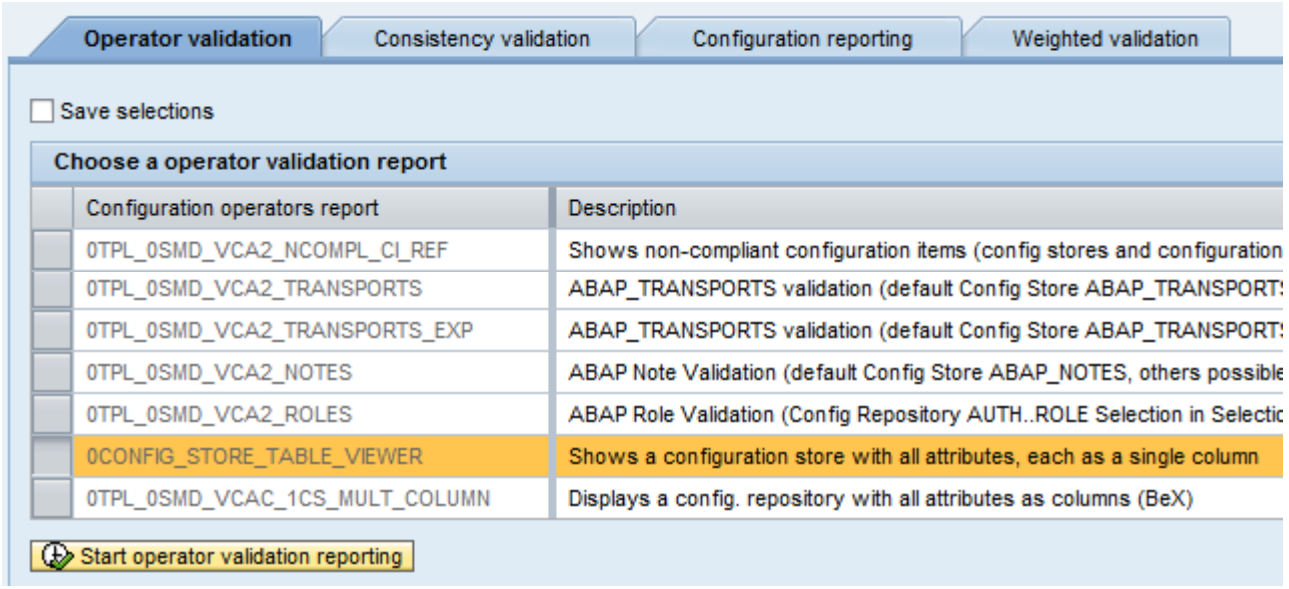
Note 2068693 - Replacing Key Pairs in ABAP and HANA

Report execution in Application Configuration Validation for Config Stores `PSE_CERT` and `J2EE_PSE_CERT`:





Result:

Display compliance Yes/No only | Display all

SID	LANDSCAPEID	COMPLIANCE	APPLICATION	CONTEXT	TYPE	SUBJECT	VALID_FROM	VALID_TO
T01	T01~ABAP~insy-vm23_T01_00	Yes	WSSCRT	WSSE	OWN-CERTIFICATE	CN=T01 WS Security Other System Encryption Certificates, OU=ISAP-INTERN, OU=SAP Web AS,	20141102161401	20380101000001
		Yes	<SNCS>	PROG	CERTIFICATE	CN=SSO_CA, O=SAP-AG, C=DE	19980504125933	20230831120000
		Yes	<SNCS>	PROG	OWN-CERTIFICATE	CN=T01, OU=MEE Service Community GRC/Security, O=SAP Consulting, L=Walldorf, C=DE	20131204221412	20231115221412
		Yes	<SYST>	PROG	CERTIFICATE	CN=SSO_CA, O=SAP-AG, C=DE	19980504125933	20230831120000
		Yes	<SYST>	PROG	CERTIFICATE	CN=T01, OU=ISAP-INTERN, OU=SAP Web AS, O=SAP Trust Community, C=DE	20141102144601	20380101000001

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Note 2099484 - Missing authorization check in Payment Engine

Software Components: PAY-ENGINE, PECROSS

One part of the correction is about turning external callable RFC function modules into internal callable functions only (not relevant concerning authorization concepts):

```
*>>>> START OF INSERTION <<<<
* Only allowed to be called internally
  CHECK /pe1/cl_bpe_authority_checks=>check_external_rfc( ) = abap_false.
```

Another part is about adding authorization checks to functions (see manual correction instruction, too):

```
*>>>> START OF INSERTION <<<<
* Check Authorizations.
  CHECK /pe1/cl_bpe_authority_checks=>check_authority_order(
                i_requested_activity = con_actvt_create
                i_clearing_area      = space )   = abap_true.
```

- Check if you are using remote interfaces which call the Payment Engine and verify if the (technical) users calling these BAPIs have authorizations for /PE1/* authorization objects

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Note 1749142 - How to remove unused clients including client 001 and 066

You have to secure any client even if it is not used. This includes the security settings of standard users like `SAP*` or `DDIC` or `EARLYWATCH` which might still have well-known standard passwords as well as the security of any other (powerful) users.

Because of this you can reduce maintenance effort and increase the security of a system if you **remove unused clients**.

See blog: How to remove unused clients including client `001` and `066`
http://scn.sap.com/community/security/blog/2013/06/06/how-to-remove-unused-clients-including-client-001-and-066

Client `066` is not used by SAP for a while and will not be used anymore.

Meanwhile the final obstacle which had hindered us to publish the official note 1749142 is solved:

Software Update Manager 1.0 SP13 does not request client `066` anymore during upgrade.

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May 2015

Topics May 2015

Note 1595582 - Deletion of temporary RFC destinations
Note 1750618 - RFC destinations created in SMSU_MANAGED_SYSTEM not delete

Note 2113995 - Missing authentication check in SAP ASE

Note 2078596 - SACF: Switchable Authorization (RFC) Scenarios (reloaded)

Current notes about System Recommendations

LZC/LZH Compression Multiple Vulnerabilities
Memory corruption vulnerabilities CVE-2015-2282, CVE-2015-2278

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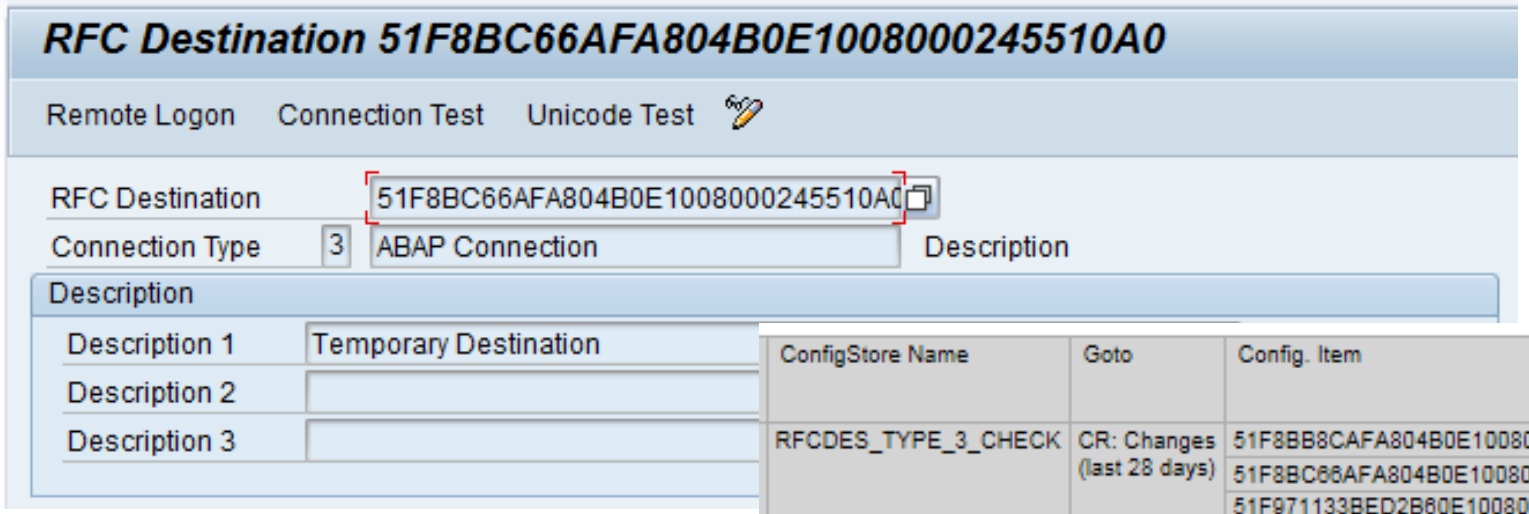
Note 1595582 - Deletion of temporary RFC destinations
Note 1750618 - RFC destinations created in SMSU_MANAGED_SYSTEM



Temporary RFC Destination in the Solution Manager

Find them using report `RSRFCCHK`

Security Validation using Configuration Validation shows these entries, too.

ConfigStore Name	Goto	Config. Item	Config. Item Value
RFCDES_TYPE_3_CHECK	CR: Changes (last 28 days)	51F8BB8CAFA804B0E1008000245510A0	LOGON_CLIENT:002/LOGON_USER:DDIC/PASSWORD_STATUS:S/H
		51F8BC66AFA804B0E1008000245510A0	LOGON_CLIENT:002/LOGON_USER:DDIC/PASSWORD_STATUS:S/H
		51F971133BED2B60E1008000245510A0	LOGON_CLIENT:002/LOGON_USER:DDIC/PASSWORD_STATUS:S/H
		5204393058F30F60E1008000245510A0	LOGON_CLIENT:002/LOGON_USER:DDIC/PASSWORD_STATUS:S/H
		520E67CB4D281AB0E1008000245510A0	LOGON_CLIENT:002/LOGON_USER:DDIC/PASSWORD_STATUS:S/H
		5265CAF84F831110E1008000245510A0	LOGON_CLIENT:002/LOGON_USER:DDIC/PASSWORD_STATUS:S/H
		5272C5D48EEE05A0E1008000245510A0	LOGON_CLIENT:002/LOGON_USER:DDIC/PASSWORD_STATUS:S/H
		527502834CC30900E1008000245510A0	LOGON_CLIENT:002/LOGON_USER:DDIC/PASSWORD_STATUS:S/H
		52E0C908993714F0E1008000245510A0	LOGON_CLIENT:002/LOGON_USER:DDIC/PASSWORD_STATUS:S/H

The job `SM:REMOVE TEMPORARY RFC` removes such temporary RFC destinations. It should be scheduled every hour. In general the scheduling is done in Basic Configuration.

Workaround: Directly delete the RFC destination in transaction `SM59`.

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Note 2113995 - Missing authentication check in SAP ASE

HotNews for Sybase ASE Database Platform

Getting Started with SAP Sybase Adaptive Server Enterprise (ASE)
http://scn.sap.com/docs/DOC-36181

This issue has been fixed in the following SAP ASE versions:

- SAP ASE 16.0 SP01
- SAP ASE 15.7 SP132

Install the fixed SAP ASE versions most appropriate for your production environments.

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Note 2078596 - SACF: Switchable Authorization (RFC) Scenarios (reloaded)

The following SAP Notes contain new switchable authorization checks in RFC:

May 2015:

Note 2152230 - Switchable authorization checks for RFC in Reconciliation Report Scheduler Scenario HRPAYUS_RECON

Note 2072357 - Switchable authorization checks for RFC in SRM application Scenarios BBP_UPDATE_DOC, BBP_DOC_CREATE, BBP_VEND_UPADTE, BBP_CONF_GETDETAIL, BBP_CTR_GETDETAIL, BBP_INV_GETDETAIL, BBP_VL_GETDETAIL

Note 2053788 - Missing authorization check in RFC enabled function module - BC-MOB-MI-SER Scenario BC_MI_RFC_CHECK

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Note 2078596 - SACF: Switchable Authorization (RFC) Scenarios (reloaded)

The following SAP Notes provides solution which do not require a switch:

May 2015:

Note 2043447 - Missing authorization check in SV-SMG-BPCA
Note 2052677 - Possible code injection and missing RFC authentication
Note 2053043 - Missing RFC authorization in eCATT Extended Computer Aided Test Tool
Note 2053197 - ChaRM: Missing authorization check in SV-SMG-CM
Note 2058351 - Missing authorization check in BC-VMC
Note 2066851 - Missing authority-check vulnerability in the OCS functionality
Note 2066943 - New authorization check for RFC in component WEC-APP-UM
Note 2067630 - DBA Cockpit: Missing authorizations during administration of jobs
Note 2105620 - Missing authorization check in Calendar Interface
Note 2105633 - Missing authorization check in Alert Management Interface
Note 2105634 - Missing authorization check in ALE Interface
Note 2118500 - Missing authorization check in SAP Records Management
Note 2122022 - Missing authorization check in function RSPO_R_SAPGPARAM
Note 2131334 - Missing authorization check in Process Monitoring Infrastructure
Note 2138031 - Missing authorization check in BC-BMT-WFM
Note 2138219 - Missing authorization check in BC-BMT-WFM
Note 2140238 - Missing authorization check in BC-XI-IS-BPE
Note 2143329 - Missing authorization check in RDDPUTJZ_COPY_TRANSPORT
Note 2149278 - Missing authorization check in SAP Records Management

No adjustment of authorization concept (roles) necessary. The solution is either different than introducing authorization checks or uses an authorization check which can be fulfilled by all legal users.

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Current notes about System Recommendations

Note 2099728 - SysRec: Object list for ABAP notes does not show Usage Procedure Logging

Note 2137673 - SysRec: filter completed implemented SAP Notes

Note 2141744 - SysRec: changed status lost
reloads 2025144 - SysRec: enhancement for RFC to managed system and switch framework

Note 2146340 - SysRec: dump in automatic check

Note 2150787 - SysRec: missing system in reporting

KBA 2126621 - SysRec: Requirement before opening incident for System Recommendation

KBA 2117439 - SysRec: Notes related to HR sub component are not presented

KBA 2041071 - SysRec: How to download latest Java patches using System Recommendation
SysRec → Choose Java Patches, then use MopZ

Tipp: Call System Recommendations for the Solution Manager System, filter by Application Component `SV-SMG-SR` and search for Correction Notes

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KBA 2126621 - SysRec: Requirement before opening incident for System Recommendation

Ensure that the following points have been checked.

- The RFC destination SAP-OSS is working fine. If not, refer to note 982045 for rectification.
- The managed systems are correctly registered in LMDB and have been assigned to a product system and solution.
- Working READ RFC to the managed system has been created and actual installed software component version info (SP level etc) has been synchronized into LMDB software component list.
- Managed systems have been included in SysRec automatic check following note 1942291. This is essential due to reason explained in note 2046605.
  (Tip: copy job `SM:SYSTEM RECOMMENDATIONS` *and execute it once instead if using 'Refresh')*
- Follow the recommendation in note 2043295 and 2137673 if SysRec presents non relevant notes.
- In the event that no data (0 count) is listed for UPL/SCMON in "Show Object List", refer to the note 2099728.

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LZC/LZH Compression Multiple Vulnerabilities
Memory corruption vulnerabilities CVE-2015-2282, CVE-2015-2278

Note 2121661 - Potential remote termination of running processes in ABAP & Java Server

Note 2124806 - Potential remote termination of running processes in SAP GUI

Note 2125316 - Potential termination of running processes in SAPCAR

Note 2127995 - Potential remote termination of running processes in Content Server

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LZC/LZH Compression Multiple Vulnerabilities
Memory corruption vulnerabilities CVE-2015-2282, CVE-2015-2278

Component	Solution	Notes
Kernel jstart	SAP KERNEL 7.20 patch 719 SAP KERNEL 7.21 patch 416 SAP KERNEL 7.22 patch 2 SAP KERNEL 7.41 patch 210	2121661
R3trans	11.02.15	19466
R3load	SAP KERNEL 7.21 patch 419 SAP KERNEL 7.22 patch 2 SAP KERNEL 7.41 patch 215 SAP KERNEL 7.42 patch 110 SAP KERNEL 7.43 patch 18	2136942, 1724496
SAP NetWeaver RFC SDK	7.21 patch 34	1025361
SAP RFC SDK	SAP KERNEL **7.20 patch 720** SAP KERNEL **7.21 patch 420**	413708

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LZC/LZH Compression Multiple Vulnerabilities
Memory corruption vulnerabilities CVE-2015-2282, CVE-2015-2278

Component	Solution	Notes
SAP Java Connector	JCo 3.0.13 SAP Business Connector Service Release 11	2155739
SAP .NET Connector	3.0.15 Advanced Analysis Office (AO 1.4 SP 12, AO 2.0 SP 2) Plant Connectivity (PCo 15.0 SP04)	2095394
ABAP development tools for SAP NetWeaver	2.41	2126477
Hana Studio	HANA Studio 2.0.12 HDB 1.0 revision 94	
SAP GUI	SAP GUI 730 Patch Level 13 SAP GUI 740 Patch Level 2	2124806
SAPCAR	version after March 16, 2015	2125316
SAP Content Server	SAP Content Server 6.50 SP03	2127995, 514500

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LZC/LZH Compression Multiple Vulnerabilities
Memory corruption vulnerabilities CVE-2015-2282, CVE-2015-2278

SAP software download center at

https://support.sap.com/swdc

→ Support Packages and Patches

→ Browse Download Catalog

→ Additional Components

ADDITIONAL COMPONENTS

- JAVA LOG VIEWER
- **MaxDB**
- NW ESH CLIENT LIBRARIES JAVA
- **SAP DB**
- **SAP Kernel**
- SAP CR CONTENT
- SAP EXCHANGE CONNECTOR
- SAP NW RFC SDK
- SAP REVERSE BUSINESS ENGINEER
- SAP RFC SDK
- SAP RFC SDK UNICODE
- SAP SPAM/SAINT UPDATE
- SAPCAR
- SAPCRYPTOLIB
- SAPROUTER
- SAPSSOEXT
- SL CONTROLLER
- SUM INTERNAL
- SYSTEM COPY TOOLS
- SYSTEM COPY TOOLS GEN
- **Upgrade Tools**

The following objects are available for download:

	File Type	Download Object	Title	Patch Level	Info File	File Size [kb]	Last Changed
☐	EXE	SAPCAR_721-20010450.EXE	SAPCAR	721	Info	4433	20.04.2015

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LZC/LZH Compression Multiple Vulnerabilities
Memory corruption vulnerabilities CVE-2015-2282, CVE-2015-2278

http://www.coresecurity.com/advisories/sap-lzc-lzh-compression-multiple-vulnerabilities

The published example refers to the Open Source versions of MaxDB but not the SAP MaxDB.

SAP MaxDB does not use the affected code which means it is not affected, therefore MaxDB is not listed in the notes.

4. VULNERABLE PACKAGES

- SAP Netweaver Application Server ABAP.
- SAP Netweaver Application Server Java.
- SAP Netweaver RFC SDK
- SAP RFC SDK
- SAP GUI
- SAP MaxDB database
- SAPCAR archive tool

Other products and versions might be affected, but they were not tested.

5. VENDOR INFORMATION, SOLUTIONS AND WORKAROUNDS

SAP published the following Security Notes:

- 2124806
- 2121661
- 2127995
- 2125316

They can be accessed by SAP clients in their Support Portal [15].

Developers who used the Open Source versions of MaxDB 7.5 and 7.6 for their tools should contact SAP.

7.1. LZC decompression stack-based buffer overflow

The vulnerability [CVE-2015-2282] is caused by an out-of-bounds write to a stack buffer used by the decompression routine to write the output characters.

The following snippet of code shows the vulnerable function [file vpa106cslzc.cpp in the MaxDB source code [12]]. This piece of code can be reached by decompressing a specially crafted buffer.

```
1  [..]
2  int CsObjectInt::CsDecomprLZC (SAP_BYTE * inbuf,
3                    SAP_INT    inlen,
4                    SAP_BYTE * outbuf,
5                    SAP_INT    outlen,
6                    SAP_INT    option,
7                    SAP_INT *  bytes_read,
8                    SAP_INT *  bytes_written)
9      [..]
10     /* Generate output characters in reverse order ...................*/
11     while (code >= 256)
12     {
13       *stackp++ = TAB_SUFFIXOF(code);
14       OVERFLOW_CHECK
15       code = TAB_PREFIXOF(code);
16     }
17 [..]
```

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April 2015

Topics April 2015

Notes 1769064 und 931252
Profile Parameter `auth/rfc_authority_check`

[Troopers 2015] RFC callback - A Backdoor in Wonderland

Note 2084037 - Potential information disclosure relating to RFC SDK

Note 2140700 - Potential termination of HANA client (hdbsql)

Note 2121869 - Potential information disclosure relating to NW Application Server and BW

Note 1966655 - Potential denial of service in ICM
Note 1981955 - Enforcing minimal request transfer rates in SAP Web Dispatcher and ICM
Note 2179384 - Traffic control: Wrong request transfer rate calculation

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Notes 1769064 und 931252
Profile Parameter `auth/rfc_authority_check`

0 = No authorization check

1 = Authorization check active (no check for same user)
(no check for same user context and function group SRFC)

2 = Authorization check active (no check for function check SRFC)

3 = Logon required for all function modules except RFC_PING and RFC_SYSTEM_INFO (no authorization check)

4 = Authorization check required for all function modules except RFC_PING and RFC_SYSTEM_INFO

5 = Logon required for all function modules except RFC_PING (no authorization check)

6 = Authorization check required for all function modules except RFC_PING

8 = Logon required for all function modules (no authorization check)

9 = Authorization check active (SRFC-FUGR also checked)

With check of function group SRFC

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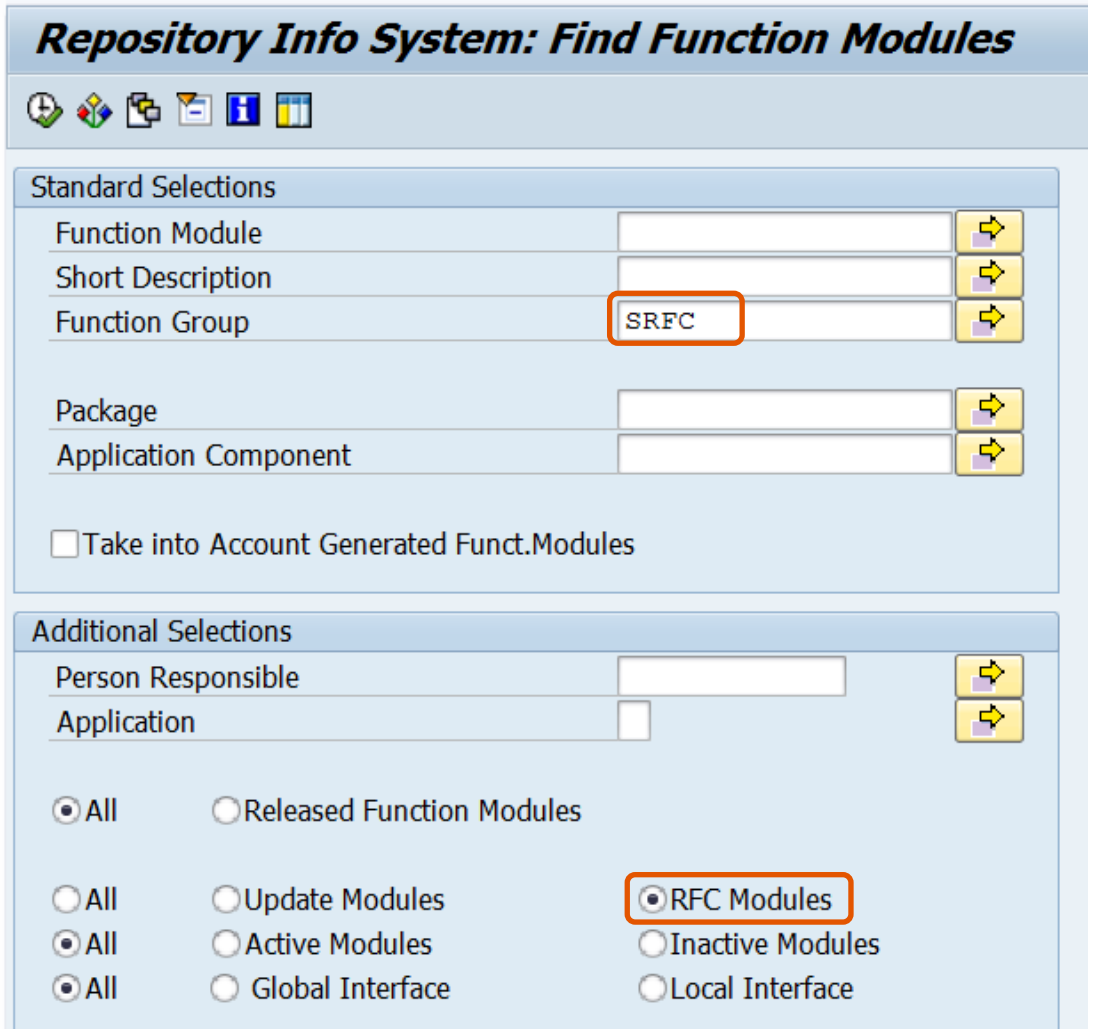
Notes 1769064 und 931252
Profile Parameter auth/rfc_authority_check



RFC enabled function modules of function group SRFC :

RFC_GET_LOCAL_DESTINATIONS

RFC_GET_LOCAL_SERVERS

RFC_PING

RFC_PUT_CODEPAGE

RFC_SYSTEM_INFO

SYSTEM_FINISH_ATTACH_GUI

SYSTEM_INVISIBLE_GUI

SYSTEM_PREPARE_ATTACH_GUI

SYSTEM_RFC_VERSION_3_INIT

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[Troopers 2015] RFC callback - A Backdoor in Wonderland

Presentation by Hans-Christian Esperer & Frederik Weidemann from Virtual Forge
March 18, 2015 (at 5 p.m.) in Special Track: SAP Security

This talk demonstrates how a single, fundamental backdoor in SAP's RFC protocol allows external attackers to penetrate even the strongest SAP security fortress. This severe security vulnerability was reported to SAP in January 2012 and has recently been fixed.
https://www.troopers.de/events/troopers15/494_a_backdoor_in_wonderland/

Recording (31 minutes)
https://www.youtube.com/watch?v=IG1VKaKD2wE

References:

Note 1686632 - Positive lists for RFC callback (at 24:43)

Note 2008727 - Whitepaper: Securing Remote Function Calls (at 25:35)
http://scn.sap.com/docs/DOC-60424

Note 2058946 - Maintenance of callback positive lists before Release 7.31 (at 26:30)

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Note 2084037 - Potential information disclosure relating to RFC SDK

Replace the existing “Classical RFC Library” (librfc32) with the corresponding patch listed in this note.

You do not need to upgrade the whole Kernel. However, you not only should replace the library which is installed together with the Kernel in folder `DIR_EXECUTABLE` but any “Classical RFC Library” which is used by any external RFC server or RFC client anywhere in the file system.

Actually it’s more important to update these other installations!

SAP KERNEL 7.20 patch 715

SAP KERNEL 7.21 patch 332

SAP KERNEL 7.43 patch 11

References:

Note 27517 explains the installation of the “Classical RFC Library”

Note 413708 explains how to verify the version of the RFC library.

Note 1005832 shows an Overview on all RFC Libraries and SDKs.

The “SAP NetWeaver RFC Library” is different and not affected by the security vulnerability.
Note 1025361 describes the Installation, Support and Availability of the “NetWeaver RFC library”.

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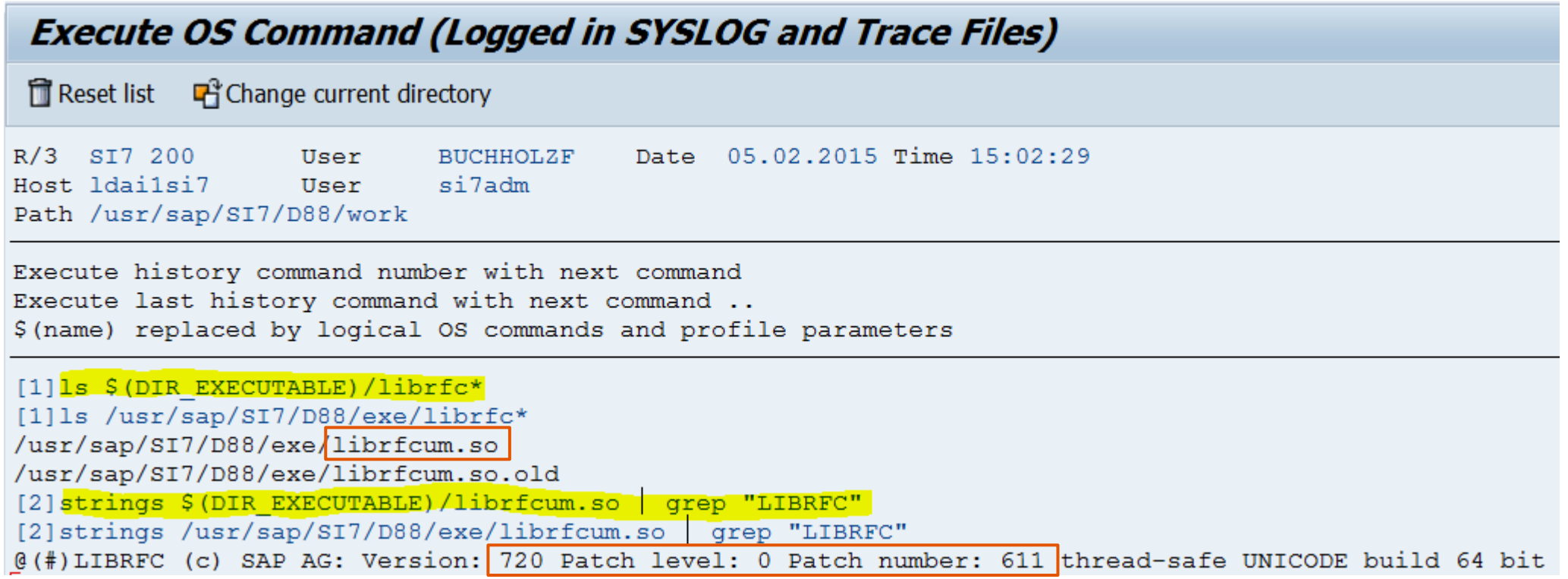
Note 2084037 - Potential information disclosure relating to RFC SDK

Example (Linux) how to check the version of the RFC library using report RSBDCOS0 :

Show list of files: `ls $(DIR_EXECUTABLE)/librfc*`

Show version: `strings $(DIR_EXECUTABLE)/librfcum.so grep "LIBRFC"`



Command on Unix: `what`
Linux: `strings`

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Note 2084037 - Potential information disclosure relating to RFC SDK

Example (Windows) how to check the version of the RFC library using report RSBDCOS0 :

Show list of files: `dir $(DIR_EXECUTABLE)\librfc*.dll`

Show version: `find "LIBRFC" $(DIR_EXECUTABLE)\librfc32u.dll`

Execute OS Command (Logged in SYSLOG and Trace Files)

```
[1]dir $(DIR_EXECUTABLE)\librfc*.dll
[1]dir D:\usr\sap\M84\D10\exe\librfc*.dll
 Volume in drive D is Application
 Volume Serial Number is 7213-C0CC

 Directory of D:\usr\sap\M84\D10\exe

29.06.2014  19:30         5.264.896 librfc32u.dll
               1 File(s)      5.264.896 bytes
               0 Dir(s)  43.700.584.448 bytes free
[2]find "LIBRFC" $(DIR_EXECUTABLE)\librfc32u.dll
[2]find "LIBRFC" D:\usr\sap\M84\D10\exe\librfc32u.dll

---------- D:\USR\SAP\M84\D10\EXE\LIBRFC32U.DLL
@(#)LIBRFC (c) SAP AG: Version: 721 Patch level: 0 Patch number: 314 thread-safe UNICODE build 64 bit
```

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Note 2084037 - Potential information disclosure relating to RFC SDK

Example (Windows) how to check the version of the RFC library using report RSBDCOS0 :

```
for %f in ($(DIR_EXECUTABLE)\librfc*.dll) do find "LIBRFC" %f
```

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Note 2140700 - Potential termination of HANA client (hdbsql)

- hdbsql is a client which connects to a HANA server.
  HANA Developer Edition-SAP HANA Client
  http://sdn.sap.com/irj/scn/go/portal/prtroot/docs/webcontent/uuid/402aa158-6a7a-2f10-0195-f43595f6fe5f
- It is sufficient to update HANA clients (hdbsql) – you do not need to update the HANA server.
  - How to identity HANA clients (hdbsql)?
  - How to validate the version of HANA clients (hdbsql)?
- *"An attacker who can start hdbsql can crash it through specifying invalid command line parameters."*
  The system is already on risk if an attacker already can execute operating system commands including arbitrary command line parameters.

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Note 2121869 - Potential information disclosure relating to NW Application Server and BW

What happens if only one or two of these parts (BEx backend, BEx frontend, SAP GUI) are installed? Does the order of implementation matters?

- If only the SAP GUI part is available, there's no improvement at all.
- If only the BEx part is available without the SAP GUI part, in worst case the connection will not be established automatically via t-code `RRMX`. We assume this is still better than establishing an unencrypted connection.
- Both BEx parts are needed: Implement note with transaction `SNOTE` and execute an frontend upgrade. If only a part of the BEx Correction is available, let's say only the backend part,
  - in case of SNC + SSO, the connection will be established using the the assertion ticket only and therefore will be unencrypted
  - in case of SNC w/o SSO, the connection via `RRMX` will fail and the logon screen will be displayed.

Note 2096517 describes the SAP GUI part.

Related Note 2122840 - Logon Control: Issue with login when SNC configuration is done.

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Note 1966655 - Potential denial of service in ICM
Note 1981955 - Enforcing minimal request transfer rates in ICM

Updated by Note 2179384 - Traffic control: Wrong request transfer rate calculation

Mitigating Slowloris Attacks
http://help.sap.com/saphelp_nw74/helpdata/en/f9/591344bde245d5afa323b48d5c0dc5/content.htm

Apply the kernel patch level specified in this SAP Note and configure the ICM in accordance with SAP Note 1981955. Alternatively, you can also use an upstream SAP Web Dispatcher with a corresponding configuration to protect the system. **SAP Web Dispatcher** and **ICM** offer the same mechanism to enforce a minimum request data rate to prevent flooding the server with tons of low data rate requests (DoS). All connections that do not satisfy the required rate are closed.

Define parameter **`MIN_RECEIVE_RATE`** of profile parameter `icm/server port <xx>`

How to find reasonable values for **`MIN_RECEIVE_RATE`**?
„Chosing useful values depends on your scenario. As a general rule, chose the highest min_rate possible that does not lead to abortion of legitimate connections. A value of 10 KB/sec can be a good starting point. If you want to improve the protection, experiment with higher values and observe whether connections get aborted by searching for "Traffic control condition" in the security log or dev trace. Use this feature with care.”

→ If you use it, check the ICM security log and the dev trace

“This mechanism replaces the previous one configured by parameter `icm/traffic_control` “ which offers a timeout only.

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March 2015

Topics March 2015

Note 2110020 - Enabling TLS or disabling SSLv3 protocol versions on SAP WebDispatcher, or SAP WebAS (AS ABAP 6xx, 7xx or AS Java >= 710)

Note 1944155 - Missing authority check in Report RKEDELE1

Note 1970644 - SAL: Missing overview of message definitions

Security Configuration Validation using SAP Solution Manager
for: Why you should really get rid of old password hashes *NOW*

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Note 2110020 - Enabling TLS or disabling SSLv3 protocol versions on SAP WebDispatcher, or SAP WebAS

The motivation to disable SSLv3 might be to mitigate POODLE attacks (CVE-2014-3566) against Web Browsers.

The motivation to get TLSv1.0 support may be newly occurring interop problems with communication peers that have recently disabled/removed support for SSLv3 (e.g. the Web Browsers Mozilla Firefox 35 and Google Chrome 40), or Servers where SSLv3 was disabled to mitigate POODLE attacks.

This note 2110020 is a how-to guide about…

- **how to determine the Netweaver component version of your sapwebdisp or icman**
- **how to determine the version of your SAPCRYPTOLIB**
- **where to get software updates for SAPCRYPTOLIB 5.5.5 / CommonCryptoLib 8 and SAP WebDispatcher (or the entire Kernel including icman)**

You can configure the desired SSL&TLS protocol versions through the two SAP profile parameters `ssl/ciphersuites` and `ssl/client_ciphersuites` according to the description and recommended settings in Section 7 of SAP Note 510007.

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Note 1944155 - Missing authority check in Report RKEDELE1

Report deletes content from tables CE1<erkrs> (erks = operating concern).

→ Application specific security vulnerability within application component CO-PA (Profitability Analysis)

If you do not use this component (which is the case if no CE1<erkrs> tables exist), then blindly apply the note and skip testing.

If you are using this component, raise priority to maximum and apply the note at once.

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Note 1970644 - SAL: Missing overview of message definitions report **RSAU_INFO_SYAG**

Note 1970644 is a normal note (not a security note)

More notes about new messages:

Note 2128095	SAL Missing parameters in DUI, DUJ, and DUK messages
Note 1963882	SAL: Problems with evaluation of audit log files (+ manual steps)
Note 1968729	SAL: Message definition for RFC callback
Note 2025307	SAL Function module RSAU_GET_AUDIT_CONFIG (+ manual steps)
Note 2124538	SM19 Error during event selection
Note 2104732	SAL - event definition for SNC client encryption
Note 1917367	SACF: supplementary corrections
Note 1995667	SACF: Navigation error
Note 2012767	SACF: Switchable authorization check for other users
Note 2073809	SAL Optimization of event documentation (only in SP)

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Tips about the Security Audit Log
http://scn.sap.com/docs/DOC-60743

Using note 1970644 you can get report **RSAU_INFO_SYAG** which shows all events of the Security Audit Log including the current status of activation. The detail view allows you to create an HTML-based event definition print list including the full documentation.

Activate all critical events. Activate other events to support various security improvement projects:

Topic	Description and references	Messages	Project
BACK	RFC callback (note 2128095)	DUI DUJ CUK	Secure RFC Callback
FILE	Directory Traversal (note 1497003)	CUQ CUR CUS CUT DU5	Secure File access
REPORT	Report start	AUW AUX	Avoid SA38 by using custom report transactions
RFC-TABLE	Generic table access via RFC using functions like RFC_READ_TABLE (note 1539105)	CUZ	Secure standard table access (authorization object S_TABU_RFC)
SACF	Switchable authorization scenarios, transaction SACF (note 2078596)	DUO DUP DUQ DUU DUV	Secure RFC functions
SAP FTP	FTP server allowlist using table SAPFTP_SERVERS (note 1605054)	DU1 DU2 DU3 DU4 DU5 DU6 DU7 DU8	Secure SAP FTP
SE16	Generic table access using transactions like SE16, SE16N, SM30, SM31, SM34, or SQV (note 2041892)	DU9	Secure standard table access (authorization object S_TABU_DIS, S_TABU_NAM)

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Security Configuration Validation using SAP Solution Manager for: Why you should really get rid of old password hashes *NOW*

Target System : SOSHASH / Store Name : ABAP_INSTANCE_PAHI

Comparison Store: M84 / 0050561[illegible] | Change | Find: | Find | Find Next | Replace with:

Sel.	Operator	Parameter	Operator	Value Low	Value High
☐	=	login/password_downwards_compatibility	=	0	

Target System : SOSHASH / Store Name : USER_PASSWD_HASH_USAGE

Comparison Store: M84 / 0050561[illegible] | Change | Find: | Find | Find Next | Replace with:

Sel.	USER_TYPE	BCODE	PASSCODE	PWDSALTEDHASH	NUM_USER	PERC_USER
☐	(=) DIALOG	(=) USED	(Ignore) UNUSED	(Ignore) UNUSED	(Ignore)	(<) 5.00
☐	(=) SYSTEM	(=) USED	(Ignore) USED	(Ignore) USED	(Ignore)	(<) 5.00

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Security Configuration Validation using SAP Solution Manager for: Why you should really get rid of old password hashes *NOW*

Result in Configuration Validation reporting:

Configuration Store **`ABAP_INSTANCE_PAHI`** configuration item `login/password_downwards_compatibility`

Configuration Store **`USER_PASSWD_HASH_USAGE`**

Configuration Items

SAP System ID	ConfigStore Name	Config. Item	Config. Item Value	Value of Target System	Compliance
M11	ABAP_INSTANCE_PAHI	login/password_downwards_compatibility	1	0	No
	USER_PASSWD_HASH_USAGE	DIALOG/USED/UNUSED/UNUSED/	#	NUM_USER:/PERC_USER:5.00	Item not found
		SYSTEM/USED/USED/USED/	#	NUM_USER:/PERC_USER:5.00	Item not found
M84	ABAP_INSTANCE_PAHI	login/password_downwards_compatibility	1	0	No
	USER_PASSWD_HASH_USAGE	COMMUNICATION/USED/USED/USED/	NUM_USER:2/PERC_USER:100.00	Target value not found	Additional in Comparison System
		DIALOG/UNUSED/UNUSED/UNUSED/	NUM_USER:1/PERC_USER:0.21	Target value not found	Additional in Comparison System
		DIALOG/USED/USED/USED/	NUM_USER:481/PERC_USER:99.79	NUM_USER:/PERC_USER:5.00	No
		REFERENCE/UNUSED/UNUSED/UNUSED/	NUM_USER:1/PERC_USER:100.00	Target value not found	Additional in Comparison System
		SERVICE/USED/USED/USED/	NUM_USER:3/PERC_USER:100.00	Target value not found	Additional in Comparison System
		SYSTEM/USED/USED/USED/	NUM_USER:19/PERC_USER:100.00	NUM_USER:/PERC_USER:5.00	No

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How to find Configuration Stores and Documentation?

- **Configuration Validation Wiki**
  http://wiki.scn.sap.com/wiki/display/TechOps/ConfVal_Home

- **Internet search for e.g.**
  USER_PASSWD_HASH_USAGE site:wiki.scn.sap.com

- **Transaction CCDB**

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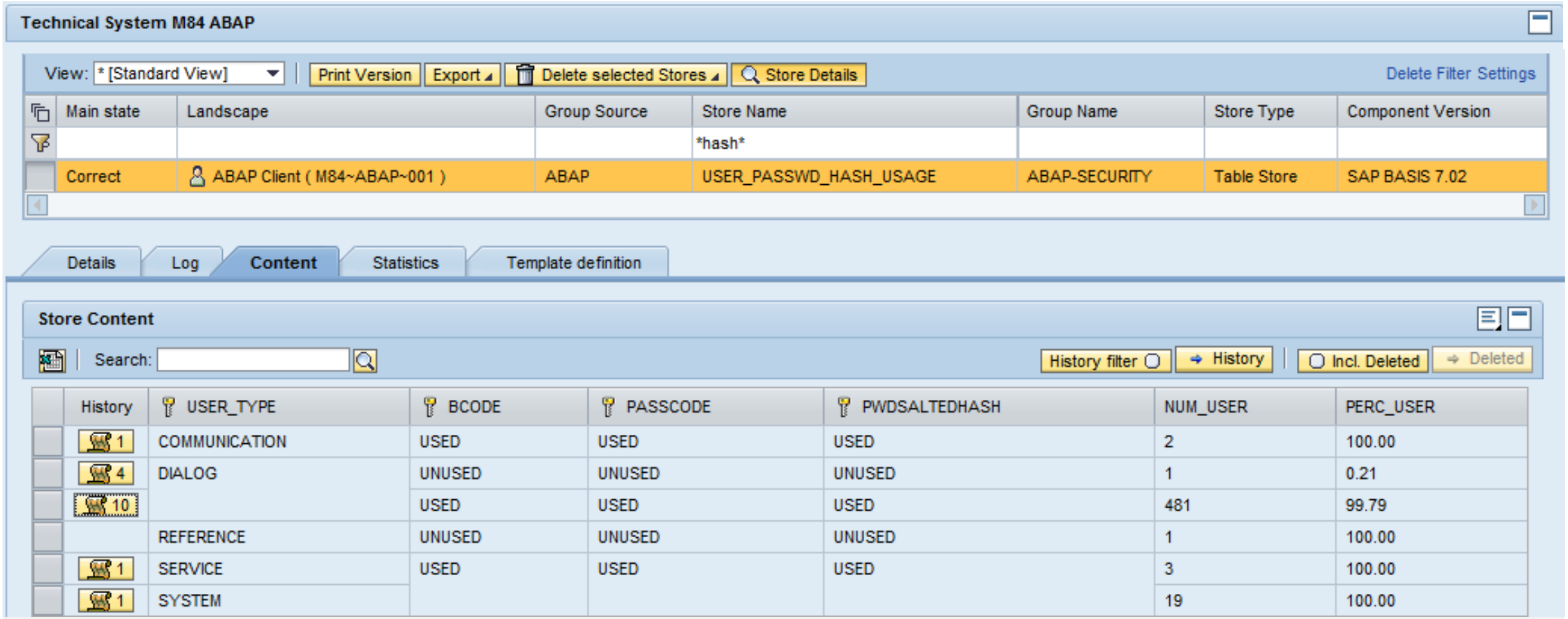
How to find Configuration Stores and Documentation?

Transaction CCDB shows Configuration Stores of a specific system:



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February 2015

Topics February 2015

Note 2128095 - SAL Missing parameters in DUI, DUJ, and DUK messages

Note 2015232 - Missing authorization check in XX-PART-OPT-INV (from September 2014)

Note 1902611 - Potential information disclosure relating to BC-SEC (from November 2013)

Note 2074736 - Directory traversal in GW (from November 2014)

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Note 1686632 - Positive lists for RFC callback (extended) Questions from users

- Is it possible to use wildcards in allowlists?
  - By using '*' in the allowlist table RFCCBWHITELIST for field CALLED_FM or CALLED_BACK_FM, you can allow all called/callback function modules for the specified system. (see documentation of release 7.40)

- Does SAP plans to deliver a standard allowlist for SAP standard functions / remote scenarios?
  - Not really as we do not know your destination names and your active scenarios
  - Transaction SM59 gets an options to generate the allowlist using the Security Audit Log

Preparation: Implement note 2128095 - SAL Missing parameters in DUI, DUJ, and DUK messages

- Would it be possible to define a blocklist instead of an allowlist?
  - No, you only have allow entries and profile parameter rfc/callback_security_method:

    0: All entries are ignored, even the active ones.

    1: Only active entries are valid

    2: Only active entries are valid. However, also (invalid) inactive entries generate an entry in the security audit log if a callback is received from this destination that would have been rejected by the entry is active.

    3: All entries are valid, even the inactive ones.

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Note 2015232 - Missing authorization check in XX-PART-OPT-INV

System Recommendations shows the note for all systems because it‘s classified as a release independent (= product independent) note, which has no “Support Package assignment”, no “Automatic Correction Instruction”, no “Manual Activity”

The Application Component XX-PART-OPT-INV „SAP Invoice Management by Open Text“ belongs to software component OTEXTVIM which is an Add-On to SAP ERP 6.0.

See:

Note 1721041 - SAP Invoice Management by OpenText support for EhP6
Note 1598141 - SAP Enhancement Package 6 for SAP ERP 6.0:Compatible Add-ons

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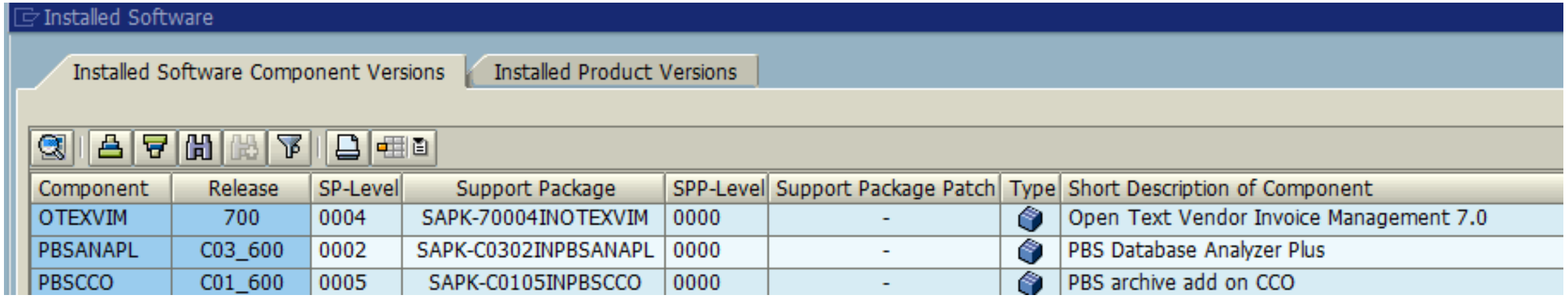
Note 2015232 - Missing authorization check in XX-PART-OPT-INV

How to check if the note is relevant:

- Use transaction `SE37` to verify if one of the functions `/OPT/VIM_RPT_GET_NPO_WI_DATA` or `/OPT/VIM_RPT_GET_PO_WI_DATA` exist. If yes, apply the note.

or

- Check System → Status if you find an entry for software component `OTEXVIM` release 700 with a support package below SP 4:



Component	Release	SP-Level	Support Package	SPP-Level	Support Package Patch	Type	Short Description of Component
OTEXVIM	700	0004	SAPK-70004INOTEXVIM	0000	-		Open Text Vendor Invoice Management 7.0
PBSANAPL	C03_600	0002	SAPK-C0302INPBSANAPL	0000	-		PBS Database Analyzer Plus
PBSCCO	C01_600	0005	SAPK-C0105INPBSCCO	0000	-		PBS archive add on CCO

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Note 1902611 - Potential information disclosure relating to BC-SEC

The Secure Storage (ABAP) is based on a static main key by default. You can set an individual main key by yourself.

Report by ERPScan:
http://erpscan.com/press-center/blog/sap-passwords-part-1/

Online Help:

Secure Storage in the File System (AS ABAP)

Using an Individual Encryption Key

Activities:

- Check recommended setting of Profile parameter `rsec/securestorage/keyfile`
- Set individual main key using transaction `SECSTORE` (see notes 1902258 and 1922423)

➢ Set „Display/maintenance using standard tools like `SE16` not allowed“ and

➢ assign special table authorization group `SPSE` for tables `RSECTAB` and `RSECACTB`

➢ **No user should have authorizations for `S_TABU_DIS` for table authorization group `SPSE`**

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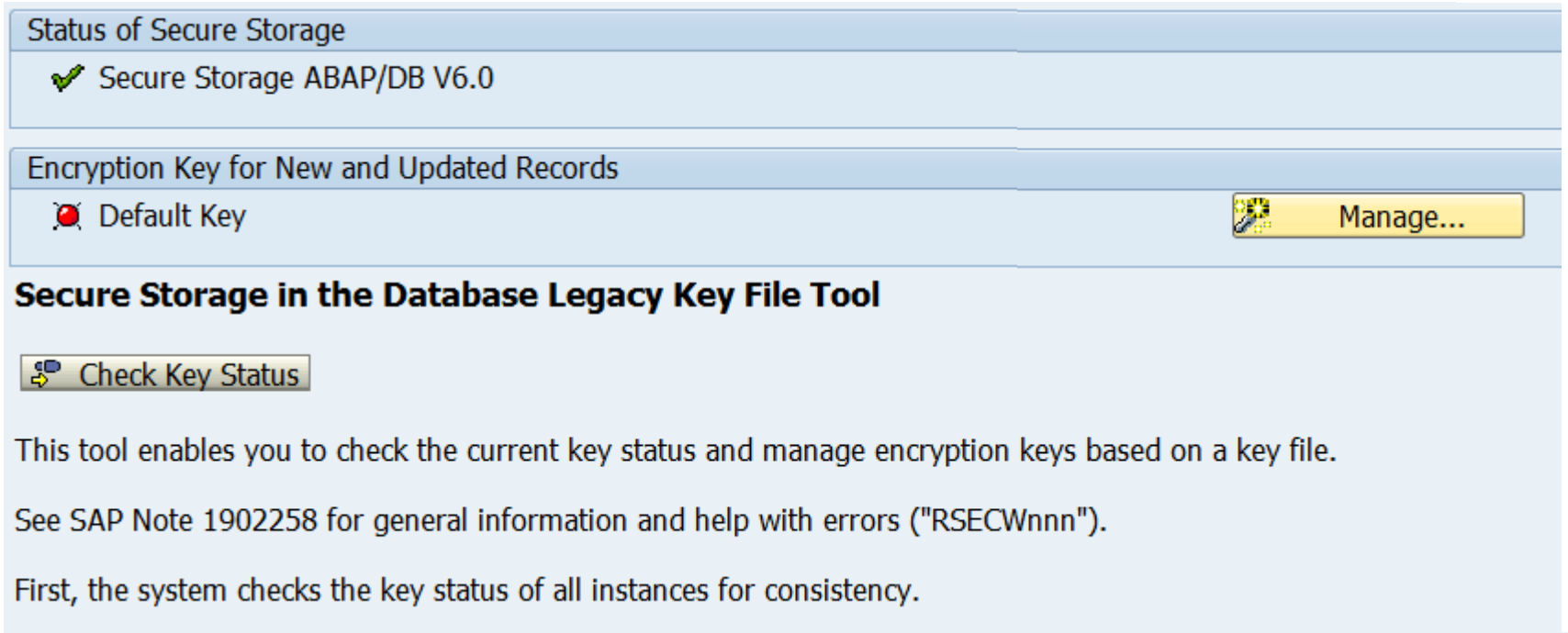
Note 1902611 - Potential information disclosure relating to BC-SEC



Instance	Execution Result	Primary Legacy Key	Secondary Legacy Key	Legacy Key File Path
wdflbmt8216_M84_10	Success	Default Key	Default Key	D:\usr\sap\M84\SYS\global\security\data\SecStoreDBKey.pse
wdflbmt8217_M84_10	Success	Default Key	Default Key	\\wdflbmt8216\sapmnt\M84\SYS\global\security\data\SecStoreDBKey.pse
wdflbmt8218_M84_10	Success	Default Key	Default Key	\\wdflbmt8216\sapmnt\M84\SYS\global\security\data\SecStoreDBKey.pse

...

Use transaction SECSTORE to check the status of the Secure Store and to generate an individual random key.

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Note 1902611 - Potential information disclosure relating to BC-SEC

Execute OS Command (Logged in SYSLOG and Trace Files)

Reset list | Change current directory

```
R/3  M84 001       User     D019687      Date  23.02.2015 Time 18:56:54
Host wdflbmt8217   User     m84adm
Path D:\usr\sap\M84\D10\work
```

```
Execute history command number with next command
Execute last history command with next command ..
$(name) replaced by logical OS commands and profile parameters
```

```
[1]dir \\wdflbmt8216\sapmnt\M84\SYS\global\security\data\
 Volume in drive \\wdflbmt8216\sapmnt is Application
 Volume Serial Number is 60C5-4056

 Directory of \\wdflbmt8216\sapmnt\M84\SYS\global\security\data

23.02.2015  18:01    <DIR>          .
23.02.2015  18:01    <DIR>          ..
03.06.2014  19:31                23 SecStore.key
07.07.2014  12:25               837 SecStore.properties
23.02.2015  18:01                49 SecStoreDBKey.pse
               3 File(s)            909 bytes
               2 Dir(s)  56.146.120.704 bytes free
[2]type \\wdflbmt8216\sapmnt\M84\SYS\global\security\data\SecStoreDBKey.pse
;B01F9423D3A406EE83D340B0C6406306A311AF20A885B1B0
```

Result: You are using an individual key which is stored in a file.

However, thy ABAP system can show the content of the file e.g. via transactions like `AL11` or reports like `RSBDCOS0`.

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Note 2074736 - Directory traversal in GW

Transaction `SMGW` and profile parameter `gw/logging` now restrict allowed pathnames to specific directories.

Solution:

1. Check value of profile parameter `gw/logging`
   If logging is off, you will observe, that the default is secure (no action; no path defined in LOGFILE):
   ```
   ACTION= LOGFILE=gw_log-%y-%m-%d SWITCHTF=day MAXSIZEKB=100
   ```
   → You can shift any activity to the next planned maintenance window.

2. Upgrade Kernel as described in note 2074736 and 2035100 (this note lists higher patch levels)
   SAP KERNEL 7.20 patch 712
   SAP KERNEL 7.21 patch 332
   SAP KERNEL 7.40 patch 76
   SAP KERNEL 7.41 patch 113
   SAP KERNEL 7.42 patch 34

3. Set profile parameter `gw/logging_secure` = `1` as described in the note 2035100

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January 2015

Topics January 2015

Repetition: Why you should really get rid of old password hashes *NOW*
Posted by joris van de Vis in SCN Security on May 8, 2014 9:01:30 AM

How many notes are in scope of the monthly patch process?

How to find security related notes about databases (Example: Oracle)?

Note 2094598 - Fixing POODLE SSLv3.0 Vulnerability in AS Java 7.00, 7.01, 7.02

Note 1985387 - Potential information disclosure relating to SAP Solution Manager

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Why you should really get rid of old password hashes *NOW*

Posted by joris van de Vis in SCN Security on May 8, 2014 9:01:30 AM

Whitepaper: Secure Configuration of SAP NetWeaver Application Server ABAP

Notes 991968 / 2076925 - List of values for "login/password_hash_algorithm“ (SHA-1, SHA-256, SHA-384, SHA-512)
Note 1023437 - ABAP syst: Downwardly incompatible passwords (since NW2004s)
Note 1237762 - ABAP systems: Protection against password hash attacks
Note 1300104 - CUA|new password hash procedures: Background information
Note 1458262 - ABAP: recommended settings for password hash algorithms
Note 1484692 - Protect read access to password hash value tables

Steps:

- Monitor current configuration e.g. using application Configuration Validation
- Protect tables containing password hashes: restrict `S_TABU_DIS` / `S_TABU_NAM`
  (if you want to give access to a part of a table you can create a new database view)
- Check compatibility i.e. concerning a CUA supporting very old systems with old releases, too
- Set profile parameters to enforce new policy
- Delete old password hashes

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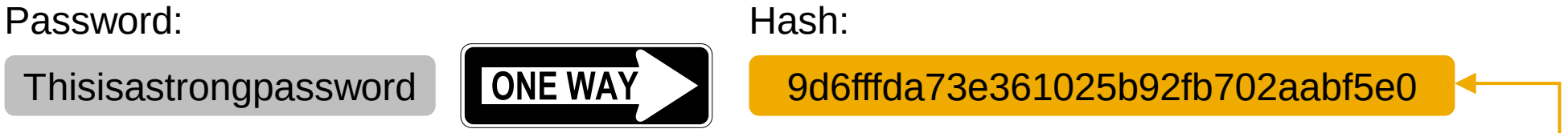
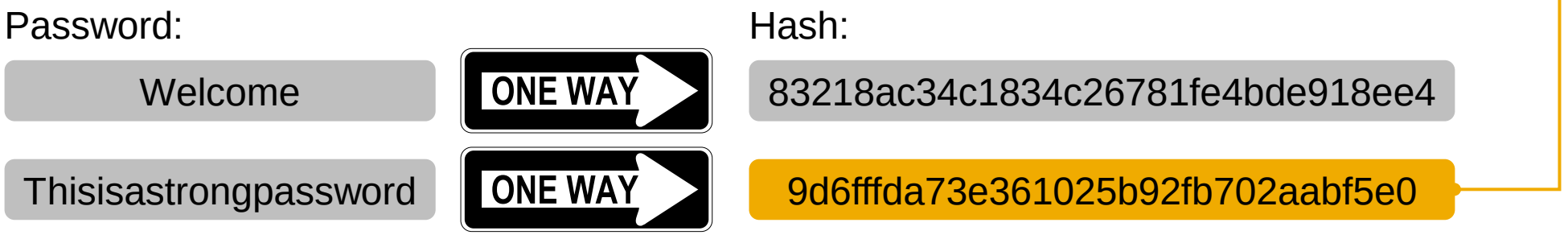
What is a password hash?

Some information about password hashes

- Passwords are hashed with password hash functions into password hashes to store passwords in a secure way
- Password hash algorithms are one way, passwords cannot be calculated from password hashes
- Password hash attacks are always possible, just the speed is different



- But password hashes can be generated from potential passwords until password hashes match



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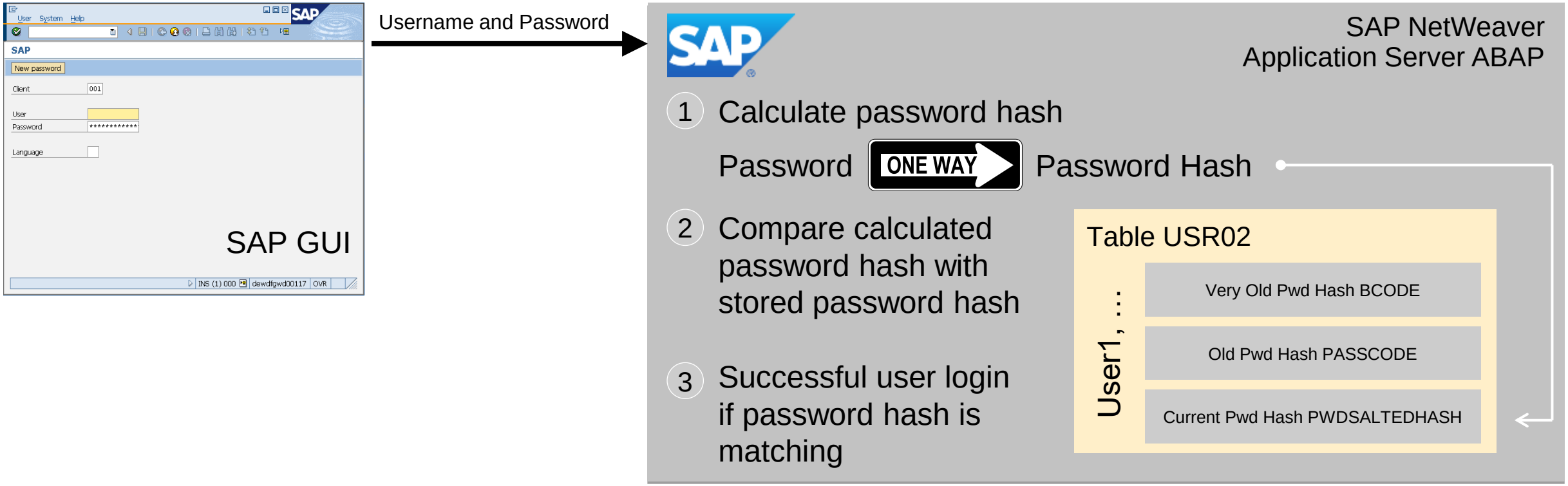
Which password hash is compared during user login?

User login in AS ABAP 7.02 with `login/password_downwards_compatibility*` = 0/1

- Code Version per user (field `CODVN`) controls which password hash is used for a user authentication
- `login/password_downwards_compatibility` >= `2` can activate check of old `BCODE` in addition



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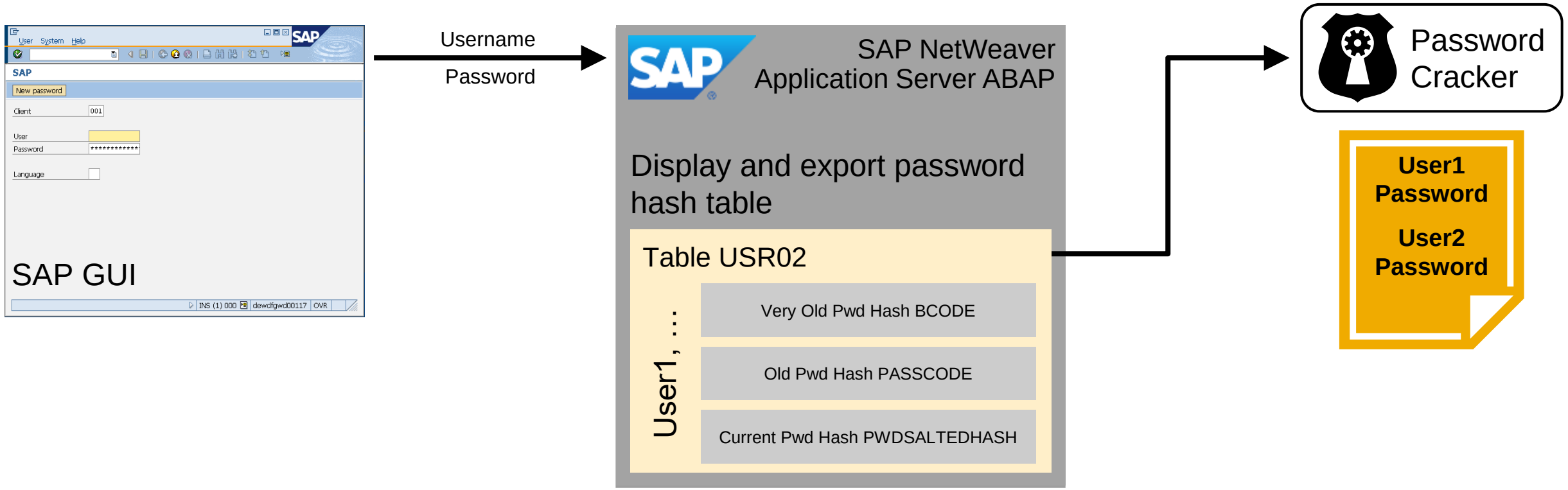
Let’s hack an SAP system by weak password hashes!

Attack scenario

Logon to an SAP system with a user having table display access to `USR02`



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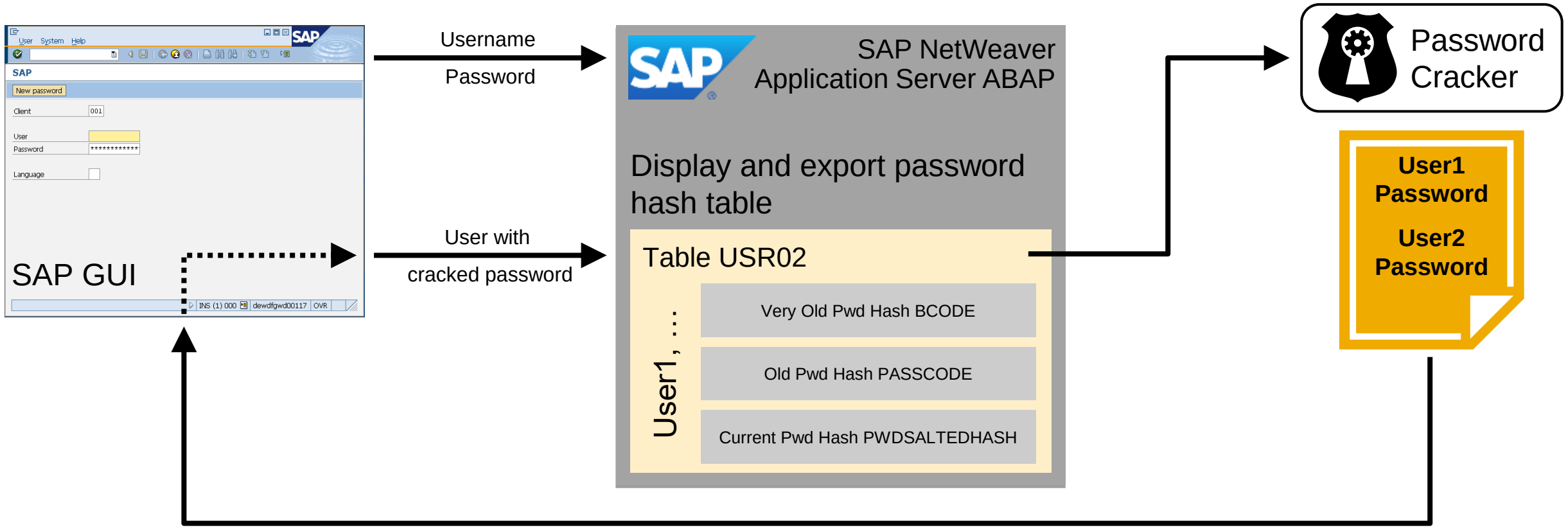
Let’s hack an SAP system by weak password hashes!

Attack scenario

Logon to an SAP system with a user having table display access to `USR02`



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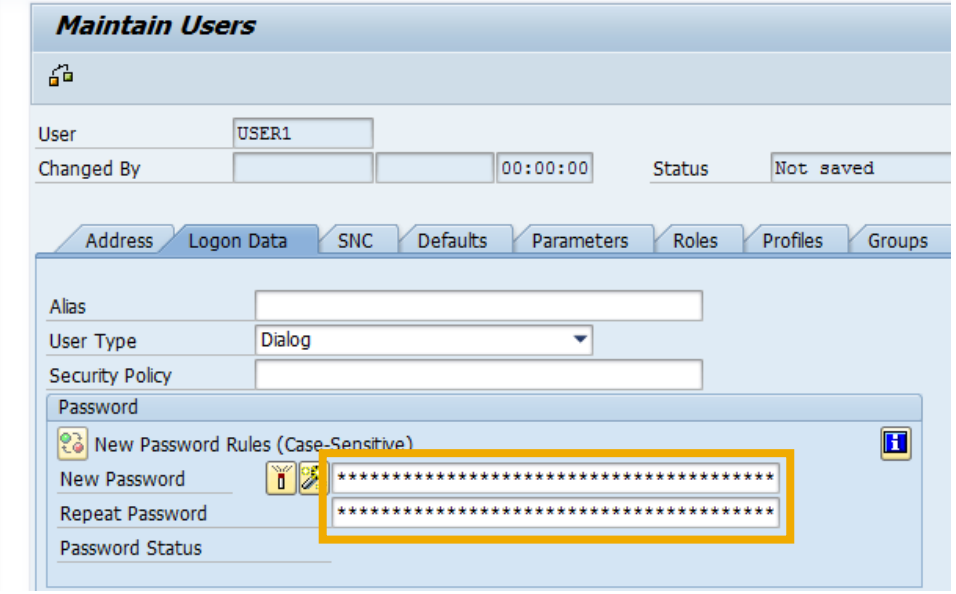
What happens during user creation?

User creation in AS ABAP with SU01

- User administrator creates a user and enters a clear text password
- SAP system generates up to three* password hashes with different strength for downward compatibility reasons



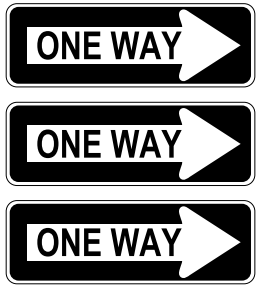


Table USR02

Very Old Pwd Hash BCODE (≤ 6.40)
Old Pwd Hash PASSCODE (7.00-7.01)
Current Pwd Hash PWDSALTEDHASH (≥ 7.02)

* Depends on profile parameter *login/password_downwards_compatibility*

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Some important details about available AS ABAP password hashes!

Password hash creation is controlled by a profile parameter (7.00+)

- `login/password_downwards_compatibility` (refer to SAP Note 1458262)

  0 = Only strongest password hash is calculated

  1-5 = All three password hashes are calculated

Password Hash	Release	Hash Algorithm / Code Version	Security Status
BCODE	3.1i	MD5 based (Code Version A-E)	• Broken, full brute force is possible by an open source password cracker with GPU acceleration within max 20 hours
PASSCODE	7.00-7.01	SHA1 based (Code Version F)	• Limited, duration of attack depends on password length and password complexity
PWDSALTEDHASH	7.02	Iterated salted SHA-1 (Code Version H)	• State of the art, higher number of iterations slows down the hash calculation; usage of random salts prevents hash pre-calculation; password length and complexity mitigate dictionary attacks

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What are the issues around password hashes in SAP systems?

SAP systems store passwords also with a broken password hash algorithm

- Refer to SAP notes 1237762 and 1458262

Password hashes are stored in several tables and tables are not assigned to special table authorization groups

- Depending on the SAP release, password hashes are stored in up to 6 tables / views
- By default, password hash tables are assigned to table authorization group `SC` (which contains many tables)
- Refer to SAP note 1484692
- Refer to SAP note 2024431 that provides a report to adjust `TDDAT` in customer landscapes

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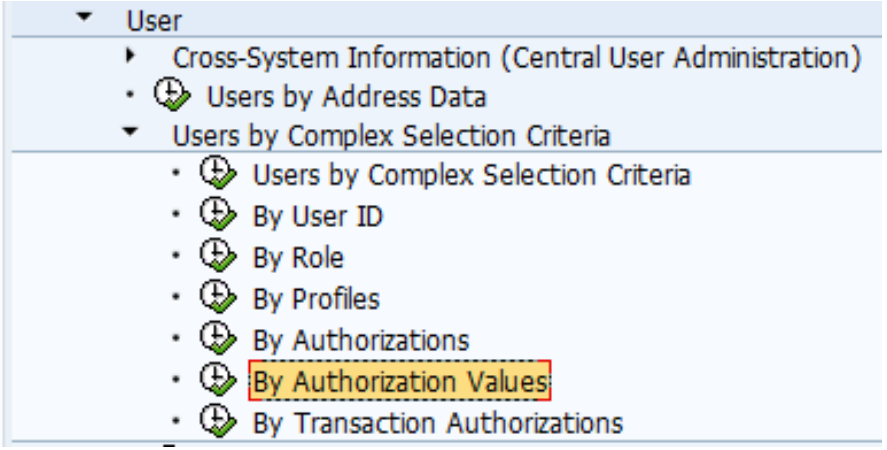
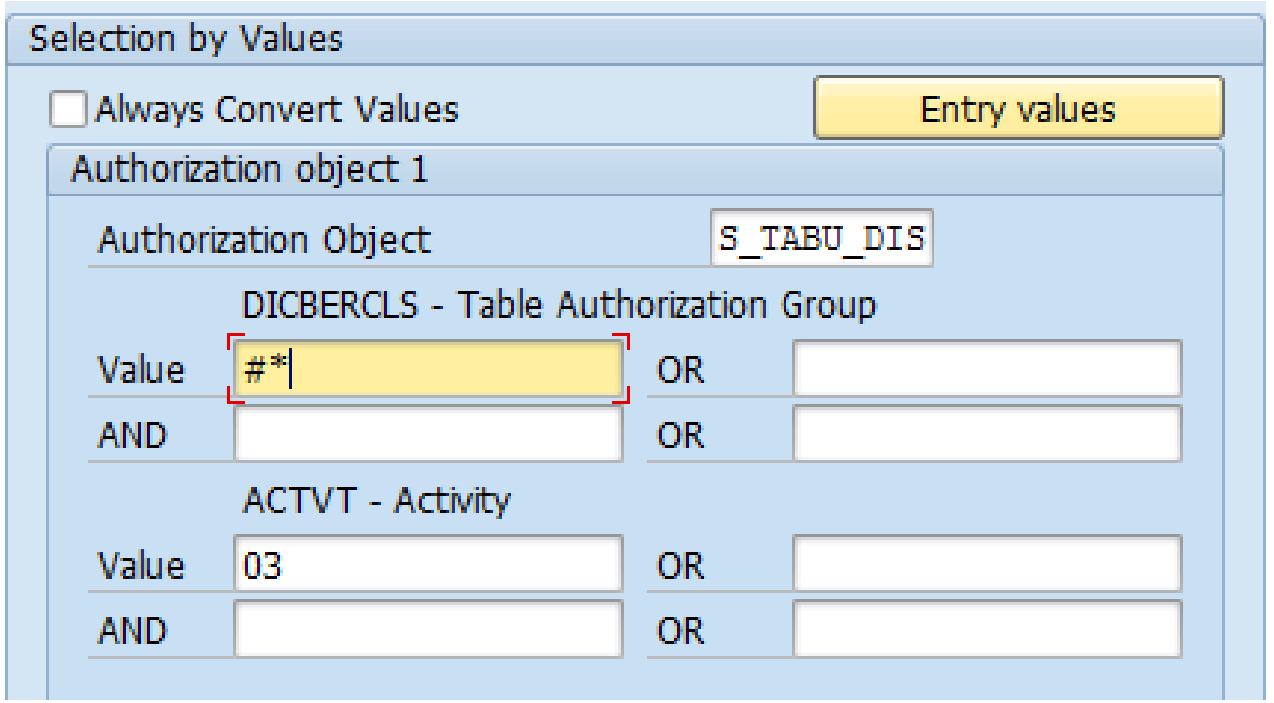
What are the issues around password hashes in SAP systems?

Large number of users have display access to the password hash tables

- Depending on the authorization concept, usually several hundred to several thousand users have access to password hash tables
- Analysis can be done with `SUIM`

  Authorization Object `S_TABU_DIS`
  Activity `03` (Display)
  - Table Auth Group `SC`, `SPWD`
  - Table Auth Group `#*`





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SAP Runs SAP:
Approach for password hash protection

Restrict display access to password hash tables

- All password hash tables have been assigned to the dedicated table authorization group `SPWD`
- Authorization concept was adjusted to minimize number of users having display access to password hash tables

Activate that only new password hashes for users are created

- Check that the CUA system generates all three password hashes
- Change profile parameter on all systems - `login/password_downwards_compatibility` = `0`
- Exclude the CUA system if this system is connected to systems not supporting `PWDSALTEDHASH`

Enforcement of single sign on for personal users

- Users defined which have an exception for single sign on in `SU01` – Tab SNC

- Enforce single-sign on for SAP GUI communication with (`snc/accept_insecure_gui` = `U`)

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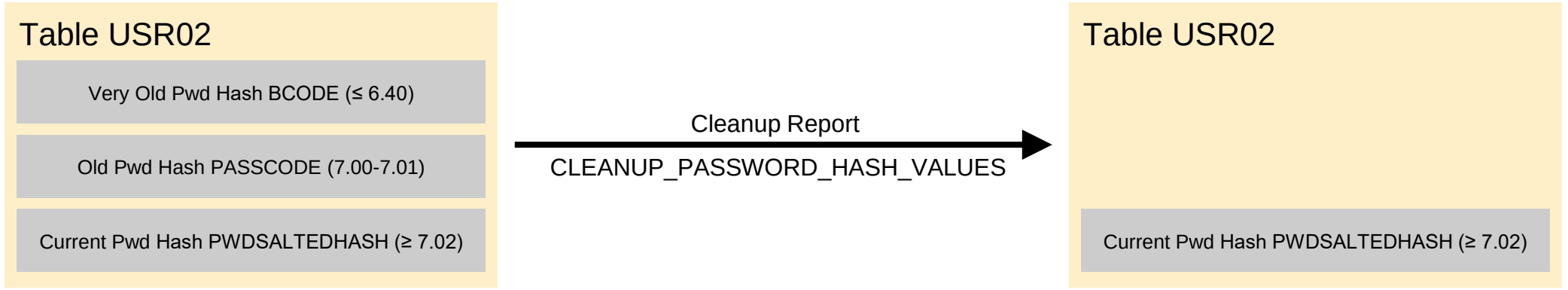
SAP Runs SAP:
Approach for password hash protection

Re-enforce / adjust password policies

- Passwords for all single-sign on users have been removed
- Change all technical users to user type SYSTEM to exclude from password policy
- Password policy was adjusted by updating profile parameters (e.g. `login/min_password_lng`)
- Password policy was enforced by setting profile parameters (`login/password_compliance_to_current_policy`)

Clean-up of old password hashes

- Execution of report `CLEANUP_PASSWORD_HASH_VALUES` which deletes redundant password hashes (cross-client)



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SAP Runs SAP:
Internal implementation of password hash protection

Issues faced during implementation – lessons learned

- Even with single sign on, password hashes might be stored for users
- Password policy settings (based on profile parameters) affect all clients
- Clean-up of redundant password hashes did not cause any problems
- Hardly possible to remove all `BCODE` password hashes in systems existing for some years (e.g. technical user accounts with only `BCODE` password hashes)
- Setting `login/password_downwards_compatibility` = `0` after system installation saves lots of efforts and discussions with operations
- Get reasons if `login/password_downwards_compatibility` has values >= `2` before changing to 0

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SAP Runs SAP:
Monitoring of ABAP password hash generation

Part 1: ABAP password hash generation depends on several independent settings

- Profile parameters (e.g. `login/password_downwards_compatibility`, `login/min_password_lng`, `login/password_compliance_to_current_policy`)
- Table authorization groups for password hash tables

Usage of SAP Solution Manager – Configuration Validation at SAP

Configuration Items

			Compliant (1=Yes, -1=No, ' '=Not valuated)						
ConfigStore Name	Config. Item	Compliance System	Overall Result	ABC 0123456789	DEF 0123456789	GHI 0123456789	JKL 0123456789	MNO 0123456789	PQR 012345678
ABAP_INSTANCE_PAHI	login/min_password_lng	No	-2	-1	-1				
		Yes	4			1	1	1	1
	login/min_password_lowercase	No	-2	-1	-1				
		Yes	4			1	1	1	1
	login/min_password_specials	Yes	6	1	1	1	1	1	1
	login/password_compliance_to_current_policy	No	-2	-1	-1				
		Yes	4			1	1	1	1
	login/password_downwards_compatibility	No	-2	-1	-1				
		Yes	4			1	1	1	1
TDDAT	USH02	No	-2	-1	-1				
		Yes	4			1	1	1	1
	USH02_ARC_TMP	Yes	6	1	1	1	1	1	1
	USR02	No	-2	-1	-1				
		Yes	4			1	1	1	1
	USRPWDHISTORY	Yes	6	1	1	1	1	1	1

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SAP Runs SAP:
Monitoring of ABAP password hash access

Part 2: ABAP password hash access depends on several independent settings

- Percentage of users with weak password hashes (under evaluation how to monitor)
  - Idea: Percentage of users with weak `BCODE` password hashes shall be 5% or less per user type
- Authorization roles allowing display access to password hash tables (under evaluation how to monitor)

Usage of SAP Solution Manager – Configuration Validation under evaluation

Configuration Items

				Compliant (1=Yes, -1=No, ''=Not valuated)				
ConfigStore Name	Client	Config. Item	Compliance System	Overall Result	ABC 0123456789	DEF 012345678	GHI 0123456789	JKL 0123456789
USER_PASSWD_HASH_USAGE	000	COMMUNICATION/USED/UNUSED/UNUSED/	No	-1		-1		
		DIALOG/USED/UNUSED/UNUSED/	No	-1		-1		
		SERVICE/USED/UNUSED/UNUSED/	Yes	1		1		
	001	COMMUNICATION/USED/UNUSED/UNUSED/	No	-1	-1			
			Yes	2		1		1
		DIALOG/USED/UNUSED/UNUSED/	No	-2		-1		-1
			Yes	1	1			
		SERVICE/USED/UNUSED/UNUSED/	No	-1	-1			
		SYSTEM/USED/UNUSED/UNUSED/	No	-1	-1			
			Yes	2		1		1
	200	COMMUNICATION/USED/UNUSED/UNUSED/	No	-1			-1	
			Yes	3	1	1		1

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How many notes are in scope of the monthly patch process?

January 2015

10 Security Notes on Patch Day

1 Support Package Note on Patch Day

4 Support Package Notes on other days

2 Security HotNews out-of-bands

Note	Application Component	Short text	Priority	Release date	Type
1985387	SV-SMG-INS-AGT	Potential information disclosure relating to SAP Solution Manager	high	13.01.2015	SecNote
2000401	IS-A-DP	Missing authorization check in IS-A-DP	high	13.01.2015	SecNote
2016638	BC-TWB-TST-ECA	Untrusted XML input parsing possible in BC-TWB-TST-ECA	high	13.01.2015	SecNote
2065073	BC-CST-LL	Missing authorization check in System Trace	high	13.01.2015	SecNote
2090692	BC-SEC	Security vulnerability in ICM content filter [sapcsa]	medium	13.01.2015	SecNote
2094598	BC-JAS-SEC-CPG	Fixing POODLE SSLv3.0 Vulnerability in AS Java	HotNews	13.01.2015	SecNote
2098906	HAN-AS-XS	Code injection vulnerability in SAP HANA XS	high	13.01.2015	SecNote
2109565	HAN-DB	Potential information disclosure relating to IMPORT FROM statement	high	13.01.2015	SecNote
2111169	XX-PART-CLK	Security Vulnerabilities in ClickSoftware Applications	high	13.01.2015	SecNote
2113333	BC-SYB-ASE	Multiple SQL injection vulnerabilities in SAP ASE	high	13.01.2015	SecNote
1951171	LO-SPM	Potentiell kontrollierbarer RFC-Funktionsbaustein bei EWM	medium	13.01.2015	SPIN
1937544	OPU-GW-CORE	Unauthorized modification of displayed content in User Self Service	medium	10.01.2015	SPIN
1605531	MDM-GDS	Credentials are stored in memory by SAP MDM GDS 2.1	medium	07.01.2015	SPIN
2069588	FIN-FSCM-BD-AR	Switchable authorization checks for RFC in Biller Direct	medium	23.12.2014	SPIN
1783807	CA-CL-SEL	Missing authorization checks in CA-CL	medium	18.12.2014	SPIN
2092489	BC-SEC	update to note 2067859	HotNews	12.12.2014	SecNote
2107562	MOB-MCO-MM	Fixing POODLE SSLv3.0 Vulnerability in Money Mobiliser Platform	HotNews	12.12.2014	SecNote

Conclusion: All notes published after the previous Patch Day are in scope!

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How to find security related notes about databases?

Most security related notes about databases (except for HANA and SYBASE) are not “Security Notes”

- The notes are not listed on https:/support.sap.com/securitynotes
- The notes are not listed by application System Recommendations

Example for Oracle:

- Note 1868094 - Overview: Oracle Security SAP Notes (updated on 03.12.2013)
  This note lists ~60 security related notes
- Note 850306 - Oracle Critical Patch Update Program (updated on 25.11.2014)
  This note lists ~30 critical patch notes

Other sources about secure configuration of Oracle databases:

- White Paper: Database Security for Oracle (PDF) from 2012
- SAP NetWeaver Security Guide - Oracle on Windows
- SAP NetWeaver Security Guide - Oracle on UNIX

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Note 2094598 - Fixing POODLE SSLv3.0 Vulnerability in AS Java 7.00, 7.01, 7.02

The solution is available as a patch even for quite old support packages.

The manual activity of the note is not required (as the old protocol SSL 3.0 is switched off automatically by applying the fix.

Note 2092630 describes how to disable SSLv3 on AS ABAP, on AS JAVA as of 7.1, and on HANA.

There does not exist a solution for AS JAVA release 6.40.

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Note 1985387 - Potential information disclosure relating to SAP Solution Manager

Open questions:

- How to check if a Solution Manager system is affected?
  - Don’t care about deep analysis, just do it.
- How to change the password of the users?
  - Not using transaction SU01 but in SolMan “System Preparation” / “Maintain Users”
- Is it necessary to tell Diagnostics Agents about the new password?
  - Only in case of “Basic Authentication” but in this case you should go for “Certificate Based Authentication” anyway
- If yes, how to tell the Diagnostics Agents about the new password?
  - That’s somewhere in the Agent Admin user interface
- Which folder contains the temporary files?
  - `C:\Program Files\sapinst_instdir` on windows respective `/tmp/sapinst_instdir` on Unix/Linux but log files can also be written to other directories, if non-standard installation procedures had been executed.

➢ These questions triggered the creation of new note **2119627 Change the Password for the Diagnostics Agent Connection User in SAP Solution Manager**

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December 2014

Topics December 2014

Recent notes for application System Recommendations

Note 1987344 - Code injection vulnerability in the OCS functionality (SPAM)

Note 2039348 - Missing whitelist check in GRC-ACP

Note 2046493 - Privilege escalation vulnerability in saposcol

Note 2091973 - Missing authorization check in FS-CD

Note 1686632 - Positive lists for RFC callback (extended)

Note 1800603 / 2074889 - Potential remote code execution in Message Server

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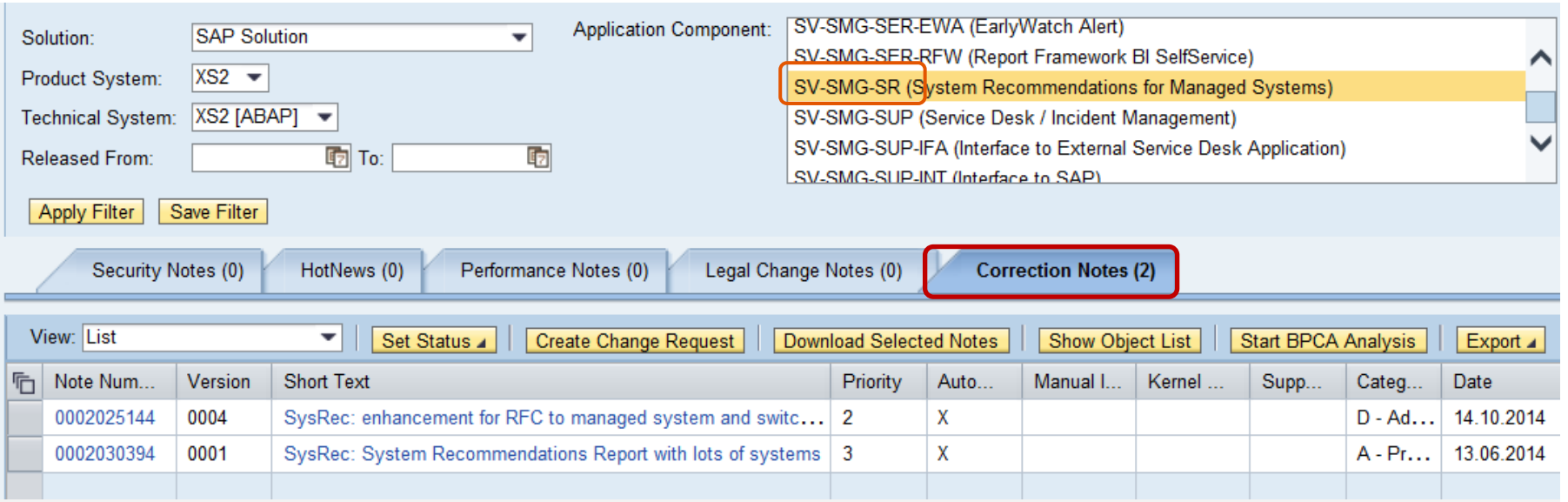
Recent notes for application System Recommendations

2099728 SysRec: Object list for ABAP notes does not show Usage Procedure Logging data (UPL) from 02.12.2014 for SolMan 7.1 SP 9 - 12

2025144 SysRec: enhancement for RFC to managed system and switch framework component from 14.10.2014 for SolMan 7.1 SP 6 – 12

Use application System Recommendations to find such notes:

- Select notes by Application Component SV-SMG-SR
- Show Correction Notes



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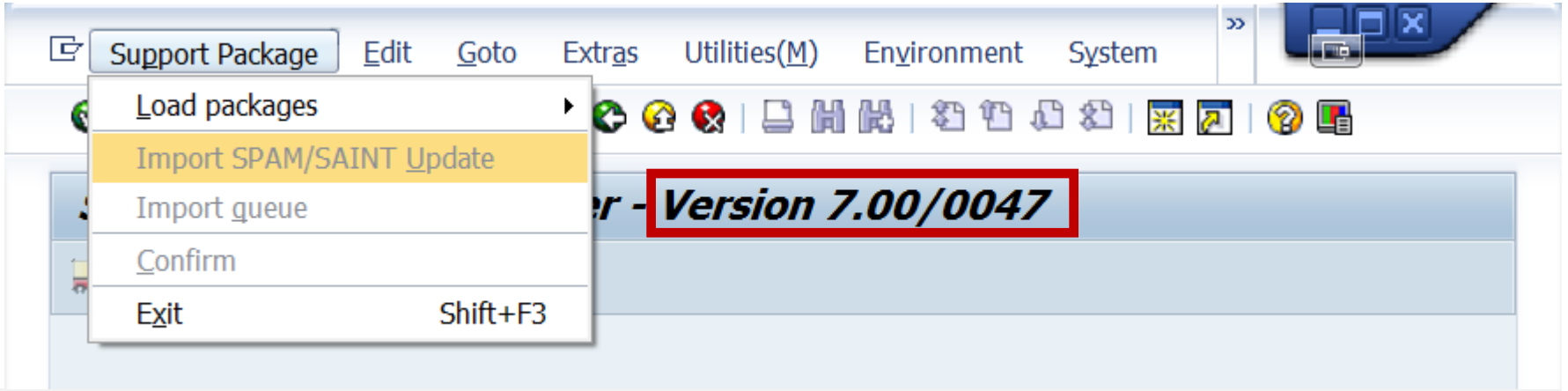
Note 1987344 - Code injection vulnerability in the OCS functionality

No Support Package assignment is possible for this type of correction.

- System Recommendations will show the note for all ABAP systems
- Call transaction `SPAM` to verify if the correction is required
- Solution:
  - R/3 Release 4.0B and 4.5B: SPAM/SAINT Update - Version 0052
  - R/3 Release 4.6: SPAM/SAINT Update - Version 0056
  - Basis Release 6.20 - 7.40: SPAM/SAINT Update - Version 0050



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Note 2039348 - Missing whitelist check in GRC-ACP
Questions from users

- Which applications use this allowlist framework?
  - This allowlist framework was published using note 1560878. Therefore we can expect that all applications which use this framework have notes showing a relationship to this note respective to some key words of the framework.
    Using the search for notes with term `SRT_WHITE_LIST` you find 10 notes which (except the framework notes itself) all belong to GRC.
- Do I need to maintain an allowlist for GRC-ACP?
  - You only need to maintain an allowlist if you are using special functions (non-GRC Plugins, NON-GRCPI) for GRC in the customer name range which are registered somewhere in GRC customizing. Otherwise it‘s sufficient just to apply the note using transaction SNOTE. In any case we can state that the attack vector is rather narrow as an attacker only is able to call very specific functions using the vulnerability.
- Can I use authorizations for S_RFC or security control using UCON instead?
  - GRC applications come with several RFC enables functions. This is true for a central GRC box as well as for the GRC plugins for managed systems. Therefore you should have a strong authorization concept for authorization object S_RFC and/or remote security based on UCON.
  - S_RFC respective UCON secure who is able to execute which RFC enabled functions. This includes RFC functions from GRC. The allowlist as described in note 2039348 secures which other functions can be indirectly called via the RFC interface of GRC.

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Note 2046493 - Privilege escalation vulnerability in saposcol

System Recommendations cannot exactly check if the system in vulnerable, therefore it shows the note for all systems. However, only Unix systems are affected (even if `saposcol` exists for other platform as well).

Verify that the s-bit is not set. You can use report `RSBDCOS0` for to execute following command:
`ls -l /usr/sap/hostctrl/exe/saposcol`

The program is vulnerable if output shows `-rws-r-x---` instead of `-rwx-r-x---`

```
[1]ls -l /usr/sap/hostctrl/exe/saposcol
-rwxr-x---  1 root sapsys 2944585 2012-07-24 15:47 /usr/sap/hostctrl/exe/saposcol
```

Start `saposcol` either as a root (not recommended according to note 726094), or use SAPHOSTAGENT package which contains the new saposcol and handles it's starting/stopping automatically in a safe way (see Note 1031096 - Installing Package SAPHOSTAGENT)

Other references:

- Note 19227 - Open newest saposcol
- Installation and Configuration of `saposcol` http://help.sap.com/saphelp_nw70ehp2/helpdata/en/aa/b8c93a8aaa2b28e10000000a114084/content.htm

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Note 2091973 - Missing authorization check in FS-CD

Deactivation of obsolete report in software component INSURANCE.

- As usual with this type of corrections: Just do it!

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Note 1686632 - Positive lists for RFC callback (extended) Questions from users

- Is it possible to use wildcards in allowlists?
  - By using '*' in the allowlist table `RFCCBWHITELIST` for field `CALLED_FM` or `CALLED_BACK_FM`, you can allow all called/callback function modules for the specified system. (see documentation of release 7.40)

- Does SAP plans to deliver a standard allowlist for SAP standard functions / remote scenarios?
  - Not really as we do not know your destination names and your active scenarios
  - Transaction SM59 gets an options to generate the allowlist using the Security Audit Log

Preparation: Implement note 2128095 - SAL Missing parameters in DUI, DUJ, and DUK messages

- Would it be possible to define a blocklist instead of an allowlist?
  - No, you only have allow entries and profile parameter `rfc/callback_security_method`:

    0: All entries are ignored, even the active ones.

    1: Only active entries are valid

    2: Only active entries are valid. However, also (invalid) inactive entries generate an entry in the security audit log if a callback is received from this destination that would have been rejected by the entry is active.

    3: All entries are valid, even the inactive ones.

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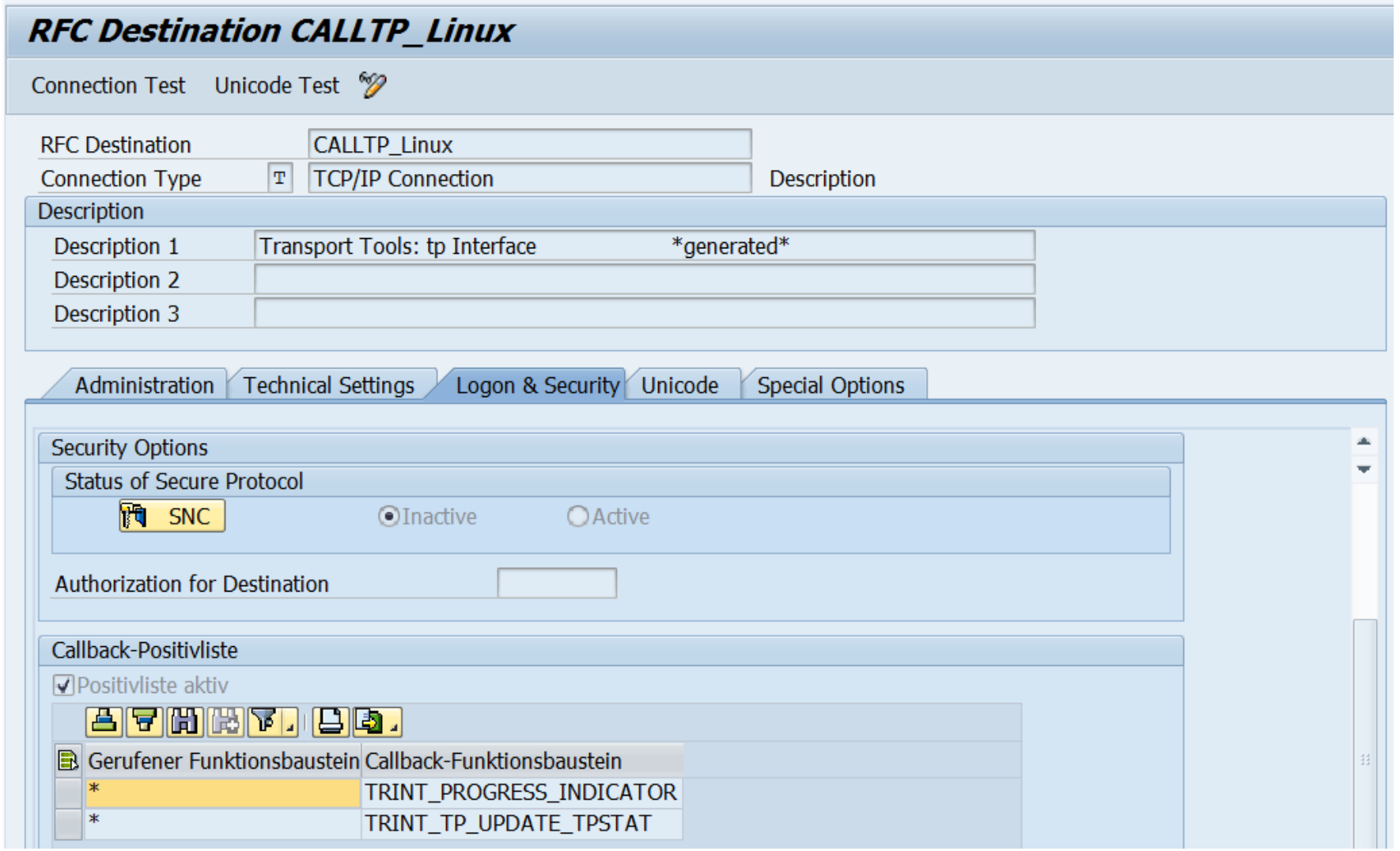
Note 1686632 - Positive lists for RFC callback (extended) Example



"Standard" scenario

tp is allowed to send status information back to ABAP.

No restriction, which of the functions within tp is allowed to callback to ABAP.

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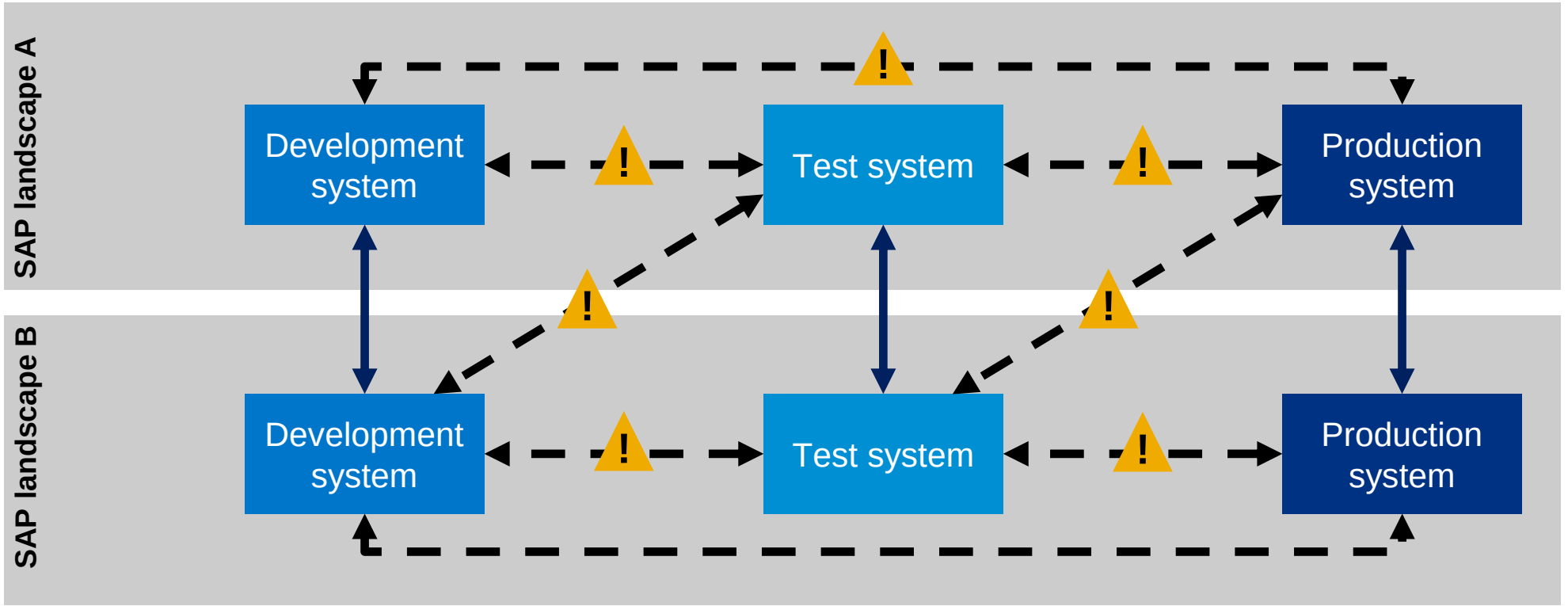
Note 1686632 - Positive lists for RFC callback (extended)
System landscape



OK: RFC destinations between systems of same security classification

CHECK: RFC destinations from low security level to high security level (trust relationship, stored credentials)
RFC destinations from high security level to low security level (callback)

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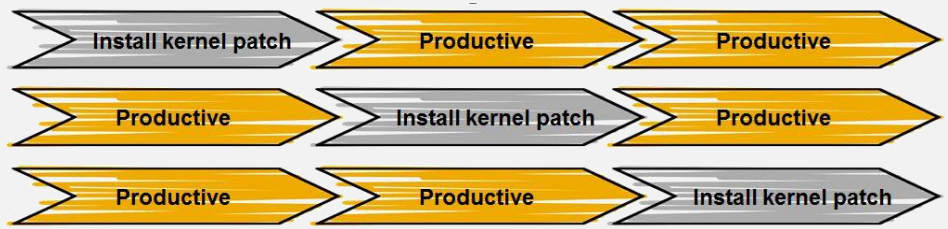
Note 1800603 / 2074889 - Potential remote code execution in Message Server

Solution:

SAP KERNEL 7.20 patch ~~402~~ 620
SAP KERNEL 7.21 patch ~~42~~ 318

Validate the version using
transaction **SMMS** → Goto → Release Notes

The Rolling Kernel Switch Procedure
http://scn.sap.com/docs/DOC-46485



Keep in mind that both system types, ABAP and Java, contain a message server and are therefore affected.

It is sufficient to update the message server. You can use the message server from 7.20 for a system with a kernel running on 7.00, 7.01, 7.10, or 7.11, however, although this will work from a technical point of view it is not officially supported by SAP. SAP strongly recommend to upgrade the kernel to release 7.20 at least. Note 1636252 describes how to install the downward-compatible kernel.

see blog:
Best-practice about Security Advisory concerning Kernel related notes 1785761 and 1800603

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November 2014

Topics November 2014

Note 1738988 - Code-Injection-Vulnerability in ABAP Dictionary Utility

Note 2078596 - SACF: Workbench for switchable authorization (RFC) scenarios
Further improvements for RFC security

Note 2008727 - Whitepaper: Securing Remote Function Calls (RFC)

Note 2086818 - Fixing POODLE SSLv3.0 (CVE-2014-3566) Vulnerability

Note 1686632 - Positive lists for RFC callback (updated)

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Note 1738988 - Code-Injection-Vulnerability in ABAP DDIC Utility

Classical ABAP Code Injection:

1. Report which can be submitted via SA38 or using many other report starters
2. No AUTHORORITY-CHECK
3. Import parameter containing ABAP coding
4. GENERATE SUBROUTINE
5. PERFORM form IN PROGRAM
6. Gotcha!

See also:

Note 1872638 - Code injection vulnerability in CRM-MKT-MPL-TPM-PPG (October 2014)

Note 1835691 - Code injection vulnerability in CRM-MKT-MPL-TPM-PPG (September 2014)

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Note 2078596 - SACF: Switchable Authorization (RFC) Scenarios

Issue: RFC enabled function modules which do not perform any or sufficient business related authorization checks.

Note	*Component*	*Description*
2078596	BC-MID-RFC	Further improvements for RFC security
2008727	BC-MID-RFC	Whitepaper: Securing Remote Function Calls
<many>	<many>	Switchable authorization checks for RFC in <…>

SAP_BASIS
700 SP 32
701 SP 17
702 SP 17
710 SP 19
711 SP 14
720 SP 8
730 SP 13
731 SP 14
740 SP 9

Prerequisite notes are referenced in SAP Note 2054522.
Additional information on switchable authorization checks (SACF) is available in note 1922808

Kernel
7.20 patch 618
7.21 patch 227
7.38 patch 51
7.40 patch 44
7.41 patch 10

Online Help - Switchable Authorization Check Framework
http://help.sap.com/saphelp_nw74/helpdata/en/ff/599a937a9a43f8927040b63ce08cc4/content.htm

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Note 2078596 - SACF: Switchable Authorization (RFC) Scenarios

Goal: Switch on all RFC scenarios …

… for used scenarios including verification and adjustment of the authorization concept

… for not used scenarios (no need to update authorizations)

Process:

1. **Fulfil prerequisites for SAP_BASIS and Kernel**
2. **Enable RFC scenarios for logging using transaction SACF**
3. **After some time: Adjust authorizations and then activate RFC scenarios**

Mitigation: Implement a strong authorization concept about **S_RFC** or use **UCON** mainly to block all unused RFC scenarios.

How to get RFC call traces to build authorizations for S_RFC for free!
http://scn.sap.com/community/security/blog/2010/12/05/how-to-get-rfc-call-traces-to-build-authorizations-for-srfc-for-free

Unified Connectivity (UCON)
http://scn.sap.com/docs/DOC-53844

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Note 2078596 - Further improvements for RFC security

Caution: Other notes about “Missing authorization check in …“ might not be related to Switchable Authorization Scenarios!

Note 2078596 currently lists 32 notes which are related to an SACF project and 28 notes describing other solutions like

- Introduction of an authorizations check which does not require to update authorizations
- Deactivation of obsolete but critical functions
- Disable the feature that the function can be called remotely

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Note 2008727 - Whitepaper: Securing Remote Function Calls (RFC)

The White Paper shows best-practice to solve typical questions:

- How to secure RFC/http destinations between different system types (DEV, TEST, PRD)?
- How to secure RFC/http destinations having stored credentials (userid / password)?
- How to secure RFC/http destinations using trust relationships (Trusted RFC, SAP Authentication Token)?
- How to encrypt RFC/http communication channels?
- How to secure RFC server programs?
- How to secure the RFC client system?
- How to setup an authorization concept for RFC?
- How to analyze RFC usage?

https://support.sap.com/securitywp
Contents:

Securing RFC Destination Configuration
- Trusted System Security
- Secure Network Communication

Securing RFC Communication on the Server
- Limiting Access to RFC Function Modules
- Authorization Maintenance for RFC Communication
- Activating Switchable Authorization Checks

Securing RFC Communication on the Client

Securing RFC Callback

Securing the RFC Gateway
- Access Control for External RFC Servers
- Access Control for RFC Proxy Requests
- Blocking RFC Communication

RFC Security Monitoring

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Note 2086818 - Fixing POODLE SSLv3.0 (CVE-2014-3566)

A fundamental flaw has been determined in the older cryptography protocol Secure Sockets Layer 3.0 (SSL 3.0), used to encrypt HTTPS communication. An exploit, called *Padding Oracle On Downgraded Legacy Encryption* (POODLE), has been published September 2014, that takes advantage of this vulnerability (CVE-2014-3566).

Although the SSL 3.0 protocol has been superseded with the newer Transport Layer Security (TLS) cryptography protocol, most web browsers also implement support for a "downgrade" protocol that allow SSL to be used if a connection using TLS cannot be established with a web application server.

This issue is not specific to SAP products, but affects all web applications that use HTTPS/SSL encrypted communication channels.

Solution:

Ensure that **all** web browsers and **all** web application servers disable use of the SSL 3.0.

Clients: Refer to vendor specific documentation for your web browser

Servers: Refer to vendor specific documentation for your Web Application Server

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Note 2086818 - Fixing POODLE SSLv3.0 (CVE-2014-3566)

Note	*Component*	*Description*
2086818	BC-SEC-SSL	Fixing POODLE SSLv3.0 (CVE-2014-3566) Vulnerability (Central note)
2092630	BC-SEC-SSL	Turning off SSLv3 on AS ABAP, on AS JAVA as of 7.1, and on HANA
2094598	BC-JAS-SEC-CPG	Fixing POODLE SSLv3.0 Vulnerability in AS Java 7.00, 7.01, 7.02 (January 2015)
2088755	BC-JAS-SEC-CPG	Disabling SSLv3.0 in Netweaver AS Java 6.40 not possible
510007	BC-SEC-SSL	Setting up SSL on Web Application Server ABAP
2089135	SBO-BC	Upgrade OpenSSL to resolve the POODLE issue with the SSL 3.0
2083444	BI-BIP-DEP	Impact of the POODLE vulnerability on SAP BusinessObjects software
2096275	BC-SYB-SQA	Fixing Poodle SSLv3.0 Vulnerability in multiple SAP Sybase products
2094995	MOB-AFA	Afaria Server Poodle Mitigation
2105793	MOB-SYC-SAP	Fixing Poodle SSLv3 vulnerability for Agentry
2107562	MOB-MCO-MM	Fixing Poodle SSLv3 vulnerability in Money Mobiliser Platform
2085867	XX-SER-SAPSMP-ACC	No more support for old SSL Protocols in Service Marketplace

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Note 1686632 - Positive lists for RFC callback (updated)

Credits for this tip:
SAP Security Consulting

The solution provided by note 1686632 is incomplete and got updated:

2002096 - Wrong originally called function in RFC callback check

This note offers a Kernel patch for 721 only!

- Upgrade Kernel to 721 patch 321or higher as part of your next maintenance activity.
- Then, schedule the project to secure RFC callback.

The implementation differs depending on the release of SAP_BASIS:

- Note 2058946 - Maintenance of callback positive lists before Release 7.31
- Online Help – RFC Logon and Security as of release 7.31
  http://help.sap.com/saphelp_nw74/helpdata/en/48/8c727789603987e10000000a421937/frameset.htm

See note 2102941 - Update 1 to Security Note 1686632

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October 2014

Topics October 2014

Note 2067859 - Potential Exposure to Digital Signature Spoofing

Note 1686632 - Positive lists for RFC callback

Note 1872638 - Code injection vulnerability in CRM-MKT-MPL-TPM-PPG

Integration of System Recommendations and Usage Procedure Logging as of SolMan 7.1 SP 11

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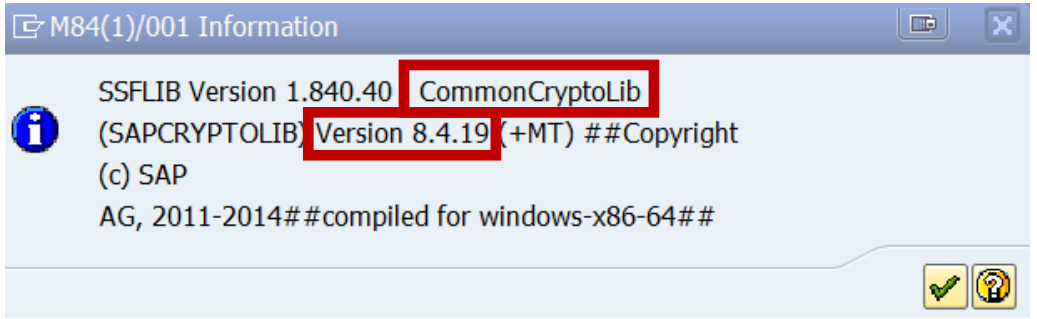
Note 2067859 - Potential Exposure to Digital Signature Spoofing

There is a critical vulnerability in versions of SAPCRYPTOLIB, SAPSECULIB and CommonCryptoLib components of SAP NetWeaver AS for ABAP and SAP HANA applications. The vulnerability may enable an attacker to spoof system digital signatures based on the DSA algorithm.

Determine the type and release of the SAP Cryptographic Library on your system using transaction `STRUST` → Environment → Display SSF Version. If your version is lower than those versions listed below, then replace your SAP Cryptographic Library.



Replace the affected libraries.

- SAPCRYPTOLIB, upgrade to version 5.5.5.38 or later.
- SAPSECULIB, upgrade to SAPCRYPTOLIB
- CommonCryptoLib, upgrade to version 8.4.30 or later.

It is sufficient to replace these libraries – you do not need to update the complete Kernel.

The main preventive measure is to replace the libraries. Do this first.
You may consider to renew DSA keys, too. See note 2068693.

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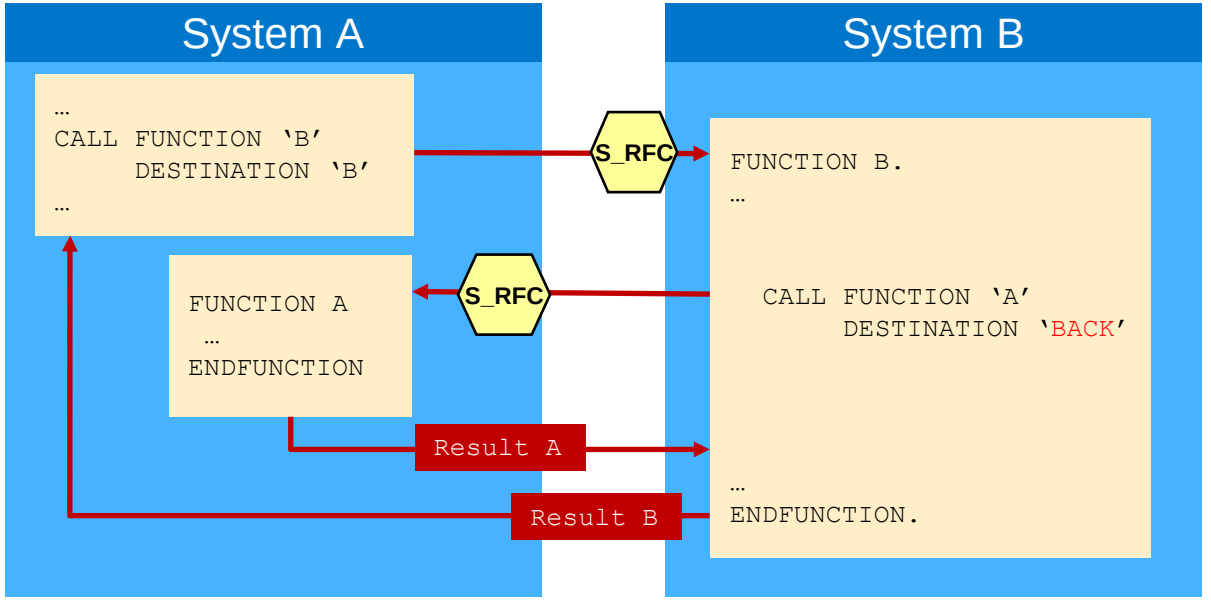
Note 1686632 - Positive lists for RFC callback

RFC callback can pose risks to business critical systems when initiating RFC communication to other systems using highly privileged users. In many cases batch jobs are executed by highly privileged system users. These batch jobs could perform RFC communication to remote systems.

Malicious remote systems could misuse the high privileges of the batch user using RFC callback. The following access control should therefore be implemented for all business critical systems.

RFC callback always performs S_RFC authorization checks and potentially additional functional authorization checks on the user that initiated the RFC communication.

The authorization management for users initiating RFC communication should therefore follow the same guidelines as for users receiving RFC calls.



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Note 1872638 - Code injection vulnerability in CRM-MKT-MPL-TPM-PPG

Classical ABAP Code Injection via RFC:

1. RFC enabled function module
2. No AUTHORORITY-CHECK except implicit check for S_RFC
3. Import parameter containing ABAP coding
4. GENERATE SUBROUTINE
5. PERFORM form IN PROGRAM
6. Gotcha!

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SAP Usage and Procedure Logging (UPL)

Introduction

UPL is a new functionality available in any ABAP based system based on the core functionality of SAP Coverage Analyzer.

It will be used to log all called and executed ABAP units like programs, function modules down to classes, methods and subroutines.

Benefits:

- ✓ No performance impact
- ✓ 100% coverage of usage
- ✓ Detection of dynamically called ABAP elements
- ✓ Secured access to UPL data to protect information
- ✓ The full reporting capabilities with enriched information in BW of the Solution Manager will give you the flexibility to analyze ABAP usage on your demands.

UPL, a prerequisite for several new SAP Solution Manager applications like BPCA and EHP Scope & Effort Analyzer

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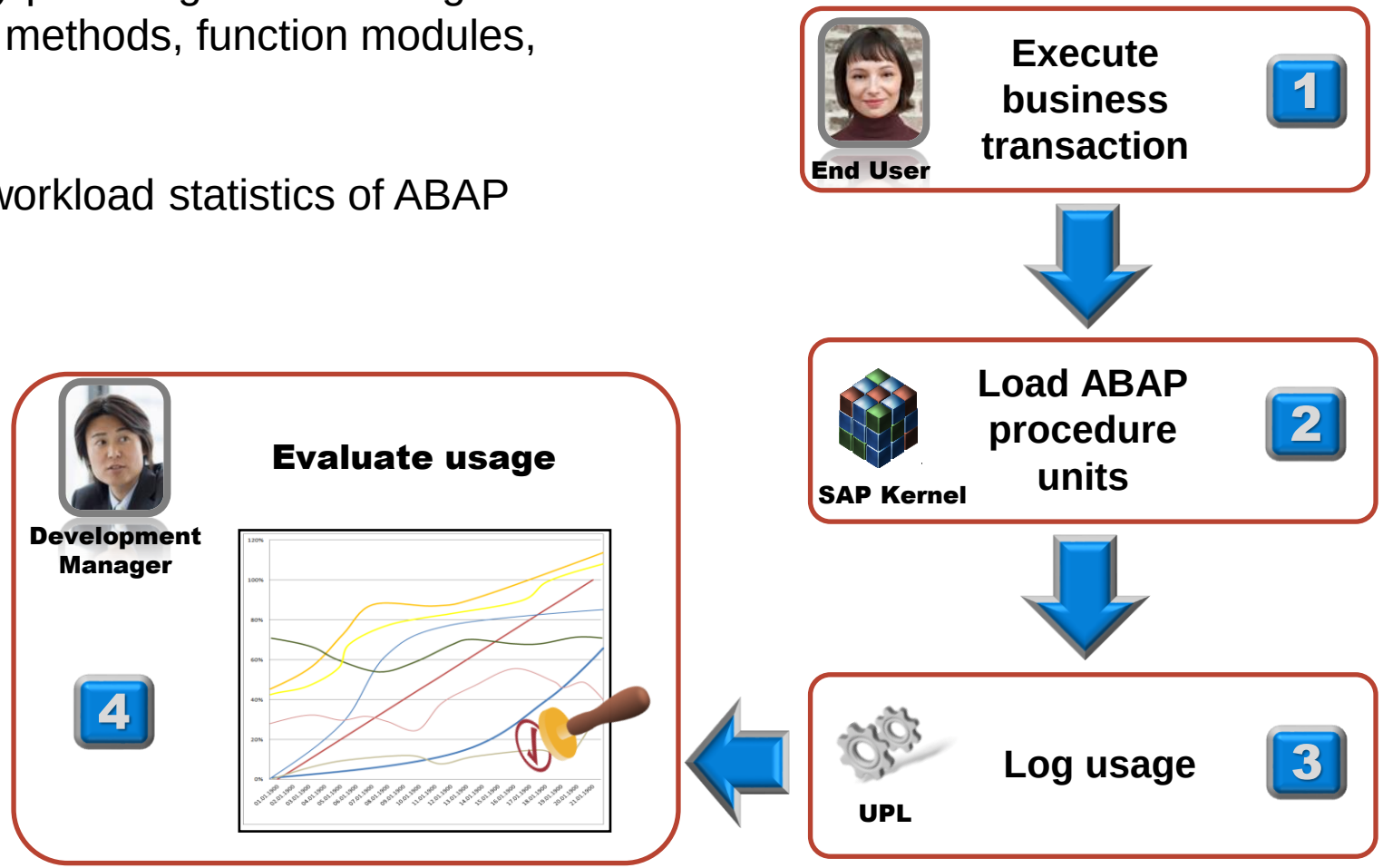
Usage and Procedure Logging (UPL)

The new way getting the real system usage

- UPL is a kernel based logging technology providing runtime usage information of ABAP procedure units like methods, function modules, subroutines and much more…
- UPL complements the standard ST03N workload statistics of ABAP executables
- UPL provides 100 % reliable usage analysis without measurable performance impact
- UPL is available as of SAP Netweaver 7.01 SP10 with Kernel 720 Patch 94
- EHP Scope and Effort Analyzer uses UPL to identify used ABAP procedure units and to create an inventory of these usage information.



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SAP Usage and Procedure Logging (UPL)

FAQ about UPL

How to find out if UPL collection is collecting data?

Start transaction **SCOV** in the managed system. If UPL is activated, you will see a status information "SCOV lite is activated!" Furthermore the traffic light under "Data collection" should be green. In this case everything is fine.

Will UPL have any impact on the system performance?

No, there is no measurable impact, because we count the usage as soon as the ABAP compiler is loading the code. This is confirmed by the SAP benchmark team.

Are there any risks to activate UPL?

No, there is no known risk to activate UPL.

How much data will be consumed in the managed system?

We collect usage data on a daily basis. As soon as one ABAP program was executed, we increase only the execution counter. From our experience the needed DB space is between 2-10 MB for 14 days of data. But this depends on the real usage of different programs.

There is an error message "Data collection was not performed" in monitor of SCOV.

Ensure settings and server are correct. If not please use report /SDF/UPL_CONTROL to stop UPL mode. Start transaction SCOV and correct the server settings. Then reactivate the UPL again.

In case of technical issues open a customer message on component SV-SMG-CCM-CDM

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SAP Usage and Procedure Logging (UPL)
Usage Analysis (local in managed system)

How to read the UPL data in the managed system?

Use the report ***/SDF/SHOW_UPL*** to show the UPL data on the managed system. This includes viewing of existing time slices and also the current UPL collection in progress. In most cases the usage information is instantly available.

Output format (selection of most important ones)

Date	All entries with the same UPL date were executed at this date (no time available).
Object Type	Describes the transport type of objects. PROG for programs, FUGR for function groups, etc.
Object Name in Object Directory	Name of the ABAP repository object (TADIR).
Tcode/Program	Name of the ABAP include containing the ABAP procedure.
Type	Type of ABAP processing block. You are able to distinct between executions of function modules (FUNC), class methods (METH), selection screens, report events, user exits, etc.
Processing Block	Name of the ABAP processing block
Accumulated Executions	Number of executions

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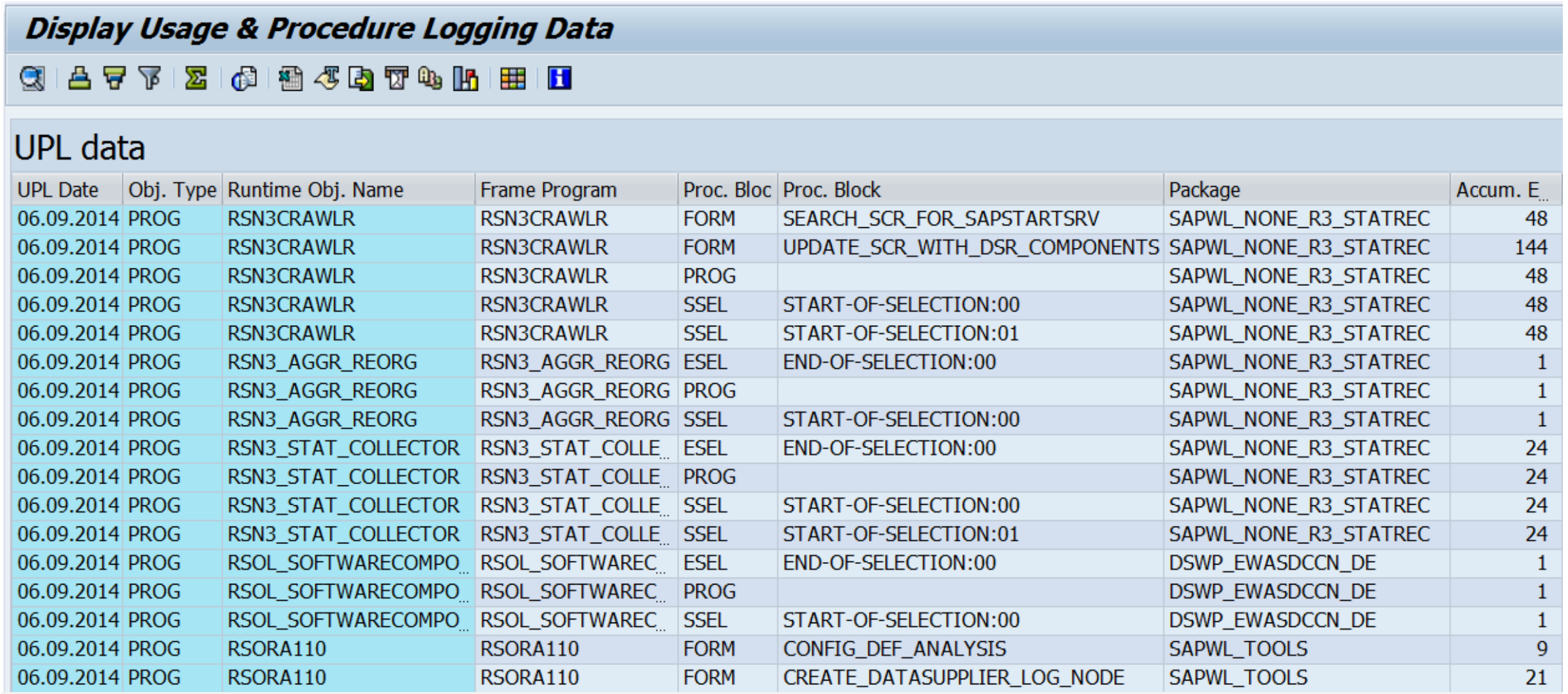
SAP Usage and Procedure Logging (UPL)
Usage Analysis (local in managed system)



Display Usage & Procedure Logging Data

UPL data

UPL Date	Obj. Type	Runtime Obj. Name	Frame Program	Proc. Bloc	Proc. Block	Package	Accum. E...
06.09.2014	PROG	RSN3CRAWLR	RSN3CRAWLR	FORM	SEARCH_SCR_FOR_SAPSTARTSRV	SAPWL_NONE_R3_STATREC	48
06.09.2014	PROG	RSN3CRAWLR	RSN3CRAWLR	FORM	UPDATE_SCR_WITH_DSR_COMPONENTS	SAPWL_NONE_R3_STATREC	144
06.09.2014	PROG	RSN3CRAWLR	RSN3CRAWLR	PROG		SAPWL_NONE_R3_STATREC	48
06.09.2014	PROG	RSN3CRAWLR	RSN3CRAWLR	SSEL	START-OF-SELECTION:00	SAPWL_NONE_R3_STATREC	48
06.09.2014	PROG	RSN3CRAWLR	RSN3CRAWLR	SSEL	START-OF-SELECTION:01	SAPWL_NONE_R3_STATREC	48
06.09.2014	PROG	RSN3_AGGR_REORG	RSN3_AGGR_REORG	ESEL	END-OF-SELECTION:00	SAPWL_NONE_R3_STATREC	1
06.09.2014	PROG	RSN3_AGGR_REORG	RSN3_AGGR_REORG	PROG		SAPWL_NONE_R3_STATREC	1
06.09.2014	PROG	RSN3_AGGR_REORG	RSN3_AGGR_REORG	SSEL	START-OF-SELECTION:00	SAPWL_NONE_R3_STATREC	1
06.09.2014	PROG	RSN3_STAT_COLLECTOR	RSN3_STAT_COLLE...	ESEL	END-OF-SELECTION:00	SAPWL_NONE_R3_STATREC	24
06.09.2014	PROG	RSN3_STAT_COLLECTOR	RSN3_STAT_COLLE...	PROG		SAPWL_NONE_R3_STATREC	24
06.09.2014	PROG	RSN3_STAT_COLLECTOR	RSN3_STAT_COLLE...	SSEL	START-OF-SELECTION:00	SAPWL_NONE_R3_STATREC	24
06.09.2014	PROG	RSN3_STAT_COLLECTOR	RSN3_STAT_COLLE...	SSEL	START-OF-SELECTION:01	SAPWL_NONE_R3_STATREC	24
06.09.2014	PROG	RSOL_SOFTWARECOMPO...	RSOL_SOFTWAREC...	ESEL	END-OF-SELECTION:00	DSWP_EWASDCCN_DE	1
06.09.2014	PROG	RSOL_SOFTWARECOMPO...	RSOL_SOFTWAREC...	PROG		DSWP_EWASDCCN_DE	1
06.09.2014	PROG	RSOL_SOFTWARECOMPO...	RSOL_SOFTWAREC...	SSEL	START-OF-SELECTION:00	DSWP_EWASDCCN_DE	1
06.09.2014	PROG	RSORA110	RSORA110	FORM	CONFIG_DEF_ANALYSIS	SAPWL_TOOLS	9
06.09.2014	PROG	RSORA110	RSORA110	FORM	CREATE_DATASUPPLIER_LOG_NODE	SAPWL_TOOLS	21

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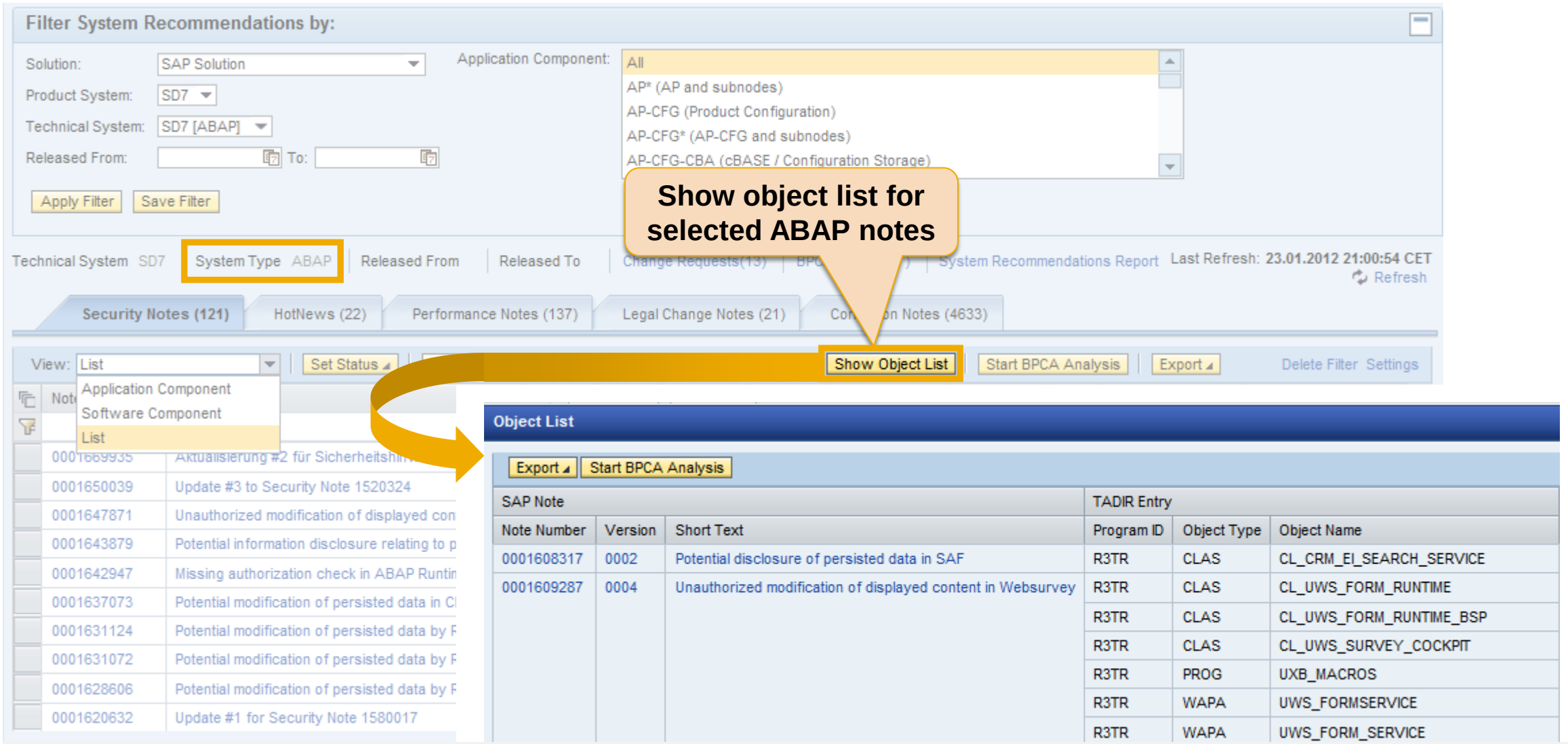
Extended Functions in System Recommendations
Show object list for selected ABAP notes

Available as of SolMan 7.1 SP 5



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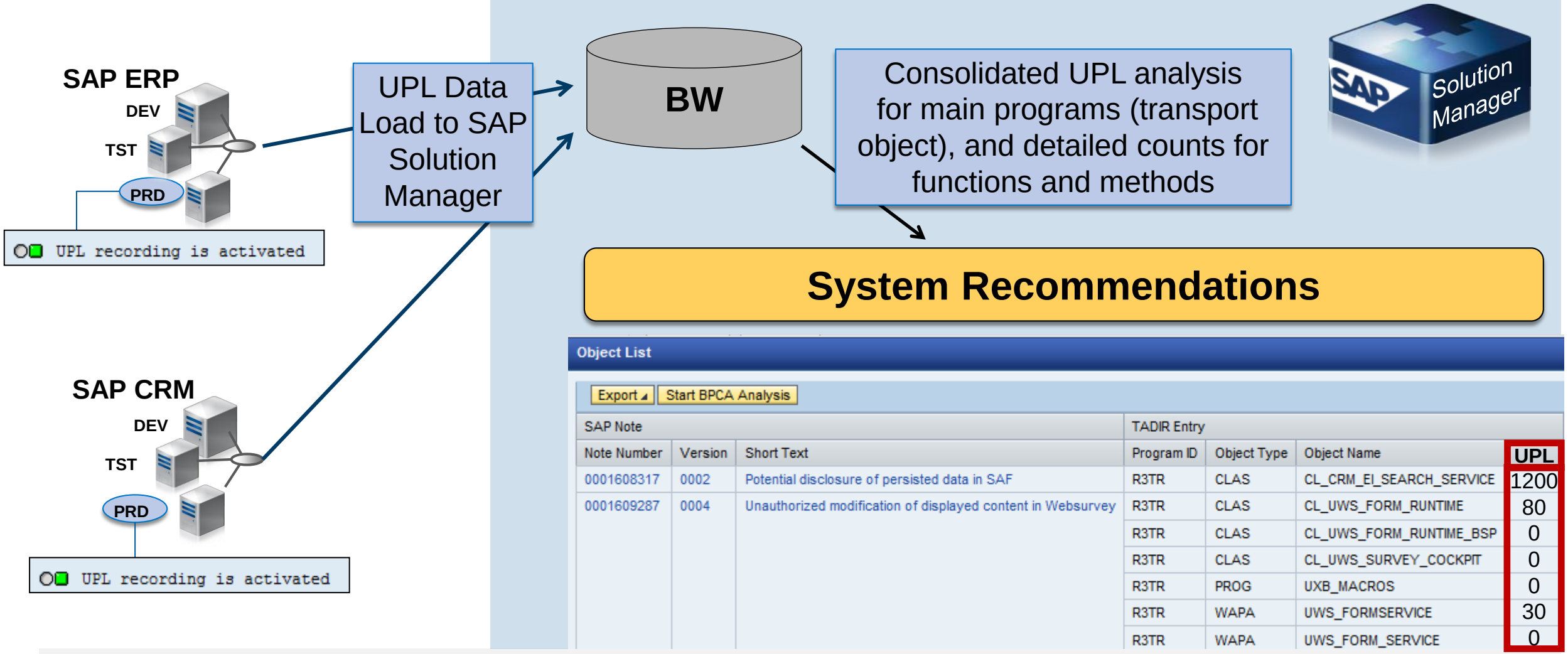
Analysis of Object Usage in System Recommendations
Data Collection of Usage Procedure Logging (UPL)

Available as of SolMan 7.1 SP 10(12)



Object List

Export | Start BPCA Analysis

SAP Note			TADIR Entry			
Note Number	Version	Short Text	Program ID	Object Type	Object Name	UPL
0001608317	0002	Potential disclosure of persisted data in SAF	R3TR	CLAS	CL_CRM_EI_SEARCH_SERVICE	1200
0001609287	0004	Unauthorized modification of displayed content in Websurvey	R3TR	CLAS	CL_UWS_FORM_RUNTIME	80
			R3TR	CLAS	CL_UWS_FORM_RUNTIME_BSP	0
			R3TR	CLAS	CL_UWS_SURVEY_COCKPIT	0
			R3TR	PROG	UXB_MACROS	0
			R3TR	WAPA	UWS_FORMSERVICE	30
			R3TR	WAPA	UWS_FORM_SERVICE	0

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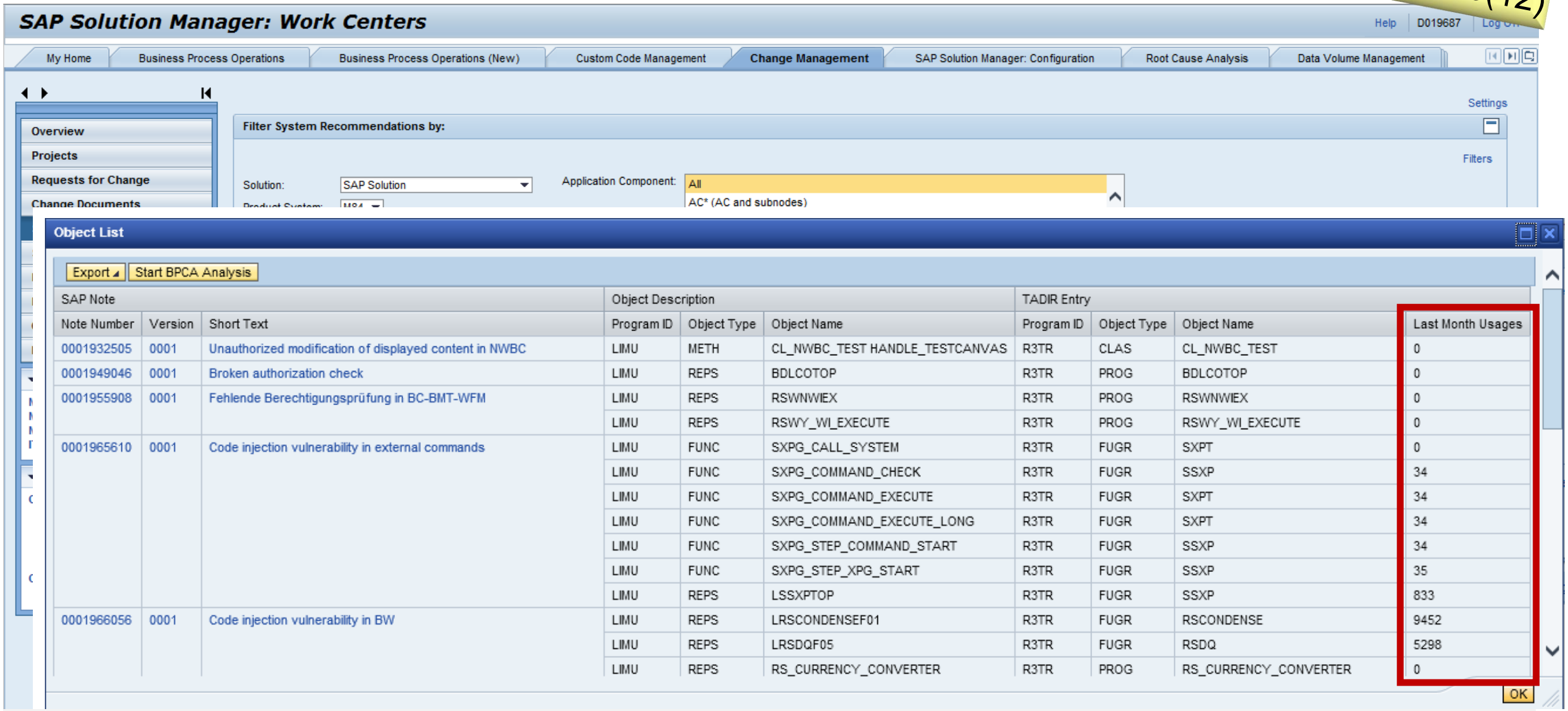
Analysis of Object Usage in System Recommendations

Show object list for selected ABAP notes with usage data

Available as of SolMan 7.1 SP 10(12)



SAP Note			Object Description			TADIR Entry			
Note Number	Version	Short Text	Program ID	Object Type	Object Name	Program ID	Object Type	Object Name	Last Month Usages
0001932505	0001	Unauthorized modification of displayed content in NWBC	LIMU	METH	CL_NWBC_TEST HANDLE_TESTCANVAS	R3TR	CLAS	CL_NWBC_TEST	0
0001949046	0001	Broken authorization check	LIMU	REPS	BDLCOTOP	R3TR	PROG	BDLCOTOP	0
0001955908	0001	Fehlende Berechtigungsprüfung in BC-BMT-WFM	LIMU	REPS	RSWNWIEX	R3TR	PROG	RSWNWIEX	0
			LIMU	REPS	RSWY_WI_EXECUTE	R3TR	PROG	RSWY_WI_EXECUTE	0
0001965610	0001	Code injection vulnerability in external commands	LIMU	FUNC	SXPG_CALL_SYSTEM	R3TR	FUGR	SXPT	0
			LIMU	FUNC	SXPG_COMMAND_CHECK	R3TR	FUGR	SSXP	34
			LIMU	FUNC	SXPG_COMMAND_EXECUTE	R3TR	FUGR	SXPT	34
			LIMU	FUNC	SXPG_COMMAND_EXECUTE_LONG	R3TR	FUGR	SXPT	34
			LIMU	FUNC	SXPG_STEP_COMMAND_START	R3TR	FUGR	SSXP	34
			LIMU	FUNC	SXPG_STEP_XPG_START	R3TR	FUGR	SSXP	35
			LIMU	REPS	LSSXPTOP	R3TR	FUGR	SSXP	833
0001966056	0001	Code injection vulnerability in BW	LIMU	REPS	LRSCONDENSEF01	R3TR	FUGR	RSCONDENSE	9452
			LIMU	REPS	LRSDQF05	R3TR	FUGR	RSDQ	5298
			LIMU	REPS	RS_CURRENCY_CONVERTER	R3TR	PROG	RS_CURRENCY_CONVERTER	0

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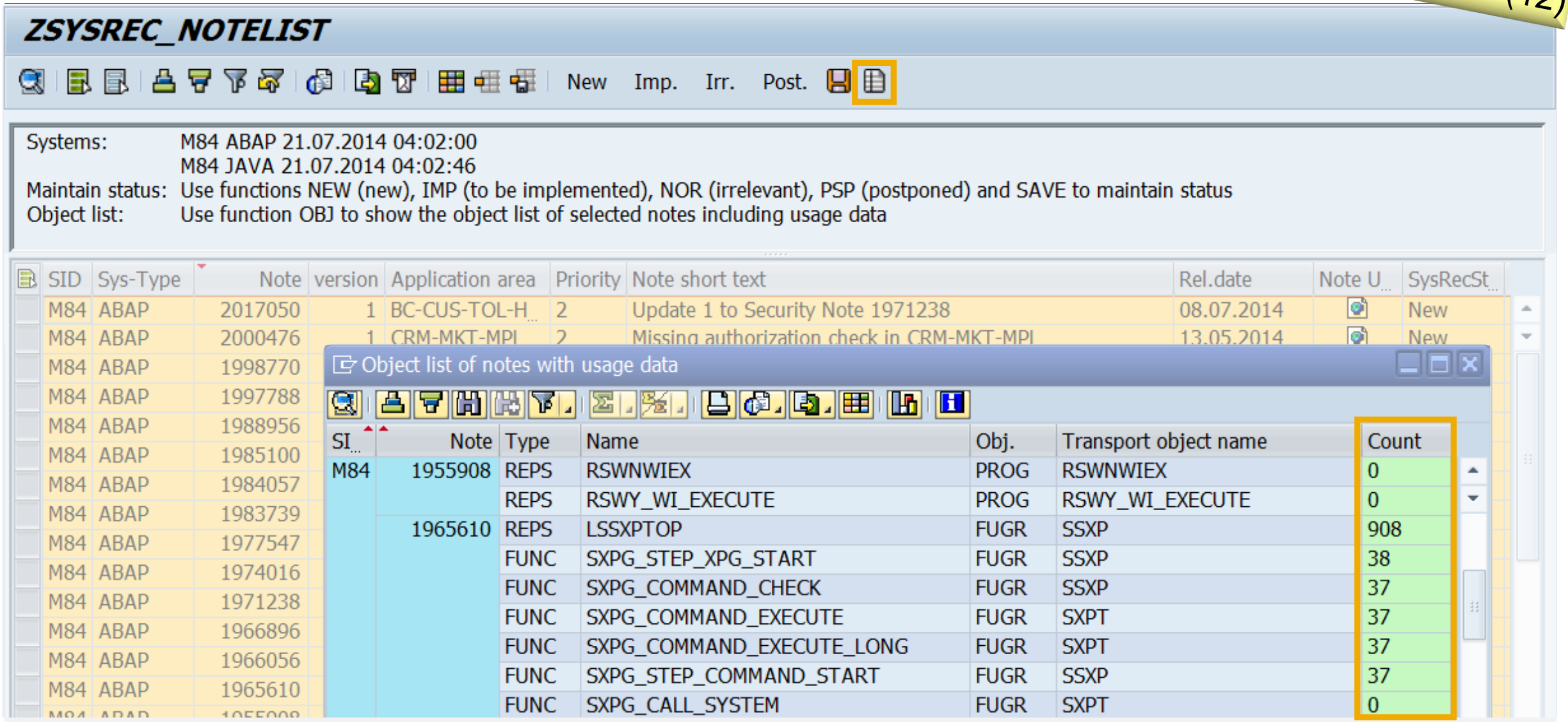
Cross-System check for System Recommendations
Report ZSYSREC_NOTELIST with object list and usage data

Available as of SolMan 7.1 SP 10(12)



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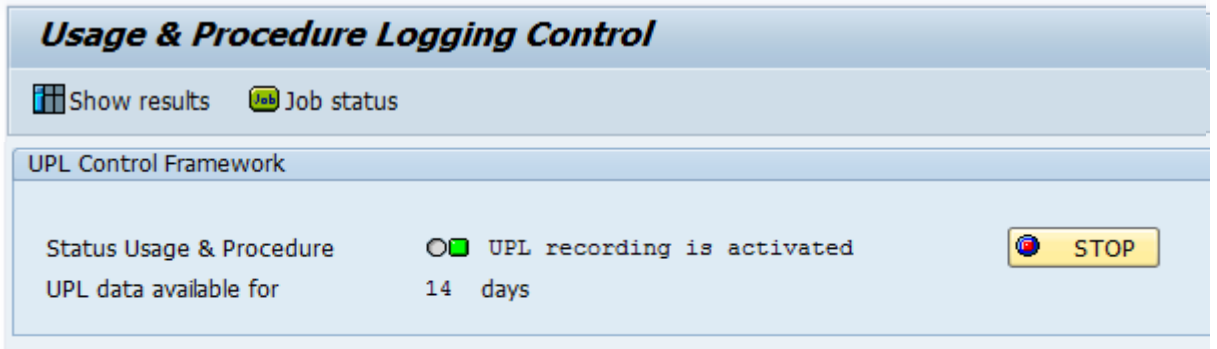
SAP Usage and Procedure Logging (UPL)
Prerequisites for the monitored system

- SAP NetWeaver SAP_BASIS 7.01 SP10 ***or*** 7.02 SP9 (= SAP ERP 6.0 EHP4 ***or*** SAP ERP 6.0 EHP5)
- ST-PI 2008_1_700 SP4 ***or*** SP5 & Note 1683134 ***or*** ST-PI 2008_1_700 SP6 *or higher*
- Kernel 720 Patch 94 *or higher according to …*
- SAP Note 1785251 - SCOV/UPL: Error messages in monitor *(Kernel 720 Patch 410 / 721 Patch 112)*
- SAP Note 1822227 *(to allow changing the data retention time using report /SDF/UPL_CONTROL)*
- SAP Note 1906451 - Technical Preparation for Custom Code Management
- Based on our experience the space requirements are 2-10 MB for 14 days of data. So even data collection of one year won´t massively affect space requirements. Nevertheless verify your individual storage settings / database free space for a higher retention time value.
- Report /SDF/UPL_CONTROL shows the status:



- Tipp: use System Recommendations to search for latest ***correction notes*** of application component **SV-SMG-CCM-CDM** for the managed system and for the SAP Solution Manager

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SAP Usage and Procedure Logging (UPL)
Activation via SAP Solution Manager

The UPL activation procedure was subject of continuous enhancements in the SAP Solution Manager infrastructure. Starting with many manual steps in SAP Solution Manager 7.1 SP5 it has finally reached a fully guided and system supported version in SAP Solution Manager 7.1 SP 11.

The **SOLMAN_SETUP** scenario for Custom Code Management contains all necessary steps and UIs to handle UPL configuration end to end including job scheduling of related UPL jobs.

See
Note 1955847 - UPL: Activation Procedure and Authorization Handling in SAP Solution Manager

Additional authorizations:

- S_COV_ADM with change activity
- S_RFC for function group /SDF/SCOV_LITE

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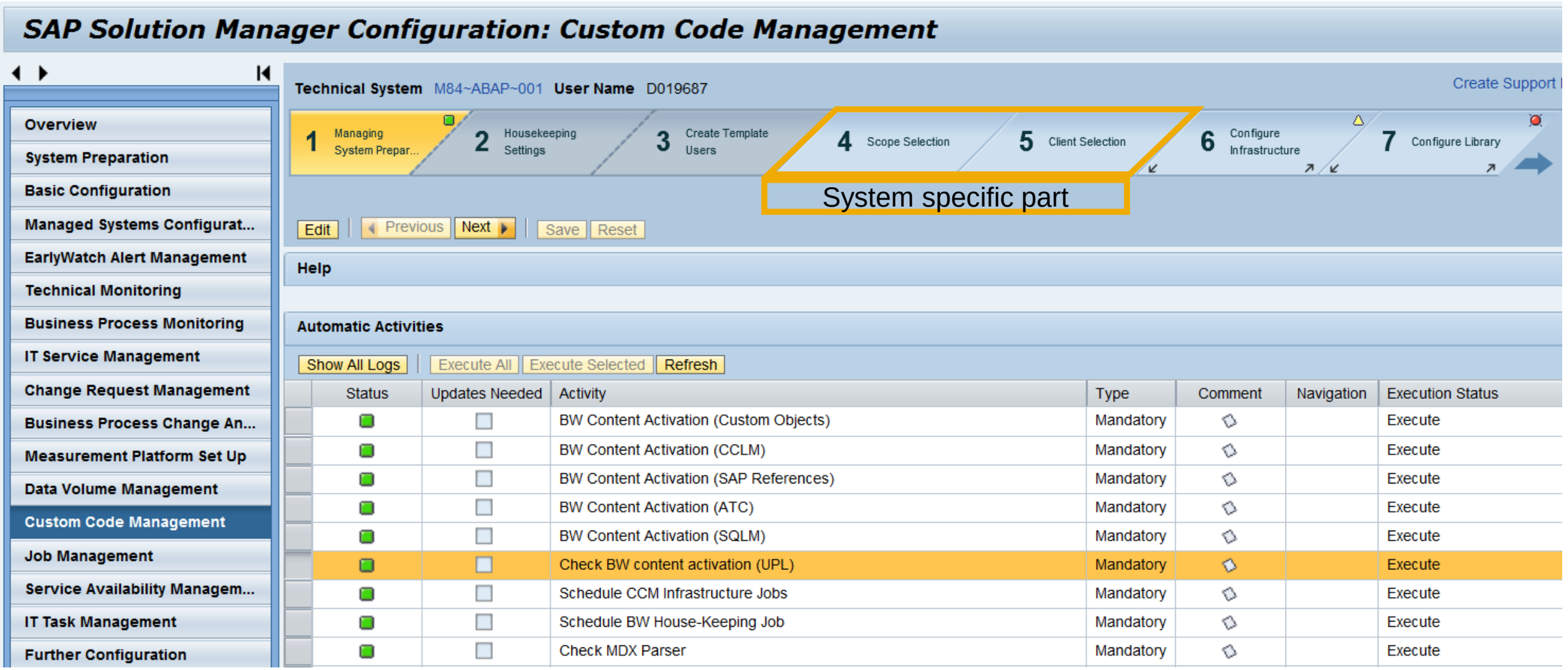
SAP Usage and Procedure Logging (UPL)
Guided Procedure as of SAP Solution Manager 7.1 SP 11



Status	Updates Needed	Activity	Type	Comment	Navigation	Execution Status
		BW Content Activation (Custom Objects)	Mandatory			Execute
		BW Content Activation (CCLM)	Mandatory			Execute
		BW Content Activation (SAP References)	Mandatory			Execute
		BW Content Activation (ATC)	Mandatory			Execute
		BW Content Activation (SQLM)	Mandatory			Execute
		Check BW content activation (UPL)	Mandatory			Execute
		Schedule CCM Infrastructure Jobs	Mandatory			Execute
		Schedule BW House-Keeping Job	Mandatory			Execute
		Check MDX Parser	Mandatory			Execute

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SAP Usage and Procedure Logging (UPL)
Central Analysis using BW in SAP Solution Manager

BW Query **0SM_CCL_UPL_MONTH**

BEx Ad Hoc Analysis

Data Analysis | Graphical display | Info | Information Broadcasting

UPL monthly Report

Last Data Update: 20.09.2014 06:57:08

Save View | Bookmark | Variable Screen | Exceptions and Conditions | Comments | Export to Microsoft Excel | Export to CSV

Rows
- Calendar Year/Month
- Object Name
- Object Type
- Processing Name
- Processing Type
- Program Name
- System ID

Columns
- Key Figures

Free Characteristics
- Dev Class
- Nameclass / Owner
- Namespace
- Object Respons Perso
- PGMID
- Processing Class
- Source System
- UPL Date

System ID	Calendar Year/Month	Program Name	Object Type	Object Name	Processing Name	Processing Type	Object Executions
M11	JUL 2014	%H_USR10	PROG	%H_USR10	GET_FIELD	FORM	8
					GET_STRUCTAB	FORM	2
					RANGE_SELECT_HV_H_USR10	FORM	2
		/1BCDWB/DB/SDF/UPL_LOG	PROG	/1BCDWB/DB/SDF/UPL_LOG	FIRST_TIME_SORT	FORM	1
					INITIALIZATION:00	INIT	2
					LIST_OUTPUT	FORM	1
					SORT_MAIN_TAB	FORM	1
					START-OF-SELECTION:01	SSEL	1
					TOP-OF-PAGE:00	TOPA	1
		/1BCDWBEN/SAPL/IWFND/EN0000	FUGR	/1BCDWBEN//IWFND/EN0000	DEQUEUE_/IWFND/E_MET_AGR	FUNC	21
					ENQUEUE_/IWFND/E_MET_AGR	FUNC	21
		/1BCDWBEN/SAPL/SSF/EN0000	FUGR	/1BCDWBEN//SSF/EN0000	DEQUEUE_/SSF/E_PTAB	FUNC	983
					ENQUEUE_/SSF/E_PTAB	FUNC	984
		/1BCDWBEN/SAPLBEN0000	FUGR	/1BCDWBEN/BEN0000	DEQUEUE_EBANK_JC_SYNC	FUNC	9
					DEQUEUE_EBANK_PP_PARUNHD	FUNC	18
					DEQUEUE_EBANK_PROCESS	FUNC	66
					DEQUEUE_EBANK_WORKL_PACK	FUNC	4.404
					ENQUEUE_EBANK_JC_ACTIVE	FUNC	9
					ENQUEUE_EBANK_JC_SYNC	FUNC	12
					ENQUEUE_EBANK_PP_PARUNHD	FUNC	18
					ENQUEUE_EBANK_PP_RUNKEY	FUNC	3
					ENQUEUE_EBANK_PROCESS	FUNC	66
					ENQUEUE_EBANK_WORKL_PACK	FUNC	4.404
		/1BCDWBEN/SAPLBEN0001	FUGR	/1BCDWBEN/BEN0001	DEQUEUE_E_MASD	FUNC	990
					ENQUEUE_E_MASD	FUNC	991

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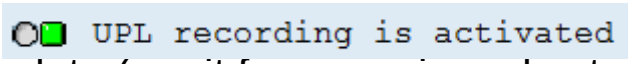
Analysis of Object Usage in System Recommendations Troubleshooting

If you do not see the additional column in System Recommendations or if you get zero results only:

- **Check if UPL is active in managed system**
  - Report `/SDF/UPL_CONTROL` should show 

  - Report `/SDF/SHOW_UPL` should show some data (run it for a previous day to get results faster)
- **Check if SolMan gets usage data**
  - BW-Query `0SM_UPL_DATE_RANGE_BPCA` respective `0SM_CCL_UPL_MONTH` should show some data
    Keep in mind that it takes some time (up to 2 days) to replicate usage data into this query
  - Note 2077995 describes new report `AGS_CC_INFRASTRUC_CHECK` for SolMan 7.1 SP 12 which checks the UPL setup
- **Check notes of application component SV-SMG-SR**
  - Note 2099728 - SysRec: Object list for ABAP notes does not show Usage Procedure Logging data (UPL) from 02.12.2014 for SolMan 7.1 SP 9 - 12

➢ If UPL is not working ask for advice via application component **SV-SMG-CCM**

➢ If SysRec does not show existing usage data, create a ticket on application component **SV-SMG-SR**

➢ If report `ZSYSREC_NOTELIST` does not show existing usage data, send me a mail or comment on http://scn.sap.com/community/security/blog/2011/07/18/report-zsysrecnotelist--show-results-of-system-recommendation

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September 2014

Topics September 2014

Note 1909442 - Incorrect authorization check in IAC post processing

Note 1971397 - Missing authorization check in BW-BEX-OT

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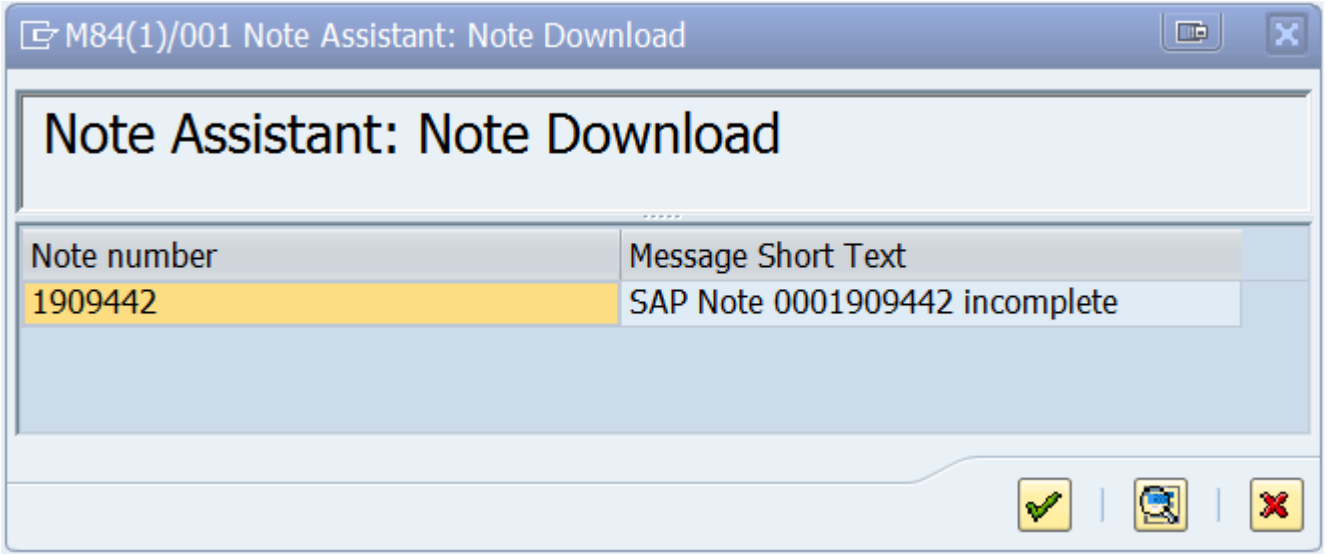
Note 1909442 - Incorrect authorization check in IAC post processing

Issue: You cannot download note 1909442 into SNOTE

SNOTE cannot download ‚incomplete' notes directely.

I'm not sure if the note owner can solve the issue.



Workaround: Use the "download basket" of the SMP do download notes to your PC. Then unzip the dowloaded archive and upload the files to SNOTE.

Works fine!

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Note 1971397 - Missing authorization check in BW-BEX-OT

Use of new 'Repository allowlists' (transaction SLDW) for a specific application.

Make sure note 1919573 and 2061628 are implemented in your system and execute the manual activities.

→ Huge correction if you have to get these notes first, go for it only if you want to run the complete project about 'Repository allowlists'

Note 1919573 - SLDW: Environment for maintaining switchable whitelists

Note 1922712 - SLDW: FAQ: Supplementary notes for whitelist maintenance

Note 2061628 - SLDW: Transport connection for new whitelists

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August 2014

Topics August 2014

Note 2020395 - Sapinst used static salt for password encryption on UNIX / Linux

Note 1917381 - Missing authorization check in Profile Maintenance

Note 1769064 - Additional values for auth/rfc_authority_check

Tips & Tricks: Notes showing several SP for same release

Tips & Tricks: Notes referring to other notes at Causes - Side Effects

Tips & Tricks: Old notes

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Note 2020395 - Sapinst used static salt for password encryption on UNIX / Linux

Only relevant for **UNIX / Linux** servers (but not for Windows…) on which you have installed ABAP, Java, etc. in the past using SAPinst patch before 2013.12.

Check file **/etc/shadow** for users showing the substring **R3** surrounded by ‚$' which is the field seperator within this file. These users have the weak salt as described in the note.

The note proposes to re-set the existining value of the password to get a new random salt for the hash.

Caution: Be very careful to re-set the existining value – you should be sure that you know the existing password. If you change the password to a different value than you have to update it wherever it is used, too.

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Note 1917381 - Missing authorization check in Profile Maintenance

Several customers had been waiting for the publication of this note. Now the note is available again.

Remark for customers that have installed Support Package 5 of SAP_BASIS 740 (SAPKB74005):

Version 2 of this note cannot be implemented if version 1 is already implemented. Do not try to de-implement version 1 in this case.

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Note 1769064 - Additional values for auth/rfc_authority_check

Calling RFC function modules requires a valid authentication of the user and authorizations for authorization object S_RFC for all function except the RFC enabled function of function group SRFC.

Some of the RFC functions of this function group unveil system information which might help potential attackers. Using the new Kernel as described in note 1769064 you can force authentication and authorization checks for these RFC functions as well.

Be careful to use these options, as this might have a strong impact to existing interfaces!

New options:

3 = Logon required for all function modules except RFC_PING and RFC_SYSTEM_INFO (no authorization check)
4 = Authorization check required for all function modules except RFC_PING and RFC_SYSTEM_INFO
5 = Logon required for all function modules except RFC_PING (no authorization check)
6 = Authorization check required for all function modules except RFC_PING
8 = Logon required for all function modules no authorization check)

It's much more important to get rid of any '*' in authorizations for S_RFC!

Run a project to improve authorizations for S_RFC, e.g. using this blog on SCN:
How to get RFC call traces to build authorizations for S_RFC for free!
http://scn.sap.com/community/security/blog/2010/12/05/how-to-get-rfc-call-traces-to-build-authorizations-for-srfc-for-free

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Tips & Tricks:
Notes showing several SP for same release

Example: Note 1674132 - Code injection vulnerability in BC-SRV-COM-FTP

There are multiple entries for different support package per release. In addition there are multiple correction instructions per release.

Which SP per release is required to get the complete solution?

- You need the latest SP.

Is the system safe if you are in beetween?

- If you just have the lower SP, the system is not safe. Individual analysis would be required to judge if you don‘t get anything ar or partly solution.

Do I need to take care while implementing a note using the note assistant, transaction SNOTE?

- Usually you see several correction instructions. One is valid up to lower SP – 1, the other is (should be) valid up to higher SP – 1. SNOTE takes care automatically implementing all relevant correction instructions in the correct order.

Support Packages

Software Component	Release	Support Package
SAP_BASIS	46B	SAPKB46B62
	46C	SAPKB46C66
	46C	SAPKB46C64
	620	SAPKB62074
	620	SAPKB62072
	640	SAPKB64032
	640	SAPKB64030
	700	SAPKB70027
	700	SAPKB70029
	701	SAPKB70112
	701	SAPKB70114
	702	SAPKB70214
	702	SAPKB70213
	702	SAPKB70212
	710	SAPKB71017
	710	SAPKB71015
	711	SAPKB71110
	711	SAPKB71112
	720	SAPKB72008
	730	SAPKB73009
	730	SAPKB73008
	730	SAPKB73007
	731	SAPKB73103
	731	SAPKB73107

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Tips & Tricks:
Notes referring to other notes at Causes - Side Effects

Example: Note 1674132 contains a reference to an update note 1826162 in the section ‚The following SAP Notes correct this Note / Patch‘

This is a similar case as described on previous slide which shows that the correction provided by the first note either is incomplete or even is the source of errors.

If the update note contains correction instructions that it‘s usually sufficent just to implement the update note. The note assistant, transaction SNOTE, will read the first note and will implement these correction instructions first. However, there is no harm if you start implementing the first note. Take care to get the update note, too.

System Recommendations shows both notes if the notes are relevant.

Causes - Side Effects

Notes / Patches corrected with this note					
Note Reason	From Version	To Version	Note Solution	Version	Support Package
The table does not contain any entries					

The following SAP Notes correct this Note / Patch					
Note Reason	From Version	To Version	Note Solution	Version	Support Package
1674132	0	0	1826162	1	

Support Packages & Patches

Support Packages		
Software Component	Release	Support Package
SAP_BASIS	620	SAPKB62074
	640	SAPKB64032
	700	SAPKB70029
	701	SAPKB70114
	702	SAPKB70214
	710	SAPKB71017
	711	SAPKB71112
	720	SAPKB72008
	730	SAPKB73010
	731	SAPKB73108
	740	SAPKB74003

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Tips & Tricks: old notes
Examples for notes showing up in SysRec for many systems

Note Number	Short Text	Auto	Manual	Date	Application Component	Software Component	Comment
0001497599	Missing authorization check in method GET_CONVERTED_TABLE	X		14.12.2010	AP-MD-PRO	SAP_ABA	An automatic correction instruction is valid for All Support Package Levels
0001517478	Missing Authorization Check in Menu Painter	X		14.12.2010	BC-DWB-UTL-BRR	SAP_BASIS	An automatic correction instruction is valid for All Support Package Levels
0001541716	Potential Denial of Service in translation tools funct.	X		08.03.2011	BC-DOC-TTL	SAP_BASIS	An automatic correction instruction is not restricted by to-SP
0001571325	Potential disclosure of persisted data in test code	X		10.05.2011	CO-PC	SAP_APPL	An automatic correction instruction is valid for All Support Package Levels
0001599094	HCM: Directory traversal in PT-TL		X	01.07.2011	PT-TL	SAP_HRRXX	An automatic correction instruction is valid for All Support Package Levels
0001608317	Potential disclosure of persisted data in SAF	X		08.11.2011	CA-GTF-IC-SAF	WEBCUIF	The note and the correction instructions are valid for several software components (SAP_ABA, CRMUIF, WEBCUIF). An automatic correction instruction for WEBCUIF is not restricted by to-SP
0001648395	Unauthorized modification of displayed content in CA-AUD		X	10.04.2012	CA-AUD	SAP_ABA	An automatic correction instruction for SAP_ABA is not restricted by to-SP
0001760776	Directory traversal in PY-NL-RP, PA-PA-NL and PA-PF-NL		X	12.03.2013	PY-NL	SAP_HRCNL	A manual post-implementation instruction for SAP_HRCNL is not restricted by to-SP. This is correct as it describes mandatory customizing activities which you can do after implementing the note or installing the SP.

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Tips & Tricks: old notes
Overall rule

- SysRec shows relevant notes if the meta data of the note (validity of correction instructions, assignments of support packages / patches) show exact ranges.
  After implementing these notes via SNOTE / support package / patch, theses notes will vanish from SysRec.
- SysRec shows candidates for relevant notes if the meta data of the note is unspecific (release independent, support package independent, valid for all support packages, no valid-to limitation)
  You have to decide if such notes are relevant for a given system. It might be the case that SNOTE accepts such notes and can implement them without errors. But it might happen that SNOTE runs into trouble as well. In this case it's most likely that the note is not relevant for this system. These notes will stay on SysRec (except if you implement them via SNOTE).

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Tips & Tricks: old notes
Some specific rules

- If you just implement the coding part of a note but miss to execute any additional manual activities (from manual instructions or simply from the text of the note) than the note will vanish from SysRec even if the implementation is not complete. This could happen for ABAP, Kernel, and all others.
- If a note has manual instructions describing customizing, profile parameter changes, etc. then it would be correct if the validity of the instruction is not limited / valid FOR ALL SP but such notes will not vanish from SysRec (if you do not implement a coding part via SNOTE).
- SysRec takes the status from SNOTE (which will be transported from DEV systems to PROD systems, too)
  → in case of ABAP notes only having manual instructions SysRec does ot know if the note is implemented or not and the note remains visible in SysRec.
- Automatic correction instructions which are valid FOR ALL SP or have no valid-to date are (most likely) wrong as SAP always delivers software corrections with support packages respective patches. You will observe that this had happened with older notes more often than with newer notes. SNOTE will claim that the note can be applied but will not find that the corrections are already there if you run a newer support package. If the code was changed in the meantime by another note or another change in a support package than it could even happen that SNOTE will show errors.
- Manual correction instructions which are valid FOR ALL SP or have no valid-to date are (most likely) correct as such notes usually describe configuration changes which can be applied after you got the new software. You should add such notes to a special worklist if you plan to postpone the action to the next maintenance activity about upgrading the SP.

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July 2014

Topics July 2014

Small patch days in June (19+3) and July (8+3) mostly for non-ABAP / non-Java

Note 1988956 - Unauthorized modification of displayed content in BSP
Note 1881073 - Unauthorized modification of displayed content in BSP

Note 1971238 - Missing authorization check in BC-CUS-TOL-HMT
Note 2017050 - Update 1 to Security Note 1971238

Note 1808003 is not visible anymore

Note 1967780 - Missing authorization check in BW-WHM-DST

Note 2006974 - Code injection vulnerability in PP-PI-CFB

Note 2026132 - Update 1 to security note 1483548

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Small patch days in June (19+3) and July (8+3) mostly for non-ABAP / non-Java

System Recommendations shows only notes about Software Components which belong to “Technical Systems” which are registered in the SLD/SMDL/SolMan.

Use the Service Marketplace
https://support.sap.com/securitynotes
to find Security Notes about other products like Sybase, BI, Mobile/Afaria.

BC-BMT	Business Management
BC-BSP	Business Server Pages
BC-CUS	Customizing
BC-JAS	Java Application Server - Please use sub-components
BC-MID	Middleware
BC-SEC	Security
BC-SRV	Basis Services/Communication Interfaces
BC-SYB	Sybase Products
BC-WD	Web Dynpro
BI-BIP	Business intelligence platform
BI-RA	Reporting, analysis, and dashboards
BW-WHM	Data Warehouse Management
EP-KM	Knowledge Management and Collaboration
EPM-BPC	Business Planning and Consolidation
FIN-FSCM	Financial Supply Chain Management
HAN-LM	SAP HANA Lifecycle Management
HAN-WDE	SAP HANA Web IDE
MFG-ME	SAP Manufacturing Execution
MOB-AFA	Afaria
MOB-SUP	Sybase Unwired Platform
PP-PI	Production Planning for Process Industries
PY-PH	Philippines

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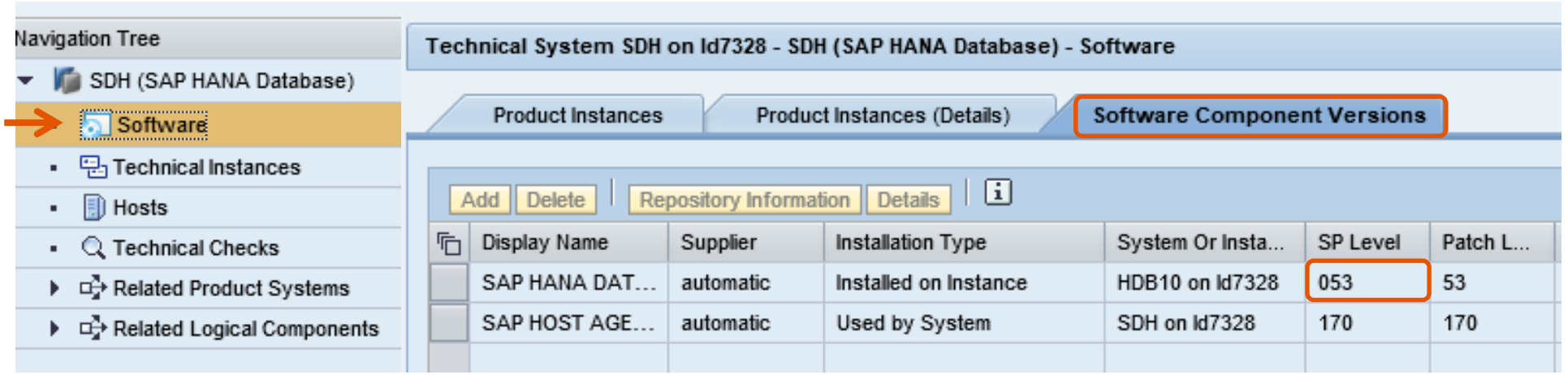
Small patch days in June (19+3) and July (8+3) mostly for non-ABAP / non-Java

Transaction LMDB
this data is automatically delivered by SLD data suppliers

System Recommendations



Security Notes (10) | HotNews

View: List | Set Status | Create Change Request | Download Selected Notes | Show Object List | Start BPCA Analysis | Export

Note Number	Short Text	Priority	Support Package Name	Date	Application Comp...	Software Component	SP Relevance
0001341333	Potential info. disclosure and code execution in sap...	2		08.05.2012	BC-DB-SDB	SAPHOSTAGENT 7.20	Support Package Independent
0001870605	Privilege escalation in SAP HANA	2	SP057	09.07.2013	HAN-DB	HDB 1.00	Support Package Independent
0001914778	Potential information disclosure relating to HANA ho...	3	SP060	08.10.2013	HAN-AS-XS	HDB 1.00	Support Package Independent
0001963932	Missing encryption for form based authentication	3	SP070	11.03.2014	HAN-AS-XS	HDB 1.00	Support Package Independent
0001964428	XS bypasses authentication for former public applic...	2	SP070	11.03.2014	HAN-AS-XS	HDB 1.00	Support Package Independent
0001993349	Unauthorized modification of displayed content in S...	2	SP072	08.04.2014	HAN-AS-XS-ADM	HDB 1.00	Support Package Independent
0002009696	Unauthorized modification of displayed content in S...	3	SP073	13.05.2014	HAN-AS-XS	HDB 1.00	Support Package Independent
0002011169	Unauthorized use of application functions in SAP H...	2	SP062	08.07.2014	HAN-LM-APP	HDB 1.00	Support Package Independent
0002014881	Potential disclosure of persisted data in SAP HANA ...	2	SP069	10.06.2014	HAN-WDE	HDB 1.00	Support Package Independent
0002015446	Unauthorized use of application functions in SAP H...	2	SP074	10.06.2014	HAN-WDE	HDB 1.00	Support Package Independent

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Note 1988956 - Unauthorized modification of displayed content in BSP
Note 1881073 - Unauthorized modification of displayed content in BSP

“Be sure the note 1881073 is already applied in the system.”

This security note from June 2014 is defined as prerequisite note, that means the Note Assistant, transaction SNOTE will get it automatically.

However, without updating the kernel you wouldn't get the solution as this prerequisite note states: ”Please apply correction for both SAP Kernel and ABAP.”

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Note 1971238 - Missing authorization check in BC-CUS-TOL-HMT
Note 2017050 - Update 1 to Security Note 1971238

Note 1971238 from March requires extended authorizations for authorization object S_RFC for function groups SHI1 and SHI5 in transactions SPRO and SUIM and others.

→do not implement this note without update note 2017050

Note 2017050 from July calls the authorization check only in case of an RFC call.

By the way: do you have a strong authorization concept about authorization object S_RFC?

- No role should contain full authorizations for authorization object S_RFC
- List used functions (FUNC) or at least function groups (FUGR) avoiding *
- Run a project to improve authorizations for S_RFC, e.g. using this blog on SCN:
  How to get RFC call traces to build authorizations for S_RFC for free!
  http://scn.sap.com/community/security/blog/2010/12/05/how-to-get-rfc-call-traces-to-build-authorizations-for-srfc-for-free

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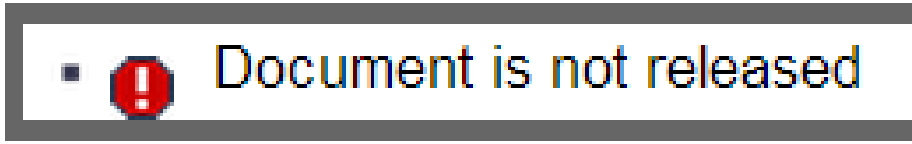
Note 1808003 is not visible anymore



Note 1808003 version 1 was published in May.

In June the note has been updated leading to version 2. Unfortunately it was neccessary to deactivate the note afterwards because implementing version 2 (which deimplements version 1 first) would harm a system on releases below SAP_BASIS 7.40

→ Ignore this note if you don‘t have implemented it

→ Do not de-implement the note if you have implemented version 1

Update note 2032840 - Potential information disclosure relating to BC-CST
explains that the solution is only available via SP and it emphasizes that you should not try to de-implement note 1808003 if you have implement it.

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Note 1967780 - Missing authorization check in BW-WHM-DST

Inspecting the ABAP correction instruction we see that's a development support program which only will be used in emergency cases:

```
==== Check authorization to execute this program
AUTHORITY-CHECK OBJECT 'S_DEVELOP' " for user sy-uname
          ID 'DEVCLASS'  DUMMY
          ID 'OBJTYPE'   FIELD 'DEBUG'
          ID 'OBJNAME'   DUMMY
          ID 'P_GROUP'   DUMMY
          ID 'ACTVT'     FIELD '03'.
```

→ Implement the note similar to other notes which deactivate obsolete code: no test required for production systems.

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Note 2006974 - Code injection vulnerability in PP-PI-CFB

What happens if you ignore the manual instruction to create a message via modification?

… not much, the user still get's the error message code E454(CFB) but without (misleading) text.

What happens if you ignore the manual instruction to implement a `BAdI`?

… nothing if you do not use Consumer Products Food and Beverage component (PP-PI-CFB)

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Note 2026132 - Update 1 to security note 1483548

The note is shown by System Recommendations if your system runs with SAP_BASIS 701 but independently from any Support Package.

You do not implement this note via Note Assistant, transaction SNOTE, therefore you do not get rid of it.

→ Happily ignore this note as you will implement referenced note 1483548 anyway if shown by System Recommendations

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June 2014

Topics June 2014

1808003 - Potential information disclosure relating to BC-CST

Minimal authorizations to run System Recommendations

How to run BW reporting on System Recommendations

How to send emails with results of System Recommendations

1889999 - Missing authorization check in LCAPPS DP

1966995 - Potential information disclosure relating to WebDynpro Application

1946911 - SAP NWBC ABAP Runtime Patch 35

1896642 - Potential information disclosure relating to Integration Technology ALE

1997455 - Potential information disclosure in BC-SEC-USR-ADM

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1808003 - Potential information disclosure relating to BC-CST

Currently we have some issues with note 1808003 version 2

CVSS Base Score: 4.0
CVSS Base Vector: AV:N/AC:L/AU:S/C:P/I:N/A:N

Priority medium

→ Do not touch the note (do not implement version 2, do not de-implement version 1)

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Minimal authorizations to run System Recommendations see Security Patch Process FAQ #30

First of all you need access to Work Center "**Change Management**" (if you don't use the corresponding WebDynpro application `WDC_NOTE_CENTER` directly).

To control access to System Recommendations, the authorization object **`SM_FUNCS`** in SAP Solution Manager 7.1 (or `SM_TABS` in SAP Solution Manager 7.0) can be used to grant or deny access to the different tabs of System Recommendations.
Use the fields `ACTVT=03`, `SM_APPL=SYSTEM_REC`, `SM_FUNC=`*tab* (i.e. `SECURITY`).

You can restrict access to the systems of specific solutions using the authorization object **`D_SOL_VSBL`** with `SOLUTION=`*solution id* and `ACTVT=03`.

Depending on the version of the Solution Manager, authorization object **`AI_LMDB_PS`** with `ACTVT=03` and `LMDB_NAMES=ACTIVE` and `PS_NAME=`*system id* controls access to individual systems as well.
These authorization objects are the minimal set which you need to execute the WebDynpro application directly.

See chapter 16.6 "System Recommendations" and 13.14.2 "User Roles for Solutions, Projects, Solution Directory" in the documentation → Operations → Security Guide SAP Solution Manager 7.1 SP10.

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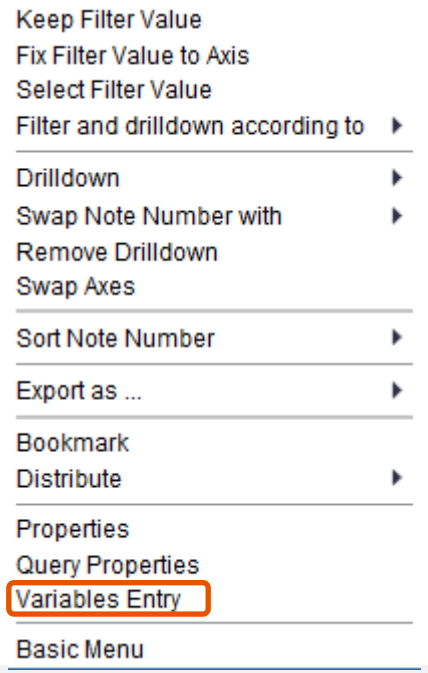
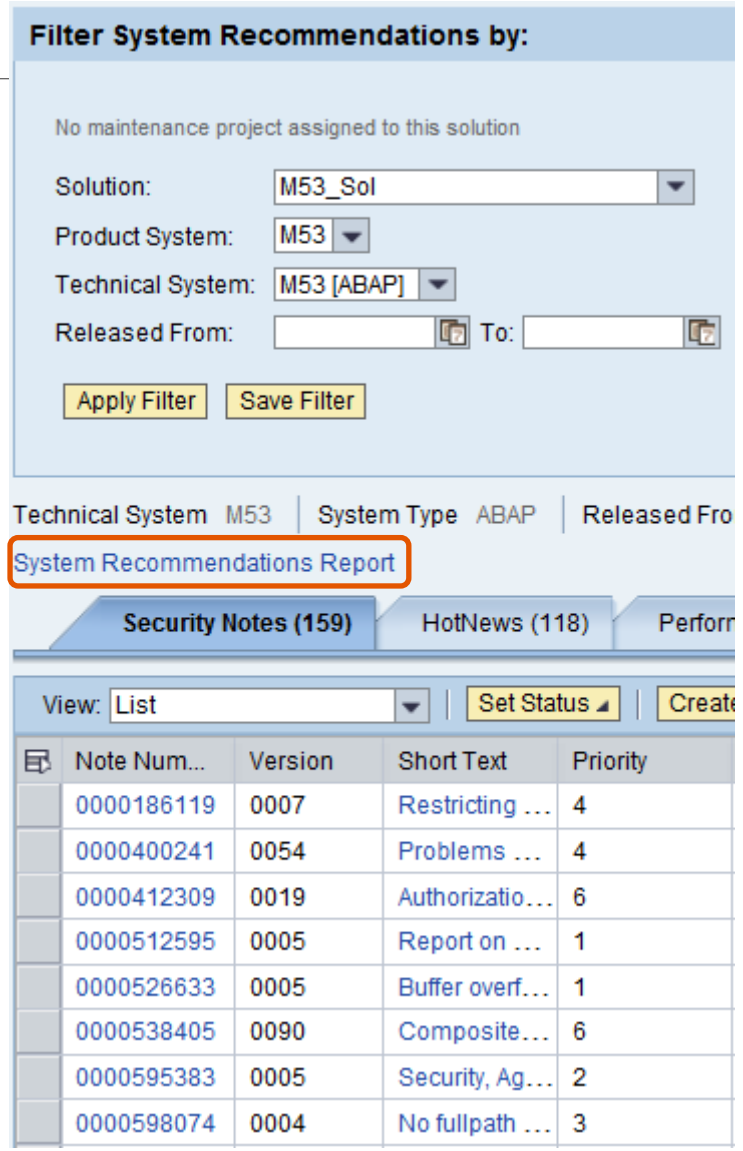
How to run BW reporting on System Recommendations
1. via System Recommendations

Execute BW reporting via System Recommendations

- Shows System Recommendations for a system and navigate to the “System Recommendations Report”
- All systems of the solution will be selected
- Data from all areas (Security, HotNews, Legal Change, Performance) will be selected
- You can change the selection afterwards within the BW report via
“Right click → Enhanced menu → Variables Entry”





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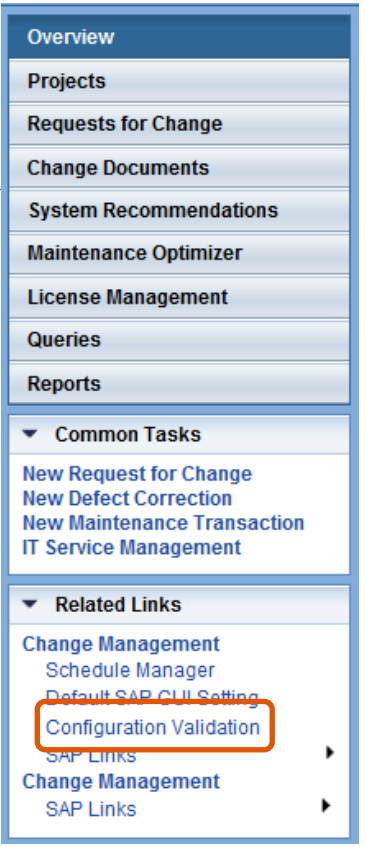
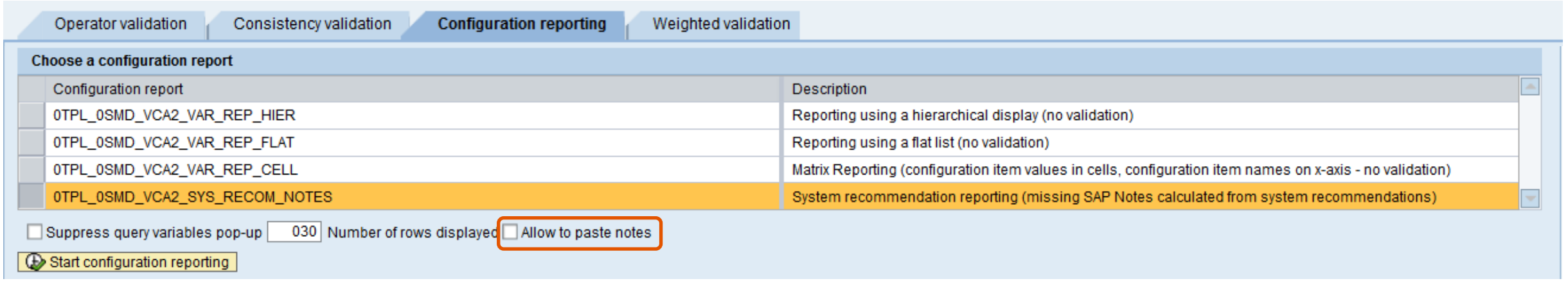
How to run BW reporting on System Recommendations 2. via Configuration Validation

Execute BW reporting via Configuration Validation

- Start Configuration Validation via same Work Center “Change Management”
- Choose tab 'Report Execution → Reporting Templates'
- Choose tab 'Configuration reporting'
- Optional: Select a system list for comparison (if you have defined one).
- Select configuration report 0TPL_0SMD_VCA2_SYS_RECOM_NOTES 'System recommendation reporting (missing SAP Notes calculated from system recommendations)'
- Finally enter selections about systems, area (Security, HotNews, Legal Change, Performance), notes (as of SolMan 7.1 SP 9) or date ranges





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How to send e-mails with results of System Recommendations via BW Broadcasting (1)

Prerequisites

To send reports by e-mail, you use the standard functions for BW Web Templates, which require only that your BW system (= Solution Manager) is connected to your e-mail communication. More information:

- SAPconnect (BC-SRV-COM)
  http://help.sap.com/saphelp_nw70ehp2/helpdata/en/2b/d925bf4b8a11d1894c0000e8323c4f/frameset.htm
- External Sending in the SAP System
  http://help.sap.com/saphelp_nw70ehp2/helpdata/en/55/a8b538891b11d2a25a00a0c943858e/frameset.htm

General information about sending BW object as e-mails:

- Broadcast by E-Mail
  http://help.sap.com/saphelp_nw70ehp2/helpdata/en/cf/700b405bacdd5fe10000000a155106/frameset.htm

You need note 1880710 “3.X Broadcaster sends empty document” (pilot release) of component BW-BEX-ET-BC if your SolMan runs with SAP_BW 702 SP 10-14 to be able to enter lower case selections e.g. for area = „Security“

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How to send e-mails with results of System Recommendations via BW Broadcasting (2)

Configuration

Call the BW report that you want to send by e-mail, and choose the desired settings for the time interval and the systems to be displayed. Create a Bookmark URL which you later can add to the e-mail text.

Ensure that you call the reports with the user under whose name the e-mails are to be sent. Ensure that this user has a working e-mail address in his or her user data (transaction SU01).

Right-click any active area of the BW report to display the context menu, switch to the ***Extended Menu*** and choose ***Distribute → By E-Mail***.

A new screen now appears, on which you can make settings for the sending of the e-mail. If you have not yet created appropriate settings, choose *Create New Setting*. Either create the settings manually or using the wizard.

You can define the title and text of the e-mail here, and to whom it is to be sent:

- In the *Description* input field, enter a meaningful description of the settings.
- If you want to send the report directly as part of the e-mail, and it is to be displayed directly in the e-mail, choose the Output Format 'MHTML'.
- You can select recipients using their user names in the system or their e-mail addresses. You can also define the recipient list using roles. Separate multiple recipients with semicolons.
- On the *Texts* tab page, you define the title and text of the e-mail. Note that the e-mails only contain the BW Report itself, that is, they do not contain the selection elements (report name, time interval, and system ID). Create an e-mail text so that the report can be understood without this information.
- If, in addition to viewing the sent BW report, the recipient should be able to directly access the BW report interactively, insert the relevant Bookmark-URL in the contents of the e-mail.
- Leave the data on the *General Precalculation* and *Filter Navigation* tab pages unchanged.

Choose *Save*, and specify a technical name for the settings.

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How to send e-mails with results of System Recommendations via BW Broadcasting (3)

Options for Sending

If you only want to send this report once immediately, choose *Execute*; however, it is more likely that you will want to send the report automatically at regular intervals. In this case, choose the *Schedule* button.

You define the scheduling on a new screen. To create a new periodic schedule, activate the two indicators *Create New Scheduling* and *Periodic*…. Now select the desired period and the next start time.

Choose the *Transfer* button, and save your changes. You have now completed the scheduling. The desired recipients will now regularly receive the desired reports.

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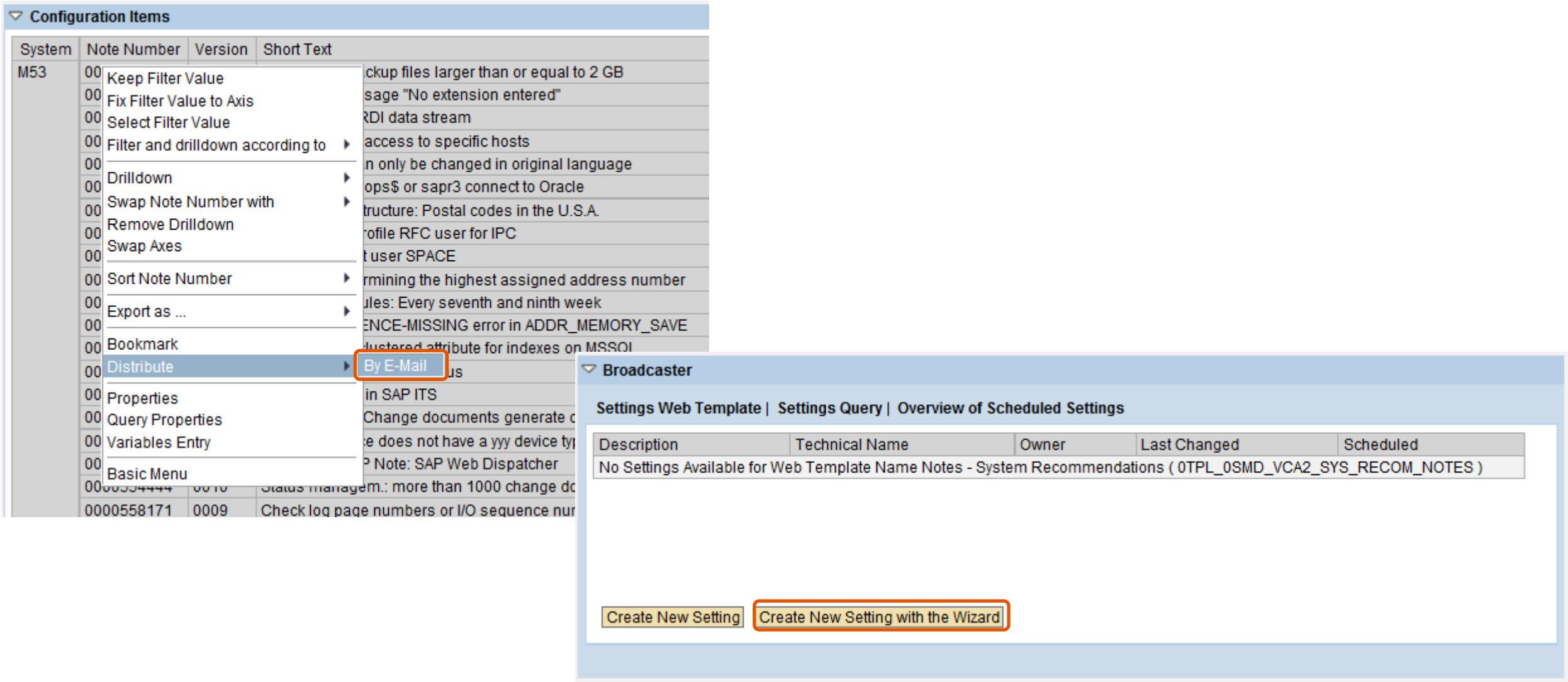
How to send e-mails with results of System Recommendations via BW Broadcasting



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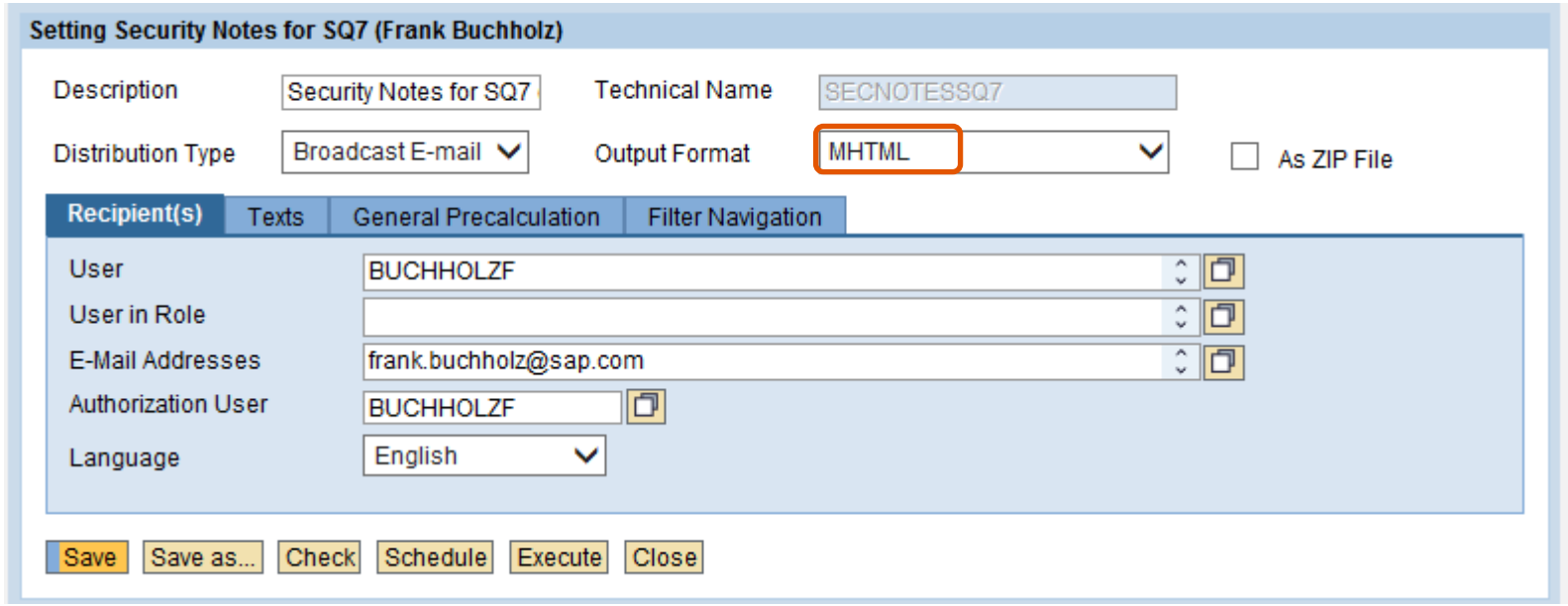
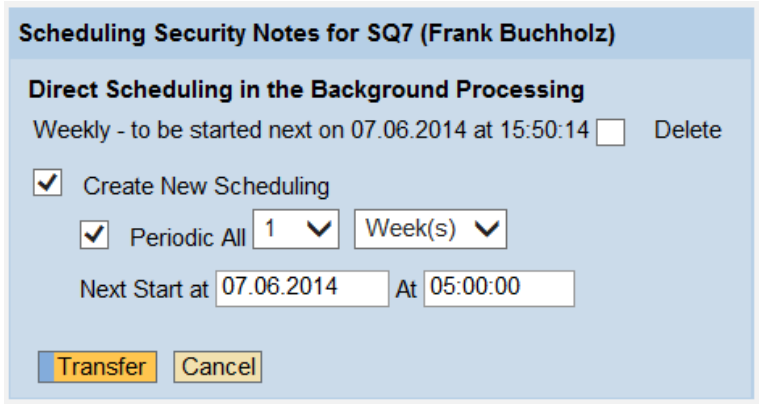
How to send e-mails with results of System Recommendations via BW Broadcasting

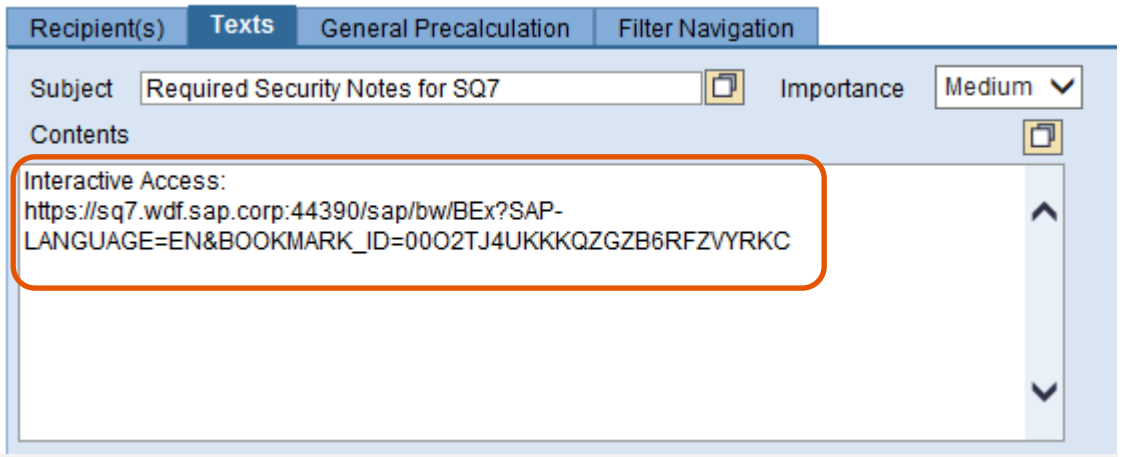


Settings

Define description, output format (MHTML), recipients, and text of the e-mail (which should contain the Bookmark URL, too, to allow interactive access).

Choose either *Schedule* or *Execute* to send the e-mail





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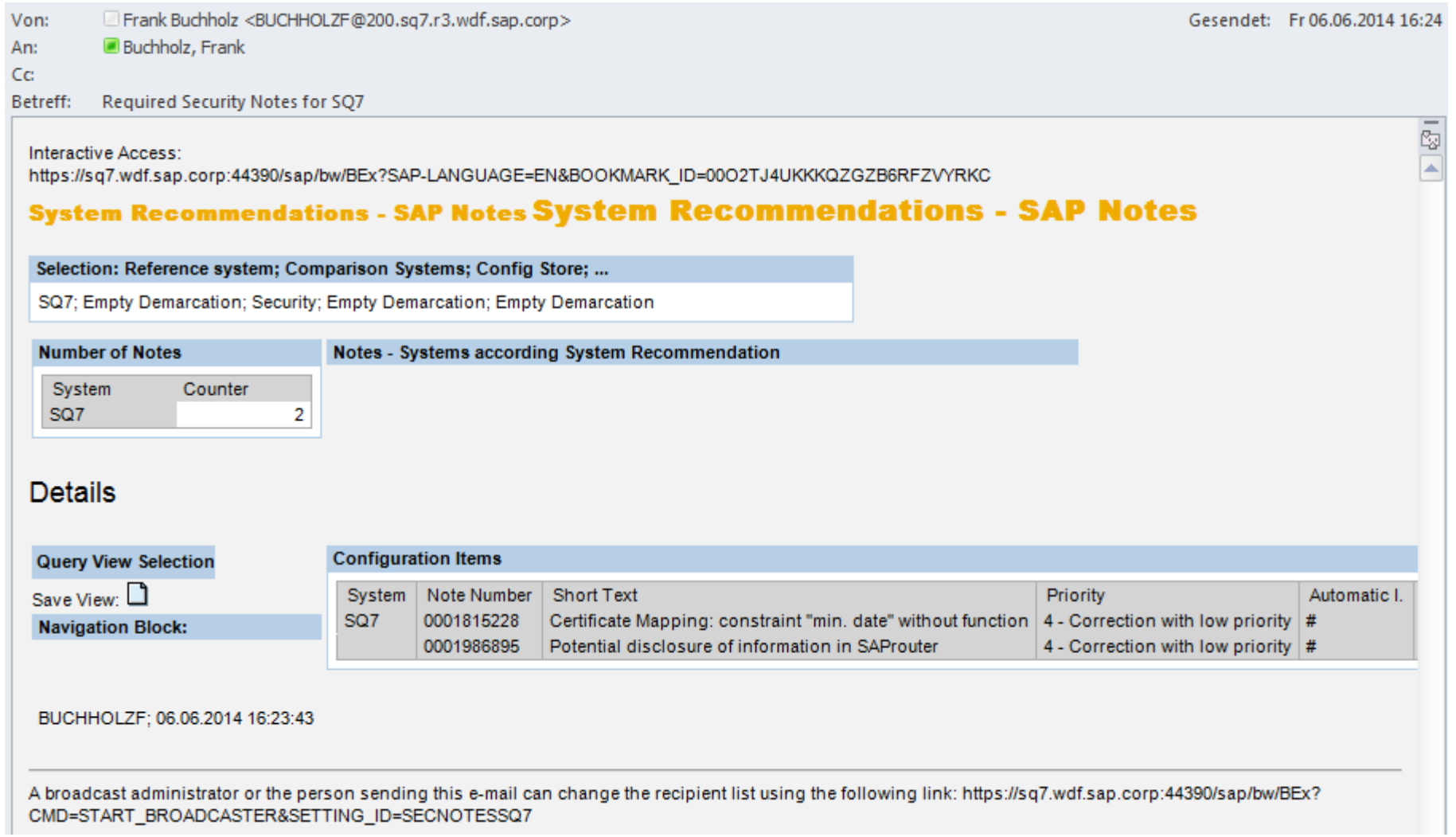
How to send e-mails with results of System Recommendations via BW Broadcasting



Von: Frank Buchholz <BUCHHOLZF@200.sq7.r3.wdf.sap.corp> Gesendet: Fr 06.06.2014 16:24
An: Buchholz, Frank
Cc:
Betreff: Required Security Notes for SQ7

Interactive Access:
https://sq7.wdf.sap.corp:44390/sap/bw/BEx?SAP-LANGUAGE=EN&BOOKMARK_ID=00O2TJ4UKKKQZGZB6RFZVYRKC

System Recommendations - SAP Notes **System Recommendations - SAP Notes**

Selection: Reference system; Comparison Systems; Config Store; ...

SQ7; Empty Demarcation; Security; Empty Demarcation; Empty Demarcation

Number of Notes

System	Counter
SQ7	2

Notes - Systems according System Recommendation

Details

Query View Selection

Save View:

Navigation Block:

Configuration Items

System	Note Number	Short Text	Priority	Automatic I.
SQ7	0001815228	Certificate Mapping: constraint "min. date" without function	4 - Correction with low priority	#
	0001986895	Potential disclosure of information in SAProuter	4 - Correction with low priority	#

BUCHHOLZF; 06.06.2014 16:23:43

A broadcast administrator or the person sending this e-mail can change the recipient list using the following link: https://sq7.wdf.sap.corp:44390/sap/bw/BEx?CMD=START_BROADCASTER&SETTING_ID=SECNOTESSQ7

Result

E-mail with Result of the BW report including a Bookmark URL to the interactive BW report

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1889999 - Missing authorization check in LCAPPS DP

No impact to existing authorization concept, as

- critical code gets deactivated
- a predefined allowlist gets introduced

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1966995 - Potential information disclosure relating to WebDynpro Application 1946911 - SAP NWBC ABAP Runtime Patch 35

Security note 1966995 simply refers to functional note 1946911.

You cannot implement note 1966995 using SNOTE but you can implement note 1946911.

This note contains cumulative corrections for the complete NW BC Framework: Transaction SNOTE would verify and implement 37+12 additional notes.

In the meantime you could find note 2015939 - SAP NWBC ABAP Runtime Patch 39

→ If you are using the SAP NetWeaver Business Client than go for periodic maintenance activities concerning SAP NWBC ABAP Runtime

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1896642 - Potential information disclosure relating to Integration Technology ALE

This note requires manual modifications. Table EDIPOWHITELIST needs to be created using transaction SE11. Then new messages need to be created using SE91.

After that you can implement the correction using transaction SNOTE.

Let's assume, you are planning a Support Pack Stack update, which will include this note.

- Do you need to implement the note before the SPS update, following instructions for pre-implementation work?
- Do you need to perform the pre-implementation steps before applying the SPS?
- If you simply apply the SPS, will table "EDIPOWHITELIST" be delivered empty?
- Should we expect a service disruption if you simply apply the SPS and do not maintain table "EDIPOWHITELIST"?

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1997455 - Potential information disclosure in BC-SEC-USR-ADM

Only customers running a CUA are affected by this vulnerability. Only the CUA main system is affected.

The solution describes how to improve the authorization concept concerning authorization object S_RFC for a particular application (Central User Administration, CUA), however, in addition to patch this application using the note I recommend to have a broader view an RFC authorizations in general:

- No role should contain full authorizations for authorization object S_RFC
- Run a project to improve authorizations for S_RFC, e.g. using this blog on SCN:
  How to get RFC call traces to build authorizations for S_RFC for free!
  http://scn.sap.com/community/security/blog/2010/12/05/how-to-get-rfc-call-traces-to-build-authorizations-for-srfc-for-free

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1881073 - Unauthorized modification of displayed content in BSP application

Correction for both SAP Kernel and ABAP

ABAP correction instruction for SAP_BASIS		Kernel
740	To SAPKB74004	SAP KERNEL 7.20 patch 612
730	SAPKB73001 - SAPKB73010	SAP KERNEL 7.21 patch 227
720	SAPKB72002 - SAPKB72007	SAP KERNEL 7.38 patch 36
711	SAPKB71101 - SAPKB71112	SAP KERNEL 7.40 patch 29
710	To SAPKB71018	
702	SAPKB70201 - SAPKB70214	→ You get the solution if you apply both.
701	To SAPKB70114	
700	SAPKB70009 - SAPKB70030	

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2006974 - Code injection vulnerability in PP-PI-CFB

Implement the attached correction instruction, check the BAdI documentation and implement the BAdI to allow the usage of your own reports for the overview form printing.

→ only relevant if you use PP-PI-CFB. In this case testing is strongly recommended.

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2028012 - Vulnerability in Afaria mobile device app

Update SAP Afaria on mobile clients to versions 6.60.6417.1 on iOS and 6.60.6417 on Android before enrollment of new devices.

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SAP HANA

2014881 - Potential disclosure of persisted data in SAP HANA Web-based Development Workbench

CVSS Base Score: 3.5 CVSS Base Vector: AV:N/AC:M/AU:S/C:P/I:N/A:N

SAP HANA DATABASE 1.00 SP069 05

2015446 - Unauthorized use of application functions in SAP HANA Web-based Development Workbench via code injection

CVSS Base Score: 6.0 CVSS Base Vector: AV:N/AC:M/AU:S/C:P/I:P/A:P

SPS06 is not affected by this issue.

SAP HANA DATABASE 1.00 SP074 00

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BO

1998990 - Potential information disclosure relating to BI-BIP-ADM
→ BI 4.0 Patch 9.1, BI 4.0 SP 10, BI 4.1 SP 4

2001106 - Potential denial of service in BI-BIPCVSS
→ BI 4.0 Patch 9.1, BI 4.0 SP 10, BI 4.1 SP 4

1941562 - Unauthorized modification of stored content in BI-BIP-INV
→ BI EDGE 4.1

1971270 - Unauthorized modification of displayed content in BI-BIP-INV, BI-BIP-QB, BI-BIP-BIW
→ BI 4.0 SP 6 patch 12, BI 4.0 SP 7 patch 10, BI 4.0 SP 8 patch 6, BI 4.0 Patch 9.1, BI 4.0 SP 10, BI 4.1 SP 4

1908531 - Untrusted XML input parsing possible in SBOP Explorer
→ BI 4.0 SP9 Patch 2, BI 4.0 SP 10, BI 4.1 SP 3 patch 2, BI 4.1 SP 4

1981048 - HTTP Cookies Without HttpOnly Flag Set may lead to Cross Site Scripting Issues
→ BI 4.1 oder Edge 4.1

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April 2014

Topics April 2014

Info: OpenSSL Heartbleed Bug

Note 1974046 - Potential information disclosure relating to Business Data

Note 1971516 - Code injection vulnerability in SV-SMG-SDD

Q: How much staff do companies have to allocate to this process?

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OpenSSL Heartbleed Bug
General

The Heartbleed Bug
http://heartbleed.com/

CVE-2014-0160
http://web.nvd.nist.gov/view/vuln/detail?vulnId=CVE-2014-0160
https://www.cert.fi/en/reports/2014/vulnerability788210.html

How to test servers:
http://www.heise.de/newsticker/meldung/SSL-Gau-So-testen-Sie-Programme-und-Online-Dienste-2165995.html

[3] http://filippo.io/Heartbleed/
[4] http://possible.lv/tools/hb/
[5] https://github.com/FiloSottile/Heartbleed
[6] https://github.com/noxxi/p5-scripts/blob/master/check-ssl-heartbleed.pl

https://www.openssl.org/news/secadv_20140407.txt
"Users unable to immediately upgrade can alternatively recompile OpenSSL with -DOPENSSL_NO_HEARTBEATS.“

Bruce Schneier: “Heartbleed is a catastrophic bug in OpenSSL”
https://www.schneier.com/blog/archives/2014/04/heartbleed.html

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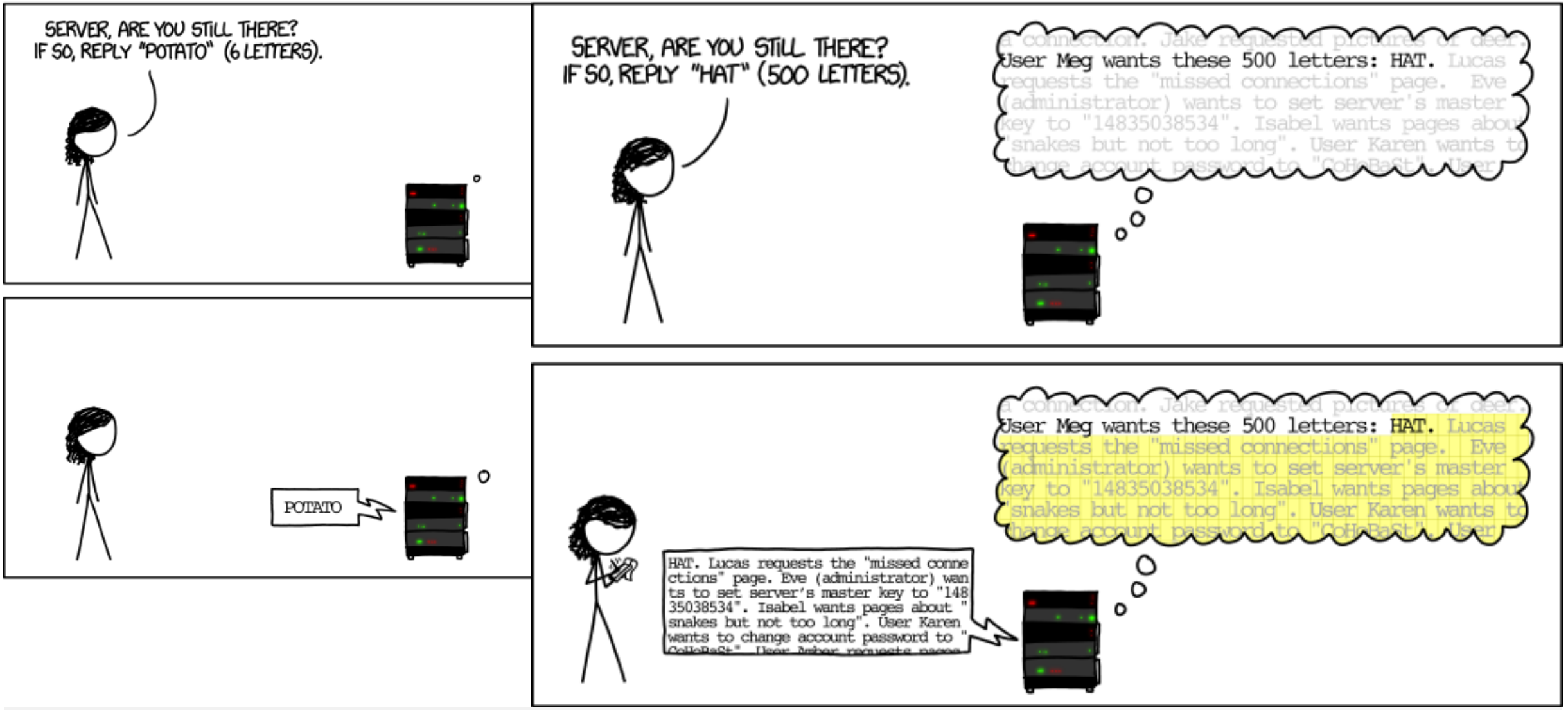
OpenSSL Heartbleed Bug

How the heartbleed bug works: http://xkcd.com/1354/



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OpenSSL Heartbleed Bug
SAP NetWeaver ABAP / Java

Application areas: BC-SEC-SSL, BC-JAS-SEC
Products: NetWeaver Application Server ABAP, NetWeaver Application Server Java

The crypto libraries used for applications in the
NetWeaver Application Server ABAP ("SAPCRYPTOLIB"/"CommonCryptoLib" aka Secure Login Library)
and in the
NetWeaver Application Server Java ("SAP Java Cryptographic Toolkit" aka "IAIK")
do not use OpenSSL.

We have no indications that these crypto libraries are vulnerable to the Heartbleed bug as in the OpenSSL 1.0.1 versions.

Customers with questions may be asked to contact SAP support via a customer message.
In the event they are unsure about the component to use, they can assign their request to the Security Backoffice component **XX-SER-BO-SEC**

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OpenSSL Heartbleed Bug
KBA/Notes

2004805 - Heartbleed (CVE-2014-0160) OpenSSL Vulnerability – Product related status and recommendations

2004903 - FAQ: OpenSSL Heartbleed vulnerability as it relates to SAP Afaria
2004565 - OpenSSL HeartBleed vulnerability. - Afaria 7

2003582 - How does The Heartbleed Bug affects SAP BusinessObjects Xi3.1 and Business Intelligence products 4/4.1
2004815 - How does The Heartbleed Bug affect SAP Data Services and Business Intelligence products 4/4.1

2004769 - SQL Anywhere, MobiLink, and the Relay Server Outbound Enabler are affected by the OpenSSL 'Heartbleed'

2004367 - SAP BW Accelerator and OpenSSL Heartbleed bug

<to be continued>

Blog@saphana.com - No Heartbleed with SAP HANA

Blog@SCN - HANA Cloud Platform is NOT Vulnerable to Heartbleed

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Note 1974046 - Potential information disclosure relating to Business Data

This note seems to be an usual ABAP note as it's related to software component SAP_BASIS.

However, you do not see any Support Package assignment or any (automatic) Correction Instructions.

Is this note incomplete?

➔ The note is correct as it deals with release SAP_BASIS release 804 only. This release has a special patch collection delivery method called 'hotfix'.

Do you need to implement the note?

➔ SAP_BASIS release 804 is used in systems of hosting scenarios only but not in on-premise installations.

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Note 1971516 - Code injection vulnerability in SV-SMG-SDD

Specific rule: This note deactivates obsolete coding → No special test procedures required.

General rule about notes of

- Software Component: ST-PI
- Application Component: SV-SMG-SDD

There exist several valid releases:

2008_1_46C
2008_1_620
2008_1_700
etc.

If not all releases are assigned in the note, than System Recommendations might miss to show the note, therefore, identify such notes on https://support.sap.com/securitynotes and use them as a trigger to update software components ST-PI and ST-A/PI.

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Q&A

How much staff do companies have to allocate to this process? It takes so much work just to determine if the notes are relevant or not. Can the notes be better segregated (e.g. if it requires a Kernel upgrade or not, if SAP suggests testing or not, etc.)?

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March 2014

Topics March 2014

Patch Day Notes vs. Support Package Implementation Notes (reloaded)

Note 1900200 - Directory traversal in BC-SRV-ARL

Note 1966056 - Code injection vulnerability in BW

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Patch Day Notes vs. Support Package Implementation Notes (reloaded)

Announcement Jul 8, 2013:
Implementing SAP security fixes
Important information and call for action

SAP is continuously investing in increasing the quality and security of its products. **To improve the consumability of its security fixes and to further adjust its deployment processes to industry standards, SAP has changed the way how security patches are provided.**

SAP delivers important security fixes on its monthly Security Patch Day. SAP strongly recommends its customers to implement security fixes, flagged with priority 1 and priority 2, primarily fixing externally reported issues. The fixes are released on the second Tuesday of every month, and can be used to fix a particular vulnerability without needing to update a system to service packs.

In order to further reduce the implementation efforts for our customers, other **security fixes like priority 3 and 4 will generally be delivered with support packages.** SAP strongly recommends its customers to apply Support Packages on their systems as soon as a support pack is available. The Support Packages can be found on SAP Service Marketplace in the corresponding product area. **Information about these improvements will also be published in security notes with priority 3 and 4 some months after Support Packages have been released**.
Find security notes that were previously released on SAP Service Marketplace at /securitynotes.

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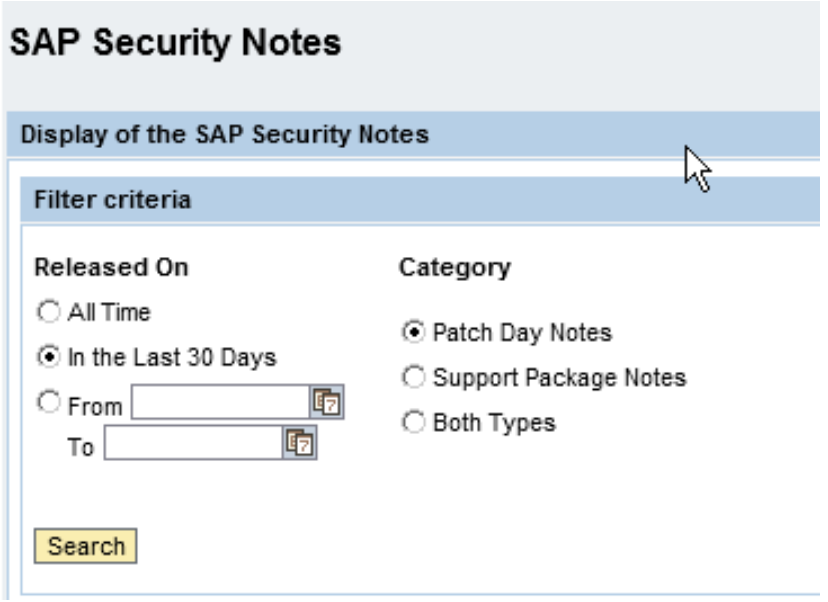
Patch Day Notes vs. Support Package Implementation Notes (reloaded)

PD Notes

- SAP Security Notes published on and for Security Patch Day
- Contain important security corrections
- Very often address security issues reported from external sources
- Have CVSS scoring in most cases



Re-classification in March 2016 covering “minor, medium or high”

SPIN

- Typically address security issues of minor impact found SAP internally
- Should not be published in the first place but just be contained in future SPs
- Had to be published outside SP and outside the PD schedule because some customer production issue depended on it to be implemented first

SPIN might be published on PD dates as well!

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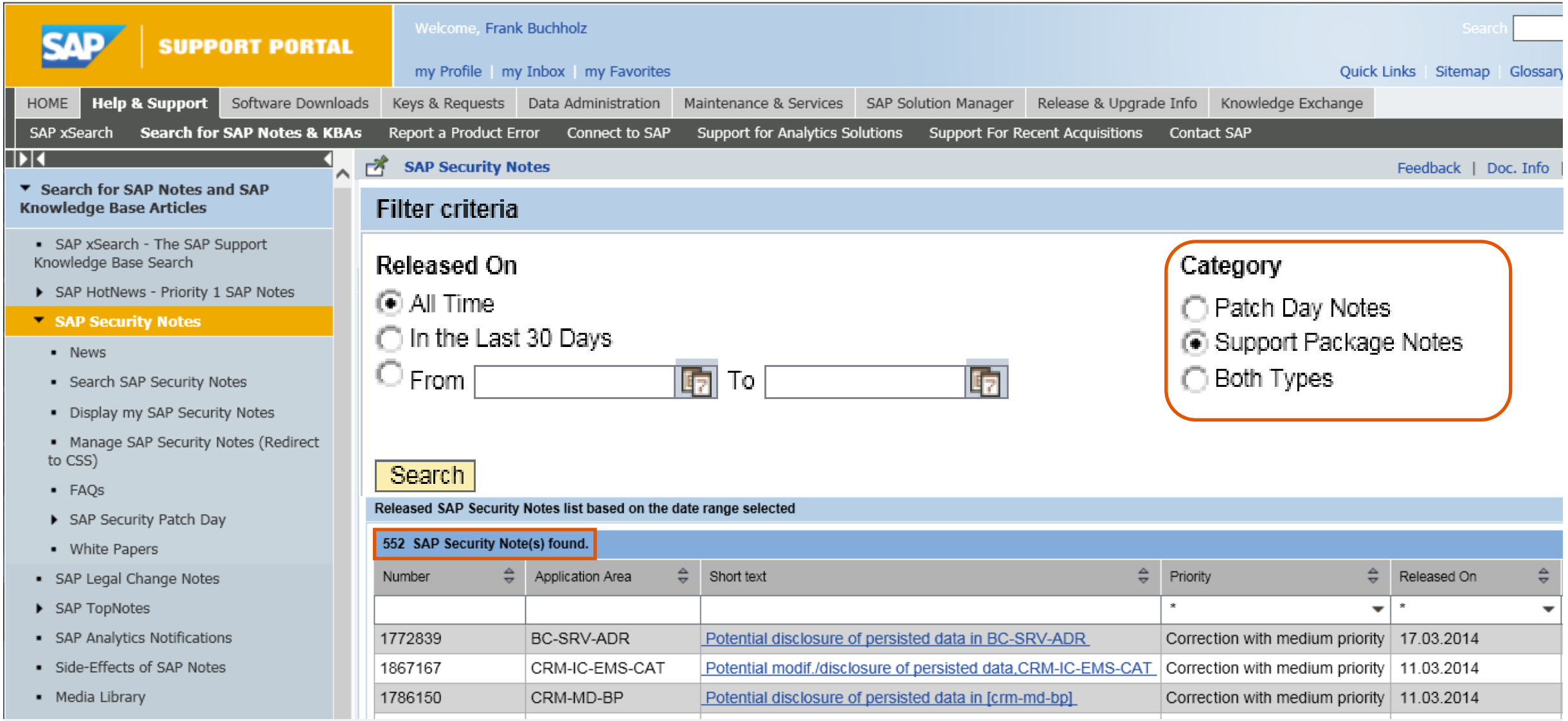
Patch Day Notes vs. Support Package Implementation Notes (reloaded)



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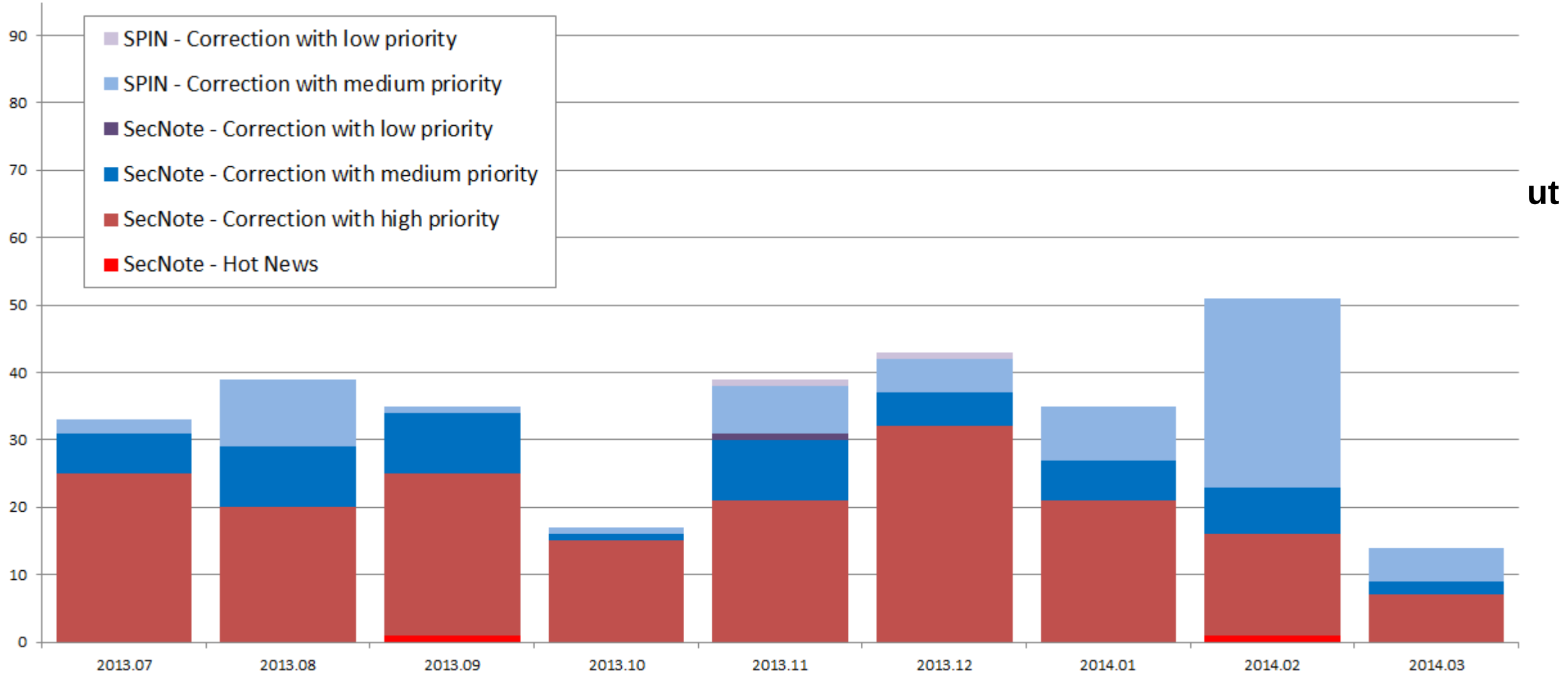
Patch Day Notes vs. Support Package Implementation Notes (reloaded)



ut

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Note 1900200 - Directory traversal in BC-SRV-ARL

This note belongs to the large group of “Directory Traversal” notes (>550 notes).

- You only need to implement this note and all other “Directory Traversal” notes if you are going to maintain logical paths and logical file names using transaction **FILE** and report **RSFILENA**
- You recognize such notes because of a reference to note **1497003** / **FILE_VALIDATE_NAME**
- Defining logical path and file names enables you to use authorization object **S_PATH**

Even if you apply recent Support Packages you have to maintain the logical path and file names !

It might be the case that SNOTE refuses to download note 1900200.

In this case use the download basket of the Service Marketplace to get the note:

- Add note to download basket in SMP
- Download the download basket to your PC
- Upload the file into SNOTE using “Goto → Upload note”

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Note 1966056 - Code injection vulnerability in BW

Important note as it is possible to inject arbitrary ABAP code without proper authorization check.

The solution turn the following critical code into display-only mode:

```
  IF i_show_report EQ rs_c_true.
    EDITOR-CALL FOR l_t_code.
  ENDIF.

* Programm generieren
  INSERT REPORT i_sx_meta-repid FROM l_t_code.
```

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Previous Webinars

Topics

Q&A from February

Links

The Future of the EWA Security Notes Subchapter (RSECNOTE)

How to find HANA Security Notes, e.g. 1964428 - XS bypasses authentication for former public applications

Note 1903756 - DB6: Authorization to execute operating system commands

Note 1963100 - Disabling execution of operating system commands using a CTC URL

Various notes about hard coded user names

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Q&A from February

In SysRec, is the "Automatic" column what used to be the identification of RSECNOTE notes ?

> Well, most notes which we had selected for RSECNOTE contained automatic correction instructions, but on the other hand, RSECNOTE only checks for a small subset of critical notes. Therefore we cannot compare the "Automatic" column with the selection used by RSECNOTE.

Is it possible to keep track of the notes installation status in SysRec ?

In the System Recommendations tool, when you implement a security note in a managed system, will Solution Manager detect this and update the note appropriately in System Recommendations, or do the admins need to go into each note and mark it as implemented ?

> Yes, SysRec retrieves the implementation status of notes from the managed system. Therefore, with the next run of the background job of SysRec all implemented notes will vanish. The implementation status of a note will be transported to the production system as well.
>
> Because of this you can configure SysRec to calculate the worklist for development systems as well as to calculate the implementation status in production systems.

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Q&A from February

For the notes for which SysRec cannot determine the applicability, I guess they will always appear in the list, even if they are actually implemented ?

> Yes, that's true. You either can set a status in SysRec (however, there does not exists a status value 'done') or in case of ABAP you can still use transaction SNOTE: Even if you cannot implement a note with SNOTE you can download the note and set the status to "completed" manually which is than used by SysRec to hide the note (but as far as I know you cannot transport this status to the production system).

Is there documentation on the security authorizations required in Solution Manger for the Security Service or a template role from SAP with the required authority?

> In addition to standard authorizations for authorization objects **D_SOL_VSBL** (to get access to the systems of a solution) and AI_LMDB_PS and AI_LMDB_OB (to read data from the LMDB) you need specific authorizations for **SM_FUNCS** (respective SM_TABS in SolMan 7.0) to see the different tabs of the SysRec.
> http://wiki.scn.sap.com/wiki/display/SMAUTH/SM_FUNCS
> http://scn.sap.com/blogs/ben.schneider/2011/04

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Links

Security Optimization Service
https://support.sap.com/sos

Security Patch Process FAQ
https://scn.sap.com/community/security/blog/2012/03/27/security-patch-process-faq

Security Notes
https://support.sap.com/securitynotes

System Recommendations for Security Notes
https://support.sap.com/sysrec

Configuration Validation
http://wiki.sdn.sap.com/wiki/display/TechOps/ConfVal_Home

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The Future of the EWA Security Notes Subchapter

Current situation

- **The EWA subchapter "SAP Security Notes: ABAP and Kernel Software Corrections"** is currently based on RSECNOTE.
- **RSECNOTE** is technically working. However, in the meantime the content, which Security Notes are recommended by RSECNOTE, is only maintained sporadically for SAP-internal reasons.
- The tool "**System Recommendations**" and the quality of SAP Security Notes have improved.

Recommendation

- Use the Solution Manager based Tool "System Recommendations" for your monthly security maintenance process (which is recommended anyhow since even in the past RSECNOTE and thus the EWA only checked for a selected subset of Security Notes)

Intended direction

- We are currently evaluating to base the above mentioned EWA subchapter directly onto System Recommendations. So if you are using System Recommendations you are in our strategic direction. However, no timeline is available yet for this change nor any technical details.
- As soon as the EWA subchapter no longer requires RSECNOTE technically, the tool RSECNOTE is planned to be discontinued.

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How to find HANA Security Notes, e.g. 1964428 - XS bypasses authentication for former public applications

System Recommendations is not yet able to show HANA Security Notes.
(Reason: the 'technical system' which is defined based on data in the SLD / LMDB does not contained required information.)

Tipp: Use search on https://support.sap.com/securitynotes to find notes of application component

BC-DB-HDB* (including the *).

Number	Application Area	Short text	Priority	Solution	Released On
1964428	BC-DB-HDB-XS	XS bypasses authentication for former public applications	high	SP 70 / SP 69 patch 2	11.02.2014
1914778	BC-DB-HDB-XS	Potential information disclosure relating to HANA host names	medium	SP 60	08.10.2013
1870605	BC-DB-HDB	Privilege escalation in SAP HANA	high	SP 57	09.07.2013
1756978	BC-DB-HDB	SAML 2.0: possible XML signature wrapping attack	high	SP 36	11.09.2012
1726160	BC-DB-HDB	Security issues fixed in SAP HANA Revision 28 and later	high	SP 28	10.07.2012
1645982	BC-DB-HDB	Security issues fixed in SAP HANA Revision 18	high	SP 18	13.12.2011
1628110	BC-DB-HDB	Security issues fixed in SAP HANA Revision 15	high	SP 15	13.09.2011

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Note 1903756 - DB6: Authorization to execute operating system commands

Important note, Published in November 2013

Issue: Note cannot be implemented in most systems as function `DB6_DIAG_GET_PROGRAM_VERSION` exists only in DB2/DB6-Systems

Following SAP Notes are implemented in this step:

Note Action	Note	Version
Implement SAP Note	1903756	10

C...	Status	Obj. Ty...	Object		Message Text
☐		FUNC	DB6_DIAG_GET_PROGRAM_VERSION		Object FUNC DB6_DIAG_GET_PROGRAM_VERSION does not exist; create it
☑		FUNC	DB6_PM_OSCMDSYSOUT2		Changes can be copied
☑		METH	CL_DB6_RDI GET_OS_COMMAND_OUTPUT		Changes can be copied
☑		FUNC	DB6_DIAG_LIST_DIRECTORY		Changes can be copied
☑		FUNC	DB6_DIAG_READ_FILE		Changes can be copied
☑		FUNC	DB6_XPLN_DOWNLOAD		Changes can be copied
☑		METH	CL_DB6_ACTION_MONITOR_SETTINGSIF_DB6_ACTION_CONTROL		Changes can be copied
☑		METH	CL_DB6_DBCON MIGRATE_PARAMETERS_FROM_RFC		Changes can be copied

- ➔ Create Support Ticket if you run into trouble while implementing security notes!
- ➔ Solved since end of January.

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Note 1963100 - Disabling execution of operating system commands using a CTC URL

HotNews
CVSS Base Score 9.0
CVSS Base Vector AV:N/AC:L/AU:S/C:C/I:C/A:C

Java, LIFECYCLE MGMT TOOLS as of 6.40

The CTC application contains vulnerability where any operating system command can be executed on an AS Java host using NWA credentials through a URL invocation. Typically, this requires authentication using NWA credentials. If you have not already implemented SAP security note 1445998, then this can be done without authentication using NWA credentials.

Note 1445998 - Disabling invoker servlet (Released in December 2010)

The Invoker Servlet has been disabled by default as of 7.20

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Various notes about hard coded user names

Note 1738965	BW-WHM-DBA-OHS	Hard-coded credentials in Open Hub	(BRANDTTH)
Note 1768049	XX-CSC-BR	Hard-coded credentials in XX-CSC-BR	(TESTER)
Note 1789569	PP-CRP-LVL	Hard-coded credentials in capacity leveling	(C1155522)
Note 1791081	PS-ST	Hard-coded credentials in PS-ST and PS-MAT-PRO	(RSHANBHAG)
Note 1795463	IS-B-DP	Hard-coded credentials in IS-B-DP	(XXXX)
Note 1911174	BC-CCM-MON	Hard-coded credentials in CCMS	(CSMREG)
Note 1914777	CA-WUI-WST	Hard-coded credentials in CA-WUI-WST	(OHLIGER)
Note 1920323	IS-OIL-DS-TSW	Hard-coded credentials in IS-OIL-DS-TSW	(various)

Few of these notes is really important from a security point of view – but of course it's better to get rid of these hard coded user names from a functional point of view.

Caution: Notes of this type could show a critical security vulnerability

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Various notes about hard coded user names

Note 1915873 - Usage of `sy-uname` in Method

Note contains attachment with an ABAP transport which deletes some objects.
As it's about the upgrade tools, there is no other option to publish the correction.

Import into all systems or import into DEV and re-export for other systems.

No test required.

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Topics

Note 1773912 - Missing authorization check in message server

Note 1906927 - Missing authorization check in Accounting BAPIs

Note 1931016 - Missing authorization check in ABAP Runtime Analysis

Note 1942424 - Missing authorization check in SV_SMG-ASU

Patch Day Notes vs. Support Package Implementation Notes

Note 1853616 - Missing authorization check in XX-IDES

Note 1864518 - Security Improvements for MOB-APP-EMR-AND

Security Notes of software component ST-PI

Note 1854408 - Potential information disclosure relating to user password in GRC AC 10

Note 1823566 - Potential information disclosure relating to SAP Solution Manager

Note 1820666 - Potential remote code execution in SAProuter

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Note 1773912 - Missing authorization check in message server

It would be sufficent to update the `msg_server`. You do not need to update the whole kernel `disp+work`.

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Note 1906927 - Missing authorization check in Accounting BAPIs

Requires note 1882417 and 1908870 and 1923728 including extensive manual activities.

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Note 1931016 - Missing authorization check in ABAP Runtime Analysis

No influence to productive business processes

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Note 1942424 - Missing authorization check in SV-SMG-ASU

The notes solves a vulnerability to execute reports (like in `SA38`).

Deactivation of obsolete but critical program. No test required.

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Patch Day Notes vs. Support Package Implementation Notes

Announcement Jul 8, 2013:
Implementing SAP security fixes
Important information and call for action

SAP is continuously investing in increasing the quality and security of its products. **To improve the consumability of its security fixes and to further adjust its deployment processes to industry standards, SAP has changed the way how security patches are provided.**

SAP delivers important security fixes on its monthly Security Patch Day. SAP strongly recommends its customers to implement security fixes, flagged with priority 1 and priority 2, primarily fixing externally reported issues. The fixes are released on the second Tuesday of every month, and can be used to fix a particular vulnerability without needing to update a system to service packs.

In order to further reduce the implementation efforts for our customers, other **security fixes like priority 3 and 4 will generally be delivered with support packages.** SAP strongly recommends its customers to apply Support Packages on their systems as soon as a support pack is available. The Support Packages can be found on SAP Service Marketplace in the corresponding product area. **Information about these improvements will also be published in security notes with priority 3 and 4 some months after Support Packages have been released**.
Find security notes that were previously released on SAP Service Marketplace at /securitynotes.

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Patch Day Notes vs. Support Package Implementation Notes

Patch Day Notes

- All Notes (irrespective of priority) fixing externally found vulnerabilities
  + notes fixing internally found vulnerabilities having High and Very High priority
- Released on Security Patch day with very few exceptions

Support Package Implementation Notes (SPIN)

- Notes fixing internally found vulnerabilities having Low and Medium priority.
- Typically not released as individual notes, however, SAP can release them any time (even on a patch day date) if there is any functional dependency which require the correction.

Currently the above categorization is not available in Service Market place.
Anyway: From a customer point of view all of these notes are simply “Security Notes”

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Patch Day Notes vs. Support Package Implementation Notes

Support Package Implementation Notes from November / December 2013

1677912	SD-BIL-IV-PC	Credit cards in order
1735308	BC-CUS-TOL-ALO	Security issues for report TAB_INTO_AUTH_GRP Refers to note 1909124
1786150	CRM-MD-BP	Potential disclosure of persisted data in [crm-md-bp]
1787032	FI-AP-AP-B1	FI: Potential Directory Traversal
1788562	LO-LIS-REP	Potential modif./disclosure of persisted data in LO-LIS-REP
1794273	LO-MAP	Persisted data in MAP may be changed/disclosed
1813155	EHS-BD	Possible change/disclosure of persisted data in EH&S
1922205	BC-XI-IS-WKB	Authorization default value in component BC-XI-IS-WKB
1775843	IS-H-PM	Directory traversal in IS-H in utilities (reports)
1785662	SD-BIL-IV-IF	Directory-Traversal in externer Fakturaschnittstelle
1794951	XX-CSC-BR	Directory traversal in XX-CSC-BR
1916257	PA-PA-US	Directory traversal in PA-PA-US

➔ Treat these notes like all other security notes

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Note 1853616 - Missing authorization check in XX-IDES

First note ever which deals with vulnerabilities in IDES demo system

Release independent note = no assignment to any product, software component, release, support package
→ potential relevant for all customer systems as far as System Recommendations can analyze it
→ all customers ‘see’ the note

Solution via ABAP transport. Normally we forbid transports in notes, however, in this special case there is no other efficient way and I assume that it works fine.

The transport contains delete/deactivation actions for RFC enabled functions in the customer name range.

➔ If you go for this note you should consider to apply all other security notes to IDES as well.

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Note 1864518 - Security Improvements for MOB-APP-EMR-AND

The note is relevant for the Mobile Platform for Android

Application System Recommendations of the SAP Solution Manager cannot check for this note

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Security Notes of software component ST-PI

Some notes about software component **ST-PI** describe the complete validity range in the text only - which cannot be interpreted by System Recommendations.
Example: "Apply Support Package ST-PI 2008_1_* SP08."

Tipp: Use search on https://support.sap.com/securitynotes to find notes of application component **SV-SMG-SDD** (which is related to software component ST-PI).

The good news: Security Notes of software component **ST-PI** and **ST-A/PI** are only relevant for the connectivity to the SAP Solution Manager. Therefore you can apply them without any influence to productive business processes within the backend system.

Number	Application Area	Short text	Priority	Released On	Validity/Corr/SP
1896785	SV-SMG-SDD	Missing authorization check in ST-PI	High	10.09.2013	4/4/2
1861791	SV-SMG-SDD	OS CMD injection vulnerability in ST-PI	High	13.08.2013	3/3/1
1688229	SV-SMG-SDD	Information disclosure due to missing auth. in EWA functions	High	13.08.2013	5/5/2
1774432	SV-SMG-SDD	Missing authorization check in ST-PI	Medium	11.06.2013	4/0/0
1788614	SV-SMG-SDD	Missing authorization check in ST-PI	High	12.02.2013	4/4/1
1727914	SV-SMG-SDD	Missing authorization checks in ST-PI	Very high	14.08.2012	4/4/1
1720994	SV-SMG-SDD	Missing authorization check in ST-PI	High	10.07.2012	4/4/1
1727119	SV-SMG-SDD	Update 1 to security note 1642810	Medium	08.06.2012	(update note)
1642810	SV-SMG-SDD	Code injection vulnerability in SV-SMG-SDD	Medium	08.05.2012	SAP_BASIS

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Note 1854408 - Potential information disclosure relating to user password in GRC AC 10

An attacker can discover information relating to passwords stored in table **GRACREQUSRPASS** (‘Request user password’).

This note contains design changes related to user password provisioning, so it is suggested to implement it very cautiously and conduct intensive regression testing before moving this to production.

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Note 1823566 - Potential information disclosure relating to SAP Solution Manager

Note published in May 2013 but still relevant!

An attacker can discover information relating to passwords stored in table `DBCON`.

All ABAP systems might be affected - not only the Solution Manager which in fact has the highest probability for the issue as it is used to manages databases including SAP HANA.

Prerequisite:

KERNEL 7.20 patch 417
KERNEL 7.21 patch 110
KERNEL 7.38 patch 14

The ABAP correction plus the Kernel just enables to move the passwords to the secure area.

After the implementation of the code corrections, execute the report **`RS_DBC_CLEANUP`** in all systems to perform the migration (client independent).

You can manually check using `SE16` for table `DBCON` with field `PASSWORD` not equal space (if `SE16` still allows viewing the table in your release).

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Note 1820666 - Potential remote code execution in SAProuter

Note published in May 2013

SAP Spotlight News:
Important security fixes for SAProuter; new malware variant

Best practice:
http://scn.sap.com/community/security/blog/2013/11/13/security-of-the-saprouter

Recommended activities:

- SAP recommends to upgrade any (active) SAProuter installation as soon as possible
- Use an access control list (saprouttab) to limit connectivity
- Activate SNC to encrypt the communication channel to SAP support and to block any other connections from the internet
- Integrate the SAProuter into a firewall
- Use an SAProuter password for SAP Support (and define process how to change it)
- Change the default port

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Thank you!

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Security Patch Process FAQ
https://scn.sap.com/community/security/blog/2012/03/27/security-patch-process-faq

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