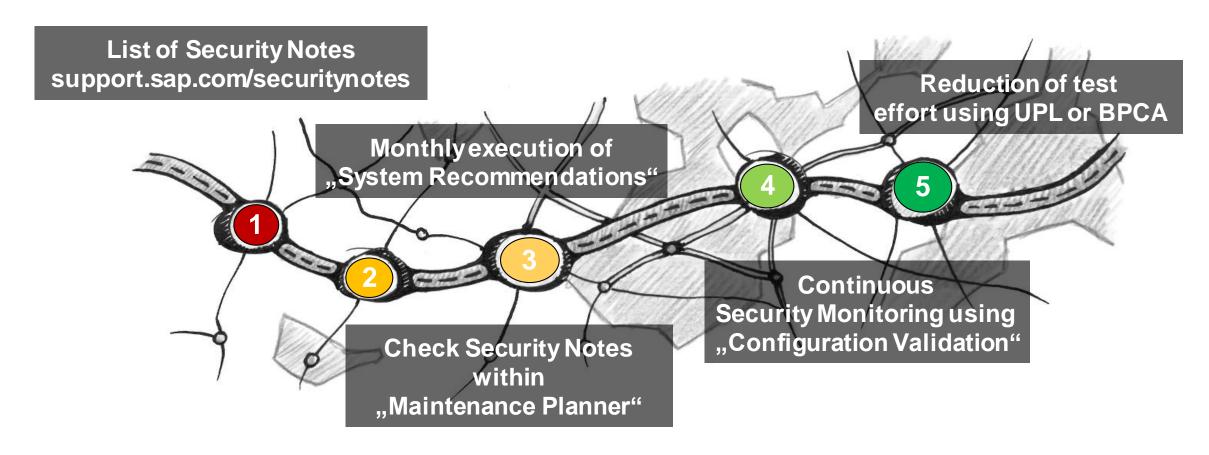


DSAG & ASUG & ES: Security Patching

Germany America EMEA/Asia



Frank Buchholz, SAP CoE Security Services January 2021



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

5

News from DSAG

AK Security & Vulnerability Management

https://dsagnet.de/go/security

Registrierung:

https://www.dsaq.de/ab-sofort-live-das-neue-dsagnet

Kennen Sie schon das neue DSAGNet? Nein? Dann machen Sie sich jetzt mit dem E-MAIL: neuen DSAG-Mitgliederportal vertraut. Dazu müssen Sie lediglich Ihr Benutzerkonto reaktivieren. KENNWORT: Wie es funktioniert? Öffnen Sie dsagnet de und klicken Sie auf "Konto beantragen", um Ihr bestehendes Konto Kennwort vergessen? zu reaktivieren. Durchlaufen Sie die entsprechenden Schritte und schon können Sie das DSAGNet wie gewohnt nutzen. ANMELDEN Weitere Anleitungen und Hilfestellungen finden Sie auf dieser Seite. Sollten Sie Schwierigkeiten beim Login haben, Konto beantragen können Sie sich gerne an support@dsag.de wenden.

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News from DSAG

Security & Vulnerability Management / Cloud Security / Idm 8.x

Sicherheit in der Cloud

Wiebke Thelo. Michael Grass,

Al V01a

So erkennen und verfolgen Sie Sicherheitsvorfälle in Ihren SAP-Systemen

Andreas Feistl. Linde AG

Ralf Kempf

akquinet enterprise solutions GmbH

RIVOID

SAP Penetration Testing - Was eigentlich keiner wissen will ...

Thomas Tiede,

IBS Schreiber GmbH

EIV06a

Die Vortragsinhalte liegen aktuell leider noch nicht vor.

14:45

V06b

DSAG Technologie Tage, 3.-4. Februar 2021

https://dsagnet.de/dsag-event?id=153542&app=info

Vorträge vom AK und der AG Cloud Security/IdM 8.x am 3.2.2021

https://dsagtechtage.plazz.net/

Agenda (PDF)

https://www.dsag.de/sites/default/files/2021-01/20 015 TechTage21 Agenda 15 DKL.pdf

Vortrag von der Universität Düsseldorf am 3.2.2021 um 14:45 Uhr:

Auf Stunde NULL folgt Stunde MINUS EINS

Wie das SAP Identity Management nach dem Hackerangriff auf das Universitätsklinikum Düsseldorf die Passwortuhren neu stellte

Hosts of the Security Notes Webinar

Overview

ASUG Information Security English Wednesday 18:00-19:00 CEST = 12:00 EST = 9:00 PST

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

DSAG AK Security & Vulnerability Management

German Thursday 14:00-15:00 CET

Calendar: https://www.dsag.de/arbeitsgremien/ak-identity-management-security/veranstaltungen

SAP Enterprise Support Value Map Security / SAP Enterprise Support Academy

Forum "SAP Security Patch Days"

English Thursday 10:00-11:00 CET

To access the SAP Learning Hub, edition for SAP Enterprise Support, a one-time registration via an s-user is required. The registration triggers an automatic eligibility check. Access is included in SAP Enterprise Support and SAP Enterprise Support, Cloud Edition as well as in SAP Product Support for Large Enterprises.

You can find the latest version of the presentation on SAP Support Portal /sos

https://support.sap.com/sos

→ Advisories → <u>Security Notes Webinar</u>

Advisories

- SAP Security Notes
 Advisory
- SAP Security Notes
 Webinar

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

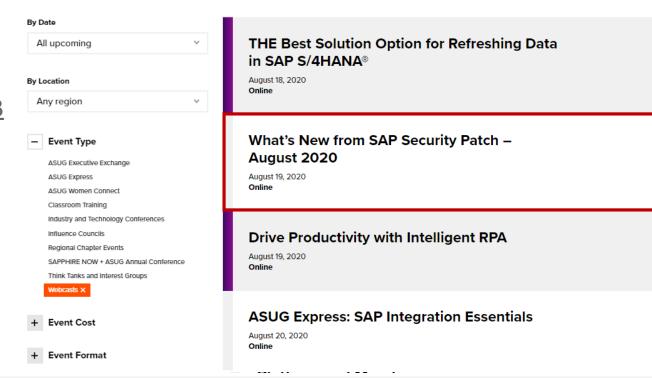
Calendar:

https://www.asug.com/events?events%5B%5D=13 56781

Events

ASUG offers a full slate of events crafted around key topics of interest for specific industries, business roles, and technologies. We look forward to seeing you—whether in person or online—very soon.

Reset filters



Hosts of the Security Notes Webinar DSAG

DSAG AK Security & Vulnerability Management

Regular schedule:

Thursday in the week after the patch day

14:00-15:00 CET

Calendar:

https://www.dsag.de/arbeitsgremien/ak-identity-management-security/veranstaltungen

Hosts of the Security Notes Webinar

SAP Enterprise Support Academy

SAP Enterprise Support Academy

Regular schedule:

Thursday in the week after the patch day

10:00-11:00 CET

Calendar:

Updates from the last SAP Security Patch Day



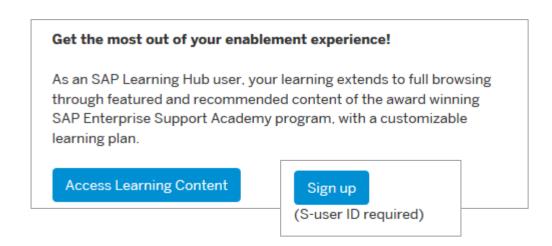
External sign up

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

Registration | withdraw | watch a recording | find the survey

<u>Direct access to SAP Learning Hub</u> (Login with your S-User ID)

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

or code: SUP_EBW_0650_1906



Register for, withdraw and join the Meet the Expert live Session or recording

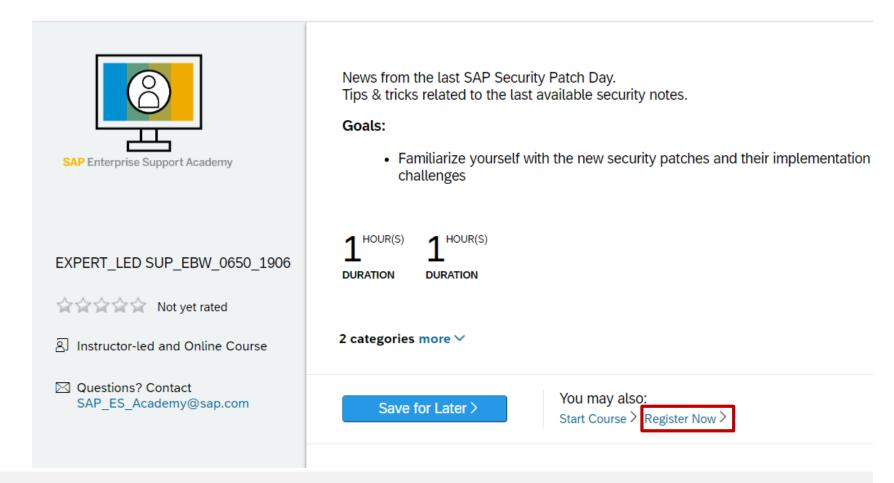




Registration | withdraw | watch a recording | find the survey

Register to course "Updates from last SAP Security Patch Day" SUP_EBW_0650_1906

Updates from the last SAP Security Patch Day §



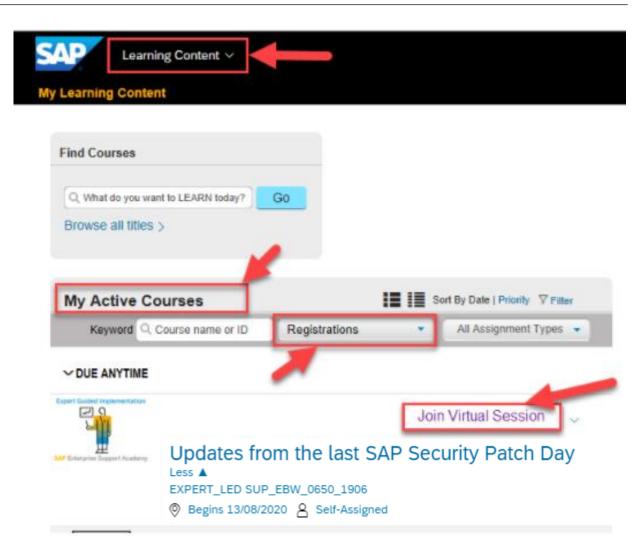
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How to join your registered session within the SAP Learning Hub

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":

<u>Updates from the last SAP Security Patch Day</u>



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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:

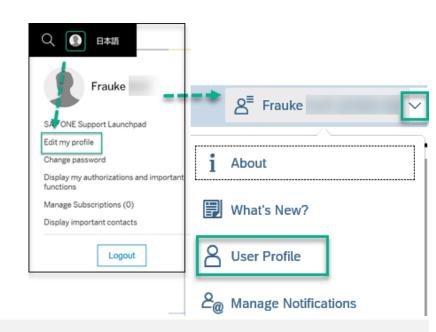
https://accounts.sap.com/ui/createForgottenPasswordMail?spld=55365985e4b07dc3abdfc16c&targetUrl=&sourceUrl

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



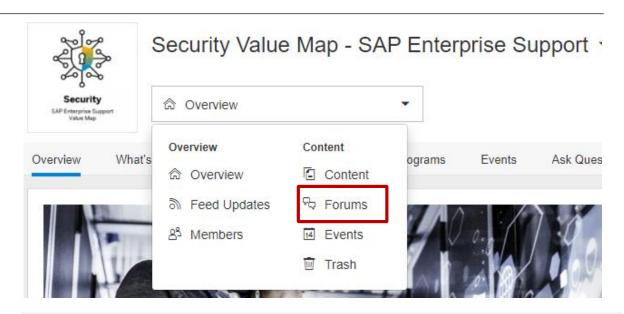
How to subscribe on notifications

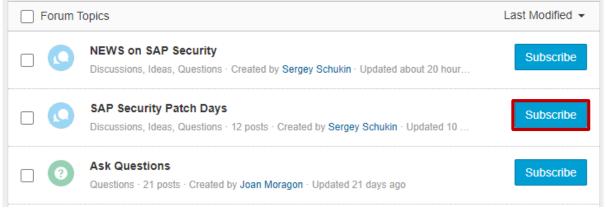
SAP Enterprise Support Value Map Security

→ Forums (via Drop-down selector)

→ Subscribe (to get updates about the webinar series) and enter the forum "SAP Security Patch Days"

https://jam2.sapjam.com/groups/nNZzUw58bEnzWfS4oZRn1X/forums?folder_id=LT06gw8ej8F6u6fsSVurm7





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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!

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 <u>SAP Security Notes Advisory</u>, too.



January 2021

Topics January 2021



Q&A Notes for Security HotNews

Note <u>2622660</u> - Security updates for the browser control Google Chromium delivered with SAP Business Client

Note <u>2983367</u> - Code Injection vulnerability in SAP Business Warehouse (Master Data Management) and SAP BW4HANA (reloaded)

Note 2945581 - Cross-Site Scripting (XSS) vulnerability in SAP CRM WebClient UI

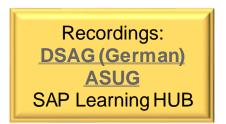
Note 2986980 - Multiple vulnerabilities in SAP Business Warehouse (Database Interface)

Note <u>2999854</u> - Code Injection in SAP Business Warehouse and SAP BW/4HANA

Note 2945581 - Cross-Site Scripting (XSS) vulnerability in SAP CRM WebClient UI

Note <u>3001373</u> - Information Disclosure in Central Order on Cloud Foundry

Note 2911103 - SE16N: Alternative edit mode



Q&A Notes for Security HotNews

December 2020

Note 2989075 - Missing XML Validation in SAP BusinessObjects Business Intelligence Platform (Crystal Report)

Note <u>2974774</u> - Missing Authentication Check In SAP NetWeaver AS JAVA (P2P Cluster Communication)

Note <u>2997167</u> - Missing Authentication Check In NW AS Java P2P Cluster Communication - Frequently asked questions and answers

Note <u>2973735</u> - 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 <u>3006112</u> - Q&A for SAP Security Note 2999854

Note <u>2986980</u> - Multiple vulnerabilities in SAP Business Warehouse (Database Interface)

Note <u>3005196</u> - Q&A for SAP Security Note 2986980

Note <u>2983367</u> - Code Injection vulnerability in SAP Business Warehouse (Master Data Management) and SAP BW4HANA

Note <u>2999167</u> - Q&A for SAP Security Note <u>2983367</u>

Note <u>2979062</u> - Privilege escalation in SAP NetWeaver Application Server for Java (UDDI Server)

Note <u>2989299</u> - 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.)

Note <u>2622660</u> - 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

Note <u>2983367</u> - 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	<u>SAPKW70041</u>
	701	<u>SAPKW70124</u>
	702	<u>SAPKW70224</u>
	731	<u>SAPKW73129</u>
	740	<u>SAPKW74025</u>
	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

Note <u>2986980</u> - 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

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

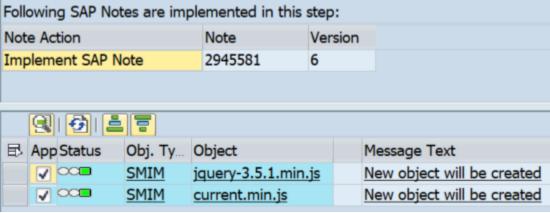
- No test required, just do it
- Generated report Z_RSDRI_DF_TXT_* is only useful for debugging purpose.
- Detection: Inspect Workload Statistics or Security Audit Log or use ETD to verify that the RFC function respective the report is not called.

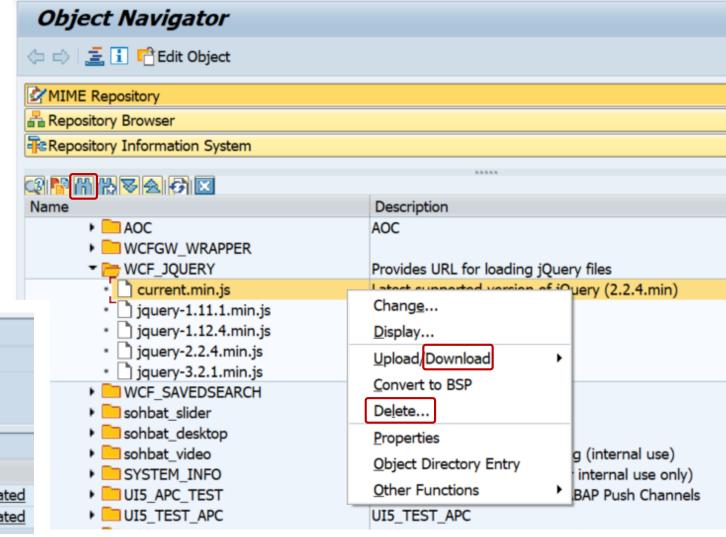
Note 2945581 - Cross-Site Scripting (XSS) vulnerability in SAP CRM WebClient UI

Software component WEBCUIF exists in various ABAP system types.

Manual instruction to delete a MIME object before implementation via SNOTE

Navigate to path SAP \rightarrow BC \rightarrow BSP \rightarrow SAP and use the search function, download the file to have a backup until





Note <u>3001373</u> - 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

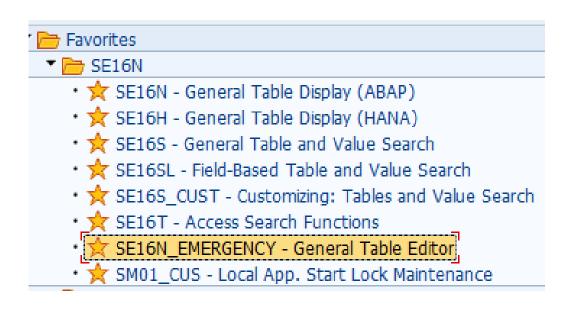
https://help.sap.com/viewer/65de2977205c403bbc107264b8eccf4b/Cloud/en-US/4514a14ab6424d9f84f1b8650df609ce.html

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.

Transaction SE16N does not offer change mode via command &SAP_EDIT anymore.

New transaction SE16N_EMERGENCY can be used instead.

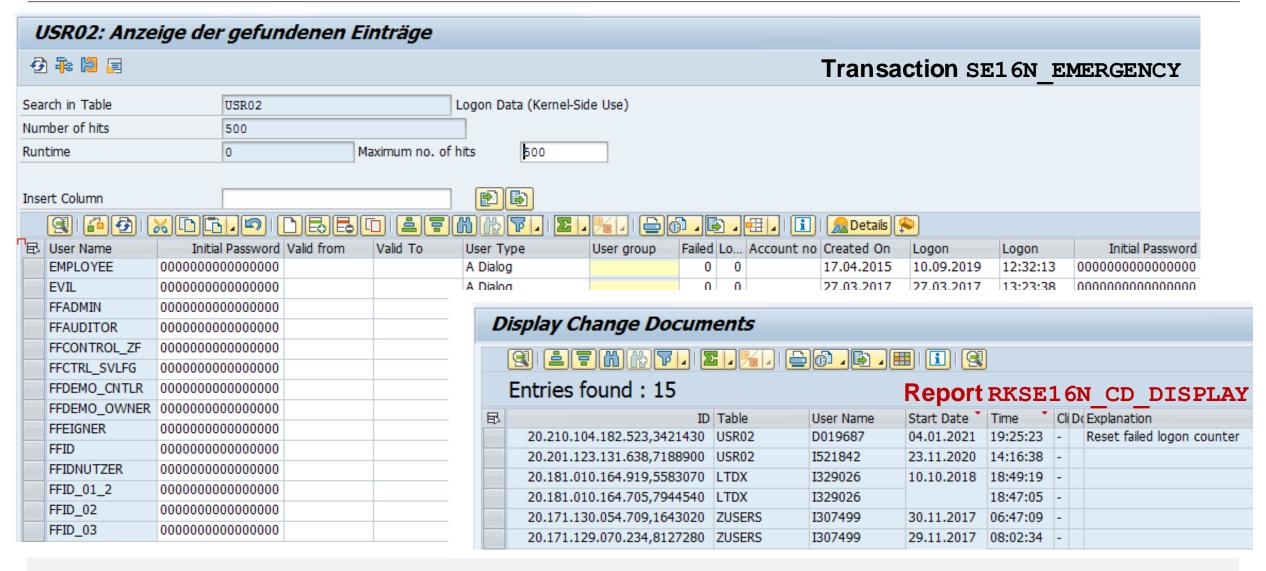
- > Several required notes with additional manual implemementation steps
- The transaction gets locked by default
- You can unclock it via transaction SM01_CUS
- Authorizations for S_TABU_DIS / S_TABU_NAM with activity 02=change is required
- Usage get logged, view logs via report RKSE16N_CD_DISPLAY



Several required notes, e.g. <u>2787892</u>, <u>2848972</u>, <u>2863410</u>, <u>2867757</u>, <u>2879630</u>, <u>2880334</u>, <u>2886898</u>, <u>2905486</u>, <u>2911103</u> with additional manual implementation steps

艮	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!



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 <u>2968176</u> - SE16H: Improvements for outer joins and having

Note <u>2978713</u> - SE16N Selection Screen does not show separators

Note <u>2985178</u> - SE16N_EMERGENCY: Explanation popup occurs even with no change of data

Note 3007467 - SE16H: Authorization check for execution of Join-Selections



December 2020

Topics December 2020





Note <u>2890213</u> - Missing Authentication Check in SAP Solution Manager (reloaded)

Note 2985866 - Missing Authentication Check in SAP Solution Manager (JAVA stack)

Note <u>2983204</u> - Multiple Vulnerabilities in SAP Solution Manager 7.2 (User Experience Monitoring)

Note <u>2974330</u> - Unrestricted File Upload vulnerability in Java (Process Integration Monitoring)

Note <u>2974774</u> - Missing Authentication Check In SAP NetWeaver AS JAVA (P2P Cluster Communication)

Note <u>2983367</u> - Code Injection vulnerability in SAP Business Warehouse (Master Data Management) and SAP BW4HANA

Note <u>2670851</u> - Authority check in RSSG_BROWSER

Note <u>2978768</u> - Inproper authentication in SAP HANA database

System Recommendations – Recalculation for some notes

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

SAP Focused Run – Use Cases & High Level Architecture

Advanced Integration Monitoring (AIM)

Advanced User Monitoring (AUM) Advanced Application Management (AAM) Advanced Configuration Monitoring (ACM) Advanced
System
Management
(ASM)

Advanced Event & Alert Management (AEM) Advanced Root Cause Analysis (ARA)

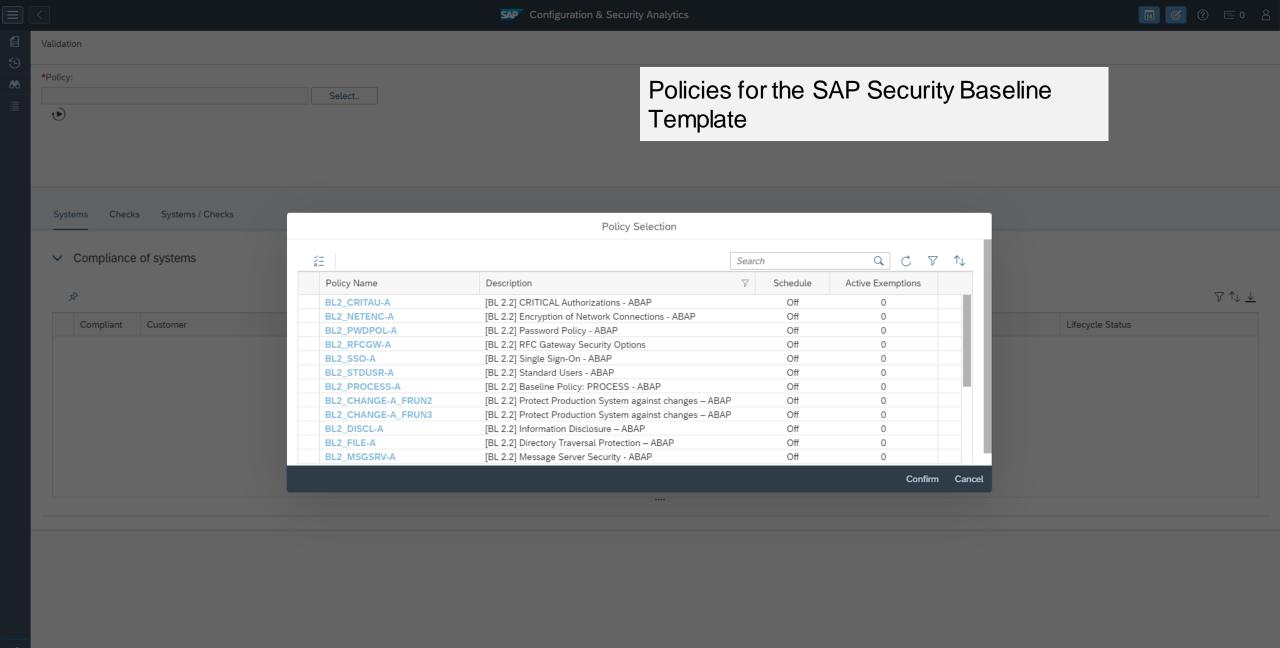
Advanced Analytics & Intelligence (AAI)

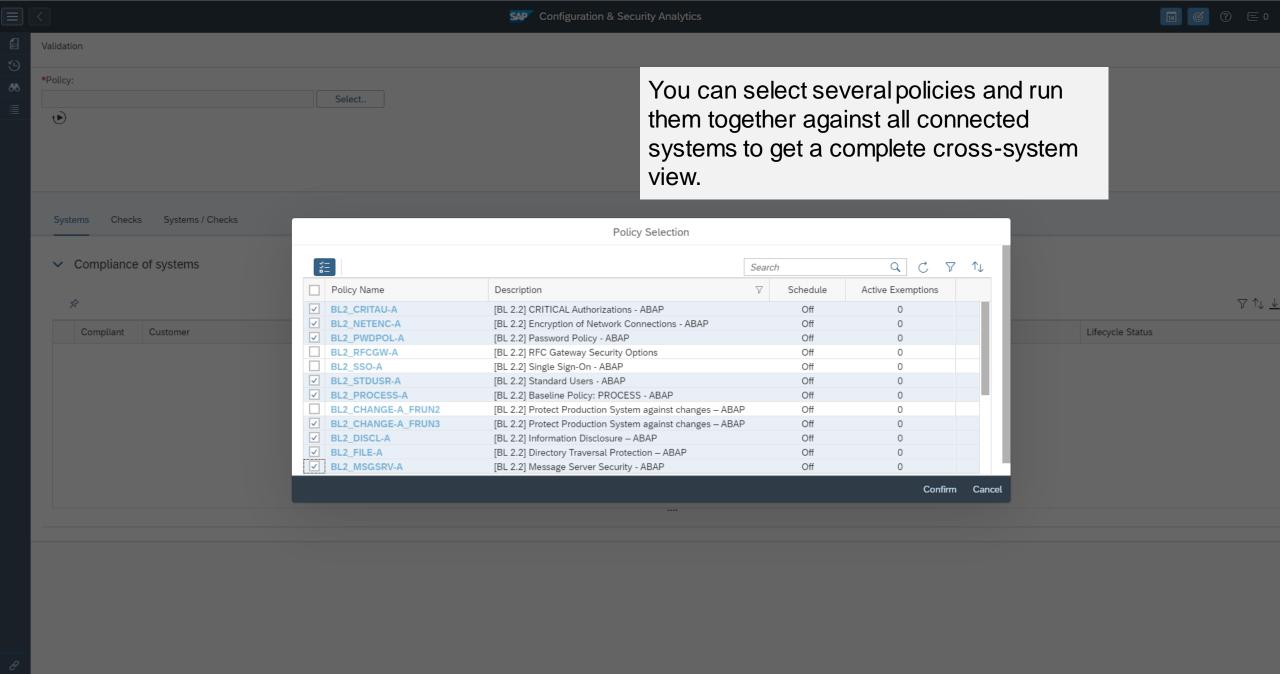
SAP Focused Run - Application Foundation

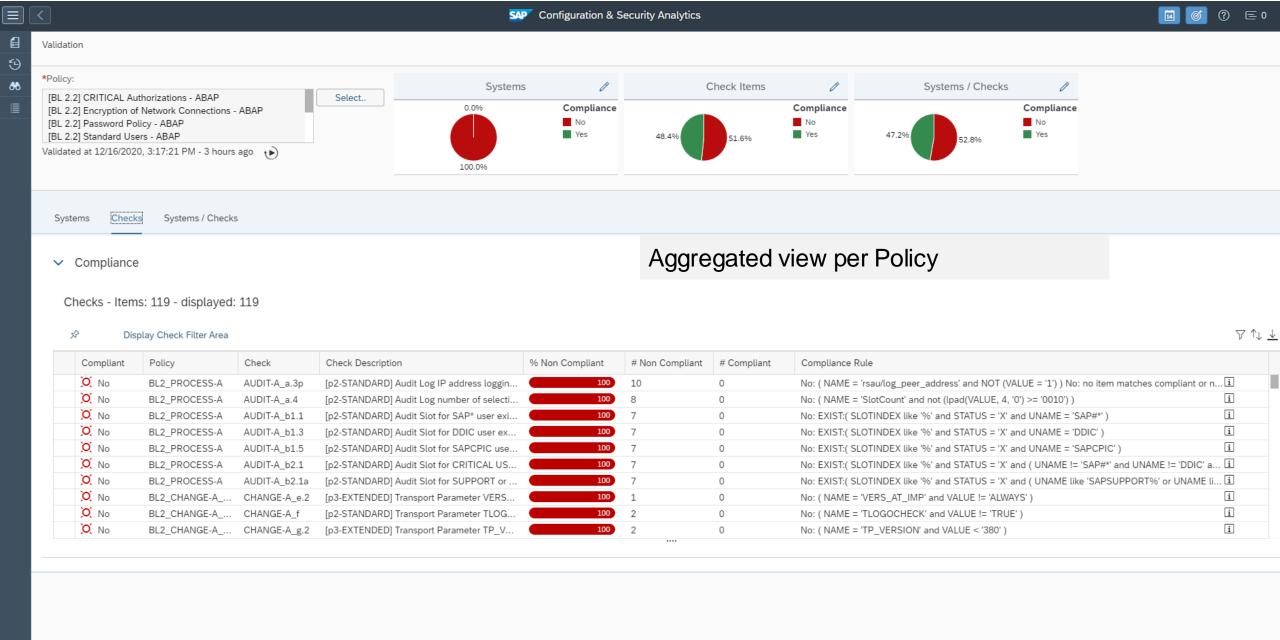
Landscape Management Database Simple Diagnostic Agent & SAP Host Agent

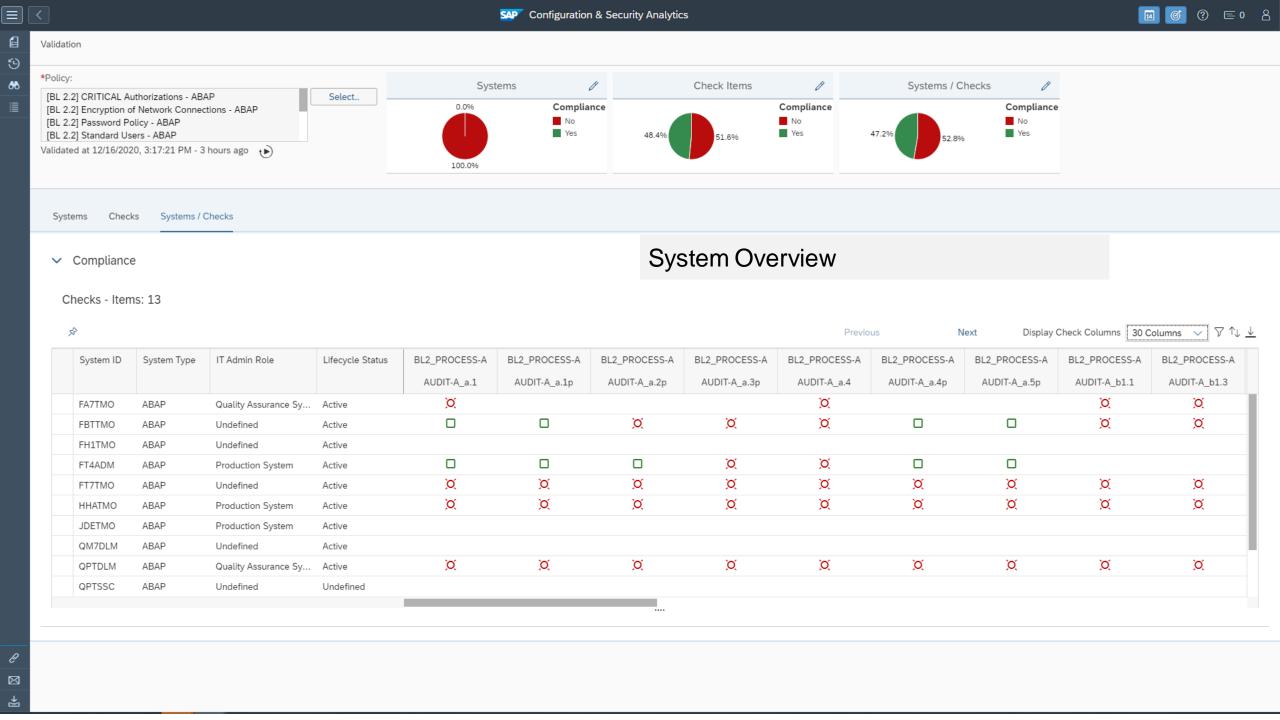
Monitoring & Alerting Infrastructure Expert Scheduling Framework Simple System Integration Guided Procedure Framework

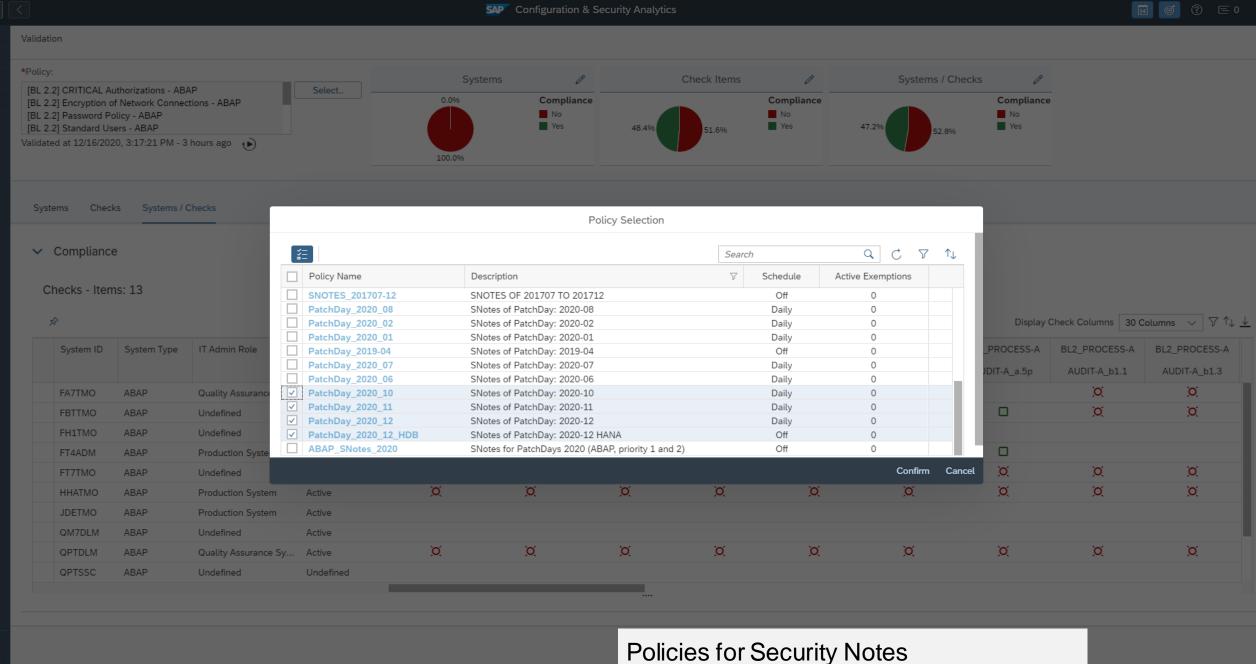
SAP HANA + SAP NetWeaver ABAP + SAPUI5 as Technology Foundation

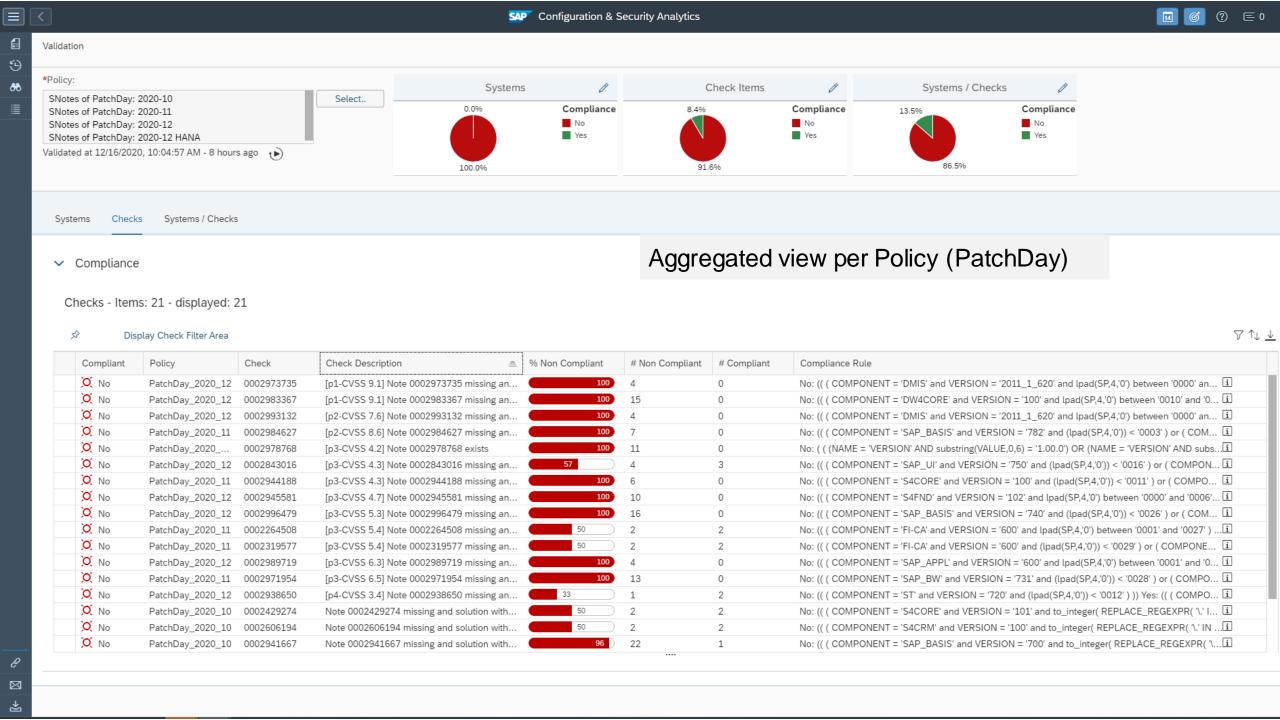


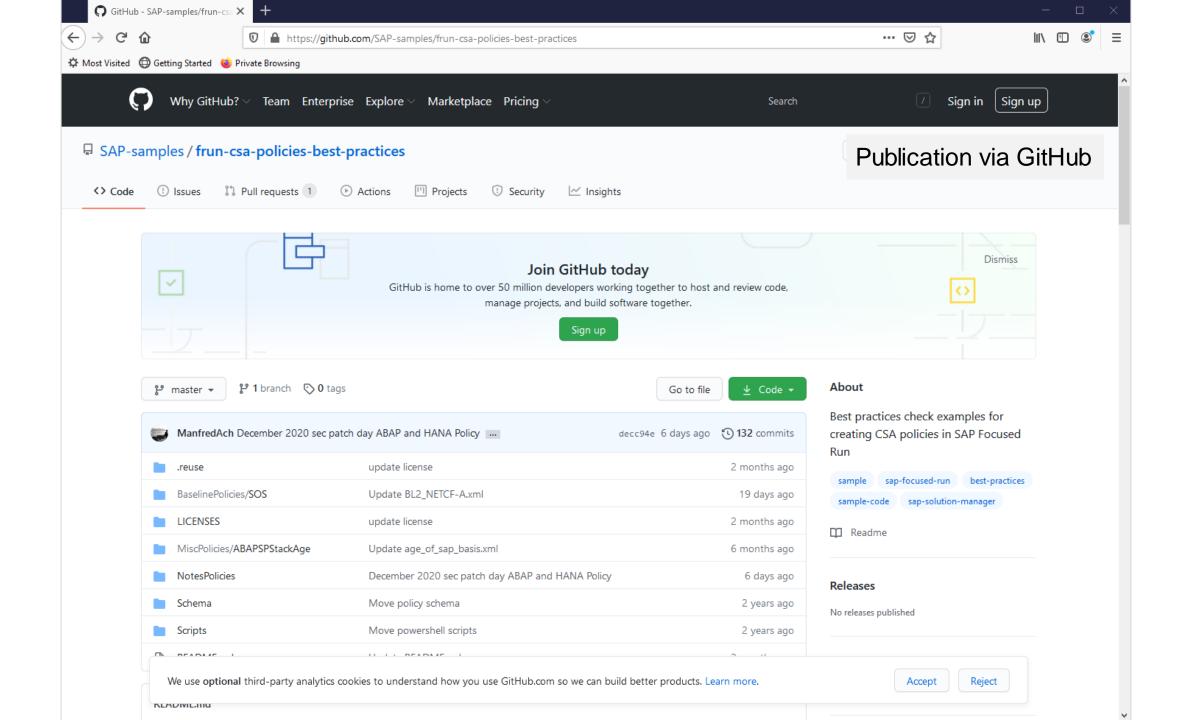


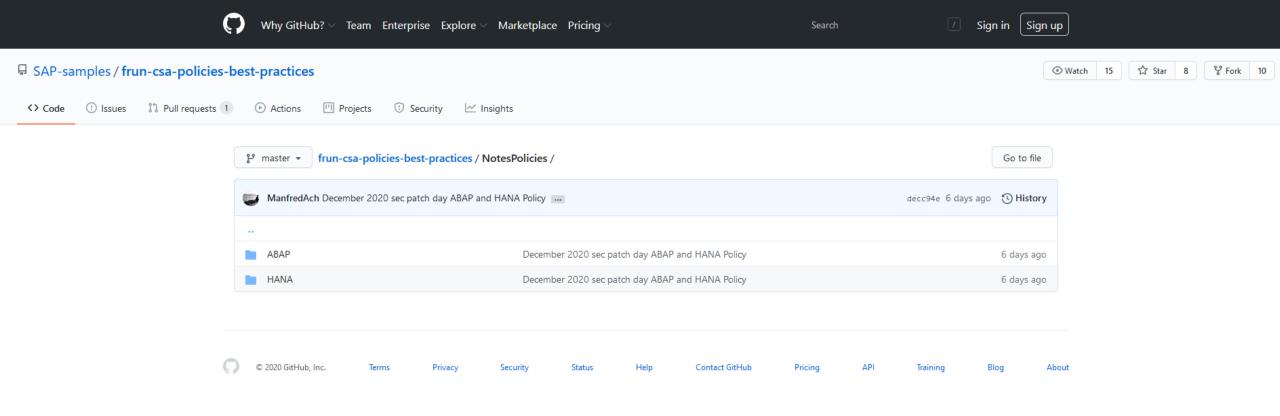


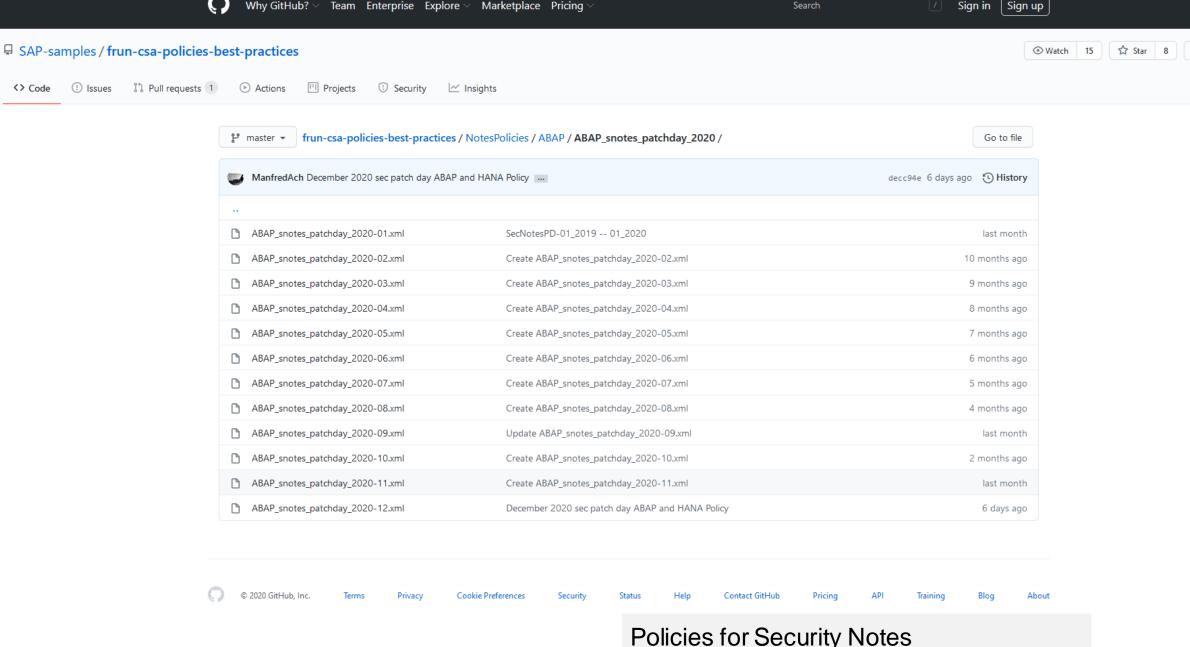








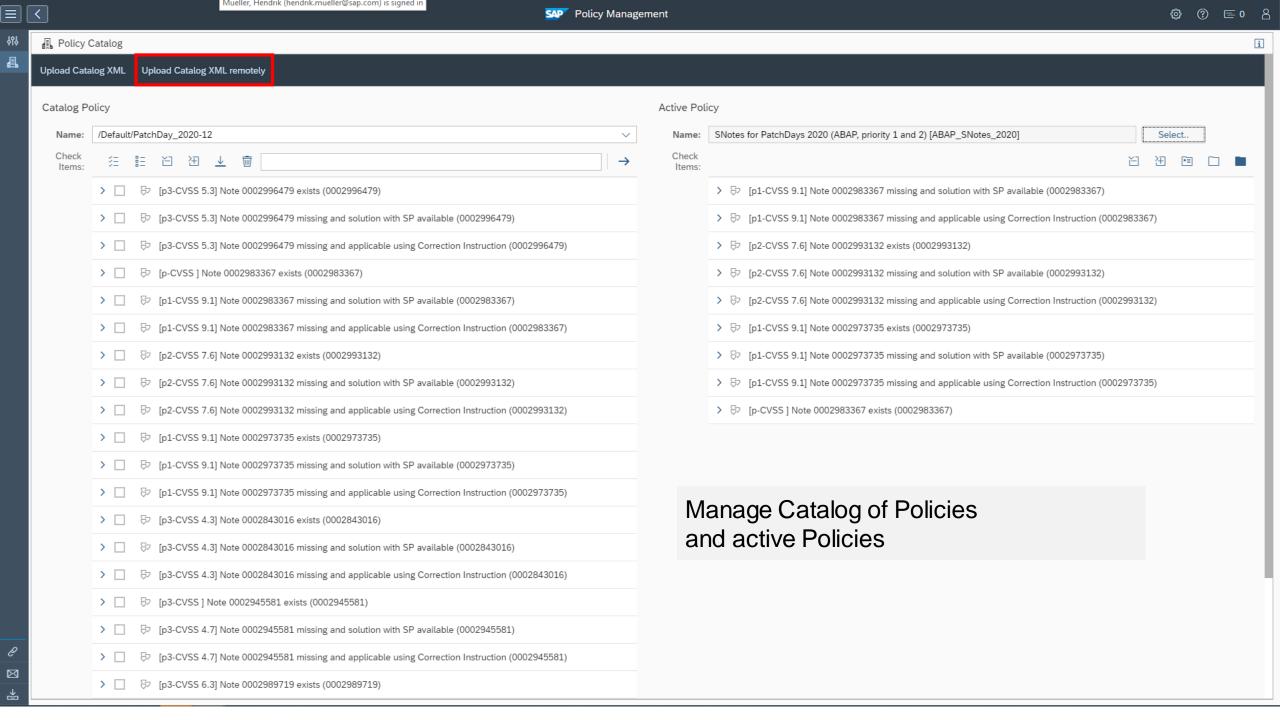


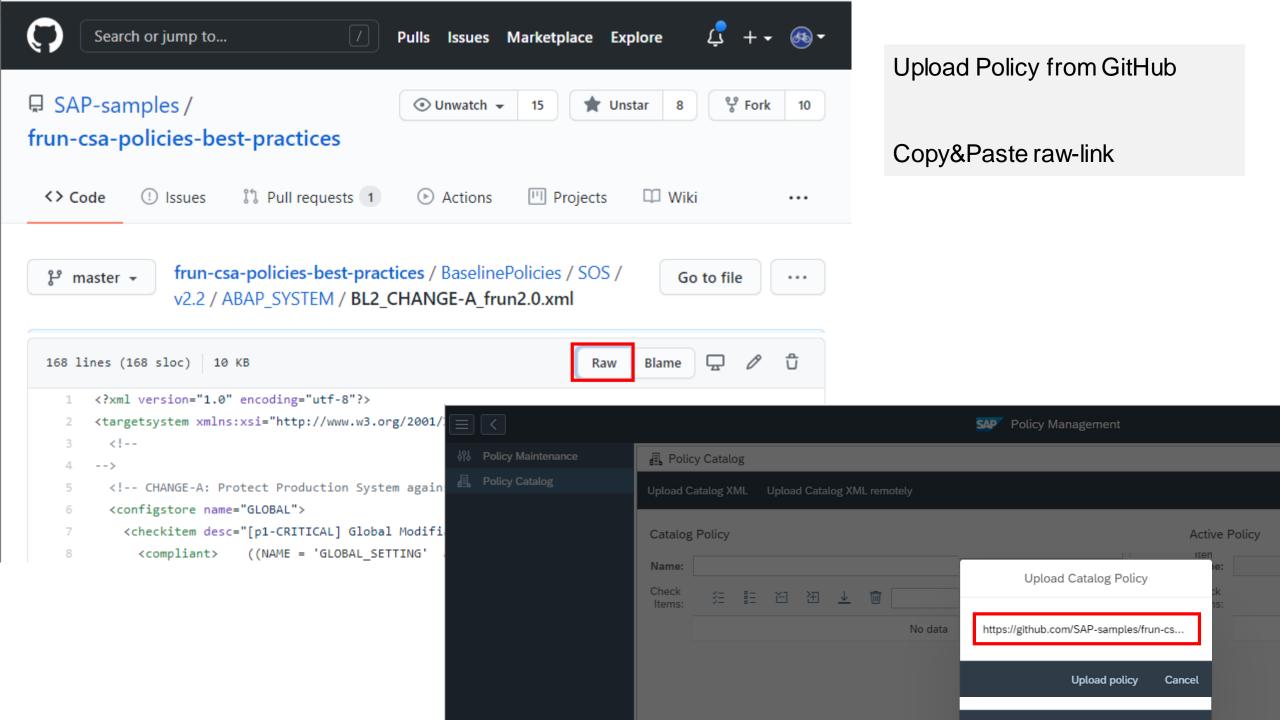


Policies for Security Notes

앟 Fork 10

```
437 lines (414 sloc) 38.1 KB
  1 <?xml version="1.0" encoding="utf-8"?>
  3 This FRUN CSA policy contains rules to check the following ABAP Security Notes:
  5 [p3-CVSS 5.3] 0002996479 BC-ABA-LA - [CVE-2020-26835] Cross-Site Scripting (XSS) vulnerability in SAP NetWeaver AS AB
  6 [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)
                                                                                                                                                        Example for a Policy
     [p3-CVSS 4.3] 0002843016 CA-UI5-DLV - [CVE-2019-0388] Content spoofing vulnerability in UI5 HTTP Handler
 10
                                    + 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
 14
                                      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
 24 [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
 26 [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
 31 Version: 001
              09.12.2020
 33 -->
     <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>
 40
 41
           <noncompliant/>
 42
          </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">
 46
           <compliant>(
 47
           ( COMPONENT = 'SAP_BASIS' and VERSION = '740' and not( (lpad(SP,4,'0')) < '0026' ) ) <!-- SAP_BASIS 740 SAPKB74026 --> or
 48
           ( 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')) < '0012' ) ) <!-- SAP_BASIS 751 SAPK-75112INSAPBASIS --> or
 49
```





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

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



Note <u>2890213</u> - Missing Authentication Check in SAP Solution Manager Note <u>2985866</u> - Missing Authentication Check in SAP Solution Manager

HotNews note (re)-published on 10.11.2020

corrected

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 NetWeaverAdministrator 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 000	012	SP04 patch 17	12.11.2020
SOLMANDIAG 720	SP005 000	013	SP05 patch 18	06.10.2020
SOLMANDIAG 720	SP006 000	014	SP06 patch 19	12.11.2020
SOLMANDIAG 720	SP007 000	020 ⊢ March	SP07 patch 26	04.11.2020
SOLMANDIAG 720	SP008 000	016	SP08 patch 24	04.11.2020
SOLMANDIAG 720	SP009 000	800	SP09 patch 18	04.11.2020
SOLMANDIAG 720	SP010 000	0002	SP10 patch 9	04.11.2020
SOLMANDIAG 720	SP011 000	004 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.

Note <u>2983204</u> - Multiple Vulnerabilities in SAP Solution Manager 7.2 (User Experience Monitoring)

Related note:

Note <u>2890213</u> - 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 \rightarrow Cross Scenario Configuration \rightarrow Mandatory Configuration

 \rightarrow Infrastructure Preparation \rightarrow (2) Setup Connectivity \rightarrow (2.2) Enable Connectivity \rightarrow Set Up Single Sign-On

مرماه المارين

Patches containing t	Published on		
SOLMANDIAG 720	SP003	800000	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

Detales a containing this poutle, les competies.

Note <u>2974330</u> - 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.limit5default [MB]sndTestMessage.monitor.payload.file.extensionstxt,xmldefault
```

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)

KBA <u>2997167</u> - 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?"

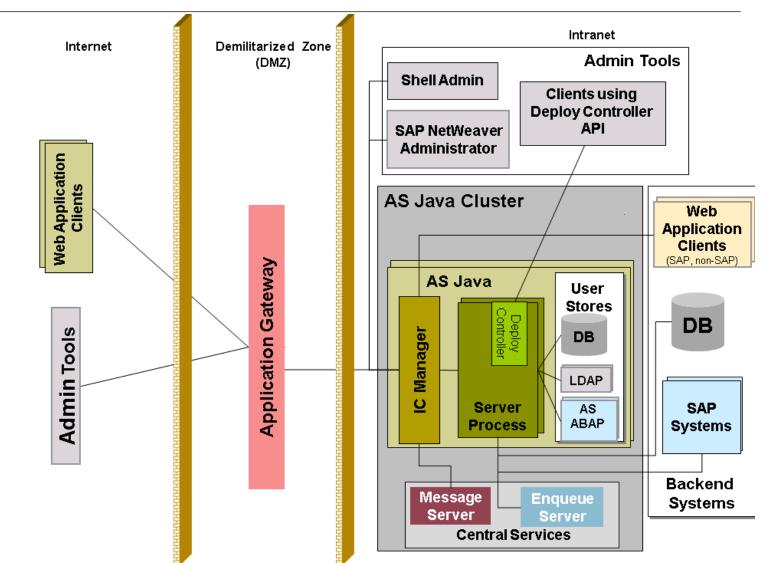
Yes, if the IP or FQDN of the remote client (who wants to make a p2p connection to the join port of some server node) is not allowed from the MS ACL, then the connection will be refused from the accepting server node.

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.

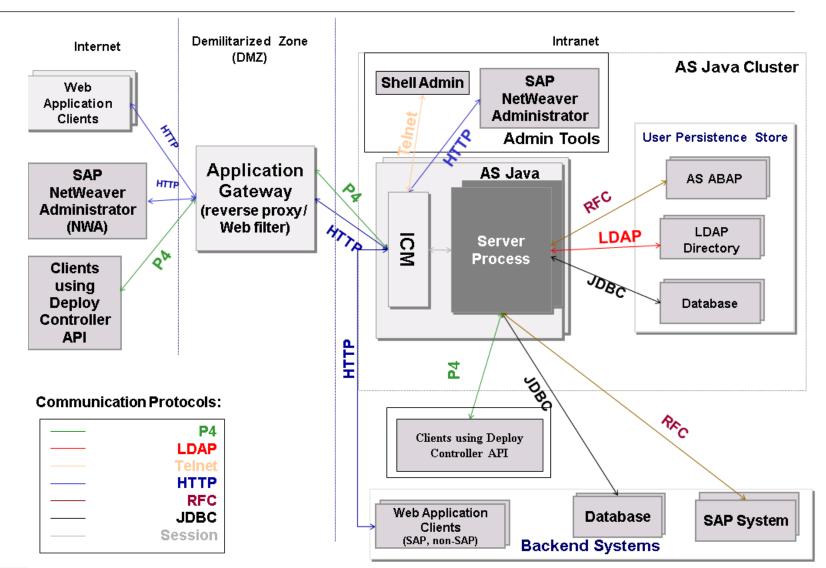
Online Help
<u>Technical System Landscape</u>

Use an Application Gateway, e.g. the SAP Web Dispatcher



Online Help
Transport Layer Security

Use an Application Gateway, e.g. the SAP Web Dispatcher



Online Help - <u>AS Java Ports</u> → 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

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></xx>	This parameter identifies the message server port at which HTTP(S) requests can arrive.

Note <u>2983367</u> - 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

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
SAPKW73121 - SAPKW73128
*$ Release 731
*$ 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 <<<<<<
```

Note <u>2670851</u> - 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

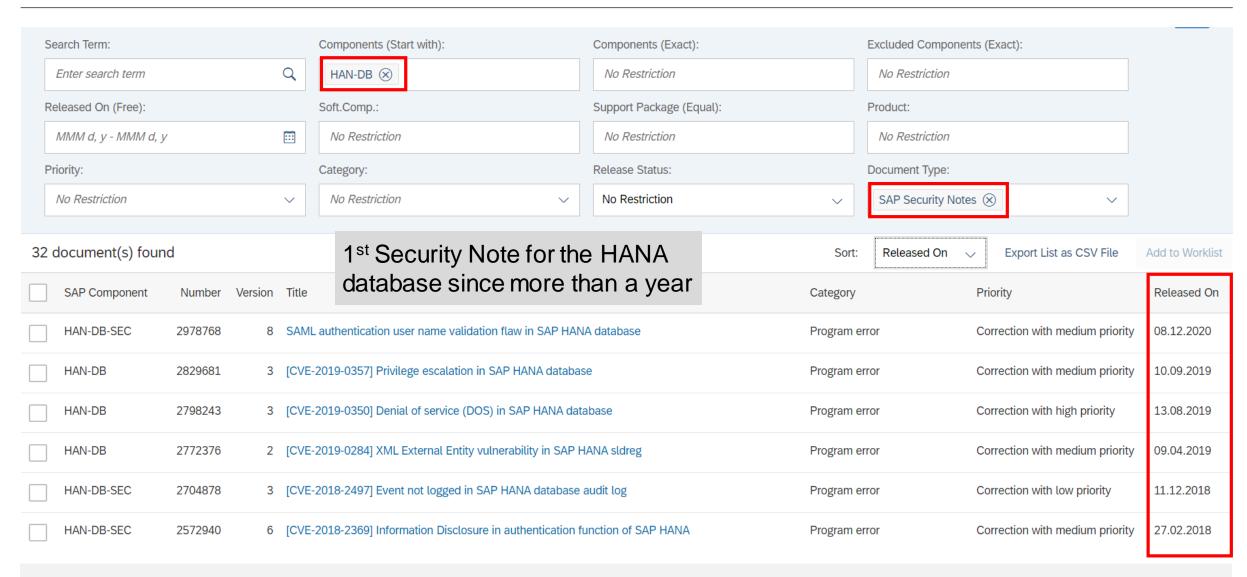
Authorizations for S_DEVELOP DEBUG 02 and S_TABU_DIS / S_TABU_NAM are required.

Do not use it in production systems!

In addition you should implement

Note 2999035 - Authority check S_TABU_DIS in RSSG_BROWSER

Note 2978768 - Inproper authentication in SAP HANA database



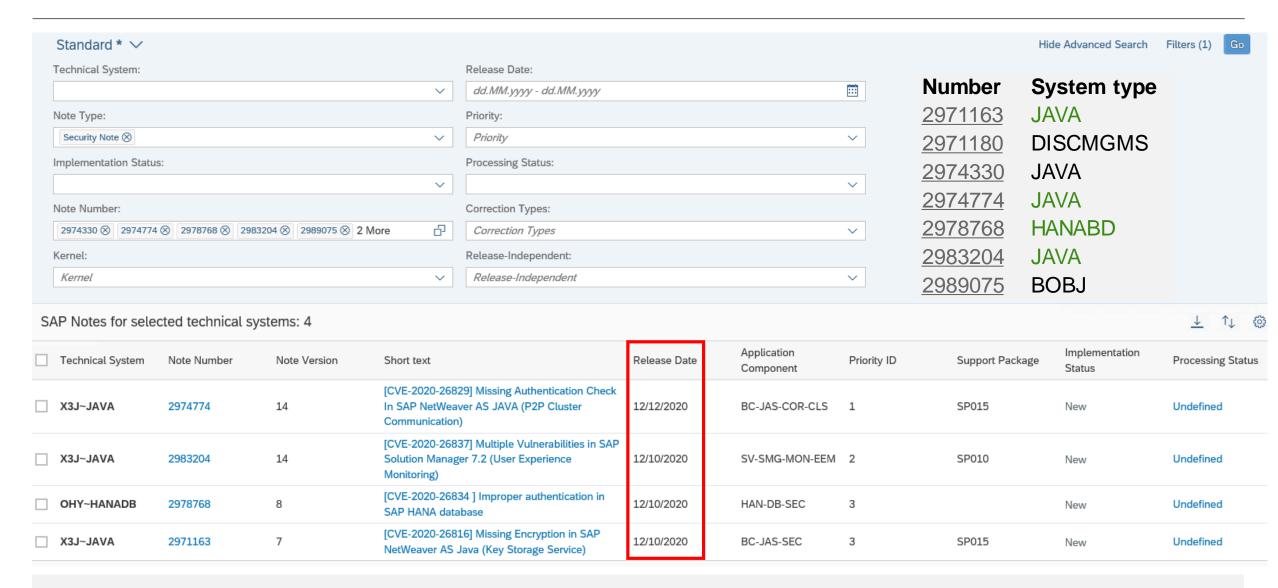
System Recommendations – Recalculation for some notes

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)
<u>2971180</u>	DISCMGMS	Formula Injection in SAP Disclosure Management
<u>2974330</u>	JAVA	Unrestricted File Upload vulnerability in SAP NetWeaver Application Server for Java (Process Integration Monitoring)
<u>2974774</u>	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)

System Recommendations – Recalculation for some notes



System Recommendations – Recalculation for some notes

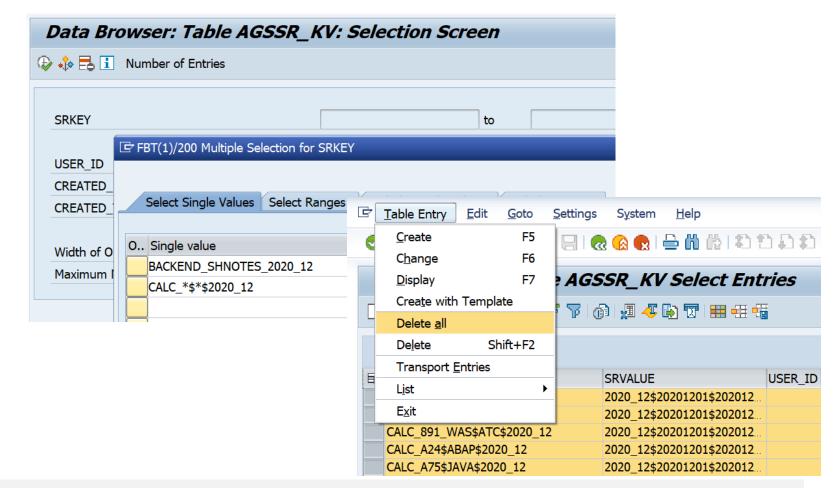
How to trigger recalculation: Use transaction SE16 for table AGSSR_KV to delete following entries for field SRKEY:

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





November 2020

Topics November 2020



Note <u>2952084</u> - Information Disclosure in SAP Process Integration (PGP Module – Business-to-Business Add On)

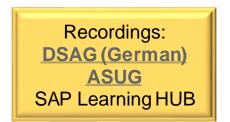
Note <u>2963592</u> - Cross-Site Scripting (XSS) vulnerability in SAP NetWeaver (Knowledge Management)

Note 2971112 - Incorrect Default Permissions in SAP ERP Client for E-Bilanz 1.

Note <u>2890213</u> - 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



Note <u>2952084</u> - 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

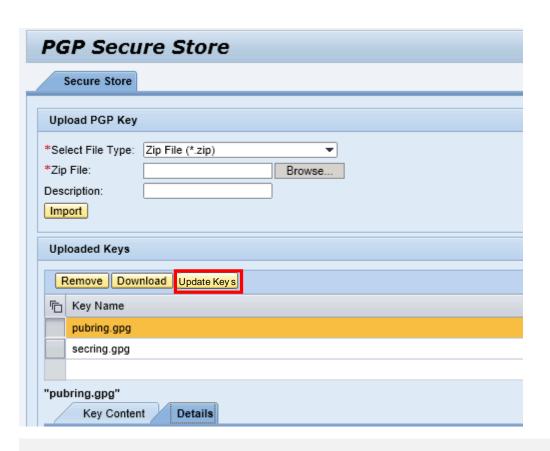
https://blogs.sap.com/2017/10/31/sftp-adapter-configuring-pgp-secure-store/

Use Configuration Store J2EE_COMP_SPLEVEL and search for element PIB2BPGP to show systemes and installed versions of that component:

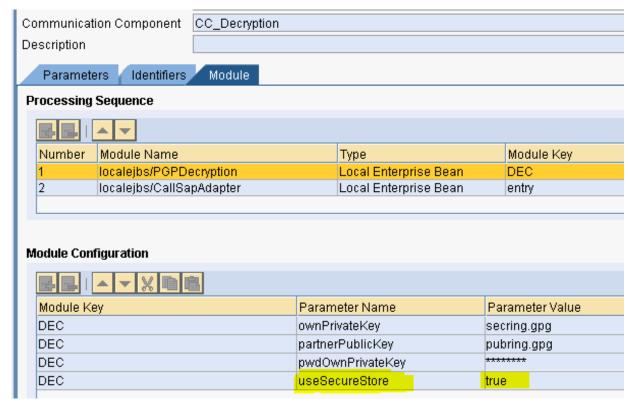
Landscape	Component Version	Store Name	Element Status	Element Class	Element Name	Element Value
i Java Technical System (JW5∼JAVA)	J2EE ENGINE SERVERCORE 7.50	J2EE_COMP_SPLEVEL	Initial (Current)	Table Row	[COMPONENT]=PIB2BPGP [RELEASE]=1.0	[EXTRELEASE]=5 [PATCH_LEVEL]=0 [DESCRIPTION]=PGP MODULE
i Java 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
i 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

Note <u>2952084</u> - 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)



Note <u>2952084</u> - 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.

Note <u>2963592</u> - 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 <u>2928635</u>, <u>2957979</u> and KBA <u>2932212</u> 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.

Note <u>2971112</u> - 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

Welcome to the Installation Wizard for SAP ERP Client for E-Bilanz

This Installation Wizard will install SAP ERP Client for E-Bilanz. To continue, click Next.

We recommend that you read the SAP Release

Note 2906774 before continuing.

SAP ERP Client for E-Bilanz Setup Installation for SAP ERP Client for E-Bilanz Completed The Installation Wizard has successfully installed SAP ERP Client for E-Bilanz, Click "Finish" to exit the wizard. Related Information Open Release Note Open SAP ERP Client for E-Bilanz User Guide 1.0.3.55 (1.0 SP03 PL12) Finish

Note <u>2890213</u> - Missing Authentication Check in SAP Solution Manager Note <u>2985866</u> - Missing Authentication Check in SAP Solution Manager

HotNews note (re)-published on 10.11.2020

corrected

.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 NetWeaverAdministrator 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	800000		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.

For this component you always install the latest patch of a specific Support Package.

Note <u>2890213</u> - Missing Authentication Check in SAP Solution Manager Note <u>2985866</u> - Missing Authentication Check in SAP Solution Manager

Related notes:

```
[...] Note \underline{2898858} - LM-SERVICE 7.20 SP 10 Patch 2 \rightarrow Solution for Webservice Security Note \underline{2908684} - LM-SERVICE 7.20 SP 10 Patch 4 \rightarrow Solution for Missing authentication check [...]
```

Note <u>2898818</u> - WebService Security (created in March 2020, not published but listed in patch info)

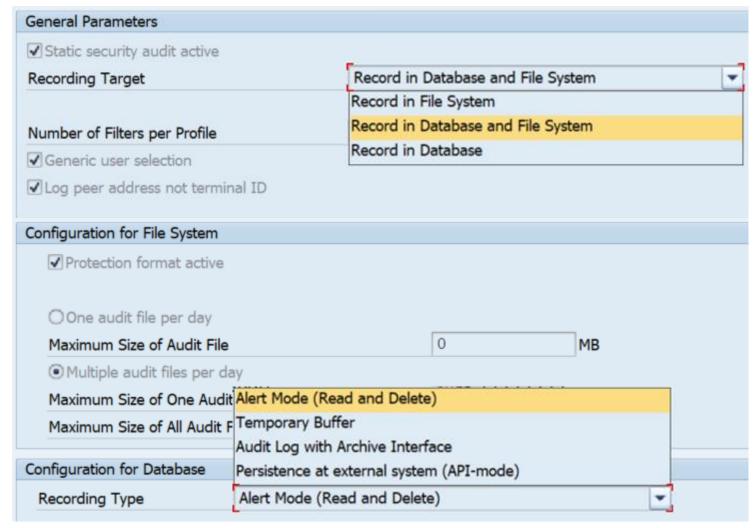
Scenarios for Using the Security Audit Log

Transaction RSAU_CONFIG offers several scenarios how to store events in files and/or in the database.

See documentation for <u>NW 7.50</u>

What is the purpose of these variants?

See documentation for S/4HANA 1909 or S/4HANA 2020 which explain these scenarios



Scenarios for Using the Security Audit Log

- 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
- 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.
- 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
- 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.

Recording Type

_

Alert Mode (Read and Delete)

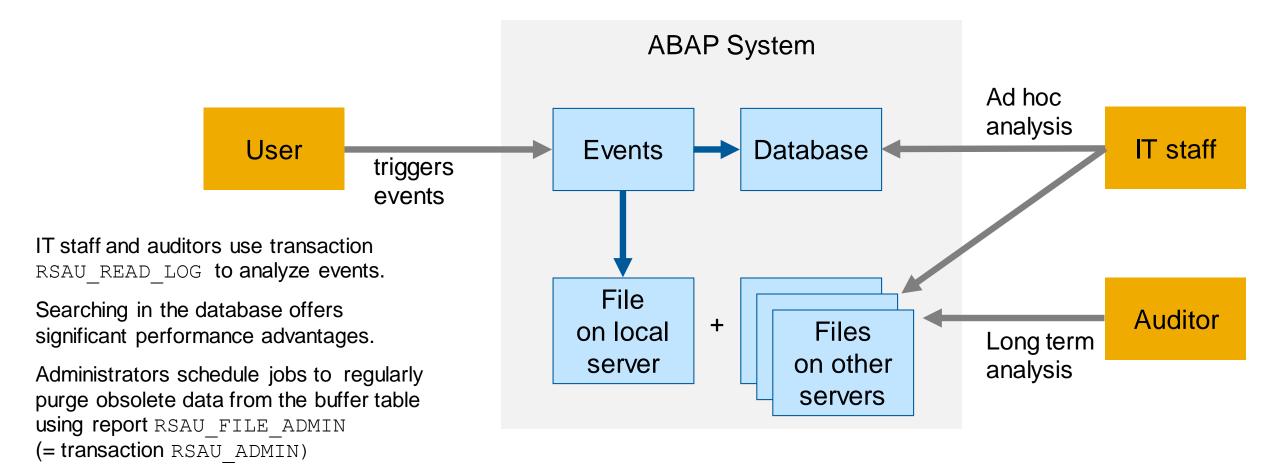
Temporary Buffer

Audit Log with Archive Interface

Persistence in ext. System (API)

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





October 2020

Topics October 2020





Note 2971638 - Hard-coded Credentials in CA Introscope Enterprise Manager

Note 2969828 - OS Command Injection Vulnerability in CA Introscope Enterprise Manager

Note <u>2941667</u> - Code Injection Vulnerability in SAP NetWeaver (ABAP) (reloaded)

Note <u>887164</u> - BSP Test Applications in Production Systems

Note <u>2973497</u> - Multiple Vulnerabilities in SAP 3D Visual Enterprise Viewer

Note <u>2883638</u> - Information Disclosure in Supplier Relationship Management

Note <u>2973100</u> - 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



SAP Secure By Default for S/4HANA on Premise 2020

Status - October 2020

Bjoern Brencher, S/4HANA Security



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.

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 <u>2926224</u> 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

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)

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

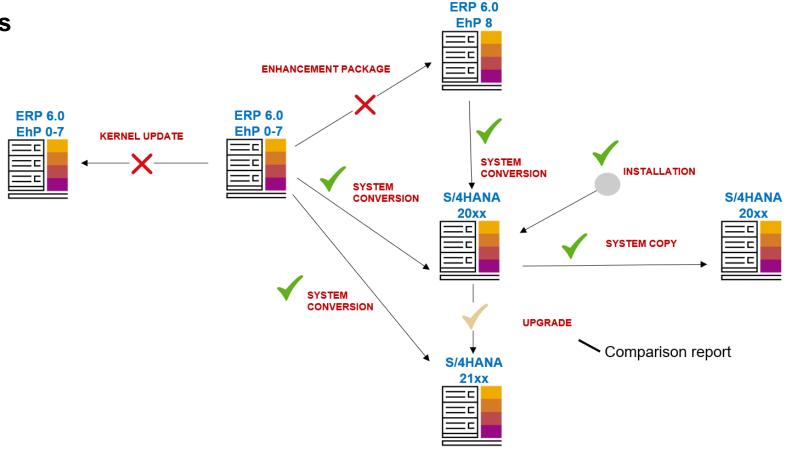
SUM 2.0 SP09

Target: S/4HANA 2020

Upgrades

No automated changes

Comparison report can be used



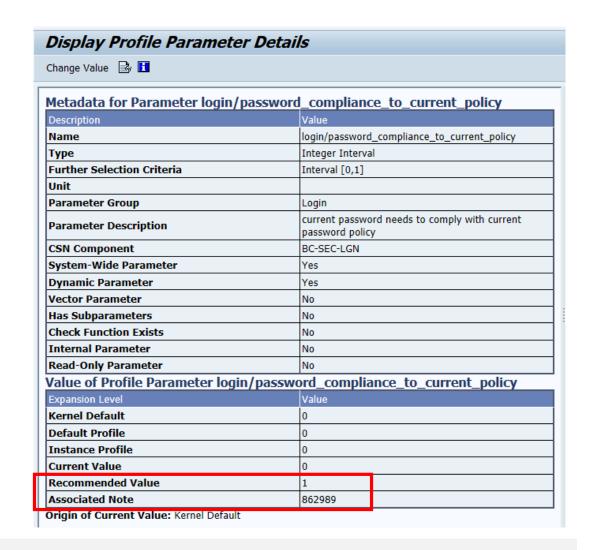
SAP Secure By Default for S/4HANA on Premise 2020 Technical View – Recommended Value for Profile Parameter

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



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

	# [
Parameter Name	Actual Value	Recommended Value	Related No
auth/check/calltransaction	3	3	515130
uth/object_disabling_active	N	N	2926224
uth/rfc_authority_check	6	6	2216306
ogin/password_downwards_compatibility	0	0	1023437
ogin/show_detailed_errors	0	0	2001962
c/callback_security_method	3	3	2678501
c/reject_expired_passwd	0	1	1591259
gin/password_hash_algorithm	encoding=RFC2307, algorithm=iSSHA-512, iterations=15000, saltsize=256	encoding=RFC2307, algorithm=iSSHA-512, iterations=15000, saltsize=256	2140269
gin/disable_cpic	1	1	2926224
gin/password_compliance_to_current_policy	0	1	862989
gin/password_max_idle_initial	0	7	862989
gin/password_max_idle_productive	0	180	862989
f/set_HTTPonly_flag_on_cookies	0	0	1277022
f/reject_expired_passwd	0	1	2579165
ystem/secure_communication	ON	ON	2040644
w/rem_start	DISABLED	DISABLED	2776748
w/reg_no_conn_info	255	255	2776748

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)

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

Thank you

Contact information



Bjoern Brencher S/4HANA Security E-mail: bjoern.brencher@sap.com



Note <u>2971638</u> - 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

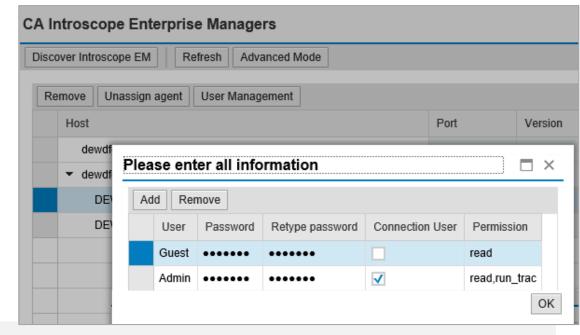
Guest. Use SAP Solution Manager, configuration step 4 "Define CA Introscope" in "Infrastructure Preparation" to set Introscope credentials. This updates the credentials on Introscope side as well as

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 predefined users Admin and Guest if they still have default values."



Note <u>2971638</u> - 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.

 $\textbf{Transaction AL11} \; (\texttt{viewonly}) \rightarrow \texttt{DIR_CCMS} \; \rightarrow \texttt{apmintroscope} \; \rightarrow \; \texttt{config} \; \rightarrow \; \texttt{users.xml}$

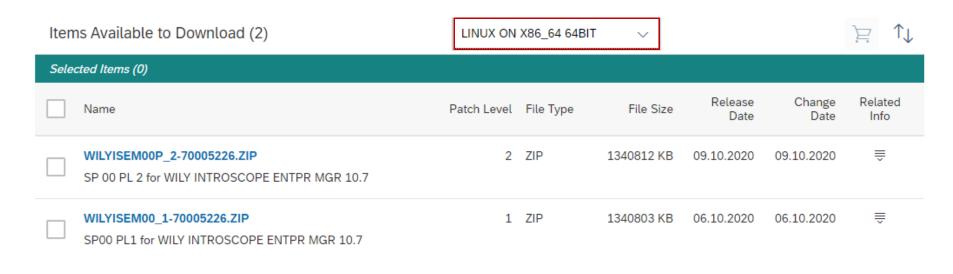
```
Directory:
              /usr/sap/ccms/apmintroscope/config
Name:
              users.xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<principals xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" version="0.3" plainTextPasswords="false" xsi:noNamespaceSchemaLocation="users0.3.xsd">
    <users>
        <user password="cf25f327d28e3476c61fb03e3266b1fc41b9b35cf07051625bc47abd7fb82fe4" name="Admin"/>
        <user password="e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca495991b7852b855" name="Guest"/>
    </users>
    <groups>
        <qroup 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>
```

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 <u>install to latest version</u> in any case:



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)

 $\textbf{Transaction AL11} \text{ (view only)} \rightarrow \texttt{DIR CCMS} \rightarrow \texttt{apmintroscope} \rightarrow \texttt{logs} \rightarrow \texttt{IntroscopeEnterpriseManager.log}$

```
Directory:
              /usr/sap/ccms/apmintroscope/logs
              IntroscopeEnterpriseManager.log
Name:
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
```

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 <u>1757810</u> – How to get the complete list of software components on your NetWeaver Application Server Java

Note <u>1771843</u> – How to identify and search the latest patch level for a Netweaver Java Component [VIDEO]

Note <u>1752501</u> – Retrieving the Java version information offline

Note <u>2181113</u> – Getting the Versions of Deployed Units on AS Java from a Command Prompt

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".

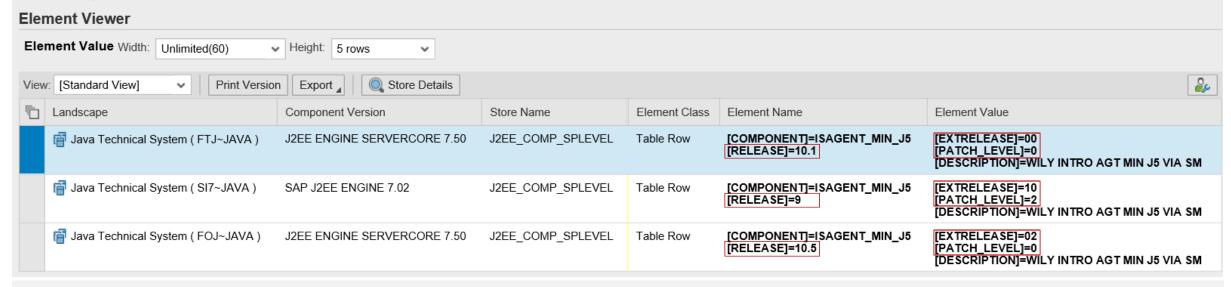
Transaction CCDB → **Status** → **Cross Selection**

Filter for Store Name = J2EE_COMP_SPLEVEL

Filter for Element Pattern = WILY*

Result:

Cross-system list of installed Software Component Versions



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

Note <u>2941667</u> - 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

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).

Note 887164 - BSP Test Applications in Production Systems

Deactivate test services according to note <u>887164</u>:

```
/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
```

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
```

Note <u>2948239</u>

Note <u>2973497</u> - 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 <u>2960815</u> - 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

Note <u>2883638</u> - 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 <u>1249846</u>, <u>1489343</u>, <u>1405908</u>, <u>1474056</u> and <u>1887020</u>.

See more information and debugging hints about inbound and outbound handler <u>here</u>.

Note <u>2973100</u> - 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 <<<<<<<</pre>
```

The existing authorization checks for authorization objects M_MATE_WGR, M_MATE_MAT, and M_MATE_MAR are rearranged in the code.

 \longrightarrow

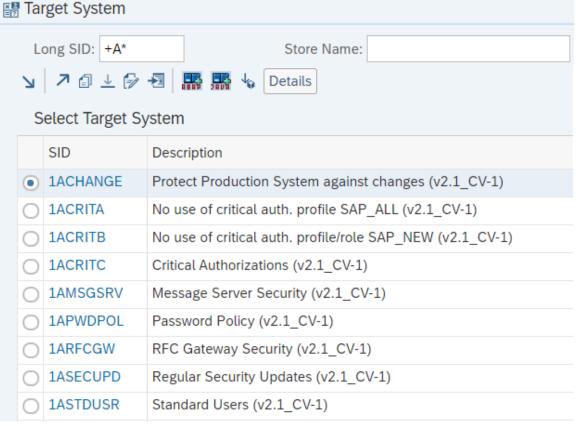
No adjustments of roles required

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)





Security Baseline Template 2.1 incl. ConfVal Package 2.1-CV-1

[Critical] Target System		[Standard] Target System		
1ACHANGE 1ACRITA 1ACRITB 1ACRITC 1AMSGSRV 1APWDPOL 1ARFCGW 1ASECUPD 1ASTDUSR	Protect Production System against changes No use of critical auth. profile SAP_ALL No use of critical auth. profile/role SAP_NEW Critical Authorizations Message Server Security Password Policy RFC Gateway Security Regular Security Updates Standard Users	2AAUDIT 2ACHANGE 2ACRITD 2ADISCL 2AFILE 2AMSGSRV 2ANETCF 2ANETENC 2AOBSCNT	Audit Settings Protect Production System against changes Protection of Password Hashes Information Disclosure Directory Traversal Protection Message Server Security Secure Network Configuration Encryption of Network Connections Obsolete Clients	
1HAUDIT 1HNETCF 1HPWDPOL 1HSECUPD	Audit Settings Secure Network Configuration Password Policy Regular Security Updates	2APWDPOL 2ASSO 2AUSRCTR 2HAUDIT	Password Policy Single Sign-On User Control of Action Audit Settings	
1HTRACES 1JMSGSRV 1JNOTEST 1JPWDPOL 1JSECUPD 1JRFCGW	Critical Data in trace files Message Server Security No Testing Functionality in Production Password Policy Regular Security Updates RFC Gateway Security	2HPWDPOL 2HSTDUSR 2JDISCL 2JMSGSRV 2JSELFRG 2JSESS	Password Policy Standard Users Information Disclosure Message Server Security No Self-Registration of Users Session Protection	

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

Important Notes for System Recommendations and Configuration Validation

Note <u>2729269</u> - CCDB: Config store GLOBAL_CHANGE_LOG, COMPONENTS_CHANGE_LOG, NAMESPACES_CHANGE_LOG	06.02.2019
Note <u>2764556</u> - ST 7.20 CV Dashboard Builder using function DIAGCPL_CV_DSH with database related co	onfiguration 05.03.2019
Note <u>2772002</u> - Warning in the store CLIENTS_CHANGE_LOG - Extractor not available [EXTR_NOT_FOUND	ND] 24.04.2019
Note 2843018 - ST 7.20 SP07-09 CV exceptions accept _ in extSID	25.09.2019
Note <u>2870159</u> - ST 7.20 CV for SysMon - add client information	05.12.2019
Note <u>2891758</u> - 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 <u>2747922</u> - SysRec: Corrections for Solution Manager 720 SP08 Fiori UI Note <u>2854704</u> - SysRec: Collective Corrections for Solution Manager 720 SP09 Fiori UI Note <u>2857899</u> - SysRec: Collective Corrections for Solution Manager 720 SP10 Fiori UI	15.09.2020 15.09.2020 15.09.2020
Note 2458890 - SysRec: Support SAP GUI Notes	17.09.2020



September 2020

Topics September 2020



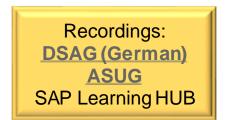
Note <u>2961991</u> - Improper Access Control in SAP Marketing (Mobile Channel Servlet)

Note <u>2960815</u> - Improper Input Validation in SAP 3D Visual Enterprise Viewer

Note <u>2958563</u> - Code Injection vulnerability in SAP NetWeaver ABAP

Note <u>2951325</u> - Improper Authorization Checks in Banking services from SAP Bank Analyzer and SAP S/4HANA Financial Products

Note <u>2934135</u> - Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard) – reloaded (Configuration Validation)



The Mobile Channel Servlet is an integral part of SAP Hybris Marketing Cloud which you install on SAP Cloud Platform.

Additional information:

Note <u>2963056</u> - FAQ - for SAP Note 2961991 - Improper Access Control in SAP Marketing (Mobile Channel Servlet)

Workaround:

Note <u>2962970</u> - Disable the SAP Cloud Platform Servlet Used by the SAP Marketing Mobile SDK

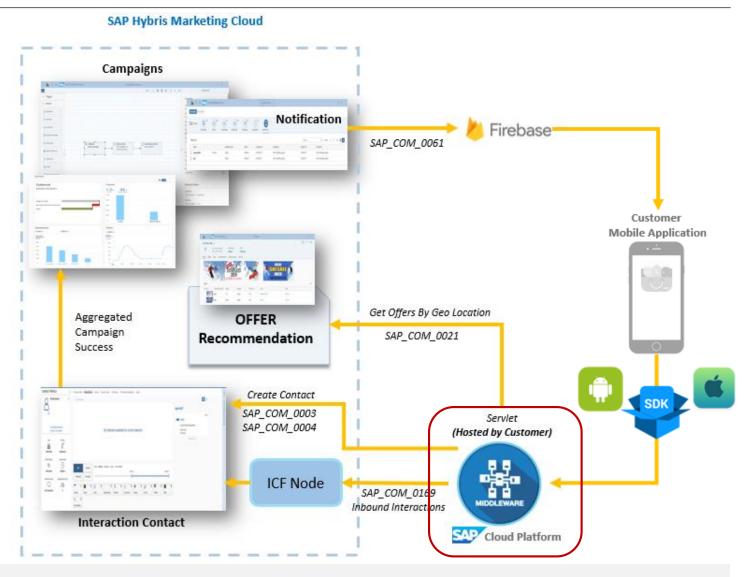
The note solves a vulnerability in the servlet used to integrate between Mobile Applications and the SAP Hybris Marketing Cloud.

You install this servlet on SAP Cloud Platform.

See Blog "Mobile Engagement using SAP Hybris Marketing" (2017)

https://blogs.sap.com/2017/08/23/mobileengagement-using-sap-hybris-marketing/

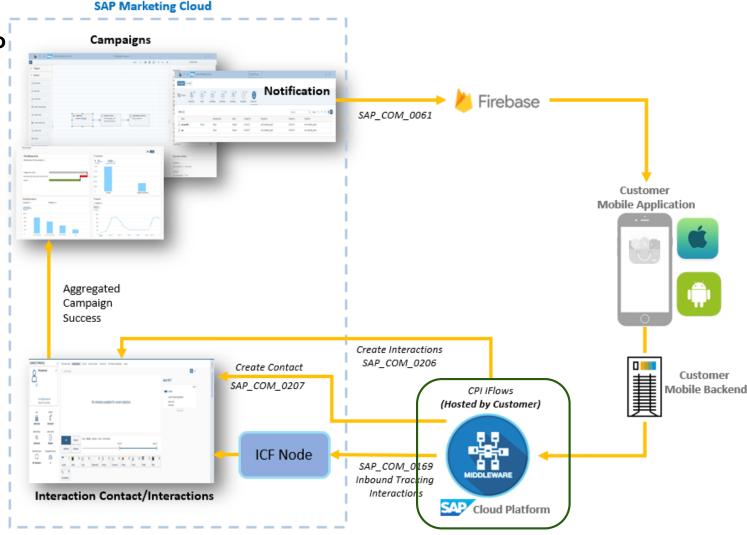
Tipp: The mobile SDK and servlet will be deprecated in future release 2011.



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/fd4e354968fd432db7
4bff1992c3a1fb/2005.500/enUS/712c1edf8ae945df84012a6c84213556.html



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.

:	Servlet_1709_SP02			
		Name	Date Modified	File Size
		mobilechannel.war	2020-09-07	14.2 MB
		Servlet_Guide_1709_SP02.pdf	2020-09-07	943 KB

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.

Note <u>2960815</u> - 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

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.

Note <u>2951325</u> - 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

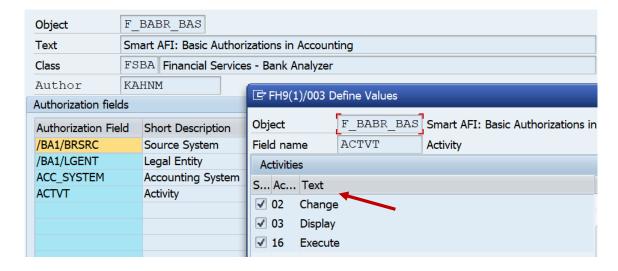
Updated authorization object F_BABR_BAS

Manual instruction: It might be required to add allowed activity 01=create in both cases to be

able to maintain authorizations in PFCG.

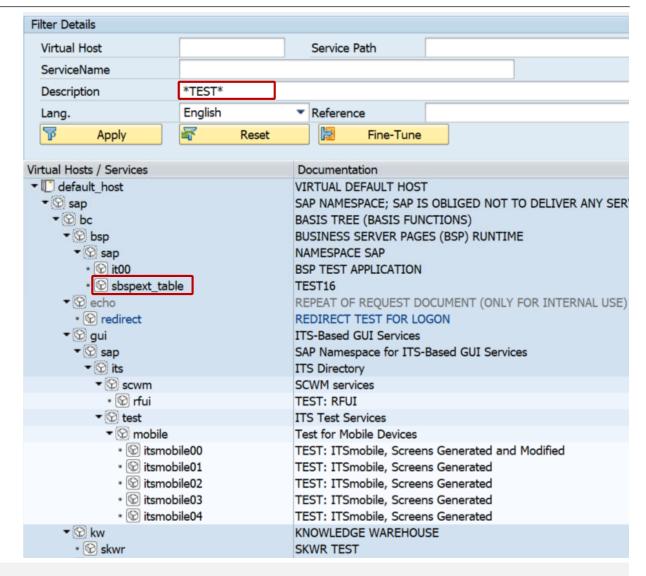
In any case you should validate roles which you have created similar to these ones:

SAP_FPS_CUSTOMIZER
SAP_FPS_EXP_FINANCIAL_ACCTNT
SAP_FPS_EXP_FINANCIAL_PLANNER
SAP_FPS_EXP_PLANNER
SAP_FPS_EXP_PLANNER



Note <u>2948239</u> - 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.



Cross system verification of installed patches

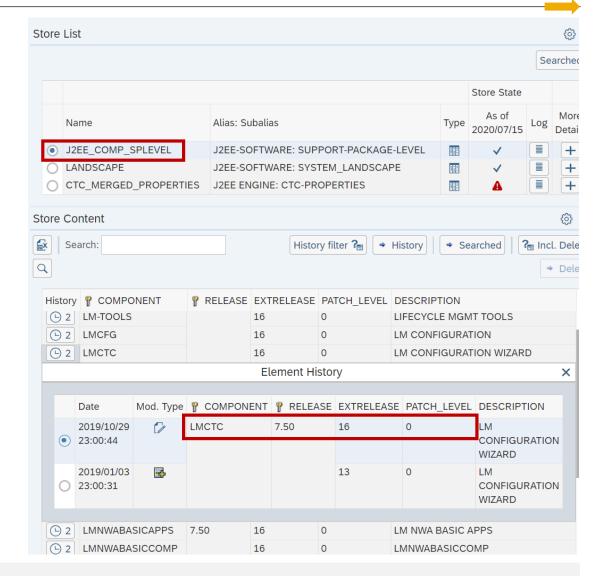
Application ChangeReporting or CCDB in the SAP Solution Manager

(Configuration Validation requires a trick)

Configuration Store: J2EE COMP SPLEVEL

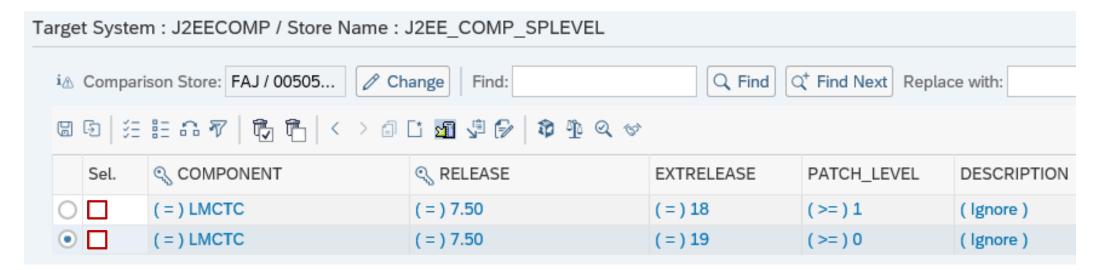
Component: LMCTC

Validation is possible in application Configuration & Security Analytics (CSA) in FRUN



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.

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	EXTREL EASE	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)

Result:

▽ Konfigurationselemente									
SAP-Systemkennung	Konfigurationselement	Wert des Configltems	KonfValid: Datenoper	Compliance	Konform (1=ja, -1=nein, " "=nicht bewertet)				
A75	COMPONENT:LMCTC/RELEASE 7.50	EXTRELEAS E:3 PATCH_LEVEL 0	>=EXTRELEASE:20/lgnorePATCH_LEVEL:	No	-1				
A8Z	COMPONENT:LMCTC/RELEASE 7.50	EXTRELEASE 10 PATCH_LEVEL 0	>=EXTRELEASE:20/lgnorePATCH_LEVEL:	No	-1				
BE4	COMPONENT:LMCTC/RELEASE 7.31	EXTRELEAS E:1 PATCH_LEVEL 0	>=EXTRELEASE:28/IgnorePATCH_LEVEL:	No	-1				
BEB	COMPONENT:LMCTC/RELEASE 7.50	EXTRELEAS E:0 PATCH_LEVEL 0	>=EXTRELEASE:20/lgnorePATCH_LEVEL:	No	-1				
BED	COMPONENT:LMCTC/RELEASE 7.50	EXTRELEAS E:0 PATCH_LEVEL 0	>=EXTRELEASE:20/lgnorePATCH_LEVEL:	No	-1				
BEF	COMPONENT:LMCTC/RELEASE 7.50	EXTRELEAS E:0 PATCH_LEVEL 0	>=EXTRELEASE:20/lgnorePATCH_LEVEL:	No	-1				
BEH	COMPONENT:LMCTC/RELEASE 7.50	EXTRELEAS E:0 PATCH_LEVEL 0	>=EXTRELEASE:20/lgnorePATCH_LEVEL:	No	-1				
BQ1	COMPONENT:LMCTC/RELEASE 7.31	EXTRELEAS E:7 PATCH_LEVEL 1	>=EXTRELEASE:28/IgnorePATCH_LEVEL:	No	-1				
EIB	COMPONENT:LMCTC/RELEASE 7.40	EXTRELEAS E:8 PATCH_LEVEL 0	>=EXTRELEASE:23/IgnorePATCH_LEVEL:	No	-1				
FAJ	COMPONENT:LMCTC/RELEASE 7.50	EXTRELEASE 18 PATCH_LEVEL 1	=EXTRELEASE:18/>=PATCH_LEVEL:1	Yes	1				
FBJ	COMPONENT:LMCTC/RELEASE 7.50	EXTRELEASE 15 PATCH_LEVEL 0	>=EXTRELEASE:20/lgnorePATCH_LEVEL:	No	-1				
FOJ	COMPONENT:LMCTC/RELEASE 7.50	EXTRELEASE 18 PATCH_LEVEL 1	=EXTRELEASE:18/>=PATCH_LEVEL:1	Yes	1				
FTJ	COMPONENT:LMCTC/RELEASE 7.50	EXTRELEASE 18 PATCH_LEVEL 1	=EXTRELEASE:18/>=PATCH_LEVEL:1	Yes	1				
GEA	COMPONENT:LMCTC/RELEASE 7.31	EXTRELEASE 10 PATCH_LEVEL 0	>=EXTRELEASE:28/IgnorePATCH_LEVEL:	No	-1				
JC3	COMPONENT:LMCTC/RELEASE 7.40	EXTRELEASE 10 PATCH_LEVEL 0	>=EXTRELEASE:23/IgnorePATCH_LEVEL:	No	-1				
JE7	COMPONENT:LMCTC/RELEASE 7.10	EXTRELEASE 19 PATCH_LEVEL 0	IgnoreEXTRELEASE:/IgnorePATCH_LEVEL:	Yes	1				
JW5	COMPONENT:LMCTC/RELEASE 7.50	EXTRELEASE 20 PATCH_LEVEL 0	>=EXTRELEASE:20/lgnorePATCH_LEVEL:	Yes	1				
N4Q	COMPONENT:LMCTC/RELEASE 7.10	EXTRELEASE 21 PATCH_LEVEL 0	IgnoreEXTRELEASE:/IgnorePATCH_LEVEL:	Yes	1				
N75	COMPONENT:LMCTC/RELEASE 7.50	EXTRELEAS E:3 PATCH_LEVEL 0	>=EXTRELEASE:20/lgnorePATCH_LEVEL:	No	-1				
PJ2	COMPONENT:LMCTC/RELEASE 7.31	EXTRELEASE 21 PATCH_LEVEL 0	>=EXTRELEASE:28/IgnorePATCH_LEVEL:	No	-1				
PJ4	COMPONENT:LMCTC/RELEASE 7.31	EXTRELEASE 14 PATCH_LEVEL 0	>=EXTRELEASE:28/IgnorePATCH_LEVEL:	No	-1				
P01	COMPONENT:LMCTC/RELEASE 7.31	EXTRELEASE 22 PATCH_LEVEL 0	>=EXTRELEASE:28/IgnorePATCH_LEVEL:	No	-1				
U3S	COMPONENT:LMCTC/RELEASE 7.31	EXTRELEASE 20 PATCH_LEVEL 0	>=EXTRELEASE:28/IgnorePATCH_LEVEL:	No	-1				
XI2	COMPONENT:LMCTC/RELEASE 7.40	EXTRELEAS E:9 PATCH_LEVEL 0	>=EXTRELEASE:23/IgnorePATCH_LEVEL:	No	-1				

Support Package too old Patch installed Patch missing Patch installed Patch installed Support Package too old Support Package too old Release not affected Support Package installed Release not affected Support Package too old Support Package too old



August 2020

Topics August 2020



Note <u>2835979</u> - Code Injection vulnerability in Service Data Download (reloaded)

Note <u>2928635</u> - Cross-Site Scripting (XSS) in SAP NetWeaver (Knowledge Management)

Note 2932212 - Security measures to protect malicious file uploading and opening in KM

Note <u>2957979</u> - 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 <u>2941667</u> - Code Injection Vulnerability in SAP NetWeaver (ABAP)

Note 2452425 - Collective Note - SAP SSO Certificate Lifecycle Management

Recordings:

DSAG (German)

ASUG

SAP Learning HUB

Note <u>2835979</u> - 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.)

Note <u>2928635</u> - Cross-Site Scripting (XSS) in SAP NetWeaver (KM) Note <u>2932212</u> - 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/f5af401efd8f2ae100000000a155106/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 <u>599425</u> Permissions for KM repositories

Older releases are not affected.

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 <u>2957979</u> 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.

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:

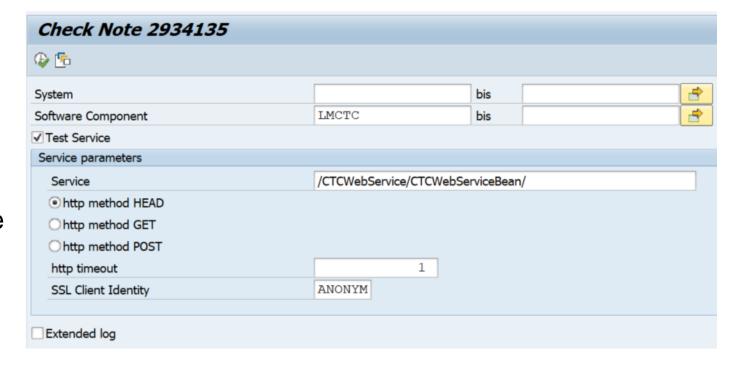
- ✓ 401 "Unauthorized" or an authentication pop-up after applying the patch according to SAP Note 2934135
- ✓ 404 "Not Found" after deactivating the application aliases according to SAP Note 2939665

In a SAP Solution Manager system you can use the report provided by KBA <u>2953257</u> to run this verification for all Application Server Java systems which are registered in the Software Lifecycle Directory (SLD).

KBA <u>2953257</u> - 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).



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/<mark>2.4.0</mark>.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/<mark>2.3.0</mark>.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 <u>2762504</u> - Disable predefined user/password authentication for OLAP connections by default

Note <u>2921615</u> - 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.

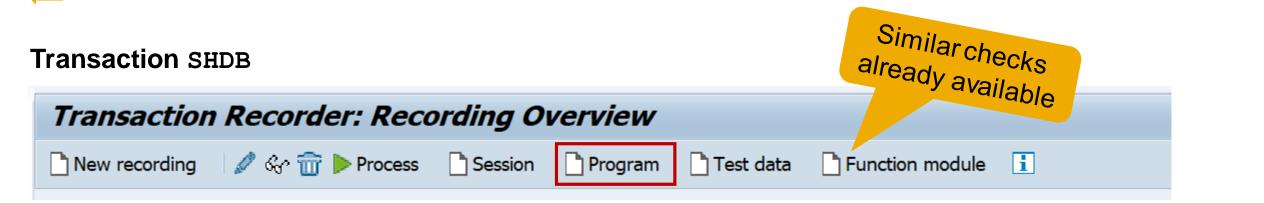
Connection data for an authentication plugin was stored including user with password in clear text.

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

Note <u>2941667</u> - Code Injection Vulnerability in SAP NetWeaver (ABAP) and ABAP Platform



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.

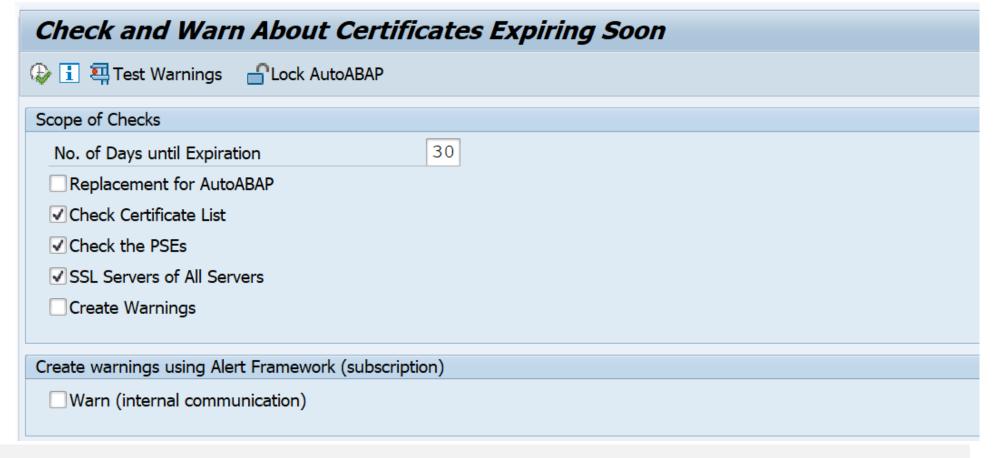
The minimal authorization required is S_DEVELOP with parameters OBJTYPE=PROG, OBJNAME=<name>, and ACTVT=01.

You cannot use this report (or this operation) in production systems anymore

Note <u>2452425</u> - 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 <u>572035</u>

Alerts only, no renewal

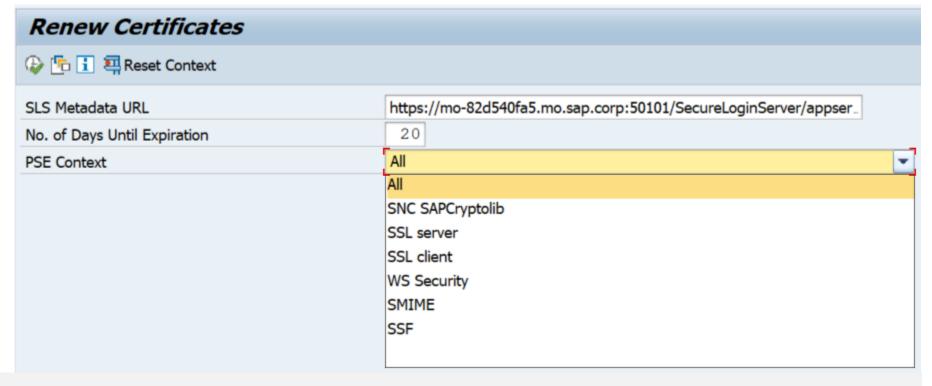


Note <u>2452425</u> - Collective Note - SAP SSO Certificate Lifecycle Management for ABAP

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/





July 2020

Topics July 2020



Note <u>2934135</u> - Multiple Vulnerabilities in SAP NetWeaver AS JAVA (LM Configuration Wizard)

Note <u>2774489</u> - Code Injection vulnerability in ABAP Tests Modules of SAP NetWeaver Process Integration

Note <u>2932473</u> - Information Disclosure in SAP NetWeaver (XMLToolkit for Java)

Note <u>2923117</u> - How to address problems with old TLS protocol versions in clients accessing SAP Cloud Platform NEO (reloaded)

Note <u>2923799</u> - 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



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 <u>2948106</u> - FAQ - for SAP Note 2934135

Note <u>2939665</u> - Disable LM Configuration Wizard

Note <u>1589525</u> (describing firewall URL filter rules)

Note <u>1451753</u> (describing filtering of administration requests)

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 <u>1589525</u> or develop filter rules for administrative requests according to note <u>451753</u>

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 <u>1715441</u>) or if possible SUM (see <u>Blog</u> and Note <u>1641062</u>). Software Download Example:

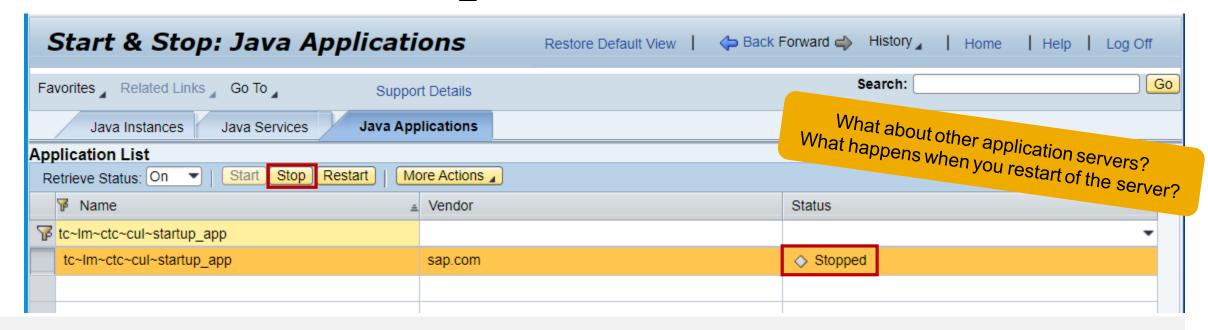
https://launchpad.support.sap.com/#/softwarecenter/search/LM%2520CONFIGURATION%2520WIZARD%25207.50

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.

View current status:

Call the NetWeaver Administrator at http(s)://<host>:<port>/nwa and login with admin user

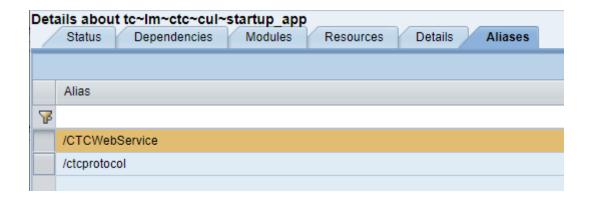
- **→ Operations**
- → **Start and Stop** (you can cancel any additional logon popup for OS credentials)
- → JAVA Applications
- → Filter for tc~lm~ctc~cul~startup_app



View current status (continued):

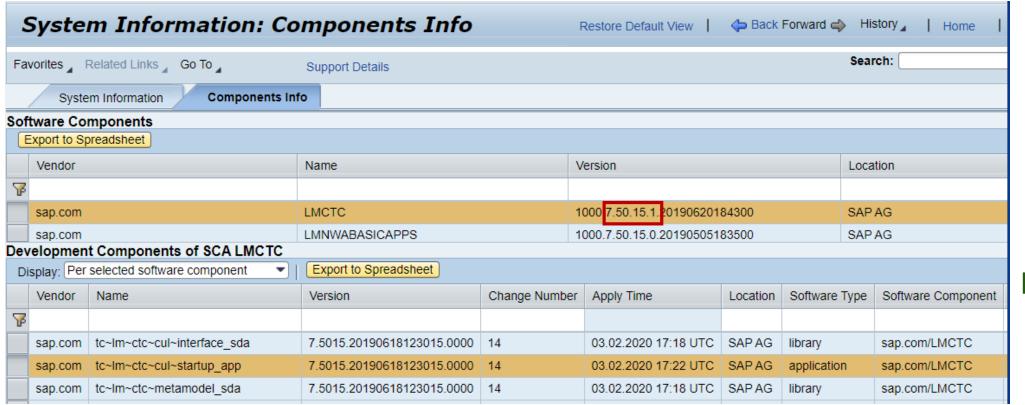
In the lower part you can view the application aliases which are associated with this application.

These are the aliases which you should deactivate according to **Note** 2939665



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



7.11 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

7.10 not affected

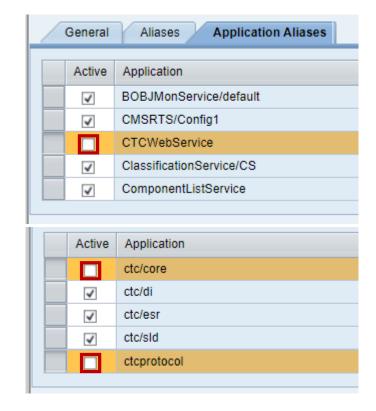
Disable Service:

Call the NetWeaver Administrator at http(s)://<host>:<port>/nwa and login with admin user

- \rightarrow Configuration
- → Infrastructure
- → JAVA HTTP Provider Configuration
- → Application Aliases

Scroll down and deactivate

CTCWebService ctc/core ctcprotocol

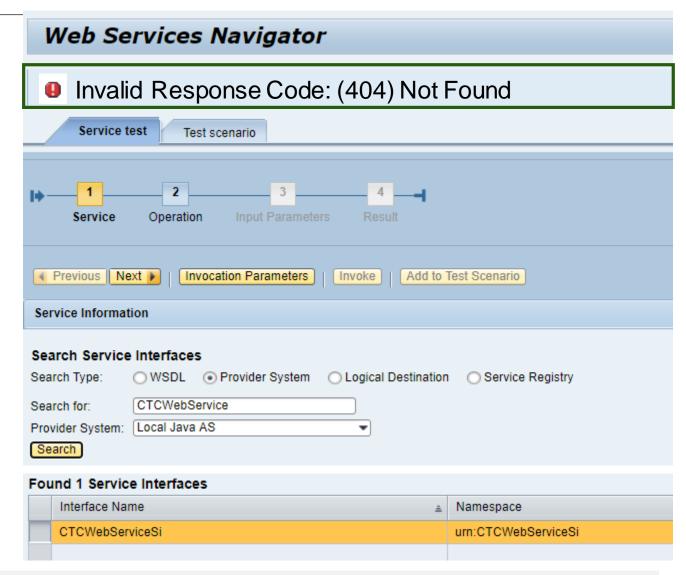


Verify deactivation:

Call the Web Service Navigator at <a href="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.



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.

Alternative option to deactivate the application

Disable application:

Call the NetWeaver Administrator at http(s)://<host>:<port>/nwa and login with admin user

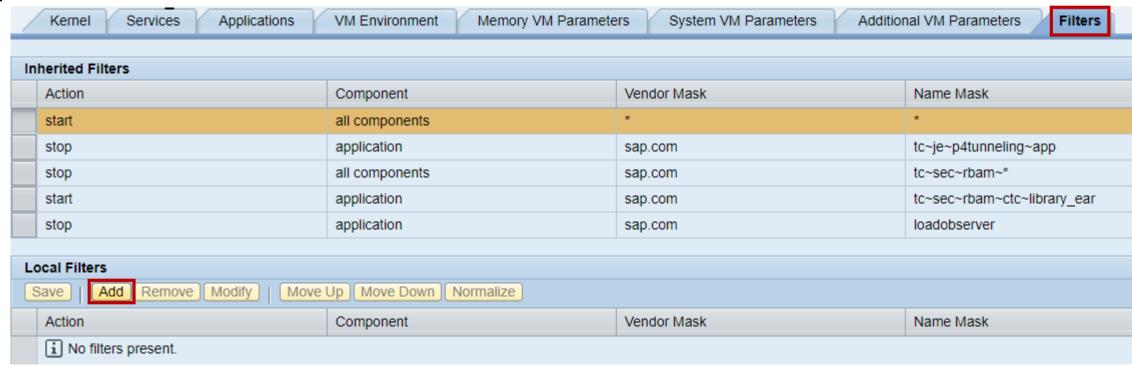
- → Operations
- → Start and Stop (you can cancel any additional logon popup for OS credentials)
- → JAVA Applications
- → More Actions
- → Edit Startup Filters



Alternative option to deactivate the application

Disable application (continued):

- → Filters
- \rightarrow Add



Alternative option to deactivate the application

Disable application (continued):

Enter Filter:

Action: disable

Vendor mask: sap.com

Component: application

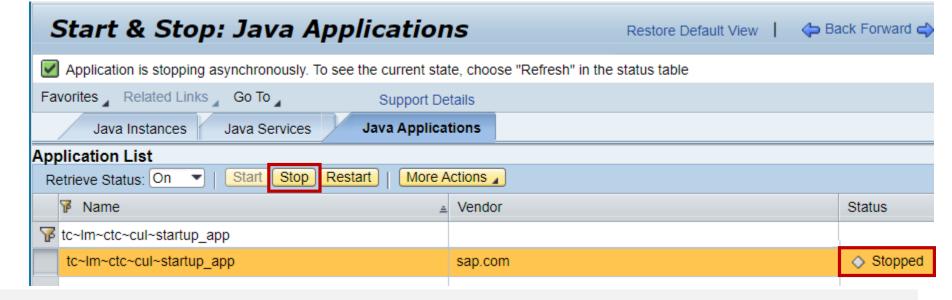
Component Name mask: tc~lm~ctc~cul~startup_app



Set and Save the Filter

Filters were saved successfully. In order for the changes to take effect, restart the cluster.

You can stop the application manually as well:



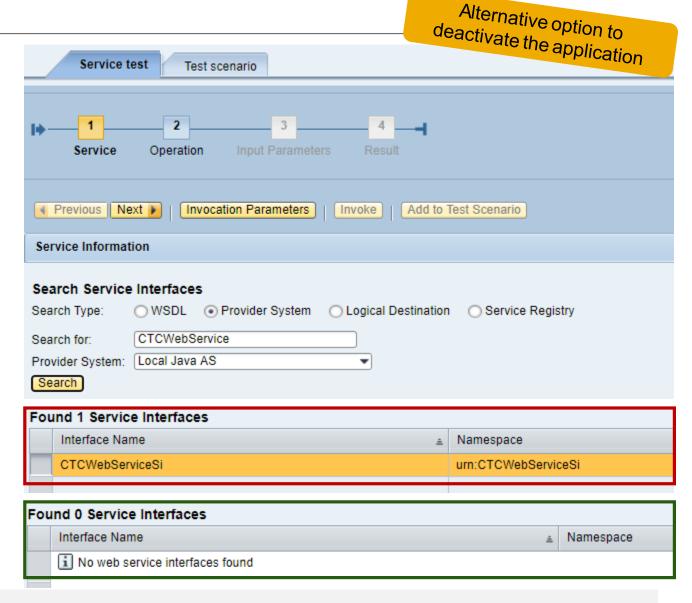
Verify deactivation:

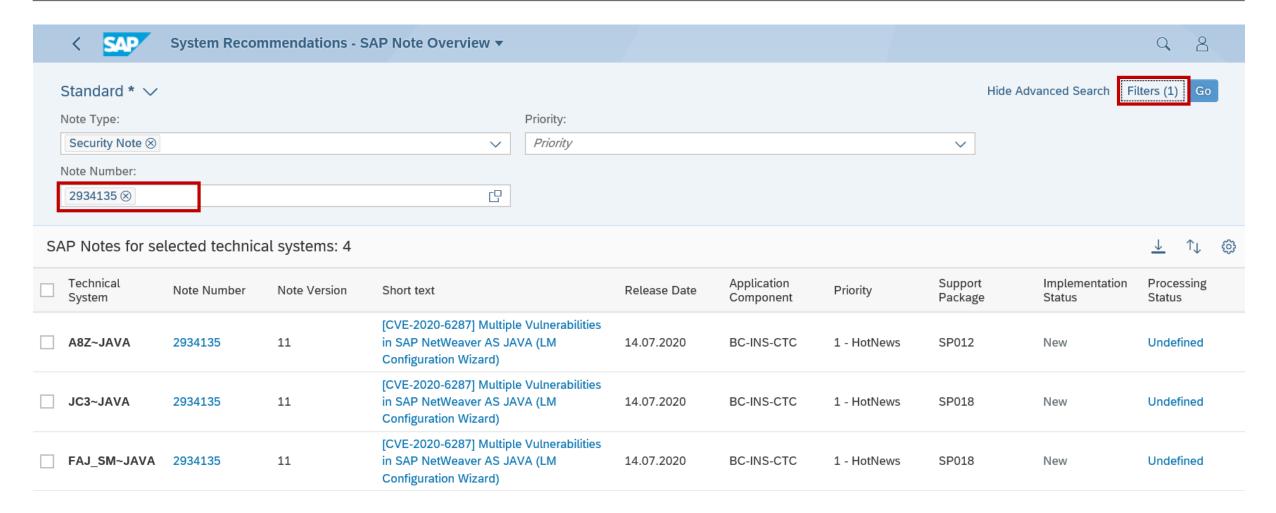
Call the Web Service Navigator at <a href="http(s)://<host>:<port>/wsnavigator and login with admin user

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:





https://<host>:<port>/sap/bc/ui2/flp?sap-client=<client>&sap-language=EN#Action-UISMMySAPNotes&/NoteOverview/sapnote=2934135

Cross system verification of installed patches

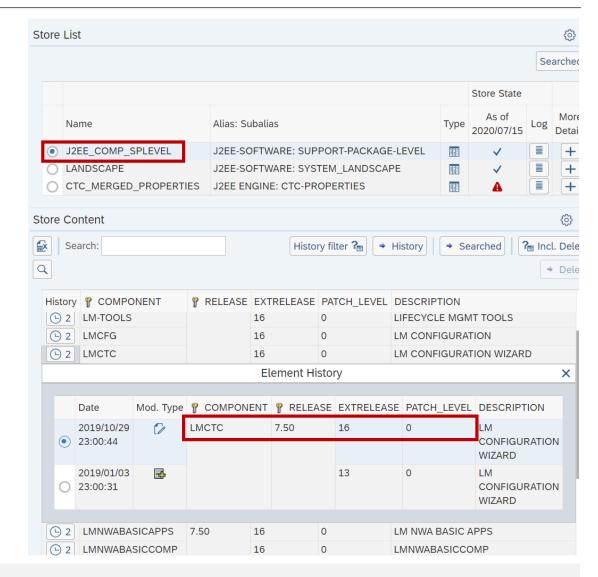
Application ChangeReporting or CCDB in the SAP Solution Manager

(Configuration Validation requires a trick)

Configuration Store: J2EE COMP SPLEVEL

Component: LMCTC

Validation is possible in application Configuration & Security Analytics (CSA) in FRUN



Note <u>2774489</u> - 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 <u>CVE-2019-0328</u>

Note <u>2932473</u> - Information Disclosure in SAP NetWeaver (XMLToolkit for Java)

Reported by a customer via secure channel:

https://support.sap.com/securitynotes

 \longrightarrow

Report a Vulnerability

 \longrightarrow

- 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)

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.



There is no SAP CP system or application administered by this user with TLS 1.0 or TLS 1.1 traffic. If you still suspect that there is such traffic, you can request a detailed investigation via a Service Ticket in component BC-NEO-SEC-CPG and with "TLS Migration" in the header

TLS 1.0 / 1.1 Traffic Analysis

LOG_SOURCE = 'CPI'

USER_AGENT = 'SAP NetWeaver Application Server%'

USER_AGENT = 'SAP Web Application Server%'

Sum("REQUESTS") < DAYS

Sum("REQUESTS") without USER_AGENT > DAYS

USER_AGENT that is no Web Browser

Old Browser/Device

Recent Browser/Device

Many different Browser/Devices

- → Cloud Platform Integration in general
- → NetWeaver Application Server
- → ABAP Application Server
- → Suspected false-positive
- → Non-Browser Client
- → Non-Browser Client
- → Update Browser or Device
- → Check Network Devices
- → External User-Facing Website

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)
                                          $(DIR LIBRARY)$(DIR SEP)libsapcrypto.so
SAPCRYPTOLIB
sec/libsapsecu
                                          $ (SAPCRYPTOLIB)
ssf/ssfapi lib
                                          $ (SAPCRYPTOLIB)
ssl/ssl lib
                                          $ (SAPCRYPTOLIB)
                                          135:PFS:HIGH::EC P256:EC_HIGH
ssl/ciphersuites
                                          150:PFS:HIGH::EC P256:EC HIGH
ssl/client ciphersuites
icm/HTTPS/client sni enabled
                                          TRUE
ssl/client sni enabled
                                          TRUE
```

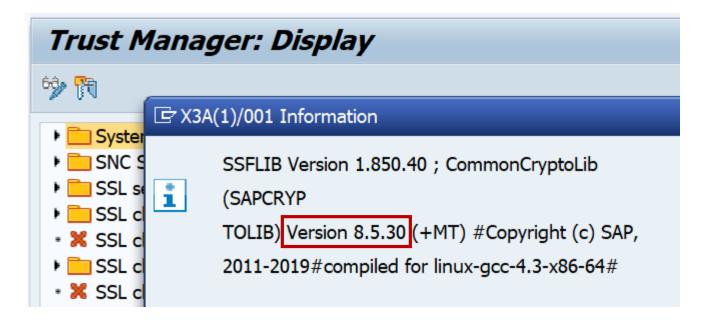
Please ensure that you are not loading an old Cryptolib from a location other than \$ (DIR_EXECUTABLE) with custom values for profile parameters ssl/ssl_lib, ssf/ssfapi_lib, sec/libsapsecu. see also section 2 of SAP Note 510007.

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 \rightarrow "Environment" \rightarrow "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 <u>2083594</u> 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.



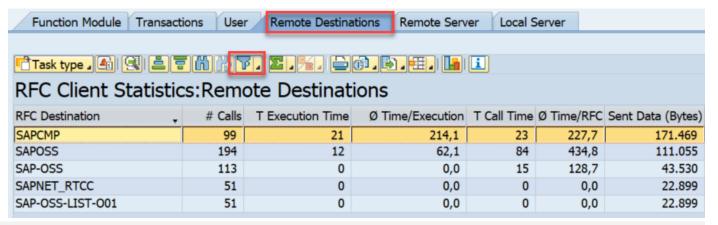
Note 2923799 - Final Shutdown of RFC Connections From Customer Systems to SAP

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-001



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 <u>2934203</u> - ST-A/PI 01T* SP01 - 01U SP00: SAP backbone connectivity for RTCCTOOL Note <u>2837310</u> - Connecting Legacy Systems with https to SAP Support Backbone

KBA <u>2911301</u> / Note <u>2946444</u> - SAP Support Portal connection - Renew client certificate

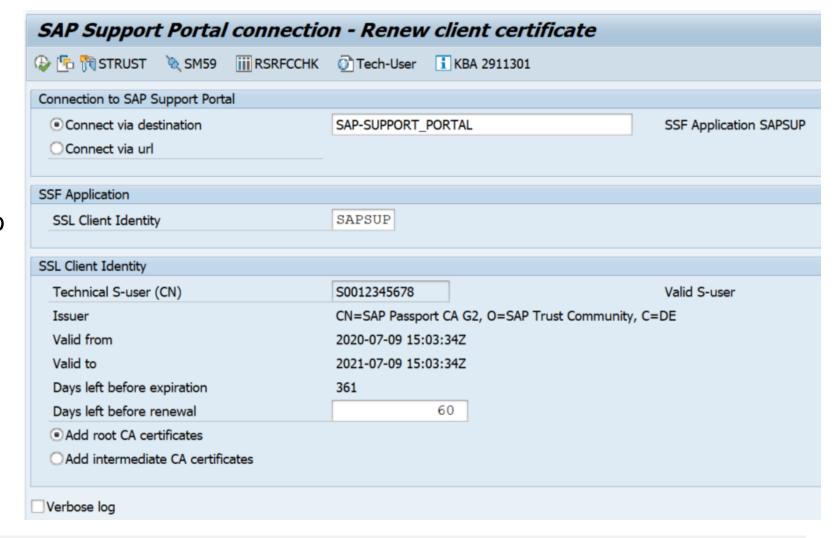
You have enabled client certificate authentication for technical communication users according to KBA 2805811.

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



Recommended Notes for System Recommendations

Note <u>2950184</u> - 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 <u>2913837</u> - SYSREC: System recommendation reports the already implemented notes

Note <u>2747922</u> - SysRec: Collective Corrections for Solution Manager 720 SP08 Fiori UI

Note <u>2854704</u> - SysRec: Collective Corrections for Solution Manager 720 SP09 Fiori UI

Note <u>2857899</u> - SysRec: Collective Corrections for Solution Manager 720 SP10 Fiori UI



June 2020

Topics June 2020



Note <u>2761608</u> - RFC Callback rejected: Analysis

Note 2912939 - Server Side Request Forgery vulnerability in SAP NetWeaver AS ABAP

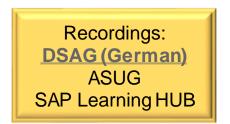
Note 2918924 - Use of Hard-coded Credentials in SAP Commerce and SAP Commerce Datahub

Note 2933282 - Missing Authorization Check in SAP SuccessFactors Recruiting

Note <u>2541823</u> - Switchable authorization checks for RFC in SAP CRM (external billing)

Note <u>2878935</u> - Cross-Site Scripting (XSS) vulnerability in SAP NetWeaver AS ABAP (BSP Test Application SBSPEXT_TABLE)

Note <u>2423576</u> - SAIS | Generic audit report about system changes



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:

Limitation: Currently this option is only valid for SAP_BASIS 7.40 SP 6-21 (via this note)

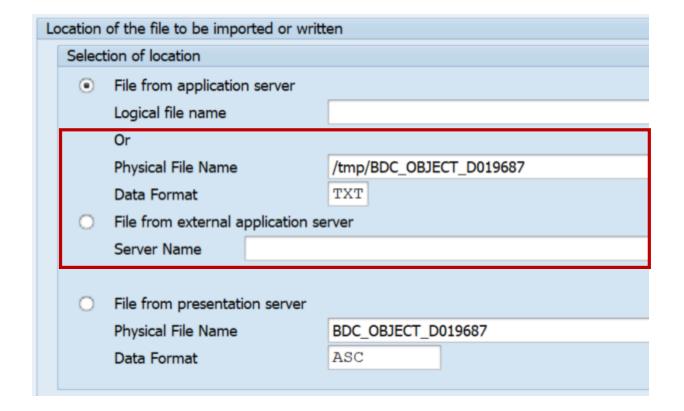
Note <u>2912939</u> - Server Side Request Forgery vulnerability in SAP NetWeaver AS ABAP

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

Note <u>2918924</u> - 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 <u>Disabling All Default Passwords for Users</u> guide by making use of the scripts provided in Note <u>2922193</u>.

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

Note <u>2933282</u> - 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..."

Note <u>2541823</u> - 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.

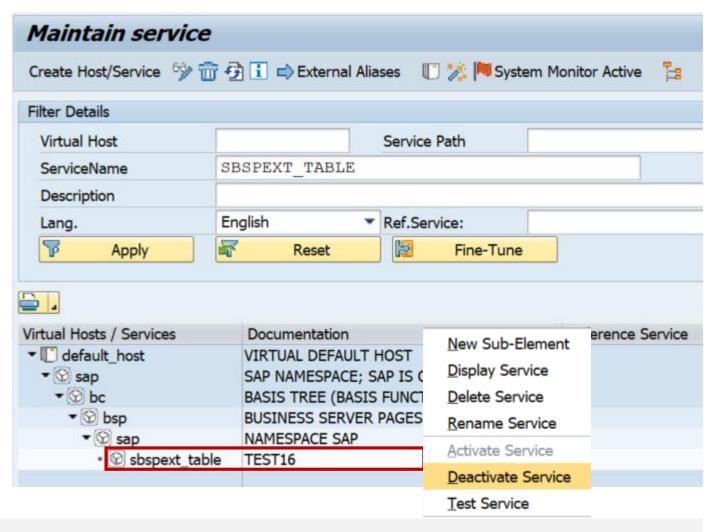
Note version 2 from 09.06.2020: The attachment is missing

Note <u>2878935</u> - 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?



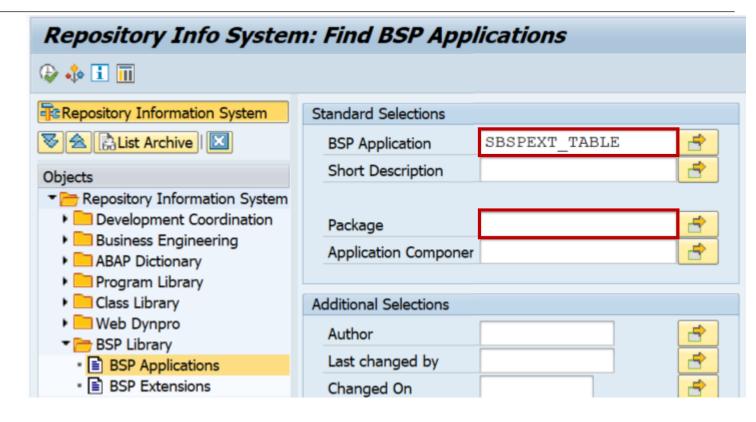
Note <u>2878935</u> - Cross-Site Scripting (XSS) vulnerability in SAP NetWeaver AS ABAP (BSP Test Application SBSPEXT_TABLE)

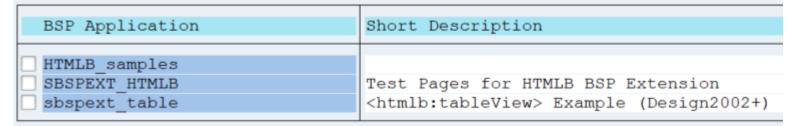
Use transaction SE84 to view the properties of service SBSPEXT_TABLE

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





Note <u>2423576</u> - 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

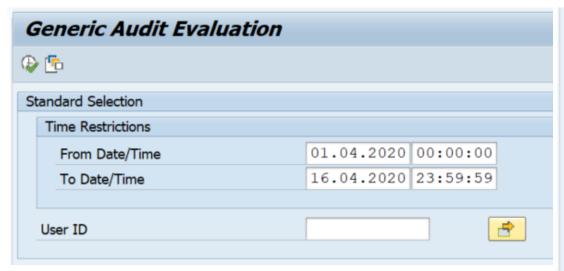
12:15 Auditfunktionen im AIS

- SAIS: Cockpit als Ersatz für SECR und rollenbasiertes Audit

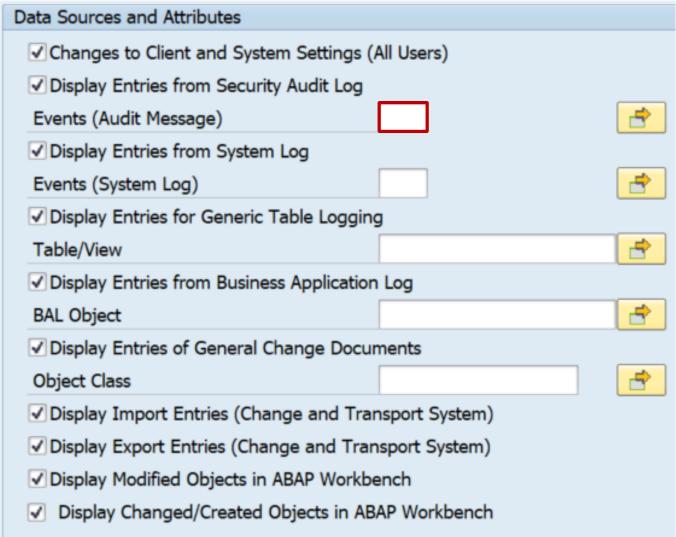
SAIS_Moni Prototyp f
ür "Was ist passiert" Infosystem (bspw. In der Zugangszeit eines SuperUsers)

- 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

Note <u>2423576</u> - SAIS | Generic audit report about system changes Selection Screen



Transaction / Report SAIS_MONI collects events from various sources:



Note 2423576 - SAIS | Generic audit report about system changes **Data Sources**

Transaction / Report SAIS MONI collects events:

Changes to Client and System Settings (All Users) SE06

Display Entries from Security Audit Log

Display Entries from System Log

Display Entries for Generic Table Logging

Display Entries from Business Application Log

Display Entries of General Change Documents

Display Import Entries (Change and Transport System)

Display Export Entries (Change and Transport System)

Display Modified Objects in ABAP Workbench

Display Changed/Created Objects in ABAP Workbench

Corresponding standard function:

RSAU READ LOG

SM21 / RSYSLOG

RSTBHIST / RSVTPROT

SLG1

RSSCD100 / CHANGEDOCU READ

SE03 RSWBOSSR

SE03 RSWBOSSR

SE95

SE84

Note <u>2423576</u> - SAIS | Generic audit report about system changes Example

Generic Audit Evaluation



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

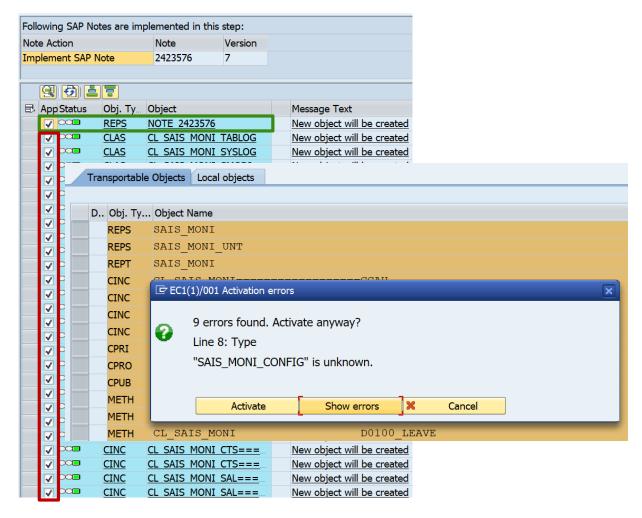
Source	Date	Time	User	Clie	Server	Instance	Termi	TCode	Program Name	Event	Object	
BAL	17.06.2020	09:35:06	D019687	001				SE38	NOTE_2423576	SNOT	Msg.: 000098 Ext.No.: NOTE_24235	576
	17.06.2020	10:18:04	D019687	001				SE38	NOTE_2423576	SNOT	Msg.: 000089 Ext.No.: NOTE_24235	76
	17.06.2020	10:21:25	D019687	001				SE38	NOTE_2423576	SNOT	Msg.: 000098 Ext.No.: NOTE_24235	576
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

Note <u>2423576</u> - SAIS | Generic audit report about system changes Implementation via SNOTE

SNOTE creates several new objects and fails if you try it in one step:

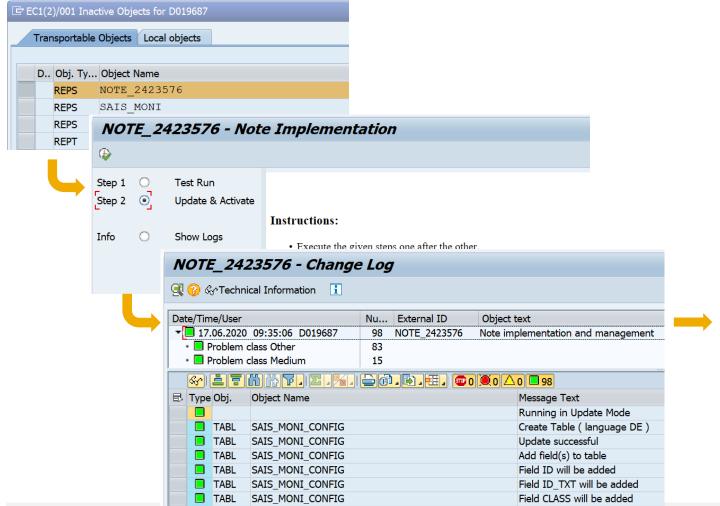
According to the manual correction instruction you should implement, activate and execute report NOTE 2423576 first.

https://launchpad.support.sap.com/#/notes/0002423576/D

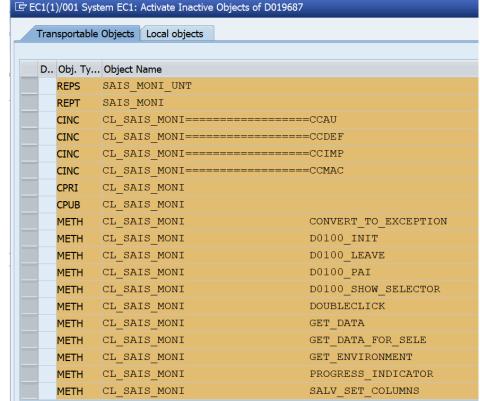


Note <u>2423576</u> - SAIS | Generic audit report about system changes Implementation via SNOTE

If you missed that, activate and execute this report NOTE_2423576 in SE38:



Than restart SNOTE and activate all remaining objects:

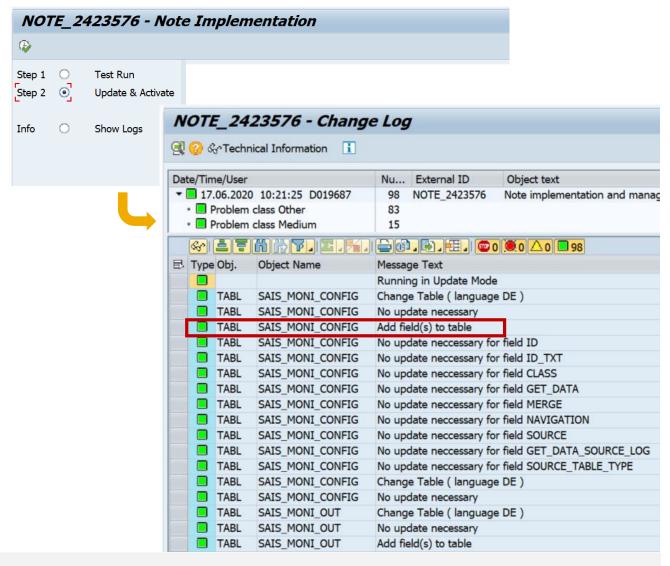


Note <u>2423576</u> - SAIS | Generic audit report about system changes Implementation via SNOTE

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





May 2020

Topics May 2020



Note <u>2923117</u> - How to address problems with old TLS protocol versions in clients accessing SAP Cloud Platform NEO

Note <u>2917090</u> - Information Disclosure in SAP Adaptive Server Enterprise (Cockpit)

Note <u>2917275</u> - Code injection in SAP Adaptive Server Enterprise (Backup Server)

Note <u>2835979</u> - Code Injection vulnerability in Service Data Download

Note <u>2885244</u> - Missing Authentication check in SAP Business Objects Business Intelligence Platform (Live Data Connect)

Note <u>2734580</u> - Information Disclosure in SAP ABAP Server

Note <u>2911801</u> - Binary planting vulnerability in SAP Business Client



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 <u>2503155</u>
- Versions higher than 7.10: Note <u>2540433</u>

SAP NetWeaver Process Integration as Client contacting SAP Cloud Platform

- TLSv1.2 support in REST adapter: Note <u>2295870</u>
- TLSv1.2 support in Axis adapter: Note <u>2292139</u>

> 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 <u>510007</u>
- 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.

Note <u>2917090</u> - Information Disclosure in SAP Adaptive Server Enterprise (Cockpit) Note <u>2917275</u> - 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	SAP ASE 15.7	SAP ASE 16.0	SAP ASE 16.0
	SP 141 HF1	SP 141 CE HF1	SP 2 PL 9 HF1	SP 3 PL 8 HF1
Note <u>2915585</u> - Missing validation in SAP Adaptive Server Enterprise (XP Server on Windows)	✓	✓	✓	✓
Note <u>2916927</u> - 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 <u>2917273</u> - 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	✓	✓	✓	✓

Note <u>2917090</u> - Information Disclosure in SAP Adaptive Server Enterprise (Cockpit) Note <u>2917275</u> - Code injection in SAP Adaptive Server Enterprise (Backup Server)

Note <u>2917090</u>

- 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.

Note <u>2835979</u> - 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

Note <u>2885244</u> - 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 1de.boe.sharedKey in the Live Data Connect property file

Configuring SAP BusinessObjects Live Data Connect

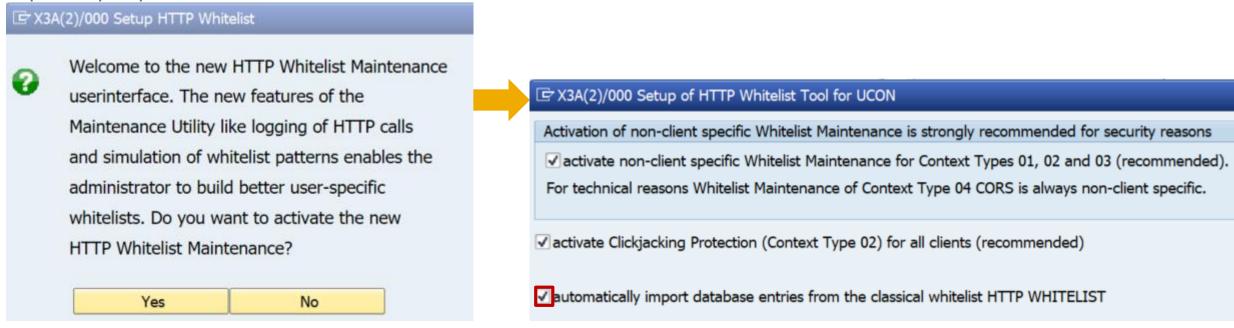
https://help.sap.com/viewer/6be6d1fc887046f7a5e5c1aa52505e86/latest/en-US/14b7943431bb4fb08b73b6ef4f43ab88.html

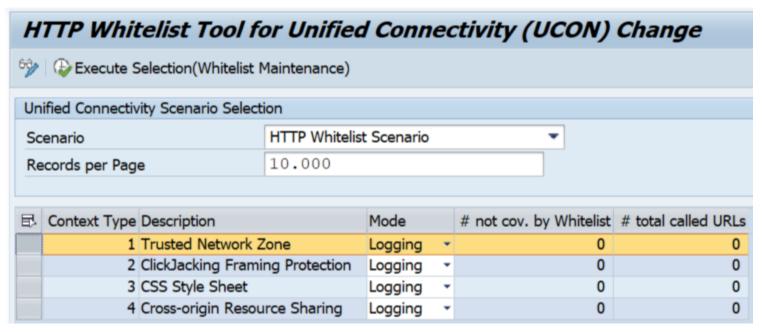
Manual configuration of whitelist is still needed!

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 Whitelist Scenario

https://help.sap.com/viewer/1ca554ffe75a4d44a7bb882b5454236f/7.51.10/en-US/91f9f84fe8a64ce59dc29b76e47078eb.html





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:

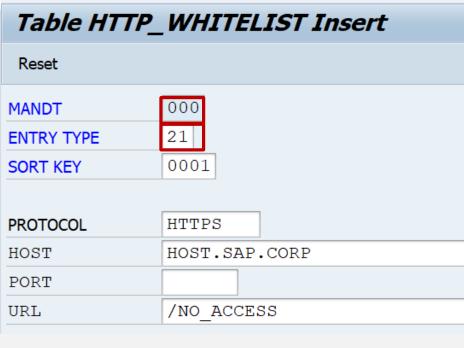
- 1 Trusted Network Zone (former entry types 02, 03, 10, 11, 20, 21, 40 and 99)
- 2 ClickJacking Framing Protection (former entry type 30)
- 3 CSS Style Sheet (former entry type 01)
- 4 Cross-origin Resource Sharing (entry type 50 only available with UCON HTTP Whitelist, see Note <u>2547381</u>)

If the UCON HTTP Whitelist is not available in the system (see Note <u>2573569</u>) 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 <u>853878</u>)
- 02 Exit URL for parameter sap-exiturl
- 03 NWBC runtime
- 10 WebDynpro Resume URL (Note <u>2081029</u>)
- 11 Web Dynpro Redirect URL (Note <u>2081029</u>)
- 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 <u>2142551</u>)
- 40 Suite Redirect
- 99 Redirect (generic)

Option b) In client 000 maintain table HTTP_WHITELIST with entry type 21 to enable HTTP Whitelist 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)

Change View "HTTP White List": Details						
🥎 New Entries 🗈 🖶 ᡢ 🞝 📮 📜						
White List EntryType	Redirect URL for ICF Logoff					
Sort/Match Seq.	0001					
HTTP White List						
Protocol for URL	HPPTS					
Host Name and Domain	HOST.SAP.CORP					
Port						
URL Pattern /NO_A	ACCESS					

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

- Download SAP Business Client from SAP Software Download Center NWBC700 10-70003080.EXE
- Create and distribute system connections (Fiori Launchpad connection, NWBC connection, SAP logon connection, and SAP shortcut) and client configuration
- Create and distribute <u>Security Settings for Browser Controls</u>

See:

Note <u>2714160</u> - SAP Business Client 7.0: Prerequisites and restrictions Note <u>2622660</u> - Security updates for the browser control Google Chromium delivered with SAP Business Client

SAP Automatic Workstation Update SAP Business Client 7.0 Calendar Synchronisation for Microsoft Outlook SNC Client Encryption 2.0 Business Explorer SAP Interactive Excel 3, 1,0 SAP GUI Screen Reader Extension for JAWS

FRONT-END INSTALLER

⊕ SAP GUI for Windows 7.60 (Compilation 1)

<u>https://community.sap.com/topics/business-client</u> → Install and Configure

Note 2911801 - Binary planting vulnerability in SAP Business Client

Implement note <u>2920217</u> 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 <u>2458890</u>

Limitation: System Recommendations cannot check the installed version on clients.



April 2020

Topics April 2020



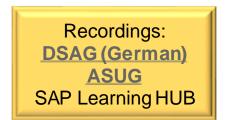
Security Notes Statistics

SOS Checks ABAP / HANA / Java

Note <u>2896682</u> - Directory Traversal vulnerability in SAP NetWeaver (Knowledge Management)

Note <u>2863731</u> - Deserialization of Untrusted Data in SAP Business Objects Business Intelligence Platform (CrystalReports WebForm Viewer)

Note 2900118 - Code Injection vulnerability in SAP OrientDB 3.0



Security Notes Statistics

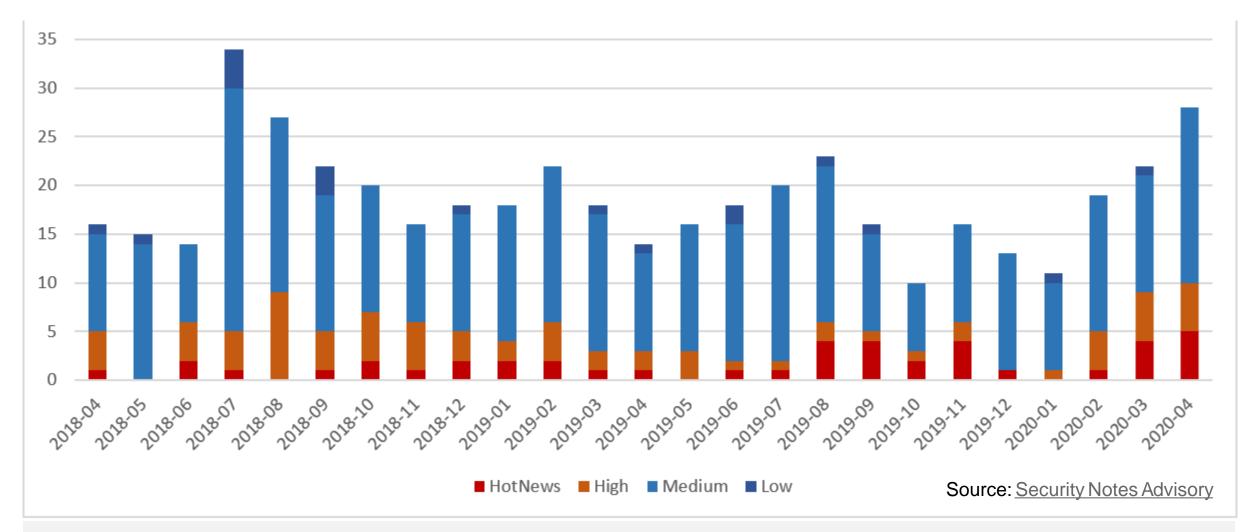
Q: Do you know if there is any general security finding, that is causing this multiple security patch fixing?

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.

Security Notes Statistics



SOS Checks ABAP / HANA / Java

Updated versions published on https://support.sap.com/sos

Media	Library			
		Search:		
Title ♣	Туре		\$	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 <u>1999993</u> - How-To: Interpreting SAP HANA Mini Check Results

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)

Changed (C) Scope (S):

Confidentiality Impact (C): High (H)

Low (L)

Integrity Impact (I): 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

Note <u>2863731</u> - 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.

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 <u>2895241</u> - OrientDB: Information needed by Product/Development Support



March 2020

Topics March 2020



Note <u>2890213</u> - Missing Authentication Check in SAP Solution Manager (User-Experience Monitoring)

Note <u>2892570</u> - Missing XML Validation vulnerability in ABAP Development Tools

Note <u>2826782</u> - Denial of service (DOS) in SAP BusinessObjects Mobile (MobileBIService)

Note <u>2859004</u> - Cross-Site Request Forgery in SAP Cloud Platform Integration for data services

Note <u>2871167</u> - 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 <u>2730525</u> - ANST: Consuming the Note Search Webservice

Note 2818143 - ANST: SEARCH_NOTES- Implementing SOAP Based Note Search

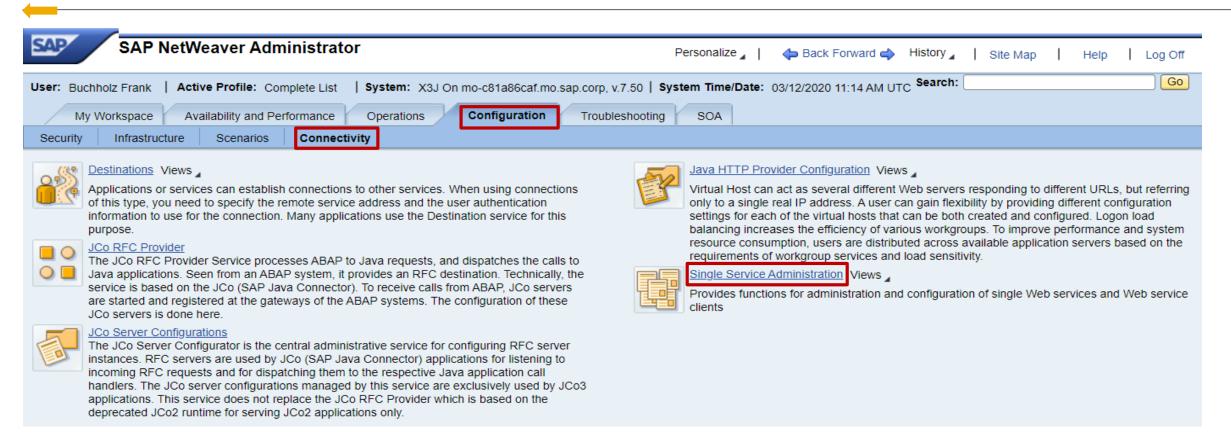
Recordings:

DSAG (German)

ASUG

SAP Learning HUB

Note <u>2890213</u> - Missing Authentication Check in SAP Solution Manager (User-Experience Monitoring)



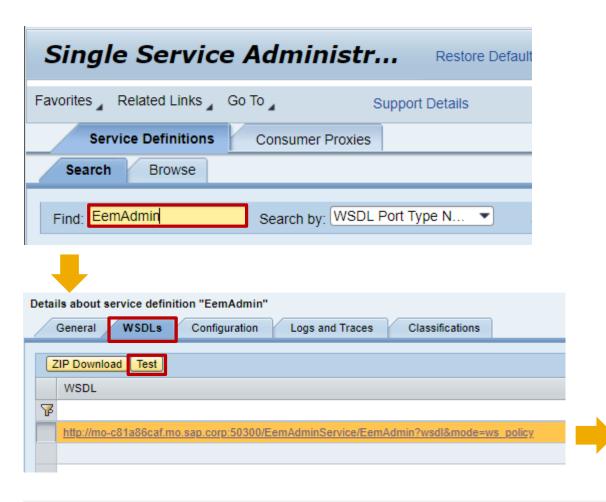


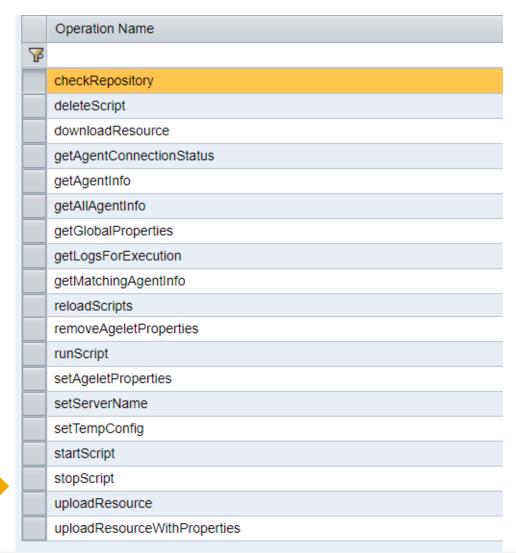
User-Experience Monitoring

https://support.sap.com/en/alm/solution-manager/expert-portal/user-experience-monitoring.html https://wiki.scn.sap.com/wiki/display/EEM/Home

Note <u>2890213</u> - Missing Authentication Check in SAP Solution Manager (User-Experience Monitoring)

Critical, because EemAdmin is powerful:





Note <u>2890213</u> - Missing Authentication Check in SAP Solution Manager (User-Experience Monitoring)



Workaround: Manual activation of EemAdmin authentication as a partial fix.



Note <u>2892570</u> - 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.

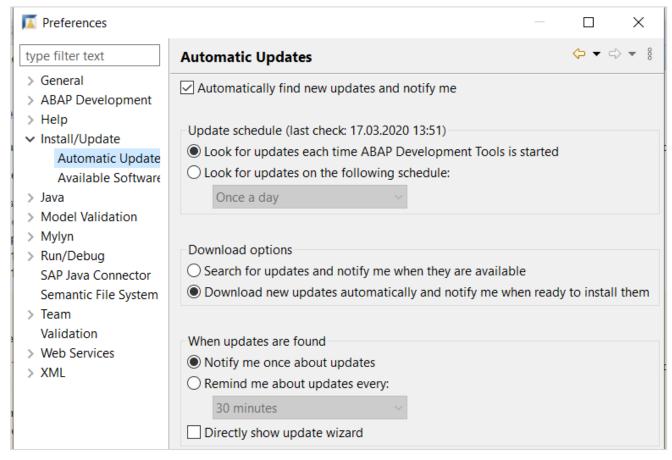
The easiest way to get the ABAP Development Tools is to use SAPs update sites described/linked on https://tools.hana.ondemand.com/#abap.

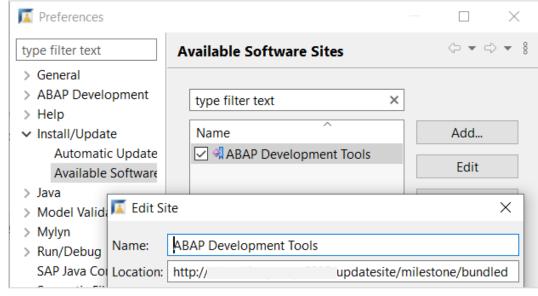
They host the latest available version of the tools.

Alternatively you can download from the SAP Software Download Center as described in the note.

Note <u>2892570</u> - 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"?

Note <u>2826782</u> - 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 <u>2824635</u> show how to configure MobileBIService in general. This is not related to the vulnerability.

Note <u>2871167</u> - 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.

 \rightarrow Go for utilizing S_TABU_NAM instead S_TABU_DIS

Note <u>2859004</u> - Cross-Site Request Forgery in SAP Cloud Platform Integration for data services

Solved by SAP Cloud Platform, no action required

Note 2808169 - SAL | Archiving with BC_SAL / API for alert cockpits

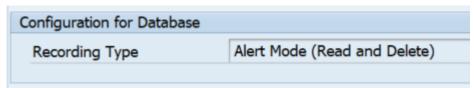
RFC function module RSAU API GET ALERTS

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

Note <u>2730525</u> - ANST: Consuming the Note Search Webservice Note <u>2818143</u> - ANST: Implementing SOAP Based Note Search

Enable ANST to use the new SAP Backbone connectivity.



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 <u>2887651</u> - Issues with SameSite cookie handling

Note <u>2822074</u> - Missing Authorization check to access BOR object attributes remotely

Note <u>2880869</u> - Cross-Site Scripting (XSS) vulnerability in ABAP Online Community Application

Note <u>2836445</u> - Unprivileged Access to technical data using SAPOSCOL of SAP Host Agent

Note <u>2841053</u> - 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

Focus Insights: Go for it!

Focused Solutions for SAP Solution Manager

https://support.sap.com/en/alm/focused-solutions.html

"As of 2020, the <u>usage rights</u> 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

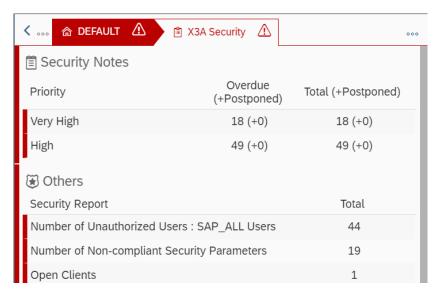
Focus Insights: Go for it!

Focused Insights: Public Online Demo

https://blogs.sap.com/2017/09/18/focused-insights-online-demo/

Examples:

- Operations Control Center
- <u>Tactical Dashboard</u> (incl. Security Scenario)





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-upgrademaintenance/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

Secure Operations Map

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

→ <u>Secure Operations Map</u>, v3 from January 2020



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

↑ Marchive, un SAP_Security_Baseline_Template (1).zip - RAR 4.x archive, un						
Name	Size	Modified				
L						
SAP_Security_Baseline_Template_V2.0.docx	313.326	17.02.2020 18:17				
SAP_Security_Baseline_Template_V2.0.pdf	1.120.961	17.02.2020 18:17				
SAP_Security_Baseline_Template_V2.0_Overview.pdf	214.805	17.02.2020 17:15				

Note <u>2887651</u> - 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/

Google Chrome: 80.0.3987.87 (Offizieller Build) (64-Bit) (cohort: Stable

Installs Only)

Überarbeitung: 449cb163497b70dbf98d389f54e38e85d4c59b43-refs/branch-

heads/3987@{#801}

Betriebssystem: Windows 10 OS Version 1909 (Build 18363.592)

chrome://flags/#same-site-by-default-cookies

SameSite by default cookies

Treat cookies that don't specify a SameSite attribute as if they were SameSite=Lax. Sites must specify SameSite=None in order to enable third-party usage. – Mac, Windows, Linux, Chrome OS, Android

Default

#same-site-by-default-cookies

https://www.chromium.org/updates/same-site/test-debug

Note <u>2887651</u> - 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

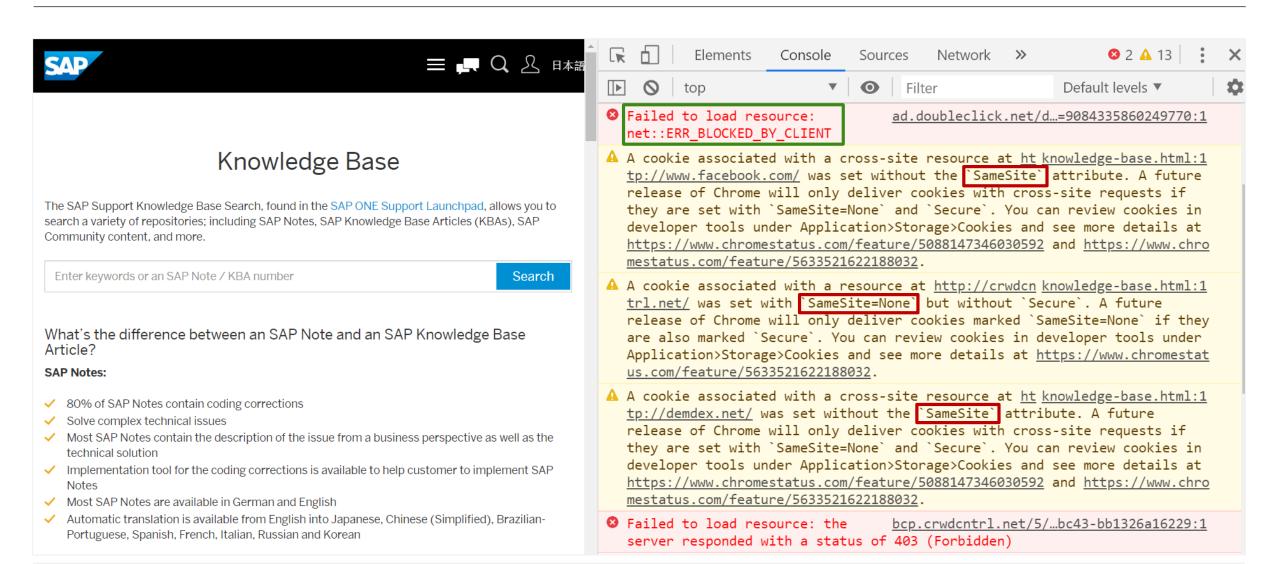
All scenarios that integrate these products with web services from different registrable domains within a single browser window are potentially affected.

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.

Note <u>2887651</u> - Issues with SameSite cookie handling How to verify potential issues: F12 Show Developer Console



Note <u>2822074</u> - 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 <u>2845081</u> 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").

Note 2822074 - Missing Authorization check to access BOR

Correction Instructions + Manual Modifications

Before implementation via **SNOTE**:

- Implement prerequisite note <u>2844646</u> (which loads notes <u>2775698</u> and <u>2447731</u>, 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

Note <u>2822074</u> - Missing Authorization check to access BOR

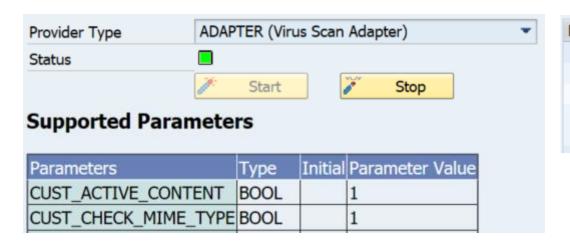
Validity	of Correction Instructions + Manual Modifications:	ons: Solution via Support Packages:	
SAP_BASIS		Caution: you still have to activate the SACF scenarios manually	
700	SAPKB70029 - SAPKB70037	SAP_BASIS 700	SAPKB70038
701	SAPKB70114 - SAPKB70122	SAP_BASIS 701	SAPKB70123
702	SAPKB70214 - SAPKB70222	SAP_BASIS 702	SAPKB70223
710	SAPKB71017 - SAPKB71024	SAP_BASIS 710	SAPKB71025
711	SAPKB71112 - SAPKB71119	SAP_BASIS 711	SAPKB71120
730	SAPKB73010 - SAPKB73019 (SP 20 might be incomplete \rightarrow go for SP 21)	SAP_BASIS 730	SAPKB73021
731	SAPKB73108 - SAPKB73125 (SP 26 might be incomplete \rightarrow go for SP 27)	SAP_BASIS 731	SAPKB73127
740	SAPKB74012 - SAPKB74022 (SP 23 might be incomplete \rightarrow go for SP 24)	SAP_BASIS 740	SAPKB74024
750	SAPK-75003INSAPBASIS - SAPK-75016INSAPBASIS (SP 17 might be incomplete \rightarrow go for SP 18)	SAP_BASIS 750	SAPK-75018INSAPBASIS
751	To SAPK-75109INSAPBASIS	SAP_BASIS 751	SAPK-75110INSAPBASIS
752	To SAPK-75205INSAPBASIS	SAP_BASIS 752	SAPK-75206INSAPBASIS
753	To SAPK-75303INSAPBASIS	SAP_BASIS 753	SAPK-75304INSAPBASIS
754	w/o Support Packages	SAP_BASIS 754	SAPK-75402INSAPBASIS

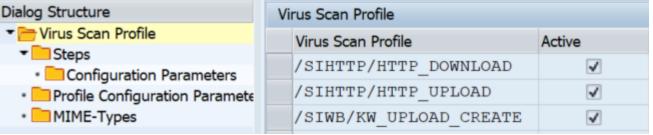
Note <u>2880869</u> - Cross-Site Scripting (XSS) vulnerability in ABAP Online Community Application

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





Note <u>2836445</u> - Unprivileged Access to technical data using SAPOSCOL

Note <u>2836445</u> - 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.

Note <u>2841053</u> - 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

Note <u>2841053</u> - Denial of Service (DOS) Vulnerability in SAP Host Agent

The Software Update Manager (SUM) uses ports 1128 (http) respective 1129 (https), too:

Note <u>2284028</u> - SUM SL Common UI: Troubleshooting problems with the new SUM UI
Note <u>1826767</u> - '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 <u>2669791</u> / <u>2689366</u> - SAP host agent connectivity with certificate based authentication

SAP Support Portal - How to request access to "Display Security Alerts in SAP EarlyWatch Alert Workspace"

See

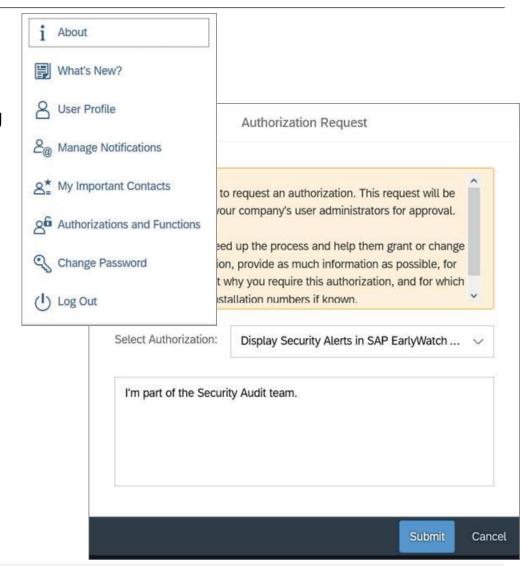
SAP Support Portal Release Notes - February 2020

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.
- 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.





January 2020

Topics January 2020



Obsolete Workarounds for System Recommendations

Note <u>2845401</u> - Missing Authorization check in Realtech RTCISM 100

Note <u>2871877</u> - Multiple security vulnerabilities in SAP EAM, add-on for MRO 4.0 by HCL

Note <u>2822074</u> - Missing Authorization check in SAP NetWeaver (ABAP Server)

Note <u>2863397</u> - Missing Authorization Check in Automated Note Search Tool (ANST) Short introduction for ANST



Obsolete Workarounds for System Recommendations

Note <u>2686105</u> - [OBSOLETE] HTTP error 0 when sending data to SAP via destination SAP-SUPPORT_PORTAL Note <u>2833610</u> - [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

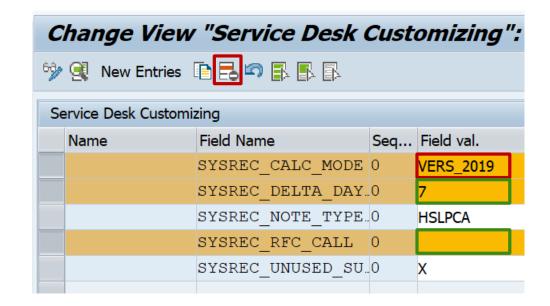
(or in transaction DNO_CUST04/table DNOC_USERCFG)

Remove following entries/values:

```
SYSREC_CALC_MODE = VERS_2019

SYSREC_DELTA_DAYS = 1 (ok: 7)

SYSREC RFC CALL = X
```



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 RTCIS	M 100: SP 1	
File Type: 9	SAR	Component Release: R	TCISM 100
SAP NOTE	S EXTENDED ATTRIBUTES	PACKAGE CONDITIONS	OBJECT LIST
Pgm ID	Object Type	Object name	
LIMU	FUNC	/RTC/CM_CMDB_NOTI	FY
LIMU	FUNC	/RTC/CM_CMDB_NOTI	FY_SERVICE
LIMU	FUNC	/RTC/CM_CMDB_PING	

Note <u>2871877</u> - 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 <u>2869792</u> "High priority security issue in the Add-On Product" which had contained the same transport files.

Note <u>2822074</u> - 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 <u>2845081</u> - Switchable authorization checks SWO_REMOTE_ACCESS and SUCD SWO PROXY ACCESS

Note <u>2863397</u> - Missing Authorization Check in Automated Note Search Tool (ANST)

An application that makes it easier to find SAP Correction Notes

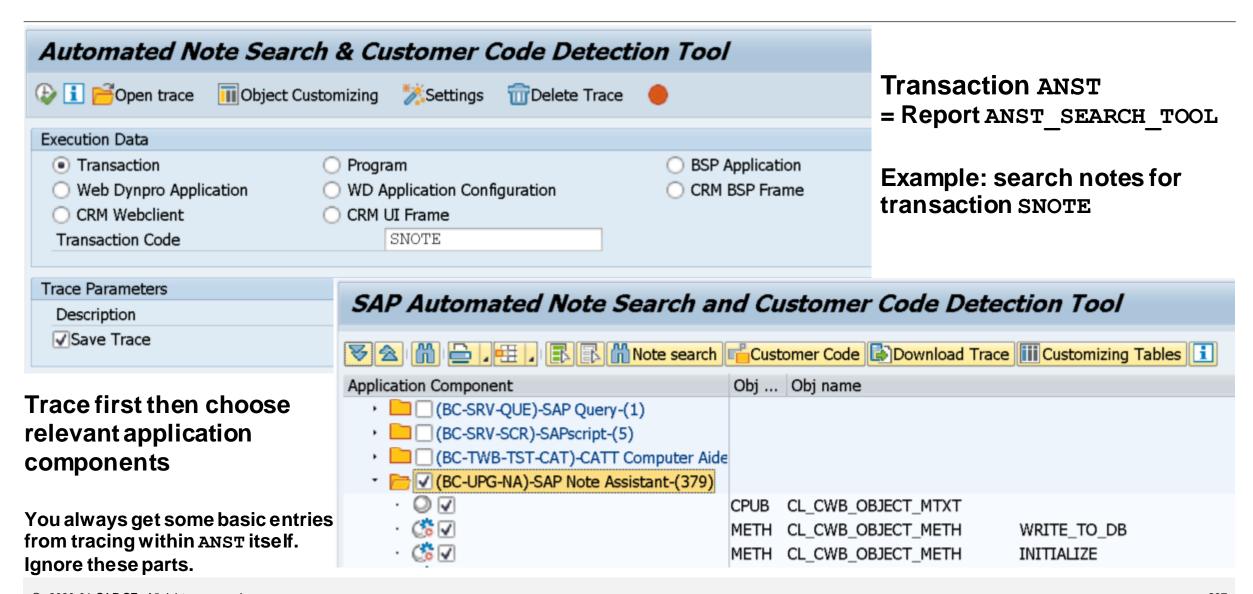
SAP Automated Note Search Tool: I'm loving it!

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



SAP Automated Note Search and Customer Code Detection Tool

Result

□ Download No	ote 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			

Preparation for **Dynamic Tracing** which you need to go for RFC scenarios or Fiori applications:

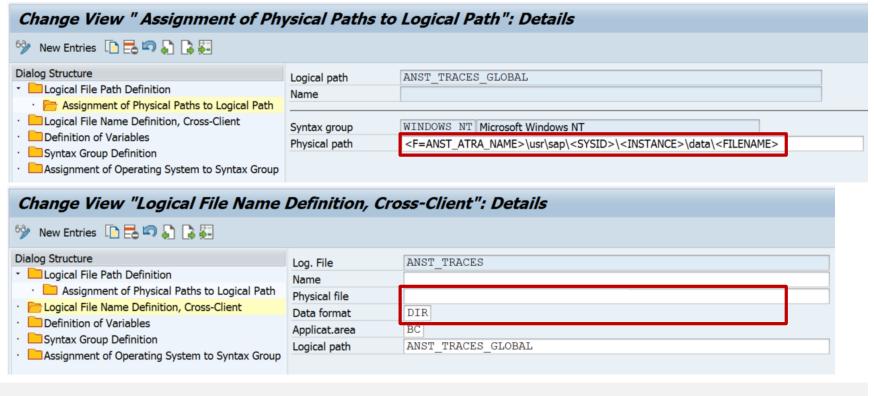
Note <u>2286869</u> - ANST: Trace On/Off error "Dynamic Start and Stop cancelled by user" You have to implement this note if required and you need the execute the manual activity in any case.

Transaction FILE:

Ensure to have the correct values for logical path

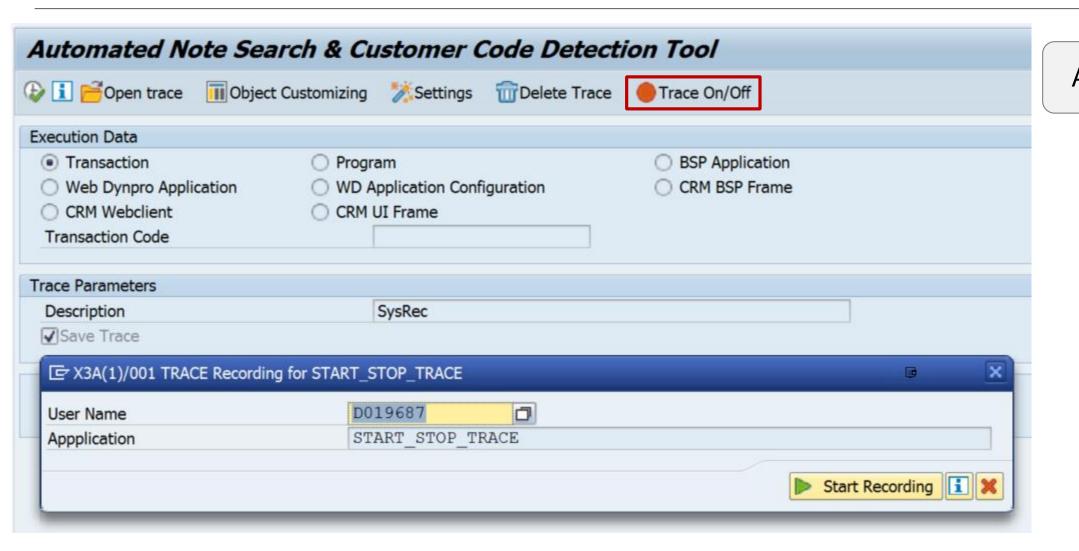
ANST_TRACES_GLOBAL and logical file

ANST_TRACES

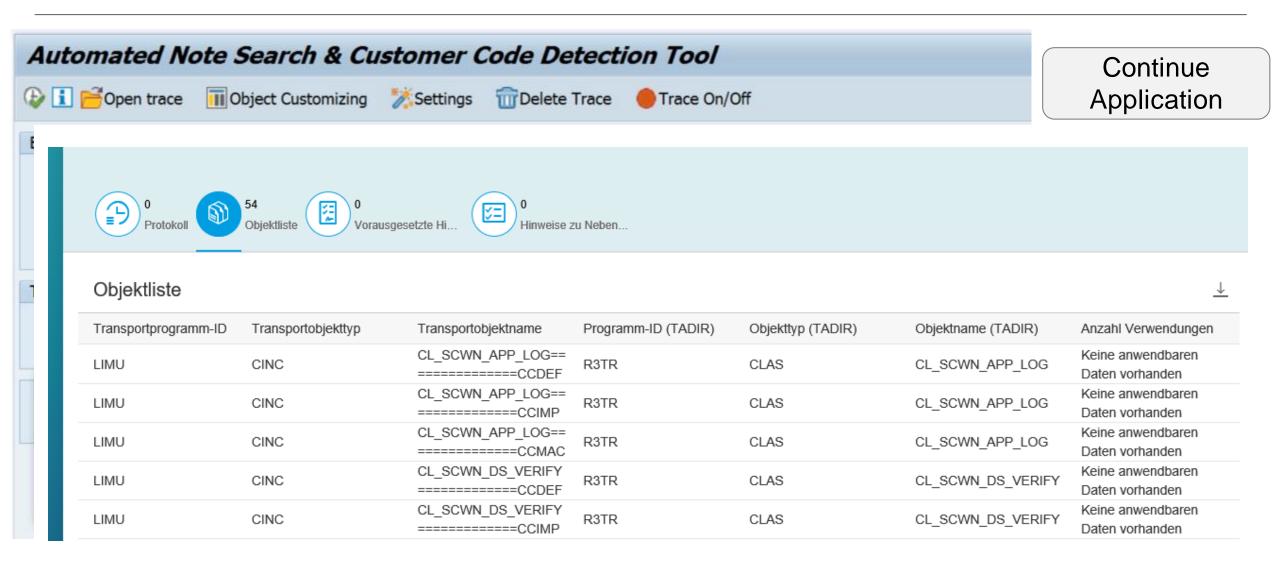


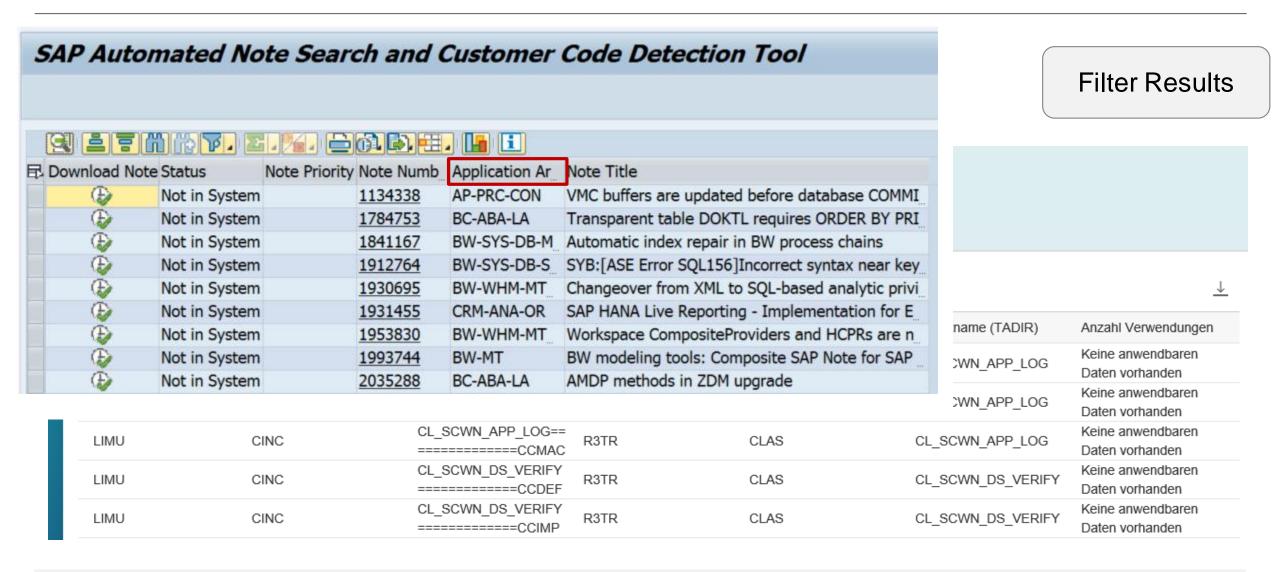
Example: Dynamic tracing for System Recommendations Object List – UPL integration

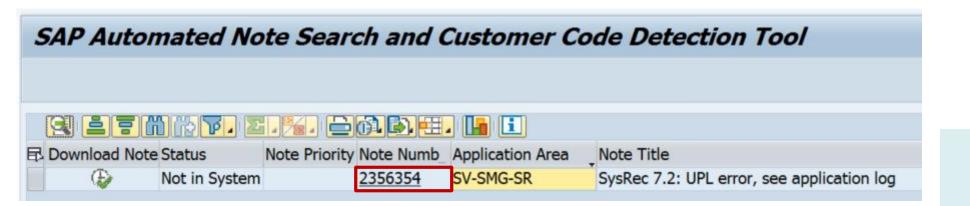
- 1. Ensure to use the same application server for Fiori and ANST!
- 2. Navigate in the Fiori App just before the screen which you want to trace
- 3. Activate tracing in ANST
- 4. Continue the Fiori App
- 5. Stop tracing in ANST
- 6. Choose Application Areas to collect objects in scope which might match (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



Activate Trace







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	R3TR	CLAS	CL_SCWN_DS_VERIFY	Keine anwendbaren Daten vorhanden
LIMU	CINC	CL_SCWN_DS_VERIFY	R3TR	CLAS	CL_SCWN_DS_VERIFY	Keine anwendbaren Daten vorhanden



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 COMING - How to keep Connectivity to Support Backbone Note 2865869 - Technical Communication User Required to Connect to SAP



Customer Connection Program SAP Identity Management 8.0

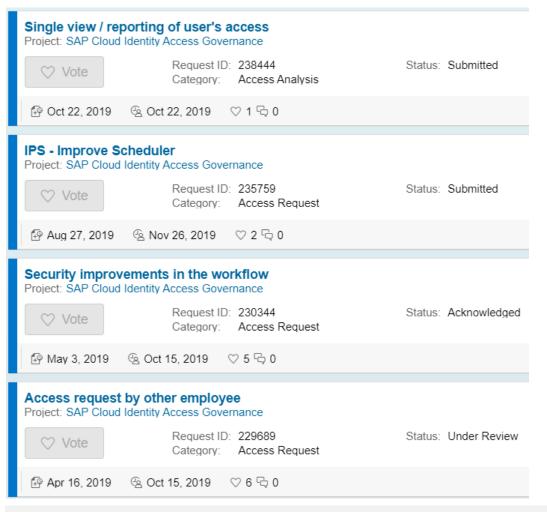
https://blogs.sap.com/2019/12/09/customer-connection-program-for-sap-identity-management-8.0

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

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.

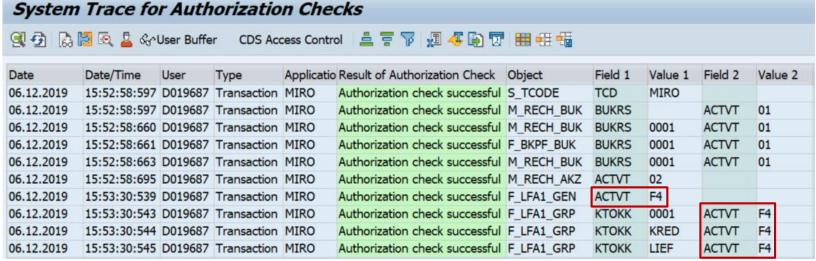
Allow employees to open an access request for another user. The main idea is to have a option to centralize access requests and decrease approval steps.

F4 Authorization check in Value Help

Example: Transaction MIRO







How to grant authorizations for new F4 check?

F4 Authorization check in Value Help

Note <u>2682142</u> - Introduction of activity value 'Value Help' in authorization objects
The attachments show a long list of applications with updated authorization proposals

Note <u>2792518</u> - 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 <u>2805887</u> - Enhancement of base class CL_SU2X_F4 Valid as of release 7.31

Useful other note:

Note <u>2567368</u> - SU2X | Enhancement of report SU2X_UPDATE_S_TABU_NAM

F4 Authorization check in Value Help Remove F4 from SU24 / Create and use role SAP NEW F4

Note <u>2606478</u> - REGENERATE_SAP_NEW | bridging authorizations for input helps Valid as of release 7.52 Implement note <u>2805887</u> before

Step 1: Implement note <u>2606478</u> 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.

Sending System:	System dir	ectly connected			
Software Component	SAP_BASIS < 700	S < 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, other ap	of SAP EarlyWatch plications are not			
Legend:	less preferre	ed option	d for EWA	best option	

Sending System:	System dir	SAP Solution Manager 7.1		
Software Component	SAP_BASIS < 700	SAP_BASI	SAP_BASIS ≥ 700	
Channel	RFC with technical user	RFC with technical user https		https
Enable https communication with SAP Note <u>2837310</u> 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 <u>checklists</u>	n.a.	n.a.	Yes	Yes
Functionality	Enables send oth	•		
Legend:	less preferre	ed option	workaround	d for EWA

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 <u>checklists</u>	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 opt						

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			https	https	https	https	https
		Temporary w	orkaround: RF	C with technical	communicati	on user	
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 <u>checklists</u>	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 opt					otion	

Are you ready? Check EWA Alert about SAP Backbone Connectivity

EWA Workspace (Dashboard)

https://launchpad.support.sap.com/#/ewaworkspace

 \longrightarrow

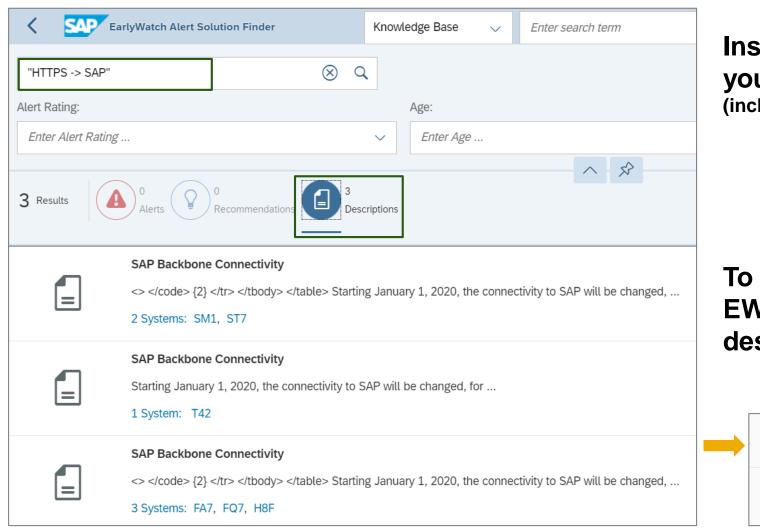
EWA Solution Finder (EWA Alerts)

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 \rightarrow SAP Backbone Connectivity" for all system for which the current S-user is authorized:

https://launchpad.support.sap.com/#/ewasolutionfinder/generic/filters/categoryHash=W3siY2F0ZWdvcnkiOiJTZXJ2aWNIUmVhZGluZXNzliwic3ViY2F0ZWdvcnkiOiJCYWNrYm9uZUNvbm5IY3Rpdml0eSJ9XQ%253D%253D

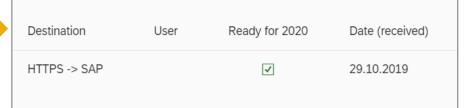
Are you ready? Check EWA Alert about SAP Backbone Connectivity



Instead of filtering for an alert category you can use one of the search strings (including quotation marks and spaces)

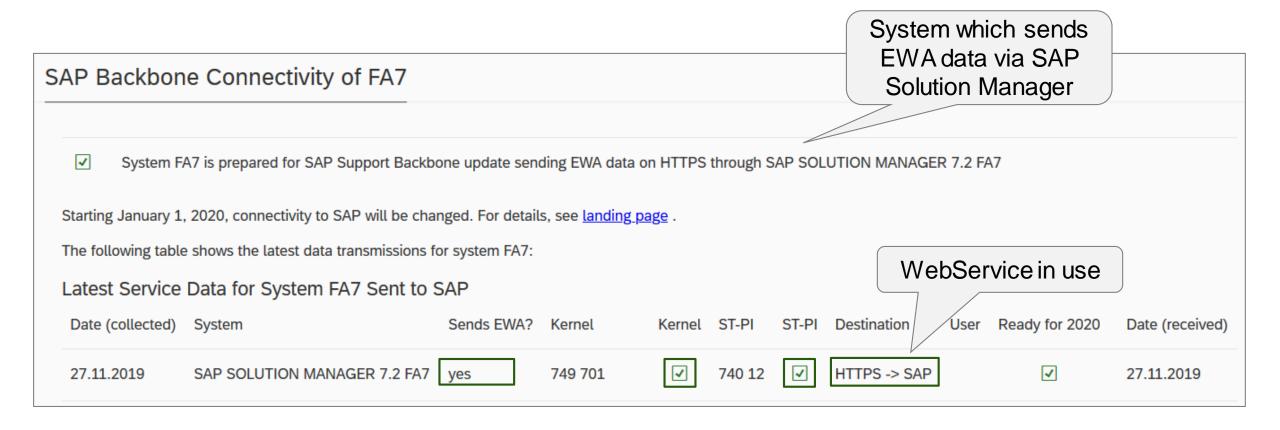
"HTTPS -> SAP"
respective
"RFC -> SAP"

To get the list of systems which send EWA data via the new webservice destination respective via RFC.



Are you ready? Check EWA Alert about SAP Backbone Connectivity

Yes!



Note <u>2865869</u> - 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: <u>SAP Note Assistant</u> (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.



November 2019

Topics November 2019



Blog: Secure By Default - Ways To Harden Your Systems

System Recommendations – Important Notes

Note <u>2393937</u> - VMC Authority Check

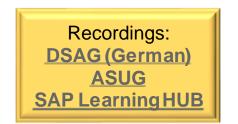
Note <u>2777910</u> - Unrestricted File Upload vulnerability in AS Java (Web Container)

Note <u>2839864</u> - Update 2: OS Command Injection vulnerability in SAP Diagnostics Agent

SAP Support Backbone – SDCCN

Note <u>2836302</u> - Automated guided steps for enabling Note Assistant for TCI and Digitally Signed SAP Notes

Are you ready? Check EWA Alert about SAP Backbone Connectivity



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/

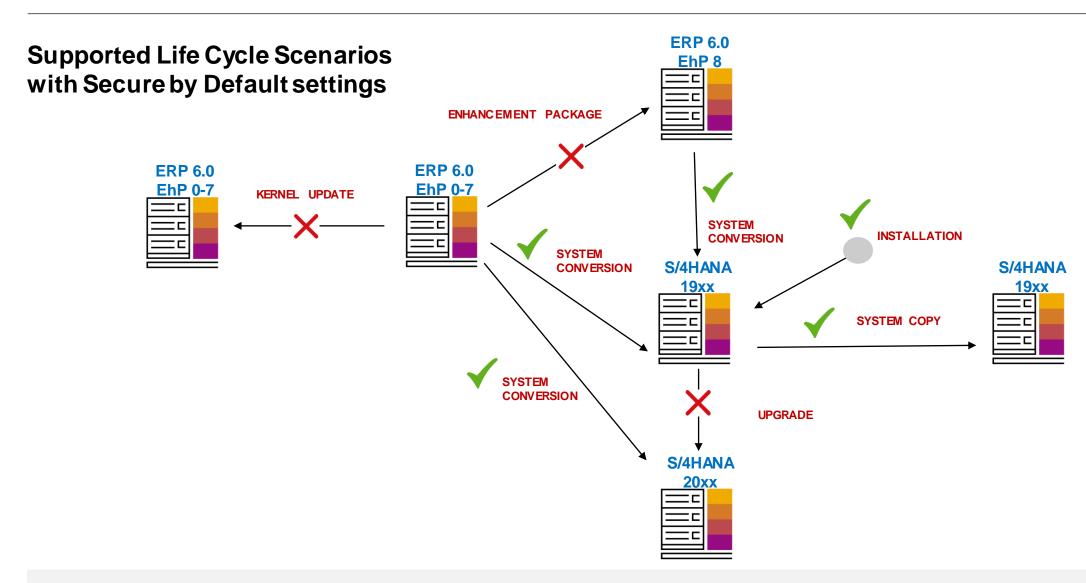
- Use the SAP-provided tools and services, such as EarlyWatch Alert, Security Optimization Service, Configuration Validation and System Recommendations
- Always introduce disruptive security settings with good timing.
 The upgrade situation and new installations are very good points in time for this
- > 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 <u>2714839</u> respective note <u>2713544</u> "New security settings during conversion to S/4HANA 1909"

Both notes show currently the same checklist:

New_Security_Settings-SUM20P6_Conversion-to-S4H1909.xlsx

Secure By Default: Ways To Harden Your Systems



Secure By Default: Ways To Harden Your Systems

Note	Name	Recommended	Note	Name	Recommended
515130	auth/check/calltransaction	3	2794817	7ms/http_logging	1
-	auth/object_disabling_active	N	-	rdisp/gui_auto_logout	1н
2216306	auth/rfc_authority_check	6	2441606	grdisp/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	cf/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 <u>2676384</u>
2788140	_icm/HTTP/logging_0	[] LOGFORMAT=	%t %a %ı	u <mark>l</mark> \"%r\" %s %b %Lms %{Host}i %w	·1 %w2
2788140	_icm/HTTP/logging_client_0	[] LOGFORMAT=%t %a %u <mark>1</mark> \"%r\" %s %b1 %b %Lms %{Host}i %P			
2788140		[] LEVEL=3			
2794817	ms/HTTP/logging_0	[] LOGFORMAT=	%t %a %u	1 \"%r\" %s %b %{Host}i	
2140269	login/password_hash_algorithm	encoding=RFC23	07 , algo:	rithm=iSSHA-512,iterations=15000	,saltsize=256

System Recommendations – Important Notes

Note <u>2795529</u> - SysRec: Irrelevant kernel notes are displayed

Note <u>2825239</u> - SysRec 7.2: Performance Improvement in SysRec Job in SP08 and SP09

Note <u>2833610</u> - SysRec 7.2: Download large volume of note data from SAP support backbone

via web service

Transaction DNO CUST04:

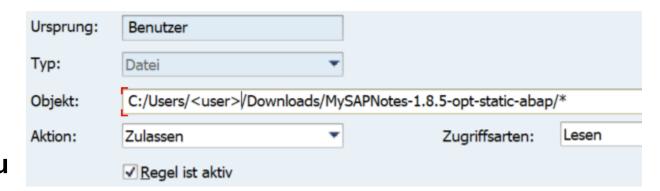
Field Name	Seq	Field val.
SYSREC_CALC_MODE	0	VERS_2019
SYSREC_DELTA_DAYS	0	7
SYSREC_NOTE_TYPES	0	HSLPCA
SYSREC_RFC_CALL	0	
SYSREC_UNUSED_SUBHR	0	X

Note <u>2780862</u> - SYSREC7.2: Required notes missing which have been published on the very last day of a month

System Recommendations – Important Notes

Note <u>2747922</u> - 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)

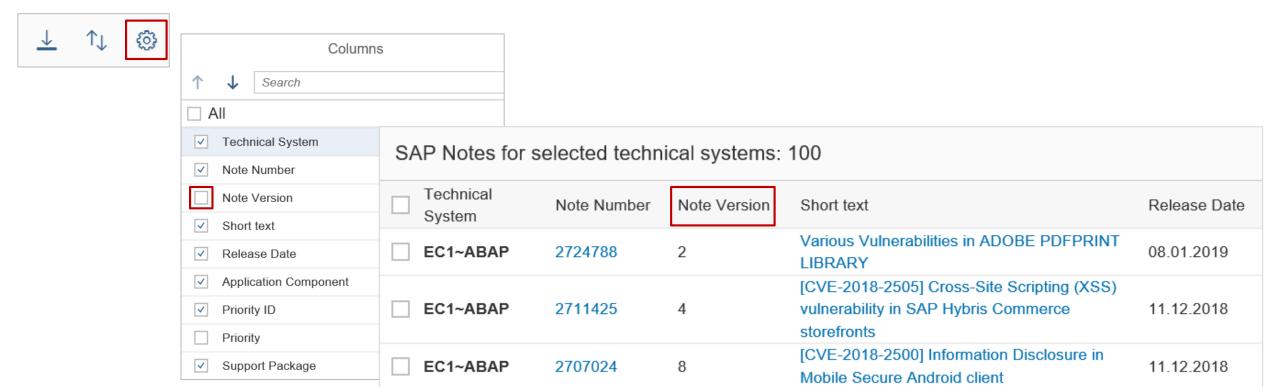
Use transaction SE80 for package UISM_AGS_SYSREC_UI to view file version.json

System Recommendations – Important Notes

Note <u>2747922</u> - SysRec: Corrections for Solution Manager 720 SP08 Fiori UI (version 1.8.5)

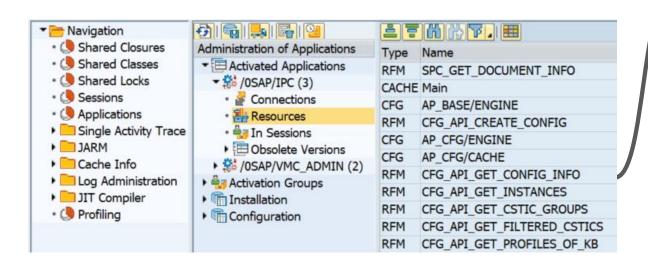
Note <u>2854704</u> - SysRec: Corrections for Solution Manager 720 SP09 Fiori UI (version 1.9.77)

A new feature allows you to show the note version on the Notes List (change setting required):

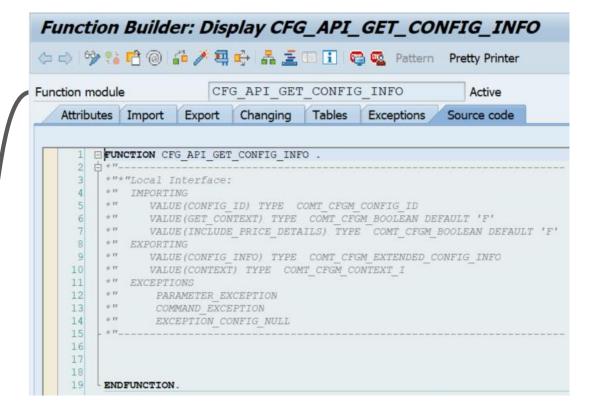


Note 2393937 - VMC Authority Check

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:



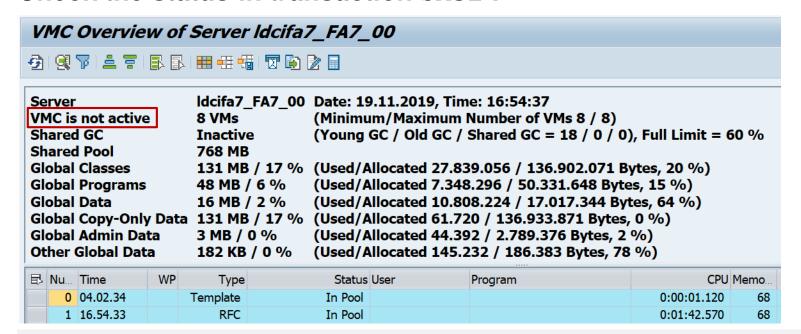
Note 2393937 - VMC Authority Check

The Virtual Machine Container (VMC) of an ABAP system is not active by default

Prerequisite to activate the VMC (default: off):

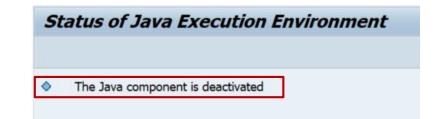
Profile parameter vmcj/enable = on (or any other of the other 'active' values: ENABLE, ACTIVATE)

Check the status in transaction SM52:



... or even simpler:

Check the status via report RSVMCRT HEALTH CHECK:



Note <u>2393937</u> - 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 (citation needed) even if the function is implemented outside of ABAP.

However, you need to activate this setting first. (citation needed)

Related notes:

Note <u>863354</u> - Using the "VM container" component

Note <u>658464</u> - Security check of IPC (with references to some other notes)

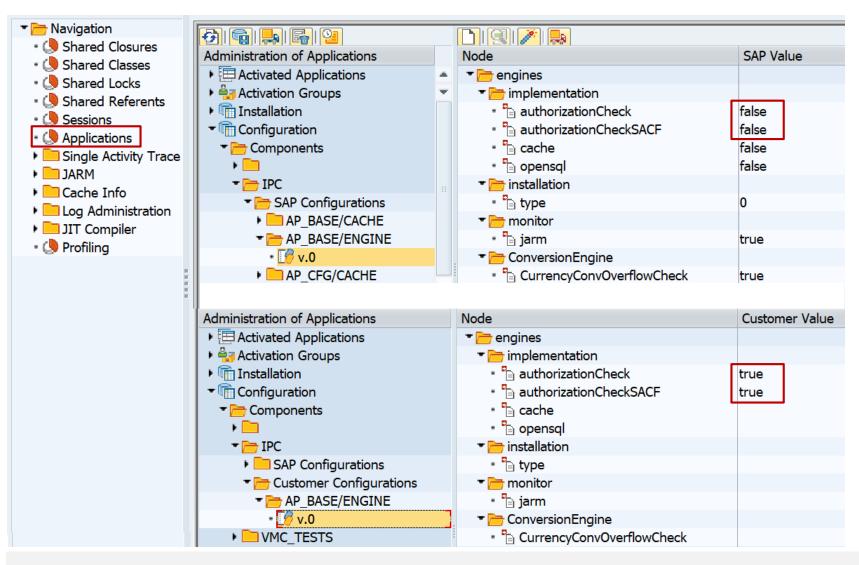
Note <u>412309</u> - Authorization profile RFC user for IPC

Related topics:

Note <u>720523</u> - IPC security: Maintaining params for SSL secured connections

Note 698181 - IPC security: Maintaining parameters for SNC-RFC connections

Note <u>2393937</u> - 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)

Note <u>2393937</u> - 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.

Note <u>2777910</u> - 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 <u>1975430</u> 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

Note <u>2839864</u> - Update 2: OS Command Injection vulnerability in SAP Diagnostics Agent

Note 2808158 - OS Command Injection vulnerability in SAP Diagnostics Agent

Note <u>2823733</u> - Update 1: OS Command Injection vulnerability in SAP Diagnostics Agent

Note <u>2839864</u> - 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?

Note <u>2839864</u> - 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
- 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
- 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

Note <u>2839864</u> - Update 2: OS Command Injection vulnerability in SAP Diagnostics Agent

Which commands are required?

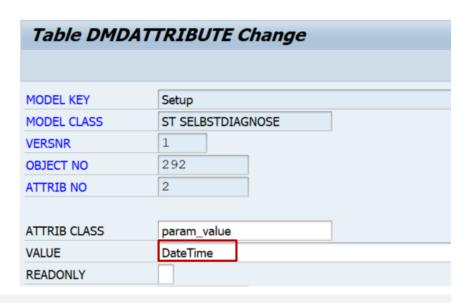
Example for topic "1. OS"

Note <u>2849096</u> - 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' ).
```



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.

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 master 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 <u>2837310</u> 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.

Support Backbone Connectivity – SDCCN Note 2837310 - Supporting HTTPS Connections for SDCCN

Related information:

Note <u>2740667</u> - RFC connection SAPOSS to SAP Service & Support backbone will change (latest) in January 2020

Note <u>2823658</u> - 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

Note <u>2836302</u> - 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	i No Action Required	i Click for Details
Step 2	Upload TCI Bootstrap Package	i No Action Required	i Click for Details
Step 3	Implement TCI Bootstrap Package	i No Action Required	i Click for Details
Step 4	Download & Implement TCI Bootstrap Note	i No Action Required	i Click for Details
Step 5	Upload TCI Rollback Package	i No Action Required	i Click for Details
Step 6	Implement TCI Rollback Package	i No Action Required	i Click for Details
Step 7	Download & Implement TCI Rollback Note	i No Action Required	i 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		
Step 10	Download & Implement SAP Note: 0002721941	Completed	
Step 11	SNOTE Configuration for Digitally Signed SAP Note download	Completed	Re-configure
		-	

Troubleshooting:

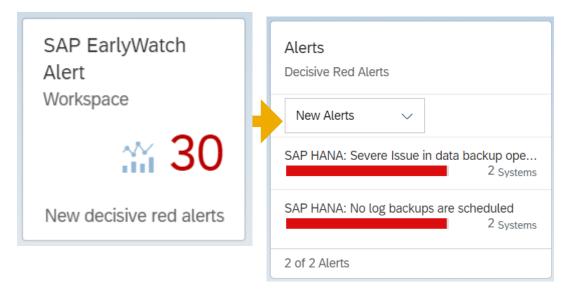
Note <u>2857602</u> - Report from SAP Note <u>2836302</u> is hanging in Step4 → Finish the SPAM queue and make sure that the status is green

Report RCWB_SNOTE_AUTOMATE_DWNLD_PROC

Step Num	Description	Action
* 🖪 Step 1	Configure Download Procedure for SNOTE	
* 🔳 Step 2	Maintain Procedure Connectivity	B
* 📅 Step 3	Lock Procedure Configuration in Transport Request	

EWA Workspace

https://launchpad.support.sap.com/#/ewaworkspace



Alerts

Decisive Red Alerts

SAP HANA: Severe Issue in data backup ope...

SAP HANA: No log backups are scheduled

2 Systems

2 Systems

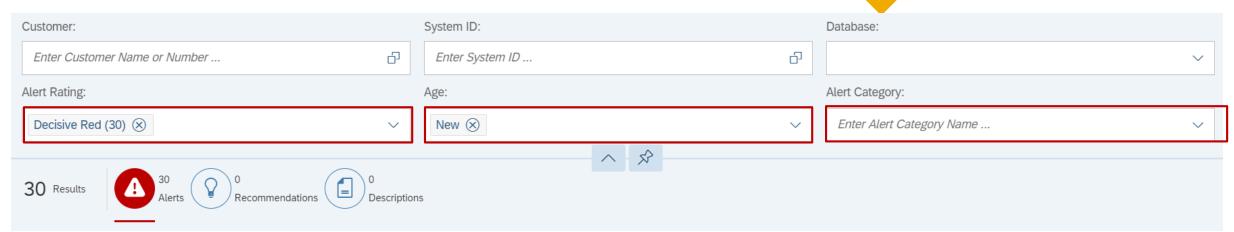
New Alerts

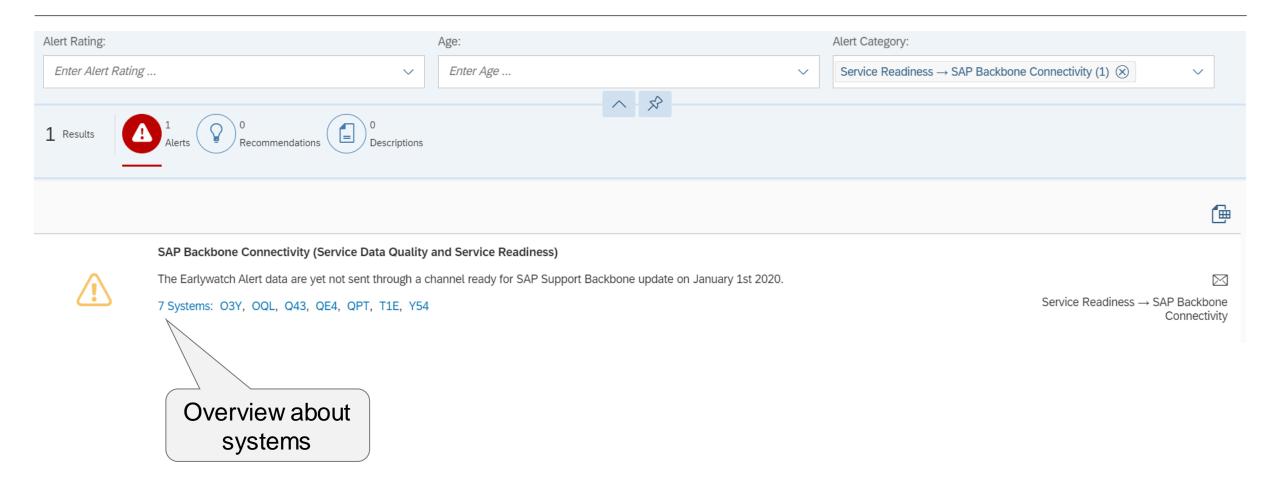
2 of 2 Alerts

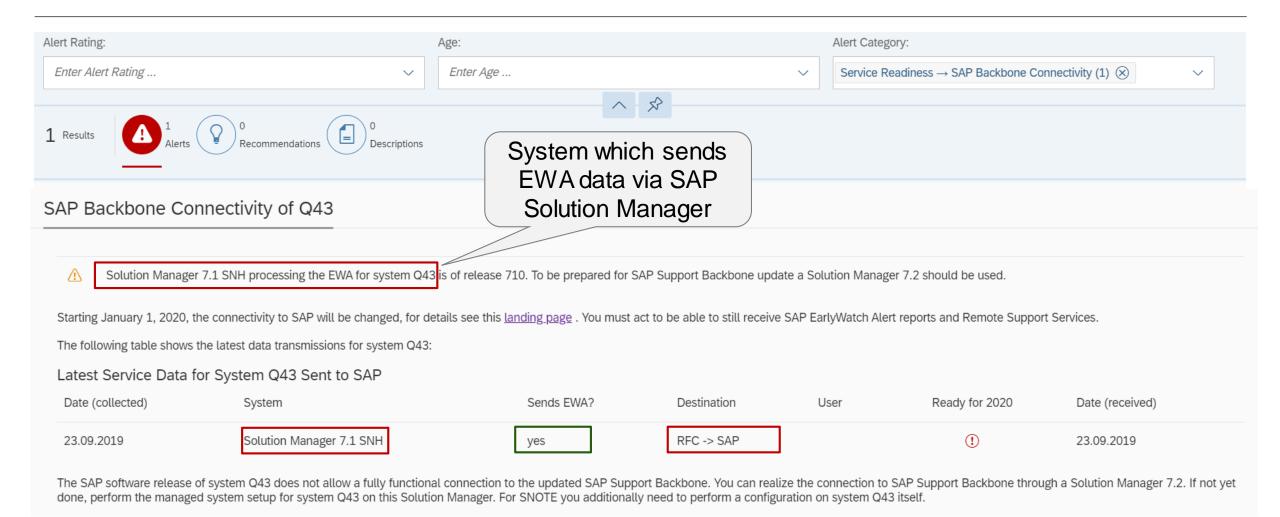
EWA Workspace

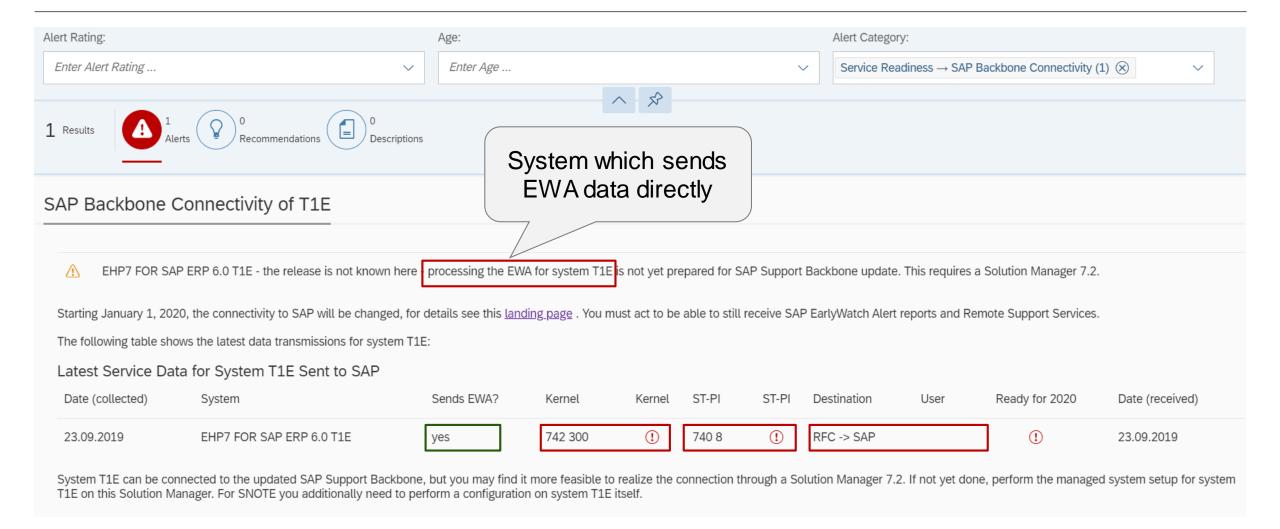
https://launchpad.support.sap.com/#/ewaworkspace

- Open Alerts (= <u>EWA Solution Finder</u>)
- Remove "Alert Rating" filter
- 3. Remove "Age" filter
- 4. Choose "Alert Category" "Service Readiness → SAP Backbone Connectivity"









EWA Workspace (Dashboard)

https://launchpad.support.sap.com/#/ewaworkspace

 \longrightarrow

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 \rightarrow SAP Backbone Connectivity" for all system for which the current S-user is authorized:

https://launchpad.support.sap.com/#/ewasolutionfinder/generic/filters/categoryHash=W3siY2F0ZWdvcnkiOiJTZXJ2aWNIUmVhZGluZXNzliwic3ViY2F0ZWdvcnkiOiJCYWNrYm9uZUNvbm5IY3Rpdml0eSJ9XQ%253D%253D

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 <u>2576306</u> <u>2603877</u>, <u>2632679</u>, <u>2721941</u>, <u>2813264</u>, ...)
- Task List for (partly) automated configuration (Note <u>2827658</u>)

b) Configure Backbone Connectivity

- Create <u>technical S-user</u> 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

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 <u>Download Service</u>?

 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?



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 <u>2828682</u> - Information Disclosure vulnerability in SAP Landscape Management Enterprise

Recordings:
DSAG (German)
ASUG
SAP Learning HUB

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

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

Authorizations
...

Reports

Support Desk Evaluation

Service Reports and Feedback

Display Security Alerts in SAP
EarlyWatch Alert Workspace

My Support Program Report

Security Status 45 of 49 Systems with Security Alerts All Alerts Standard Users 39 Systems Communication 26 Systems Configuration 40 Systems Maintenance 5 Systems Critical Authorizations 36 Systems Review and Monitoring 17 Systems

Blog: <u>Displaying Security Alerts in the SAP EarlyWatch Alert Workspace</u>

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 sт03м)
- Recommendation: DigiCert SHA2 Secure Server CA DigiCert Global CA G2

URL

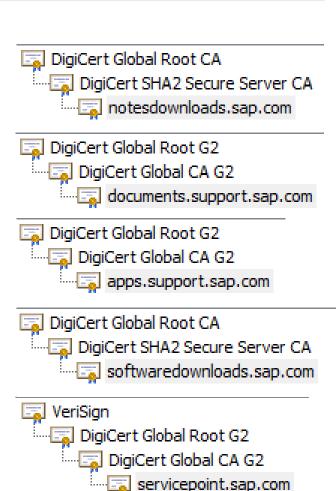
https://notesdownloads.sap.com https://documents.support.sap.com https://apps.support.sap.com/dummy

https://softwaredownloads.sap.com

https://servicepoint.sap.com

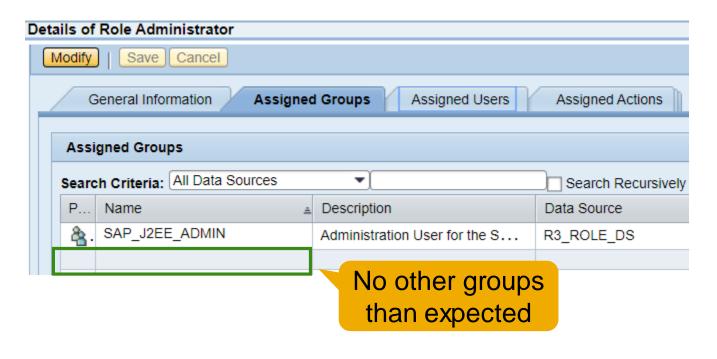
Destination

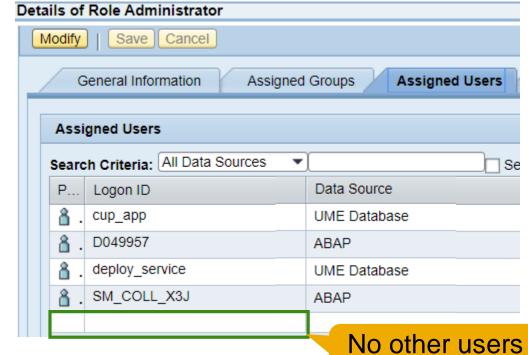
SAP-SUPPORT_NOTE_DOWNLOAD SAP-SUPPORT_PARCELBOX SAP-SUPPORT_PORTAL



Java: Guest user is not an Administrator No-brainer

User J2EE_GUEST is not an Administrator. Never.





than expected

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

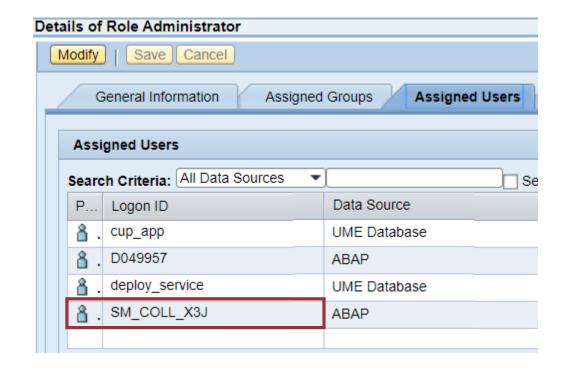
Java: Guest user is not an Administrator What about other users having role Administrator?

i 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.

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

Note <u>2786151</u> - 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

Note <u>2828682</u> - 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



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 <u>2362078</u>, <u>2624688</u>, <u>2778519</u> – Secure System Internal Communication

Note <u>2813809</u> - 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



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.



Status: New

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

SAP Support Backbone Connectivity - Download Service

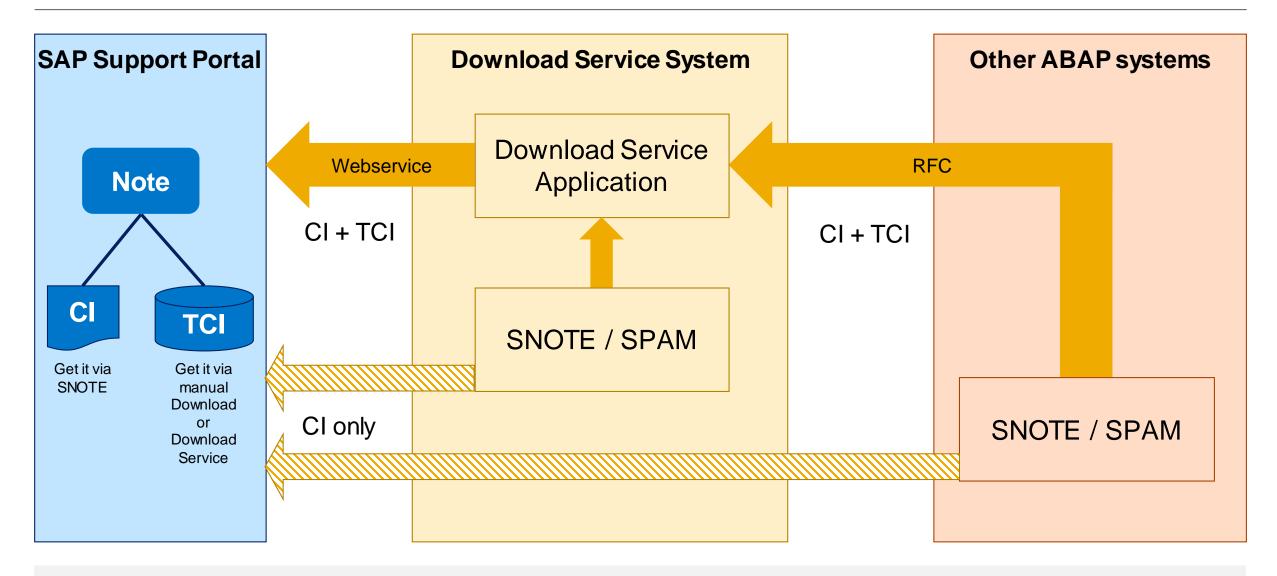
The most important use case for the ABAP Download Service is downloading from SAP file shares connected to the SAP Support Portal and the download of SAP Notes with all their dependencies and relevant SAP Notes transport-based correction instructions (TCIs).

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/9d6aa238582042678952ab3b4aa5cc71/7.5.15/en-US/7cd5bc1666824b3eba96e8a79dd2055e.html

SAP Support Backbone Connectivity - Download Service



SAP Support Backbone Connectivity – Download Service Required correction notes

Note <u>2456654</u> - Adjustment of SAP NetWeaver Download Service for new download locations Note <u>2503500</u> - 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 <u>2554853</u> - SAP NetWeaver download service for SAP Notes

Note <u>2618713</u> - SNOTE: Timeout during download of SAP Notes via SAP Download Service

Note <u>2681011</u> - 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

SAP Support Backbone Connectivity – Download Service Activation

On a Download Service System:

- 1. Maintain <u>S-User</u> and <u>execution parameters</u> using transaction SDS_CONFIGURATION Required roles SAP_BC_SDS_CONF_ADMIN respective SAP_BC_SDS_TASK_USER
- 2. Install <u>client certificates</u> according note <u>2620478</u> using transaction STRUST
- 3. Adapt <u>proxy settings</u> (if required)
- 4. Configure <u>HTTPS service</u> (if required)
- 5. Set up download directory (if required)
- 6. Set up <u>SL protocol service</u> (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

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_втсн_јов	JOBACTION	RELE	JOBGROUP	1 1		
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		

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 <u>2576306</u> (complete via TCI) respective note <u>2508268</u> (with manual implementation steps)

SAP Support Backbone Connectivity – Download Service Configuration for LMDB

Note <u>2756210</u> - Configuration of SAP Netweaver Download Service for LMDB Content import automation

SAP Support Backbone Connectivity – Update of Task List

Note <u>2827658</u> - Automated Configuration of new Support Backbone Communication - Update 02 (old note <u>2793641</u>)

SAP NOTE <u>2827658</u> - Automated Configuration of new Support Backbone Communication - Update 02

- 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

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 -

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=cprofile> -ssl secure store -expert -cmdfile -
```

Notes <u>2362078</u>, <u>2624688</u>, <u>2778519</u> – 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 <u>2362078</u>, <u>2624688</u>, <u>2778519</u>:

- 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

Note <u>2813809</u> - 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.

Note <u>2838480</u> - SAL | Secure By Default (as of SAP_BASIS 7.54) Note <u>2676384</u> - 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 <u>2033317</u>)
- 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"



August 2019

Topics August 2019



Note <u>2786035</u> - Code Injection vulnerabilities in SAP Commerce Cloud

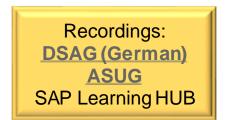
Note <u>2798743</u> - Missing Authorization check in ABAP Debugger

Note 668256 - Using HTTP/external debugging

Note 668252 - Authorization check for HTTP/external debugging

Note <u>2286679</u> - Clickjacking Framing Protection in JAVA

SAP Support Backbone Connectivity – Check usage of destinations



Note <u>2786035</u> - Code Injection vulnerabilities in SAP Commerce Cloud

Note <u>2697573</u> - Cross-Site Scripting (XSS) vulnerability in SAP Commerce / SAP Hybris Solution:

SAP Hybris Commerce 6.7 or later

Note <u>2786035</u> - Code Injection vulnerabilities in SAP Commerce Cloud Solution (<u>software downloads for SAP Hybris Commerce</u>):

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 <u>2697573</u>

These links show the patch info

Workaround: Deinstall Virtualidbc and Mediaconversion extensions if not needed

Note <u>2798743</u> - 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

Note <u>668256</u> - Using HTTP/external debugging Note <u>668252</u> - 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

Note <u>2286679</u> - Clickjacking Framing Protection in JAVA How to activate Clickjacking Protection

Enabling the Clickjacking Protection Service on Java systems

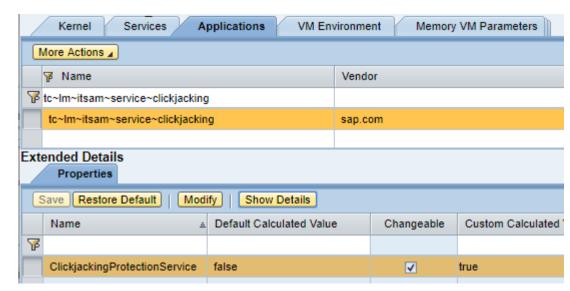
- Log on to SAP NetWeaver Administrator at http://<host>:<port>/nwa.
- 2. Navigate to "Configuration → Infrastructure → Java System Properties"
- 3. Choose the Applications tab.

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.



Note <u>2286679</u> - 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 <u>2169860</u> Web Dynpro JAVA (WDJ)
- Note <u>2169722</u> Enterprise Portal (iViews)
- Note <u>2290783</u> Java Server Pages (JSP)

Note <u>2286679</u> - 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:**

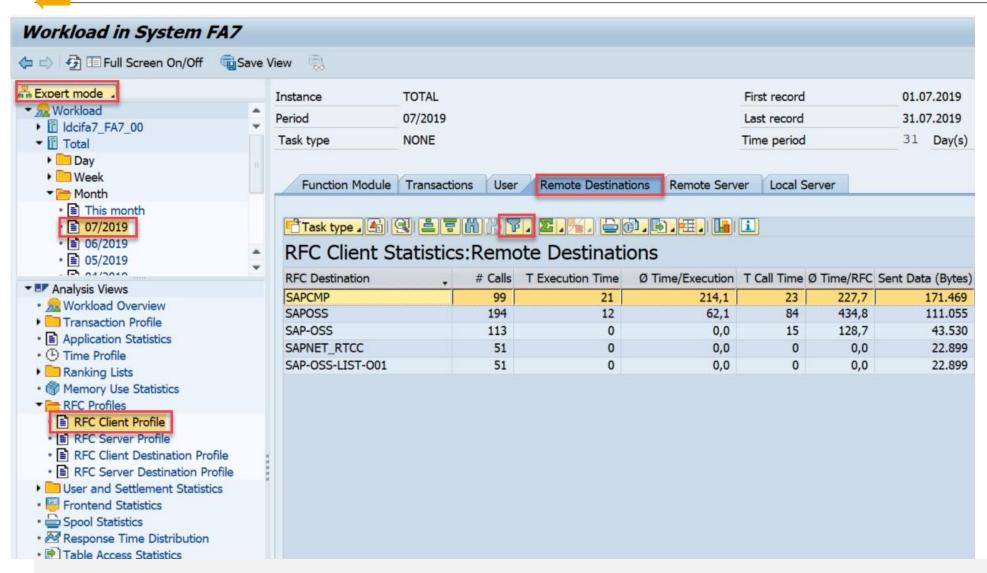
However,

Name = tc~lm~itsam~service~clickjacking

or

Element Pattern = ClickjackingProtectionService does not show results.

SAP Support Backbone Connectivity Check usage of RFC Destinations



Transaction ST03N shows the usage of RFC Destinations

 \longrightarrow

Ensure that none of these destinations are still in use

Filter for destinations:

SAPCMP

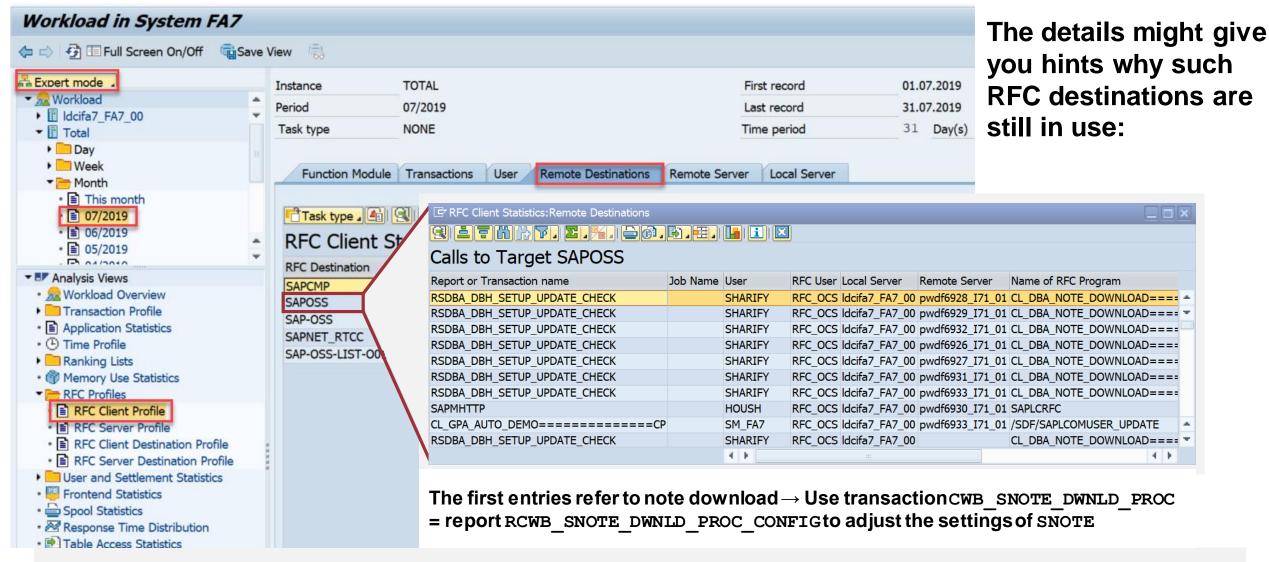
SAPOSS

SAP-OSS

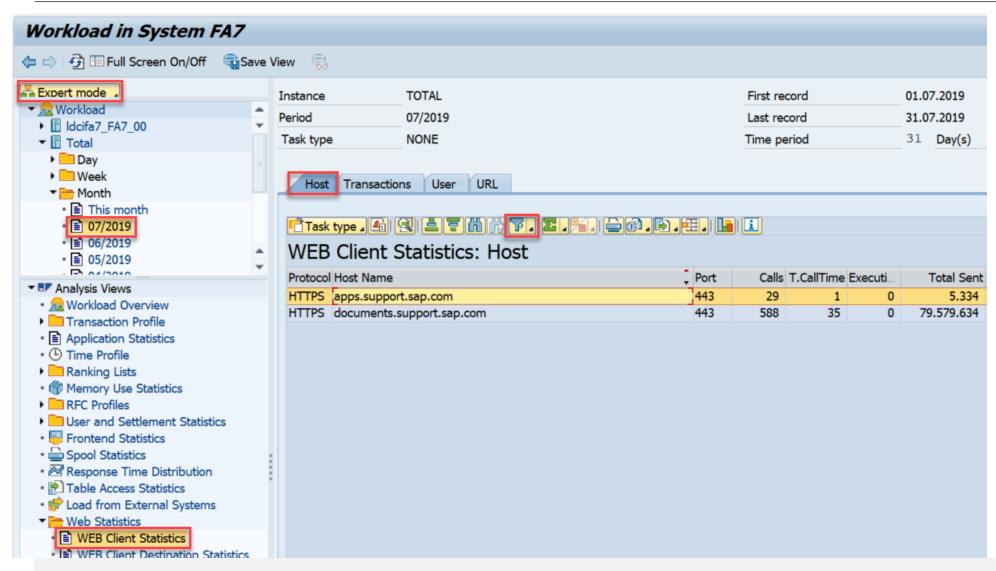
SAPNET RTCC

SAP-OSS-LIST-001

SAP Support Backbone Connectivity Check usage of RFC Destinations



SAP Support Backbone Connectivity Check usage of Webservice



Transaction ST03N shows the usage of Webservices

 \longrightarrow

Check that the new webservices are used

Filter for host: *support.sap.com



July 2019

Topics July 2019



Note 2808158 - OS Command Injection vulnerability in SAP Diagnostics Agent

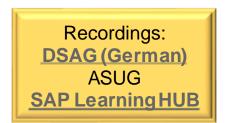
Note <u>2812152</u> - Update 1 to Security Note 2643447

Note <u>2774742</u> - Cross-Site Scripting (XSS) vulnerability in ABAP Server and ABAP Platform

Note <u>2738791</u> - Information disclosure in SAP NetWeaver AS Java (Startup Framework)

Security Audit Log as of 7.50

The intermediate Support Backbone Update Guide



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 <u>2686969</u> - 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 whitelisted OS commands which can be executed via the Diagnostics Agent.

Note <u>2808158</u> - OS Command Injection vulnerability in SAP Diagnostics Agent

Updated by note 2839864

How-to execute OS commands?

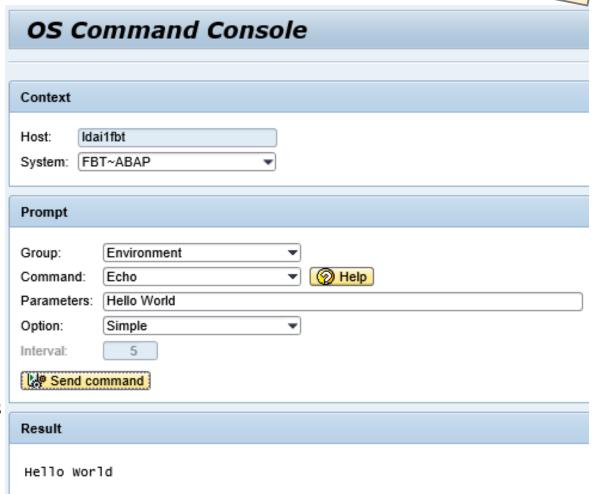
Root Cause Analysis Workcenter

→ OS Command Console

Which whitelisted commands are available?

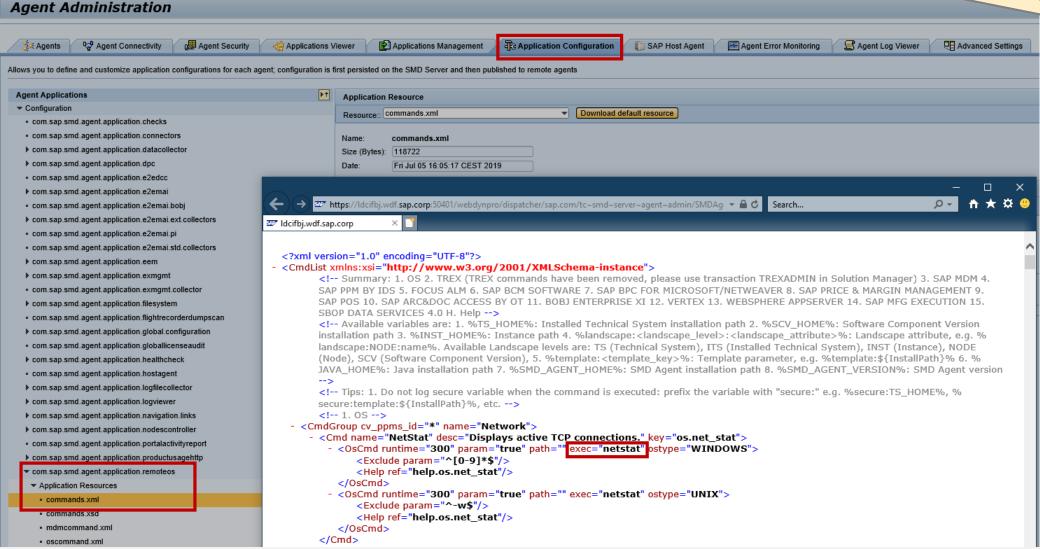
SAP Solution Manager Administration Workcenter

- → Agents Administration
- → Agent Admin
- → Choose tab "Applications Configuration"
- → com.sap.smd.agent.application.remoteos
- → Application Resources
- \rightarrow commands.xml



Note <u>2808158</u> - OS Command Injection vulnerability in SAP Diagnostics Agent

Updated by note 2839864



Note <u>2812152</u> - Update 1 to Security Note <u>2643447</u>

Side effect solving note, which is required if you install respective have installed note <u>2643447</u> 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 <u>2812152</u> to avoid syntax error	Nothing to do

Note <u>2774742</u> - 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.

Note <u>2738791</u> - Information disclosure in SAP NetWeaver AS Java (Startup Framework)

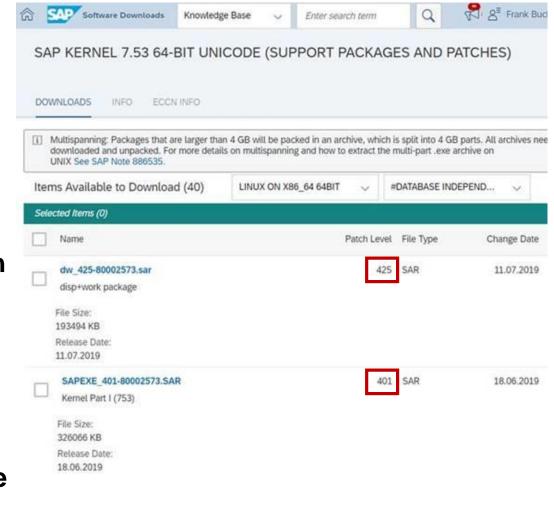
Java systems run with parts of the Kernel.

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.



Security Audit Log as of 7.50 Transaction SM19 vs. RSAU CONFIG

Note <u>2191612</u> - 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.

Security Audit Log as of 7.50 Important corrections

Configuration:

Note <u>2663455</u> - 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 <u>2743809</u> - 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 <u>2682603</u> - 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 <u>2682072</u> - 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)

Connectivity to SAP's Support Backbone

https://support.sap.com/backbone-update

Support Backbone Update Guide (https://pdf)

Digitally Signed SAP Notes

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

Note <u>2537133</u> for FAQs on Digitally Signed SAP Notes

Webinar <u>replay</u>

Click <u>here</u> to view the presentation

Cheat Sheet for enabling SNOTE for Digitally Signed SAP Notes and for TCI

and (among others)

Note <u>2174416</u> - Creation and activation of users in the Technical Communication User app

Note <u>2740667</u> - RFC connection SAPOSS to SAP Service & Support backbone

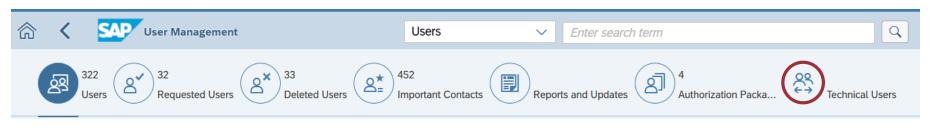
Note <u>2738426</u> - Automated Configuration of new Support Backbone Communication

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 <u>2603877</u>, <u>2632679</u>, <u>2721941</u>, <u>2813264</u>, ...)
- 2. Request technical S-users via <u>User for Support Hub Communication application</u> 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 <u>2740667</u>
 - 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)

The intermediate Support Backbone Update Guide Request Technical Communication User

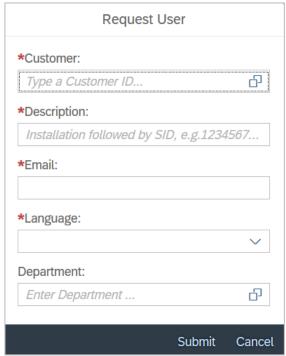


Request Technical Communication User on SAP Support Portal

Proposed naming: <installation number>_<system id>

https://launchpad.support.sap.com/#/user/management

→ https://launchpad.support.sap.com/#/techuser



User was successfully requested

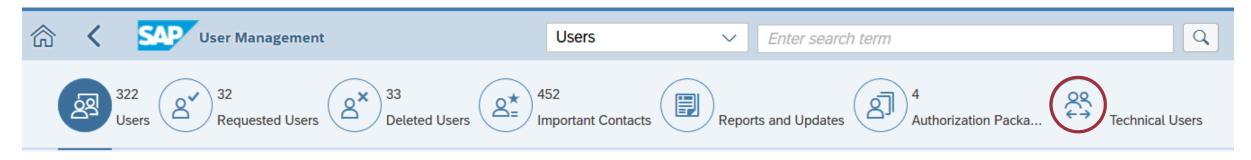
The new technical user account will be created within one business day

OK

The intermediate Support Backbone Update Guide Bonus: Note <u>2805811</u> - 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.

The intermediate Support Backbone Update Guide (Partly) Automated Configuration of new Support

Communication

SAP NOTE <u>2827658</u> - 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 UT and follow instructions to implement SAP Note/TCI.

Note <u>2793641</u> - Automated Configuration of new Support Backbone Communication - Update 01 Version 3 from 08.07.2019

- Implement the TCI of note <u>2793641</u> with transaction SNOTE
- Install certificates into transaction STRUST
- Execute task list 'New OSS Communication' via transaction STC01 with adjusted settings
- Check destinations using report RSRFCCHK
- Switch SNOTE to using https instead of RFC
- Verify that you can download digitally singed notes via https

Note <u>2793641</u> – (Partly) Automated Configuration

SAP NOTE <u>2827658</u> - 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).

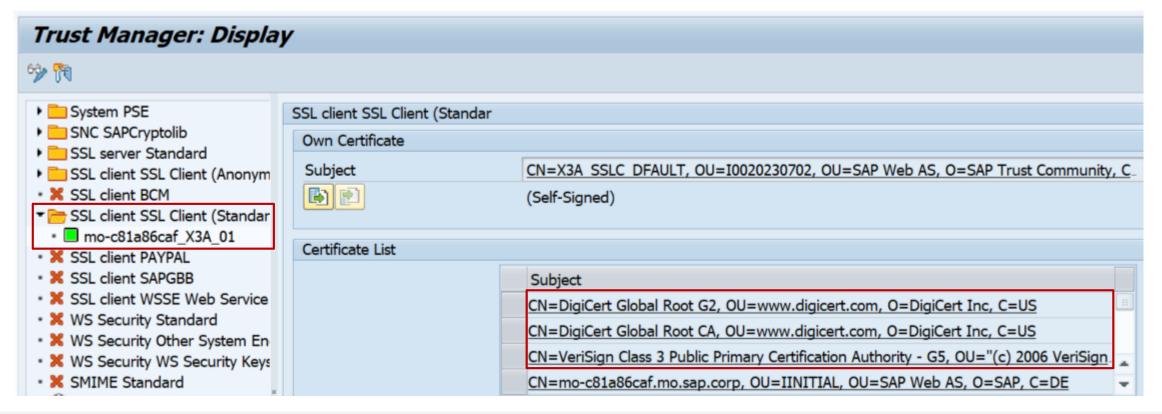
Enter user credentials of Technical Communication User, scroll down and activate all three checkboxes "Overwrite existing destination"

Note <u>2793641</u> – (Partly) Automated Configuration

SAP NOTE <u>2827658</u> - 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



Note <u>2793641</u> – (Partly) Automated Configuration

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

RFC Cor	SAP NOTE <u>2827658</u> - Automated onfiguration of new Support Backbone Communication - Update 02
Standard Selection	02
RFC destinations	*SAP*
Connection Type	
Connection Test	
Execute connect	ion test

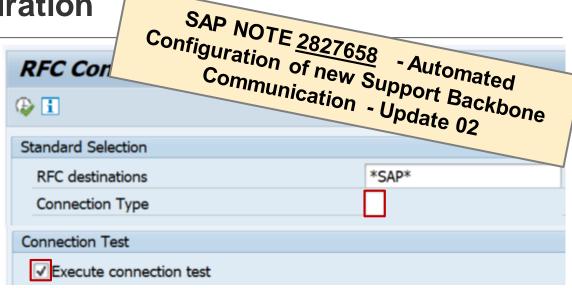
Destination SAPOSS still got generic user OSS_RFC and you have to adjust the other destinations SAP-OSS, SAP-OSS-LIST-001, and SAPNET RTCC by yourself also:

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-001	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	50019841862	Password saved

Note <u>2793641</u> – (Partly) Automated Configuration

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.



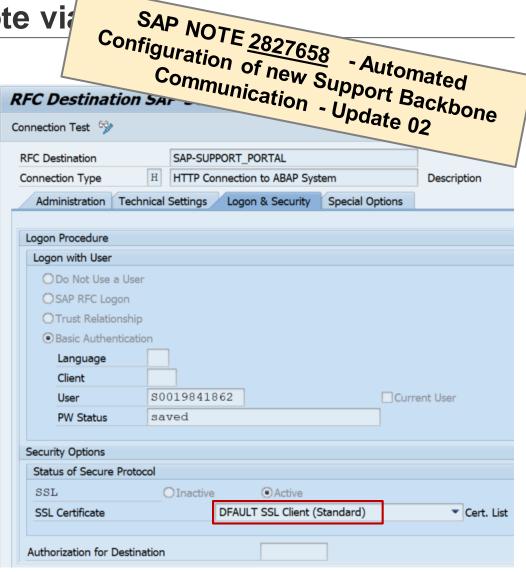
Nevertheless, the connection is ok, to download notes

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	- pi	(HTTP: 404) Not Found
	SAP-SUPPORT_PARCELBOX	documents.support.sap.com	k) 🗸	(HTTP: 200)
HTTP Connections to ABAP System	SAP-SUPPORT_PORTAL	apps.support.sap.com	/	(HTTP: 200) OK

Note 2721941 - Download of digitally signed note vi

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.



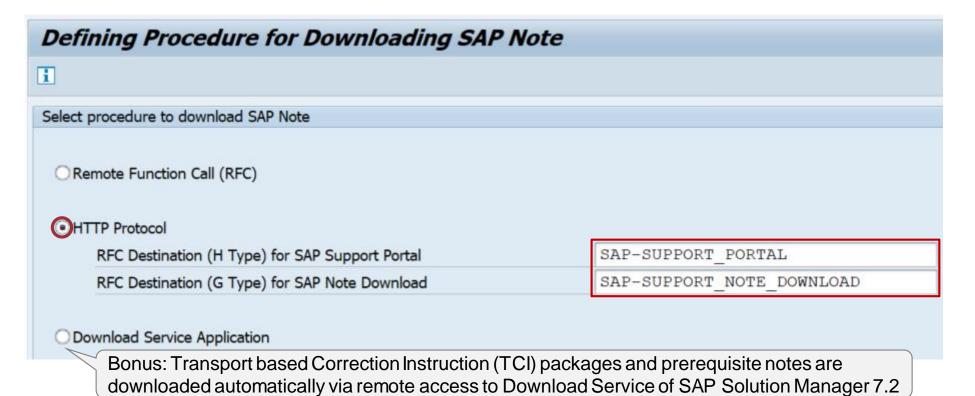
Note 2721941 - Download of digitally signed note via

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

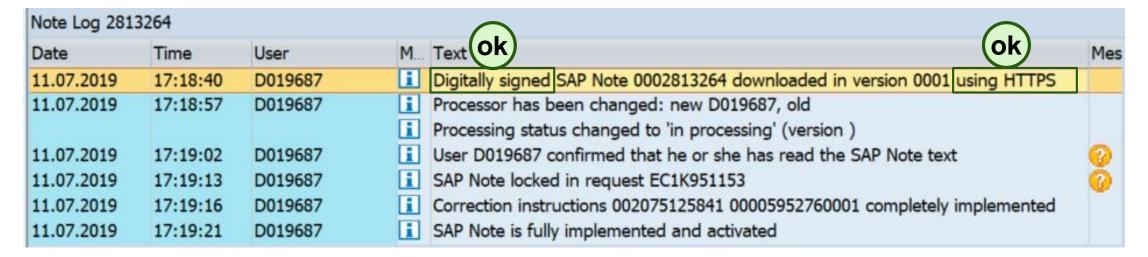
Enter the new destinations SAP-SUPPORT_PORTAL and SAP-SUPPORT_NOTE_DOWNLOAD



The intermediate Support Backbone Update Guide Verification

Use SNOTE to download and install a note, then check the log:





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

g 4 7	7 6 4	<u> 4</u> 🚯	7 II I			
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





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 <u>2748699</u> - Information Disclosure in Solution Manager 7.2 / CA Introscope Enterprise

Note 1997734 - Missing authorization check in RFC runtime

Note <u>2730227</u> - 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

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 <u>Digitally Signed SAP Notes</u>. To understand the overall impact of the SAP Support Backbone update, refer to <u>SAP Support Portal</u>.

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>');
```

How to get rid of Act Now! (if already done...)

TamperMonkey Script

```
// ==UserScript==
// @name
                Hide OSSRetiredMsq
  @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; }');
```

Note <u>2070691</u> - Potential information disclosure relating to database server file system

The original version 4 of note <u>2070691</u> didn't covered all releases and introduced a side-effect error which is solved in note <u>2708068</u>. 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)

N	Vote	Version	Short text	Component ID	Status	Implementation Stat.
2070	691	6	Potential information disclosure relating to database server file system	SV-SMG-SDD	new	Can be implemented
2708	8068	3	2070691 encoutered error message unable to find delivery event	SV-SMG-SDD	new	Can be implemented



If you install one of the notes,

Co_ Status	Obj. Type	Object	Message Text
▼ ○○□	<u>FUNC</u>	/SDF/SADV SHOW DBA PROFILE LOG	Changes can be applied
√ ∞=	<u>FUNC</u>	/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
4	∞=	<u>FUNC</u>	/SDF/SADV SHOW DBA PROFILE LOG	All changes already exist
V		<u>FUNC</u>	/SDF/SORA SAPDBA SXPG	All changes already exist

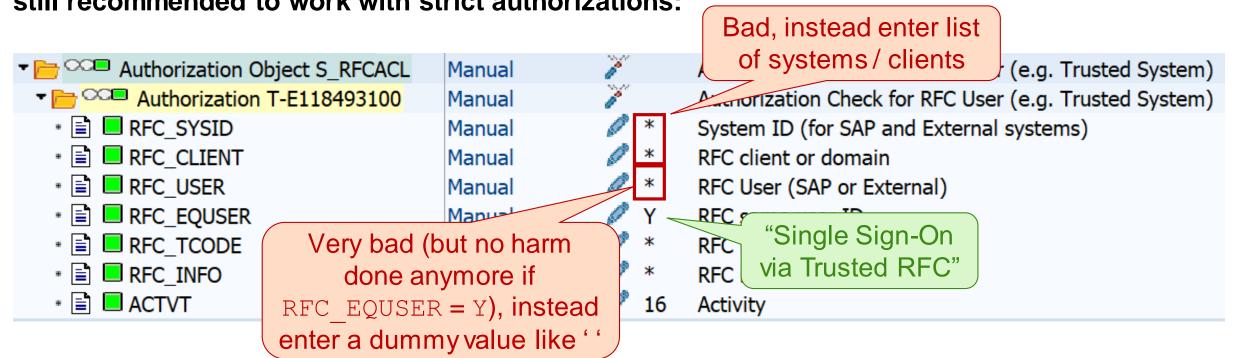
Note <u>2748699</u> - Information Disclosure in Solution Manager 7.2 CA Introscope Enterprise Manager

Procedure:

- 1. Apply patch of note 2748699 on SAP Solution Manager (and check note 1579474)
- 2. Apply patch of related notes <u>2534316</u> (for Introscope 10.5) respective <u>2285189</u> (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 $SOLMAN_SETUP \rightarrow$ "Cross Scenario Configuration" \rightarrow "Mandatory Configuration" \rightarrow "Basic Configuration" \rightarrow "Configure Basic Functions" \rightarrow execute task "Push DPC Configuration to CA Introscope"

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).

Note <u>2730227</u> - Missing Authorization Check in SAP Central Payment

Note <u>2730227</u> - Missing Authorization Check in SAP Central Payment

⇔ (required / is relevant only if)

Note <u>2651431</u> - Central Payment: Historical Open Items – Ensuring Payment and Clearing Takes Place in the Source System (Source Side)

⇔ (required / is relevant only if)

Pilot Note <u>2346233</u> - 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"

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.

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

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
```

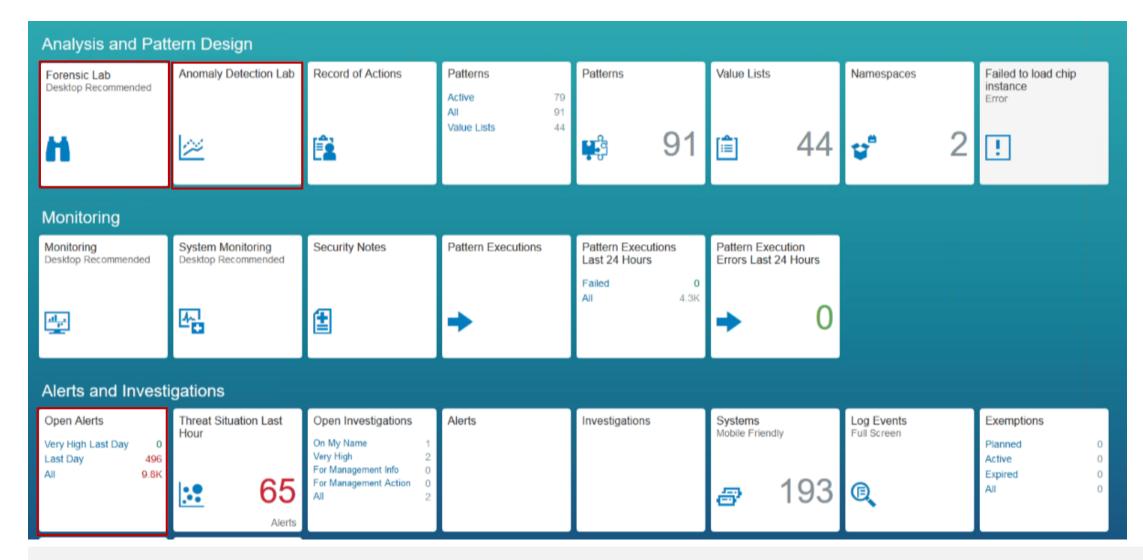
Prerequisite: Remote monitoring needs to be active with gw/monitor=2

Useful commands:

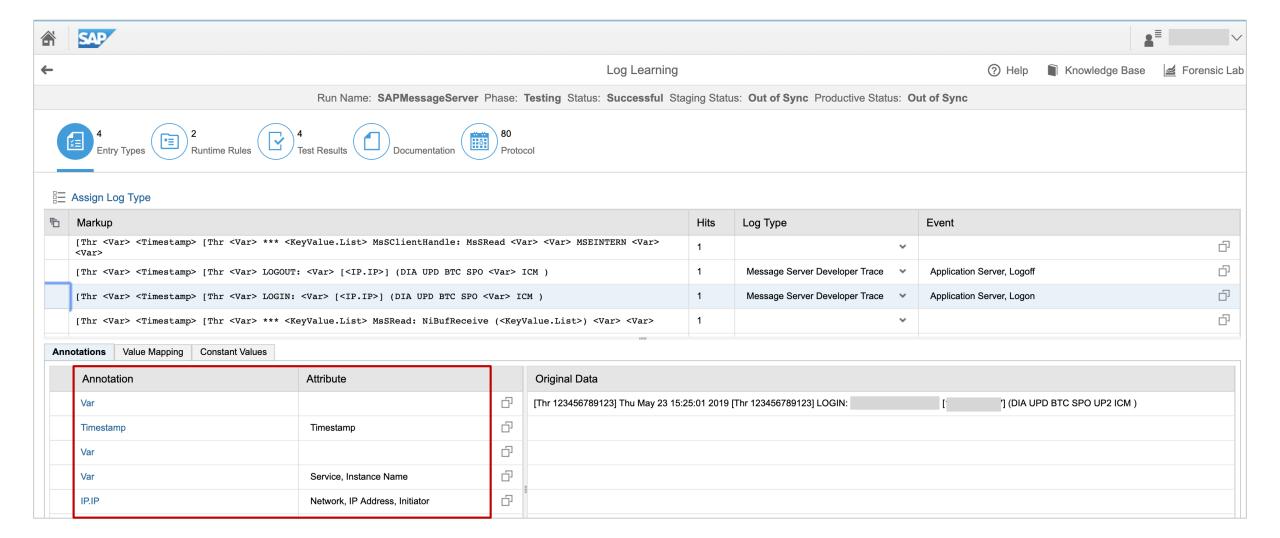
```
GET_RELEASE
GET_PARAM
GET_SECINFO
GET_REGINFO
GET_TRUSTED_IPADR
GET_SEC
```

https://wiki.scn.sap.com/wiki/pages/viewpage.action?pageId=491913782

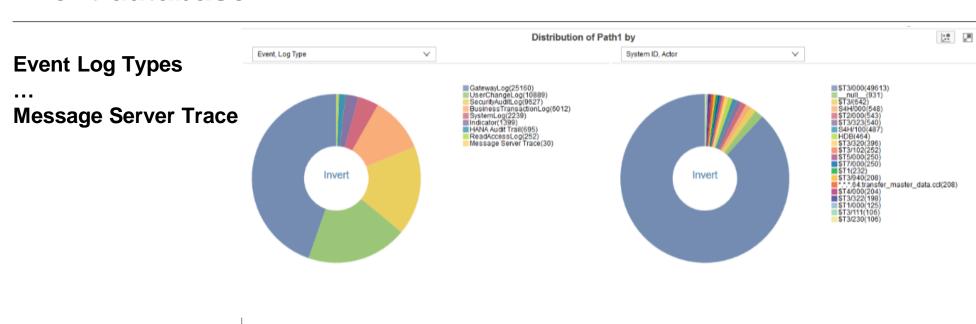
ETD for RFC Gateway and Message Server Monitoring Launchpad



ETD for RFC Gateway and Message Server Monitoring Preparation: Log Learning of Log Type "SAP Message Server"

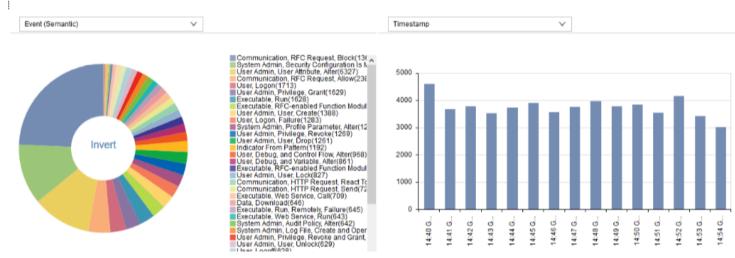


ETD for RFC Gateway and Message Server Monitoring Event database



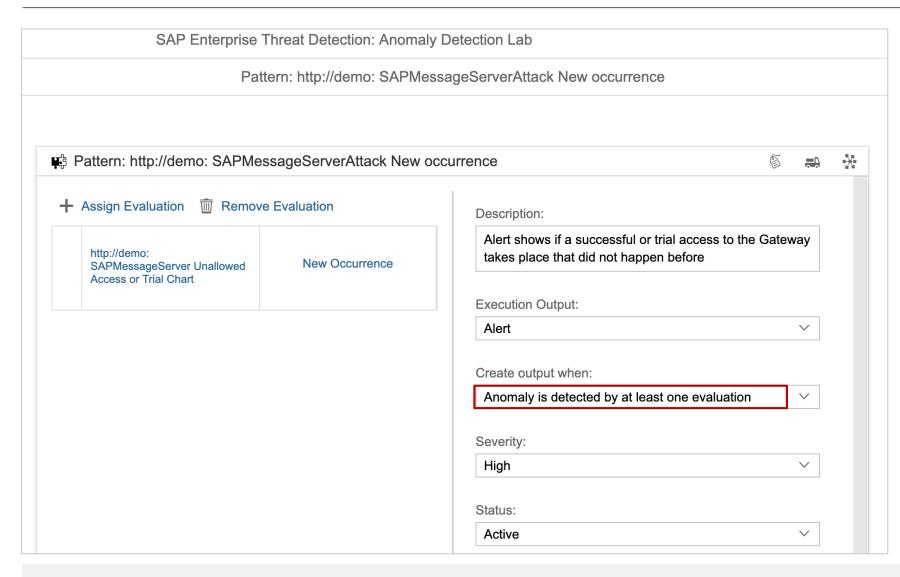
Source Systems

Semantic Events
...
Server Logon
Server Logoff



Timestamp of selected events

ETD for RFC Gateway and Message Server Monitoring Anomaly Detection Lab

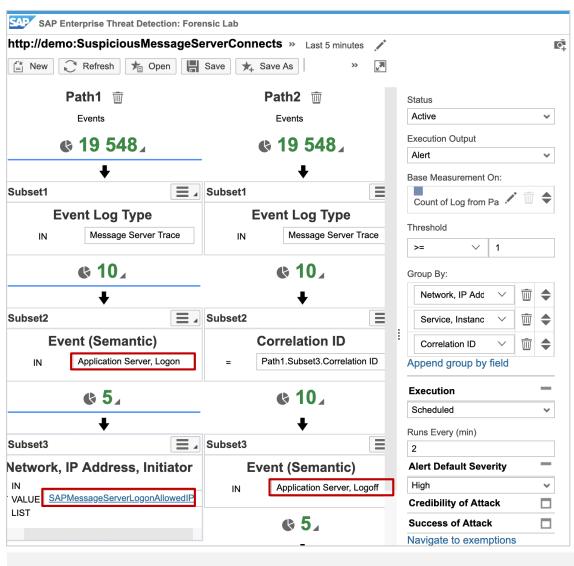


Purpose: Find unusual events

Assumption: We'll get only the same events like in the past 4 weeks

Alert: New events

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 whitelist

Path2: Application Server Logoff

Correlation: Logoff shortly after Logon

Alert: Critital logon attempts

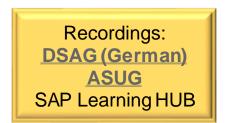


May 2019

Topics May 2019



Extended availability for Security Corrections
RFC Gateway & Message Server Security
Pilot Phase for Security Dashboard in the SAP EarlyWatch Alert Workspace



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 <u>2797813</u>, too)

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 <u>modular</u> <u>exploit kit</u> 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 <u>security companies that incited the coverage</u>.

You can find official statements from SAP <u>here</u> or <u>here</u>.

Two weeks later, the security researchers published <u>some notes regarding the news release after SAP OPCDE talk.</u>

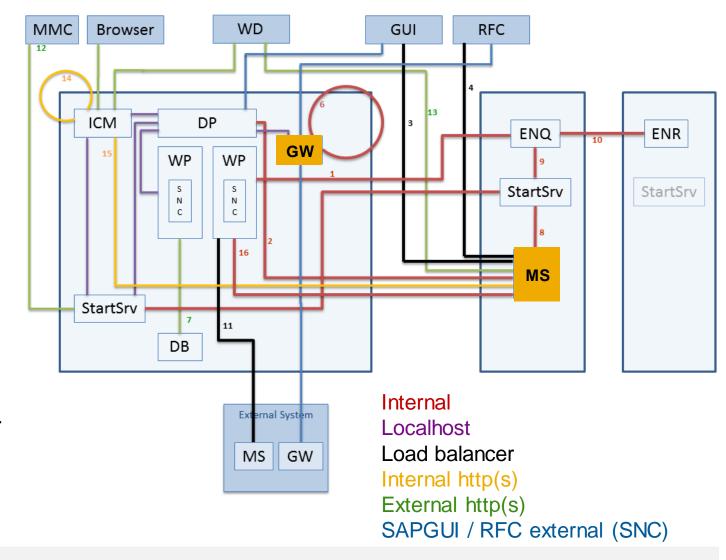
Architecture & Main Risks

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



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 <u>whitepaper</u> was over 8 years ago.

RFC Gateway and Message Server Configuration Settings

Topic	Profile Parameter	changeable in RZ11	Recommended value	RFC Whitepaper	EarlyWatch Alert Note <u>863362</u>	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=""></file>	yes	yes	yes (SY089, 0282)	-
GW	gw/reg_info		<file name=""></file>	yes	yes	yes (SY089)	-
GW	gw/prxy_info		<file name=""></file>	•	-		-
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=""></file>	Note <u>821875</u> , <u>1421005</u>	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</sid>	Note <u>821875</u> , <u>1421005</u>	yes	yes (SY092)	-
MS	rdisp/msserv_internal		39NN	Note 821875, 1421005	yes	yes (SY092)	yes
MS	ms/acl_file_int		<file name=""></file>		-	•	-
MS	ms/monitor	yes	0	Note <u>821875</u>	yes	yes (SY093)	yes
MS	ms/admin_port	yes	0	Note <u>821875</u>	yes	yes (SY093)	yes
MS	ms/server_port_ <xx></xx>	yes	not set		-	-	-
MS	system/secure_communication		ON	Note <u>2040644</u>	-	-	-
MS	Non-trivial entries in the ACL files		no * values		-	-	yes
MS	Firewall settings			Note <u>821875</u>	- (out of scope)	- (out of scope)	- (out of scope)

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

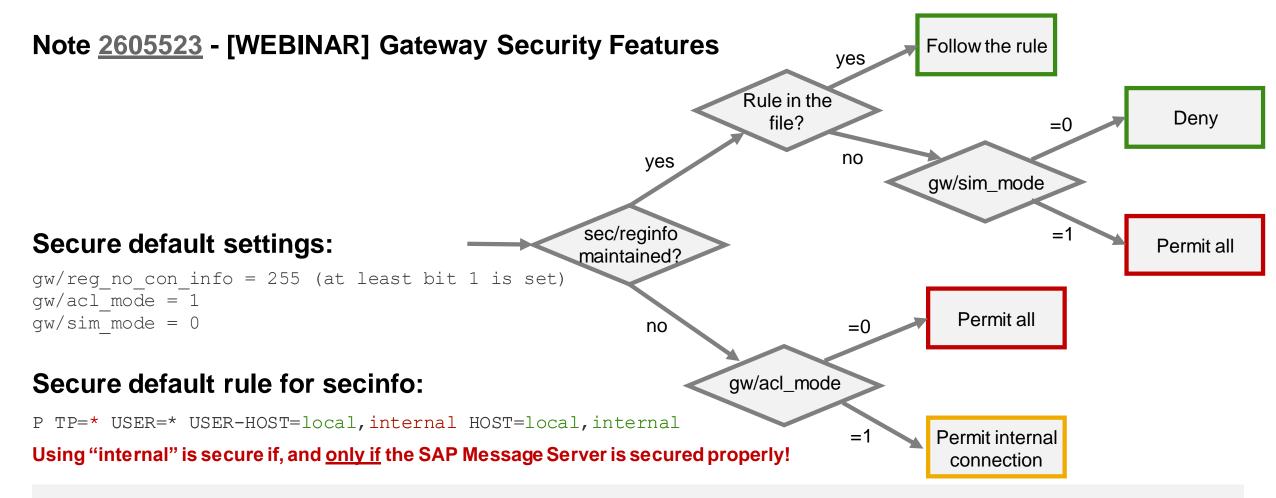
ACL files: -

See Security Baseline Template with Target Systems BL_S-7 and BL_S-8

RFC Gateway Security

RFC Gateway @ SAP Wiki

https://wiki.scn.sap.com/wiki/display/SI/SAP+Gateway



Message Server Security Notes <u>821875</u>, <u>1421005</u>, <u>1495075</u> plus <u>2040644</u>

- 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)
 - 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)

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?

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
```

Pilot Phase for Security Dashboard in the SAP EarlyWatch Alert Workspace

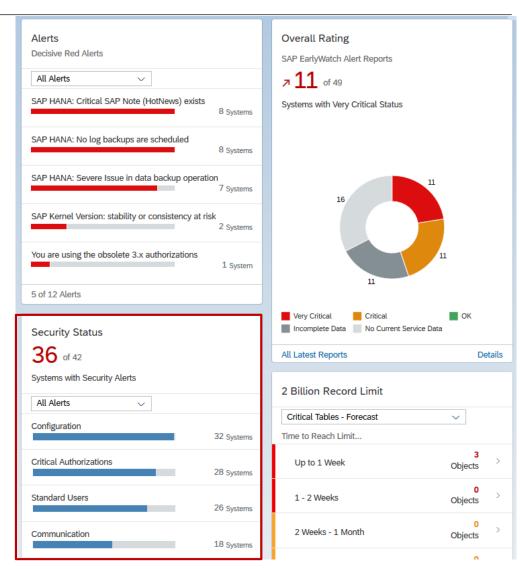
The SAP EarlyWatch Alert Workspace offers a new Security Dashbord which summarizes the security related alerts as shown by the EWA Solution Finder

When interes this the Pilot Phase apply with a brief email (with keep place) to:

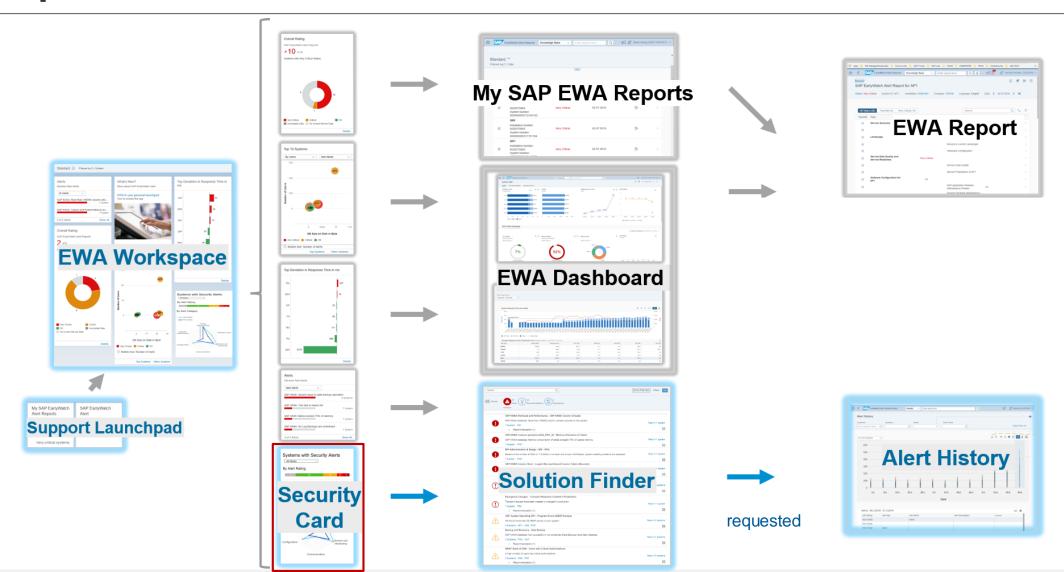
Dr. Hendrik Wus. October 2019 of

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.



Pilot Phase for Security Dashboard in the SAP EarlyWatch Alert Workspace





April 2019

Topics April 2019





Note <u>2729710</u> - XML External Entity vulnerability in sldreg on ABAP and Java Platform

Note <u>2772376</u> - XML External Entity vulnerability in sldreg on SAP HANA

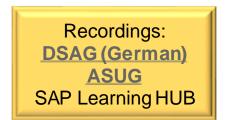
Note <u>2643371</u> - Missing Authorization check in ABAP Server File Interface

Note <u>2643447</u> - 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)



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

Note <u>2729710</u> - XML External Entity vulnerability in sldreg on ABAP and Java Note <u>2772376</u> - 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

DOWNLOADS INFO ECCN INFO					
Name	Patch Level File Type	e File Size	Release Date	Change Date	Related Info
SAPSLDREG_619-70001625.SAR SAPSLDREG	619 SAR	18350 KB	19.02.2019	19.02.2019	=

Note <u>2772376</u> April 2019:

Full HANA update

Attacker requires authenticated user with local access

Note <u>2643371</u> - Missing Authorization check in ABAP Server File Interface Note <u>2643447</u> - 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

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

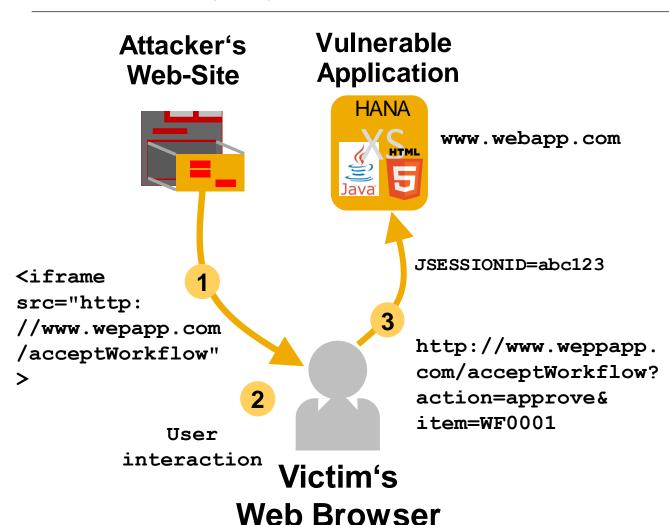
Profile parameter auth/object_disabling_active

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.

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.

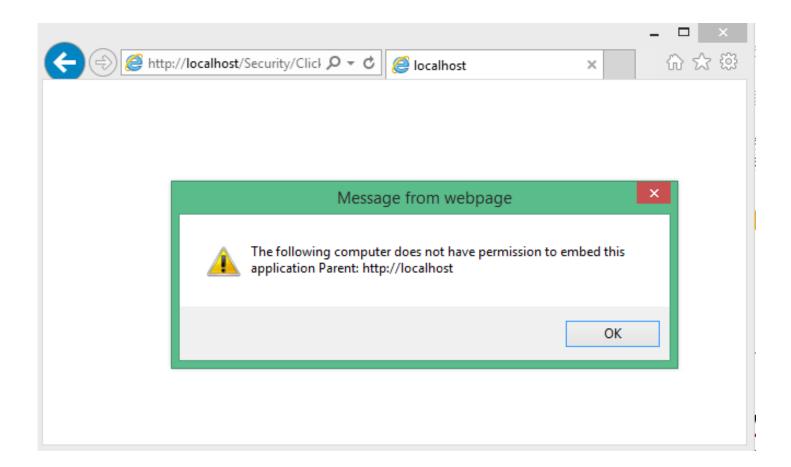
This is particularly dangerous when administrators or privileged business user are successfully attacked.

→ Unauthorized transaction execution

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:



Why now? It's much easier now! (at least for user interfaces based on SAP_UI)

Note <u>2573569</u> - UCON HTTP Whitelist Downport (7.40 SP 20, 7.50 SP 12, 7.51 SP 6, 7.52 SP 1) (February 2018)

Note <u>2507225</u> - Integration of Clickjacking Framing Protection with UCON HTTP Whitelist (April 2018)

Note <u>2667053</u> - CX_HTTP_WHITELIST was raised (July 2018)

Note <u>2667160</u> - Activation of client dependent UCON HTTP Whitelist - clickjacking settings are not saved correctly

(July 2018)

Note <u>2547381</u> - 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

Clickjacking Protection (Reloaded) Transaction UCON CHW or UCONCOCKPIT

Use UCON Logging to learn if any entries in Whitelist are required.

Secured with authority object S_UCON_WHI respective S_UCON_ADM for UCON_TYPE = UCHW

Activation:

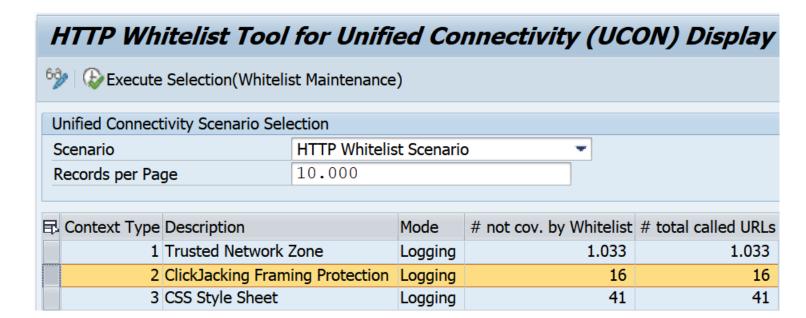
Welcome to the new HTTP Whitelist Maintenance userinterface. The new features of the Maintenance Utility like logging of HTTP calls and simulation of whitelist patterns enables the administrator to build better user-specific whitelists. Do you want to activate the new HTTP Whitelist Maintenance? Yes No

Activation of non-client specific Whitelist Maintenance is strongly recommended for security reasons activate non-client specific Whitelist Maintenance for Context Types 01, 02 and 03 (recommended). For technical reasons Whitelist Maintenance of Context Type 04 CORS is always non-client specific. activate Clickjacking Protection (Context Type 02) for all clients (recommended) automatically import database entries from the classical whitelist HTTP_WHITELIST

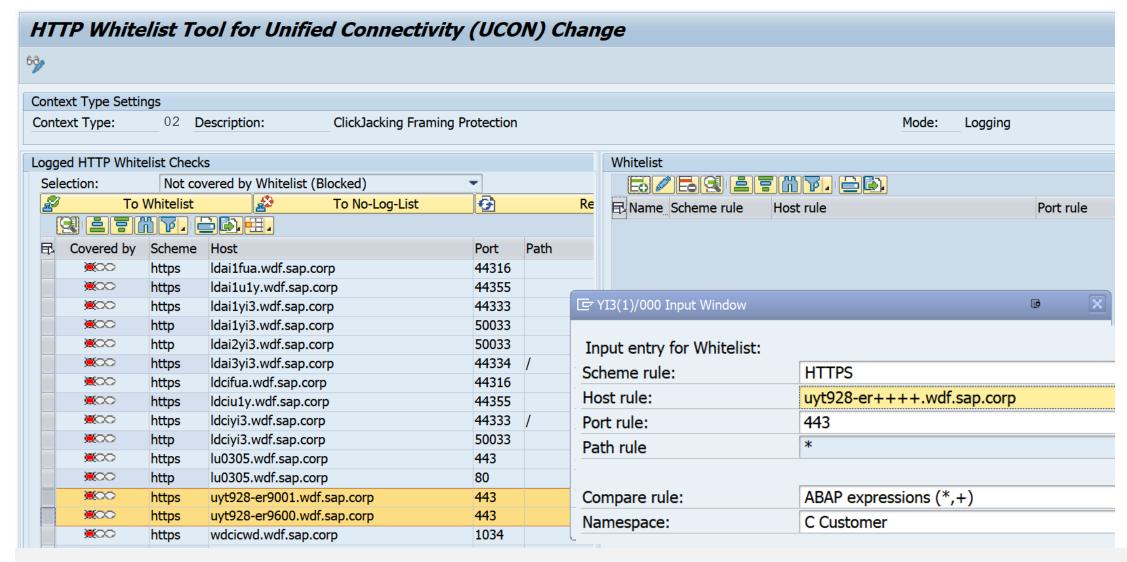
Clickjacking Protection (Reloaded) Transaction UCON CHW or UCONCOCKPIT

Use UCON Logging to learn if any entries in Whitelist are required.

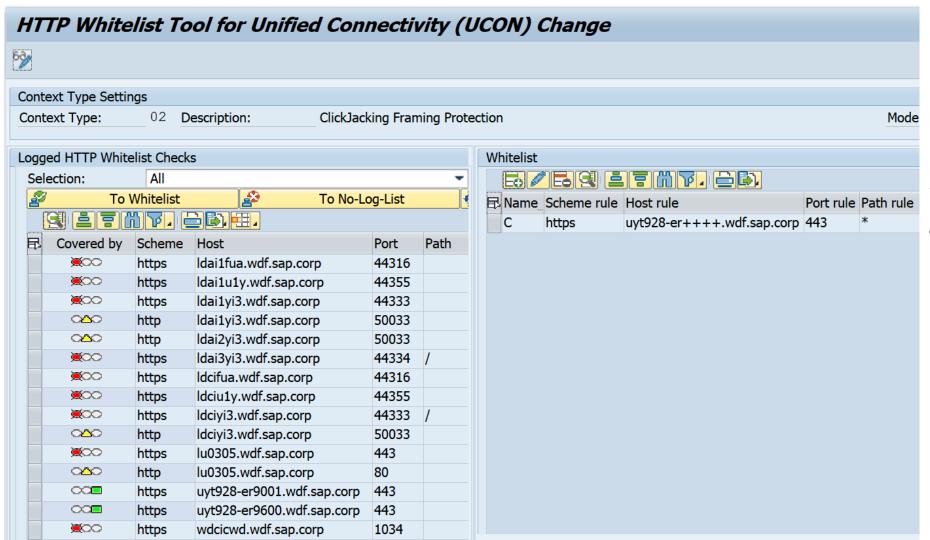
Example:



Clickjacking Protection (Reloaded) Transaction UCON_CHW or UCONCOCKPIT



Clickjacking Protection (Reloaded) Transaction UCON_CHW or UCONCOCKPIT



Result:

HTTP is blocked

Servers uyt928-er+++
are accepted

Required actions in a nutshell (in addition to UCON notes)

Pre-consideration

- Central Clickjacking protection information:
 - → see note <u>2319727</u>
- Check system requirements:
 - → see <u>below</u> (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 <u>2319192</u>
- JAVA: (Custom) JSP applications require adaption
 → see note 2290783

Configuration ABAP

- Perform configuration for activation of Clickjacking protection ABAP
 - Central Whitelist maintenance: → see note <u>2142551</u>
 - UCON HTTP Whitelist: → see note 2507225
 - BSP activation: → see note 2319192
 - What about note <u>2028904</u> describing a mandatory configuration activity with transaction SICF?

Configuration JAVA

- Perform configuration for activation of Clickjacking protection JAVA
 - Central Whitelist maintenance & activation:
 → see note 2170590
 - Framework activation: → see notes <u>2169860</u> (WDJ), <u>2169722</u> (EP), <u>2263656</u> (HTMLB), <u>2244161</u> (WCEM)

References

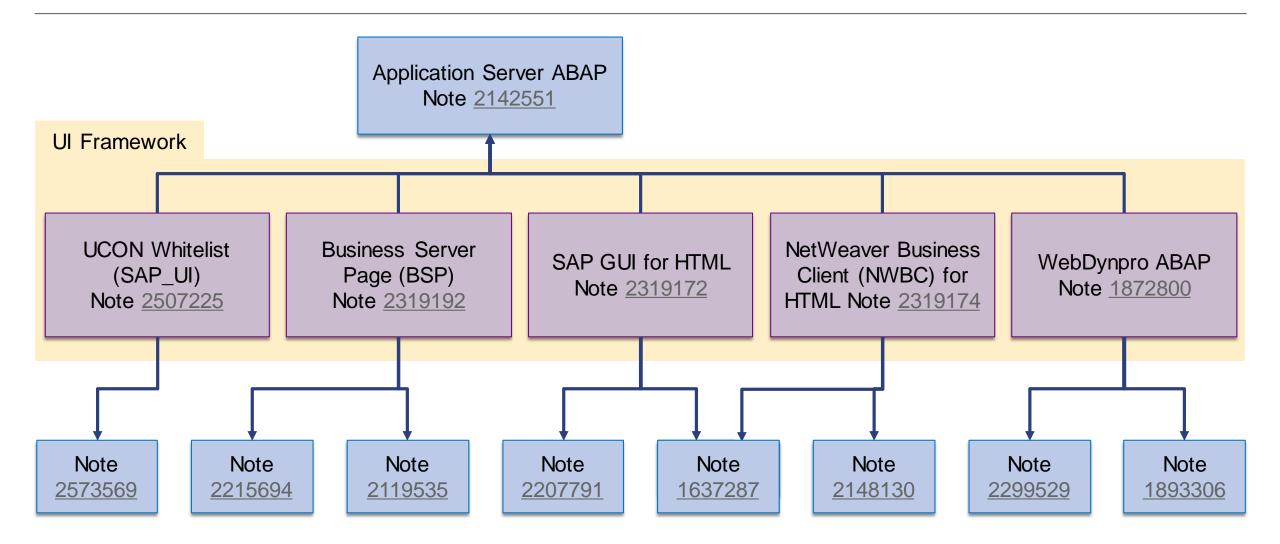
Online Help

Using a Whitelist for Clickjacking Framing Protection

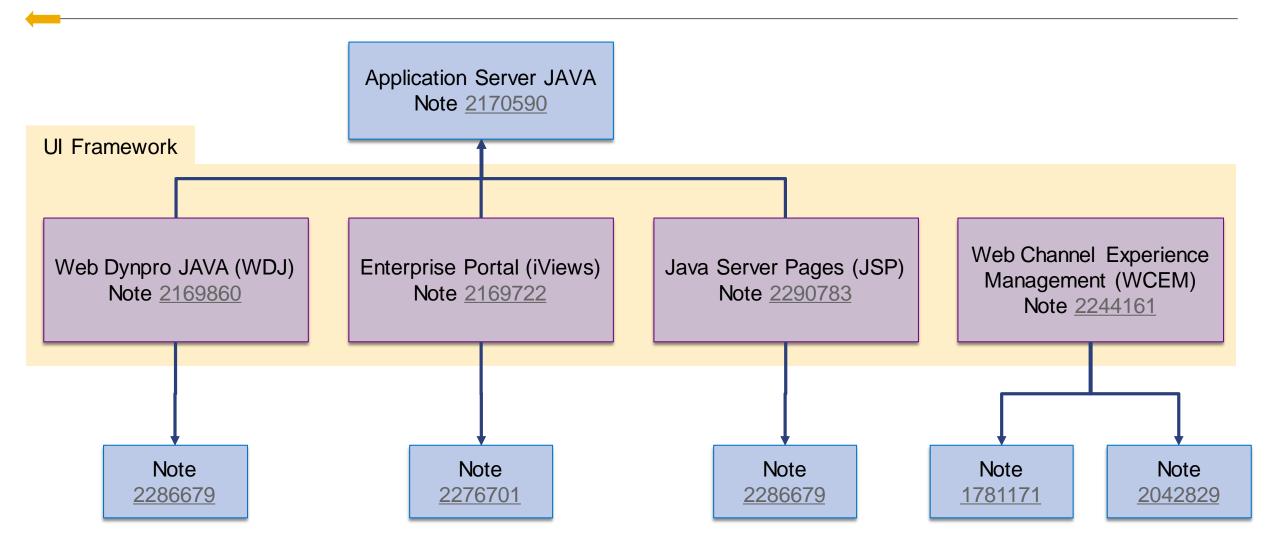
https://help.sap.com/saphelp_nw73ehp1/helpdata/en/96/6b6233e5404ebe80513ae082131132/frameset.htm

https://help.sap.com/viewer/864321b9b3dd487d94c70f6a007b0397/7.4.19/en-US/966b6233e5404ebe80513ae082131132.html

ABAP Framework



JAVA Framework





March 2019

Topics March 2019



WINTER IS COMING - How to keep Connectivity to SAP's Support Backbone

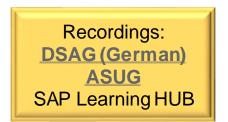
Note <u>2475591</u> - Transport Check Report

Note 2030144 - Switchable authorization checks for RFC in SLCM (Student Life cycle Mngmt.)

Note 2524203 - Switchable authorization checks for RFC in FI-CA

Notes <u>2764283</u> <u>2742027</u> <u>2724713</u> about XSA

Overview about recent Notes concerning System Recommendations



WINTER IS COMING - 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

WINTER IS COMING - 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 <u>2716729</u> - SAP backbone connectivity - SAP Parcel Box configuration

Note <u>2714210</u> - New communication channel to SAP Backbone for Service Content Update

Note <u>2740667</u> - RFC connection SAPOSS to SAP Service & Support backbone will change (latest) in January 2020

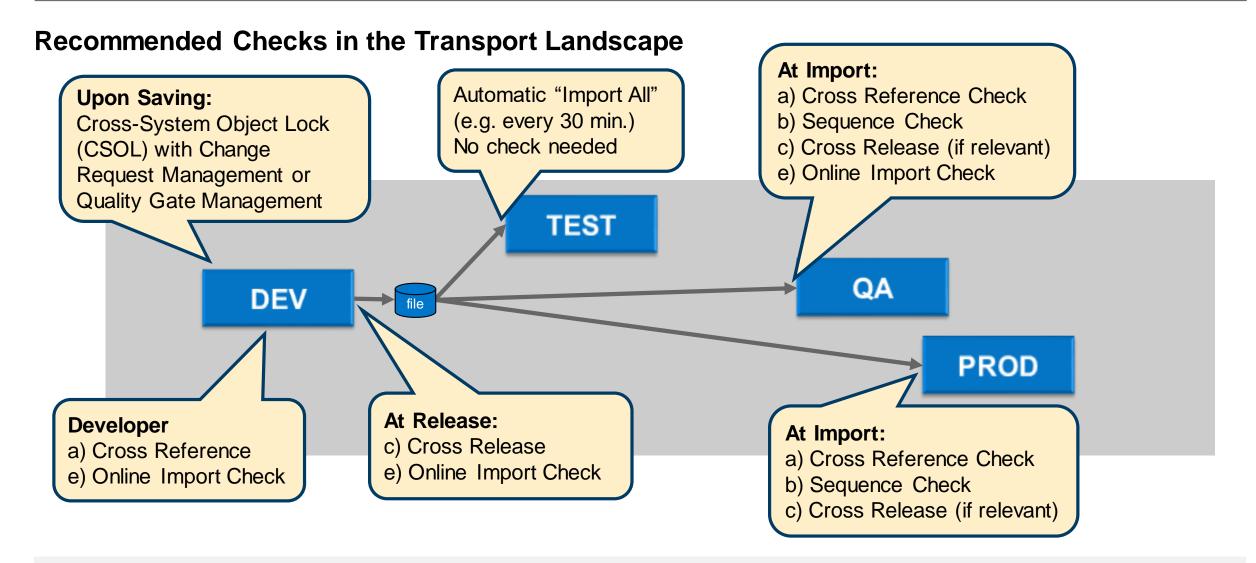
[....]

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 (maybe in addition to already activated SCMON)

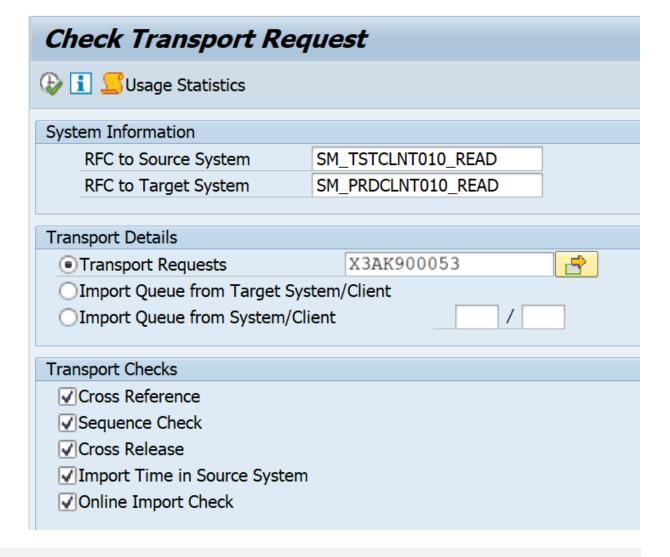
Note <u>2475591</u> - Transport Check Report



Note <u>2475591</u> - 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.



Note <u>2475591</u> - 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

Note <u>2030144</u> - 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/Clie Executed On: Number of Scenarios Fo	ent: 753 / EC1 19.03.201	l / 001 19/14:36:56			
Scenario Name	Component ID	Object	Short Text for Check		
FI_ACE_REPORT	FI-LA	F_ACE_DST F_ACE_PST F_L_ACCRUL	Authorization check f		
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			

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

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)?

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: <u>SAP HANA XSA System Monitoring setup</u>

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

Overview about recent Notes concerning System Recommendations

Release Notes

Note <u>2725557</u> - 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 <u>2640996</u> - SysRec: Enhancement of UPL error message Handling

Note <u>2745082</u> - SysRec: NonABAP notes relevance check fix

Note <u>2443137</u> - SysRec: Note count is 0 in SysRec system overview

Note <u>2683868</u> - SysRec: Download Basket doesn't contain the files

Note <u>2536918</u> - SysRec: Display all systems and notes at one time

Fiori App Correction Notes

Note <u>2747922</u> - SysRec: Corrections for Solution Manager 720 SP 08 Fiori UI

Note <u>2741223</u> - SysRec: Corrections for Solution Manager 720 SP 07 Fiori UI

Note <u>2656937</u> - SysRec: Collective corrections for SAP Solution Manager 7.2 SP 07 Fiori UI

Note <u>2556623</u> - SysRec: Collective Corrections for Solution Manager 720 SP03-SP06 Fiori UI



February 2019

Topics February 2019





Note <u>2742027</u> - Missing Authentication check in SAP HANA Extended Application Services, XSA

Note <u>2709897</u> - Directory Traversal in SAP Enterprise Architecture Designer on XSA

Note <u>2750987</u> - Potential Corruption of Encrypted Root Key Backups by SAP HANA Cockpit

Note <u>2712210</u> - SysRec 7.2 SP 5 customize the calculation of security notes for unused subHR component

Recap: Security Patch Process



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

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.

Note <u>2709897</u> - 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 1c" to show the component info overview. Check the entry for XSAC HANA EA D (sap.com) 1.X.Y

Note <u>2709897</u> - 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_MESS_SRV (sap.com) 1.3.1
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
```

Note <u>2750987</u> - 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

Note <u>2750987</u> - 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
```

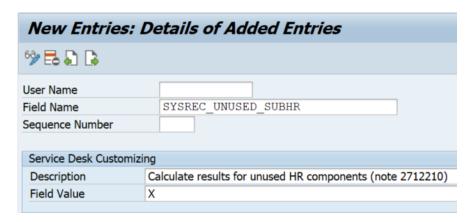
Please note that this command must be executed for SystemDB and every tenant individually.

Note <u>2712210</u> - 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 <u>2449853</u> 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	Х
SAP_HRCAR	608	SAP_HR	608	Х
SAP HRCAT	608	SAP HR	608	Χ
SAP HRCAU	608	SAP HR	608	Χ
SAP HRCBE	608	SAP HR	608	Х
SAP HRCBG	608	SAP HR	608	Χ
SAP_HRCBR	608	SAP_HR	608	Χ

Note <u>2712210</u> - 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&filters=releaseStatus%25253Aeq~'NotRestricted'%25252BsecurityPatchDay%25253Aeq~'NotRestricted'%25252Btype%25253Aeq~'SECU'%25252BfuzzyThreshold%25253Aeq~'O.9'%25252BsoftwareComponent%25253Aeq~'SAP_HR'~'SAP_HRGXX'~'SAP_HRRXX'~'EA-HRCDE'~'EA-HRGXX'~'SAP_HRCDE'~'EA-HRCDE'
```

Note <u>2712210</u> - 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'
```

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



January 2019

Topics January 2019





Note <u>2727624</u> - Information Disclosure in SAP Landscape Management

Note <u>2696233</u> - Multiple Vulnerabilities in SAP Cloud Connector

Note 2724788 - Various Vulnerabilities in ADOBE PDFPRINT LIBRARY

Note <u>2688393</u> - 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

Note <u>2699233</u> - Information Disclosure in SAP Financial Consolidation Cube Designer

Solution: Solution "... It now introduces a whitelist ..." The fix is a change in the configuration file of the Deployer Service. It now introduces a whitelist of Financial Consolidation URLs, configured by a Cube Designer administrator, which will **Solution options:** no longer allow manipulation of the service call. You can find more information here. oxdot Static, hard coded whitelist o just apply the patch Install the patches mentioned in this security note. $oxedsymbol{oxed}$ Empty, active whitelist $oldsymbol{ ightarrow}$ secure, but maybe incomplete I Empty, inactive whitelist because it's empty ightarrow manual configuration required $oxedsymbol{oxed}$ Empty, inactive whitelist because of master switch o manual configuration required \square Logging / simulation available to identify required entries \longrightarrow good to know

Note <u>2699233</u> - Information Disclosure in SAP Financial Consolidation Cube Designer

The example shows an empty, inactive whitelist:

```
<AuthenticatedURL>
  <!-- webserver url="http://10.100.100.123/FC101WS" / -->
  <!-- webserver url="http://10.100.100.123/FC101WS_2" / -->
  </AuthenticatedURL>
  </AuthenticatedFinanceWebServers>
```

Solution

The fix is a change in the configuration file of the Deployer Service.

It now introduces a whitelist 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.

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.

Note <u>2727624</u> - 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

Note <u>2696233</u> - 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

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

escription CVSS Softv	vare Components Support Packag	ge Patches Attributes Languages					
Software Components							
Software Component	From	То					
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 Pate	Support Package	Patch Level					
	Support Package	Patch Level 000003					
Software Component	Support Package 750 SP000						

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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).

Cipher suites number in profile parameters ssl/cipher suites and ssl/client_cipher suites

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" optiondo 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

How-to deactivate TLS 1.0?

Note <u>2384243</u> - NetWeaver Application Server: How to configure strict TLS 1.2

Note <u>2384290</u> - 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/

> sapgenpse t/sinfo -cDEFAULT

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-c150: 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_RSA_WITH_AES256_CBC_SHA
TLS_ECDHE_RSA_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]

> sapgenpset/sinfo-c950:PFS:HIGH::EC P256:EC HIGH > sapgenpset/sinfo-c816:PFS:HIGH::EC P256:EC HIGH

Running in client mode Running in client mode

Configured protocol versions:

TLSv1.0, TLSv1.1, TLSv1.2 (Blind Client Certificate, Strict Protocol Version 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_SHA384

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]

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

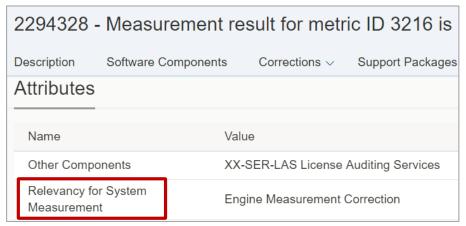
Enabled elliptic curves:

EC_P256 [optimized: FALSE]
EC_P384 [optimized: FALSE]
EC_P521 [optimized: FALSE]
EC_X25519 [optimized: FALSE]

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:



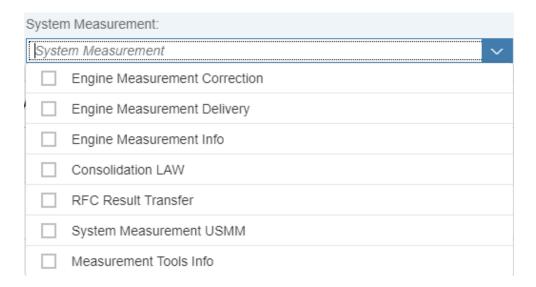
System recommendations:

75 All	28 ABAP	3 ATC	10 BOBJ	1 CLOUD_CON	16 N HANADB	10 JAVA	1 SUP	5 UNSPE	INSPECIFIC		1 WEBDISP		
Sys	stem											<u></u>	€
	Technical System	IT Ad Role		System Priority	Security Notes	Hot News	Perfo Notes	ormance s	Legal Cl Notes	nange	License Audit Notes	Favorite	
	AHN~ABAP	DEV	ELOP	High	217	120	672		564		1	*	
	AHN~HANAD B	Unde	efined	Undefined	23	49	173	477			0	☆	
E	BE6~ABAP	Test	System	Undefined	198	125	602		550		1	*	
E	BEA~ABAP	Unde	fined	Undefined	127	69	378		548		1	*	
E	BEB~JAVA	Unde	fined	Undefined	63	89	245		479		0	☆	
E	BEC~ABAP	Deve Syste	elopment em	Undefined	55	60	242		504		1	☆	

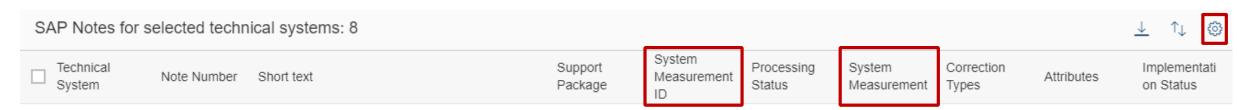
Limitation: The Notes Search on SAP Support Portal https://support.sap.com/notes does not show a filter option for such notes

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

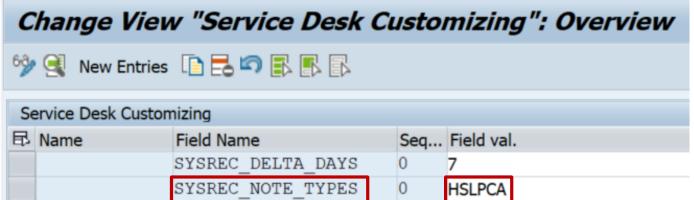
What's new in System Recommendations 7.2 SP 8 Support for Notes which are Relevant for System Measurement

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

Change View "Service Desk Customizing": Ov



See Online Help: https://help.sap.com/viewer/34eaf25a11d54485aecf05e041f78555/107/en-US/aab02c8d37b54536bc3319521ea08eff.html

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 <u>2512261</u> - FKKINV: Usage measurement for SAP Convergent Invoicing still includes documents for ...

Note <u>2294328</u> - Measurement result for metric ID 3216 is 1 too high

Note 2254780 - Enhancement of software license audit for SAP GTS

Note <u>2234559</u> - 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 <u>2164594</u> - LAW 2.0: Falsche Nutzertypen bei Konsolidierung

Note 2112104 - LAW 2.0: Fehlende Sortierfunktion im RFC STATUS

System Measurement USMM

Note <u>2213466</u> - System measurement: Performance during determination of user address data

Note <u>2170034</u> - 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 <u>2170036</u> - LAW 2.0: RFC results from component systems are placed in LAW1 inbox

Note <u>1630359</u> - Report RSLAW_PLUGIN: Error message in case of RFC problems

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

What's new in Configuration Validation 7.2 SP 8 Send Configuration Validation reports via email

Report DIAGCV_SEND_CONFIG_VALIDATION

Target system

Comparison list

Config store(s)

Email recipients

Email greeting, body, ending

Email subject

Show only non-compliant items

Target system (mandatory)

Comparison list (mandatory)

Configuration stores (multi values)

Email recipients (multi values)

Text (html)

Text

x (default) show non-compliant only,

' 'show compliant and non-compliant,

+ show all including 'item not found' and 'additional in target system'

Target system Comparison list Config store(s) **Email recipients** Dear Sir or Madam. Email greeting Email body Text body could contain a lot of lines. Email ending Yours Sincerely < br>>forename surname Email subject Configuration Validation Results Show only non-compliant items Compliance table header Configuration Validation Results Attachment name cova attachment Send to SAP inbox Χ Attach results to email 30 Time range (today - days) X -Send empty validation result Use Item Description

Compliance table header

Attachment name

Send to SAP inbox

Attach results to email

Time range (today - days)

Send empty validation result

Use Item Description

Text (html)

File name

- (default) no, x send to sender, too

x (default) results as attachment, ' 'results inline

Number of days (if the query is time dependent)

x (default) send also email when validation result is empty, ' 'no mail if empty results

- (default) no, **x** show weight and item description (instead of store group name column)

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

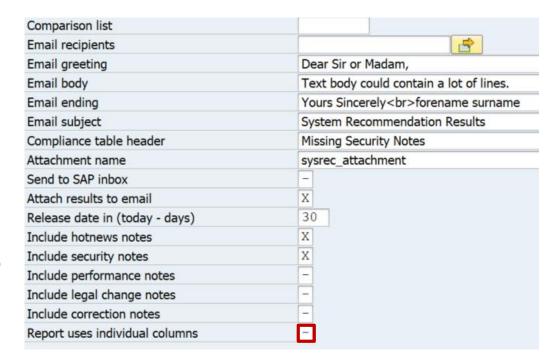
Include HotNews, Security Notes, Performance notes, Legal Change notes, Correction notes

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





December 2018

Topics December 2018



Note <u>2718993</u> - Cross-Site Scripting using host header in NetWeaver AS Java

Note <u>2721962</u> - Version Management: REMOTE comparison option is missing the "Target sys" option

Note <u>2530147</u> - Missing Authorization check in DFPS stock transfer process

Note <u>2061129</u> - Missing whitelist check in SAP Dispute Management

RFC Security Optimization Projects

Note 2040644 - System Internal Communications Security



Note <u>2718993</u> - 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 <u>Mapping Ports</u> and KBA <u>1927272</u>.

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)
```

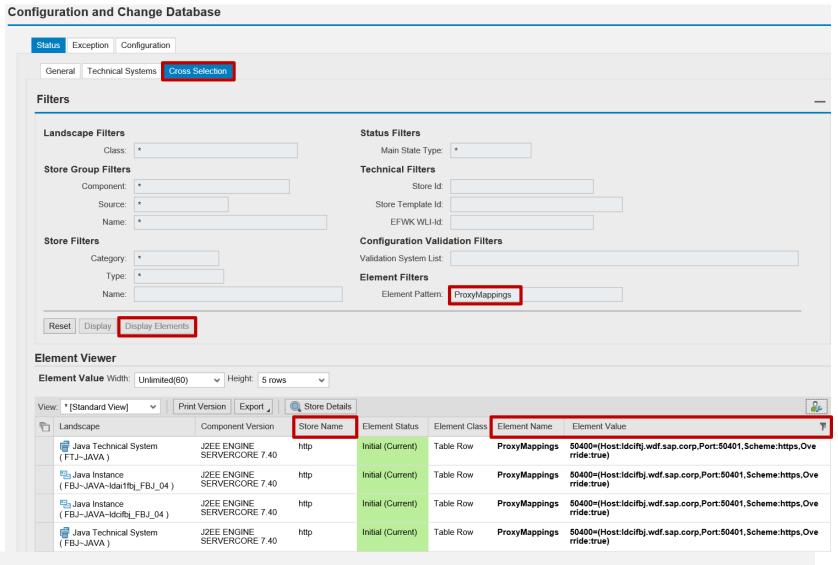
The Override attribute (with default value *false*) is activated to force the host and port information from the request to be overridden by the relevant information from this property.

If you are already using a Proxy, ensure that this attribute is set.

Note <u>2718993</u> - Cross-Site Scripting using host header in NetWeaver AS Java

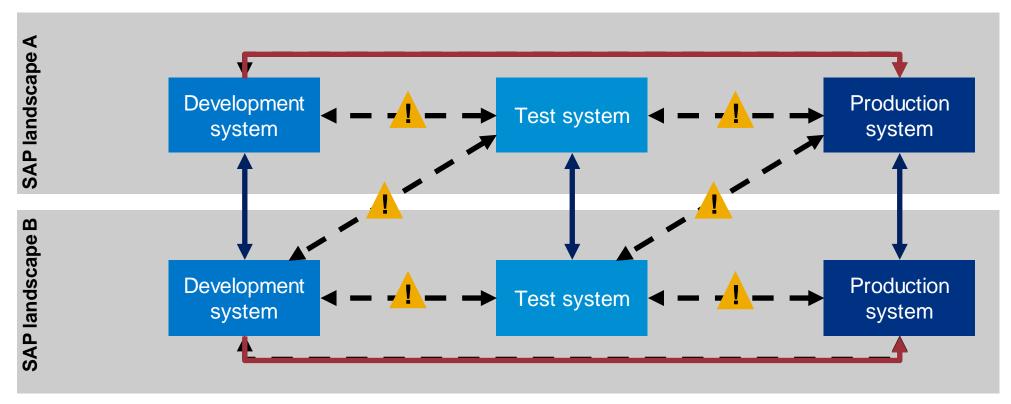
In application Change Reporting and Configuration Validation, respective (as shown here) in transaction CCDB you find the Configuration Item

ProxyMappings in the Configuration Store http for Java systems:



Note <u>2721962</u> - 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)

Note <u>2721962</u> - 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	Description
RFC NAME)	2 3 3 3 1 7 1 7 1
TR_SYS_PARAMS	Read system name, type, change option
SVRS_GET_VERSION_DIRECTORY	Read version directory
SVRS GET VERSION DIRECTORY 40	
SVRS_GET_VERSION_DIRECTORY_46	
or	
SVRS_GET_VERSION_DIRECTORY*	
SVRS_GET_VERSION_FUNC	Reads version of ABAP function,
SVRS_GET_VERSION_FUNC_40	method, or program
SVRS_GET_VERSION_METH	
SVRS_GET_VERSION_METH_40	
SVRS_GET_VERSION_REPS	
SVRS_GET_VERSION_REPS_40	
[]	
or	
SVRS GET VERSION *	
GET_E07T_DATA	Extracts the E07T for the appropriate
GET_E07T_DATA_40	Read short texts for workbench
GET_E07T_DATA_46	requests and tasks
or	
GET E07T DATA*	
FUNCTION_EXISTS	Check existence of function
SVRS GET NOTE CI TCI INFO	Get Note CI and TCI information

Note <u>2530147</u> - Missing Authorization check in DFPS stock transfer process

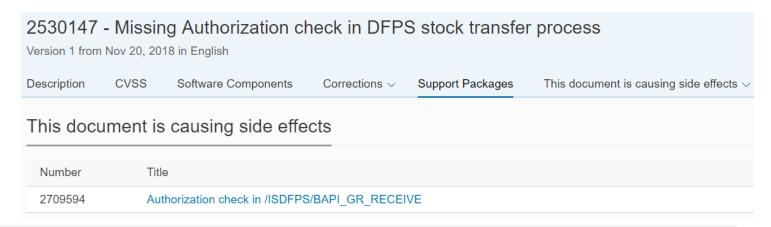
The corrections for software component EA-DFPS adds an unconditional authority check for authority object DF_BAS_ALE in a remote-enabled BAPI function.

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.



Note 2061129 - Missing whitelist check in SAP Dispute Management

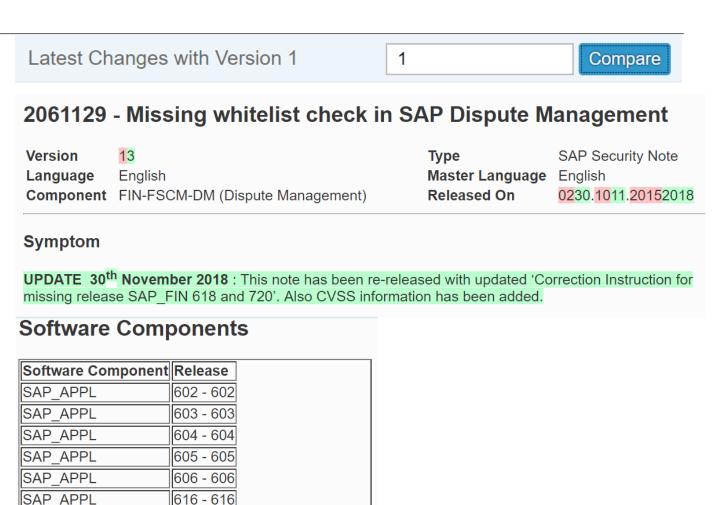
This note is not valid for

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.



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SAP FIN

SAP_FIN

617 - 617

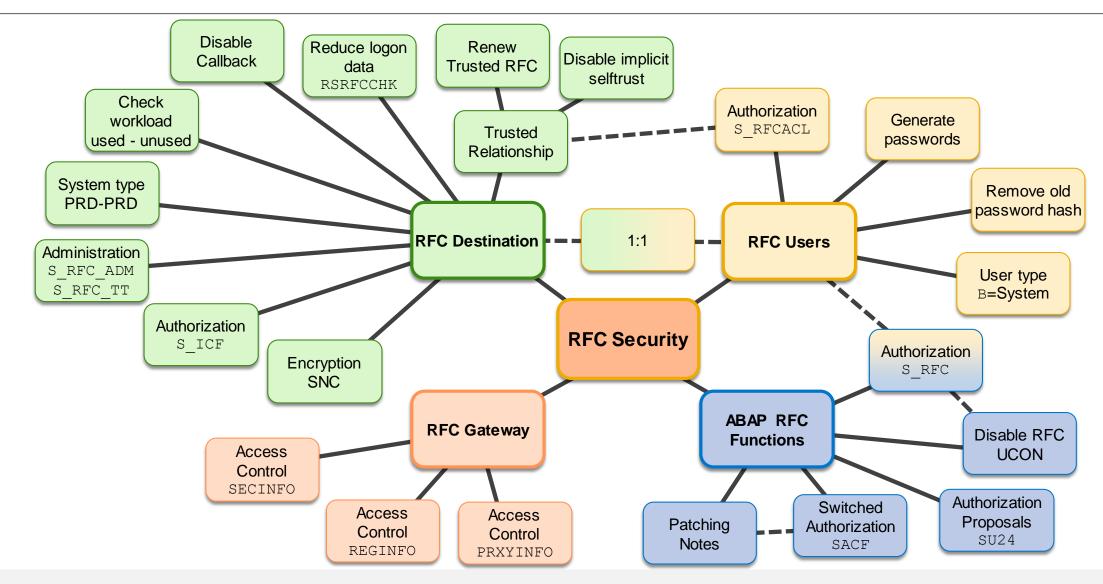
720 - 720

618 - 618 SAP FIN 700 - 700

RFC Security Optimization Projects

Security Whitepaper https://support.sap.com/securitywp

→ SAP Security Recommendations: Securing Remote Function Calls (RFC)



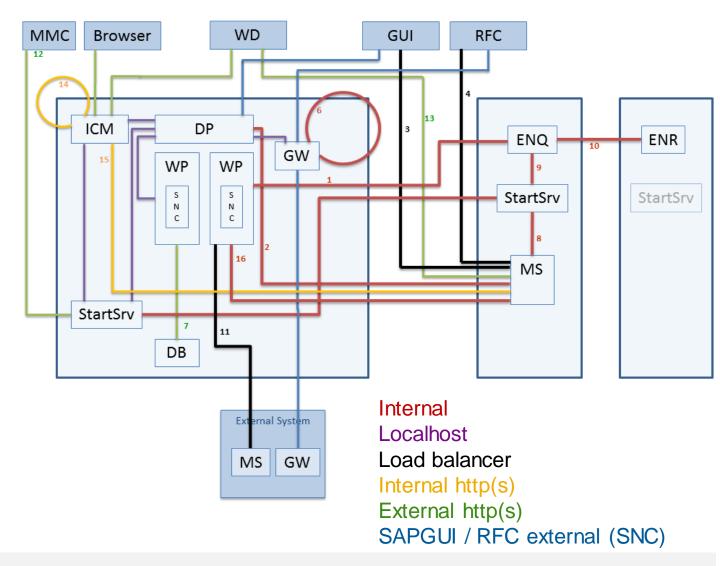
Note <u>2040644</u> - System Internal Communications Security Requirement

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:

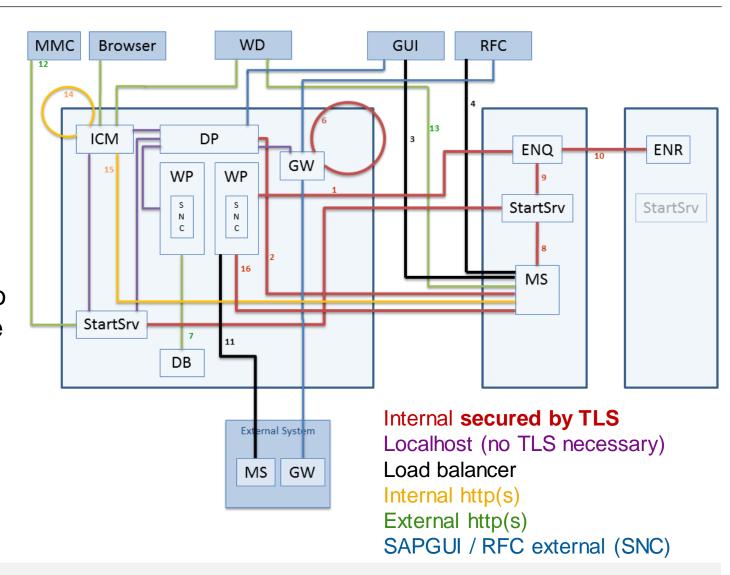
- All Server components must be authenticated
- Communication between the components must be encrypted



Note <u>2040644</u> - 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



Note <u>2040644</u> - System Internal Communications Security First steps



"The usage of this feature is currently limited to pilot customers that have previously contacted SAP. To patriciate in the pilot phase, open a tick and the pilot phase are pilot phase.

→ Go for it – the feature is available for quite making use of it

P just wants to track which customers are

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

Note <u>2040644</u> - System Internal Communications Security First steps

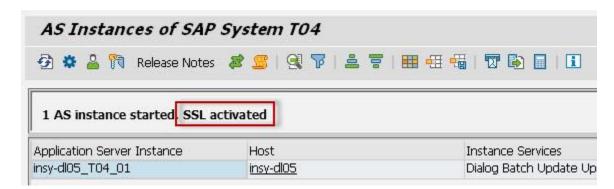
Minimum requirement: SAP_BASIS 7.40 SP 8 with Kernel release 742 or higher

Recommended minimal versions according to additional notes <u>2362078</u>, <u>2624688</u>, <u>2778519</u>:

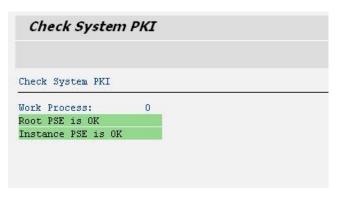
- SAP_BASIS 7.40 SP 11
- Kernel release 749 with patch >= 710
- Kernel release 753 with patch >= 416
- Kernel release 773 with patch >= 121
- Kernel release > 773

Note <u>2040644</u> - System Internal Communications Security Check activation

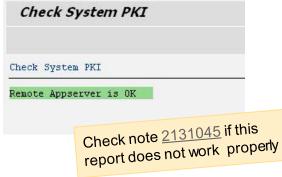
Transaction SM51



Report SSFPKITEST1



Report SSFPKITEST2



Report SSFPKITEST3

```
Own Certificate:
Certificate:
    Subject
                :CN=insy-d105_T04_01, 0=SAP System PKI, C=DE
    Issuer
                :CN=root TO4, OU=sapstartsrv, O=SAP System PKI, C=DE
    Serial number: 0x20141007053349
    Validity:
      Not before : Mon Oct 6 06:33:49 2014
      Not after :Fri Jan 1 03:00:01 2038
    Key:
                 :rsaEncryption (1.2.840.113549.1.1.1)
     Key type
     Key size
    PK Fingerprint MD5:COAB D987 9FD4 8F47 2E80 875B 1332 7951
    Signature algorithm: shalWithRsaEncryption (1.2.840.113549.1.1.5)
    extensions:
      AuthorityKeyId:
        Significance: Non critical
          Key identifier (size="20"):9EBFEBE8A5753D971B4E3940D4CD3F91894B9A58
      SubjectKeyIdentifier:
        Significance: Non critical
                     (size="20"):423A5EF846CF397D5EC49ACA8343F14A07A257A5
      Key usage:
        Significance: Critical
        Value:
          digitalSignature
          nonRepudiation
          keyEncipherment
          dataEncipherment
      Extended key usage:
        Significance: Non critical
          element#no="1":ServerAuthentication (1.3.6.1.5.5.7.3.1)
          element#no="2":ClientAuthentication (1.3.6.1.5.5.7.3.2)
          element#no="3":Unknown (1.3.6.1.5.5.7.3.0)
      Basic constraints:
        Significance: Non critical
        Value:
```

Note <u>2040644</u> - 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.

Note <u>2040644</u> - 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 <u>2000417</u>) 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

Note <u>2040644</u> - 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 <code>gw/internal_port</code> and allow access to the specified port in your firewall setup. When <code>gw/internal_port</code> is not set, the gateway will assign dynamic ports that can change after each system restart (or the restart of the gwrd process).

Note <u>2040644</u> - 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



November 2018

Topics November 2018



Security Notes Statistics: ABAP vs. others

Spring Framework Vulnerabilities in SAP

Note <u>2490973</u> - Missing Authorization check in SAP SRM

Note <u>1517831</u> - Potential Directory Traversal in SAP HCM Payroll NPO

Notes 2392860 2693083 - Leveraging privileges by customer transaction code (reloaded)

KBA <u>2709955</u> - 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

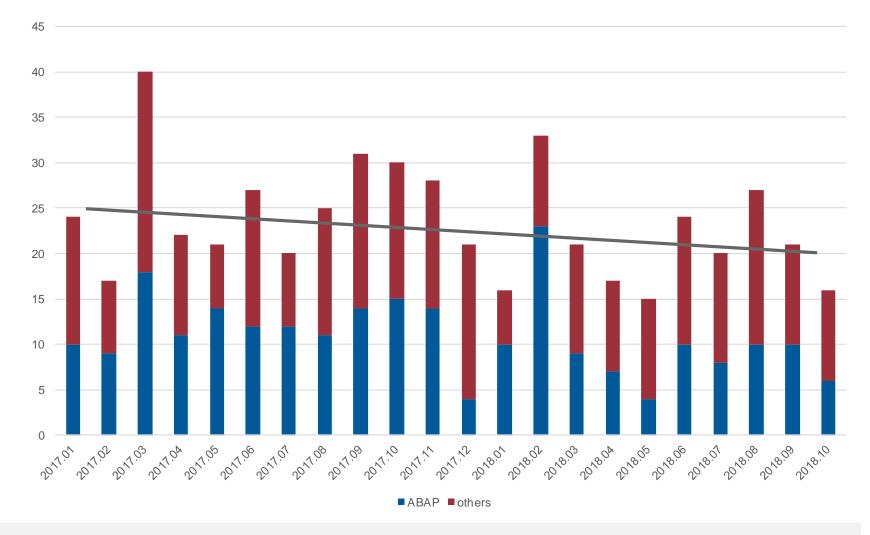
Fiori based Reporting as of SolMan 7.2 SP 6



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.

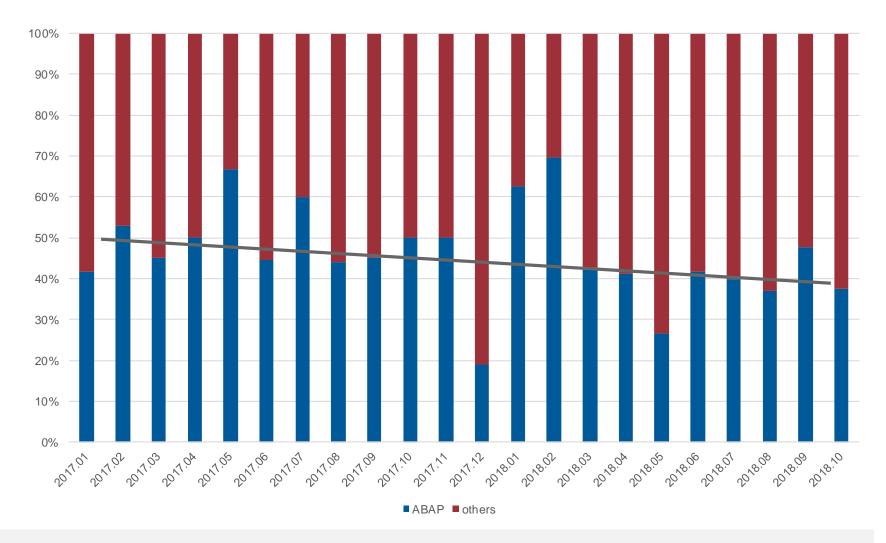
The percentage of ABAP notes decreased from ~50% in beginning of 2017 to ~40% in 2018.



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.



Spring Framework Vulnerabilities in SAP

Implement the following notes for following products affected by these vulnerabilities:

Note <u>2681280</u> - HAN-SDS - Security vulnerability in Spring Framework library used by SAP HANA Streaming Analytics

Note <u>2633025</u> - BC-XS-SEC - Update SAP Client Library 1.25.0 (use latest version 1.28.0 according to note <u>2710106</u>)

Note <u>2656951</u> - CRM-CCI - SAP Contact Center Hotfix 7.0.11.13 Universal Queue: Open Source Vulnerability Fix

Note <u>2656955</u> - CRM-CCI - SAP Contact Center Hotfix 7.0.12.16 Universal Queue: Open Source Vulnerability Fix

Check this note, too:

Note <u>2411730</u> - 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

Spring Framework Vulnerabilities in SAP

No action required for the these products:

- Note <u>2630687</u> 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 <u>2631128</u> BC-SYB-SQA** Does SAP SQL Anywhere use Spring Framework and MVC in any product modules?
- Note <u>2634988</u> MOB-ONP-SEC Vulnerability of Spring Framework, MVC and Spring Data SAP Mobile Platform
- Note <u>2631282</u> **BI-BIP-ADM** Spring Vulnerability Data REST CVE-2017-8046 on SAP BusinessObjects XI 3.1 and Business Intelligence 4.x

Note 2490973 - Missing Authorization check in SAP SRM

Vulnerability: "Missing Authorization check" **Solution options:** Deactivate/delete obsolete code, no test required Change code ☐ Invent whitelist, manual configuration required ☐ Invent 'old' authorization check, no change of roles required ☐ Invent 'new' authorization check, change of roles 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: 1v external call TYPE sap bool.
 CALL METHOD cl rfc=>check rfc external
      RECEIVING
                        = lv external call
       external call
      EXCEPTIONS
        kernel too old
       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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☐ Invent 'switched' authorization check, change of roles and manual configuration required

Note <u>1517831</u> - 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

Notes <u>2392860</u> <u>2693083</u> - 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



→ Common Authorization Object S_TCODE	Manually	
Authorizat. T_SD87002602	Standard	
· 🖹 🔳 TCD	Standard	6 RMPS_DP_REP
· 🖹 🔲 TCD	Standard	RMPS_EVENTTYPES
· 🖹 🔲 TCD	Standard	6 RMPS_EXPDEST
· 🖹 🔲 TCD	Standard	RMPS_KPRO
· 🖹 🔲 TCD	Standard	& RMPS_POST_PROCESS
· 🖹 🔲 TCD	Standard	6 RMPS_PRO_DISPOSAL
· 🖹 🔲 TCD	Standard	& RMPS_PRO_TRANS
· 🖹 🔳 TCD	Standard	RMPS_RECTYPE
· 🖹 🔲 TCD	Standard	RMPS_RECTYPEC
· 🖹 🔲 TCD	Standard	6 RMPS_RULEBASE
· 🖹 🔲 TCD	Standard	6 SCASEPS
· 🖹 🔲 TCD	Standard	6€ SO01
· 🖹 🔲 TCD	Standard	% SSC1
· 🖹 🔲 TCD	Standard	ZPTTNO_TIME

KBA <u>2709955</u> - 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 <u>speculative</u> 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.

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 L0SZZF01 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.

Note <u>2258238</u> - 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:

	a			
SAP Notes	Version	CI Number	Status	Dependency Level
· <u>></u> 1668882				0
· 🛅 1668882	24	1250921	Completely implemented	1
· 🖹 2589309	7		4 Incompletely implement	2
· 🖹 2617883	1	315904	Can be implemented	2
· 🖹 2624337	2	323859	Can be implemented	2
· 🖹 2589309	7	352012	4 Incompletely implement	2
· 🖹 2411418	2	352071	Completely implemented	2
· 🖹 2691847	2		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		Completely implemented	2
· 🖹 2589309	7	430367	4 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 Ve	rsion 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 downloading	BC-UPG-NA	new	Can be implemented

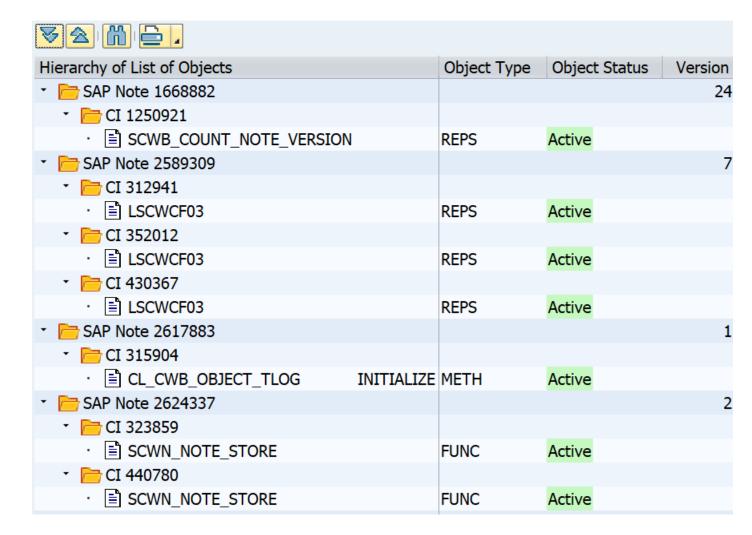
Note <u>2258238</u> - SAP Note Assistant: Troubleshooting Reports

Report SCWN_NOTES_SUCCESSORS_CALC shows which dependent notes will be affected if a note needs to be deimplemented.



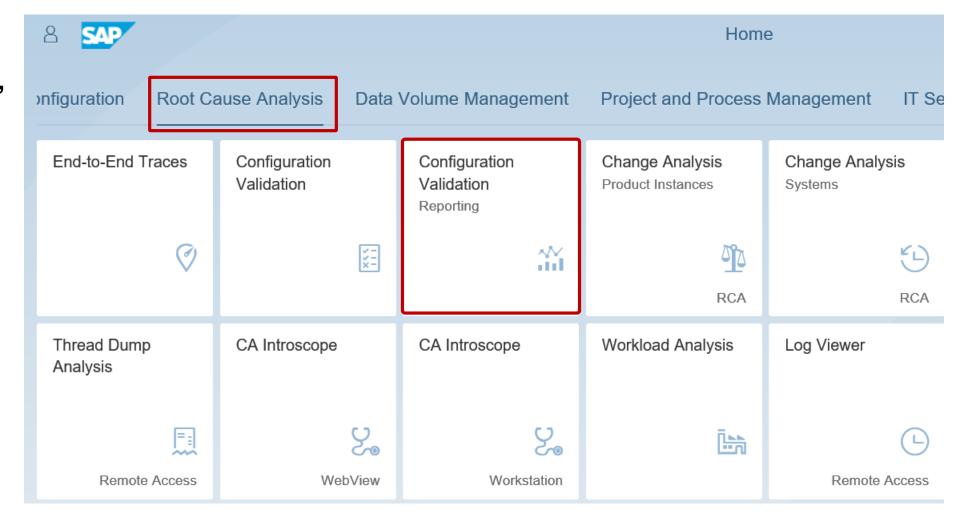
Note <u>2258238</u> - SAP Note Assistant: Troubleshooting Reports

Report SCWN_OBJECT_LIST_CALC_SWI shows which objects were touched by a note and what the status are for those objects.

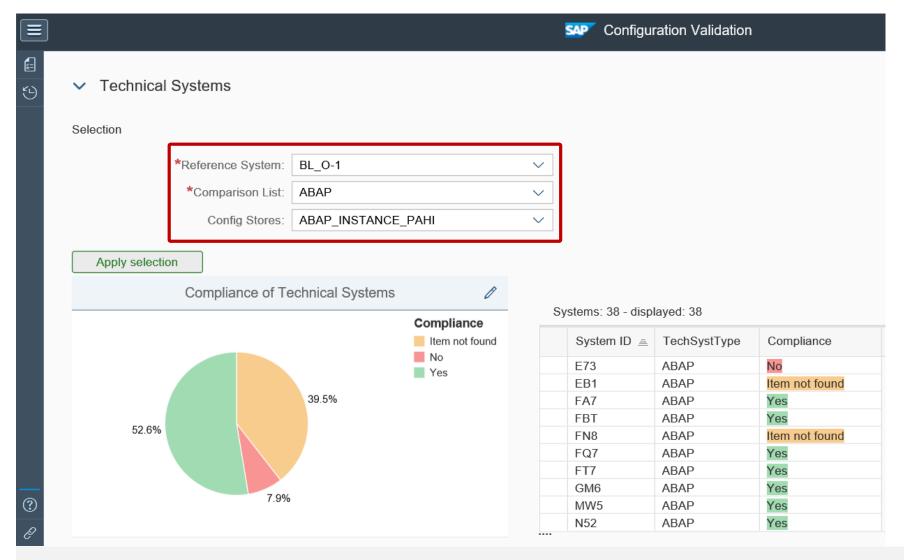


News about Configuration Validation Fiori based Reporting as of SolMan 7.2 SP 6

The Fiori Launchpad tile "Configuration Validation Reporting" points to the new reporting app:



News about Configuration Validation Fiori based Reporting as of SolMan 7.2 SP 6

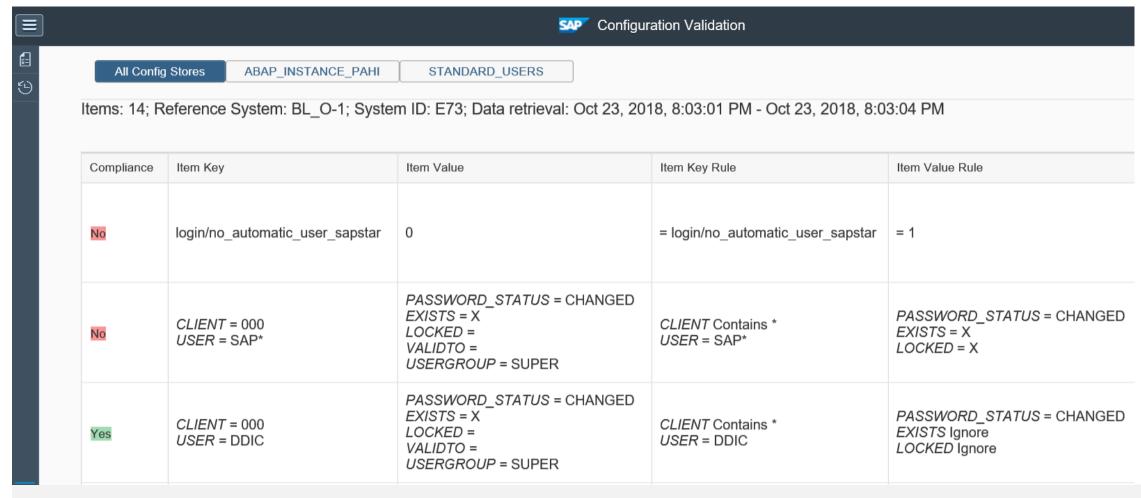


You select a Target
System, a Comparison
List and optionally a
selection for a
Configuration store

You get a System Overview page

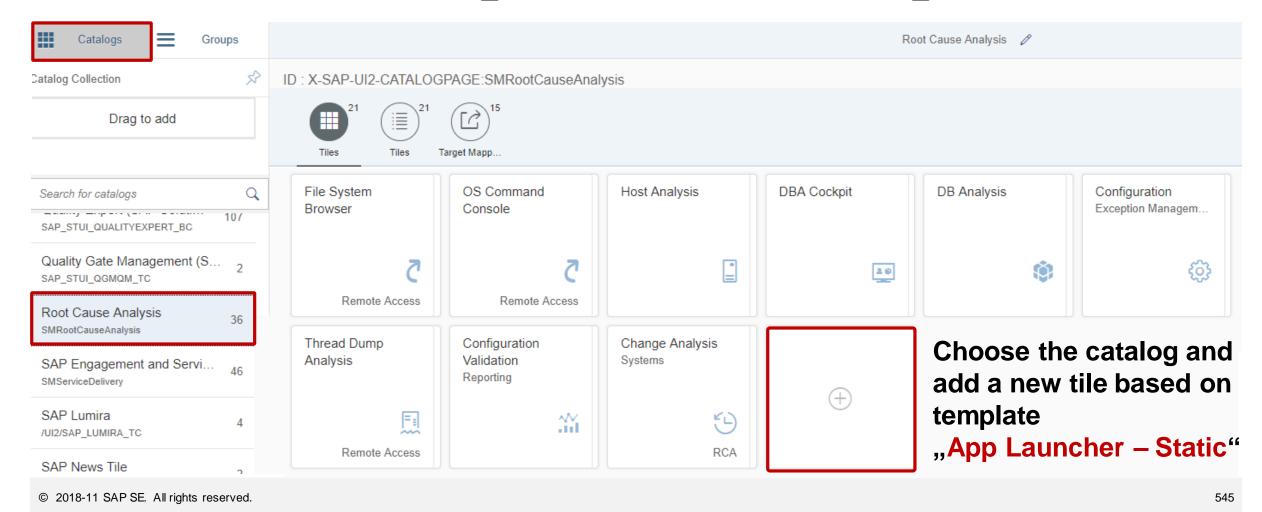
News about Configuration Validation Fiori based Reporting as of SolMan 7.2 SP 6

Drilldown into system specific details:



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)

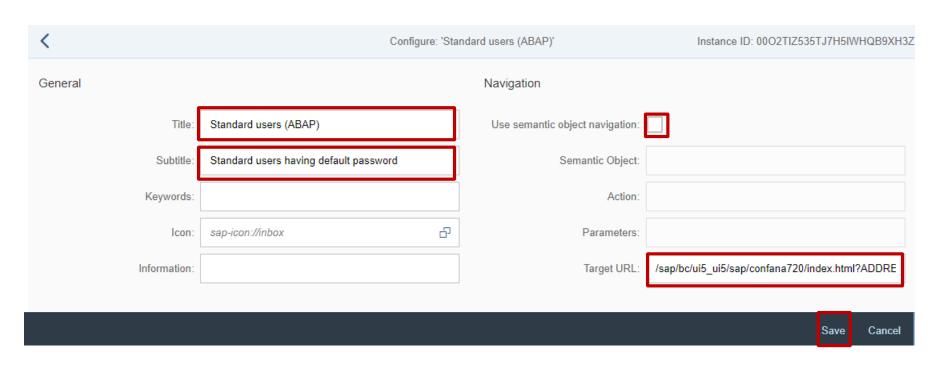


How-to create a specific Fiori tile Define "App Launcher – Static" tile in catalog

Enter texts

Choose icon, e.g. sap-icon://business-objects-experience

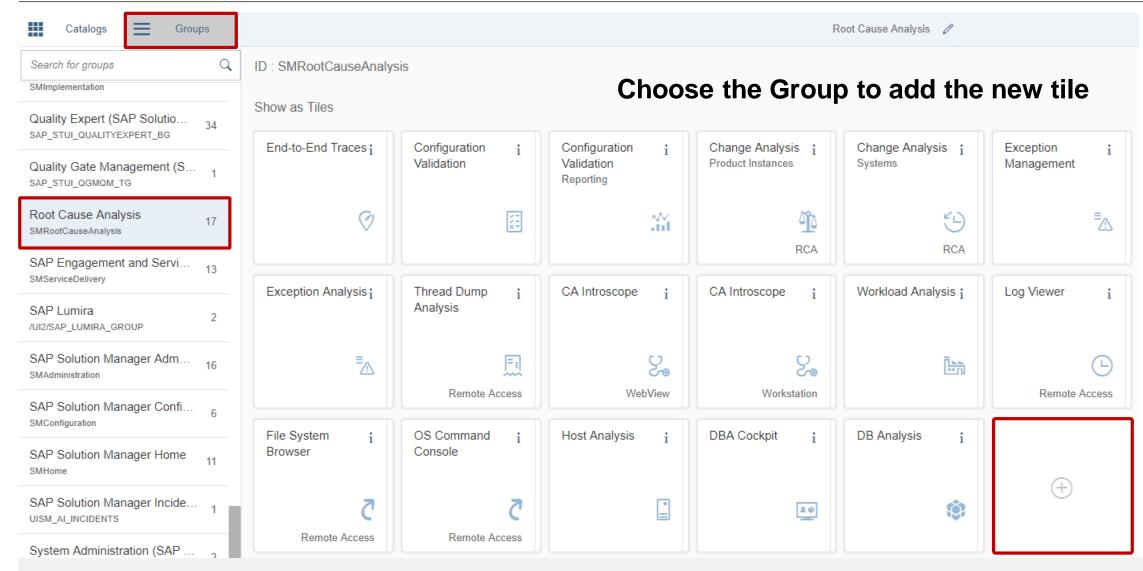
Deselect check box "Use semantic object navigation"



Enter target URL after replacing variables:

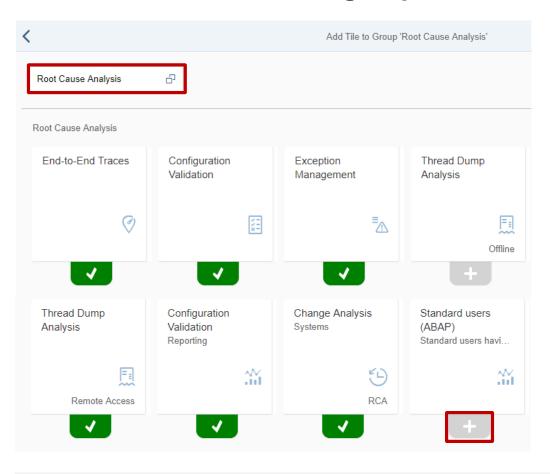
/sap/bc/ui5_ui5/sap/confana720/index.html?TARGET_ID=<target_system>&
COMPLIST=<comparison_list>&CONFSTORE=<configuration_store>&ADDRESTRI
CTIONS&DATERANGE&sap-client=<client>&sap-language=<language>

How-to create a specific Fiori tile Add tile to group

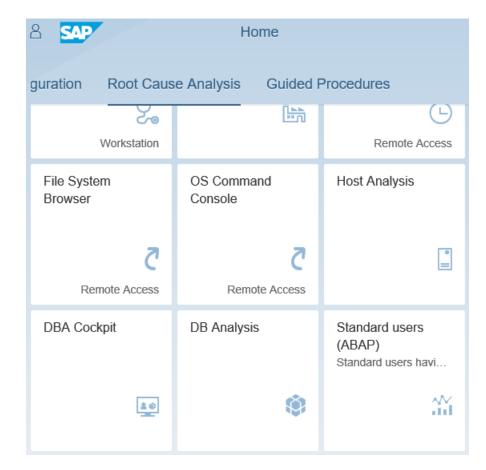


How-to create a specific Fiori tile Add tile to group

Choose the Catalog containing the new tile and add it to the group:



Restart the Launchpad to view the new tile:





October 2018

Topics October 2018



News from Support Portal Launchpad SAP Notes Dependency Browser

Note <u>2699726</u> - Missing network isolation in Gardener

Note <u>2392860</u> - 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

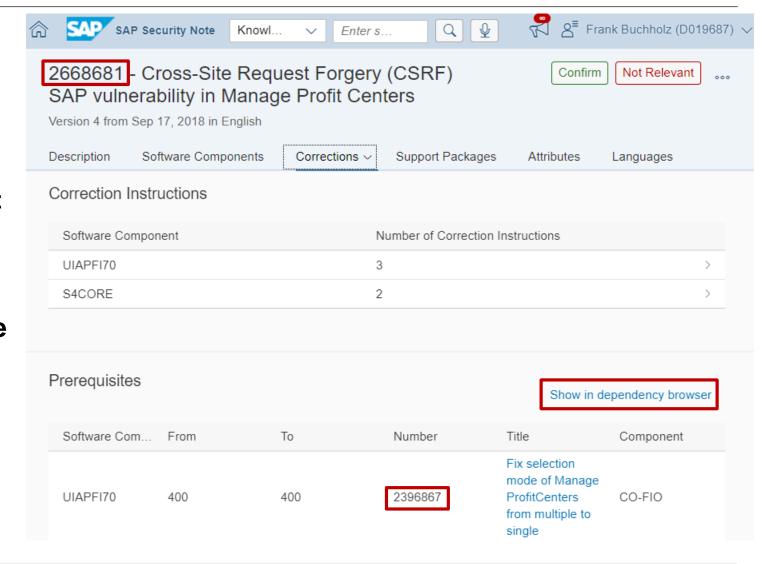


News from Support Portal Launchpad SAP Notes Dependency Browser

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:

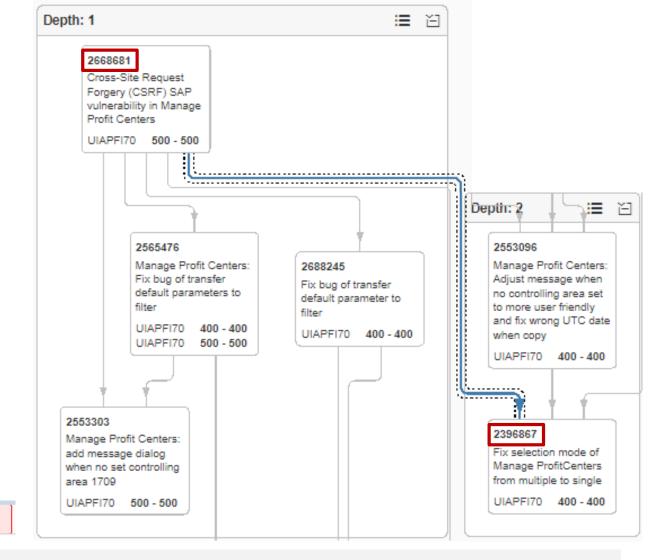
Example: Note <u>2668681</u> requires note <u>2396867</u> and others



News from Support Portal Launchpad SAP Notes Dependency Browser



Example: Note <u>2668681</u> requires note <u>2396867</u> and others



(!) Due to the number of Prerequisites Notes being too large, they cannot be displayed completely.

Note <u>2699726</u> - 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

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

ightarrow Do not use these roles, check authorizations first



── Authorization Object S_TCODE	Manually	
Authorizat. T_SD87002602	Standard	
· 🖹 🔳 TCD	Standard	6 RMPS_DP_REP
· 🖹 🔳 TCD	Standard	RMPS_EVENTTYPES
· 🖹 🔳 TCD	Standard	⟨⟨⟨⟩ RMPS_EXPDEST
· 🖹 🔳 TCD	Standard	RMPS_KPRO
· 🖹 🔳 TCD	Standard	
· 🖹 🔳 TCD	Standard	6 RMPS_PRO_DISPOSAL
· 🖹 🔳 TCD	Standard	& RMPS_PRO_TRANS
· 🖹 🔳 TCD	Standard	⟨⟨√⟩ RMPS_RECTYPE
· 🖹 🔳 TCD	Standard	6 RMPS_RECTYPEC
· 🖹 🔳 TCD	Standard	6 RMPS_RULEBASE
· 🖹 🔳 TCD	Standard	≪ SCASEPS
· 🖹 🔳 TCD	Standard	ể√ SO01
· 🖹 🔲 TCD	Standard	& SSC1
· 🖹 🔲 TCD	Standard	& ZPTTNO_TIME

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.

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 <u>2413716</u> - 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.

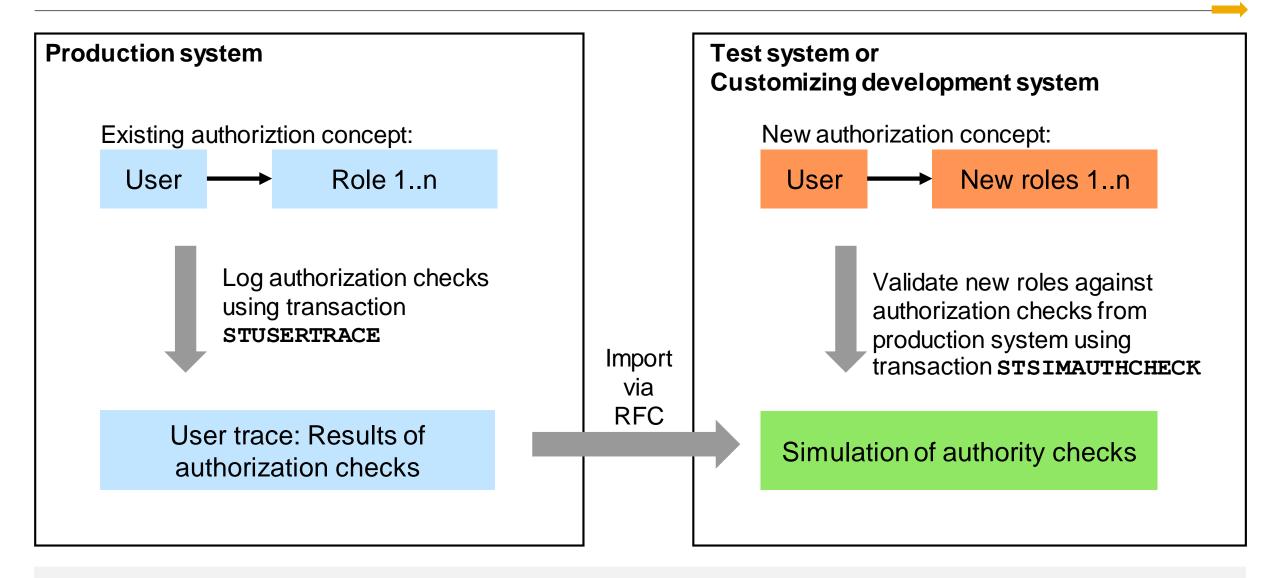
Example: P00CLNT400 for system P00 with client 400

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 <nnnnnnnnnn>.
- 2. Search for open connections [via STFK] for system <FFF> with installation number <nnnnnnnnnn> of customer number <ccccc> 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.



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.

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.

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 $Goto \rightarrow Reorganize$.

Analysis using transaction STUSERTRACE in production system:

🚉 🚰 🔐 🔝 🔯 🕰 🗞 User Buffer 🔝 🛓		■世史								
Type of Application	Application Name		User	Check Result F	Result	Addit.Info	Access Filterin	g 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 - Ser	vice /UI2/INTEROP	0001	D019687	0 /	Authorization chec			S_SERVICE	SRV_NAME	A15F5E180FD97
SAP Gateway Business Suite Enablement - Ser	vice AGS_SYSREC_SRV	0001	D019687	0 /	Authorization chec			AI_LMDB_OB	ACTVT	03
SAP Gateway Business Suite Enablement - Ser	vice AGS_SYSREC_SRV	0001	D019687	0 /	Authorization chec			AI_LMDB_OB	ACTVT	03
SAP Gateway Business Suite Enablement - Ser	vice AGS_SYSREC_SRV	0001	D019687	0 /	Authorization chec			AI_LMDB_OB	ACTVT	03
SAP Gateway Business Suite Enablement - Ser	vice AGS_SYSREC_SRV	0001	D019687	0 /	Authorization chec			AI_LMDB_OB	ACTVT	03
SAP Gateway Business Suite Enablement - Ser	vice AGS_SYSREC_SRV	0001	D019687	0 /	Authorization chec			AI_LMDB_OB	ACTVT	03
SAP Gateway Business Suite Enablement - Ser	vice AGS_SYSREC_SRV	0001	D019687	0 /	Authorization chec_			AI_LMDB_OB	ACTVT	03
SAP Gateway Business Suite Enablement - Ser	vice AGS_SYSREC_SRV	0001	D019687	0 /	Authorization chec			AI_LMDB_OB	ACTVT	03
SAP Gateway Business Suite Enablement - Ser	vice AGS_SYSREC_SRV	0001	D019687	0 /	Authorization chec			AI_LMDB_OB	ACTVT	03
SAP Gateway Business Suite Enablement - Ser	vice AGS_SYSREC_SRV	0001	D019687	0 /	Authorization chec			AI_LMDB_OB	ACTVT	03
SAP Gateway Business Suite Enablement - Ser	vice AGS_SYSREC_SRV	0001	D019687	0 /	Authorization chec			AI_LMDB_OB	ACTVT	03
SAP Gateway Business Suite Enablement - Ser	vice AGS_SYSREC_SRV	0001	D019687	0 /	Authorization chec			SM_FUNCS	ACTVT	
SAP Gateway Business Suite Enablement - Ser	vice AGS_SYSREC_SRV	0001	D019687	0 /	Authorization chec			S_SERVICE	SRV_NAME	8A5C52B04A84I
SAP Gateway: Service Groups Metadata	AGS_FLP_INTEROP_0001		D019687	0 /	Authorization chec			S_SERVICE	SRV_NAME	738D848517A8I
SAP Gateway: Service Groups Metadata	AGS SYSREC SRV 0001		D019687	0 /	Authorization chec			S_SERVICE	SRV_NAME	BA7D9B4C2704

Simulation using transaction STSIMAUTHCHECK in test or customizing development system:

🔋 📔 🔯 🚨 🗞 User Buffer 🛮 🚢 😇	7 4 4 5 7 4 = 4	=							
Type of Application	Application Name	Si	imulation	Result Result of Simulation	User	Result Result of Authorization Check	Obiect	Field 1	Ą
a contraction of the contraction	VIII at Philippedial interest and a second at the con-	U	ISER	12 No authorization in user	D019687	0 Authorization check successful	-	/UIF/KEYU	U
		U	SER	12 No authorization in user	D019687	0 Authorization check successful		DEVCLASS	
SAP Gateway Business Suite Enablement - Se	ervice /UI2/INTEROP	0001 U	ISER	12 No authorization in user	D019687	0 Authorization check successful	S_SERVICE	SRV_NAM	IE
SAP Gateway Business Suite Enablement - Se	ervice AGS_SYSREC_SRV	0001 U	ISER	0 Authorization check succe	D019687	0 Authorization check successful	AI_LMDB_OB	ACTVT	
SAP Gateway Business Suite Enablement - Se	ervice AGS_SYSREC_SRV	0001 U	ISER	0 Authorization check succe	D019687	0 Authorization check successful	AI_LMDB_OB	ACTVT	
SAP Gateway Business Suite Enablement - Se	ervice AGS_SYSREC_SRV	0001 U	ISER	0 Authorization check succe	D019687	0 Authorization check successful	AI_LMDB_OB	ACTVT	
SAP Gateway Business Suite Enablement - Se	ervice AGS_SYSREC_SRV	0001 U	SER	0 Authorization check succe	D019687	0 Authorization check successful	AI_LMDB_OB	ACTVT	
SAP Gateway Business Suite Enablement - Se	ervice AGS_SYSREC_SRV	0001 U	ISER	0 Authorization check succe	D019687	0 Authorization check successful	AI_LMDB_OB	ACTVT	
SAP Gateway Business Suite Enablement - Se	ervice AGS_SYSREC_SRV	0001 U	ISER	0 Authorization check succe	D019687	0 Authorization check successful	AI_LMDB_OB	ACTVT	
SAP Gateway Business Suite Enablement - Se	ervice AGS_SYSREC_SRV	0001 U	ISER	0 Authorization check succe	D019687	0 Authorization check successful	AI_LMDB_OB	ACTVT	
SAP Gateway Business Suite Enablement - Se	ervice AGS_SYSREC_SRV	0001 U	ISER	0 Authorization check succe	D019687	0 Authorization check successful	AI_LMDB_OB	ACTVT	
SAP Gateway Business Suite Enablement - Se	ervice AGS_SYSREC_SRV	0001 U	SER	0 Authorization check succe	D019687	0 Authorization check successful	AI_LMDB_OB	ACTVT	
SAP Gateway Business Suite Enablement - Se	ervice AGS_SYSREC_SRV	0001 U	ISER	0 Authorization check succe	D019687	0 Authorization check successful	AI_LMDB_OB	ACTVT	
SAP Gateway Business Suite Enablement - Se	ervice AGS_SYSREC_SRV	0001 U	ISER	0 Authorization check succe	D019687	0 Authorization check successful	SM_FUNCS	ACTVT	
SAP Gateway Business Suite Enablement - Se	ervice AGS_SYSREC_SRV	0001 U	ISER	12 No authorization in user	D019687	0 Authorization check successful	S_SERVICE	SRV_NAM	IE
SAP Gateway: Service Groups Metadata	AGS_FLP_INTEROP_0001	U	SER	12 No authorization in user	D019687	0 Authorization check successful	S_SERVICE	SRV_NAM	IE
SAP Gateway: Service Groups Metadata	AGS_SYSREC_SRV_0001	U	ISER	12 No authorization in user	D019687	0 Authorization check successful	S_SERVICE	SRV_NAM	IE

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

			Syst	tem Overview
10 4 4 All ABAP HANAD	ew list you notes which d yet			
☐ Technical System	IT Admin Role	System Priority	Security	Hot News
☐ EC1~ABAP	Demo System	Undefined	115	193
JS4~JAVA	Test System	Undefined	137	165
NA1~ABAP	Demo System	Undefined	113	188
OHN~HANADB	Production System	Undefined	66	72
OHQ~HANADB	Demo System	Undefined	66	72

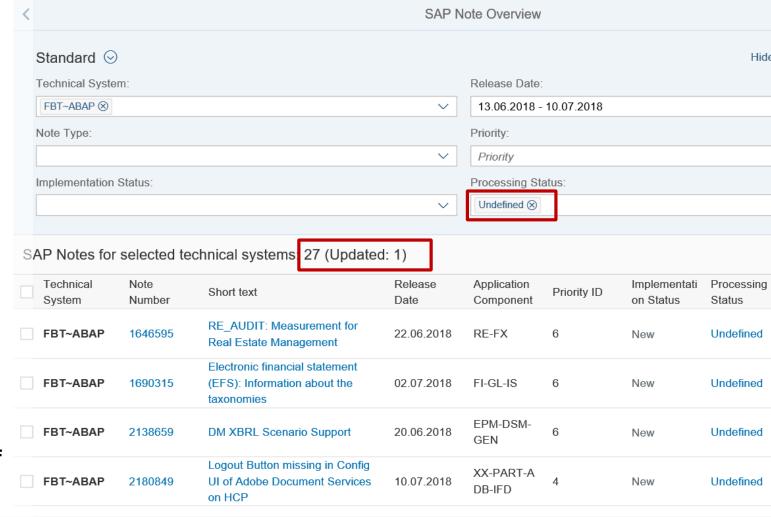
The Note Overview list shows notes with processing status "undefined" by default. Notes with other status values are not shown.

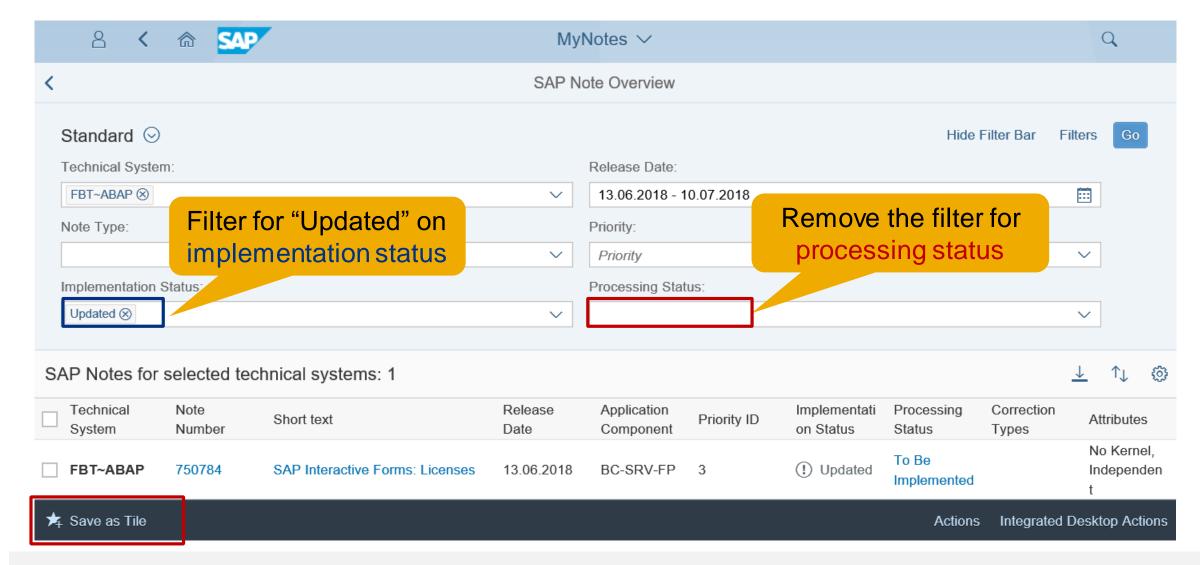
Therefore you do not see notes for which you already have set a processing status.

New versions of notes which already got a specific processing status for older versions get the implementation status "Updated".

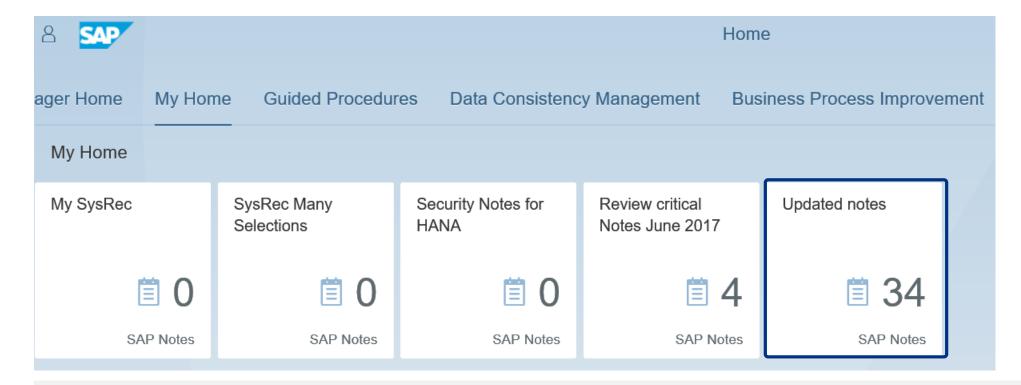
Because of the filter on processing status you do not see these notes.

At least you get a hint showing the count of invisible updated notes.





Create a specific filter for updated (security) notes and save it as a tile into a suitable Fiori Launchpad Group:





September 2018

Topics September 2018





Note <u>1640584</u> - Missing authorization check for maintenance of trust

Note <u>2644279</u> - Missing XML Validation vulnerability in BEx Web Java Runtime Export Web Service

Note <u>2522156</u> - 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



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 master system.

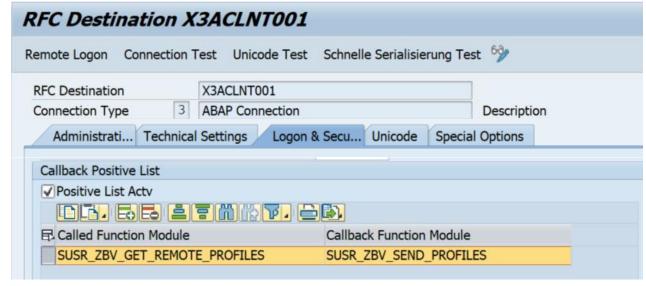
New report RSUSR_CUA_CALLBACK_WHITELISTS generates required RFC callback whitelist entries for all RFC destinations which connect the master to the client systems of the Central User Administration (CUA):

Called function module in manages system:

SUSR_ZBV_GET_REMOTE_PROFILES

Callback function module in CUA master:

SUSR ZBV SEND PROFILES



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

Note <u>2644279</u> - 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 <u>2470973</u> shows the correct list of software components and offers links to software packages.

Description	Software Comp	onents	This document is referenced by \sim
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

Notes <u>2522156</u> and <u>2508918</u> - SAL | New events for UCON_HTTP whitelists (7.40) and CDS views (7.50)

Implement notes <u>2522156</u>, <u>2508918</u>, <u>2573779</u>, <u>2573792</u> (to activate usage of the messages) and Implement notes <u>2463645</u>, <u>2682603</u> (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

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

Application Start Lock (Client 001)
Application Start Lock Only for WinGUI (Client 001)
Application Start Lock Only for Non-WinGUI (Client 001)

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	<u></u>		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: <u>2367061</u>, <u>2420609</u>, <u>2422243</u>, <u>2578158</u>

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

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 <u>2126550</u> - Saprouter crashes with active SNC trace when the saprouter trace file is renamed 04.02.2015

Note <u>2046942</u> - Support encrypted passwords in saprouttab

25.07.2014

Note <u>2106963</u> - Saprouter over SNC doesn't work with CommonCryptoLib due to oversized initial SNC token 23.01.2015

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

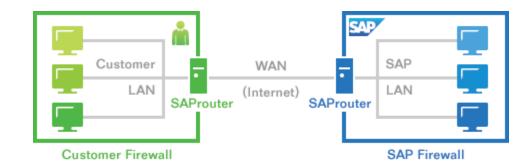
but cannot give you exact results for

- 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.

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)

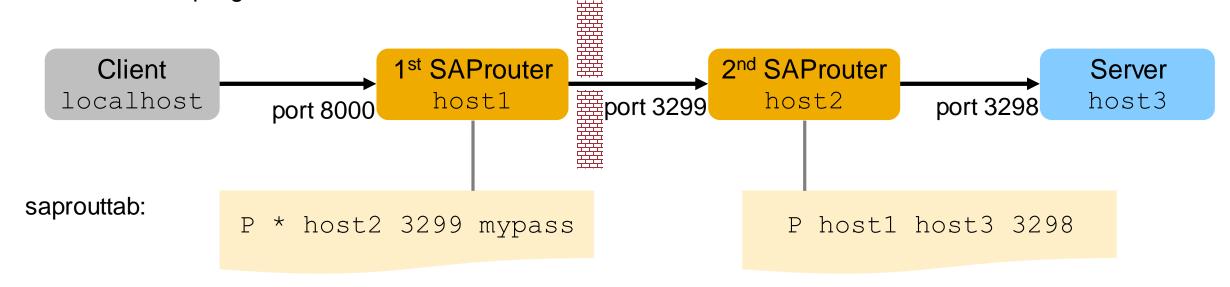
(Change the default port)

Note <u>2622434</u> - Information disclosure relating to password in SAProuter

Note <u>2622434</u> - 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



August 2018

Topics August 2018





Validate version of CommonCryptoLib

Note <u>2546807</u> - List of Diagnostic Agents can't be retrieved due to enforced security at API level Secure Diagnostics Agent

Note <u>2614229</u> - Memory Corruption vulnerability in SAP BusinessObjects Business Intelligence platform

Note <u>2671160</u> - Missing input validation in ABAP Change and Transport System (CTS)

Security Baseline Template Version 1.9 (including ConfigVal Package version 1.9_CV-5)



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

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.<mark>5</mark>.9 Feb 8 2017
```

8.<mark>5</mark>.13 May 2017

8.<mark>5.22</mark> Jul 25 2018

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 <u>2444321</u> which asks for **8.5.10 or higher**:

```
 ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{(8).5}. \\  ^{
```

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

Note <u>2546807</u> - 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 <u>2546807</u> 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 <u>2544779</u>?

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

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 <u>1770585</u>
- Configure the P4S port for the J2EE NetWeaver Application Server according to Note 2419031

Note <u>2614229</u> - 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

Note <u>2614229</u> - 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 <u>24</u>	07193	Note <u>24</u>	12999	Note <u>26</u>	30018	Note <u>26</u>	<u> </u>	Note <u>26</u>	44154	Note <u>26</u>	14229
SBOP BI PLATFORM SERVERS 4.0	SP012	<u>5</u>										
SBOP BI PLATFORM SERVERS 4.1	SP007	<u>11</u>	SP007	<u>12</u>								
	SP008	<u>7</u>	SP008	9								
	SP009	<u>1</u>	SP009	<u>3</u>	SP009	<u>12</u>	SP009	<u>12</u>			SP009	<u>13</u>
	SP010	<u>O</u>	SP010	<u>O</u>	SP010	<u>7</u>	SP010	<u>7</u>			SP010	7
			SP011	<u>O</u>	SP011	<u>200</u>	SP011	<u>200</u>			SP011	<u>200</u>
					SP012	<u>0</u>	SP012	<u>0</u>			SP012	<u>0</u>
SBOP BI PLATFORM SERVERS 4.2	SP002	<u>9</u>	SP002	<u>11</u>								
	SP003	<u>5</u>	SP003	<u>7</u>								
	SP004	<u>O</u>	SP004	<u>1</u>	SP004	<u>9</u>	SP004	<u>9</u>			SP004	9
			SP005	<u>O</u>	SP005	<u>400</u>	SP005	<u>400</u>	SP005	<u>400</u>	SP005	<u>400</u>
					SP006	<u>0</u>	SP006	<u>0</u>	SP006	<u>0</u>	SP006	<u>0</u>
SBOP BI PLATFORM SERVERS 4.3			SP000	<u>0</u>								

Note <u>2671160</u> - 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,

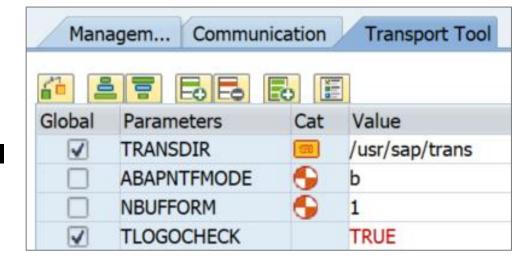
753 patch 220/312, 773 patch 11/25, 774 patch -/12

(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.

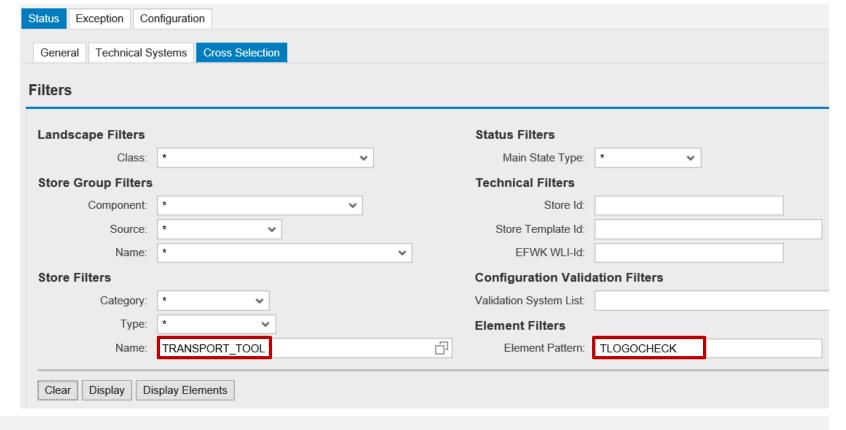
Credits:

https://blog.virtualforge.com/en/how-to-double-your-salary-in-1-minute

Note <u>2671160</u> - Missing input validation in ABAP Change and Transport System (CTS)

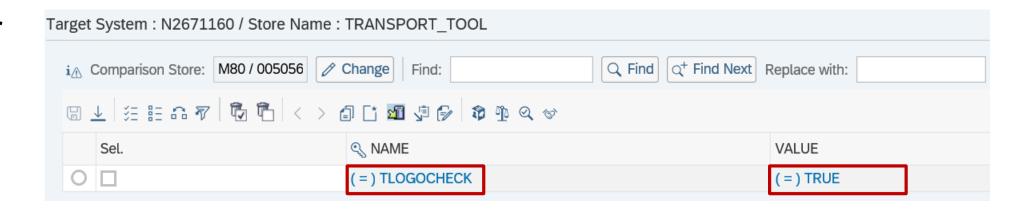
Monitor parameter TLOGOCHECK in application CCDB respective Configuration Validation using configuration store TRANSPORT_TOOL (use this store to validate parameter RECCLIENT as well).

You do not see entries in transaction CCDB if the parameter is not set (in opposite to Profile Parameters there is no default definition).



Note <u>2671160</u> - 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.

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

Note <u>2671160</u> - Mitigation (without solving the issue) Option a) Checking Critical Objects in Transport Requests

Use transaction STMS \rightarrow Import Overview \rightarrow Extras \rightarrow 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

Note <u>2671160</u> - Mitigation (without solving the issue) Option b) Critical Objects Check and Approval in ChaRM

Transaction SPRO \rightarrow SAP Solution Manager \rightarrow Capabilities (Optional) \rightarrow Change Control Management \rightarrow Transport Management System \rightarrow Specify Critical Transport Objects (WebDynpro Application CM_COCKPIT \rightarrow 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)

Note <u>2671160</u> - 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

Note <u>2671160</u> - 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

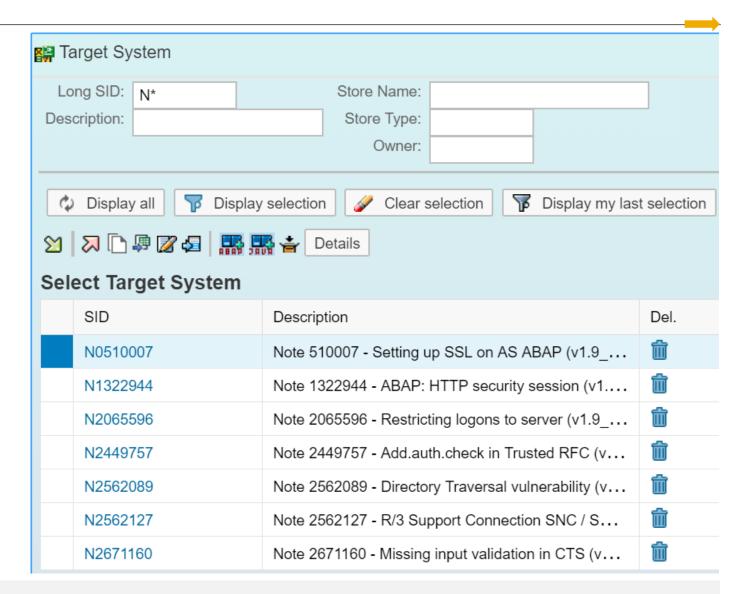
Security Baseline Template ConfigVal Package version 1.9_CV-5

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





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 <u>2644227</u> - Command execution with SAP Internet Graphics Server (IGS) request through the multiplexer RFC listener

Note <u>2621121</u> - Information Disclosure in UI5 Handler

Note <u>2538856</u> - Cross-Site Scripting (XSS) vulnerability in SAPUI5

Note <u>2597913</u> - Denial of Service (DOS) in SAP Gateway

Note <u>2110950</u> - 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

Recommended Notes for System Recommendations

Note <u>2556623</u> - 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.

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

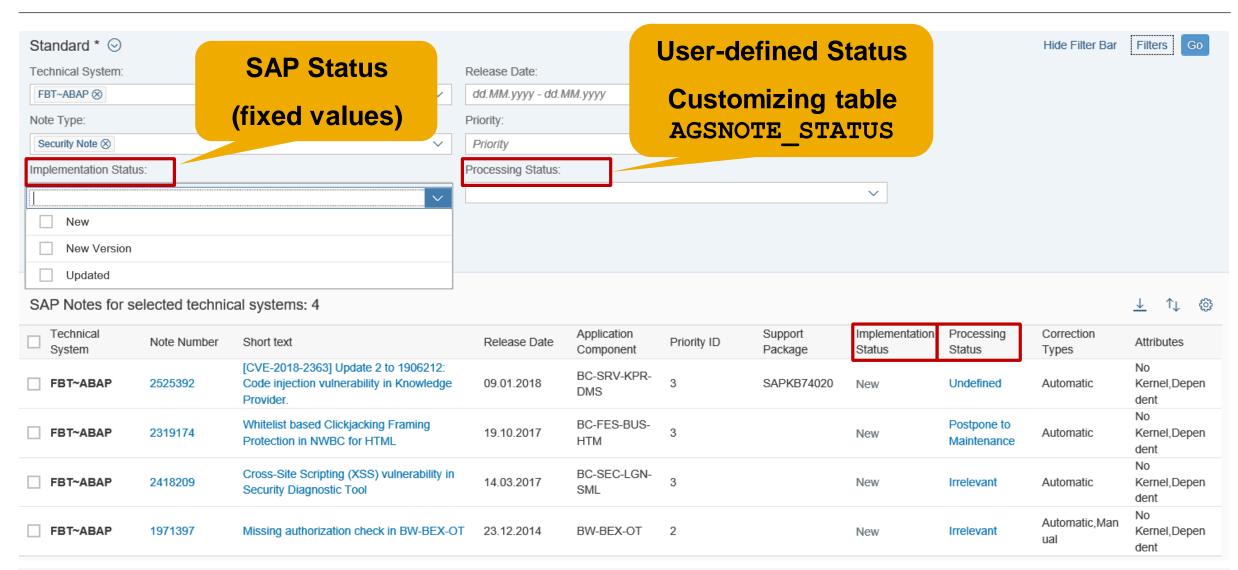
Updated Updated note which has a processing status for an older version

[Implemented] Implemented notes are omitted in System Recommendations

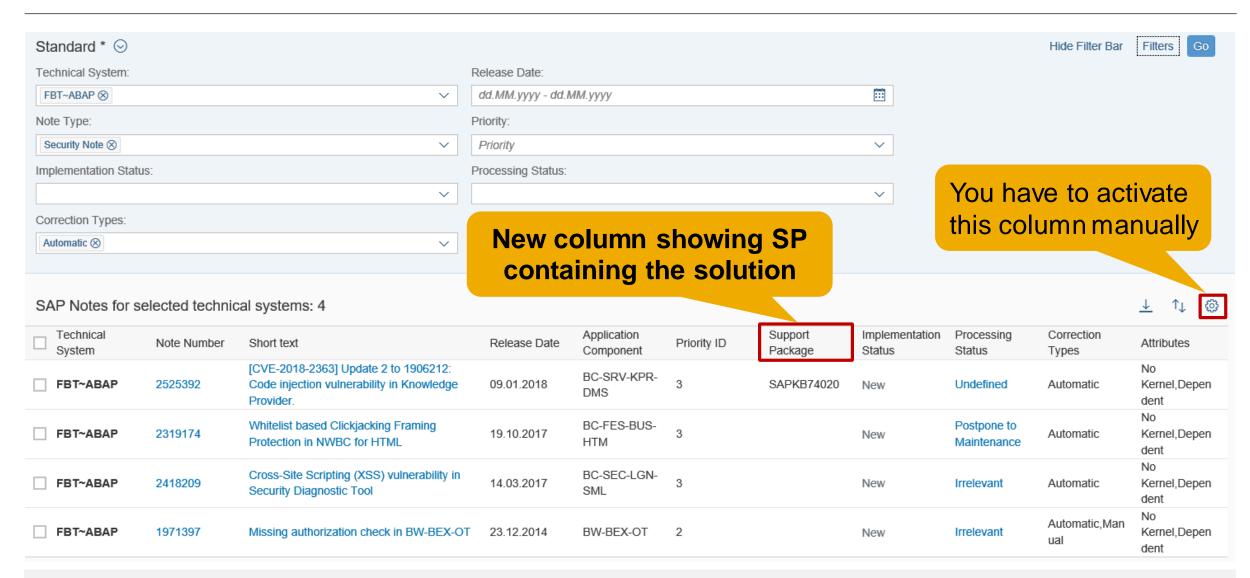
The "Processing Status" is set by the user manually

- 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"

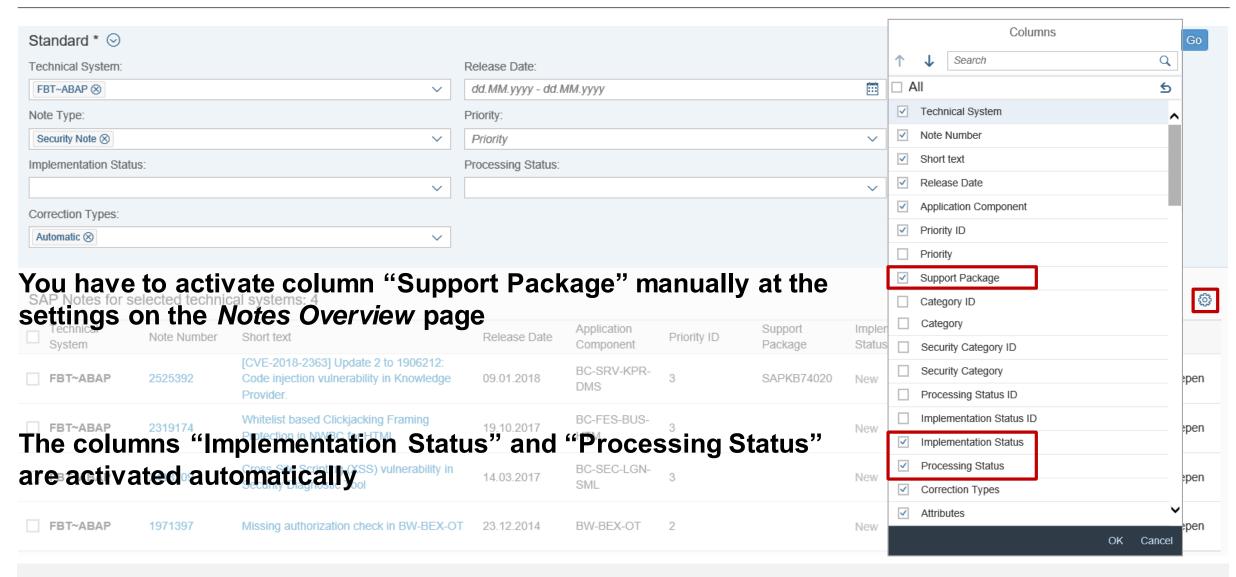
System Recommendations 7.2 SP 7 Separation between "Implementation Status" and "Processing Status"



System Recommendations 7.2 SP 7 New column "Support Package containing the solution" for ABAP notes



System Recommendations 7.2 SP 7 New columns



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)

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)

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:

Dialog RFCs between FBT Client 200 and A24 Client 001

RFC Destination and User for Login Access to managed system (LOGIN&TRUSTED RFC)

Create/Update SM_A24CLNT001_LOGIN

Create/Update SM_A24CLNT001_TRUSTED

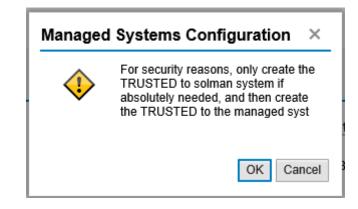
Trusted RFC Destination to SAP Solution Manager

Create/Update SM_FBTCLNT200_TRUSTED

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.)



Note <u>2644227</u> - 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:

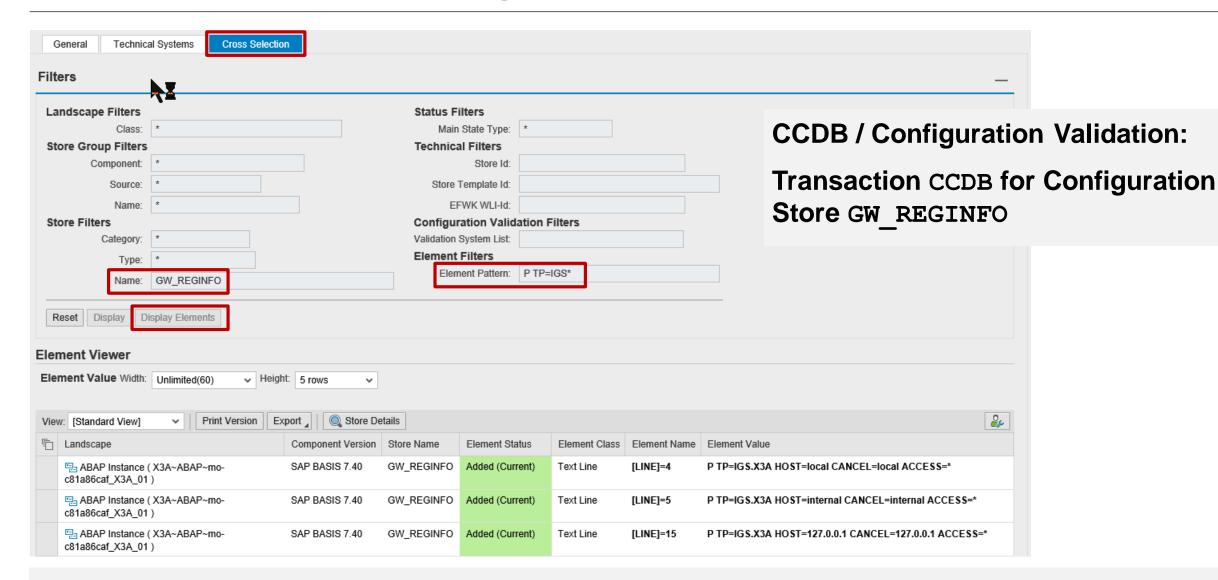
```
P TP=* HOST=internal CANCEL=internal ACCESS=internal
P TP=Trex_X3A_* HOST=* CANCEL=* ACCESS=*
P TP=IGS.X3A HOST=local CANCEL=local ACCESS=*
P TP=IGS.X3A HOST=internal CANCEL=internal ACCESS=*
P TP=SLD_UC HOST=local CANCEL=local ACCESS=*
P TP=SLD_UC HOST=internal CANCEL=internal ACCESS=*
```

P TP=* HOST=local CANCEL=local ACCESS=local

P TP=SLD NUC HOST=internal CANCEL=internal ACCESS=*

P TP=SLD NUC HOST=local CANCEL=local ACCESS=*

Note <u>2644227</u> - Command execution with SAP Internet Graphics Server (IGS) request through the multiplexer RFC listener



Note <u>2621121</u> - Information Disclosure in UI5 Handler Application Component CA-UI5-DLV

Simple ABAP note

Note <u>2538856</u> - 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

SAP HANA DATABASE 2.0

SAP HANA DATABASE 2.0 SPS 02

SAP HANA DATABASE 2.0 SPS 03

Maintenance Revision 122.16

Maintenance Revision 012.04

Maintenance Revision 024.00

Initial Revision 030.00

ABAP see "Manual Activities" which refer to other notes

- SAP_UI 7.40 SP 20 according to Note <u>2547009</u> (and for UISAPUI5 100)
- SAP_UI 7.50 SP 10 according to Note <u>2482210</u> (and for UI_700 200)
- SAP_UI 7.51 SP 05 according to Note <u>2493450</u>
- SAP_UI 7.52 SP 01 according to Note <u>2468634</u>

Java see "Support Package Patches"

See Java patches

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 Release 100 Software Component Release 740	UISAPUIS SAP UIS CLIENT SAPK-10012INUISAPUIS - SAPK-10019INUISAPUIS SAP_UI
Please implement note	2547009 to get the newest UIS version.

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

Note 2597913 - Denial of Service (DOS) in SAP Gateway

Note <u>2597913</u> (Version 4 from 10.07.2018) solves some issues but introduces a new error which gets solved with note <u>2647109</u> (Version 5 from 04.06.2018):

SAP KERNEL 7.21
SAP KERNEL 7.22
SAP KERNEL 7.45
SAP KERNEL 7.49
SAP KERNEL 7.53

Note <u>2597913</u> Note <u>2647109</u>
patch 1016 patch 1020
patch 610 patch 617
patch 715 patch 723
patch 510 patch 514
patch 110 patch 201

2597913 - [CVE-2018-2433] Denial of Service (DOS) in SAP Gateway

Version 4 from 10.07.2018 in English

Description

Software Components

Support Package Patches

This document is referenced by \sim

This document is causing side effects ~

This document is causing side effects

Number	Title
2647109	GW: external cpic programs do not start any more

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 \rightarrow no testing required

Coloring of ABAP correction instruction: see <u>SAP Note Enhancer</u>

```
*$ Correction Inst. <u>0120061532 0001815152</u>
*$ Valid for :
*$ Software Component ST SAP Solution Manager

*$ Release 710 SAPKITL711 - 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 @ 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.

*
```

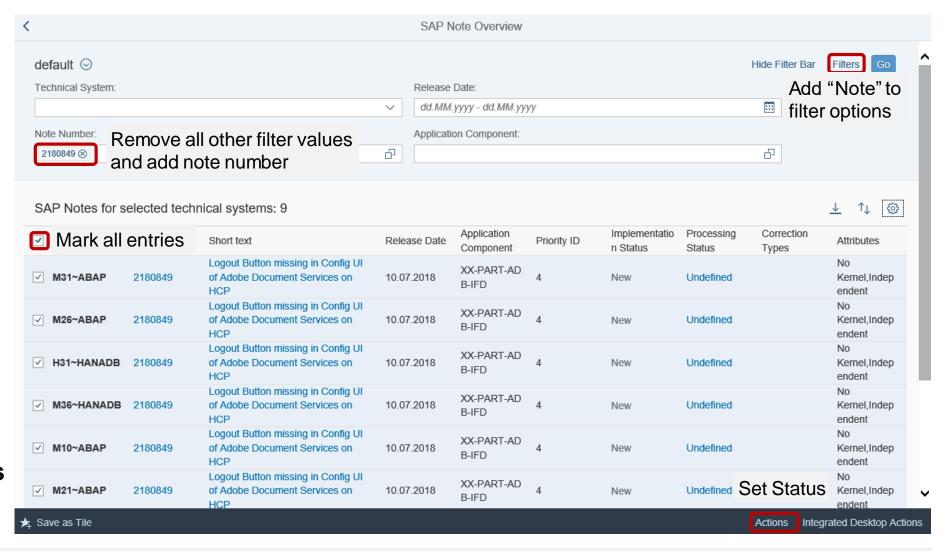
Note <u>2180849</u> - Logout Button missing in Config UI of Adobe Document Services on HCP

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



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 $\underline{2360408}$ even if it is still required – check the coding in include $\underline{L0SZZF01}$ for \underline{CALL} $\underline{FUNCTION}$ ' \underline{RSAU} _ \underline{WRITE} _ \underline{CTS} _ \underline{ORG} _ $\underline{SETTINGS}$ ' $\underline{\rightarrow}$ 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

New Security Audit Log Messages Note <u>2535552</u> - SCU3: New authorization design for table logging

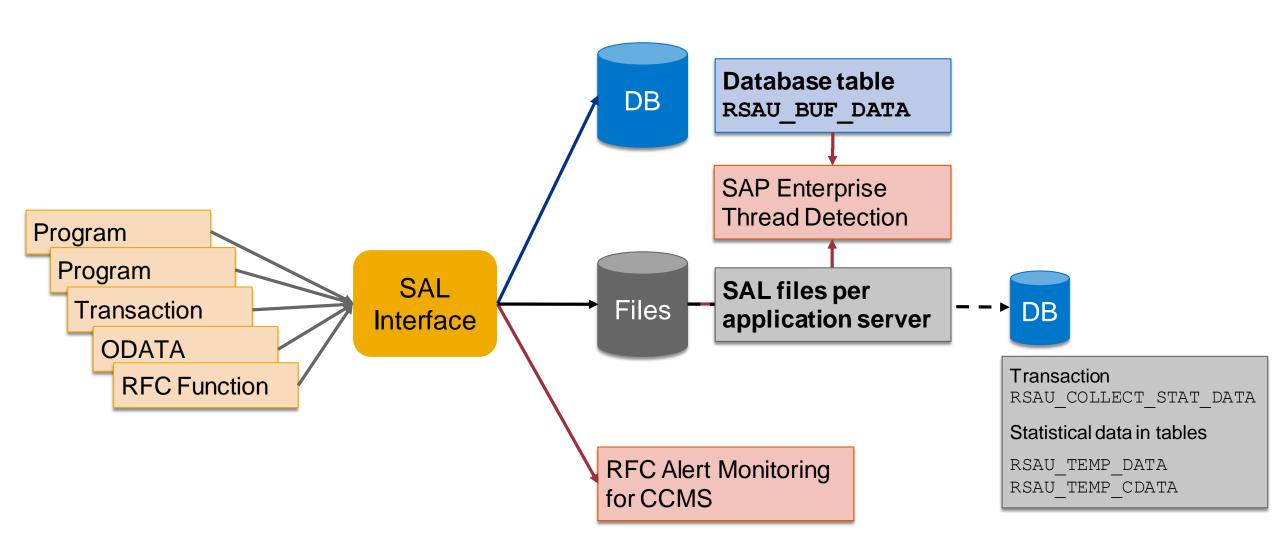
Report RSTBPDEL writes message EU3 to SAL and Syslog

EU3 Critical &A change documents deleted without archiving (&B)

Note <u>2535552</u>

- has manual post-installation steps
- has required notes <u>2525372</u>, <u>1919440</u>, <u>1750915</u>, <u>1735308</u>
- and has side effect solving notes <u>2621537</u>, <u>2634844</u>, <u>2639096</u>
- Implement all these notes if required

Security Audit Log as of SAP_BASIS 7.50 Data flow / data storage



Security Audit Log as of SAP_BASIS 7.50 Maintenance

- > Transaction RSAU_ADMIN Log Data Administration
 - = 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
 - = 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

Select Activity

Configure integrity protection format
Check integrity of the files
Display Last Integrity Check Status
Reorganize log files
Reorganize log table

SM19

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
 - = report RSAU_READ_LOG
 - 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

SM20

RSAU_SELECT_EVENTS

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:



Transaction SM19 is obsolete. Use transaction RSAU CONFIG for maintenance.

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

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



May 2018

Topics May 2018



Note <u>2524107</u> - AIS | Enhancements in system audit reporting

SAP Solution Manager User Management Transaction USR_MNGT

Note <u>2081029</u> - Potentially false redirection of Web site content in Web Dynpro ABAP

Note <u>2449757</u> - Additional Authentication check in Trusted RFC on own system (reloaded)

Note <u>2610231</u> - Code Injection Vulnerability in SAP MaxDB ODBC Driver

Recommended Notes for System Recommendations

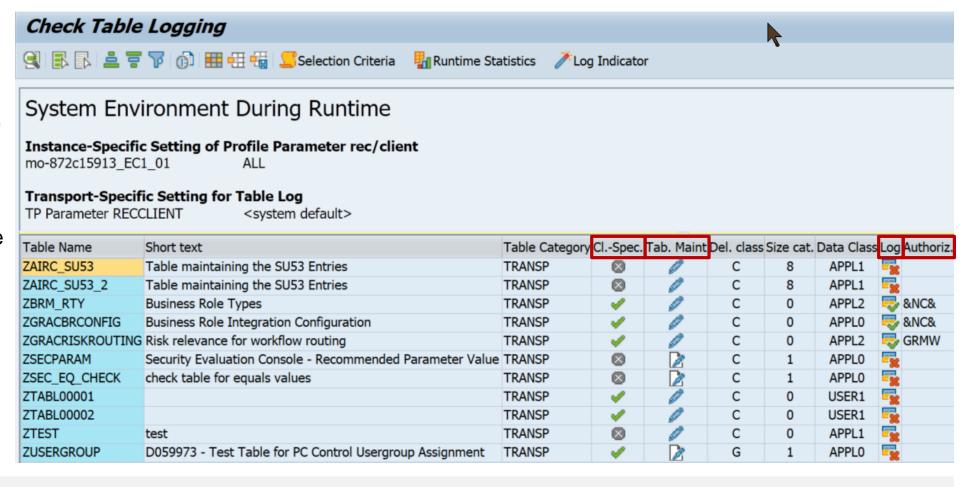


Note 2524107 - AIS | Enhancements in system audit reporting

Report RDDPRCHK – Check Table Logging

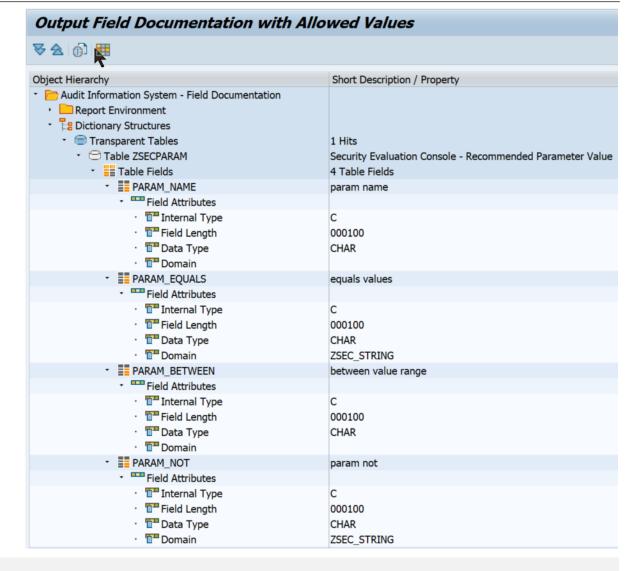
The function for deactivating logging is available following this correction procedure via the function code =DACTVT only.

Extended version, see Note 2579568 - RDDPRCHK | Optimization for reporting



Note 2524107 - AIS | Enhancements in system audit reporting

Report RDD00DOC - Output Field Documentation with Allowed Values



Note 2524107 - AIS | Enhancements in system audit reporting

Report RSCRDOMA is now replaced by report RSAUDIT_WUSL_DDIC

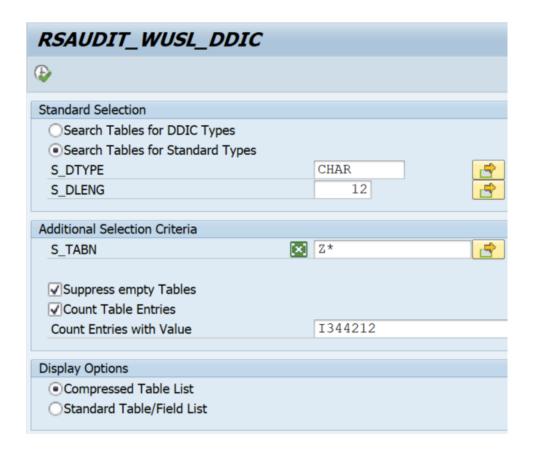


Table Name	Short Description	CNT_ALL	CNT_VAL
ZAIRC_SU53	Table maintaining the SU53 Entries	1.702	
ZARIXCA2		56	
ZCS_CC_OWNER	Companycode to Role owner mapping	2	2
ZCS_USR	ZCS_USR	3	2
ZGPM_PROJECT		4	
ZTESTHR	Test HR Payroll	2	

SAP Solution Manager User Management Transaction USR_MNGT

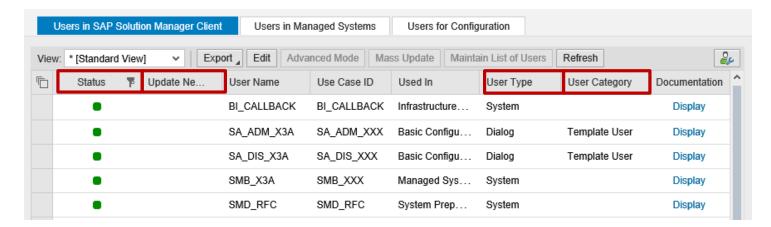
Transaction USR_MNGT shows an overview about users managed by SOLMAN_SETUP.

Existing users

Status "Success"

To-be-updated users A Status "Warning"

Missing password • Status "Error"



Checks / Actions:

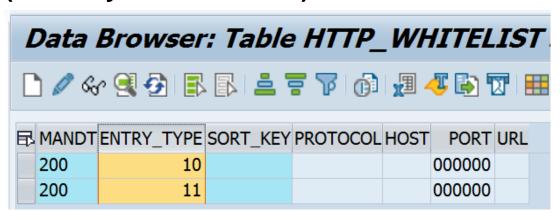
- Do you need all these existing users, i.e. do you need "template users"?
- Does the user type match to the purpose of the user and your security policy?
- Update role assignments if needed

Note <u>2081029</u> - Potentially false redirection of Web site content in Web Dynpro ABAP application

ABAP corrections (automatic and manual) are old \rightarrow no action needed to update software

Manual configuration of whitelist 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 <u>853878</u>)
- 02 Exit URL for parameter sap-exiturl
- 03 NWBC runtime
- 10 WebDynpro Resume URL (Note <u>2081029</u>)
- 11 Web Dynpro Redirect URL (Note 2081029)
- 20 Redirect URL for parameter sap-mysapred of ICF (Note 612670)
- 21 Redirect URL for parameter redirecture of ICF (Note 1509851)
- Clickjacking Framing Protection (Note <u>2142551</u>)
- 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.

Note <u>2449757</u> - Additional Authentication check in Trusted RFC on own system (reloaded)

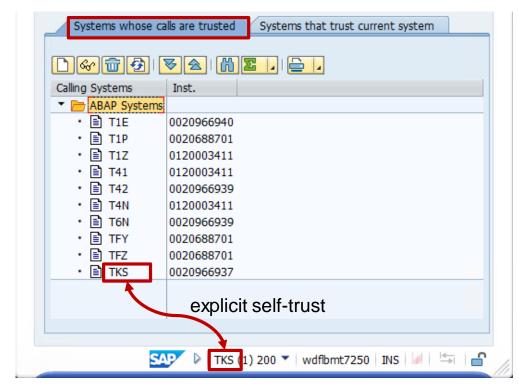
Caution: Use Kernel update as described in note <u>2614667</u> before activating parameter rfc/selftrust in systems where you want to define Trusted RFC destinations within the same system.

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



Note <u>2610231</u> - 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 <u>822239</u>:

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

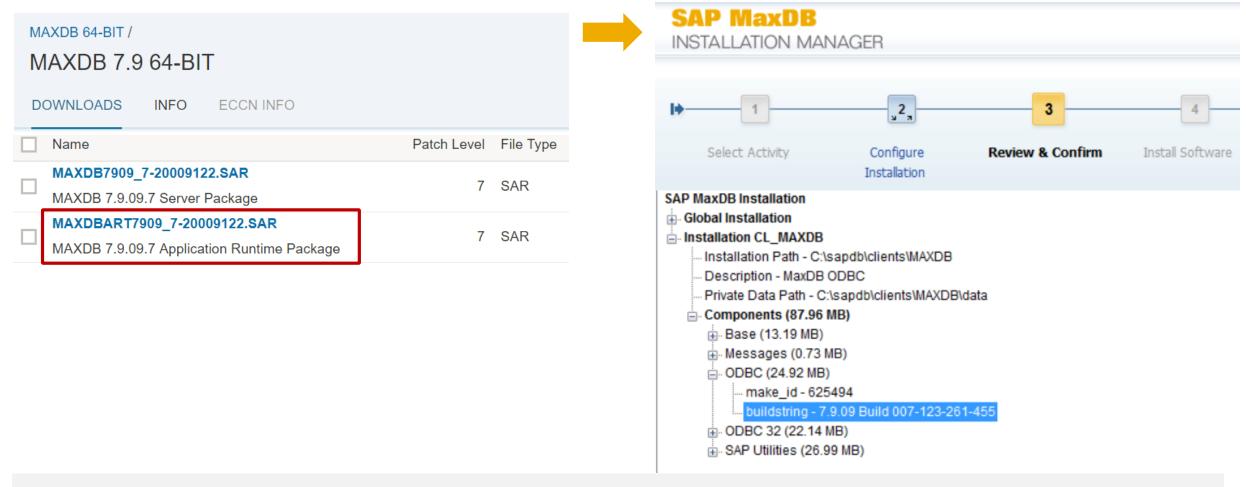
24. How can I determine which ODBC version is installed on the host?

You can check installed software using the sbdregview tool (e.g. using report RBDCOSO):

/sapdb/programs/bin/sdbregview -l | grep -i ODBC

Note <u>2610231</u> - Code Injection Vulnerability in SAP MaxDB ODBC Driver

The client library is part of the Application Runtime Package (MAXDBART)



Recommended Notes for System Recommendations

Optimization of UPL integration:

Note <u>2610652</u> - SysRec: Query Execution Error when checking UPL data

plus

Note <u>2619312</u> - Custom Code Management (ST 7.2 SP03 or higher):

The API "CL_AGS_CC_UPL_DATA" enhancement

Note <u>2590592</u> - SysRec7.2 NonABAP system notes calculation (new version available)

Recommended Notes for System Recommendations

Note <u>2556623</u> - 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.

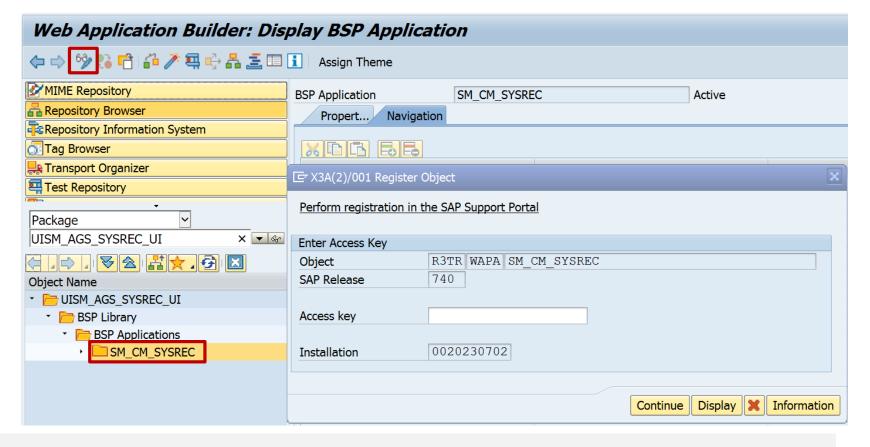
Note <u>2556623</u> - SysRec: Collective Corrections for Solution Manager 720 SP03-SP06 Fiori UI

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.



Note <u>2556623</u> - 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

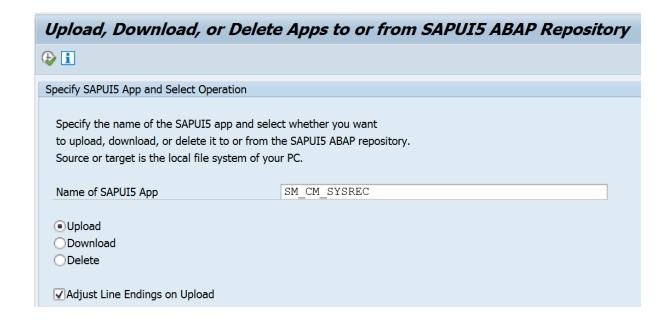
Upload: Checked

Adjust Line Endings on Upload: Checked

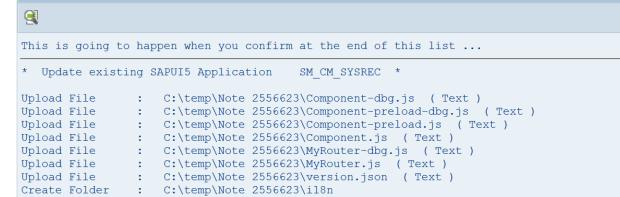
Execute and start upload

Enter transport request: <...>
External Codepage: CP1252

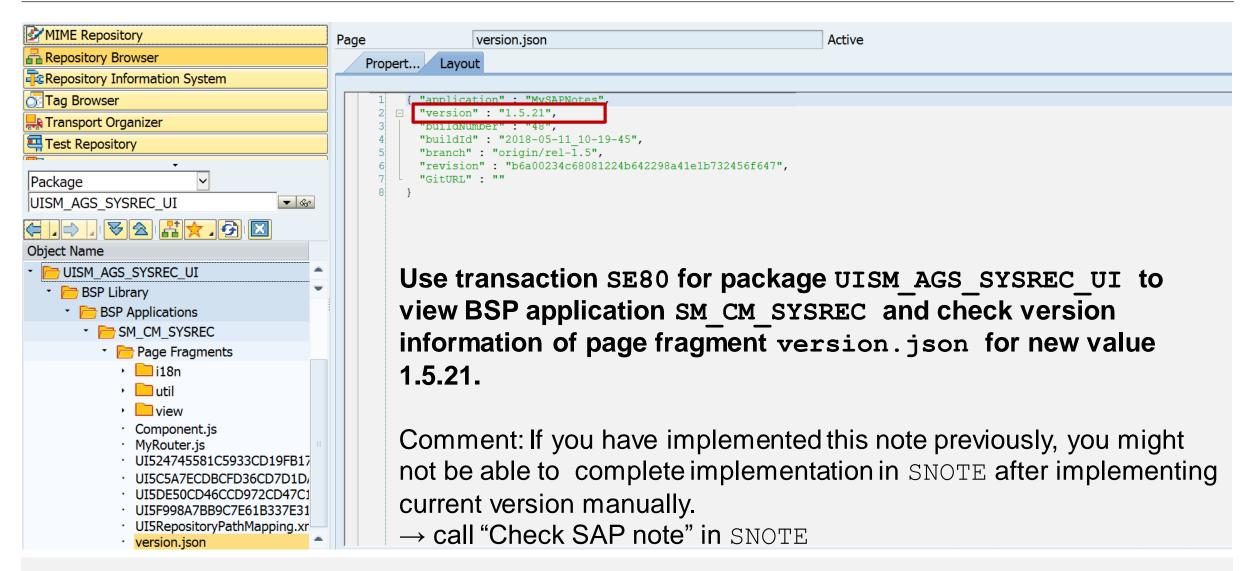
Check log, you should only get info messages



Load SAPUI5 Application from File System to the SAPUI5 ABAP Repository



Note <u>2556623</u> - SysRec: Collective Corrections for Solution Manager 720 SP03-SP06 Fiori UI





April 2018

Topics April 2018





Note <u>2272827</u> - Check of S_PROGNAM for scheduling of job step

Note <u>184277</u> - Length Limitation of SNC-Names

Note <u>2562127</u> - R/3 Support Remote Connection with SNC / SSO

Note <u>2614141</u> - Improper session management when using SAP Cloud Connector

Note <u>2622660</u> - Security updates for web browser controls delivered with SAP Business Client

Note <u>2190621</u> - SAP Netweaver SAL incorrect logging of addresses

Note <u>2497000</u> - Missing Authorization check in XX-CSC-BR-NFEIN

Note <u>2497027</u> - Missing Authorization check in XX-CSC-BR-NFE

System Hardening with SAP Security Notes



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
- 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.

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)

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.

Switchable authorization checks (SACF)

Search SACF notes on SAP Support Portal and export the list to cvs file

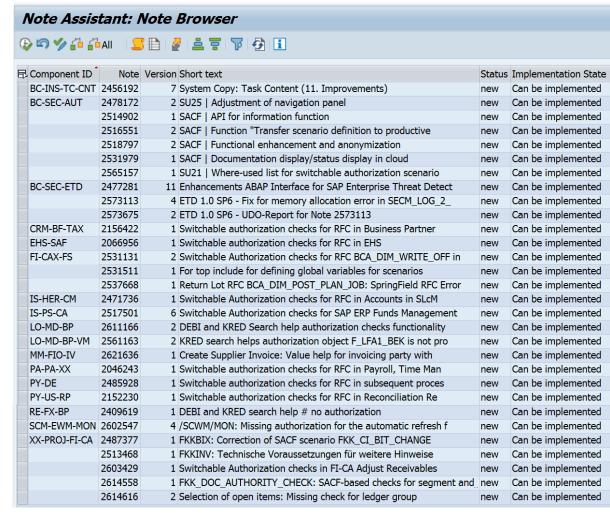
Use Copy&Paste to download notes into SNOTE

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



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:
 - Analyze logs and adjust roles if necessary (Messages DUP DUV)
 - 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)

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)

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 \rightarrow "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 <u>2272827</u> 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*. [...]

Note <u>184277</u> - Length Limitation of SNC-Names Note <u>2562127</u> - R/3 Support Remote Connection with SNC / SSO

Note <u>184277</u> describes limitations concerning the maximal length of printable SNC names. For all relevant (= actively used) SAP_BASIS and Kernel releases it tells:

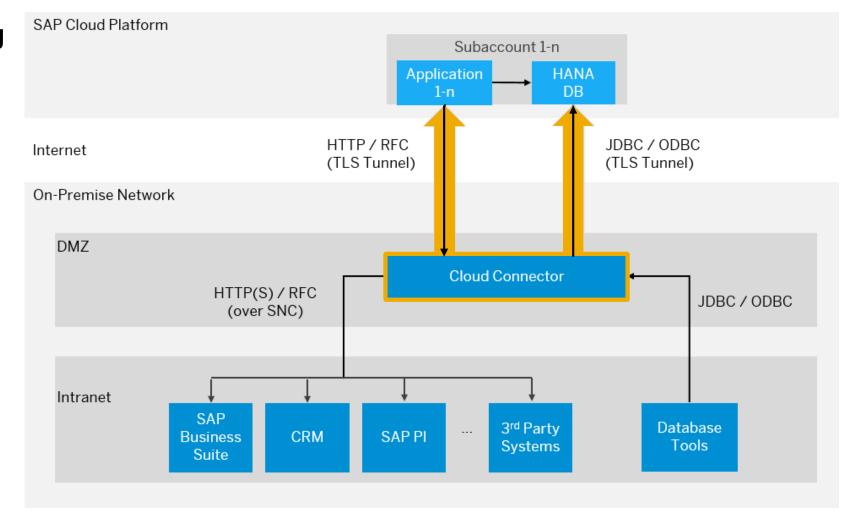
- > Hard Limit: Release >= 6xx R/3 Kernel 254 8-bit chars for the printable name
- Warning: Do NOT use SNC-Names that are longer than 220 printable characters with SAP Netweaver >= 6xx.

Note <u>2562127</u> describes an additional temporary limitation concerning the SNC names of APAP application servers if yo SNC / SSO secured Support Remote Connection

Please take into account, that at this point in time we poort SNC names with a length bigger than 80 characters. This feature will be delivered by June 2018.

Connectivity landscape using SAP Cloud Connector in cloud extension scenarios

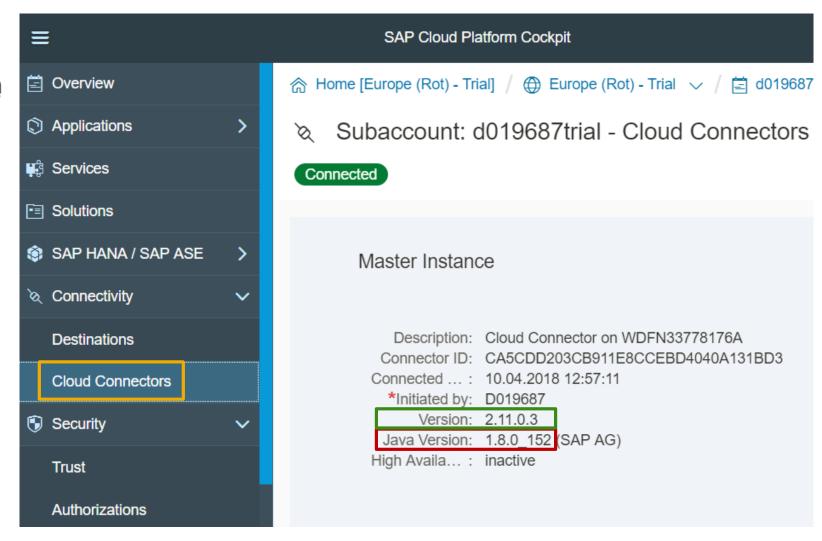
The SAP Cloud Connector opens encrypted communication channels to SAP Cloud Platform which then can be used by onpremise applications.



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)

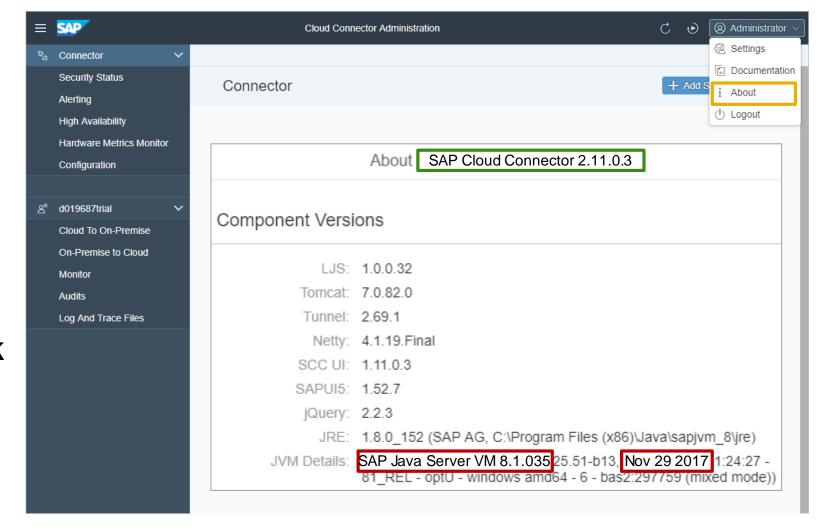
see note <u>2219315</u> - Mapping of SAP JVM patches to Oracle JDK updates



Check the version locally:

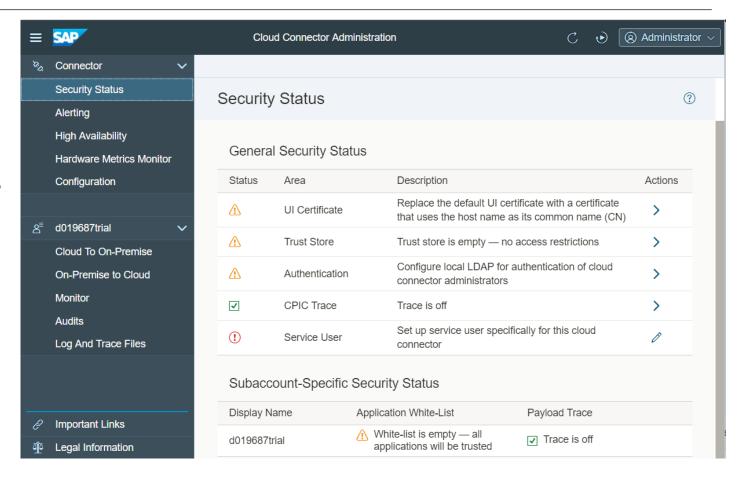
- SAP Cloud Connector check version ≥ 2.11
- Java JVM check version ≥ 8.1.036 or date ≥ 09.02.2018

see note <u>2219315</u> - Mapping of SAP JVM patches to Oracle JDK updates



Check the security status:

- Both the general and the subaccountspecific 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.

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

Note <u>2622660</u> - Security updates for web browser controls delivered with SAP Business Client

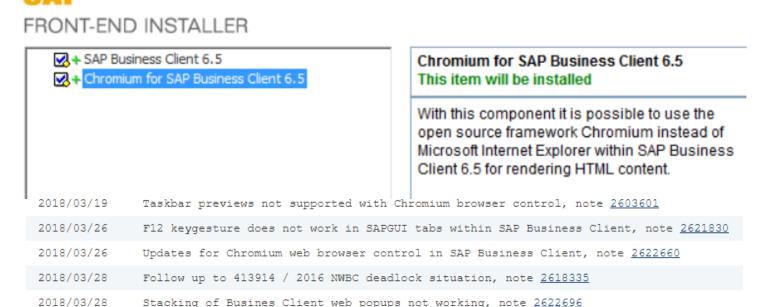
Internet Explorer: Security corrections for .NET framework are delivered via Microsoft Update.

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



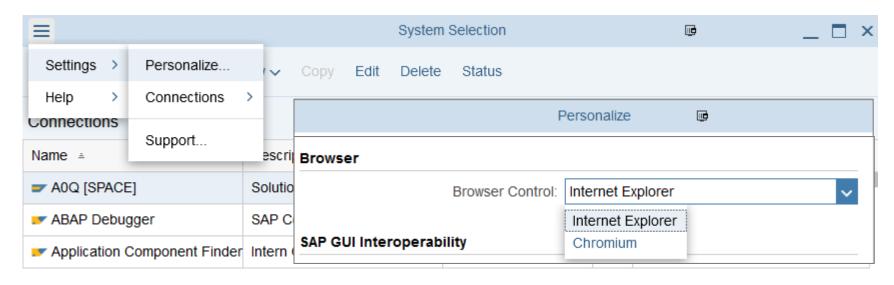
Authentication challenge for favicons requires user interaction, note 2627387

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2018/04/05

Note <u>2622660</u> - 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>

Note <u>2622660</u> - Security updates for web browser controls delivered with SAP Business Client

Related Note <u>2446515</u> - 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":

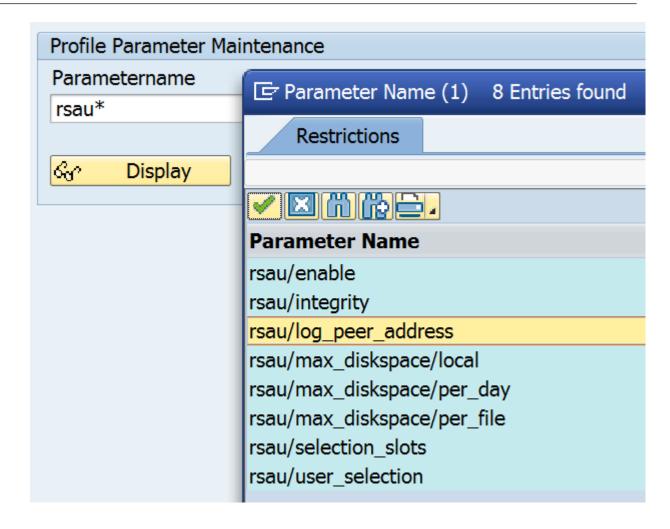
28	7 Document(s) found	Sort By:	Relevance	→ [[[
	2507107 - SAP NWBC ABAP Runtime Patch 60 NWBC for HTMLCertain parameters get lost in Internet Explorer. This occurs for parameters whose name start e.g. with 'reg'. IE interprets this string part as 'Registered Trademark' sign (®)System aliases are being ignored for navigation to BC-FES-BUS (Netweaver Business Client) 23.01.2018 SAP Note			
	2481347 - SAP NWBC ABAP Runtime Patch 59 NWBC for DesktopSmall fixes for themingNWBC RuntimeBAdl implementations for NWBC_RUNTIME_EXTENSION_ROLE are no longer processed. This is because the BAdl filter is not consideredThe SAP menu takes very long to be loaded. This is because the c BC-FES-BUS (Netweaver Business Client) 16.08.2017 SAP Note			

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



Note <u>2497000</u> - Missing Authorization check in XX-CSC-BR-NFEIN Note <u>2497027</u> - 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 <u>2497000</u> might lead to implementation error: Type "CL_J_1BNFE_AUTHORITY_CHECK" is unknown.

Solution: Implement note <u>2497027</u> first.

32 Syntax Error for Function Module J_1BNFE_SEARCH_PO_BY_MAIN_ITEM			
Type Lo	Line	Description	
(31	Function Module J_1BNFE_CREATE_GOODS_RECEIPT	
		Type "CL_J_1BNFE_AUTHORITY_CHECK" is unknown.	
(35	Function Module J_1BNFE_CREATE_GOODS_RECEIPT	
		Type "CL_J_1BNFE_AUTHORITY_CHECK" is unknown.	

If you are using this component, another legal change note <u>2477513</u> (which automatically implements notes <u>2497027</u>, <u>2368483</u>, too) should be implemented as well.

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.

System Hardening with SAP Security Notes

Note <u>2421287</u>

Note <u>1322944</u> **ABAP: HTTP security session management** Note <u>1531399</u> **Enabling SSL for Session Protection** Notes <u>1585767</u>, <u>1693981</u> **Enabling Virus Scanning** Note <u>1616535</u> Secure configuration of ICM for the ABAP application server Note <u>1853140</u> Managing SAProuter from external host Note <u>1973081</u> XSRF vulnerability: External start of transactions with OKCode Notes <u>2086818</u>, <u>2107562</u> Fixing POODLE SSLv3.0 (CVE-2014-3566) Vulnerability Notes <u>2142551</u>, <u>2245332</u>, <u>2319172</u>, <u>2319192</u>, <u>2333957</u>, <u>2349128</u> Whitelist based Clickjacking Framing Protection Switchable authorization checks for RFC in data extraction within CA-MDG Note <u>2185122</u> Note <u>2260344</u> OS command injection vulnerability in SCTC_* Function modules

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Front-end printing with SAP GUI 750

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 individual services in transaction SICF see note $\underline{1947241}$ 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 = 1login/ticketcache entries max = 1000login/ticketcache off = 0login/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 = 60Client Name **Current Status** ☐ Client SAP AG Konzern 000 SAP AG Konzern 001

Online Help <u>Activating HTTP Security Session Management on SAP NetWeaver AS for ABAP Wiki: https://wiki.scn.sap.com/wiki/pages/viewpage.action?pageId=462054228</u>

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)	12

Configuration Store SESSION MANAGEMENT (client specific configuration store)

⊾ [®] NAME	VALUE
(=) SESSION_MANAGEMENT	(=) ACTIVE

SAP-Systemkennung	Mandant	Name des Konfigurationsspeichers	Konfigurationselement	Wert des Configltems	KonfValid: Datenoper	·	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



March 2018

Topics March 2018



New old notes

Note <u>2597543</u> - Directory Traversal vulnerability in SAPCAR

Note <u>2449757</u> - Additional Authentication check in Trusted RFC on own system (reloaded)

Dashboard Builder for Configuration Validation



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

Note <u>2597543</u> - 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.

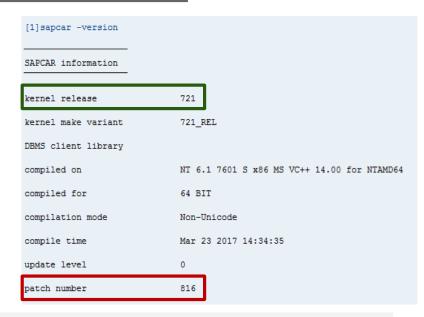
Get version from latest release 7.21 (!):

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



Note <u>2449757</u> - Additional Authentication check in Trusted RFC on own system (reloaded)

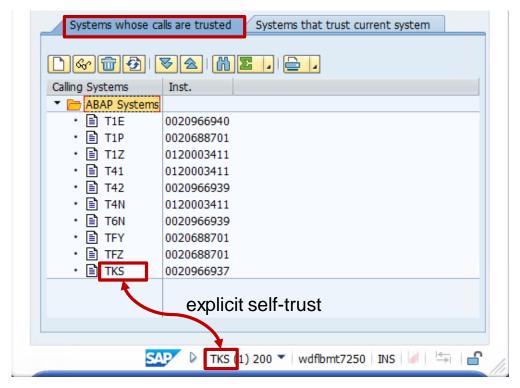
Caution: Use Kernel update as described in note <u>2614667</u> before activating parameter rfc/selftrust in systems where you want to define Trusted RFC destinations within the same system.

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



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/

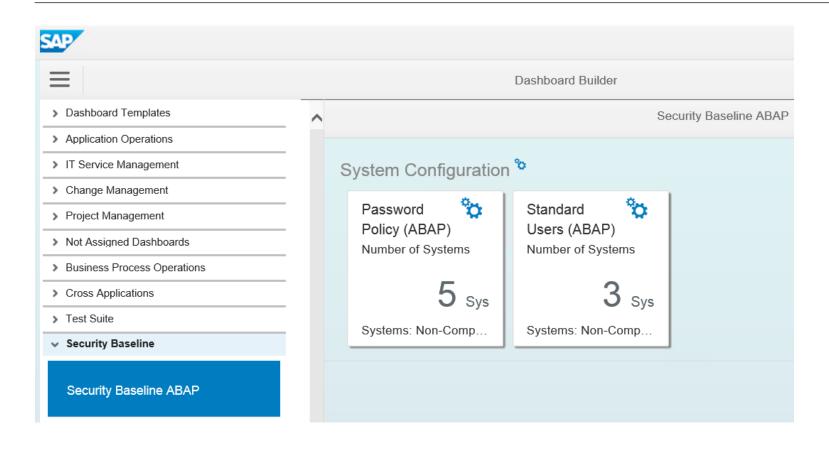
KPI Catalog

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

Dashboard Builder for Configuration Validation Dashboard



So far, two examples are part of the SAP Security Baseline Template

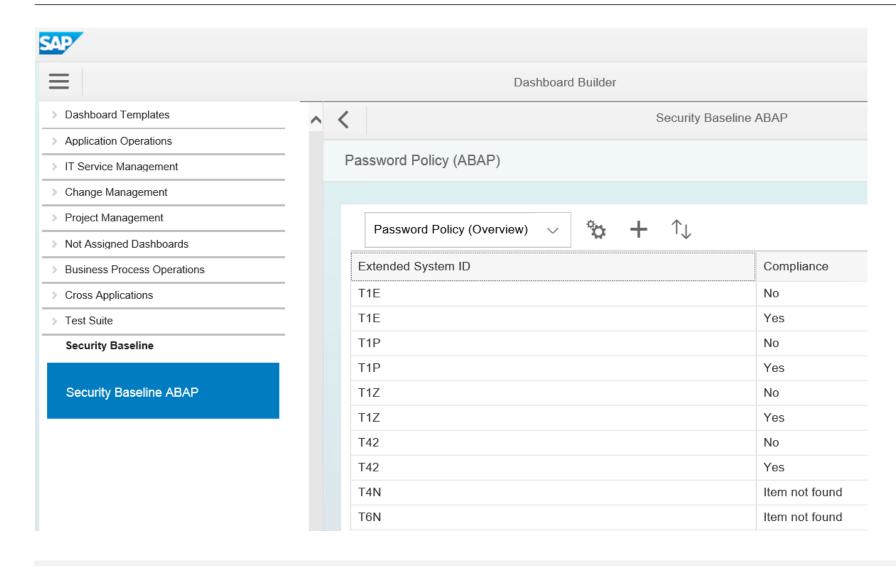
These examples are based on following Target Systems:

BL_S-1 Password Policy

BL_O-1 Standard Users

The numbers on the tiles show the count of non-compliant systems

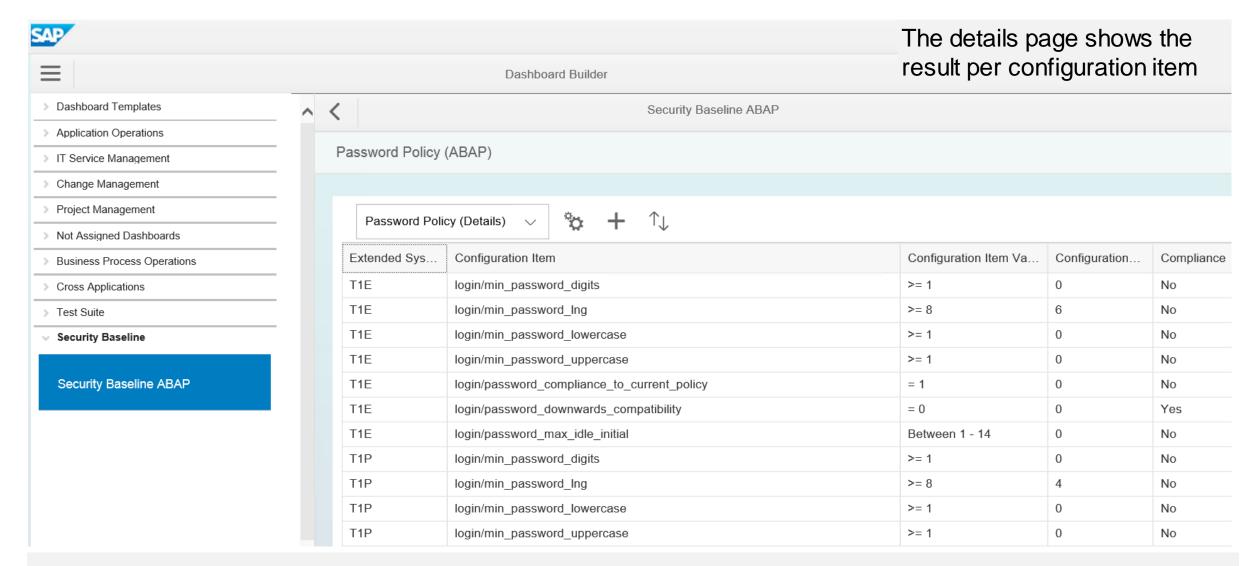
Dashboard Builder for Configuration Validation Example: Overview



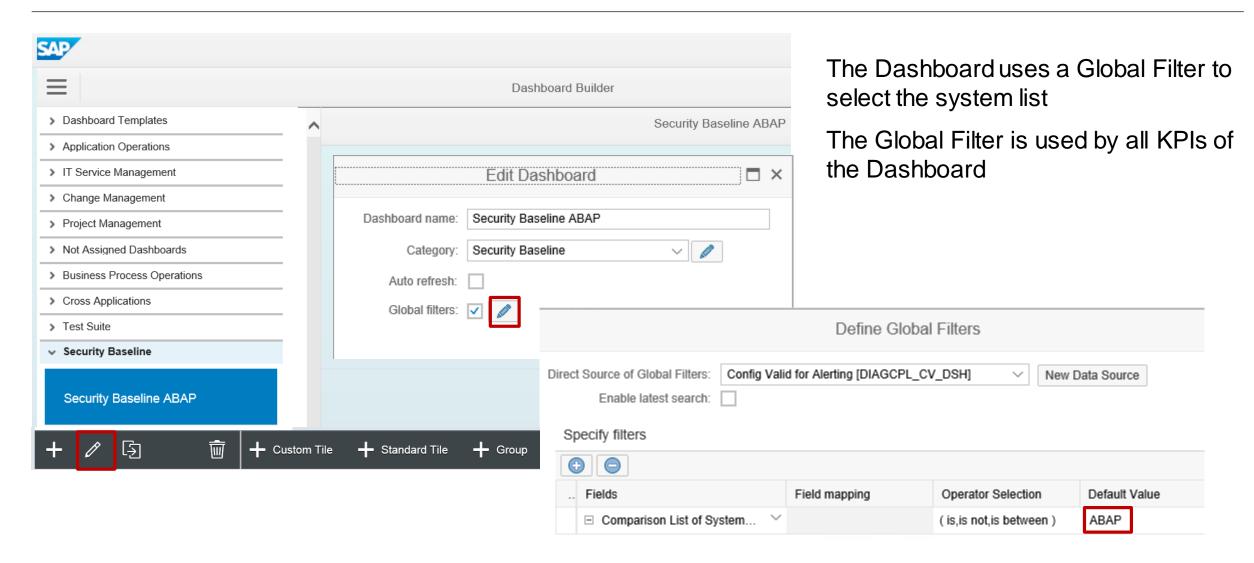
The overview page shows partly consolidated results per system

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

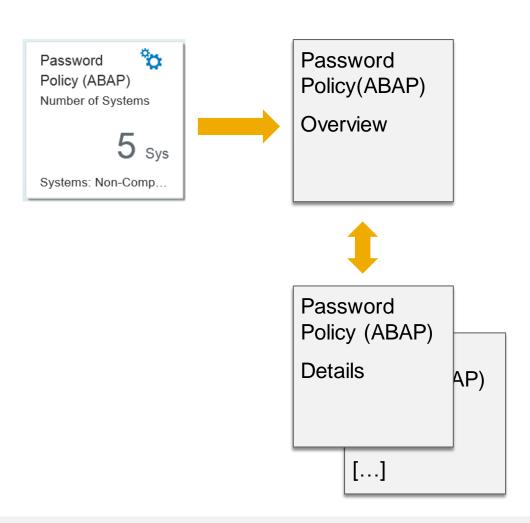
Dashboard Builder for Configuration Validation Example: Details



Dashboard Builder for Configuration Validation Example: Definition of Dashboard



Dashboard Builder for Configuration Validation Example: Definition of Dashboard KPIs

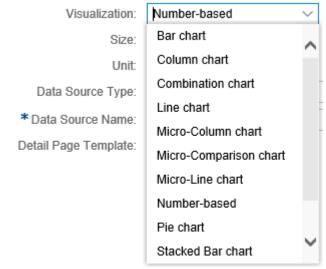


A dashboard tile shows the consolidated result of a KPI

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:

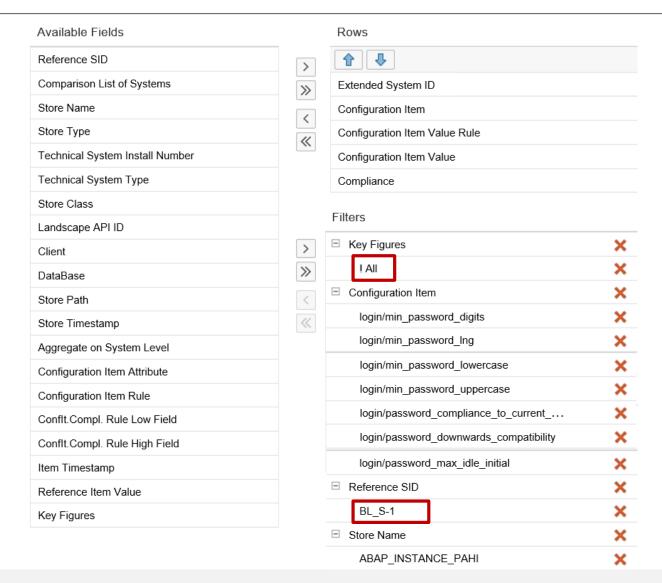


Dashboard Builder for Configuration Validation Example: Definition of KPI



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)



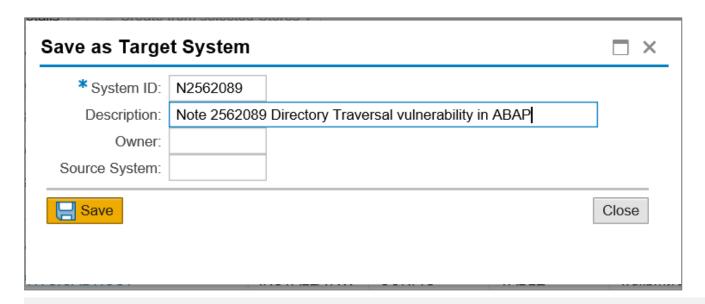
Dashboard Builder for Configuration Validation Example Note <u>2562089</u>: Create Target System

Note <u>2562089</u> - Directory Traversal vulnerability in ABAP

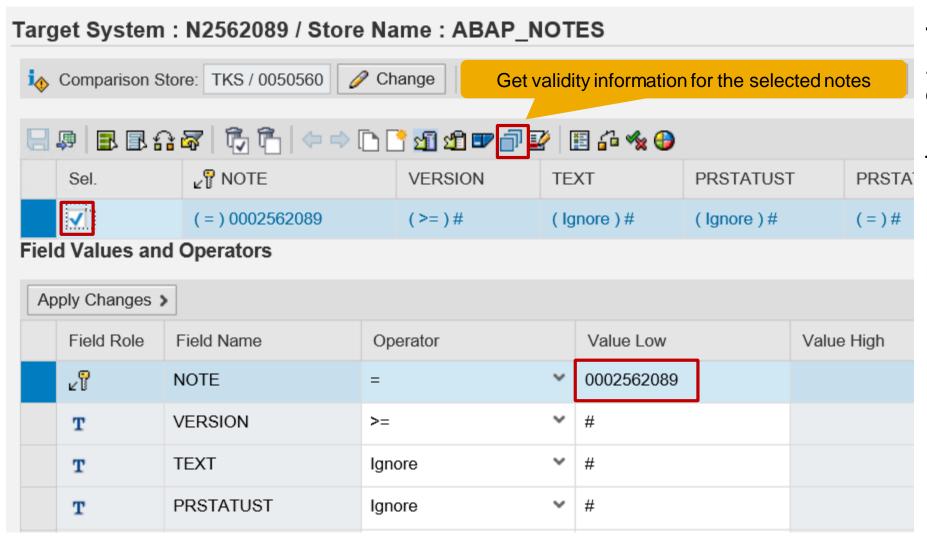
ABAP correction: Configuration Store ABAP_NOTES for note <u>2562089</u>

Configuration: Configuration Store ABAP INSTANCE PAHI with check rule for

profile parameter abap/path normalization = ext

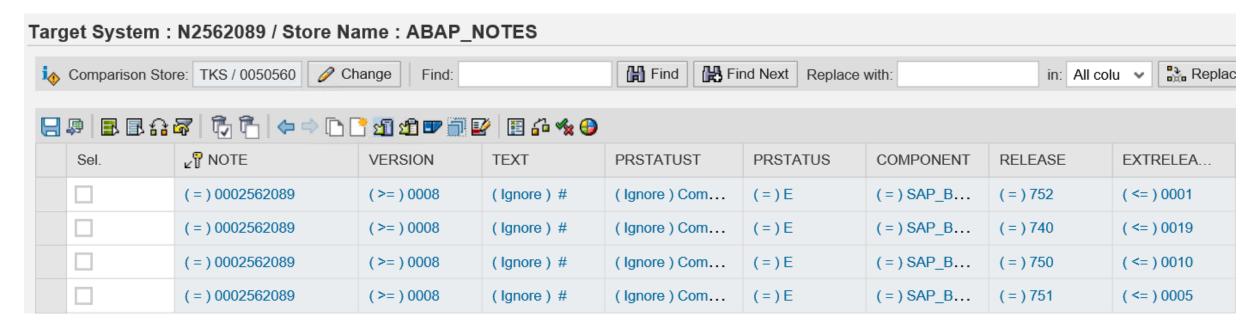


Dashboard Builder for Configuration Validation Example Note <u>2562089</u>: Edit Target System



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.

Dashboard Builder for Configuration Validation Example Note <u>2562089</u>: Edit Target System





Result for configuration store ABAP_NOTES

Enter a rule for the profile parameter for configuration store

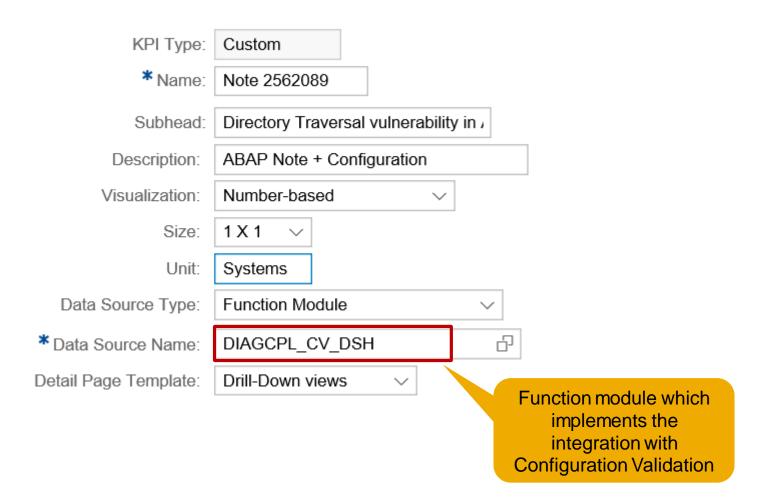
ABAP INSTANCE PAHI

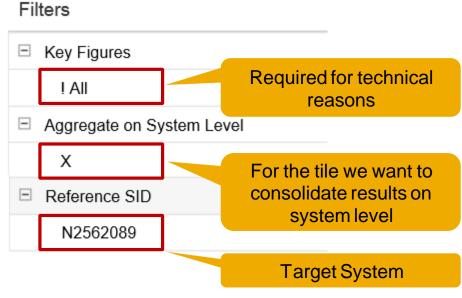
Dashboard Builder for Configuration Validation Example Note <u>2562089</u>: Reporting

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

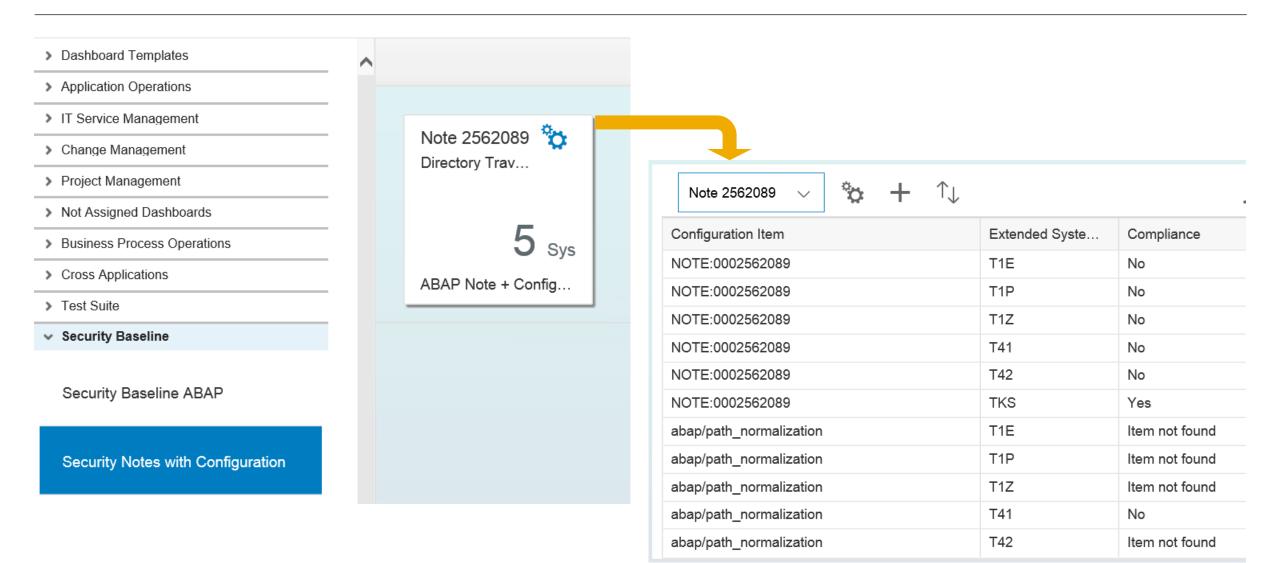
Standard reporting using Configuration Validation with adjusted layout You can store the view as a "bookmark" for repeated reporting

Dashboard Builder for Configuration Validation Example Note <u>2562089</u>: Definition of corresponding Dashbord Tile





Dashboard Builder for Configuration Validation Example Note <u>2562089</u>: Dashbord Tile and Drilldown View





February 2018

Topics February 2018





Note <u>2408073</u> - Handling of Digitally Signed notes in SAP Note Assistant (reloaded)

EarlyWatch Alert Workspace and

EarlyWatch Alert Solution Finder in Support Portal Launchpad

Note <u>2562089</u> - Directory Traversal vulnerability in ABAP File Interface

Note 2525222 - [multiple CVE] Security vulnerabilities in SAP Internet Graphics Server (IGS)

Note <u>1584573</u> - Security Verdict in SUGM SAUS SUGM_UPG_TYPE_PLUS_DEL_XML

Note <u>1977547</u> - Update 1 to Security Note 1584573



Recommended Notes for System Recommendations

Note <u>2585487</u> - SysRec7.2 notes for obsolete kernel versions are displayed for the target system

Note <u>2590592</u> - SysRec7.2 Support Package for kernel notes are missing

Note <u>2591182</u> - 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)

General Customizing and Personalization Transaction SM30_DNOC_USERCFG_SR

```
SYSREC STATUS FILTER (*)
SYSREC UPL ACTIVE (*)
SYSREC UPL MONTH (*)
SYSREC NOTE TYPES
SYSREC LAST MONTHYEAR
SYSREC BPCA USER
SYSREC BPCA DATE
SYSREC CHARM LOG TYPE
SYSREC CHARM USER
SYSREC CHARM DATE
SYSREC OBJECT EXP
SYSREC REQ EXP
SYSREC SIDE EFFECT
SYSREC UNSUPPORTED SYSTEM (*)
SYSREC UNUSED SUBHR
(*) User specific personalization
```

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).

Activate/deactivate the integration with UPL while showing the object list of ABAP notes.

Count of month for which UPL data get loaded. The default is 2 which represents the current and the previous month.

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.

Defines the earliest calculated notes. By default the application calculates all SAP Notes which were released between January 2009 and the current month.

Defines if the current user should be added as selection for BPCA.

Defines the earliest filter for BPCA results. You can change the start date for this period.

Defines the text id according to table TTXID for the text object CRM ORDERH.

Defines if the current user should be added as selection for ChaRM.

Defines the earliest filter for ChaRM results. You can change the start date for this period.

Lifetime of the cache which contains the object list of notes. The default is 14 days.

Lifetime of the cache which contains the required notes of notes. The default is 14 days.

Lifetime of the cache which contains the side-effect notes of notes. The default is 14 days.

System types which you want to block from SysRec (one entry per system type)

Calculate results for unused HR components (see note 2712210)

Note <u>2408073</u> - 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:

AuthObject	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)
```

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 <u>2517661</u> - How to include EWA Fiori Cloud apps into customer launchpads

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	ystems 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=*)			
<u>(!)</u>	6 Systems Default Passwords of Standard Users (Security → ABAP Stack) Standard users including SAP* or DDIC have default password				
<u>!</u>	14 Systems SAP HANA Network Settings for Internal Services (Security → SAP HANA Database HPJ) SAP HANA internal network configuration is insecure				
<u>(!</u>)	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				
<u>(i</u>	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)				
<u>(i</u>	6 Systems Gateway Security (Gateway and Message Server Security) Gateway Access Control List (reg_info / sec_info) contains trivial entries (P TP=*)				
<u>(i</u>	22 Systems Users with Critical Authorizations (Security → ABAP Stack) A high number of users has critical authorizations				
<u>(1)</u>	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 <u>1823566</u>)

3 Systems

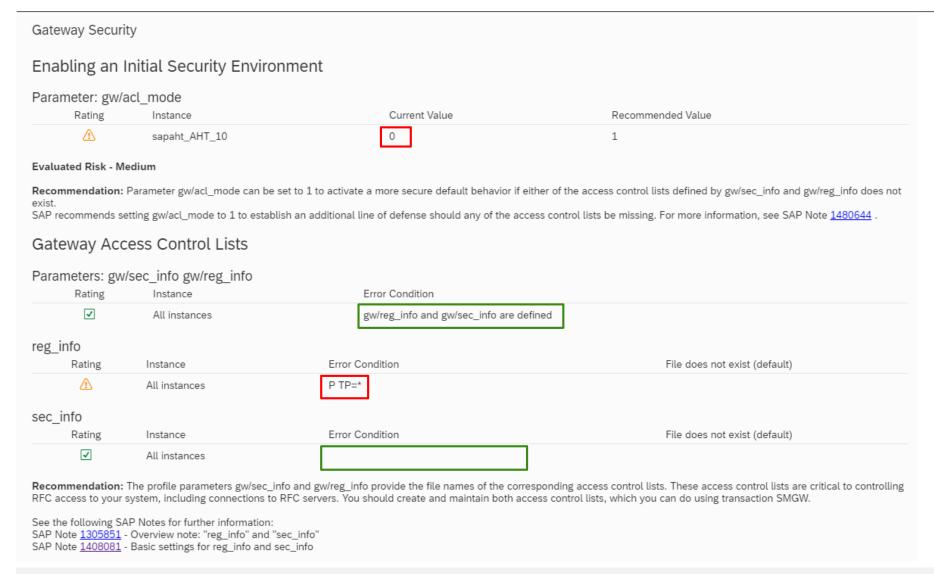
SAP HANA SSFS Master Encryption Key (Security → SAP HANA Database)

SAP HANA SSFS master encryption key is not changed (note 2183624)

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Recommendations

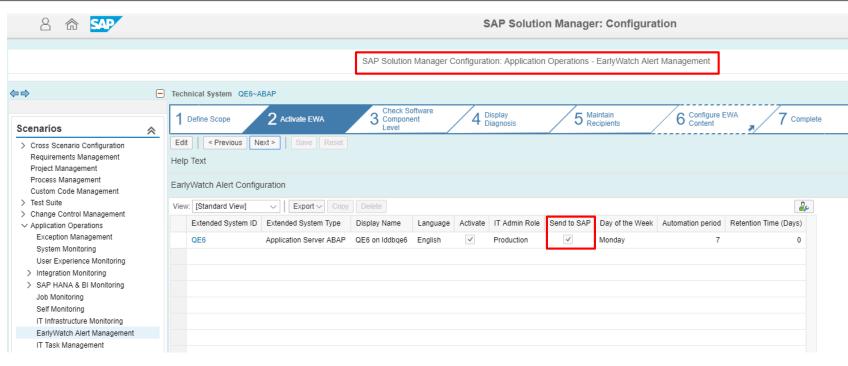
EarlyWatch Alert for RFC Gateway Example



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.

Note <u>2562089</u> - 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 <u>2551541</u>) 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 <u>2433777</u> - Missing Authorization check in ABAP File Interface

Related topic: Security Optimization Project "Secure against Directory Traversal using transaction (S) FILE", see note 1497003

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	Generic filenames	昆	Path in file system	S	NR	RO	Auth.group
SAVEFLAG	(S) If the flag is set, the files specified in PATH are included in security procedures.		/ /tmp	H			
FS NOREAD	(NR) If the flag is set, this means that no		/tmp/files	√			TEMP
_	access is allowed. This flag overrides all user authorizations. If you set FS_NOREAD, FS_NOWRITE is also automatically set.)READ,	
FS_NOWRITE	(RO) If the flag is set, this means that \bf{no} write access is allowed. This flag overrides al user authorizations.						
FSBRGRU				check			

Note <u>2525222</u> - [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 <u>454042</u>, <u>514841</u> (Troubleshooting when a problem occurs with the IGS), and <u>959358</u>. 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.

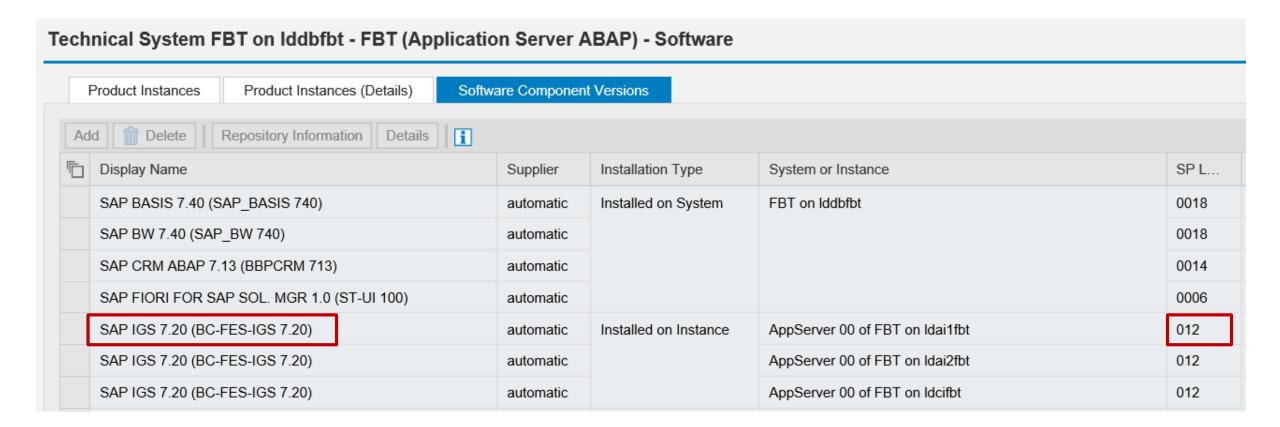
See slides about note 2380277 to learn how to check the version of the IGS

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 Pain	/usr/sap/X3A/SYS/profile/X3A_DVEBMGS01_mo- c81a86caf

Note <u>2525222</u> - [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):



Note <u>1584573</u> - Security Verdict in SUGM SAUS SUGM Note <u>1977547</u> - 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'



January 2018

Topics January 2018



Note <u>2562127</u> - R/3 Support Remote Connection with SNC / SSO

Note <u>2562154</u> - HTTP Remote Connection with SNC / SSO

Transparent Software Vulnerability Disclosure - SAP is a CVE Naming Authority

Meltdown and Spectre

Note <u>2576306</u> - Transport-Based Correction Instruction (TCI) for Download of Digitally Signed SAP Notes (reloaded)

Note <u>2554853</u> - SAP NetWeaver download service for SAP Notes

Notes <u>1891583</u> / <u>2065596</u> - Restricting logon to the application server

Note <u>2525392</u> - Update 2 to <u>2278931</u> and <u>1906212</u>: Code injection vulnerability in Knowledge Provider

Note <u>2533541</u> - SQL Injection vulnerability in Olingo JPA

Note <u>2453871</u> - Cross-Site Scripting (XSS) vulnerability in SAP BusinessObjects

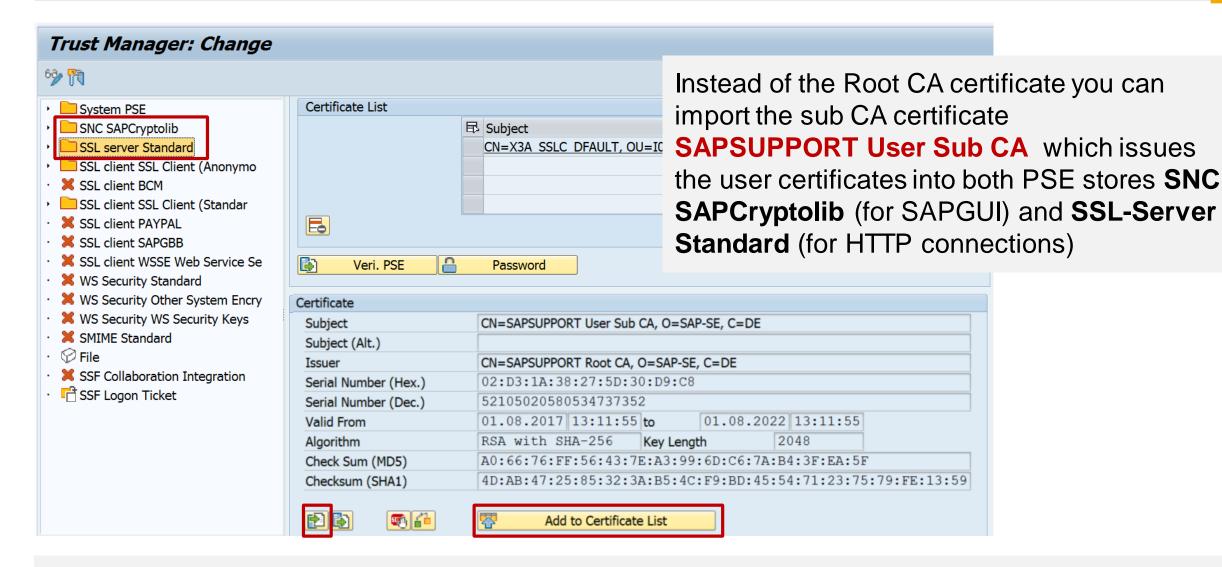
Design Studio

Recordings:

DSAG (German)

ASUG

Note 2341600 - SUIM | Search in role menu RSUSR_ROLE_MENU



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></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></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

	System PSE	<syst> PROG</syst>	System PSE	SAPSYS.pse
٠	SNC SAPCryptolib	<sncs> PROG</sncs>	SNC SAPCryptolib	SAPSNCS.pse
٠	SSL server Standard	DFAULT SSLS	SSL server Standard	SAPSSLS.pse
٠	SSL client SSL Client (Anonymo	ANONYM SSLC	SSL client SSL Client (Anonymous)	SAPSSLA.pse
	★ SSL client BCM		,	-
٠	SSL client SSL Client (Standar	DFAULT SSLC	SSL client SSL Client (Standard)	SAPSSLC.pse

Transparent Software Vulnerability Disclosure SAP is a CVE Naming Authority

SAP is now a <u>CVE Numbering Authority</u>. Using <u>Common Vulnerabilities and Exposures</u>, 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 <u>SAP's Security Patch Day</u> 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?g=CONFIRM%3Ahttps%3A%2F%2Flaunchpad.support.sap.com+site%3Amitre.org

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)

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.

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 <u>2586312</u> - Linux: How to protect against speculative execution vulnerabilities?

Note <u>2591472</u> - 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 <u>2585591</u> - How to protect against speculative execution vulnerabilities on Windows?

Cloud

Infrastructure?

Note <u>2588225</u> - How to protect against speculative execution vulnerabilities on IBM Cloud?

Note <u>2588298</u> - Fixes for Speculative Execution Vulnerabilities on Alibaba Cloud

Note <u>2588044</u> - How to protect against speculative execution vulnerabilities on Google Cloud Platform (GCP)?

Note <u>2588867</u> - How to protect against speculative execution vulnerabilities on Microsoft Azure?

Note <u>2589580</u> - How to protect against speculative execution vulnerabilities on Amazon Web Services (AWS)?

Note <u>2588124</u> - How to protect against speculative execution vulnerabilities on Oracle Cloud

Note <u>2576306</u> - Transport-Based Correction Instruction (TCI) for Download of Digitally Signed SAP Notes (reloaded)

Good news: Instead of implementing notes <u>2408073</u>, <u>2546220</u>, and <u>2508268</u> manually (which would lead to multiple manual activities) you can implement the new TCI for SNOTE as described in note <u>2576306</u>. You do not need to perform any manual activities in this case.

Prerequisite: Note <u>2187425</u> describes how to prepare the Note Assistant (Transaction SNOTE)

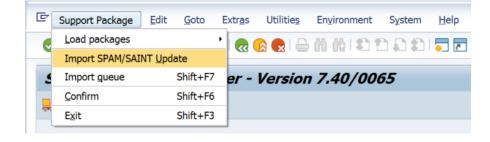
to consume TCIs:

 SPAM Version 66 or higher (update SPAM via client 000)

plus Note Assistant Bootstrapping note:

for SAP BASIS 700 Note <u>2446868</u> for SAP BASIS 701,702 Note <u>2444141</u> as of SAP BASIS 731 Note <u>1995550</u>

plus note <u>2520826</u>



Note <u>2408073</u> still describes how to extract notes text files from digitally signed archive files in case SNOTE is not prepared in time.

Note 2554853 - SAP NetWeaver download service for SAP Notes

Note <u>2554853</u> "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 <u>510007</u>.

Beginning with CommonCryptoLib 8.5.4 (see note <u>2288631</u>), 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.

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

Note <u>2525392</u> - Update 2 to <u>2278931</u> and <u>1906212</u>: 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.



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.

Note <u>2453871</u> - Cross-Site Scripting (XSS) vulnerability in SAP BusinessObjects Design Studio

Note <u>2453871</u> 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 <u>2453871</u> refers to notes <u>2376849</u> (1.6 SP 5) and <u>2555577</u> (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 BLAAS 16	16	

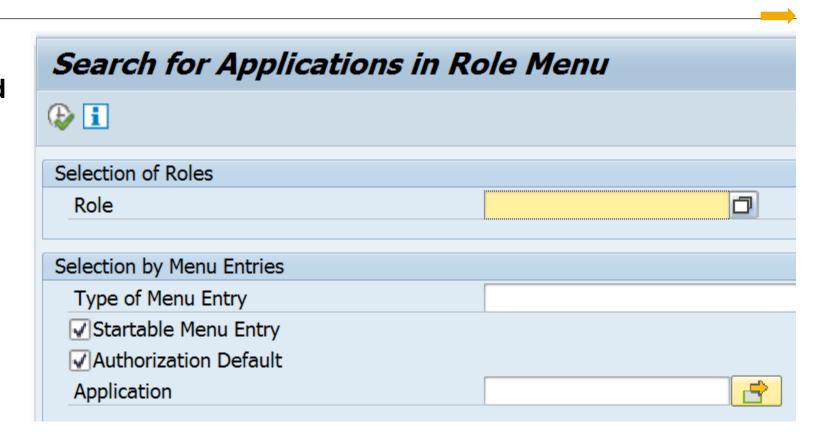
Support Packages & Patches

DESIGN STUDIO NW 1.6 SP005 respective SP006

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: <u>2341600</u>, <u>2449011</u>, <u>2356418</u>, <u>2369818</u>, <u>2439307</u>
- See Note <u>2449011</u> SUIM | Search for startable applications in roles



Available as of SAP_BASIS 7.50

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		



December 2017

Topics December 2017



Note <u>2449757</u> - Additional Authentication check in Trusted RFC on own system

Note <u>2357141</u> - OS Command Injection vulnerability in Report for Terminology Export

SAP HANA Security Notes

Note <u>2427292</u> - Information disclosure in SAP MMC Console

Note <u>2500044</u> - Full access to SAP Management Console

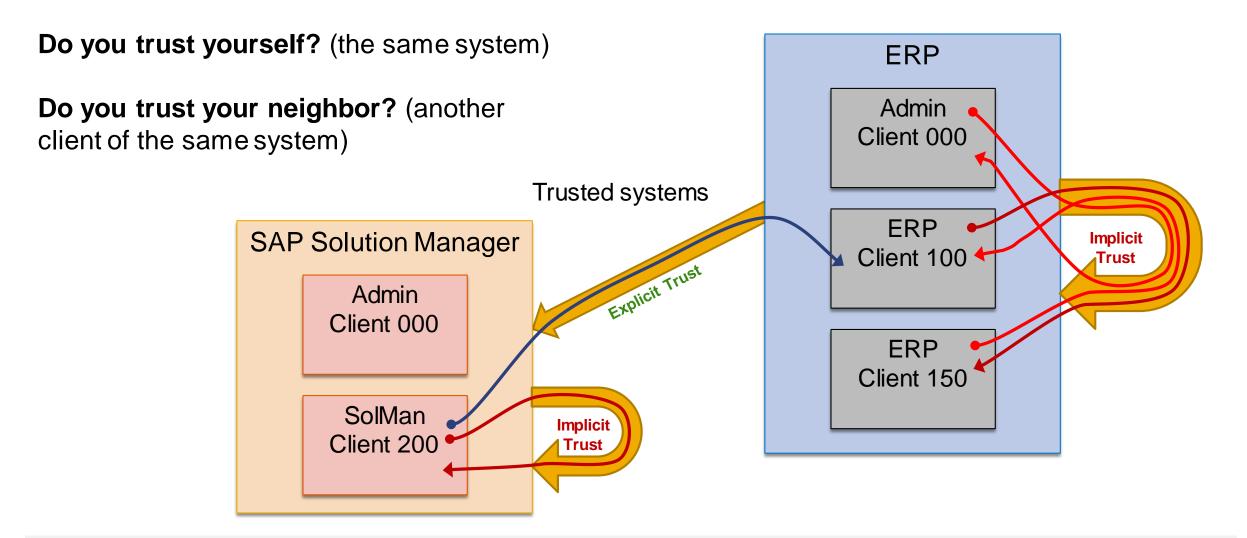
Note <u>2562127</u> - R/3 Support Remote Connection with SNC / SSO

Note <u>2562154</u> - HTTP Remote Connection with SNC / SSO

Note <u>2531131</u> - Switchable Authorization checks for RFC BCA_DIM_WRITE_OFF in Loans

Recommended Notes for System Recommendations

Note <u>2449757</u> - Additional Authentication check in Trusted RFC on own system



Note <u>2449757</u> - 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 <u>2614667</u> 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

Note <u>2357141</u> - 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.



SAP HANA Security Notes

Note <u>2520995</u> - [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 <u>2549983</u> - [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 <u>2522510</u> - [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

Note <u>2427292</u> - Information disclosure in SAP MMC Console Note <u>2500044</u> - Full access to SAP Management Console

Both notes addresses potential security vulnerabilities about <u>Java Reflection</u>.

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.

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.

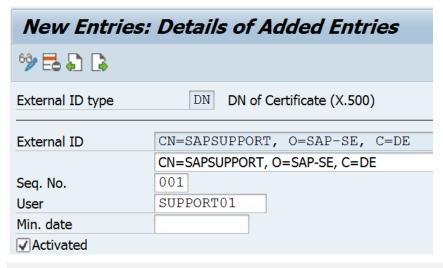
(Workaround used so far: Set snc/accept insecure gui=U to allow exceptions for such users)

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

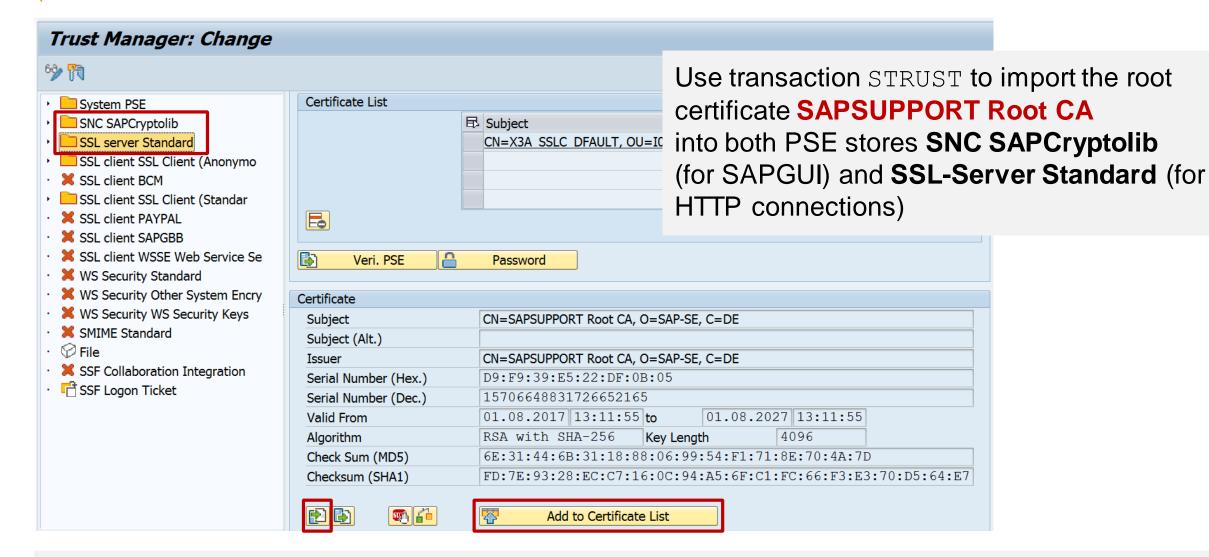
client.

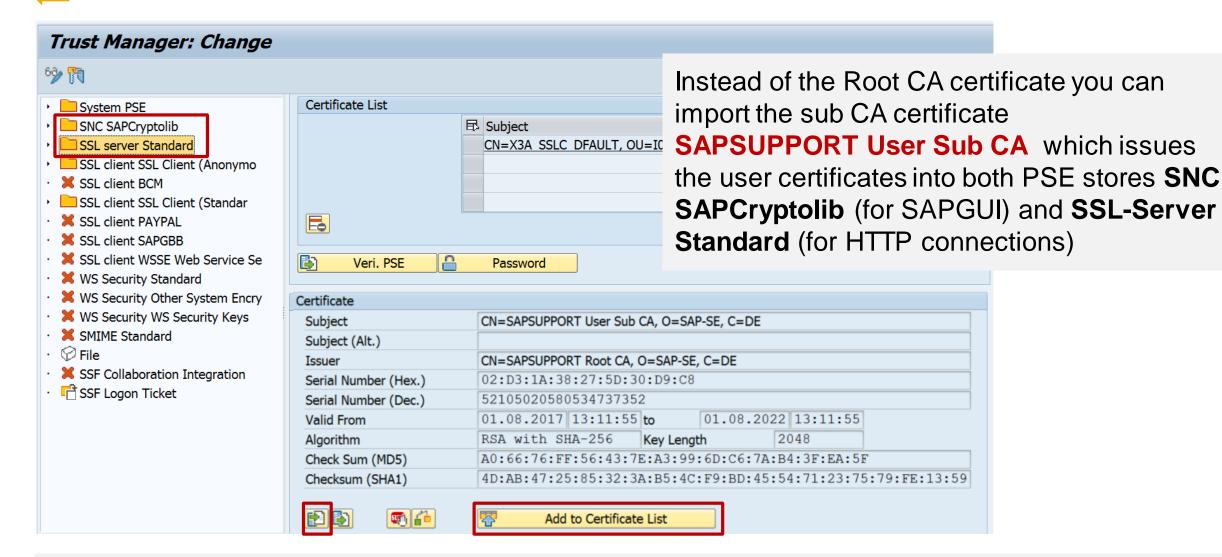
in transaction SU01 or
 via transaction SM30 for table USRACL (for SAPGUI)
 (Take care to add leading p: to the SNC name)

via transaction sм30 for table vusrextid
 with extid type DN (for HTTP connections)

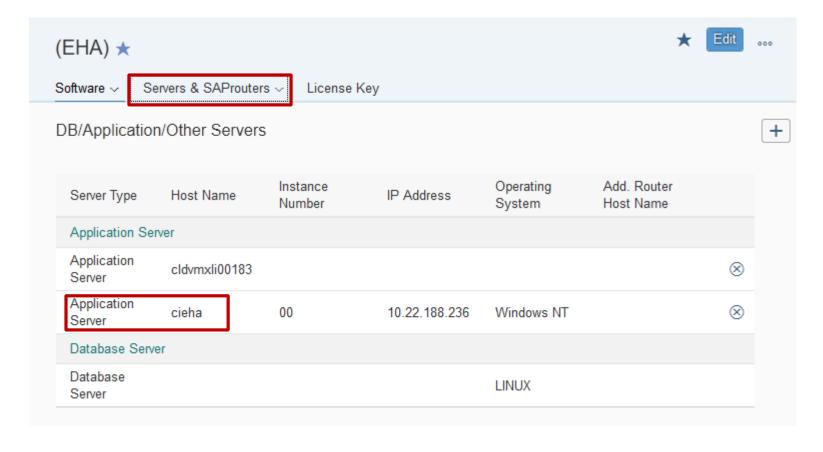


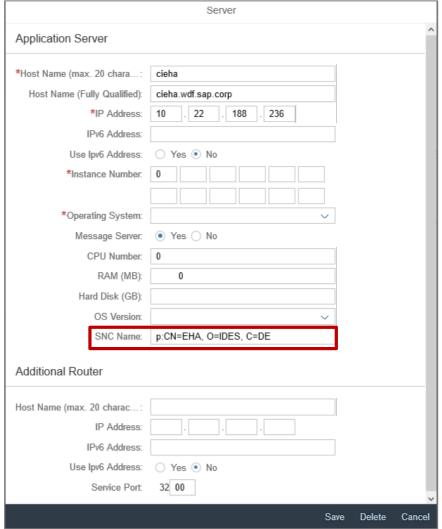






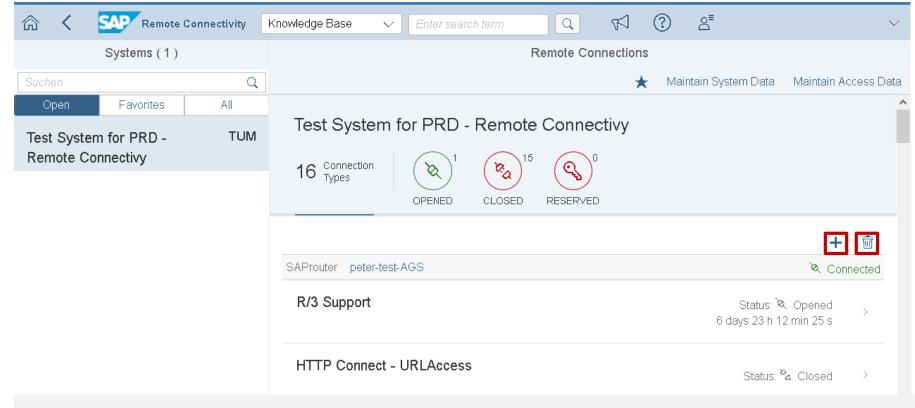
Add the SNC name of your system at "Servers & SAPRouters" for your application server(s)

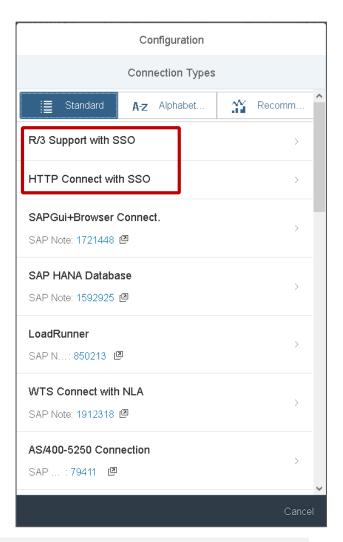




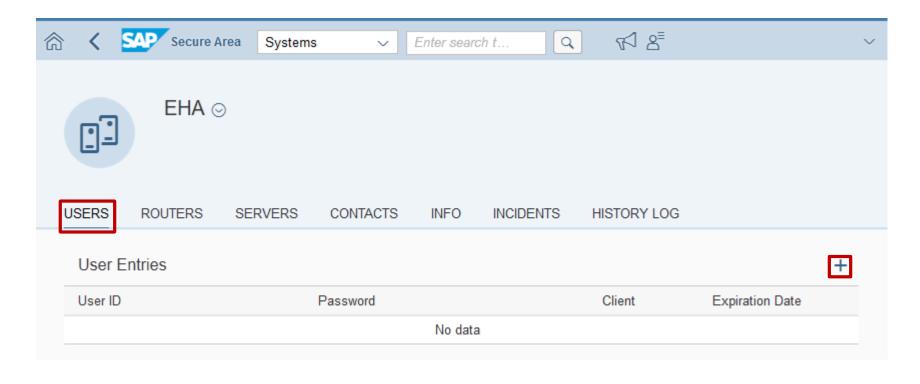
Add the new protocols...

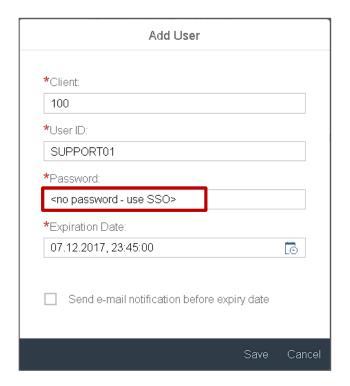
... and after successful testing, remove the non-SNC protocols





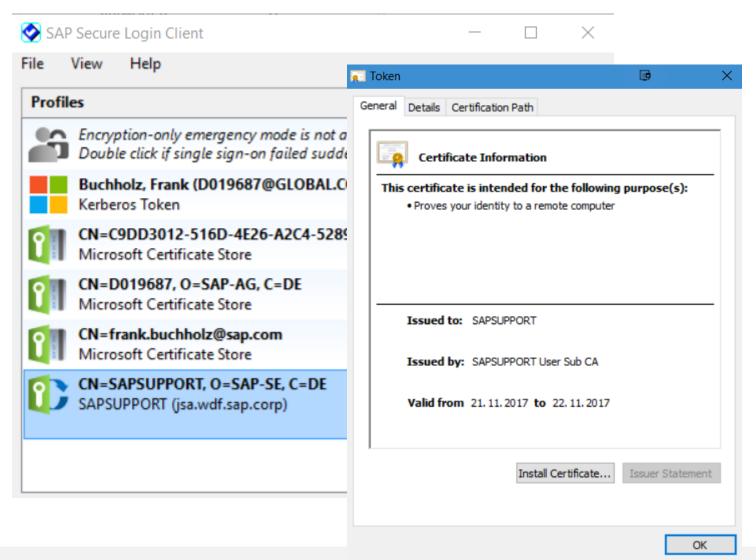
SAP support users do not need a password anymore Enter some explaining text instead of a password You still should assign the user entry to the incident to tell about the user name!





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



Remote Support

https://support.sap.com/remoteconnection

Related notes (maybe not updated yet):

Note 812732 - R/3 support service connection

Note <u>1773689</u> - How to add logon credentials securely to an incident - SAP ONE Support Launchpad

Blogs:

• • •

Note <u>2531131</u> - 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.

Recommended Notes for System Recommendations 7.2

Note <u>2563064</u> - SysRec: Kernel note is missing

Note <u>2461414</u> - SysRec: notes for obsolete kernel versions are displayed

Note <u>2556623</u> - SysRec: Corrections for Solution Manager 720 Fiori UI

Note <u>2536918</u> - SysRec: Display all systems and notes at one time

Note <u>2549846</u> - SysRec: Date in filter bar gets changed

(omit this note if implementation fails)

Note <u>2545616</u> - SysRec 7.2: Note is missing in Note Overview

Note <u>2542562</u> - 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 <u>2547598</u> - SysRec: check configuration data

Execute report AGSNO CHECK MIG after installing this note in all systems to show old settings

Note <u>2547915</u> - 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



October 2017

Topics October 2017





Note <u>2371726</u> - Code Injection vulnerability in Text Conversion

Note <u>2269032</u> - Authorization check for S_PROGRAM

Note <u>2457014</u> - Missing Authorization check in PA-PA-US

Note <u>2531241</u> - Disclosure of Information/Elevation of Privileges LVM 2.1 and LaMa 3.0

Note <u>2520772</u> - Disclosure of Information/Elevation of Privileges LaMa 3.0

Check RFC Callback protection using Configuration Validation

It's not possible to prepare SNOTE automatically by implementing notes <u>2518518</u> and <u>2408073</u> anymore. Note <u>2518518</u> is archived, instead you have to follow some new manual implementation steps in note <u>2408073</u>:

- Create a table
- Create an application log object
- Create messages
- Change a GUI status and GUI title
- Create text elements

Note <u>2408073</u> still describes how to extract notes text files from digitally signed archive files in case SNOTE is not prepared in time.

Note 2371726 - Code Injection vulnerability in Text Conversion

Critical note:

(correction of old Security Note <u>1673713</u>)

```
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 <<<<<

* 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 version 6 on top of version 5.

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

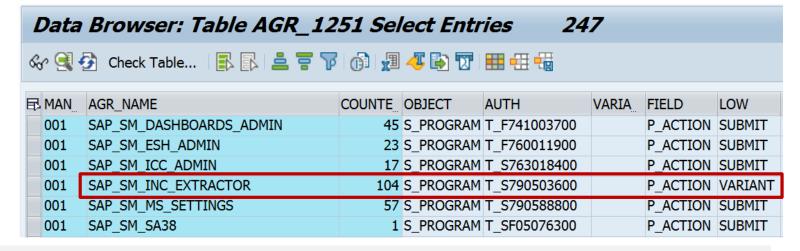
BTCSUBMIT Schedule report for background processing

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.



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 HRPADOOAUTH_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 <u>1531288</u>.

Notes <u>2531241</u> and <u>2520772</u> - 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 <u>2350252</u> - SAP Landscape Management 3.0 - Standard edition

DSAG documents and events about LaMa: https://www.dsag.de/search/site/lama (German)

Security Whitepaper https://support.sap.com/securitywp

→ <u>SAP Security Recommendations: Securing Remote Function Calls (RFC)</u>

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 <u>1686632</u> - Positive lists for RFC callback

Notes about RFC callback – Required whitelist entries:

Comment in Blog "Remote Code Analysis in ATC for Developers" (May 2019)

Note <u>2585923</u> - CUA: Text comparison (callback whitelist) (February 2018)

Note <u>2251931</u> - Runtime error CALLBACK_REJECTED_BY_WHITELIST in graphical Screen Painter

Note 2133349 - Error RFC_CALLBACK_REJECTED when starting tp

Note <u>1992755</u> - RFC callback deactivated → transport tools no longer work

Notes about RFC callback – Custom code:

Note 1515925 - Preventing RFC callbacks during synchronous RFC

```
Notes about RFC callback – Kernel updates:
```

```
Note <u>2523719</u> - Internal RFC Callback rejected by UCON

Note <u>2483870</u> - RFC Callback whitelist check for destination BACK [7.45 patch 515, 7.49 patch 221]

Note <u>2463707</u> - RFC Callback whitelist check for internal calls [7.45 patch 515, 7.49 patch 215]

Note <u>2173003</u> - 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 <u>2382935</u> - Generation of RFC Callback Whitelist fails [SAP_BASIS 7.40 SP 17, 7.50 SP 7, 7.51 SP 2]

Note <u>2235513</u> - 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 <u>1686632</u> - 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 <u>2463645</u> - SE92 | Correction for SAL event definitions

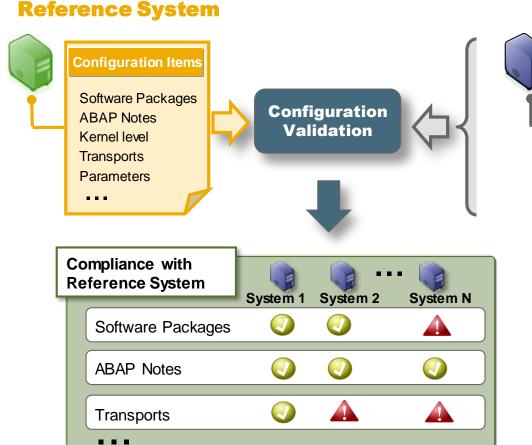
Note <u>2128095</u> - SAL | Missing parameters in DUI, DUJ, and DUK messages

Note <u>1968729</u> - SAL: Message definition for RFC callback

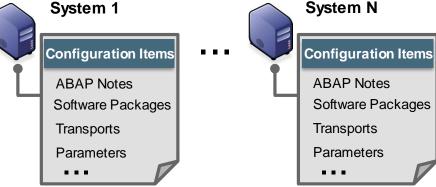
Note <u>539404</u> - FAQ: Answers to questions about the Security Audit Log
```

Check RFC Callback protection using Configuration Validation The Idea behind Configuration Validation

A reporting to understand how homogeneous the configuration of systems is



Compared Systems



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?

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

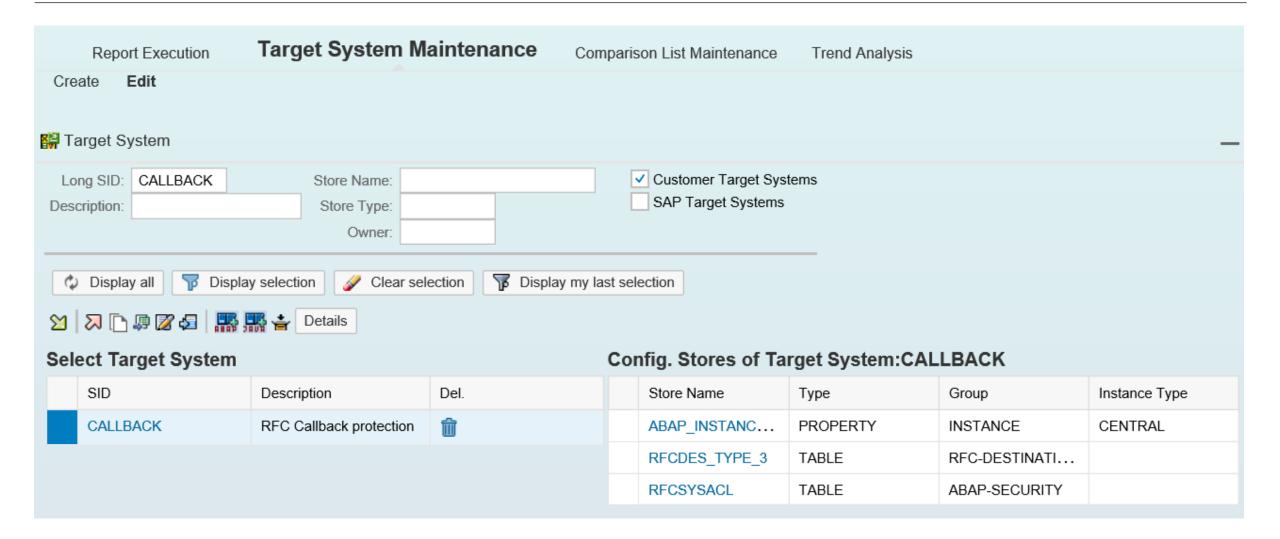
Comliance rule: CALLBACK WHITELIST ACTIVE = X

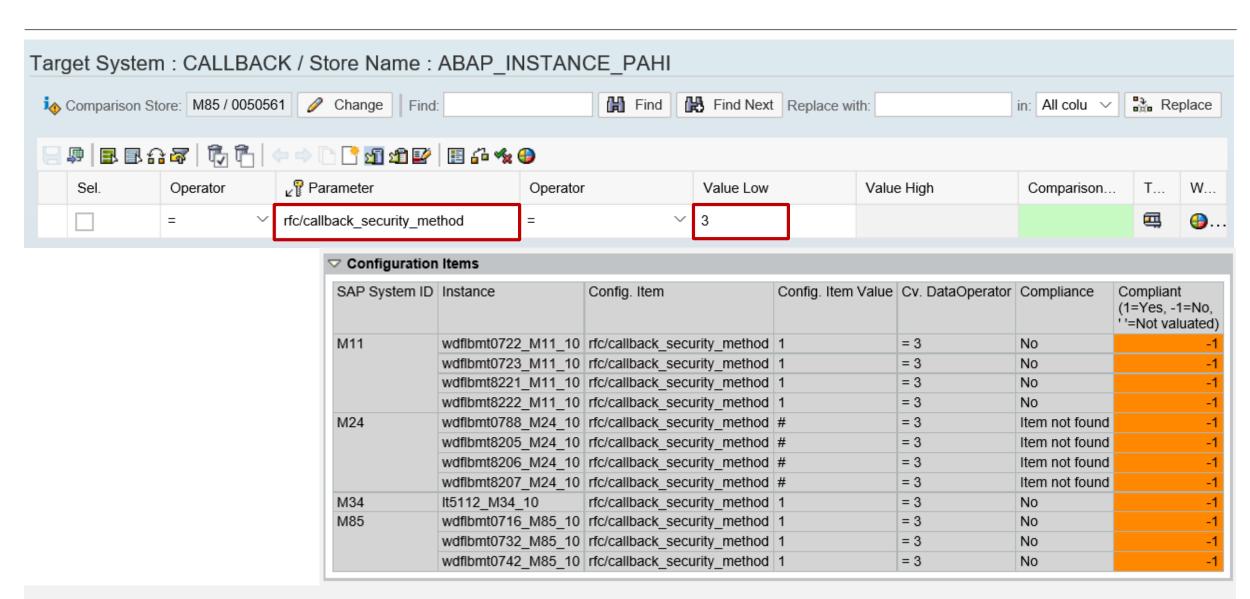
Check RFC Callback protection using Configuration Validation Transaction CCDB

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	i ABAP Technical System (M85∼ABAP)	ABAP	RFCDES_TYPE_3	RFC-DESTINATIONS	Table Store	SAP BASIS 7.40
Correct	i 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	i ABAP Technical System (M85∼ABAP)	ABAP	RFCDES_TYPE_L	RFC-DESTINATIONS	Table Store	SAP BASIS 7.40
Correct	i 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

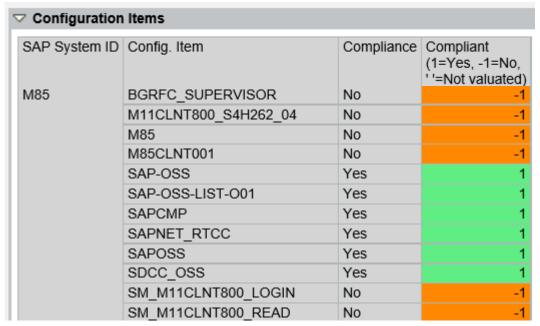
Check RFC Callback protection using Configuration Validation Transaction CCDB

History		RFCTYPE	CALLBACK_WHITELIST	CALLBACK_WHITELIST_ACTIVE	LOGON_CLIENT	LOGON_USER
	BGRFC_SUPERVISOR	3			001	BGRFC_SUSR
S 1	M11CLNT800_S4H262_04	3			800	GRCADM
	M85	3				
	M85CLNT001	3				
<u>\$\$</u> 1	SAP-OSS	3		X	001	S0005141447
S 1	SAP-OSS-LIST-001	3		Х	001	S0005141447
S 1	SAPCMP	3		Х	001	SAPCMDB_R
S 2	SAPNET_RTCC	3		X	001	ST14_RTCC
<u>\$\$</u> 1	SAPOSS	3		х	001	OSS_RFC
S 1	SDCC_OSS	3		х	001	SDCC_NEW
S 1	SM_M11CLNT800_LOGIN	3			800	
<u>\$</u> 1	SM_M11CLNT800_READ	3			800	SM_M85
<u>\$</u> 1	SM_M11CLNT800_TMW	3			800	SMTMM85
S 1	SM_M11CLNT800_TRUSTED	3			800	
					800	











September 2017

Topics September 2017





Note <u>2520064</u> - Missing Authentication check in SAP Point of Sale (POS) Retail Xpress Server

Note <u>2528596</u> - Hard-coded Credentials in SAP Point of Sale Store Manager

Note <u>2483870</u> - RFC Callback whitelist check for destination BACK

Note <u>2507798</u> - Bypass of email verification in e-recruiting

Note <u>2449011</u> - SUIM | Search for startable applications in roles - RSUSR_START_APPL

Note <u>2520885</u> - Logout function missing in SAP Best Practices Package Manager for Partner

Note 2051717 - SQL-Injection-Schwachstelle in SAP Netweaver

Security Spotlight News

Digitally Signed SAP Notes – September 12, 2017

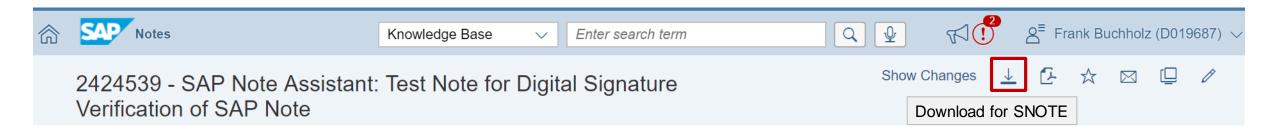
SAP is making Notes more secure by ensuring all SAP Notes files are digitally signed.

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 <u>SAP Security Note</u> <u>2408073</u>. Without implementing this SAP Security Note, it will not be possible to upload a digitally signed SAP Note file.

Please also note, with <u>SAP Security Note 2408073</u>, 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 <u>SAP Note 2408073</u> before download functionality is released.

For details, please visit this blog. Watch the Note Assistant page on SAP Support Portal, for the latest updates

SAP plans to deliver digitally signed note files on SAP Support Portal.



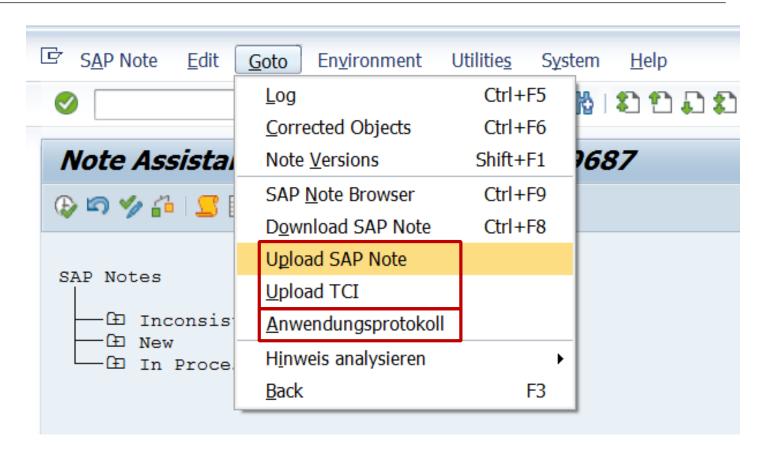
Currently you get a .ZIP file containing a .TXT file. In the future you'll get a .SAR file instead.

You should prepare transaction SNOTE to be able to upload such files.

- Implement notes <u>25,8318</u> and <u>2408073</u>, 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).

You should prepare transaction SNOTE to consume . SAR using function "Upload SAP Note" or "Upload TCI".

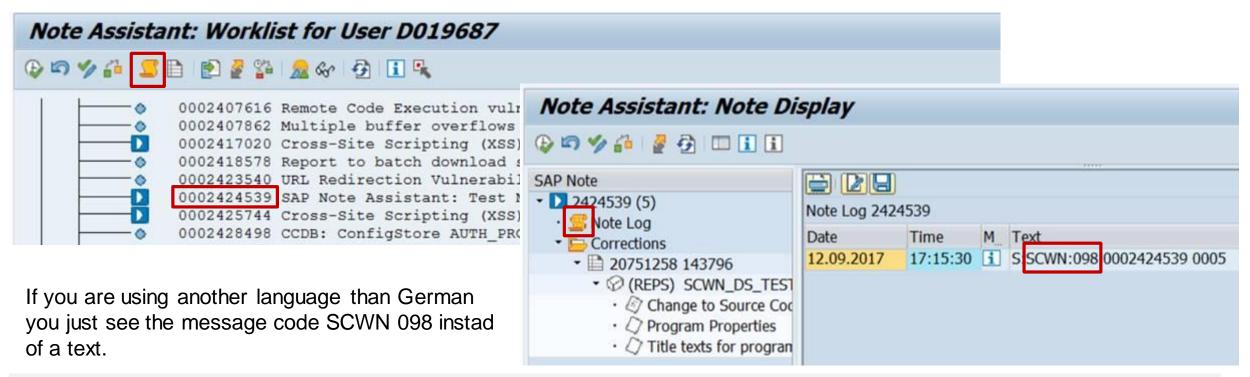
(You use function "Download SAP Note" to load notes directly from SAP Support Portal via the SAPOSS connection. This is a different function which is not affected by the current patch.)



The new function "Application Log" points to new report SCWN_FAILED_DS_VERIFICATION The report shows failed digital signature validations logs

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:



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 <u>2178665</u> - Signature validation of archives with SAPCAR

Note 1634894 - SAPCAR: Signed Archive

Note <u>2520064</u> - Missing Authentication check in SAP Point of Sale Note <u>2528596</u> - 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.

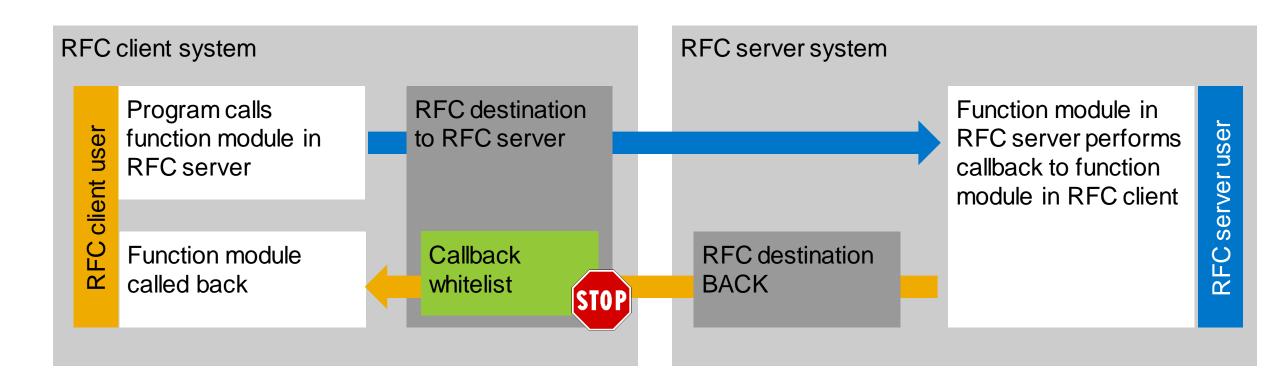
http://gsec.hitb.org/sg2017/sessions/get-to-the-money-hacking-pos-and-pop-systems/

SAP Point of Sales, Software Component XPRESSBU

Note <u>2476601</u> with correction SAPPOS23_SP11_Build1171 had been replaced with Note <u>2520064</u> containing SAPPOS22_Build1153 respective SAPPOS23SP11_Build1177 This note shows how to check the installed version, too.

Note <u>2528596</u> covers notes <u>2520232</u> and <u>2529966</u> and contains additional corrections.

Note 2483870 - RFC Callback whitelist check for destination BACK



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

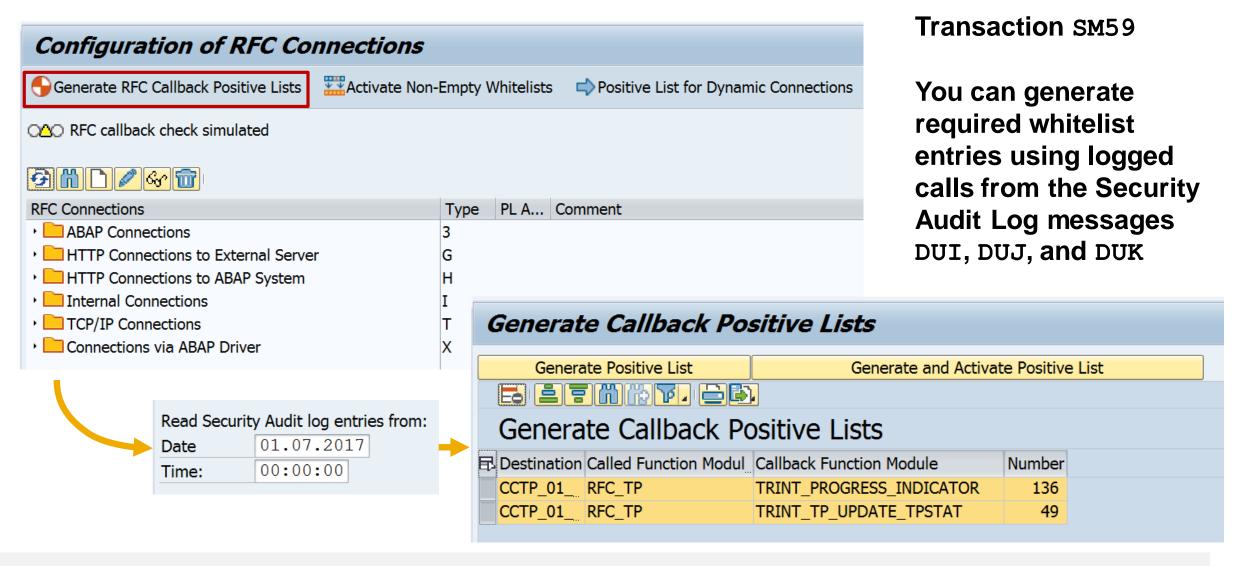
Solution:

Kernel 7.45 patch 515, 7.49 patch 221

The note solves a side effect (=bug) which was introduced with note <u>2463707</u>. Solution (and introduction of new bug) of this note <u>2463707</u>:

- Kernel 7.45 patch 515, 7.49 patch 215
- \succ On Release 7.45 the solution is part of the same patch as the previously introduced bug ightarrow no issue
- However, all Kernel versions before 7.45 patch 515 might be affected by the issue about internal RFC calls, which require RFC whitelist entries
- You log RFC callback using the Security Audit Log anyway → no issue (except that you might end up with some additional RFC whitelist entries which are not required in the future)

Note <u>2483870</u> - RFC Callback whitelist check for destination BACK Generate callback whitelist



Note <u>2483870</u> - RFC Callback whitelist check for destination BACK Required whitelist entries

Note <u>2251931</u> - 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 <u>1686632</u> - 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

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.

Note 2507798 - Bypass of email verification in e-recruiting

SAP E-Recruiting

Technical Settings

- · 🗟 Check System Settings
- 🗟 🐶 Set System Parameters
- Set Up Communication Interface
- User Administration
- SAP Business Partner
- Search Engine
- Workflow
- Periodic Services
- SAP Web Application Server
- Reporting
- SAP ERP Central Component (ECC) Integration
- User Interfaces
 - Candidate
 - Front-End Candidate
 - Backend Candidate
 - 🗟 🚱 Create Special Users for Backend System (Web Dynpro ABAP)
 - 🗟 🕼 Specify Role Assignment for Service Users and Reference Users
 - 🗟 🚱 Create RFC Connection to Front-End System
 - 🗟 🦫 Activate Cross System Lock in Backend System
 - Specify System Parameters for Web Dynpro
 - 🗟 🦃 Assign Values to Interface Parameters (Web Dynpro ABAP)
 - 🗟 🚱 Specify URL Parameter for Applications with Web Dynpro ABAP

The switch RECFA VERIF is stored in customizing table T77SO

Use transaction OO_HRRCF_WD_BL_CUST "System Parameter Backend System" (or SM30 for table T77S0) to view the settings

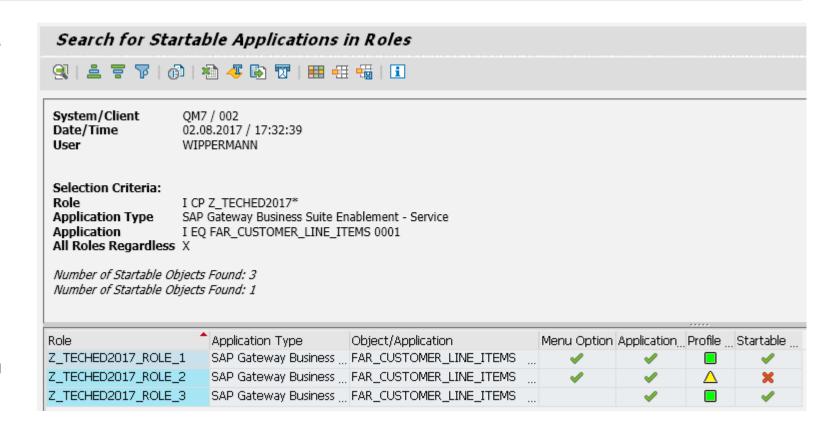
You find this transaction in the Implementation Guide at "Specify System Parameters for Web Dynpro"

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).

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).



Available as of SAP_BASIS 7.50

Note <u>2520885</u> - Logout function missing in SAP Best Practices Package Manager for Partner

This note is not relevant for any on-premise system \rightarrow 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 <u>2041140</u> - Order SAP pre-assembled Best Practices solution software appliance as an SAP Partner

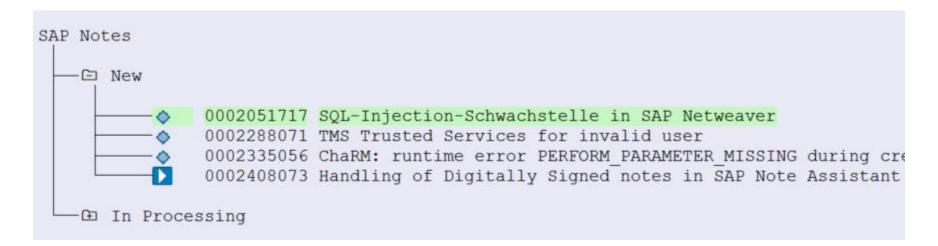
https://blogs.sap.com/2017/05/15/partner-packaged-solutions-on-sap-best-practices-explorer-s4hana-and-beyond

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"





August 2017

Topics August 2017



What's new in Configuration Validation on SolMan 7.2

What's new in System Recommendation

Note <u>2394536</u> - URL Redirection vulnerability in Knowledge Management and Collaboration and Web Page Composer

Note <u>2216306</u> - S_RFC check and profile parameter auth/rfc_authority_check

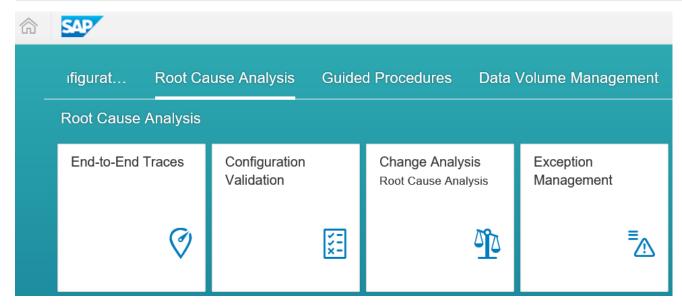
Note <u>2417020</u> - Cross-Site Scripting (XSS) vulnerability in SAP NetWeaver Business Client for HTML

Note <u>2024431</u> - TDDAT adjustment in customer landscape (reloaded) Comparison of Table Authorization Group Assignment

Note <u>2356982</u> - SE54 | Maintenance of table authorization groups

Note <u>1645260</u> - Extended maintenance of table authorization groups

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:

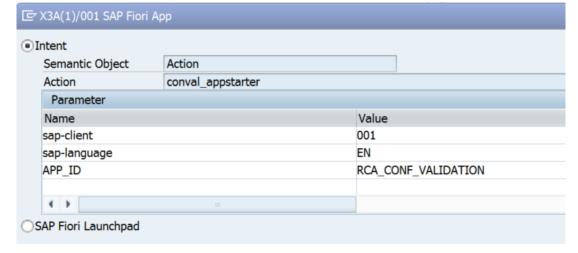
Semantic Object Action

Action conval appstarter

Parameters:

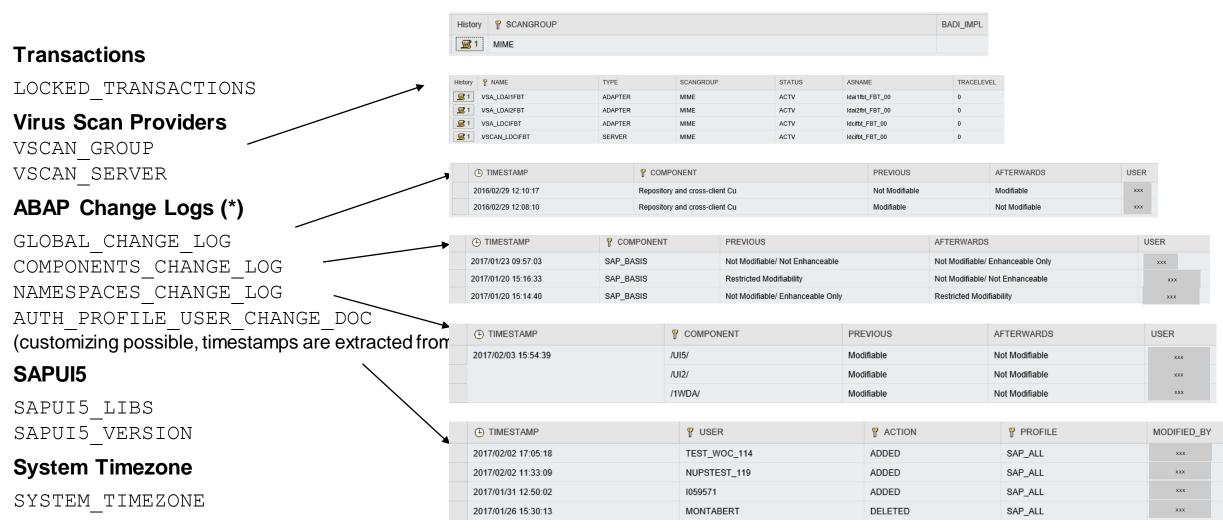
APP_ID RCA_CONF_VALIDATION

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

What's new in Configuration Validation SolMan 7.2 SP 3: More ABAP Configuration Stores



^{*}including integration into system monitoring and alerting

What's new in Configuration Validation SolMan 7.1 SP 14 / 7.2 SP 3: CCDB SPML Java Extractor

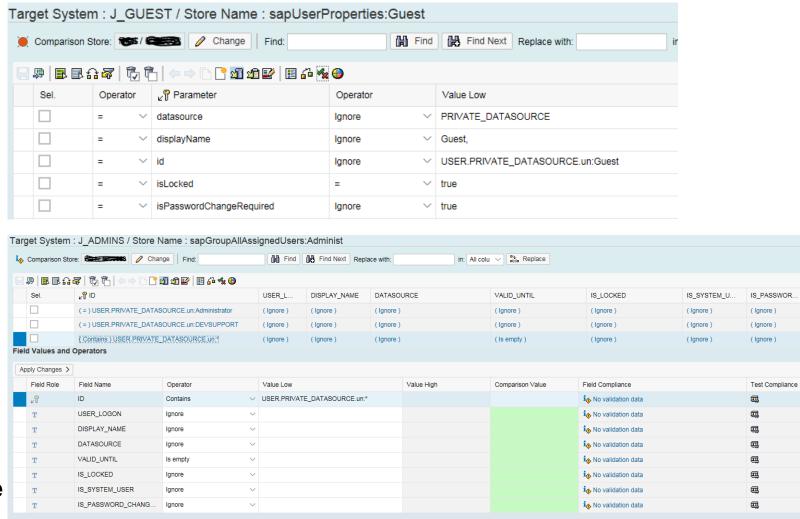
The Diagnostic Agent can now read user and role date from the J2EE engine using SPML

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



What's new in Configuration Validation SolMan 7.2 SP 3: UI related features

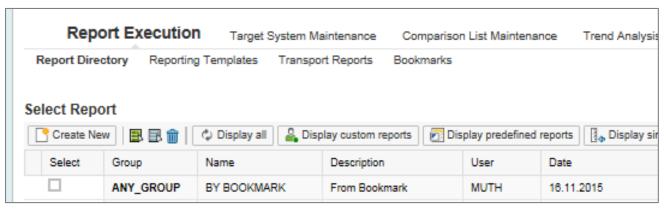
Reporting directory

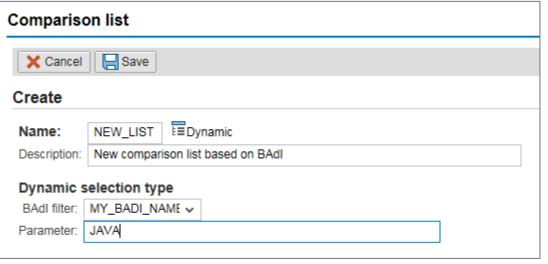
includes Bookmark now

Comparison Lists

Badi Implementation to build dynamic comparison list base on the BAdl enhancement DIAGCV_ES1_SYSTEM_LIST

For more information see note <u>2365039</u>





BI Reporting

Larger Strings in columns (up to 250 chars instead of 60 chars)

What's new in Configuration Validation SolMan 7.2 SP 3: Send Configuration Validation reports via email

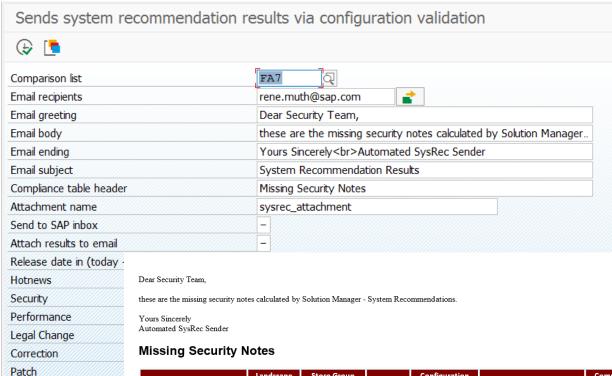
BW Information Broadcasting is not longer supported in SAP BW 7.40 (Note 2020590)

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



Store Name	Landscape Key	Store Group Name	Compliance	Configuration Item	Configuration Value	Compliance Rule	Extraction Date
SYSTEM_RECOMMENDATIONS_NOTES	FA7_SM	SAP Notes	No	0050000756	SHORT_TEXT.Ready for Review FLAGS:Security THEMK:FI-AA RELEASE_DATE:20160308 PRIORITY.Correction with high priority CATEGORY.Program error IMPL_STATUS: SYS_RECOM_STATUS:NEW VERSION:0001 USER:LUANE AUTO_IMPL: MANU_IMPL: SUPP_NAME: SOFT_COMP: KERN_NOTE: SP_RELEV:	Exists 0050000756	17.12.2016 13:22:32

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 <u>2401878</u> - ST7.20 SP03/04 Configuration Validation - Send mail with system recommendation results

On SolMan 7.2 SP 6-7 install following note, too:

Note <u>2639106</u> - Configuration Validation: Sending compliance results via email to several recipients fails

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

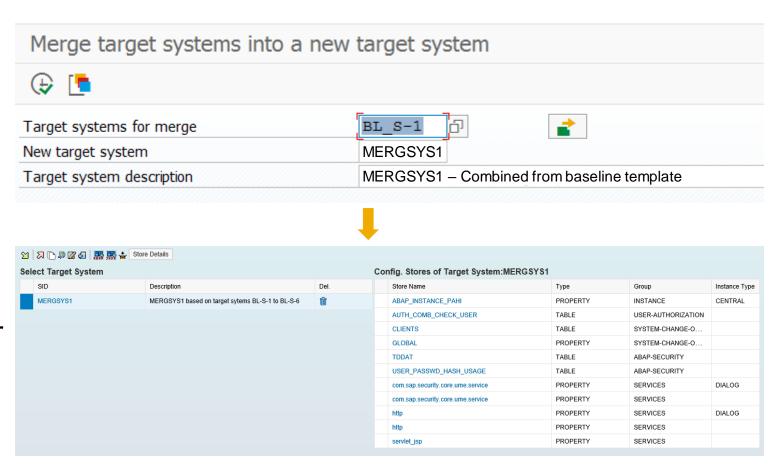
Usage:

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



What's new in Configuration Validation SolMan 7.2 SP 5: New key operator for table stores: regex

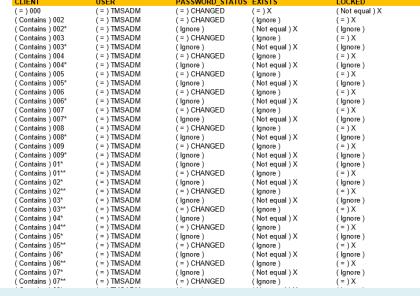
New key operator (regex) for table stores

Example: Configuration Store STANDARD_USERS:

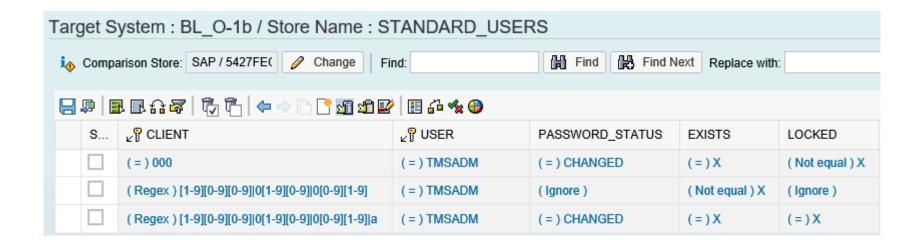
The simplified check rules for user TMSADM which identify entries in other clients than client 000 uses the simple regular expression [1-9] [0-9] [0-9] [0-9] [0-9] [0-9] [1-9]

The result is 'compliant' if...

- a) PASSWORT STATUS=CHANGED and LOCKED=X or
- b) the user does not exists



Tar	Target System : BL_O-1b / Store Name : STANDARD_USERS										
i₀	Comparison Store: SAP / 5427FE(Change Find: Find Find 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					



What's new in Configuration Validation SolMan 7.2 SP 5: New Configuration Stores and Fields

			New Configuration Store			
History	PARAMETER	VALUE	ABAP INSTANCE PAHI ENH			
	icm/server_port_0	PROT=HTTP, PORT=50000, PROCTIMEOUT=300, TIMEOUT=300				
	icm/server_port_1	PROT=HTTPS, PORT=44300, PROCTIMEOUT=300, TIMEOUT=300	allows to check if parameter			
	icm/server_port_2	PROT=SMTP, PORT=25000, PROCTIMEOUT=300, TIMEOUT=300	icm/server_port_0 to 9 contains at least			
	icm/server_port_3		one entry about HTTPS			
	icm/server_port_4					
	icm/server_port_ALL	{PROT=HTTP, PORT=50000, PROCTIMEOUT=300, TIMEOUT=300}{PROCTIMEOUT=300, TIMEOUT=300}{}{}	HTTPS, PORT=44300, PROCTIMEOUT=300, TIMEOUT=300}{PROT=SMTP, PORT=25000,			

Now Configuration Store

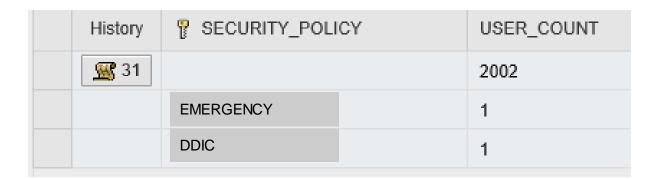
New Field TRAIL_TYPE in Configuration Store AUDIT_POLICIES (HANA) with values TABLE | SYSLOG | CSV

History	P AUDIT_POLICY_NAME	P AUDIT_POLICY_OID	P EVENT_ACTION	TRAIL_TYPE
<u>\$\$</u> 5	SAPDLM Audit - Change System Configuration	499099	SYSTEM CONFIGURATION CHANGE	SYSLOG
<u>\$\$</u> 5	SAPDLM Audit - Create or Drop Role	499101	CREATE ROLE	TABLE
<u>\$\$</u> 5			DROP ROLE	TABLE
₩ 3	SAPDLM Audit - Execution of Procedure 001_dlm_start_procedure	2283841	EXECUTE	TABLE

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



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

P RFCSYSID	TLICENSE_NR	RFCTRUSTSY	RFCDEST	RFCTCDCHK	RFCSNC	RFCSLOPT
FQ7	0020270862	FA7	SM_FQ7_TRUSTED_BACK		Х	
FT7		FA7	SM_FT7_TRUSTED_BACK		X	
HF2		FA7	CWBADM_HF2_200		Х	2

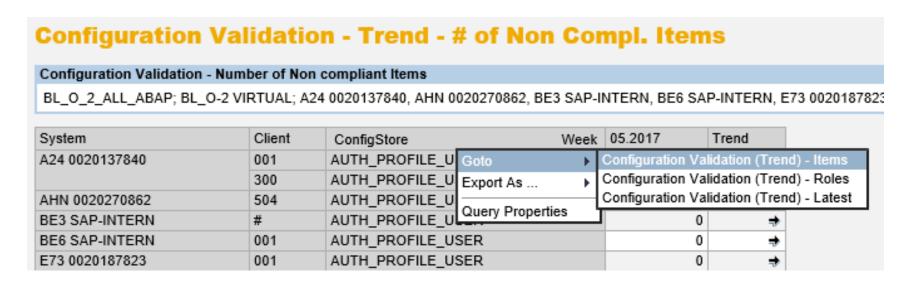
What's new in Configuration Validation SolMan 7.2 SP 5: New Configuration Stores for HANA XSA

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

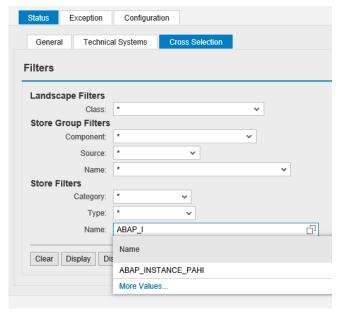
What's new in Configuration Validation SolMan 7.2 SP 5: Miscellaneous

Navigation within Validation to Trend Analysis (Items, Roles, and Query showing latest data)



Validation: Additional search indexes to improve performance for Configuration Stores with more than 4 key fields

Interactive search help in CCDB Administration and Configuration



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:

OSMD CVA2 TR SYSTEMS DSH

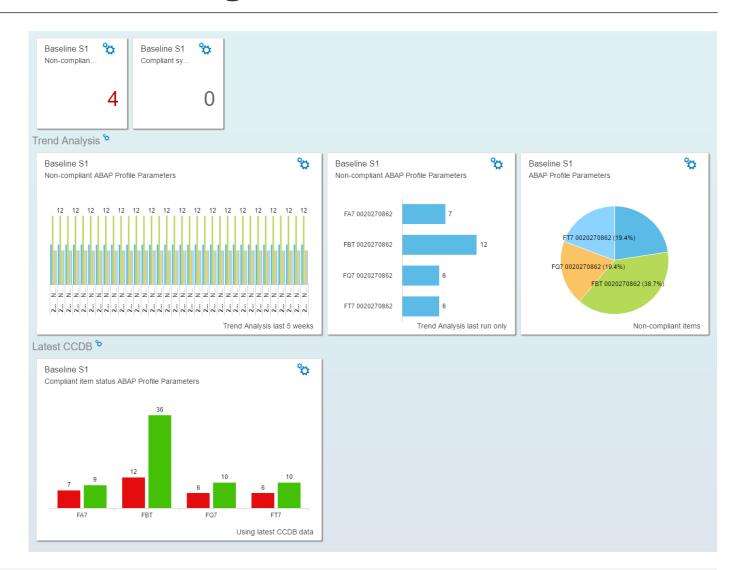
Details:

OSMD_CVA2_TR_ITEMS_DSH

Last results:

OSMD CVA2 TR NC ITEMS LAST DSH

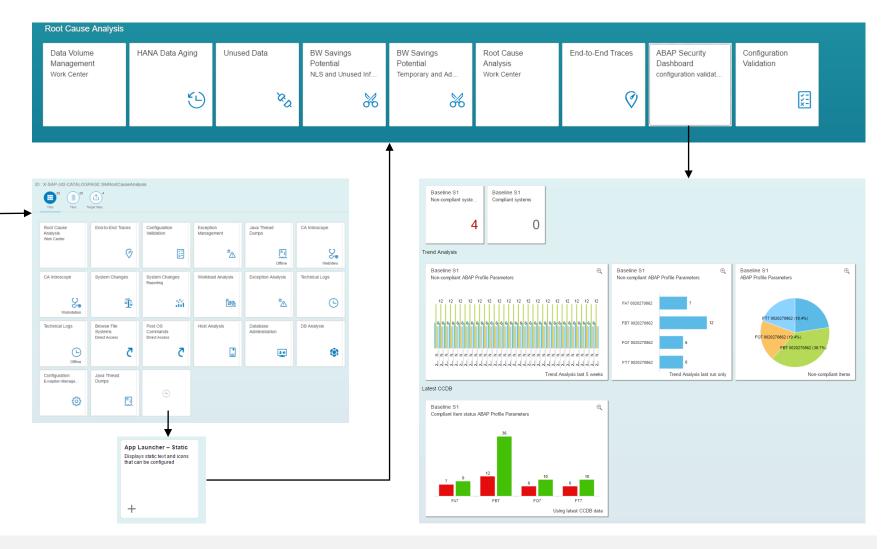
Configuration Validation based on function DIAGCPL CV DSH



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



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

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

Note <u>2394536</u> - 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 <u>2342421</u> 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
 - 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

By default you do not need authentication and no authorization to call one of the RFC enabled function of function group SRFC:

```
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."

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)

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 ...

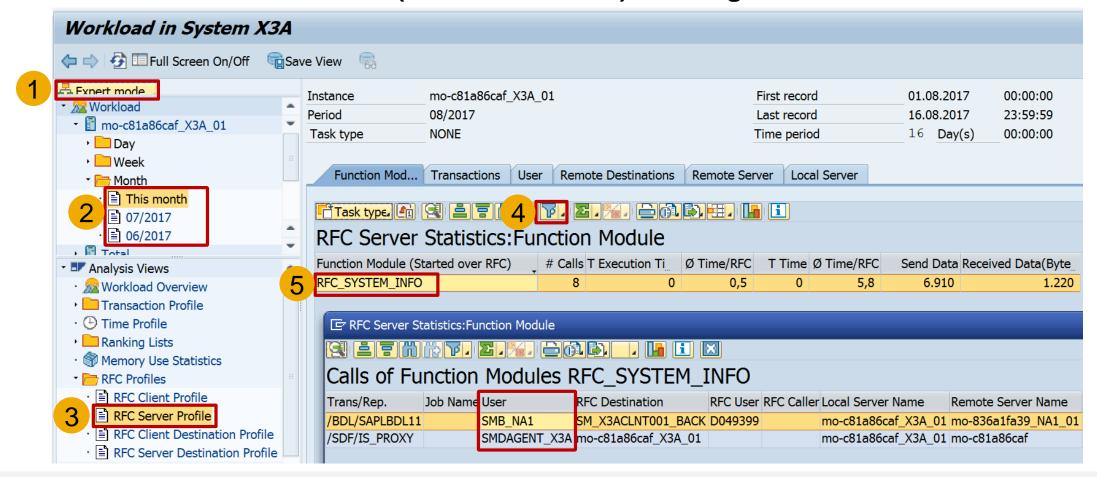
SAP_SOLMAN_TMW ...

SAP_SECURITY_OPTIMIZATION 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) \rightarrow RFC Server Profile or transaction STRFCTRACE to verify if these functions are used in RFC scenarios (or you use report ZRFC STATRECS SUMMARY).

Workload Statistics (Transaction ST03N) \rightarrow RFC Server Profile shows a cross-client list of users (but not the client) who might need additional authorizations



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

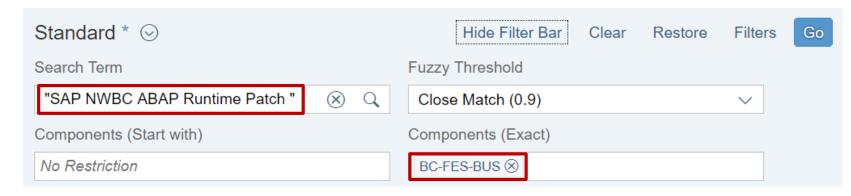
Record	Date	Clie	Account	User type	Userid	Target	Remote instance	RFC Function	Gro_	Authorizations	Σ# Calls
SV	01.06.2017	001	SMB_NA1	B System	D049399	SM_X3ACLNT001_BACK	mo-1ddad0fe9_NA1_01	RFC_SYSTEM_INFO	SRFC	RFC_SYSTEM_INFO	4
SV	01.06.2017	001	SMB_XS2	B System	D049399	SM_X3ACLNT001_BACK	mo-1ea744416_XS2_00	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	ધા	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		2 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	ધા	3 1
SV	01.06.2017	000	TMSADM	B System	SOLMAN_BTC	TMSADM@X3A.DOMAIN_X3A	mo-c81a86caf_X3A_01	RFC_SYSTEM_INFO	SRFC	ધા	3 1
SV	01.06.2017	001	D019687	A Dialog	D019687	NONE	mo-c81a86caf_X3A_01	RFC_SYSTEM_INFO	SRFC	™ *	4 87
SV	01.06.2017	001	D019687	A Dialog	D019687	X3ACLNT001	mo-c81a86caf_X3A_01	RFC_SYSTEM_INFO	SRFC	™ *	4 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	5 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

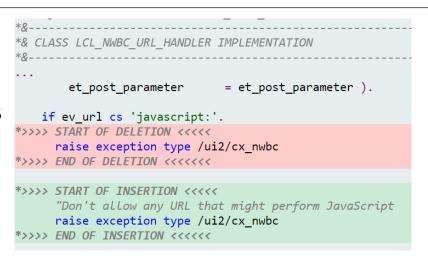
Note <u>2417020</u> - Cross-Site Scripting (XSS) vulnerability in SAP NetWeaver Business Client for HTML

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:





Note <u>2024431</u> - 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

Note <u>2024431</u> - TDDAT adjustment in customer landscape (reloaded) Comparison of Table Authorization Group Assignment

Get updates regularly and then execute report TDDAT_COMPARE again:

Note <u>2383438</u> - TDDAT_COMPARE | Enhancement of comparison list (Oct. 2016)

Update of Table Authorization Group Assignments

Note <u>2290977</u> - TDDAT_COMPARE | Enhancement of comparison list (March 2016)

Update of Table Authorization Group Assignments

Note <u>2273583</u> - TDDAT_COMPARE | Error in database update

Correction

Note <u>2079497</u> - Table authorization group assignment in user and authorization management

Update of Table Authorization Group Assignments (Nov. 2015)

Note <u>2024431</u> - TDDAT adjustment in customer landscape (July 2015)

Framework and Update of Table Authorization Group Assignments

(Older notes are prerequisites of newer notes \rightarrow it's sufficient to implement the newest note.)

Note <u>2356982</u> - SE54 | Maintenance of table authorization groups Note <u>1645260</u> - 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.

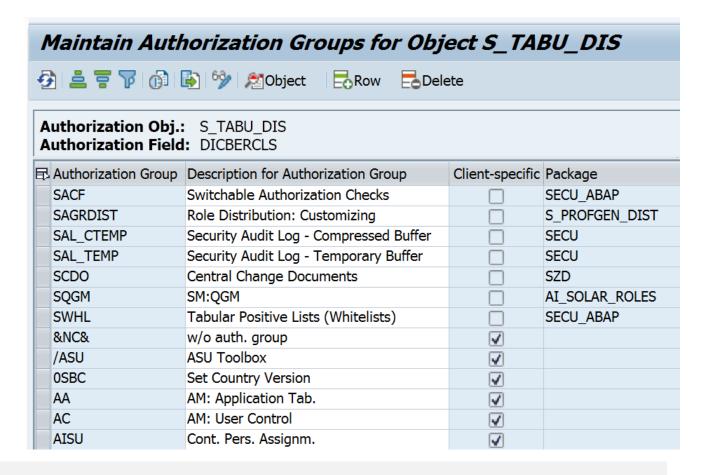
Maintain client independent table authorization group definitions

> 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)





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 <u>2416119</u> - Improved security for outgoing HTTPS connections in SAP NetWeaver

Note <u>2442993</u> - Malicious SAP Host Agent Shutdown without Authentication

Note <u>2459319</u> - Weak encryption used in SAP Netweaver Data Orchestration Engine

Note <u>1854252</u> - Missing authorization-check in BC-SRV-ALV

Note <u>2252890</u> - User TMSADM_WF with standard password

Note <u>2285744</u> - TMS_UPDATE_PWD_OF_TMSADM_WF - password not allowed

Notes about SAP ONE Support Launchpad

Note <u>2371996</u> - SAP Security Notes app - SAP ONE Support Launchpad https://support.sap.com/securitynotes

Note <u>2361791</u> - 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 <u>System Data application</u>. You need to mark systems in the System Data application as 'Favorite'.

Note <u>2388433</u> - Expert Search for SAP Notes & KBAs - SAP ONE Support Launchpad https://support.sap.com/notes → Expert Search

Note <u>2348668</u> - 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

Note <u>2416119</u> - 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.

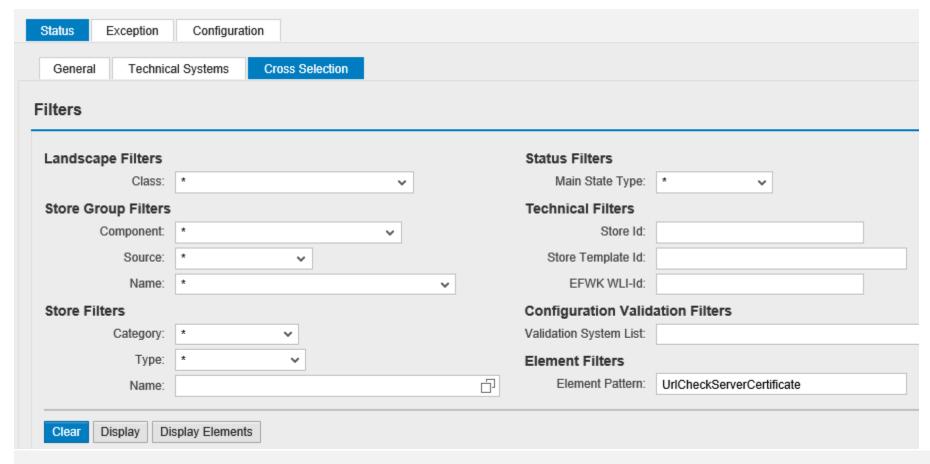
Upon execution, in the GUI of the tool, from the left menu, navigate to cluster-data \rightarrow template-Usage_Type_All_in_One \rightarrow services \rightarrow http

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.

Note <u>2416119</u> - Improved security for outgoing HTTPS connections in SAP NetWeaver

How to find the property UrlCheckServerCertificate in Configuration Validation – just try it: Transaction CCDB



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/d2/05d69422864604a487c67472cdd4ff/frameset.htm

SAP Note Transport-Based Correction Instructions

https://help.sap.com/viewer/9d6aa238582042678952ab3b4aa5cc71/7.31.19/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

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 <u>2187425</u> - Information about SAP Note Transport based Correction Instructions (TCI)

Note 1995550 - Enabling SNOTE for transport based correction instruction

Note <u>2345669</u> - Limitations/Known issues in TCI

Note <u>2347322</u> - Note Status of the TCI note is not shown correctly in the subsequent systems

Transport-Based Correction Instructions (TCI) Unified Rendering

Note <u>2090746</u> - Unified Rendering Notes - Which One To Apply - Instructions And Related Notes.

Example: Note <u>2493427</u> - 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 <u>2187425</u> describes how to prepare your system and how this SAP Note can be used in the SAP Notes Assistant (transaction SNOTE).

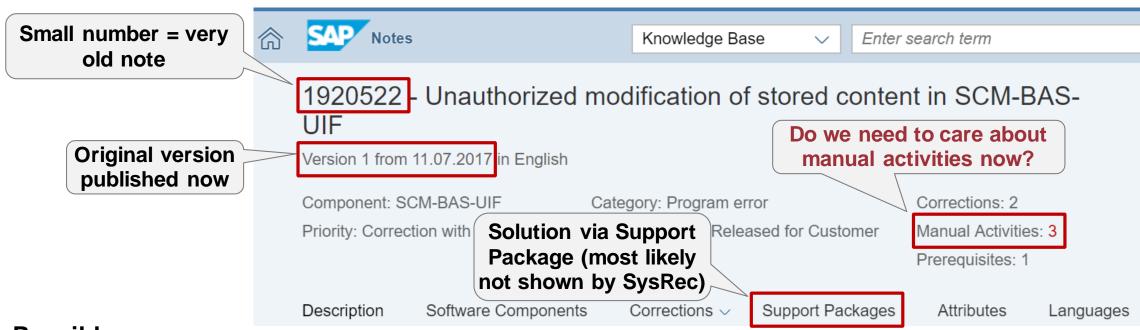
If your SP level is under SAPKB740SP12 SAP_UI, please upgrade your SP version first.

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

Note 1920522 - Unauthorized modification of stored content in SCM



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

Note 1920522 - Unauthorized modification of stored content in SCM

Pre-Imp. / Post-Imp. =

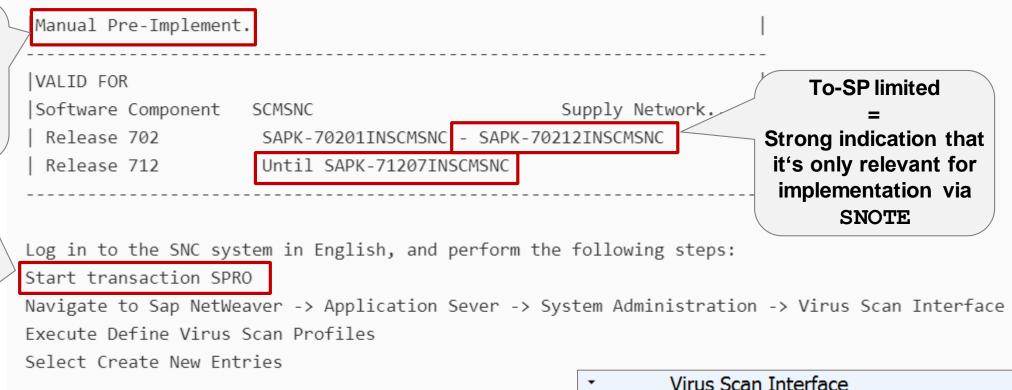
Weak indication that it's only relevant for implementation via

SNOTE

Customizing transaction

= ct

Very strong indication that you need it in any case or if you are using the application



Define Scanner Groups

Define Virus Scan Servers

Define Virus Scan Profiles

Implement BAdI for Virus Scanners

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

Enter /SCA/DM BRANDING/UPLOAD FILE for Scan Profile

Note <u>2442993</u> - 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 <u>1031096</u> - Installing Package SAPHOSTAGENT

Which SAP Notes are important for SAP Host Agent?

Note <u>1031096</u> - SAP Host Agent Installation

Note <u>1473974</u> - SAP Host Agent Auto upgrade

Note <u>927637</u> - Web service authentication in sapstartsrv

Note <u>1907566</u> - SAP Host Agent Documentation

Note <u>2130510</u> - 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).

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

The user root (but not <sid>adm) can use these commands, too:

saphostexec -version

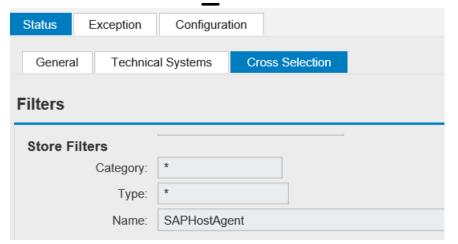
or

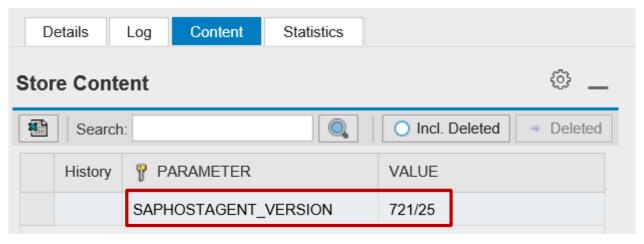
saphostctrl -host <hostname> -function
ExecuteOperation -name versioninfo

/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

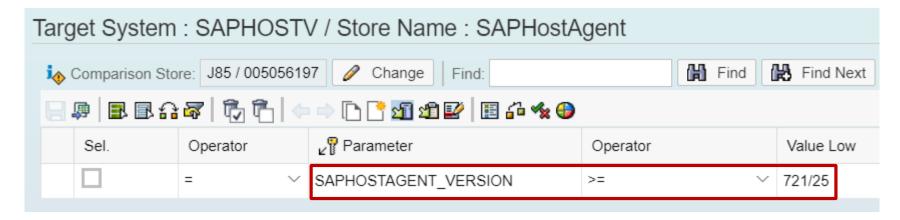
SAP Host Agent Validate the version using Configuration Validation

Transaction CCDB showing Configuration Store SAPHostAgent with Configuration Item SAPHOSTAGENT VERSION





Target System to check for a specific version:



SAP Host Agent Validate the version using Configuration Validation

Result of Configuration Validation for Configuration Store SAPHostAgent

▽ Co	nfiguration Ite	ms							
System		Host Name	Config. Item		Config. Item Value	Cv. DataOperator	Compliance	Complian (1=Yes, -1=No ' '=Not valuated	
	HRX	ldcih	Content out of	SION	720/205	>= 721/25	No	-1	
	IN1	atgvmlst	date	SION	721/28	>= 721/25	Yes	1	
	INTA 00004	atgvmls5 i	SAFIUSTAGE V	LKSION	721/28	>= 721/25	Yes	1	
	Multiple	dfgwd01527	SAPHOSTAGENT V	ERSION	720/197	>= 721/25	No	-1	
	hosts per	o-fbab0393f	Content ou	ut-of-date	Days: 481	#	Item not found	-1	
Ν	system	hs0037	SAPHOSTAGENT V	ERSION	#	>= 721/25	Item not found	-1	
M.	oyoto	lddbmw5	SAPH No data	Non	#	>= 721/25	Item not found	-1	
	N4Q	lddbn4q	SAPH INO Gata	SION	#	>= 721/25	Item not found	-1	
	N75	ldcin75	SAPHOSTAGENT_V	ERSION	721/28	>= 721/25	Yes	1	
		lddbn75	SAPHOSTAGENT_V	ERSION	721/28	>= 721/25	Yes	1	
	PJ2	vmw4307	SAPHOSTAGENT_V	'ERSION	721/28	>= 721/25	Yes	1	
PJ3		vmw4308	Content ou	ut-of-date	Days: 344	#	Item not found	-1	
	PJ4	vmw4309	SAPHOSTAGENT_V	ERSION	/21/29	>= /21/25	Yes	1	
	PO1	nced60229921a	SAPHOSTAGENT_V	ERSION	721/22	>= 721/25	No	-1	

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?

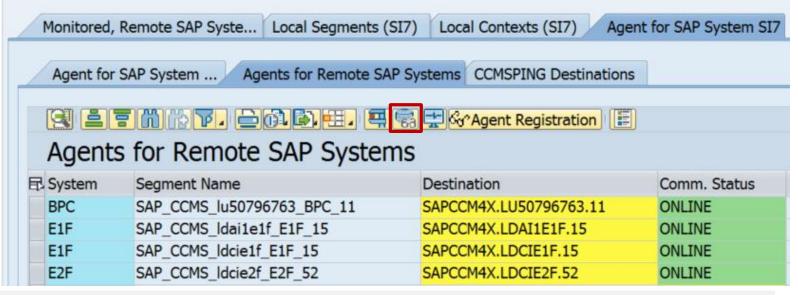
Check for parameters ssl/server_pse and service/auditlevel and service/logfile_*
in file /usr/sap/hostctrl/exe/host_profile

Use Configuration Store host_profile to check these parameters in application Configuration Validation.



Transaction RZ21

→ Agent Working Directory



Note <u>2459319</u> - Weak encryption used in SAP Netweaver Data Orchestration Engine

Deactivation of obsolete code, no test required.

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



Note <u>2252890</u> - User TMSADM_WF with standard password Note <u>2285744</u> - 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.

Note <u>2252890</u> - 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 <u>2252890</u> 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 <u>2191190</u> - Could not create user TMSADM_WF error configuring workflow



June 2017

Topics June 2017



What's new in System Recommendations SolMan 7.2

Note <u>2461414</u> - SysRec: notes for obsolete kernel versions are displayed on SolMan 7.2

Note <u>2380277</u> - Memory Corruption vulnerability in IGS

Priority changes because of CVSS, e.g. Notes <u>2235513</u>, <u>2235514</u>, <u>2235515</u>

Reloaded: How to define cipher suites for SSL/TLS

Security notes for the Web Dispatcher

Note <u>2423429</u> - Code Injection vulnerability in SAP Web Dispatcher

What's new in System Recommendations SolMan 7.2 SP 3 Send Configuration Validation reports via email

Patch

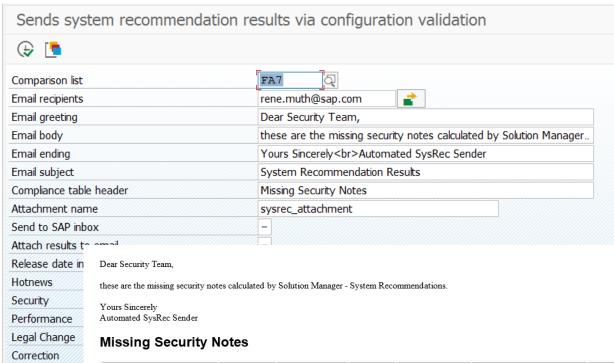
BW Information Broadcasting is not longer supported in SAP BW 7.40 (Note 2020590)

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

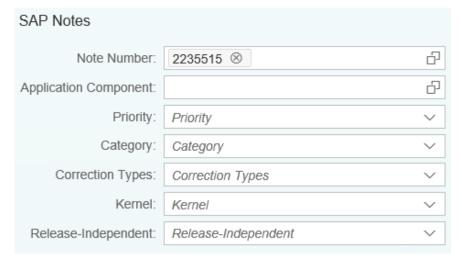


Store Name	Landscape Key	Store Group Name	Compliance	Configuration Item	Configuration Value	Compliance Rule	Extraction Date
SYSTEM_RECOMMENDATIONS_NOTES	FA7_SM	SAP Notes	No	0050000756	SHORT_TEXT: Ready for Review FLAGS: Security THEMK: FLAA RELEASE_DATE: 20160308 PRIORITY: Correction with high priority CATEGORY: Program error IMPL_STATUS: SYS_RECOM_STATUS: NEW VERSION:0001 USER: LUANE AUTO_IMPL: MANU_IMPL: SUPP_NAME: SOFT_COMP: KERN_NOTE: SP_RELEV:	Exists 0050000756	17.12.2016 13:22:32

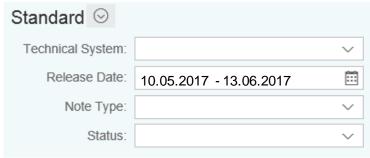
What's new in System Recommendations SolMan 7.2 SP 5

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.

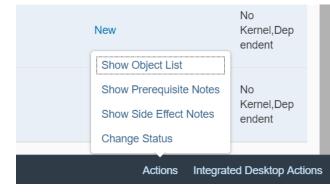


✓ Tip for using the date filter
 Starting from: enter a date 01.01.2017 - 31.12.9999
 Range: enter a range 10.05.2017 - 13.06.2017
 One day: use a range 13.06.2017 - 13.06.2017



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



Note <u>2461414</u> - 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 <u>1553180</u> (only kernel up to 7.20 or SAP_BASIS up to 7.31 are affected)

Note <u>1453325</u> (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 <u>2449853</u>

Note <u>2380277</u> - Memory Corruption vulnerability in BC-FES-IGS

Which version of IGS is currently installed?

- See note <u>931900</u> 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
```

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.

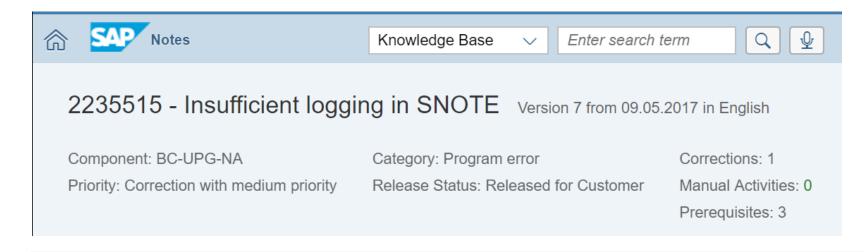
In some business use cases, the SAPGUI uses an IGS-based activeX control to render charts directly in SAPGUI. For those use case, you should upgrade the SAPGUI version.

Priority changes because of CVSS, e.g. Notes <u>2235513</u>, <u>2235514</u>, <u>2235515</u>

Notes <u>2235513</u>, <u>2235514</u>, <u>2235515</u> 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



Reloaded: How to define cipher suites for SSL/TLS more samples

SAP ASE

Note <u>2478377</u> - Exposure to Sweet32 vulnerability in multiple SAP Sybase products <u>https://help.sap.com/doc/a6115f7abc2b1014bf21a063974f889e/16.0.2.5/en-US/Security_Administration_Guide_en.pdf</u> → 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 <u>2383957</u> - Supported Cipher Suites

SAP Replication Agent for Oracle

Note <u>2458049</u> - Support for the TLS v1.2 Protocol

SAP JVM

Note <u>2193460</u> - 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

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.

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
- \rightarrow 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

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.



May 2017

Topics May 2017



WannaCrypt ransomeware

Remote Code Execution vulnerability in SAP GUI

SNC Client Encryption – Do it!

Note <u>2443673</u> - 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

WannaCrypt ransomeware

Note <u>2473454</u> - Customer Guidance for WannaCrypt attacks

Note 2476242 - Disable windows SMBv1

Note <u>2473904</u> - Does RemoteWare have any patches required for the WannaCrypt ransomware attack?

Note <u>2473914</u> - Does SAP Mobile Platform impacted by WannaCrypt?

Note <u>2474540</u> - 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 <u>disable the support for SMB v1</u> to directly block this ports in the firewall, however, this might affect interfaces to other partner systems. Careful testing required!

Note <u>2407616</u> - Remote Code Execution vulnerability in SAP GUI Note <u>1768979</u> - 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

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

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!

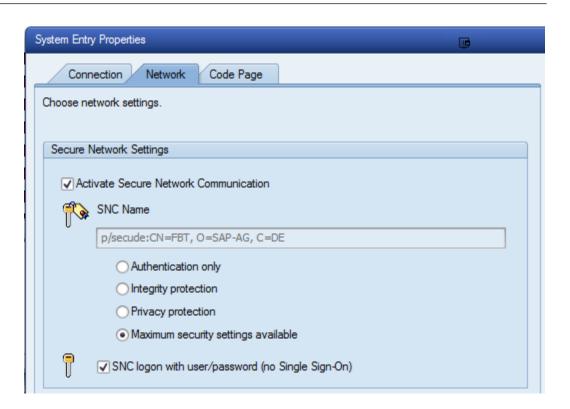
SNC Client Encryption – Do it! SNC Client Encryption 2.0: Supported Clients

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



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 encryptiononly 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

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 Common CryptoLib 8.4.x or 8.5.x (preferred: 8.5.11 or newer)

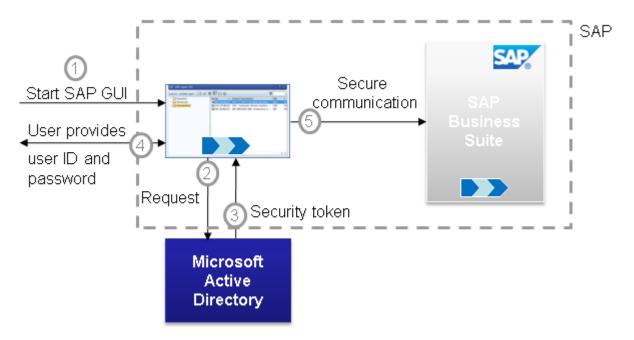
SAP GUI option

- SNC Client Encryption 2.0 is integrated in SAP GUI 7.50
- Shipment as of May 2017

SNC Client Encryption – Do it! Architecture using Kerberos

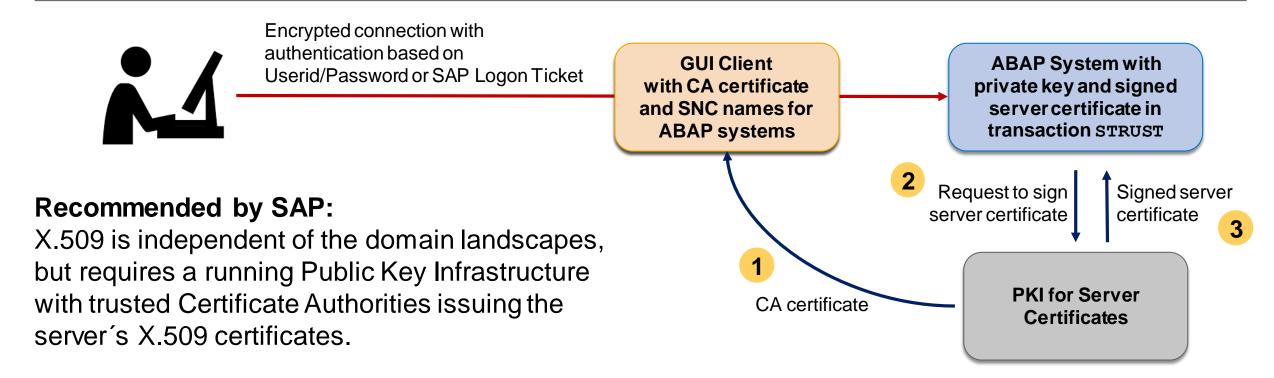
This is the architecture of **SNC Client Encryption 1.0**

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.

SNC Client Encryption – Do it! Architecture using signed server certificates in version 2.0



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

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.

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 <u>2075150</u> - 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 <u>2175351</u> - SAP Logon (Pad) 740: create/distribute the administrative core configuration file in the SAP UI landscape format

SNC Client Encryption – Do it! Questions

How can we check if connections are encrypted?

- The transactions SM04 and AL08 show currectly 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).

	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
sing	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

XClient <> 000

★User missing

✓ Terminal

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 <u>2440692</u> - Central Note for SNC Client Encryption 2.0

Note <u>2425150</u> - 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

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

Note 2443673 - Filter Incoming Serialization Data (JVM)

Recommendations:

- Patch the JVM regularly from <u>SAP Service Marketplace</u>. 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.

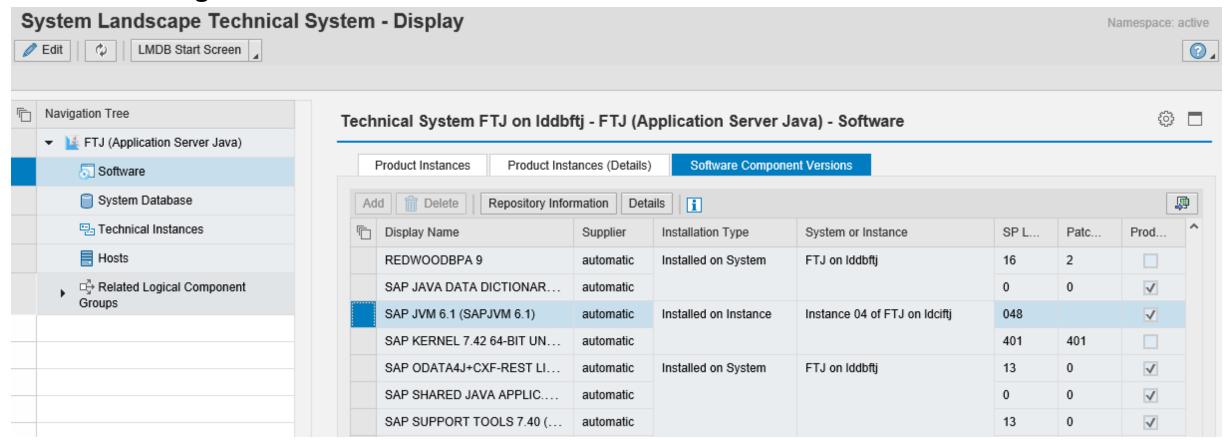
- System property jdk.serialFilter
- Security property jdk.serialFilter in conf/security/java.properties

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.

Note 2443673 - Filter Incoming Serialization Data (JVM)

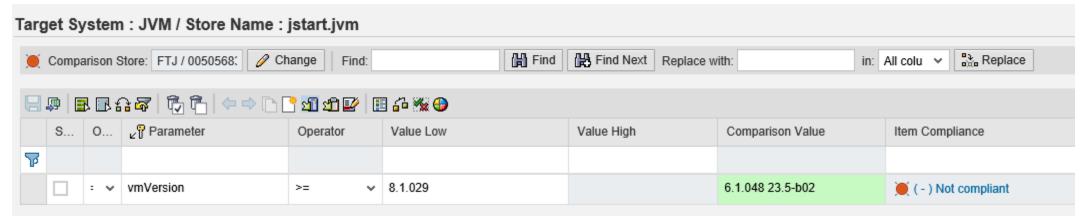
You can verify the version of the JVM of a managed system in transaction LMDB in the SAP Solution Manager:



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.)



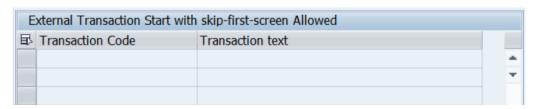
Disable start of transactions with OKCode skipping the first screen

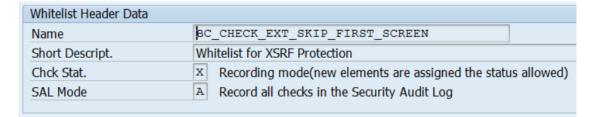
1st test: Profile Parameter dynp/checkskip1screen

- 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 <u>1399324</u> Profile parameter dynp/checkskip1screen
- Note <u>1157137</u> SAPShortcut: Security issue in SAPShortcut login

2nd test: Profile Parameter dynp/confirmskip1screen

- Logging option
- SLDW whitelist BC_CHECK_EXT_SKIP_FIRST_SCREEN
- Popup respective cancel message 840(00)
- (no documentation on help.sap.com)
- Note <u>1973081</u> XSRF vulnerability: External start of transactions with OKCode
- Note 1956086 Profile parameter for XSRF protection





Note 2062885 - SU01/SU10: New user documentation function Note 2203672 - SU01/SU10: New user documentation function II

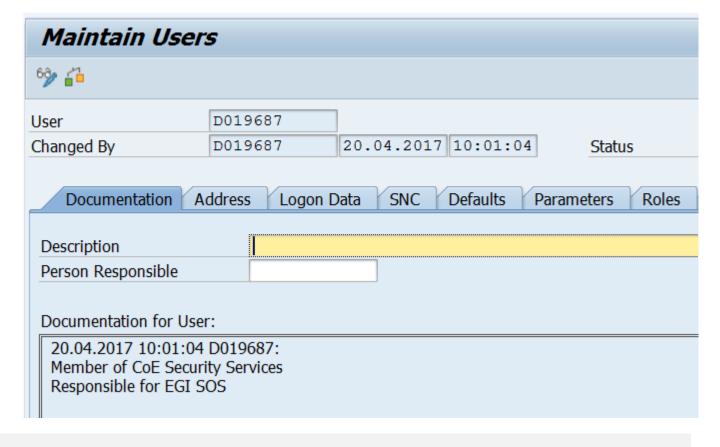
New tab about Documentation in transaction SU01 available as of SAP_BASIS 7.31 SP 15 (optimized in SP 17) and 7.40 SP 10 (optimized in SP 13)

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.



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 <u>2300741</u> - 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 <u>2463168</u> - 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)



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 <u>2407616</u> - Remote Code Execution vulnerability in SAP GUI for Windows

Note <u>1768979</u> - Changes to the SAP GUI security rules file saprules.xml

Note <u>2458890</u> - SYSREC: support of SAP GUI security notes

Note <u>2378090</u> - Missing Authorization check in Solution Manager

Notes <u>1329326</u> <u>1616535</u> <u>1823687</u> <u>1914778</u> <u>2012562</u> <u>2045861</u>

Server Information Disclosure

Note 2423486 - Missing Authorization check in ADBC Demo

Note 2417355 - Missing Authorization check in RFC Destination Maintenance

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.

SAP Support Portal – What's New? Notifications

Notifications

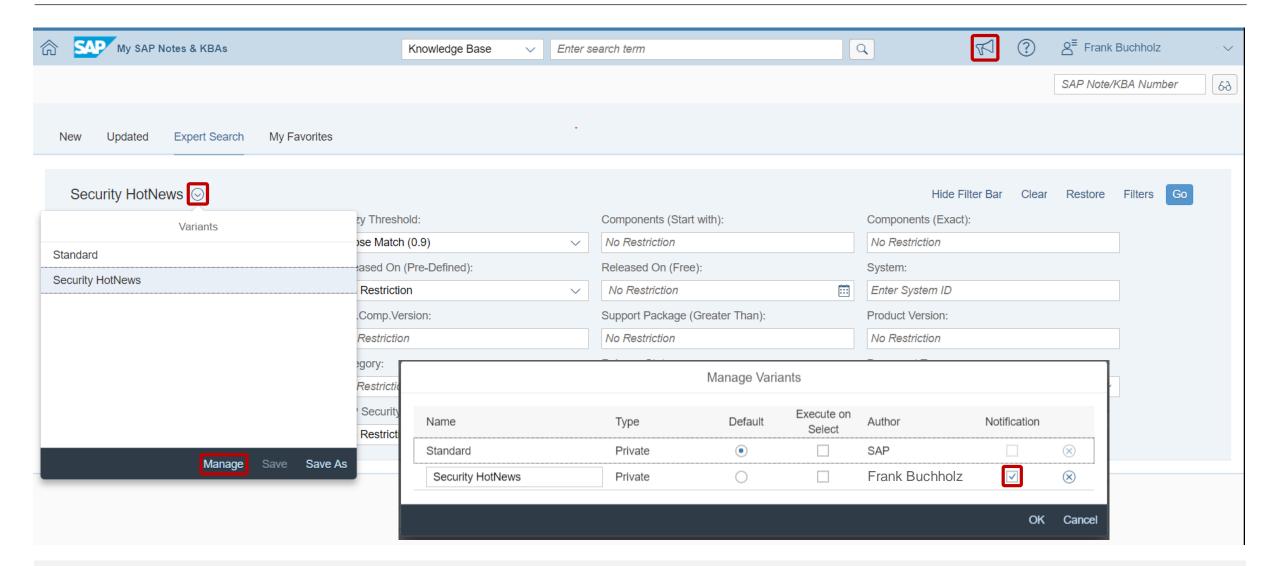
Notifications offer you access to system-driven information that helps you become aware of critical real-time information. After a successful pilot phase, the SAP ONE Support Launchpad notification area has now become available to all visitors. It is the place where you can get an overview of notifications 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/

SAP Support Portal – What's New? Notifications at Notes Expert Search



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!

<u>SAP EarlyWatch Alert – Analytical Dashboard</u>: 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)

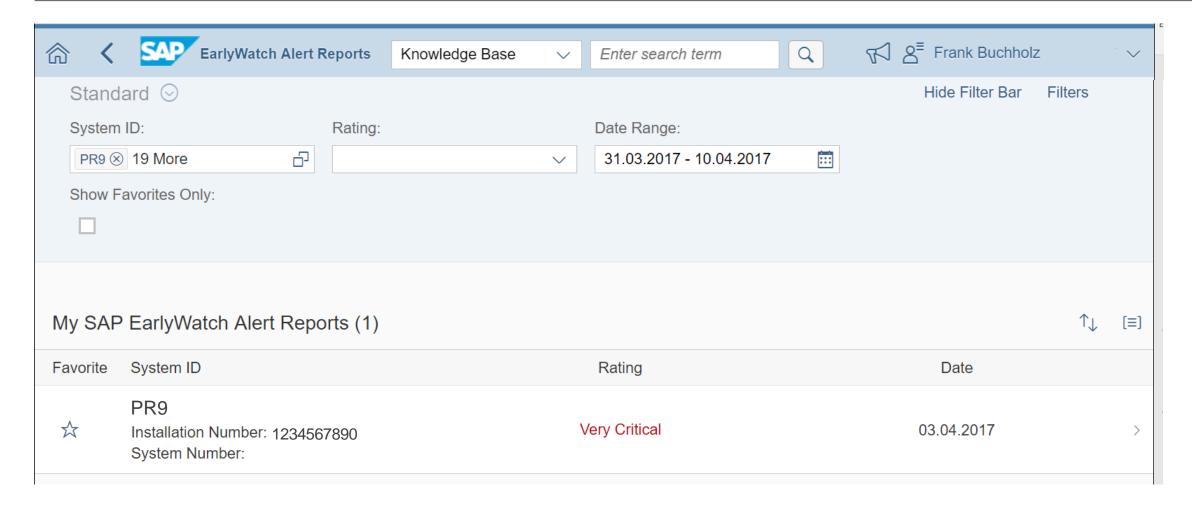
You require the SAP ONE Support Launchpad authorization "Service Reports & Feedback" to see data in these applications for the systems of the customer numbers to which your S-user is assigned. To request it, contact one of your company's user administrators.

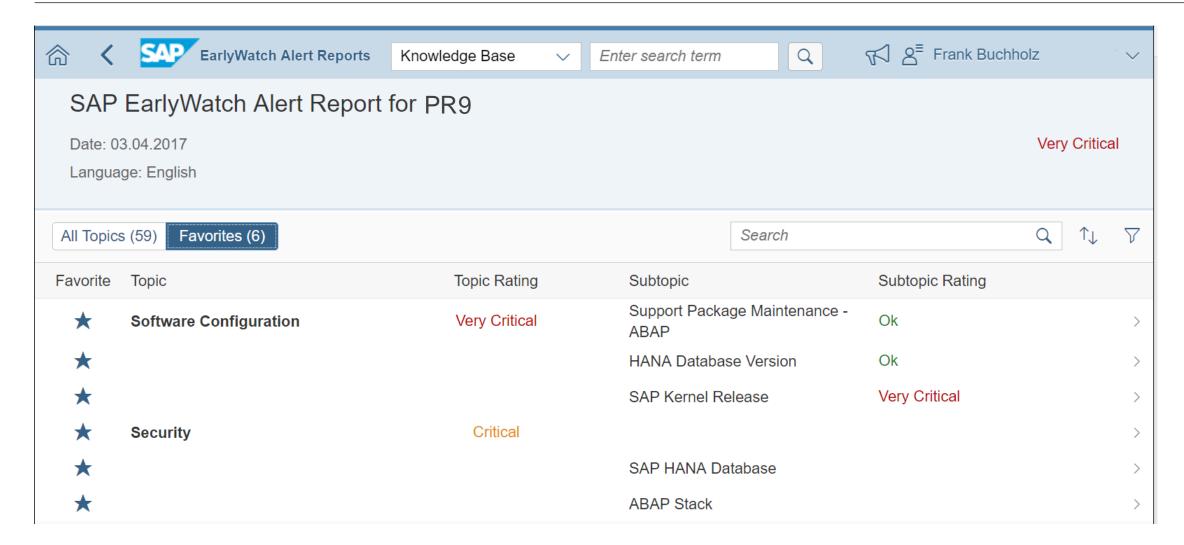
Either add the two new tiles to your <u>SAP One Support Launchpad</u> or use these direct links to the applications:

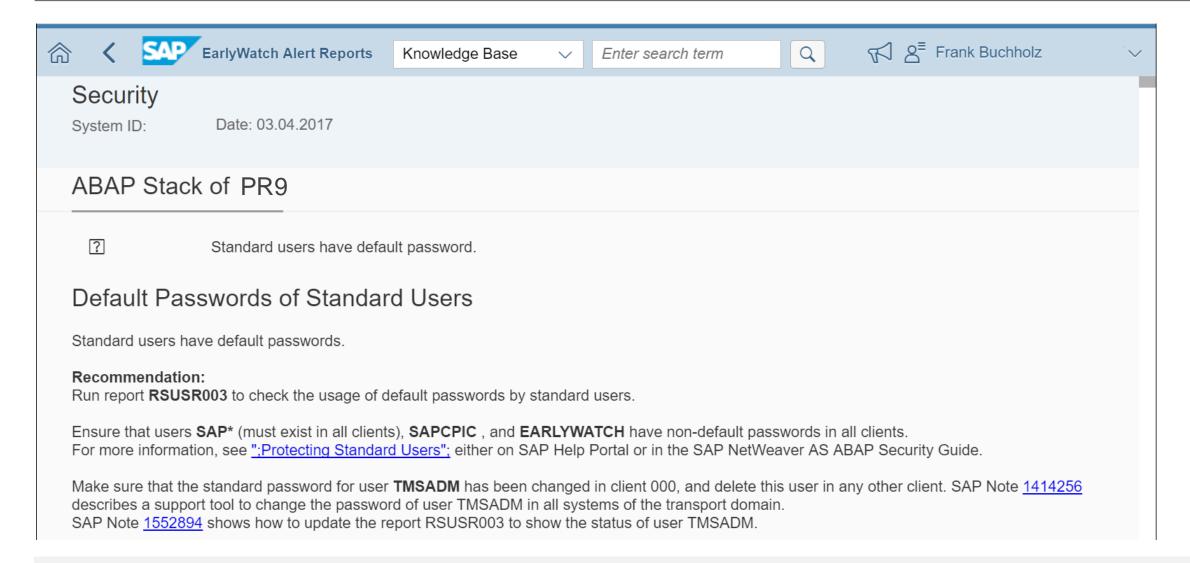
- https://launchpad.support.sap.com/#/ewaviewer
- https://launchpad.support.sap.com/#/ewadashboard

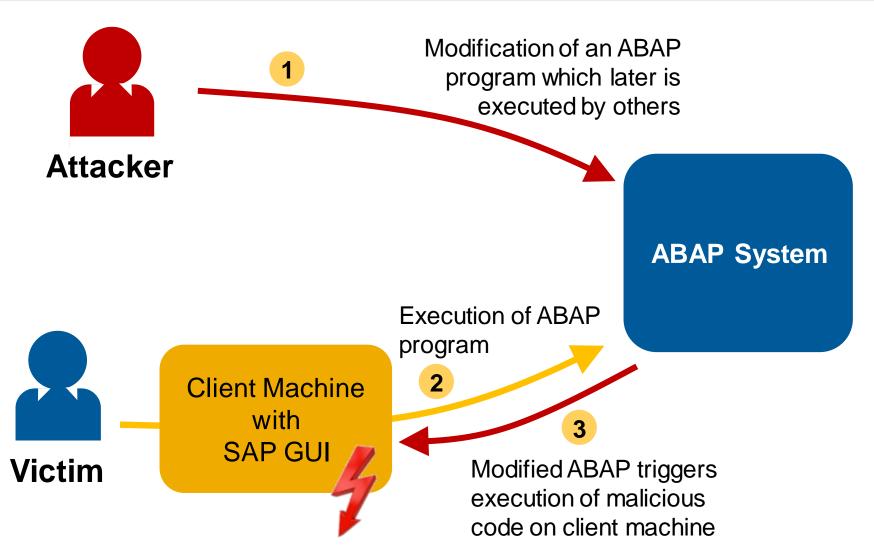
The application My SAP EarlyWatch Alert Reports provides the complete SAP EarlyWatch Alert report for ABAP on SAP HANA systems (and systems having an additional database connection to a separate SAP HANA database). You can easily monitor the alerts and find out how to improve the system stability, performance 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.







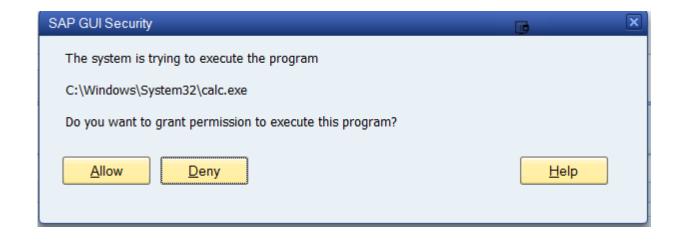


This issue is related to execution of a file/executable on the client PC via ABAP programs triggering SAP GUI commands. The impact is on the client PC and not on the SAP System.

The client machines trust the ABAP servers unless the Security Module of the SAP GUI enforces strict security rules.

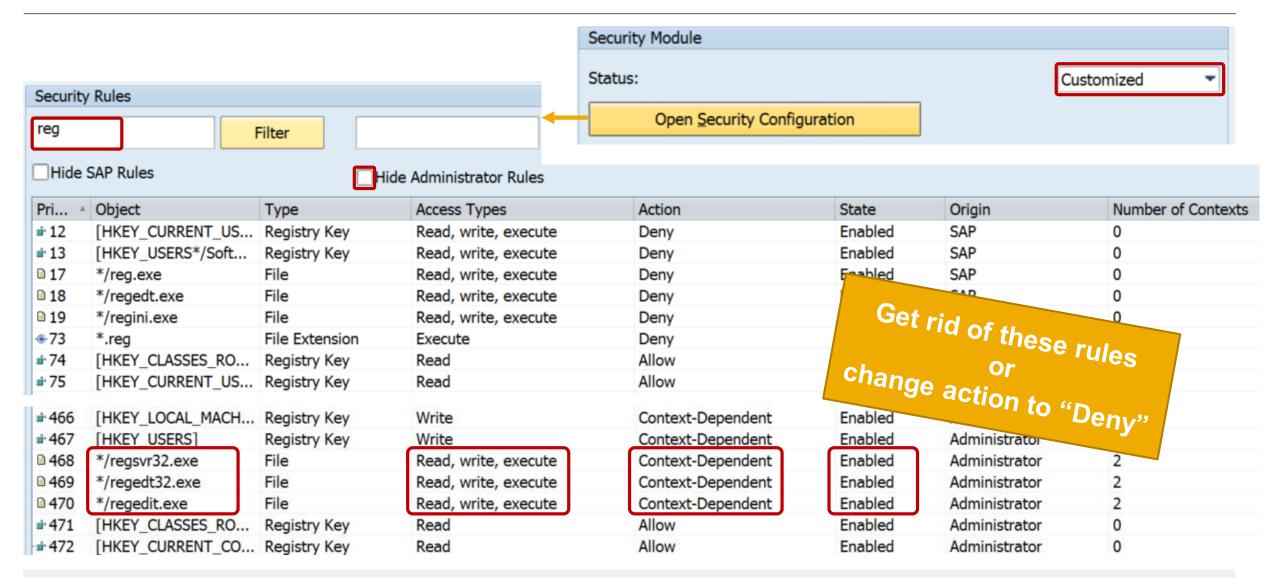
Example if there does not exist any rule (respective if the rule enforces "Ask"):

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:





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.

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.

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

Note 2456553 - Frequently Asked Questions on note 2407616

Frequently asked questions regarding SAP Note <u>2407616</u>:

- 1. We do not have a saprules.xml file, and we are not using SAPGUI 7.4 patch 12. Does this issue affect us?
- 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?

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

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 <u>2458890</u> - SYSREC: support of With this

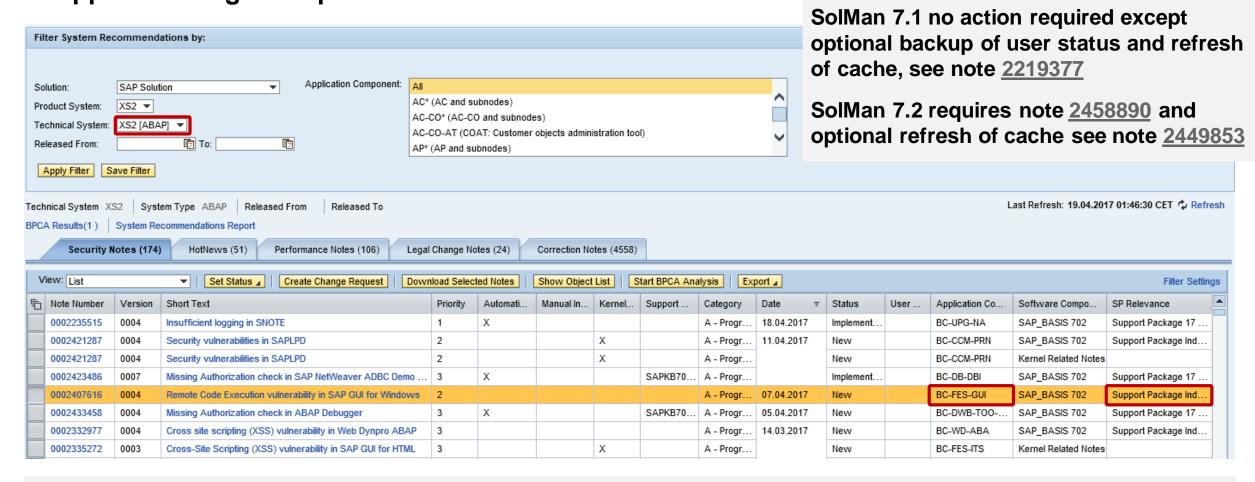
With this note all ABAP systems show SAPGUI notes, too.

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 Ve	ersion	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

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.



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 <u>2330065</u> - 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.

Notes <u>1329326</u> <u>1616535</u> <u>1823687</u> <u>1914778</u> <u>2012562</u> <u>2045861</u> Server Information Disclosure

Note <u>1329326</u> - Configuration of server header in HTTP response

```
is/HTTP/show server header = false (default)
```

As a work-around, set parameters <code>is/server_name</code> (default: "SAP NetWeaver Application Server") and <code>is/server_version</code> (default: Kernel release) to an arbitrary value.

Note <u>1616535</u> - Secure configuration of ICM for the ABAP application server

Note <u>1914778</u> - Potential information disclosure relating to HANA host names

is/HTTP/show detailed errors = false (default)

Note <u>1823687</u> - Potential information disclosure relating to user existence

login/show_detailed_errors = 0
(Only display general error message)

Note <u>2012562</u> - Tracing HTTP information for problem analysis

rdisp/TRACE HIDE SEC DATA = on (default)

Note <u>2045861</u> - Hiding release information from the SMTP server banner

icm/SMTP/show server header = false

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

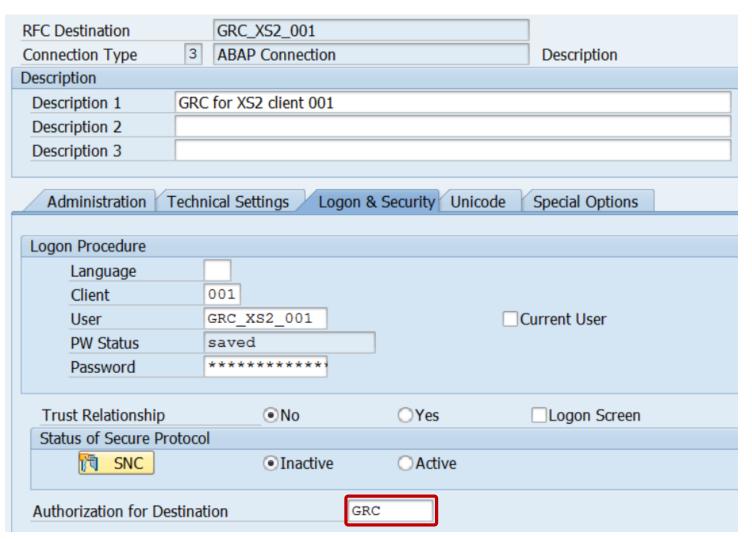
Note 2423486 - Missing Authorization check in ADBC Demo

Example: Cross-client access to basis salary (table PA0008)



MAN	PERN	R	St	UBT O	B S	E	NDDA	BEGI	OΑ	SEQ	AED!	TM	U.	NAME		Η	I R	0	IT	PR	F	F	F F	RE	RE	GRPV	TR	TR	TRFGR	T
STVO	R	OR	PA	WAER	s v	7G	VG VGLO	SR.	VG V	GLSV	1	BSGRD)	DIVGV	AN	SAL						FAL	GK		F	ALGR	LG	0.4		
BET0	1			ANZ	01		EIN (LGA(BET	02			AN	Z02	EIN	0	LGA	0	BET	03				Al	1Z0	3	EI	0	LGA0	
800	0000	2120	0 0			9	9999123	1 199	9100:	1 000	200	3022	5 F	HEATWOLE													0:	1 0:	GRD05	
0000	0000			GBP					(00000	000	100,0	00	162,50			1	10	.00	0,0	0						10	002		
	9.	166,	67		0,	00)				0	,00		0,00								-	0,0	0		0,00				
		0,	00		0,	00)				0	,00		0,00									0,0	0		0,00				
800	0000	701	2 0			9	9999123	1 199	40112	2 000	199	6020	1 5	SCHMIDT													01	01	GRD01	
0000	0000			CAD					(00000	000	0,0	00	0,00			1	85	.00	0,00)						MO	03		
	3.	541	, 67		0,	, 00	0				0	,00		0,00								(0,00	0		0,00				
		0	,00		0,	, 00)				0	,00		0,00								(0,00	0		0,00				

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.



March 2017

Topics March 2017



Support Portal relaunch

Support Tools for System Recommendations

Note 2427140 / 2423962 - SYSREC: Support tool for Solution Manager

Note <u>2418578</u> - Report to batch download solution manager trace files

Notes <u>2424120</u> <u>2424173</u> <u>2426260</u> <u>2428811</u> <u>2429069</u> about HANA

Note <u>1570399</u> - Solution Manager BI reporting (7.1)

Notes <u>1594475</u> <u>1712860</u> XML External Entities (XXE)

Note <u>2433458</u> - Missing Authorization check in ABAP Debugger

Note 2088593 - Potential disclosure of persisted data in LO-MD-BP-CM & LO-MD-BP-VM

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

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:

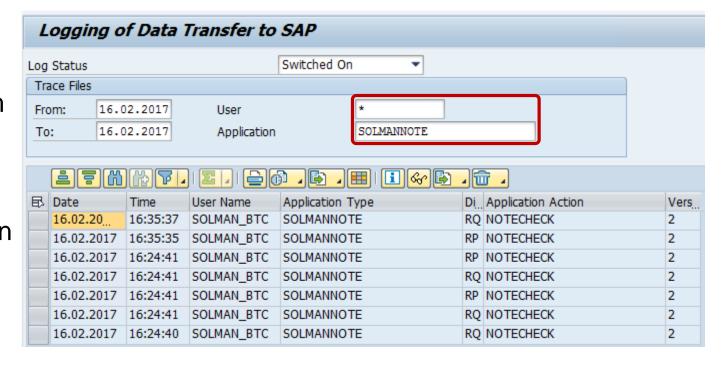
- 1. Run report AGSNO_RPT_EASY_SUPPORT and choose the system ID and the system type (e.g. ABAP or JAVA)
- 2. Save the generated xml file in your local directory. You can inspect the xml file with any xml viewer.
- 3. Compress the xml file into a .zip file using the common zip program
- 4. Create a support ticket on component SV-SMG-SR and add the zip file as an attachment.

```
<?xml version="1.0" encoding="UTF-8"?>
<asx:abap xmlns:asx="http://www.sap.com/abapxml" version="1.0">
 - <asx:values>
    - <NOTE REQUEST>
         <RELEASE>720</RELEASE>
         <EXTRELEASE>0003</EXTRELEASE>
        + < NOTES>
         <BATCH/>
      </NOTE_REQUEST>
      <SYSNAME>TKS</SYSNAME>
      <SYSTYPE>ABAP</SYSTYPE>
     + <LS_TS_INFO>
    - <LT SCV>
        - <AGS SR S SCV>
            <NAME>BBPCRM</NAME>
            <VERSION>713</VERSION>
            <SPLEVEL>000011</SPLEVEL>
            <PATCHLEVEL/>
            <0S/>
            <DB/>
         </AGS SR S SCV>
        - <AGS_SR_S_SCV>
            <NAME>BI_CONT</NAME>
            <VERSION>757</VERSION>
            <SPLEVEL>000009</SPLEVEL>
            <PATCHLEVEL/>
            <05/>
            <DB/>
         </AGS_SR_S_SCV>
        - <AGS_SR_S_SCV>
            <NAME>CPRXRPM</NAME>
            <VERSION>610 740</VERSION>
            <SPLEVEL>000005</SPLEVEL>
            <PATCHLEVEL/>
            <0S/>
            <DB/>
         </AGS_SR_S_SCV>
```

Support Tools for System Recommendations Note 2418578 - Report to batch download solution manager trace files

You use program **SMBI_TRACE** (see note <u>1394862</u>) 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.



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.

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 <u>SAP Security Patch Day</u>, 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.

Notes 2424120 2424173 2426260 2428811 2429069 about HANA

Note <u>2424120</u> - 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 <u>2426260</u> - 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 <u>2428811</u> - 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 <u>2429069</u> - 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

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

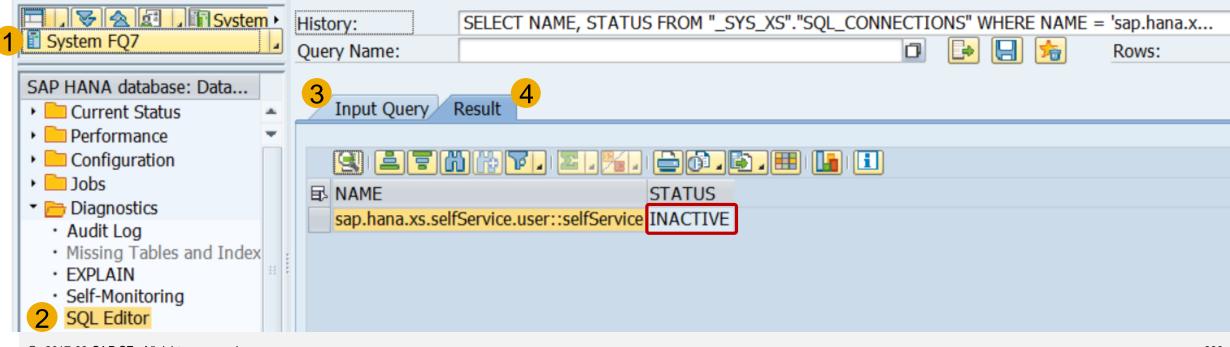
Notes 2424173 - Vulnerabilities in user self-services of SAP HANA

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:



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?...

Note <u>1570399</u> - Solution Manager BI reporting (7.1)

This note contains SAP Standard Roles which get updated regularly.

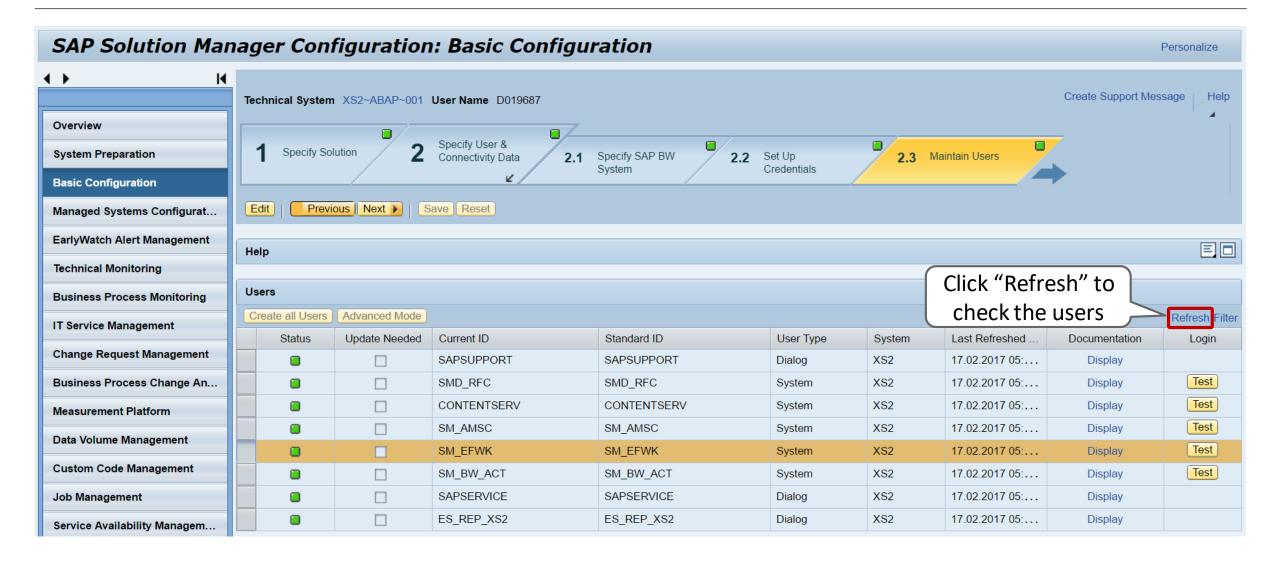
Version 51 takes away full **S_RFC** * authorizations from role **SAP_SM_TWB_EXTRACTOR**.

This role (copied to a Z role) is assigned to user SM_EFWK automatically in SAP Solution Manager Basic Configuration.

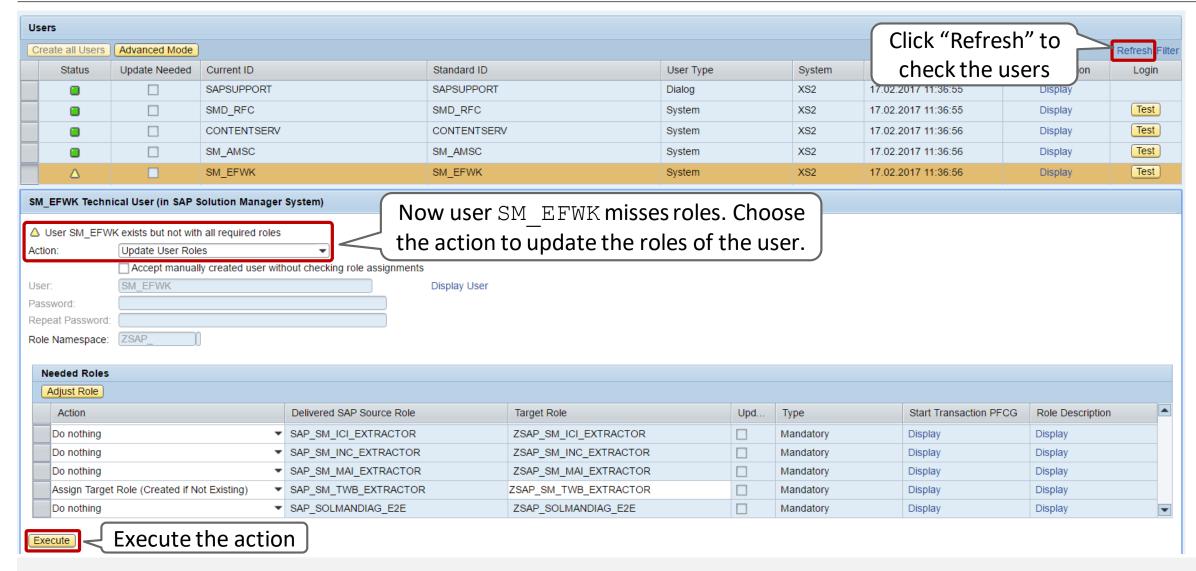
Steps to perform in SAP Solution Manager:

- 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)

Note <u>1570399</u> - Solution Manager BI reporting (7.1)

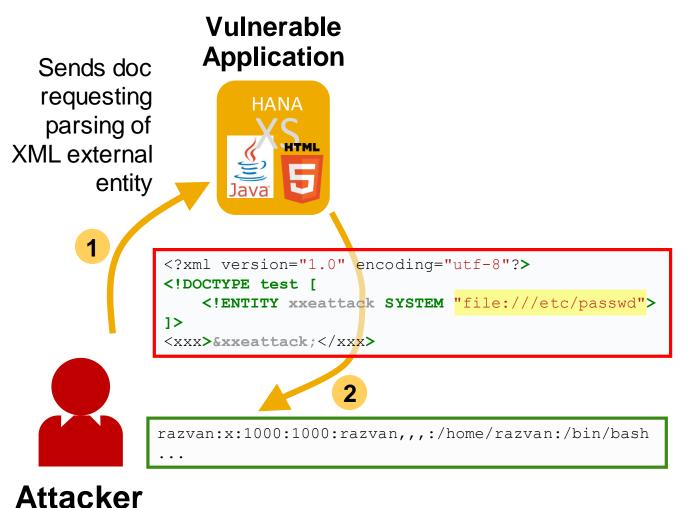


Note <u>1570399</u> - Solution Manager BI reporting (7.1)



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

Notes <u>1594475</u> <u>1712860</u> 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:

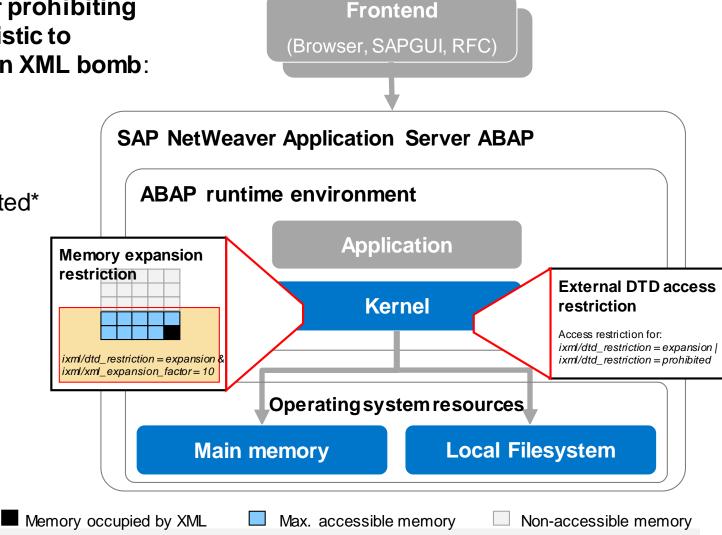
```
DATA 1_dtd type string value '\\myserv\mydtd.dtd'.

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 ).
```



Notes 1594475 1712860 XML External Entities (XXE)

Required actions in a nutshell (ABAP)

Pre-consideration

Check system requirements according to note <u>1594475</u>

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

Note 2433458 - Missing Authorization check in ABAP Debugger

New authorization check for <u>executing scripts within ABAP</u> <u>Debugger</u>:

```
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.

 Debugger Script Services ▼ → Variable Information Variable Value (for Simple Variables) · Simple Variable Description Change Variable Value Simple Variable or String ▶ Table Search in Variables · Direction Compare Varibles (DIFF) · 🖹 Global Variables of a Program • 🖹 Local Variables and Procedure Interface · 🖹 Name of the COMMON PART for a Variable Type Specific Variable Description Source Code Information Break-/Watchpoints (Trigger) Debugger Control (Steps and Jumps) Debug Step (F5,F6,...) · 🖹 Goto Statement Set Up Debug Step Script Flow Control Script Output(ALV) and Messages Write Trace Analysis of the Current Statement ▼ → Special Information

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/

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
```

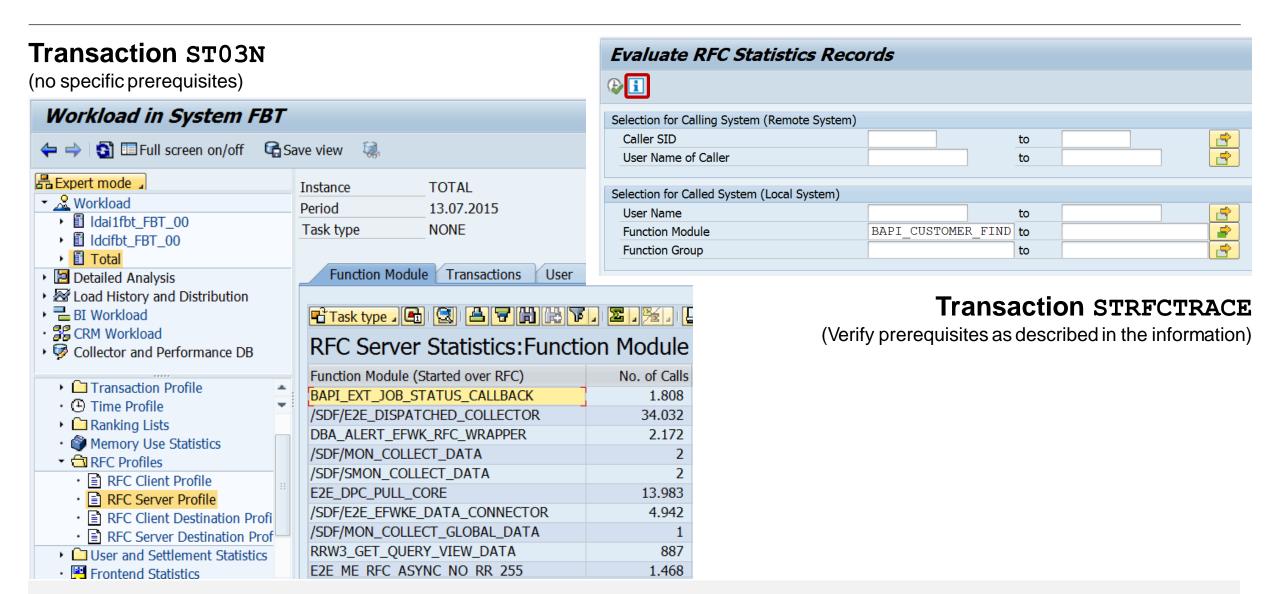
Switchable Whitelist (SLDW)

```
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 whitelist only if you are using these functions via RFC.

You can use the Workload Statistics (Transaction ST03N) \rightarrow RFC Profiles or transaction STRFCTRACE to verify if these functions are used in RFC scenarios (or you use report ZRFC STATRECS SUMMARY).

Note 2088593 - Potential disclosure of persisted data in LO-MD-BP





February 2017

Topics February 2017



System Recommendations failure – solved as of 21.02.2017

Note <u>2418823</u> - Update 1 to Note <u>2319506</u>

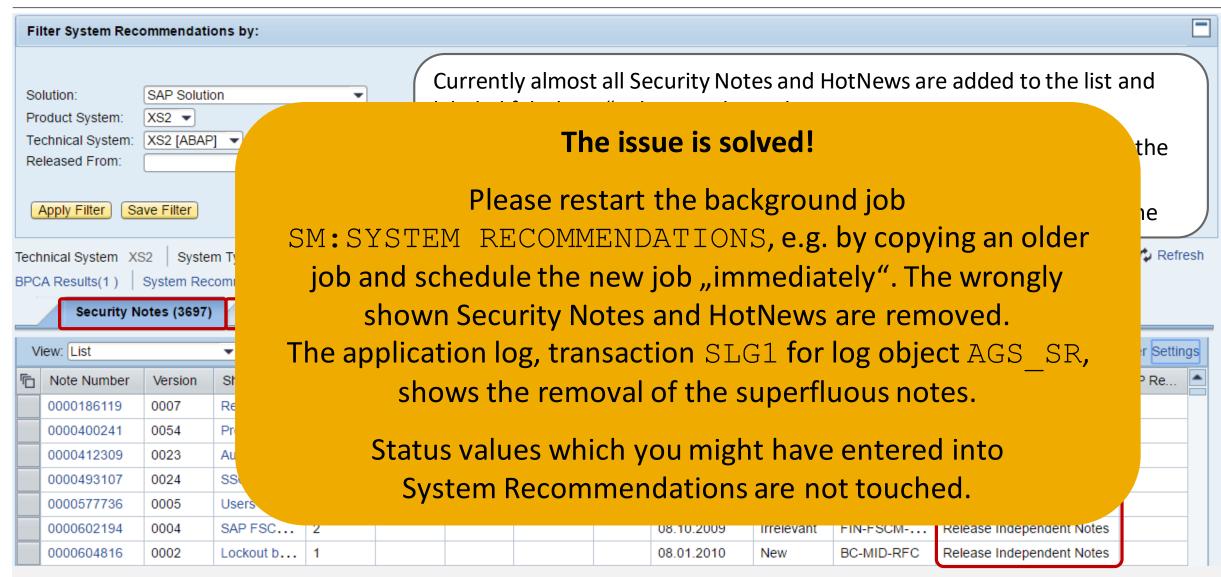
Note 2413716 - Setup of Trusted RFC in GRC Access Control EAM

Note <u>2374165</u> - Missing Authorization check in BW-BPS

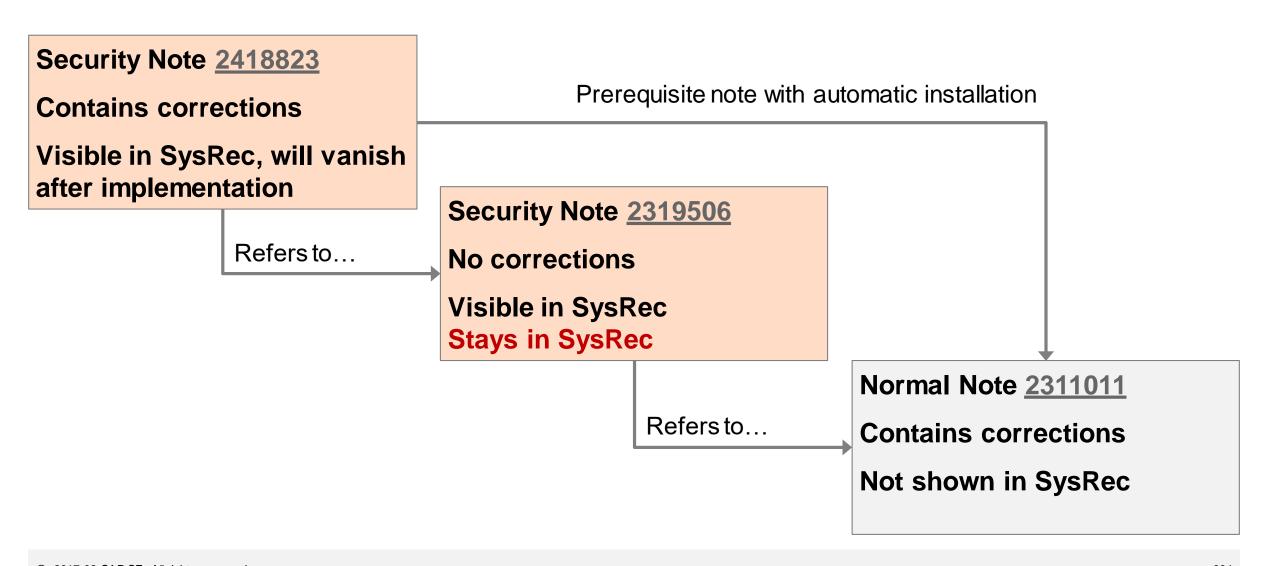
Note <u>2405256</u> - PFCGMASSVAL: Adding a manual authorization

The SAP Security Baseline Template & Configuration Validation

System Recommendations failure - solved as of 21.02.2017



Note <u>2418823</u> - Update 1 to Note <u>2319506</u>



Note <u>2418823</u> - Update 1 to Note <u>2319506</u>

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 ...



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 <u>1694657</u>.

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

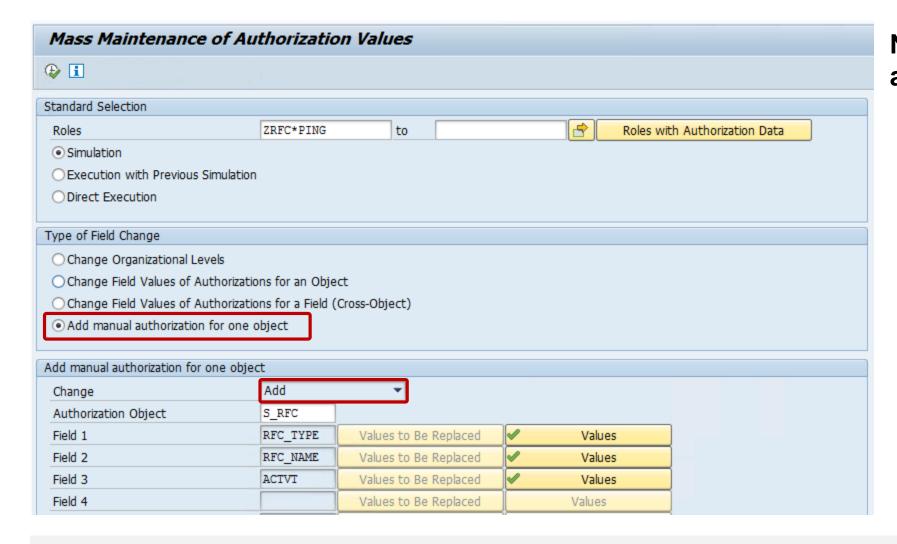
Note 2374165 - Missing Authorization check in BW-BPS

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)

Note 2405256 - PFCGMASSVAL: Adding a manual authorization



New option to add an authorization manually

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.

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

 \longrightarrow

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_0-1	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



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 <u>2379540</u> - User defined HTTP logging with TLS information

Note <u>2265385</u> - Switchable authorization checks for RFC in Product Catalog

Overview about Authorization Trace Options

Note <u>1854561</u> - Authorization trace with filter

Note 2220030 - STUSERTRACE: User trace for authorization checks

News from SAP Support Portal – Filter for Security Notes

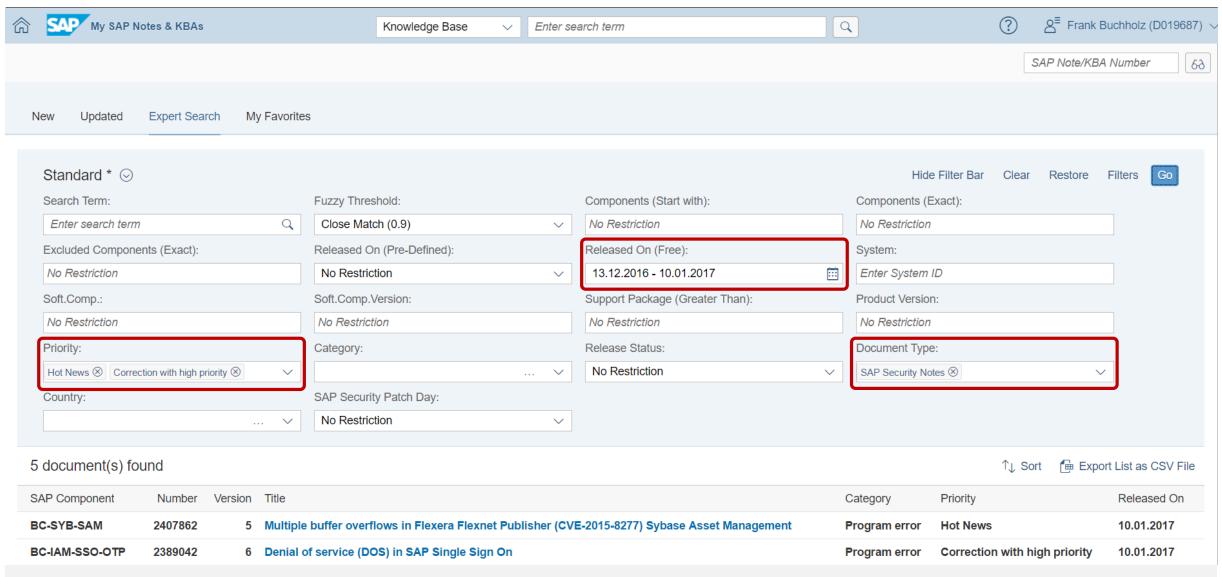
My SAP Notes & KBAs Application https://support.sap.com/notes → Expert Search

- 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.

News from SAP Support Portal – Filter for Security Notes https://support.sap.com/notes → Expert Search



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

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

Version12TypeSAP Security NoteLanguageEnglishMaster LanguageEnglishComponentBC-FES-ITS (SAP Internet Transaction Server)Released On1218.0701.20162017

No change

Note 1541716 - Potential Denial of Service in translation tools funct.

Version24TypeSAP Security NoteLanguageEnglishMaster LanguageEnglishComponentBC-DOC-TTL (Translation Tools)Released On1317.1201.20122017

Software ComponentReleaseSAP_BASIS702 - 702SAP_BASIS711 - 730SAP_BASIS72L - 800

Unimportant change (removal on superfluous release assignment)

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?

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/48/442541e0804bb8e100000000a42189b/frameset.htm

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:

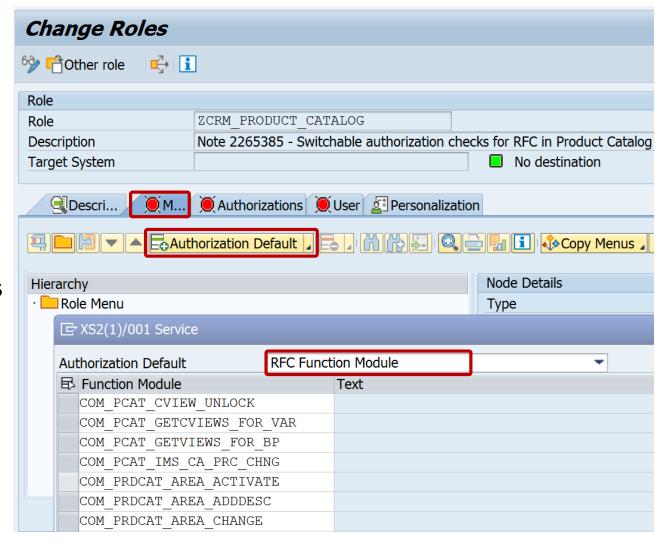
```
Time specification in CLF format: [15/Dec/2007:16:18:35 +0100]
응t
             IP address of the remote host (this might the a load balancer, therefore we add placeholder % { Host}i)
응a
             TLS protocol version (only useful if SSL termination happens here)
%y1
             TLS cipher suite as string (only useful if SSL termination happens here)
%y2
             User name of a basic authentication or the "common name" of an X.509 certificate
응u
             First line of an HTTP request with the original path and form fields
응r
             OK code of the response
응S
             Length of the response in bytes
응b
             The duration of a request in milliseconds (followed by "ms"
%Lms
             Name of a request header field
%{Host}i
             SID of the back-end system (from wdisp/system) to which an HTTP request was sent.
%w1
             Instance of the back-end system to which an HTTP request was sent.
%w2
```

Note <u>2265385</u> - Switchable authorization checks for RFC in Product Catalog

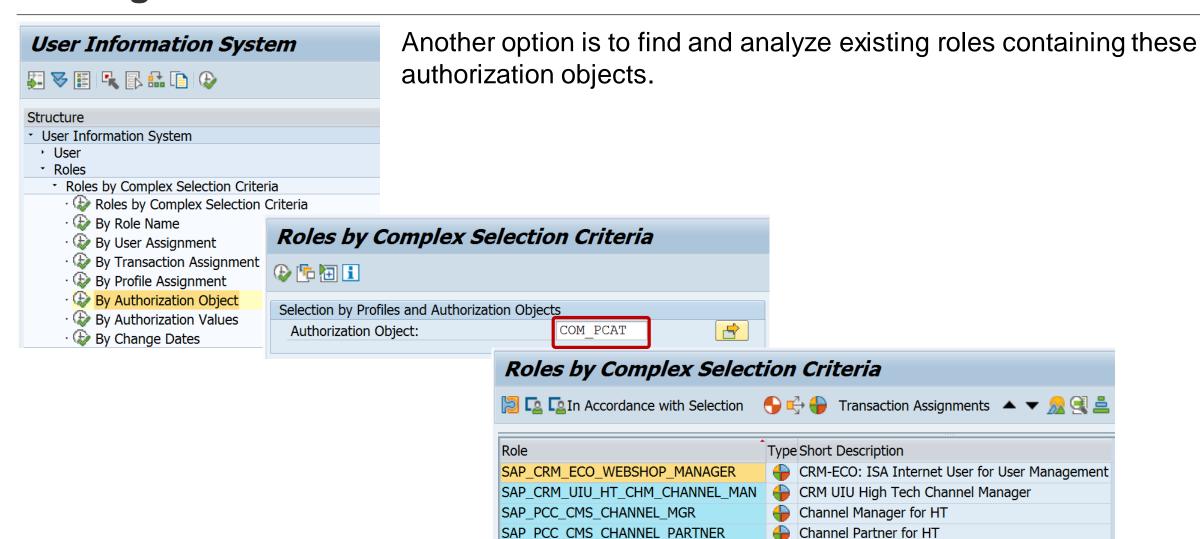
Step 5: Maintain RFC Function Modules default values using transaction SU22/SU24 ... instructions for many functions ...

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.



Note <u>2265385</u> - Switchable authorization checks for RFC in Product Catalog



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Channel Management: Channel Manager

SAP PCC COL CHANNELMANAGER

Overview about Authorization Trace Options

Application Server

Transaction

WebDynpro

RFC Function

Service

Database

File

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 tableUSOB_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

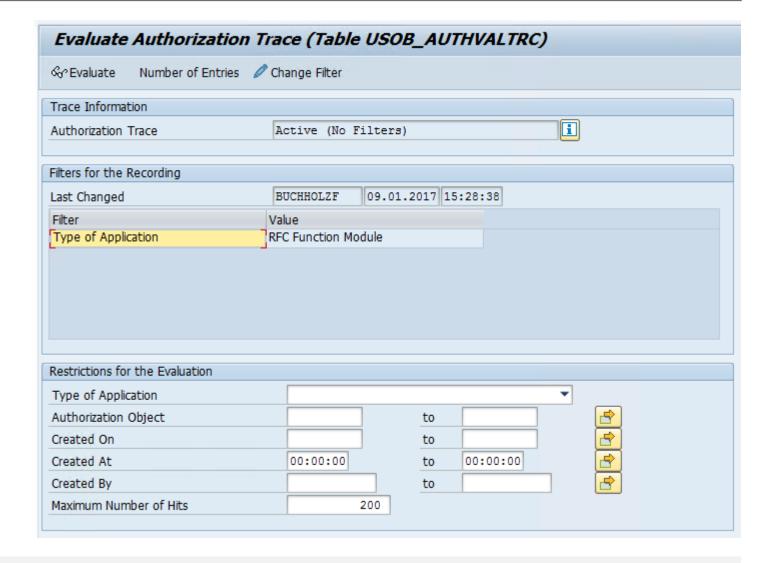
Analysis of statistic records for RFC

- All servers
- Client specific
- User specific
- Logging of external RFC calls

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



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.

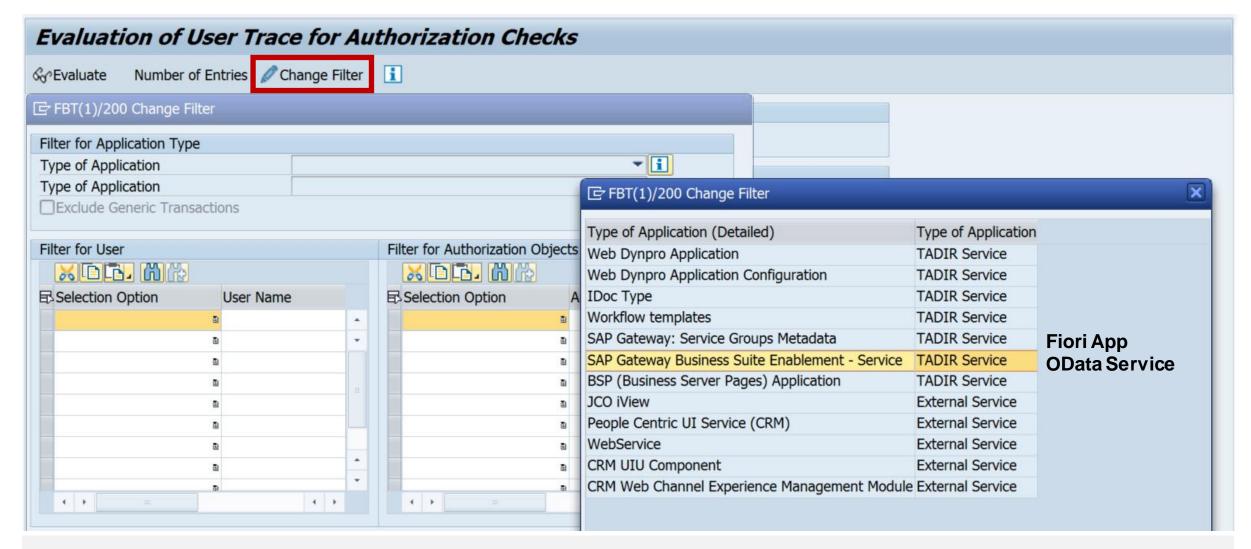
You can activate the trace either completely or only for selected authorization checks using a filter indicator. Application type, user, and authorization objects can be used as filters. In this way, you can examine special scenarios, such as RFC programs or batch jobs, over a longer period of time.

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 TNSFRTTON <<<<<
  " New authorization check for user trace
*>>>> END OF INSERTION <<<<<<
```

Note 2220030 - STUSERTRACE: User trace for authorization checks



Note <u>2220030</u> - STUSERTRACE: User trace for authorization checks

Result for calling the Fiori Launchpad and the Fiori App System Recommendations

User Tr	ace for Authorization Checks:	34 Hits							
9 💼 🗟)								
₽ 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



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 <u>2351486</u> - SAP HANA cockpit: Information disclosure in offline administration

Authorizations for SAP Solution Manager RFC users

Notes <u>2257213</u> for SolMan 7.2, note <u>1830640</u> for SolMan 7.1, (and old note <u>1572183</u>)

How to manage RFC Gateway Access Control lists as of SAP_BASIS 7.40

SAP to become a CVE Naming Authority for SAP issues Tentative Proposal

Soenke Eggers

Product Security Response Team December, 2016

Proposal – For Customer Feedback

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.

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)

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



















Not every software vendor is a CNA...but

Rank	C	Organisation	Revenue**	FY	Market cap**	Publish to CVE?	Security Notice available to Public?	
1		<u>Microsoft</u>	\$93.58	2015	\$439	Y	Y	
2	122	<u>Oracle</u>	\$38.27	2015	\$194.7	Y	Y	
3		SAP	\$23.3	2015	\$94.5	N – researcher publishes	N? Login Required?	
4		<u>Salesforce.com</u>	\$6.61	2015	\$52.9	N	N/A	
5	122	<u>Symantec</u>	\$6.58	2015	\$17.7	Y	Y	
6	(2)	<u>VMware</u>	\$6.57	2015	\$20.82	Y*	Y	
7	(2)	<u>Fiserv</u>	\$5.25	2015	\$21.53	N	N/A	
8	122	CA Technologies	\$4.26	2015	\$112.59	Y	Y	
9		<u>Intuit</u>	\$4.19	2015	\$26.0	N – researcher publishes	N – no note or advisory	
10	8	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

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.

When we do not submit, our researchers do...

FILLICITION 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

Always point to the researcher's blog in CVE...





SAP Security Notes April 2016 – DoS vulnerabilities on the rise

April 12, 2016/Blog

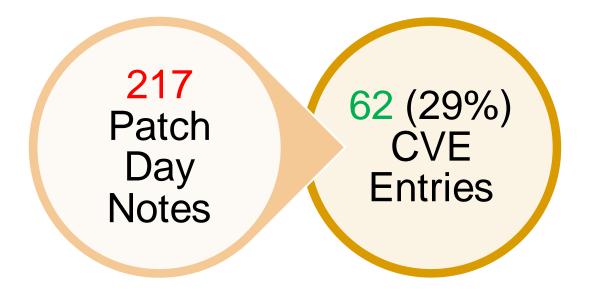


<u>SAP</u> has released the monthly <u>critical patch update for April 2016</u>. This patch update closes 26 vulnerabilities in SAP products including 19 SAP Security Patch Day Notes and 7 Support Package Notes. 8 of all Notes were released after the second Tuesday of the previous month and before the 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.

Stacking up the numbers...in 2015

Researchers don't submit all SAP vulnerabilities to CVE, especially those with little marketing values to them.



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

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.

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)		

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.



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

Home | CVE IDs | About CVE | Com

Current status:

SAP does not produce CVE records but others create advisories about SAP

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.

Transparent Software Vulnerability Disclosure SAP as a CVE Naming Authority

Adopting Public Disclosure via CVE

- Transparent communication on security patches
- Standardize vulnerability notification and formatting

- Proposal asking for Customer Feedback
 SAP Product Security Response
 Email: vic.chung@sap.com
- 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

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"

SAP Component Support Package Security Notes SAP Component SAP Component SAP Component WEC-FRW OK BC-MID-RFC Day Released On Support Package Security Notes Patch Day Security Notes OK RFC

SAP Security Notes

All SAP Security

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/

Knowledge Base

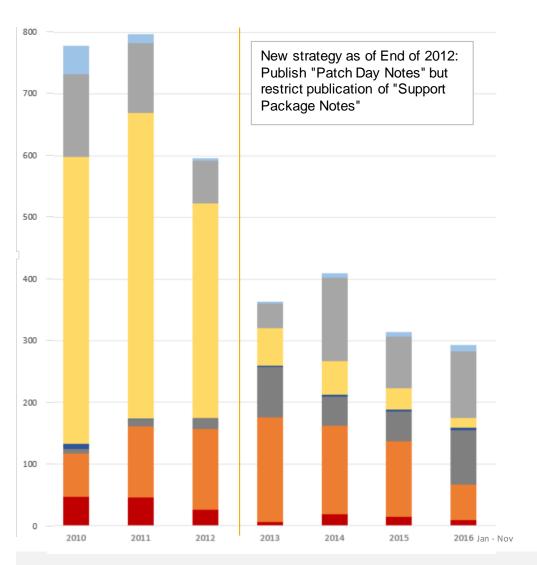
2381

1413

^{*} 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".

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

Note <u>2351486</u> - 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.

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 <u>2257213</u> Authorizations for RFC users as of SAP Solution Manager 7.2 SP02
- ➤ Note <u>1830640</u> Authorizations for SAP Solution Manager RFC users 7.1 SP09
- Ignore old note <u>1572183</u>

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.

Note <u>1989587</u> - GW: Interface for maintenance of gateway security files

Note <u>2325191</u> - GW: Maintenance of gateway ACL files

Use transaction SMGW → Goto → External Security → Maintenance of ACL Files

Of (if this navigation path is not available)

use transaction SA38 to submit report RSMONGWY_ACL_FILES_ALV directly.

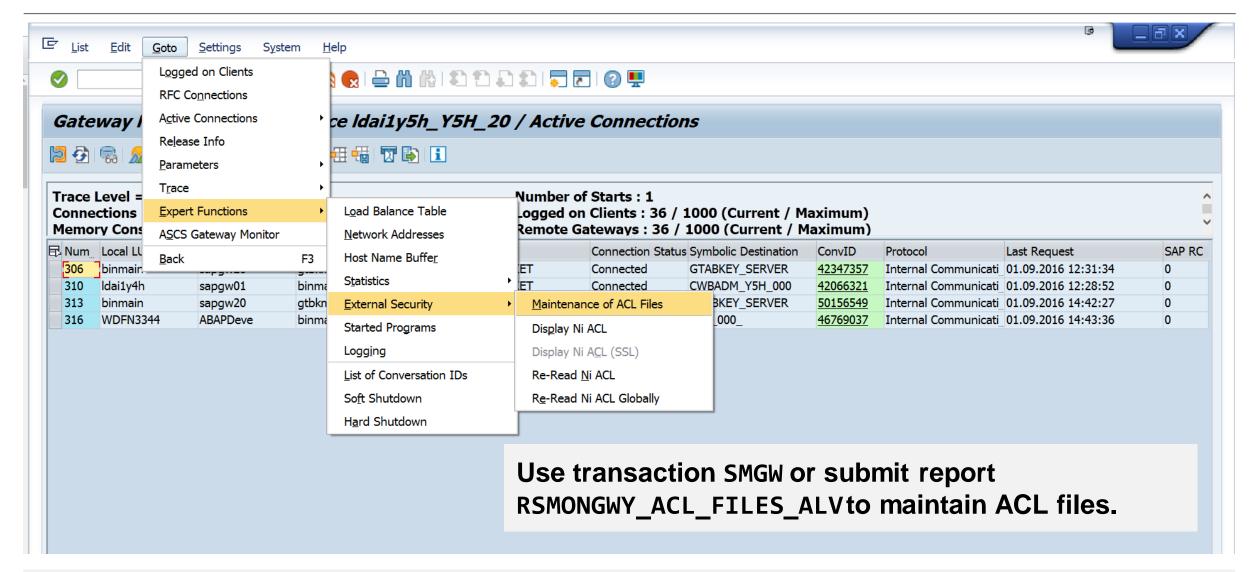
The new report is available as of new Support Packages SAP_BASIS 7.40 SP 16 and SAP_BASIS 7.50 SP 05

Comments:

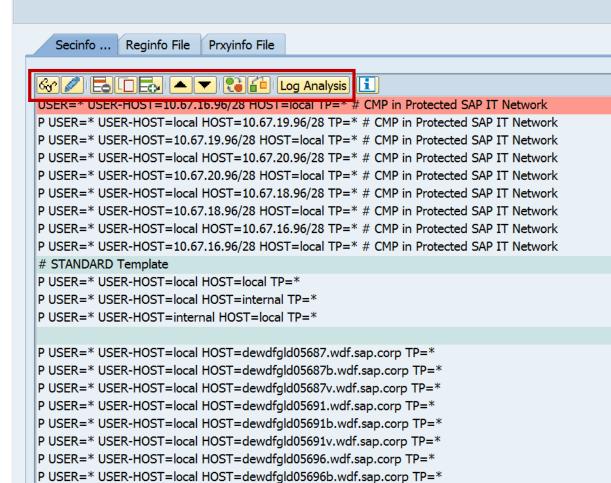
- The SP assignment in note <u>1989587</u> seems to be wrong as the new report is available as of SP 16.
- The profile parameter gw/display_acl_new (with values 0 / 1) and the Kernel patch mentioned in note 1989587 do not seem to be important.

Project plan:

- 1. Preparation in transaction SMGW \rightarrow Goto \rightarrow Expert functions \rightarrow 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



Gateway ACL Files of AS Instance Idai1y5h_Y5H_20

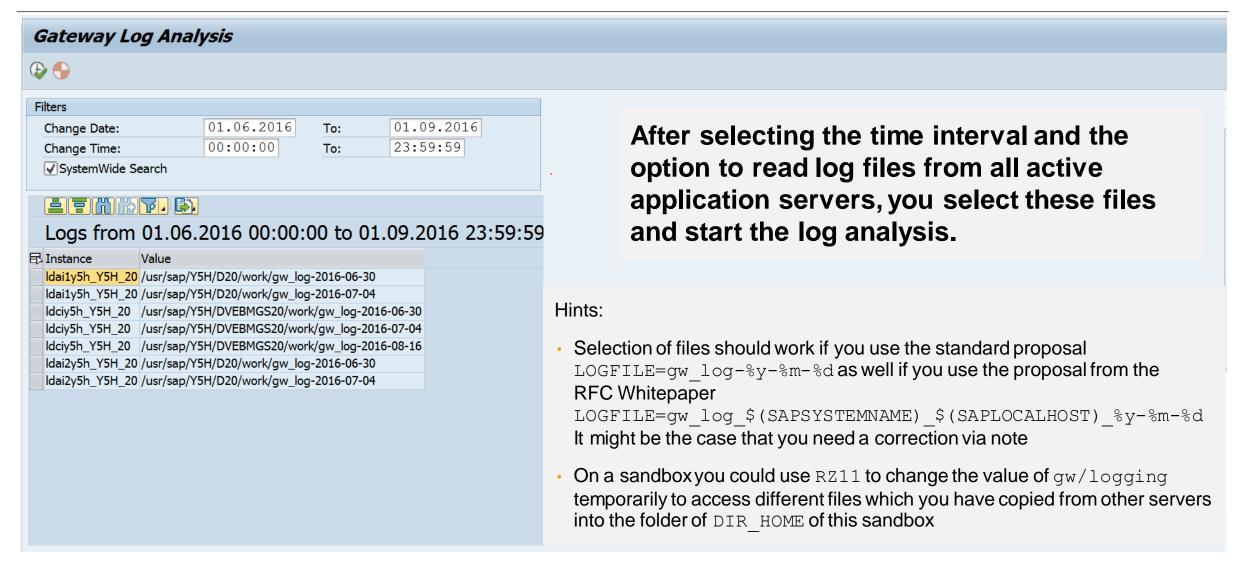


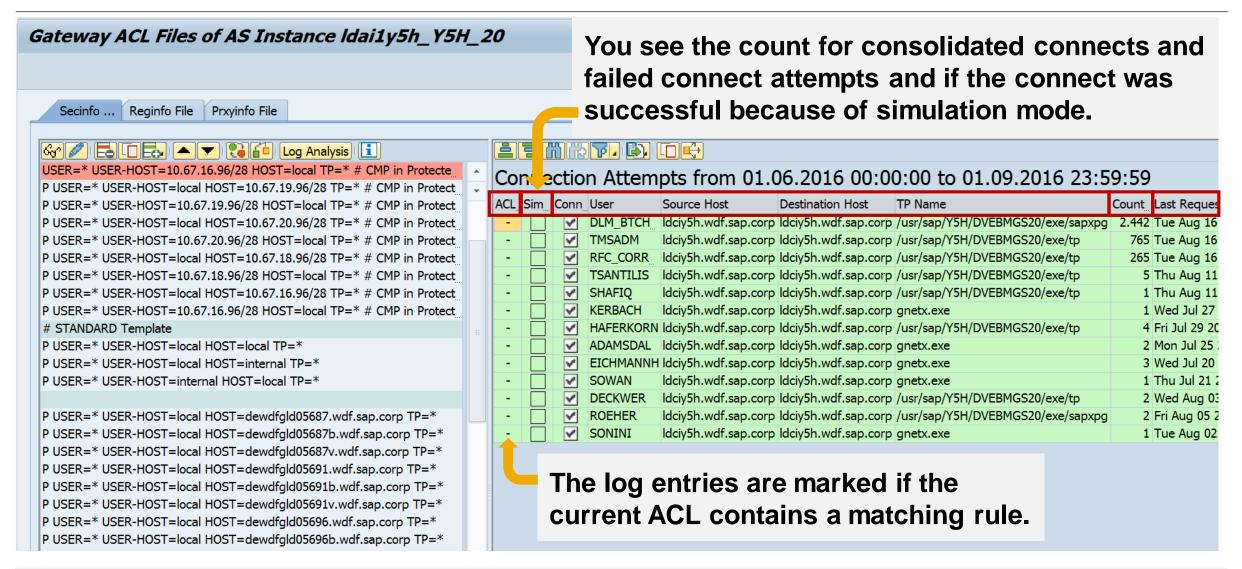
The editor offers functions to change, delete, copy, insert or move entries for the secinfo, reginfo or proxyinfo files.

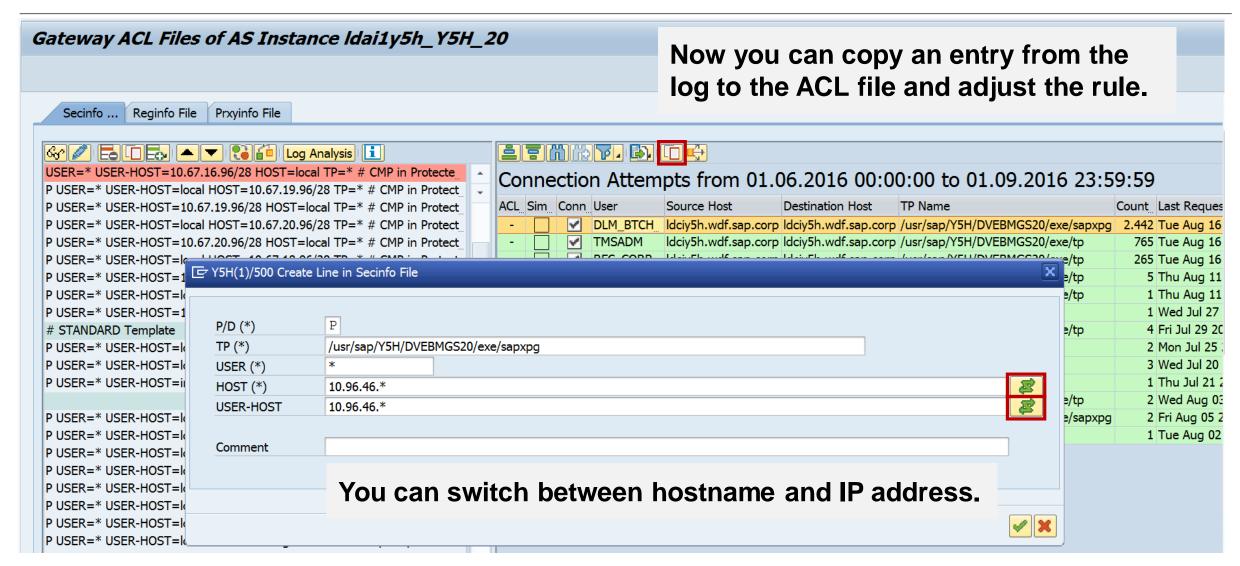
The syntax of entries is checked.

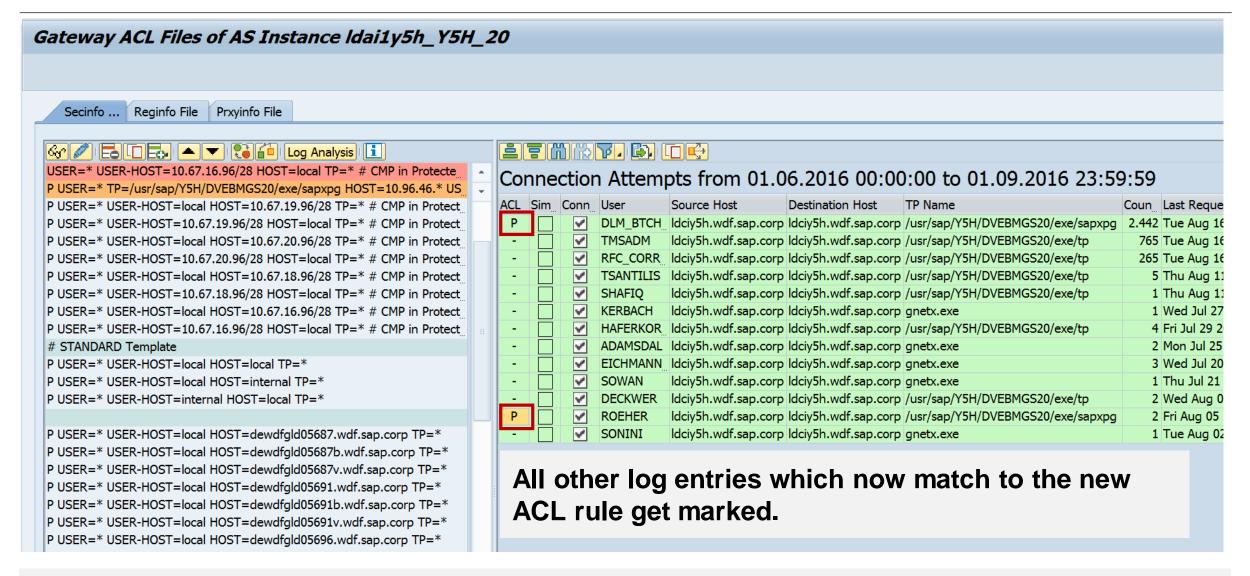
You can start the log analysis.

Finally you can save and activate the changes.

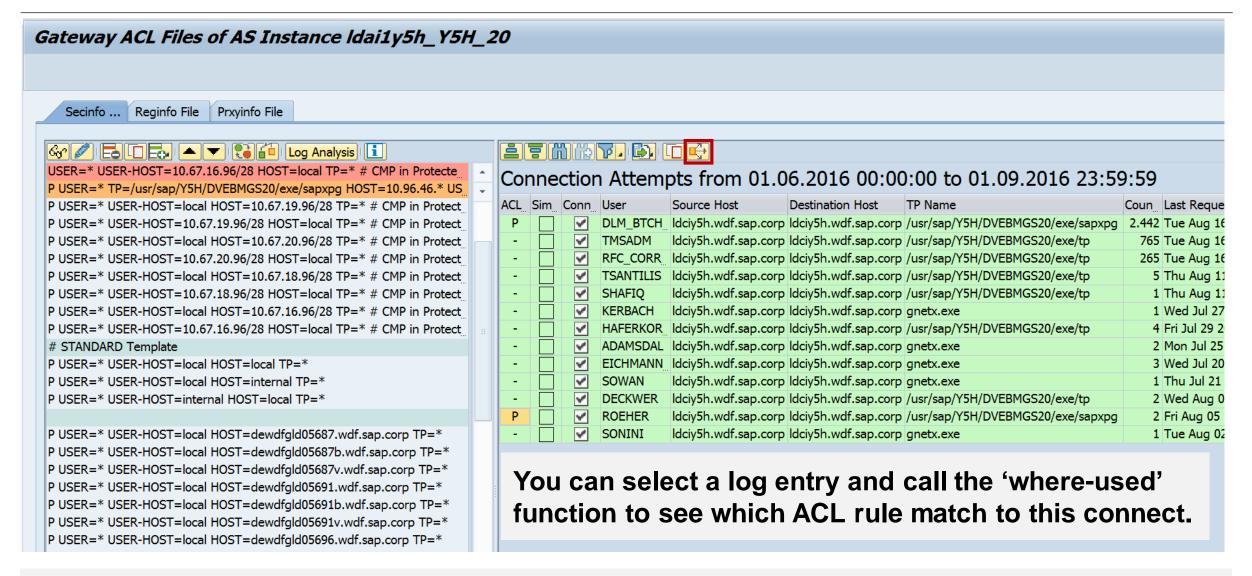








How to manage RFC Gateway Access Control lists as of SAP_BASIS 7.40



How to manage RFC Gateway Access Control lists in older ABAP releases or in Java

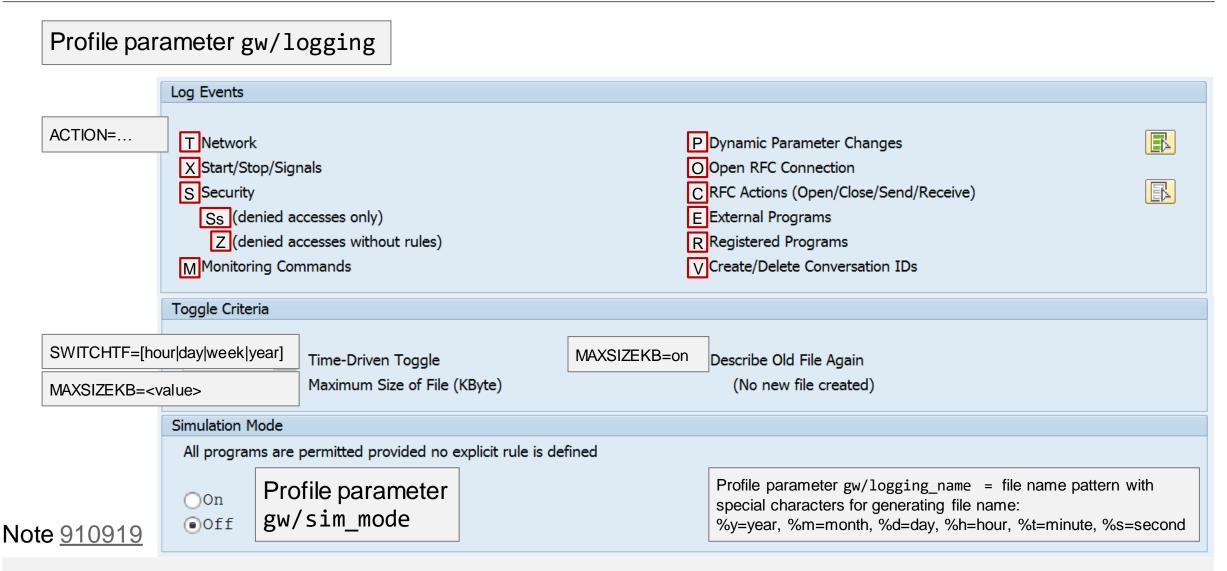
The same profile parameters, ACL files, and log files are used in ABAP releases below SAP Basis 7.40 or in Java, however, you have to analyze the logs manually to find necessary ACL entries.

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

How to manage RFC Gateway Access Control lists Dynamic Log Settings: SMGW → Goto → Expert functions → Logging



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



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 <u>2356480</u> - GW: Several Fixes in RFC Gateway

Note <u>2367193</u> - Missing Authorization check in Cash Flow Statement report

Note <u>2197830</u> - Missing authorization check in Account Management

Note <u>2368873</u> - Missing Authorization check in Banking Services / Standing Order

News about the Support Launchpad: How to define the filter for Security Notes

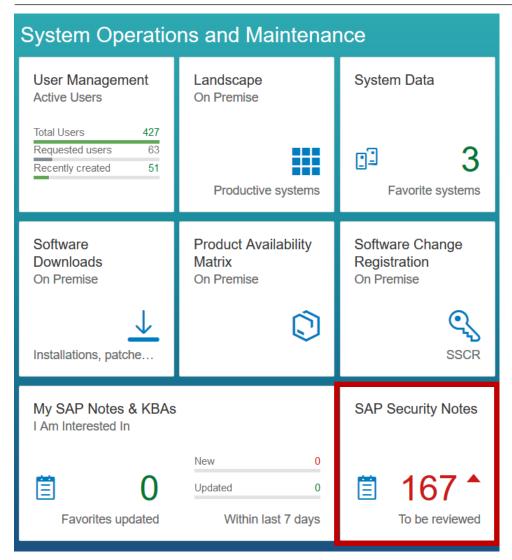


Choose your Favorites at "System Data"

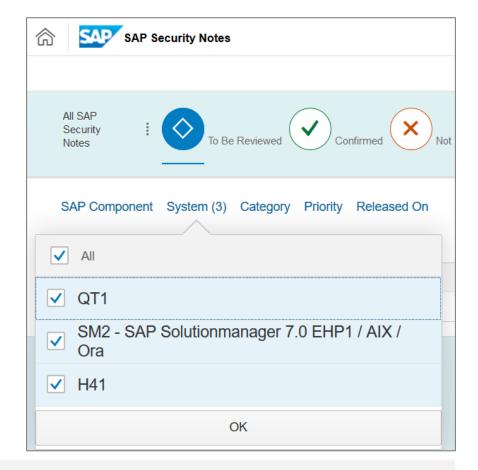
Prerequisites:

- 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

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":



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

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.

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 <u>1444282</u> - gw/reg_no_conn_info settings

Note 2123405 - GW: gw/reg_no_conn_info in 74X kernel releases

Note <u>2269642</u> - GW: Validity of parameter gw/reg_no_conn_info as of kernel release 74X

Note <u>2356480</u> - 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			

Note <u>2367193</u> - 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.

Note <u>2197830</u> - 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.)

Note <u>2368873</u> - 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".



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 <u>2078596</u> - Further improvements for RFC security (reloaded) Switchable authorization checks (SACF) plus 24 + 7 more notes

Note <u>2029397</u> - Missing authorization checks for RFC in E-commerce ERP applications

Note <u>1694657</u> - GRC SPM RFC Destination Call and FFID Passwords

Note <u>1498973</u> - Renewing trust relationships to a system

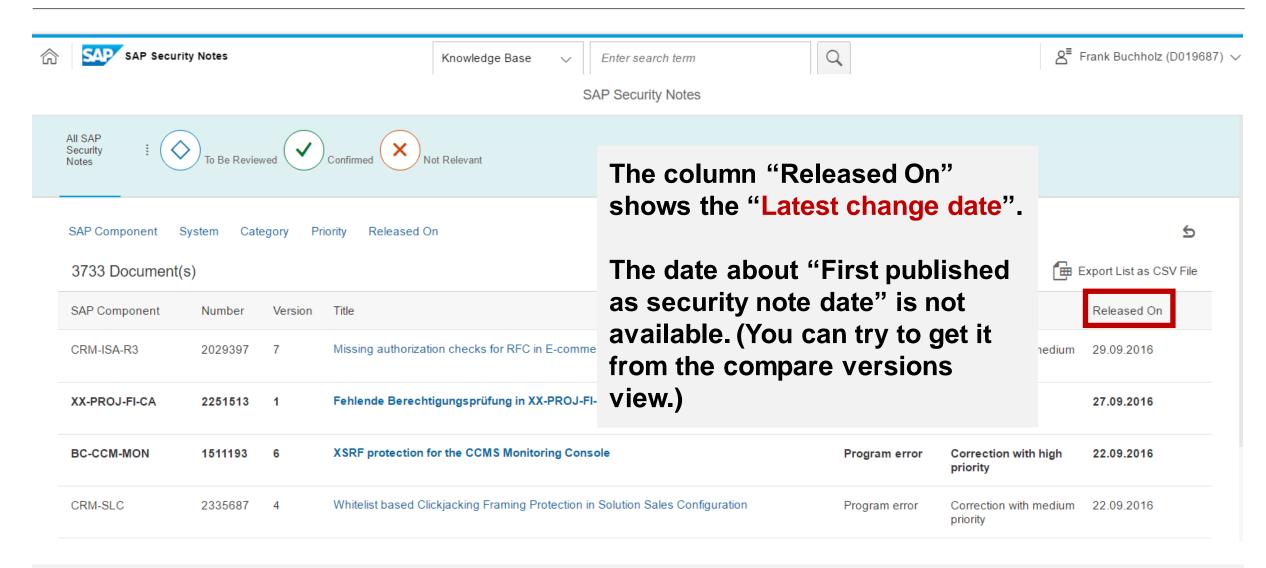
News about the Support Launchpad and System Recommendations: Released On = Latest change date

"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.

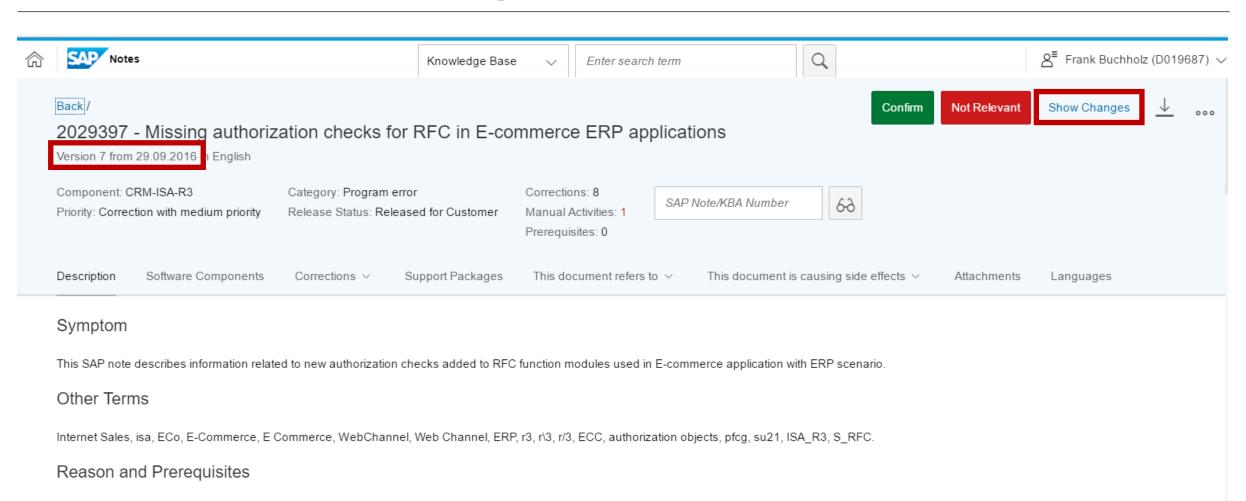
If a customer wants to base any information or reporting on the very date on which SAP has first published a vulnerability, he may do so with own custom tools. He may also look into each Note individually for the first released version, but this information is not reliable either. Customers should not work with any "first released" date of Security Notes at all. They should adapt their processes to consume the "last updated" date only.

News about the Support Launchpad Released On = Latest change date



News about the Support Launchpad Released On = Latest change date

Note 2008727 for further information on RFC Security.

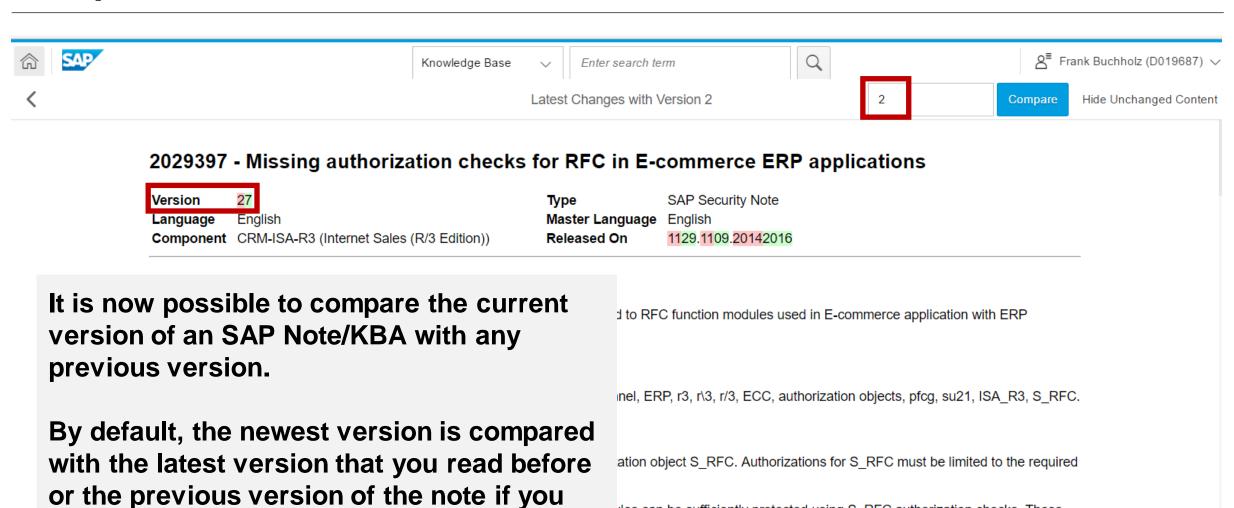


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Remote calls to RFC function modules are protected by checks on the authorization object S_RFC. Authorizations for S_RFC must be limited to the required minimum authorizations for all users to ensure system security. Many RFC function modules can be sufficiently protected using S_RFC authorization checks. These RFC function modules often do not perform additional functional authorization checks. Please see SAP

News about the Support Launchpad Compare versions

haven't read it before.



modules often do not perform additional functional authorization checks. Please see SAP Note 2008727 for further information on RFC Security.

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lles can be sufficiently protected using S RFC authorization checks. These

News about System Recommendations in SolMan 7.1

About "status management" with System Recommendations in SolMan 7.1

Note <u>2141744</u> - 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.

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 <u>associated tag "Security"</u>. 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 <u>Browse Community page</u>:

SAP Identity Management

SAP Single Sign-On

Security

SAP Solution Manager

SAP TechEd

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

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

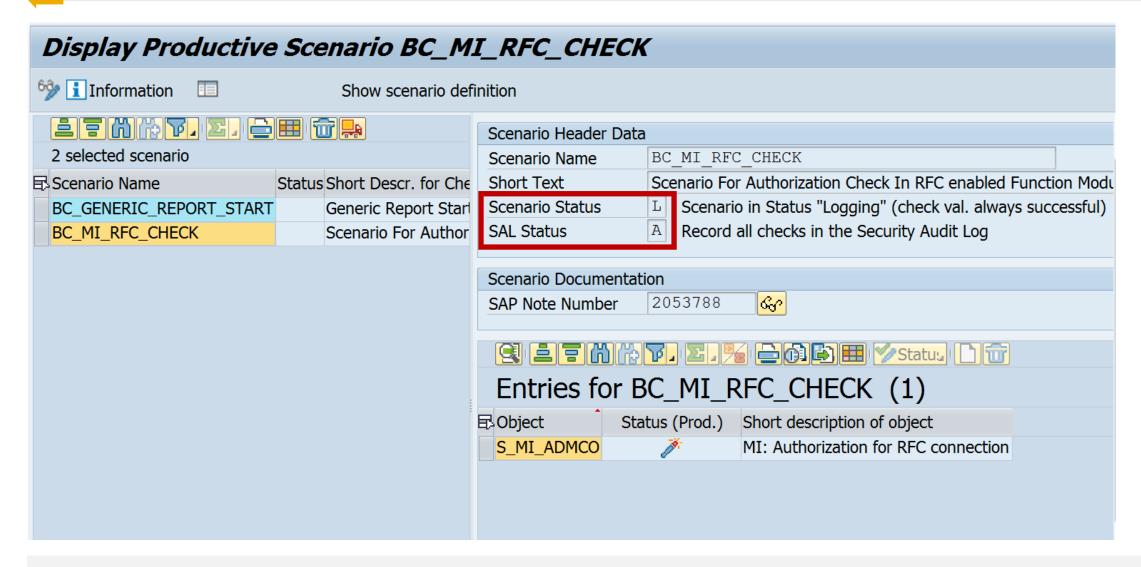
Why you should really get rid of old password hashes *NOW*

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

Note <u>2078596</u> - Further improvements for RFC security (reloaded) Switchable authorization checks (SACF)

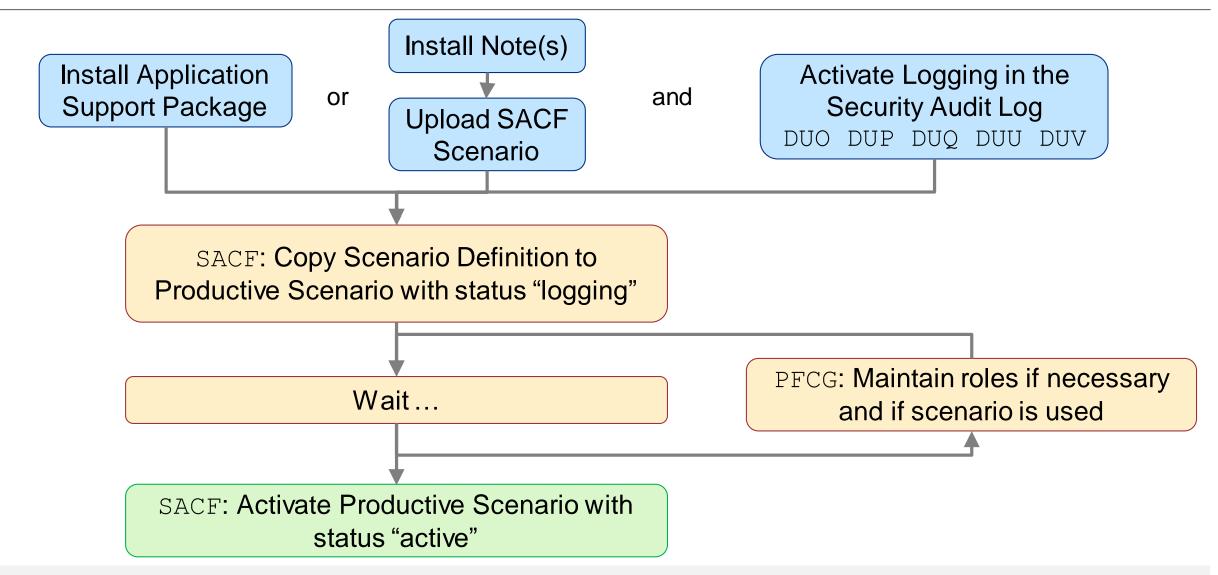


Note <u>2078596</u> - Further improvements for RFC security (reloaded) Switchable authorization checks (SACF)

The following SAP Notes contain new switchable authorization checks in RFC functions October 2016:

<u>2266687</u>	CRM-BF	Switchable authorization checks for RFC in CRM Counters
2255642	CRM-BF-BRF	Switchable authorization checks for RFC in Rule Builder BRFplus
<u>2276601</u>	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
<u>2265385</u>	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
<u>2266967</u>	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

Note <u>2078596</u> - Further improvements for RFC security (reloaded) Switchable authorization checks (SACF)



Similar Transactions / Similar Projects Switchable Whitelists (SLDW) and Authorization Checks (SACF)

Similar transactions for SACF and SLDW:

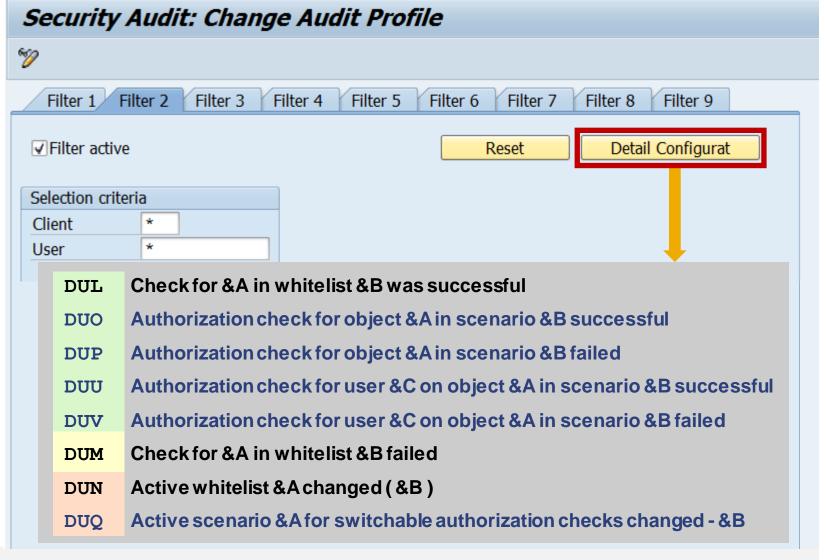
- → Switchable Whitelists (SLDW)
 - · TSLDW Switchabe Whitelists

 - † SLDW_TRANSFER Transport Switchabe Whitelists (Files)
 - · * SLDW_INFO Info. Sys. for Switchabe Whitelists
- Switchable Authorization Checks (SACF)
 - · Transport Sack Switchable Authorization Checks
 - * SACF_COMPARE Compare Scenario-Based Checks
 - * SACF_TRANSFER Transport Scenarios (Files)
 - · 🙀 SACF_INFO Info. Sys. for Scenario-Based Checks

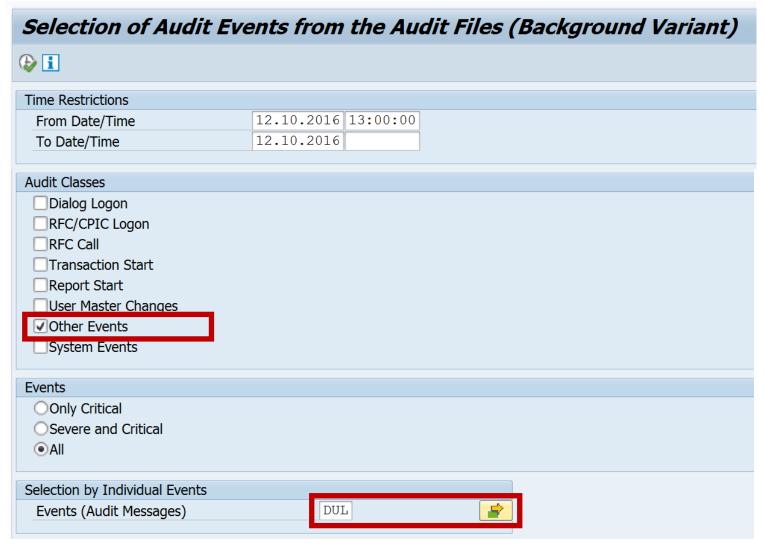
Activate logging via Security Audit Log for Switchable Whitelists (SLDW) and Authorization Checks (SACF)

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 Whitelists (SLDW) and DUO, DUU, DUP, DUV, and DUQ for Authorization Checks (SACF). You find all messages in section "Other Events"



Activate logging via Security Audit Log for Switchable Whitelists (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 whitelists.

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 whitelist / the scenario into active state.

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	djustment of authorizati		

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.

Note <u>2078596</u> - Further improvements for RFC security (reloaded) Comments about unconditional authorization checks

Note <u>2257328</u> – 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 <u>2263132</u> – CRM-CHM Missing authorization check in CRM-CHM

Missing authorization checks were implemented using <u>Access Control Engine</u> (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 <u>2251513</u> – 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.

Note <u>2029397</u> - 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.

Note <u>2029397</u> - Missing authorization checks for RFC in E-commerce ERP applications (reloaded)

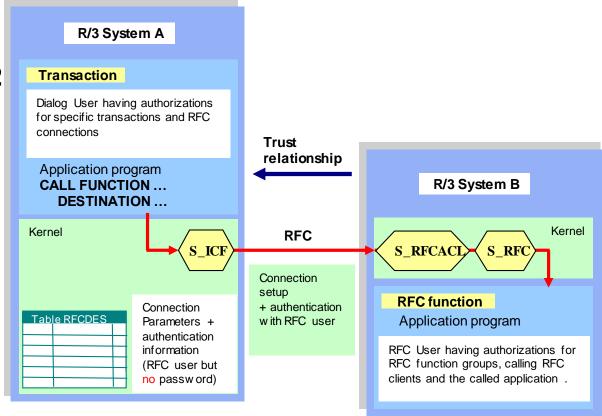
No change between version 5 (October 2015) and version 7 (October 2016)

Software Component	From	То	Version	Changed on	Sion 7 (October 2016)
SAP_APPL	600604600	604 <mark>2</mark>	3	2812.0805.2014 19:2015 18: <mark>11</mark> 44:56	<mark>0001796923</mark> 0001796927
SAP_APPL	606600606	600 <mark>3</mark>	2	1228.0508.2015 2014 19:18:41:4211	0001796940 0001796923
SAP_APPL	602606602	606 <mark>2</mark>	3	2812.0805.2014 192015 18: <mark>24</mark> 41: <mark>13</mark> 42	00017969240001796940
SAP_APPL	617602617	602 <mark>3</mark>	2	1228.0508.2015 182014 19: <mark>38</mark> 24: <mark>36</mark> 13	00017969420001796924
SAP_APPL	603617603	617 <mark>2</mark>	13	2812.0805.2014 192015 18: <mark>27</mark> 38: <mark>35</mark> 36	0001796925 <mark>0001796942</mark>
SAP_APPL	616603616	603 <mark>3</mark>	2	1228.0508.2015 182014 19: <mark>39</mark> 27: <mark>46</mark> 35	00017979160001796925
SAP_APPL	604 <mark>616</mark> 604	616	3	12.05.2015 18: <mark>44</mark> 39: <mark>56</mark> 46	<mark>0001796927</mark> 0001797916
SAP_APPL	605	605	4	25.09.2015 15:09:39	0001796939

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 <u>128447</u>):
 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)



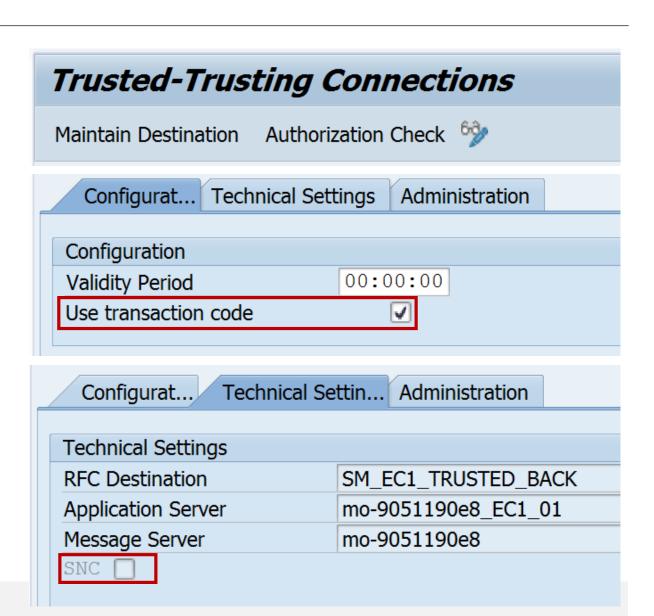
Source: Presentation <u>RFC Security v1.1</u> from 2004

respective Teched 2012 session SIS264 Securing RFC

On the GRC Box (local / central):

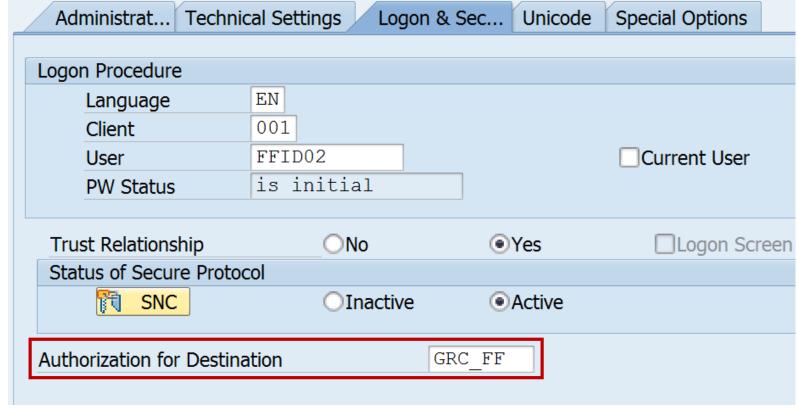
- Modifications to Trust Relationship in transaction SMT1
 - Activate the setting which enables sending the transaction code
 - You can check this with transaction SE16 for table RECSYSACL with field RECTCDCHK = X

Optionally, you can enable SNC



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'.



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.

Dependig 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).

Authorizations for S RFCACL on the managed systems:

Do not enter * values for RFC_SYSID, RFC_CLIENT, RFC_EQUSER, and RFC_TCODE!

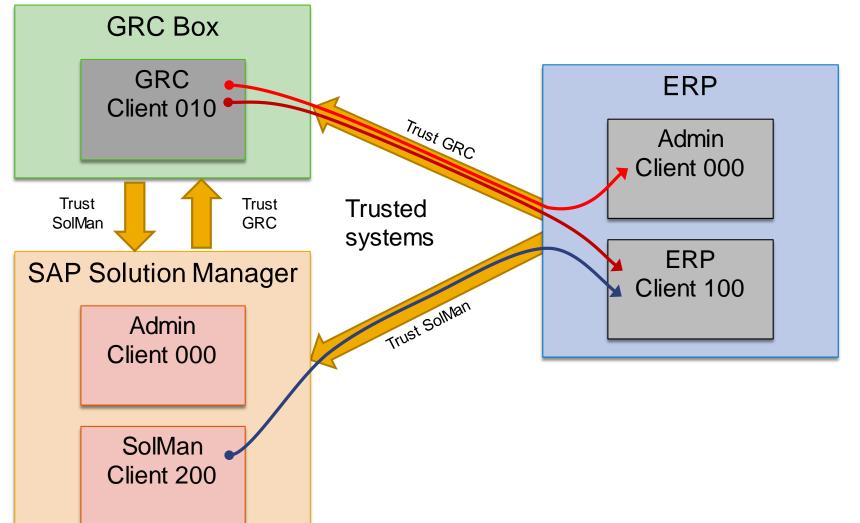
	AC 5.3	AC 10.x, decentral	AC 10.x, central
Role	/VIRSA/Z_VFAT_FIREFIGHTER	Z_SAP_GRC_SPM_FFID	
RFC_SYSID	<local sid=""></local>	<local sid=""></local>	<sid box="" grc="" of=""></sid>
RFC_CLIENT	<local client=""></local>	<local client=""></local>	<cli>delient of GRC box></cli>
RFC_USER	*	*	*
RFC_EQUSER	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)
3 CM37M	1.6	,	,
ACTVT	16	16	16

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 box="" grc="" of=""></sid>	
RFC_CLIENT	SAME_CLIENT	SAME_CLIENT	<cli>delient of GRC box></cli>	
RFC_USER	* Alternate solution if	+	*	
RFC_EQUSER	NOTE 2150260 CAME	NOTE 2150260 CAMP -		
RFC_TCODE	/VIRSA/V can be extended and do	RFC_SYSID in trusted RFC does not work can be extended and downported		
RFC_INFO	SAME_LICENCE_NR	SAME_LICENCE_NIX	(or installation number of GRC box)	
ACTVT	16	16	16	

System Landscape – SolMan and Central FireFighter



FireFighter:

Identical authorizations for S_RFCACL in all clients in all systems:

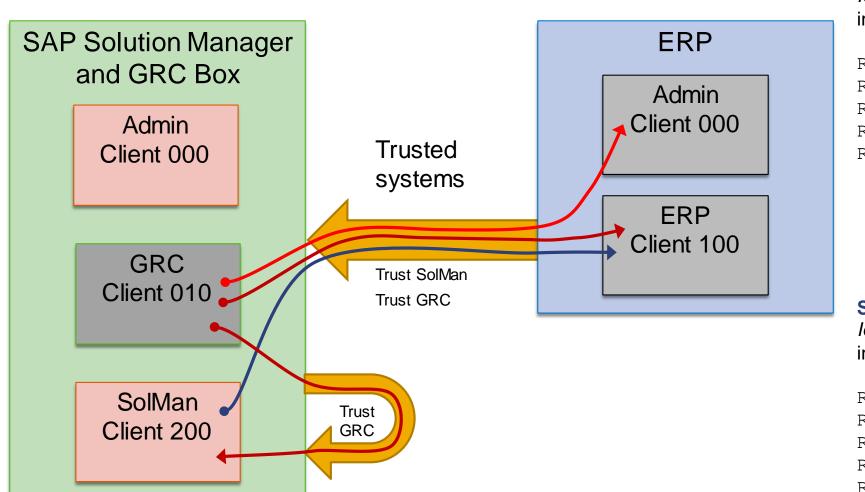
```
RFC_SYSTEM = GRC (GRC system)
RFC_CLIENT = 010 (GRC client)
RFC_EQUSER = N
RFC_USER = *
RFC_TCODE = GRAC_EAM
```

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 = *
```

System Landscape – SolMan and Central FireFighter



FireFighter:

Identical authorizations for S_RFCACL in all clients in all systems:

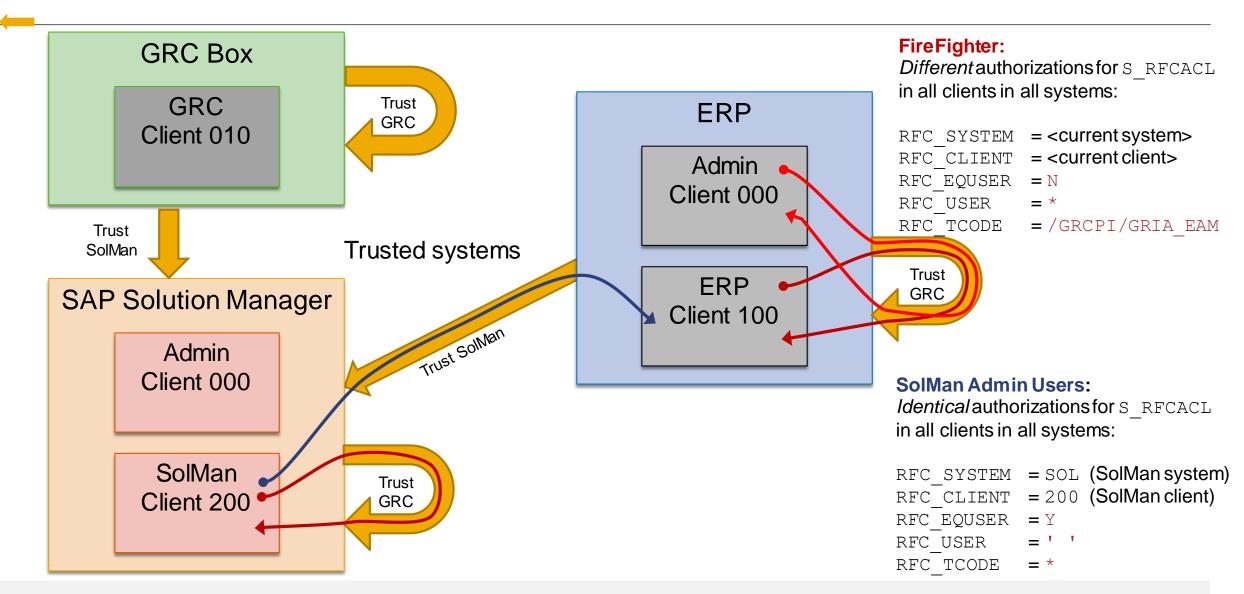
```
RFC_SYSTEM = SOL (SolMan system)
RFC_CLIENT = 010 (GRC client)
RFC_EQUSER = N
RFC_USER = *
RFC_TCODE = GRAC_EAM
```

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 = *
```

System Landscape – SolMan and decentral FireFighter



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/	XS2/0020230702 trusts these systems:			
System	Install.no	Security Method	Evaluation	Delete
EC1	SAP-INTERN	Security Method 1 (Not Recommended)	X	ŵ
NA1	INITIAL	Security Method 1 (Not Recommended)	©	T
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)	€ ○○



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 <u>1477597</u> - Unauthorized modification of stored content in NW KMC

Old Update Notes

Note <u>2227969</u> - SAP_NEW profile exists despite SAP Note 1711620

Note <u>1711620</u> - Role SAP_NEW replaces profile SAP_NEW

Reloaded: How to define cipher suites for SSL/TLS in ABAP, Java, and HANA

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 <u>2216869</u> and parameter <u>file_security</u> in section [import_export] according to note <u>2252941</u> 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

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'
```

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:

- <u>2176128</u> Potential information disclosure relating to server information (solution with revision 95)
- <u>2148905</u> 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)
- <u>2233136</u> Potential termination of running processes triggered by IMPORT statement (solution with rev. 102.02, rev. 110)
- <u>2252941</u> Potential information disclosure relating to files exported from SAP HANA with EXPORT statement (solution with rev. 102.03, rev. 110)
- <u>2233550</u> Communication encryption for HANA multi tenant database containers does not work as expected (solution with rev. 102.02, rev. 110)

Note <u>1477597</u> - Unauthorized modification of stored content in NW KMC

Update note <u>2351001</u> 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

Note <u>1477597</u> - 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

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 <u>1540408</u> - Update #1 for security Note 1505368

Note <u>1542033</u> - Update #1 for security note 1497003

Note <u>1678072</u> - Update #1 to Security Note 1579673

Note <u>1724922</u> - Update 1 to Security Note 1653474

Note <u>1727640</u> - Update 1 to security note 1520101

Limitation: The validity information for SP ranges is not added (only for software component and release).

Note <u>2227969</u> - SAP_NEW profile exists despite SAP Note 1711620 Note <u>1711620</u> - 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

Reloaded: How to define cipher suites for SSL/TLS in ABAP, Java, and HANA

Note <u>2110020</u> 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 <u>510007</u> respective in note <u>2253695</u>.
- 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 <u>2284059</u>.

HANA

 Note <u>2312071</u> describes how to define the profile parameter ssl/ciphersuites for the web dispatcher of HANA



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 <u>2220030</u> - STUSERTRACE: User trace for authorization checks

Tips for the Upgrade of a system with a CUA central system i.e. if CUA master is still running on SolMan 7.1

Note <u>2288530</u> - 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)

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.

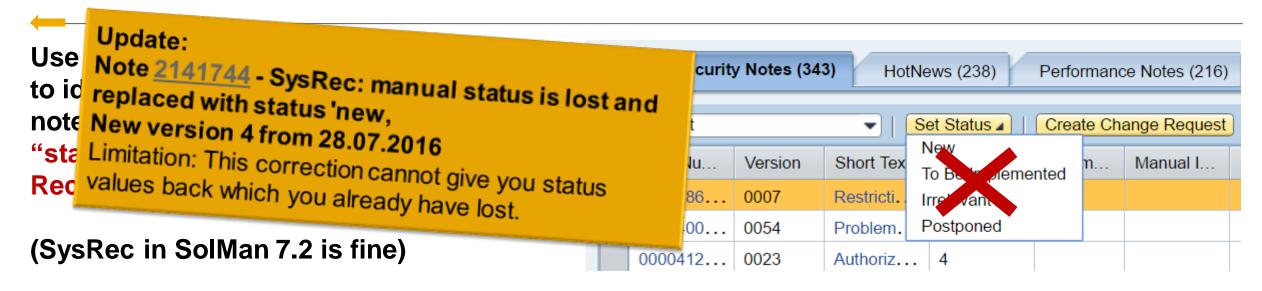
More information can be found on <u>SAP ONE Support Launchpad Application Overviews</u>.

Report issues with Launchpad and new applications using the Feedback button or create an incident:

https://support.sap.com/contactus

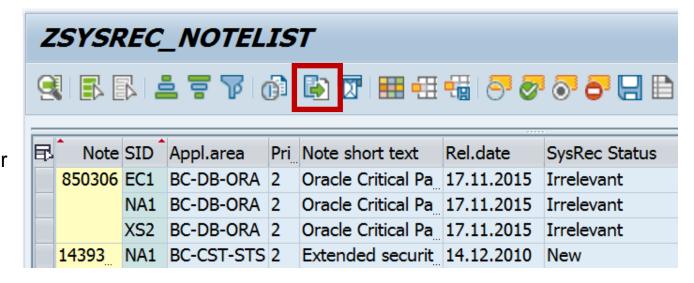
→ Report an incident for component XX-SER-SAPSMP-LAUNCH

News about System Recommendations in SolMan 7.1



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.



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

Note 2220030 - STUSERTRACE: User trace for authorization checks

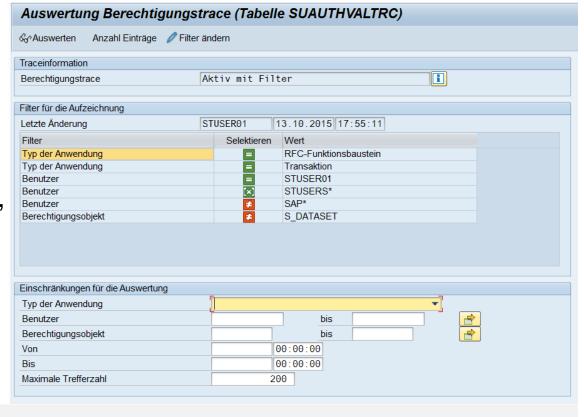
New transaction STUSERTRACE as of SAP_BASIS 7.40 SP 14 or 7.50 SP 03 with Kernel as of 7.45 patch 112 allows a long-time trace for authorization checks of an user.

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



Tips for the Upgrade of a system with a CUA central system

If CUA master 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 master 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.

Note <u>2288530</u> - System internal logons are not properly logged in Security Audit Log

Internal logon	Profile parameter
AutoABAP	rdisp/autoabapuser
Server Startup Procedure	rdisp/server_startup/user
SAP Startservice	rdisp/start_service_user
Java Virtual Machine	rdisp/autojavauser
BGRFC Watchdog	rdisp/bgrfc_watchdog_user

Comment

Empty user in client 000!

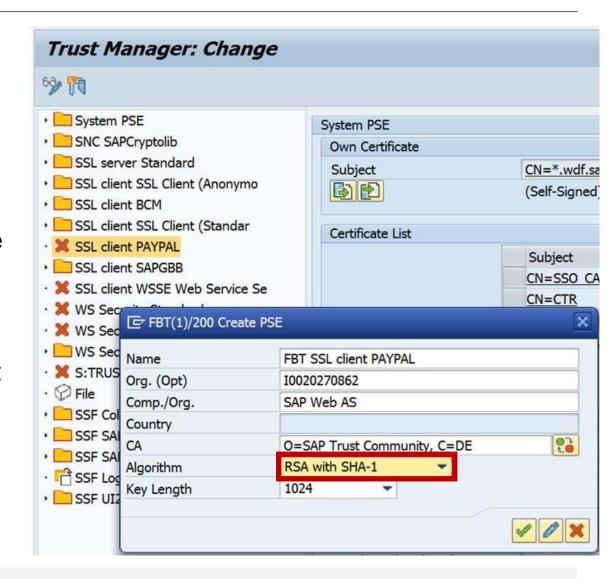
Note 2223635 - Fixes in CommonCryptoLib 8.4.43

To strengthen encryption, i.e. with SNC or SSL, you may want to choose a stronger encryption algorithm.

Note <u>2223635</u> 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.



Note 2223635 - Fixes in CommonCryptoLib 8.4.43

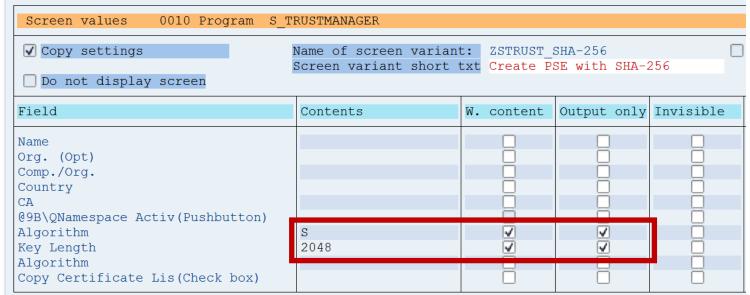
Tipp from an ASUG Member:

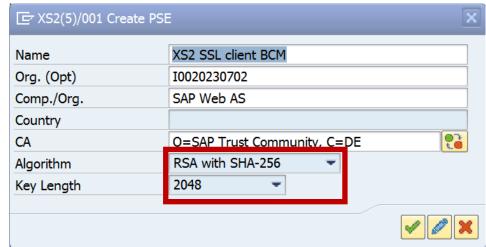
Change screen variant

GuiXT Script
Screen variants for transaction STRUST

Use transaction SHDO 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.





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 \rightarrow 10000

Saltsize: 32 - 256 (divisible by 8) default = 96 is ok

Clickjacking Overview

https://www.owasp.org/index.php/Clickjacking

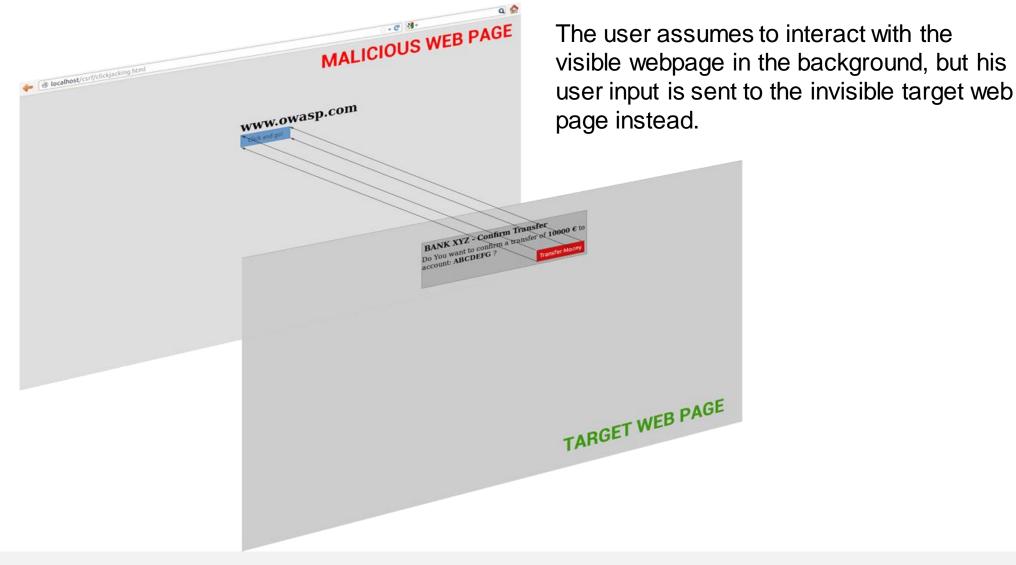
Test page file:///C:/temp/clickjack_test.htm

Use such a test page to validate your configuration or use the Transaction Launcher URL IFAME Testing

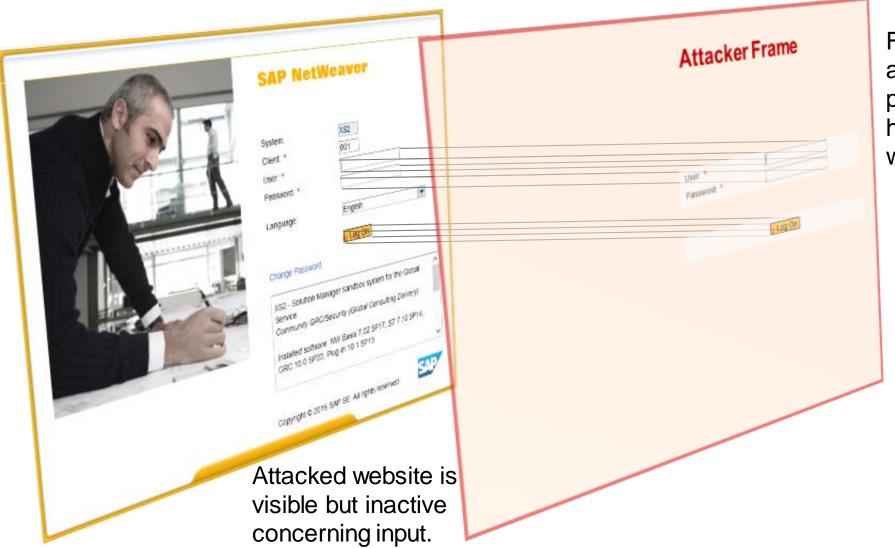
Central note with overall description of the protection framework

Note <u>2319727</u> - Clickjacking protection framework in SAP Netweaver AS ABAP and AS Java

Example (variant with victim on top)



Example (variant with attacker on top)



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.

NEW NOTES (compared with first publication in July 2016; marked red on next slide)

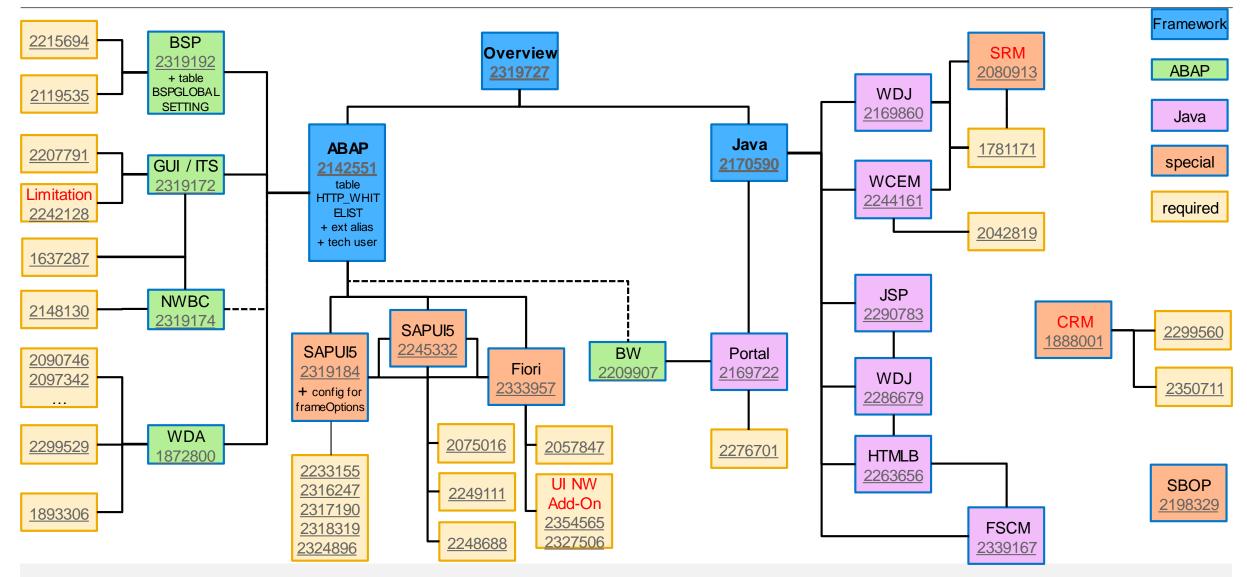
- Note <u>1888001</u> Error "This content cannot be displayed in a frame" is shown on CRM WebUI page
- Note <u>2299560</u> Issue with the SHL report creation
- Note 2350711 Targetgroup List of Hybris Marketing can't be displayed inside CRM
- Note 2080913 Error "This content cannot be displayed in a frame" on SRM-MDM in Internet Explorer
- Note <u>2242128</u> Clickjacking protection works only with limitations
- Note <u>2354565</u> ClickJacking notes for Fiori and downloading UI NW Add-On
- Note <u>2327506</u> Shared Service Framework: Enabling SAP Fiori Transaction Launch

More notes (not checked yet)

- Note <u>2321867</u> Extending or replacing functionalities in Web Channel / E-Commerce
- Note <u>2327541</u> Configuring ClickJacking protection in Web Channel / E-Commerce applications (HTMLB)
- Note <u>2325497</u> Clickjacking Framing Protection in MII (JSP)
- Note <u>2338446</u> Clickjacking Framing Protection in MII (JSP)
- Note <u>2337225</u> Clickjacking vulnerability in LSO Content Player
- Note 2339506 Whitelist based Clickjacking Framing Protection in Utility Customer E-Services

[...]

Relationship between notes



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 <u>2245332</u> Automatic usage of Whitelist Service for Clickjacking Framing Protection in SAPUI5 Apps
- Note <u>2319172</u> Whitelist based Clickjacking Framing Protection in SAP GUI for HTML
- Note <u>2319174</u> → <u>2148130</u> Whitelist based Clickjacking Framing Protection in NWBC for HTML
- Note <u>2319192</u> Whitelist based Clickjacking Framing Protection in BSP



- Note <u>2242128</u> Clickjacking protection works only with limitations
- Note <u>2354565</u> ClickJacking notes for Fiori and downloading UI NW Add-On
- Note <u>2350711</u> Targetgroup List of Hybris Marketing can't be displayed inside CRM

mandatory settings

General switch / whitelist

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
         NWBC runtime
03
10
         WebDynpro Resume URL (Note 2081029)
         Web Dynpro Redirect URL (Note 2081029)
         Redirect URL for parameter sap-mysapred of ICF (Note 612670)
20
         Redirect URL for parameter redirecturl of ICF (Note 1509851)
21
         Clickjacking protection (Note <u>2142551</u>)
30
         Suite Redirect
40
99
         Generic
```

You can use report RS_HTTP_WHITELIST instead, too, which shows the value help for the entry type field.

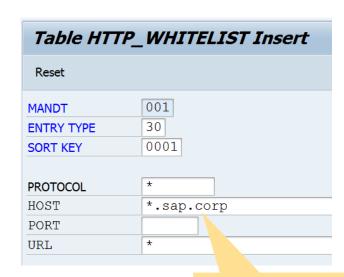
Recommended SP for ABAP

Required SP for ABAP (mainly according to notes 2142551 and 2319184)

"Implementing UR SAP Notes via SNOTE may be a time consuming process."

CAD DACIC	700	C / DK D 70022	N
SAP_BASIS	700	SAPKB700 <mark>33</mark>	
SAP_BASIS	701	SAPKB701 <mark>18</mark>	Clicl
SAP_BASIS	702	SAPKB70218	SE16
SAP_BASIS	710	SAPKB710 <mark>21</mark>	HT'
SAP_BASIS	711	SAPKB711 <mark>16</mark>	E
SAP_BASIS	730	SAPKB730 <mark>15</mark>	S
SAP_BASIS	731	SAPKB731 <mark>18</mark>	requi
SAP_BASIS	740	SAPKB740 <mark>14</mark>	-
SAP_BASIS	750	SAPK-75002INSAPI	BASIS

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

SAP_UI	740	SAPK-740 <mark>16</mark> INSAPUI	with SAPUI5 version 1.28.35 with SAPUI5 version 1.36.11
SAP_UI	750	SAPK-750 <mark>03</mark> INSAPUI	
UISAPUI5	100	SAPK-100 <mark>16</mark> INUISAPUI5	with SAPUI5 version 1.28.35 with SAPUI5 version 1.36.11
UI 700	200	SAPK-200 <mark>03</mark> INUI700	

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

Additional Information for ABAP

Note <u>1872800</u> requires Unified Rendering note <u>2090746</u> which might require many other notes.

Note <u>2319172</u> might require to create empty methods BUILD_HTML_FRAMESETPAGE and START_TRANSACTION in class CL_HTTP_EXT_ITS using transaction SE80 as a preparation.

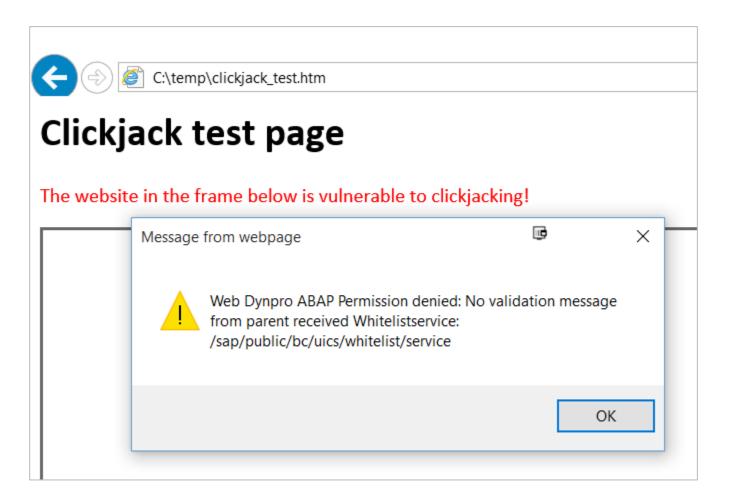
Notes <u>2319192</u> and <u>2327506</u> requires additional activation in table BSPGLOBALSETTING with an entry showing CLICKJACKING = ON

Note <u>2327506</u> 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.

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.

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 <u>Transaction Launcher URL</u> <u>IFAME Testing</u>

Not checked yet

ClickJacking Notes

Additional information for Java

Note <u>2170590</u> - Whitelist service for Clickjacking Framing Protection in AS JAVA

- Note <u>2169860</u> Whitelist based Clickjacking Framing Protection in Web Dynpro Java
- Note 2169722 Whitelist based Clickjacking Framing Protection in Enterprise Portal
 - Note <u>2276701</u> BCM Not showing messages after upgrade
- Note <u>2290783</u> 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













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

ClickJacking Notes

Additional information for Java

Note <u>2290783</u> - Whitelist based Clickjacking Framing Protection for Java Server Pages

Adopt the impacted custom application based on JSP

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 <u>2263656</u> 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
On 7.01 there is a patch for SP 18 available and SP 19	LIFECYCLE MGMT TOOLS 7.00	SP034	000000
contains the solution. SP 17 is affected as well-	LIFECYCLE MGMT TOOLS 7.01	SP018	000002
especially in case of a general issue like Clickjacking,	LIFECYCLE MGMT TOOLS 7.01	SP019	000000
however, you have to run an SP upgrade to get the	LIFECYCLE MGMT TOOLS 7.02	SP018	000003
solution.	LIFECYCLE MGMT TOOLS 7.02	SP019	000000

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!



June 2016

Topics June 2016



Security Notes on the Support Portal and the Launchpad – Reloaded

Note <u>2021789</u> - SAP HANA revision und maintenance strategy

How to use SAP HANA Mini Checks for Security Validation

Note <u>2252312</u> - Insufficient logging of RFC in SAL

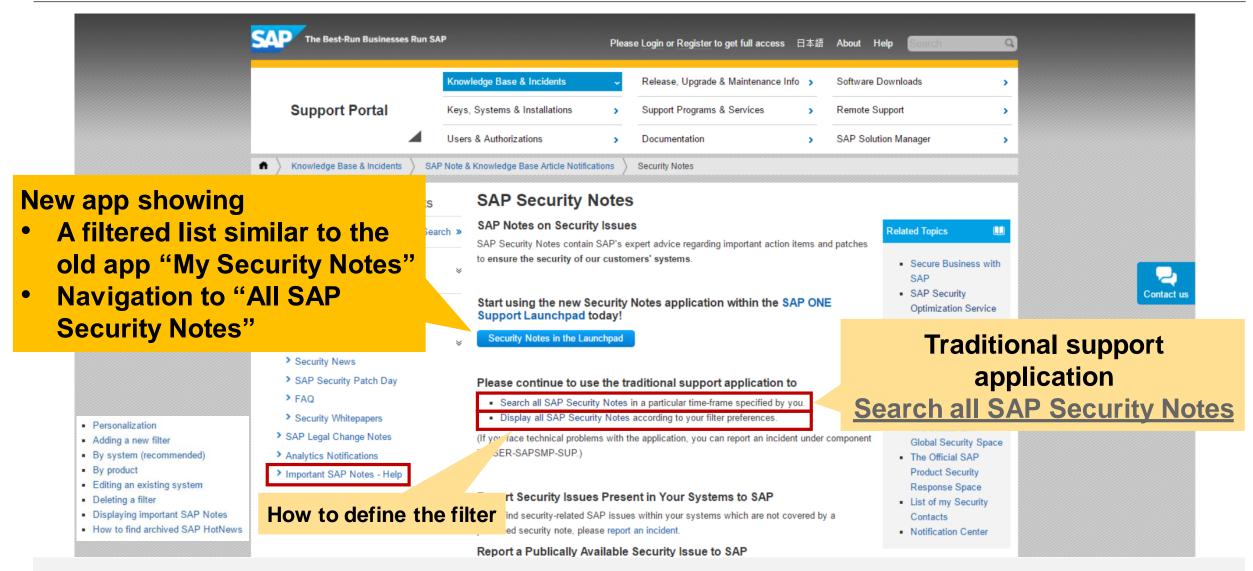
Note <u>2306709</u> - Code Injection vulnerability in Documentation and Translation Tools

Note 2160790 - Missing authorization check in FS-CML

Note <u>2195409</u> - Potential modif./disclosure of persisted data in SAP CPQ Solution Configuration

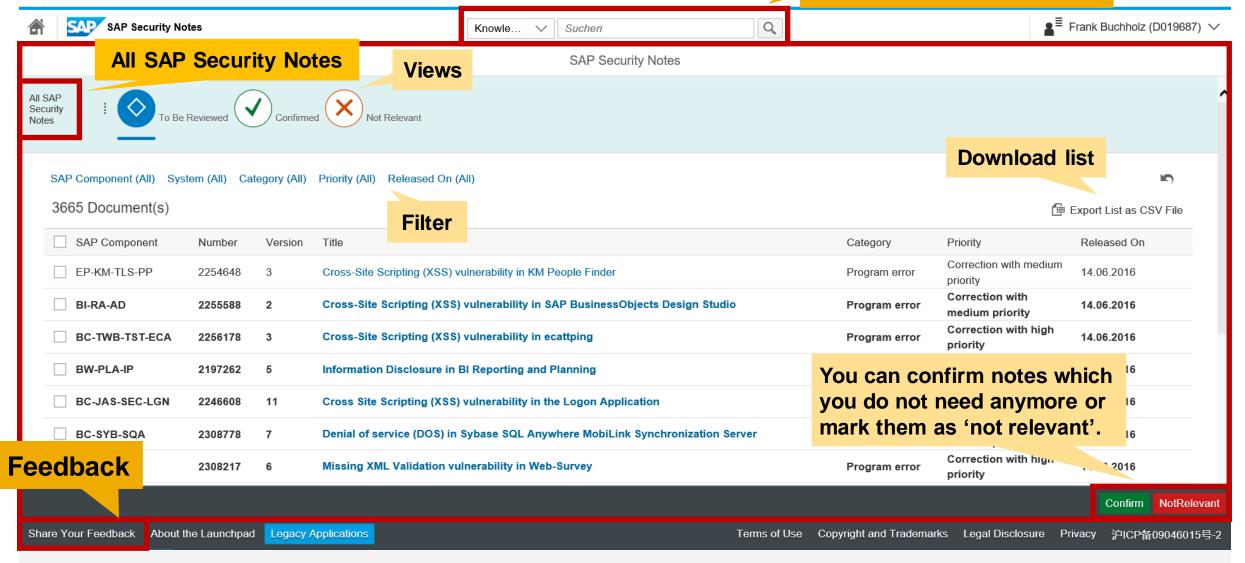
Note <u>1882254</u> - Authorization check for logon data not based on passwords

Security Notes on the Support Portal https://support.sap.com/securitynotes



Security Notes in the Launchpad

"General Search" (not related to current app)



SAP HANA Security Maintenance Strategy, Revision Management and Patching

Holger Mack, SAP SE

June 2016



secure information access

secure system setup

secure software



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?

It is difficult to assess impact of security issue?

Could you provide workarounds?

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?

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



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

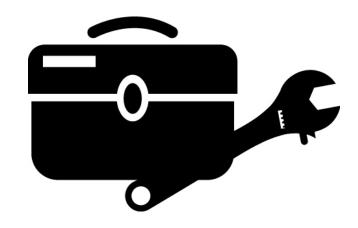
- Installed using SAP HANA's lifecycle management tools
- See also SAP Note <u>2021789</u> SAP HANA revision und maintenance strategy

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

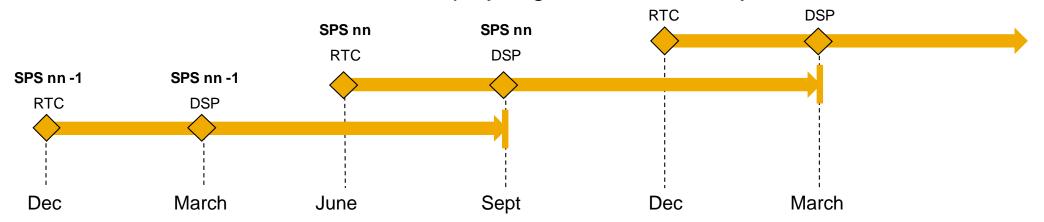
Provided by the respective vendors SuSE/Redhat



SAP HANA Maintenance Strategy

Overview Timeline

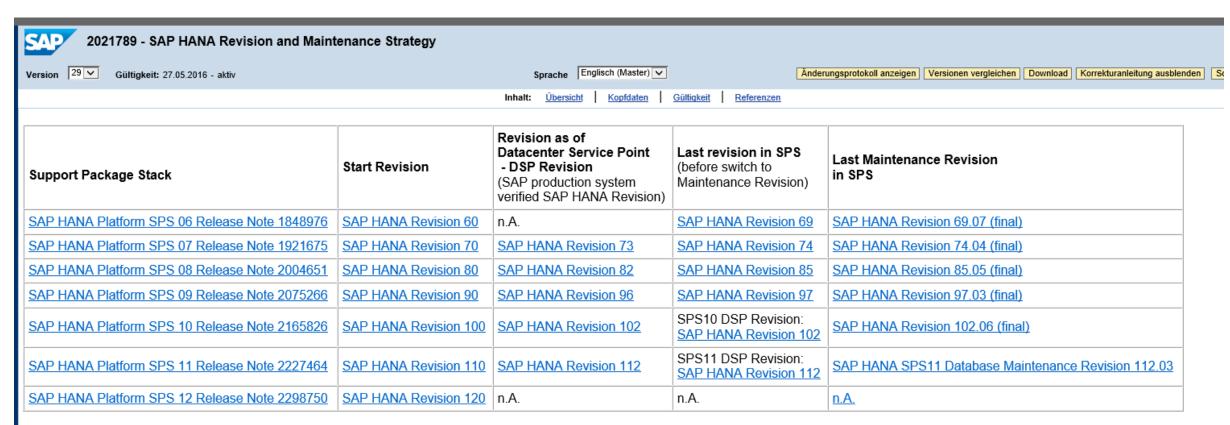
- New capabilities are introduced twice a year, every time a new SAP HANA Support Package Stack (SPS) is released. This happens normally in December and June
- Datacenter Service Point is declared about 3 month after RTC, normally in March and September
- SAP is not providing maintenance revisions for 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

SAP HANA Maintenance Strategy

Overview SAP Note 2021789



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 preparation details.

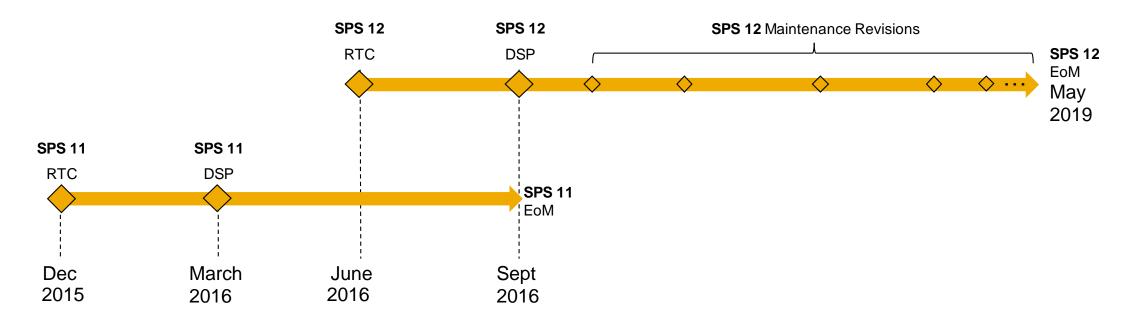
SAP further recommends to ensure that SAP EarlyWatch Alert (EWA) has been activated in your SAP HANA environment to ensure that you will get the latest up-to-date technical recommendation related to your SAP HANA landscape. For more information, please refer to SAP Note 1958910.

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.

SAP HANA Maintenance Strategy Revision Strategy for SPS12

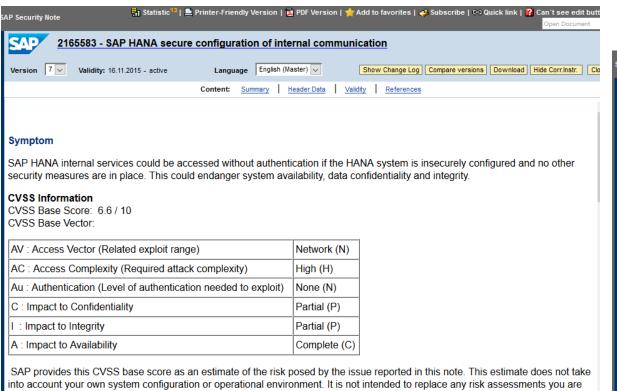
Customers running mission critical systems demand a *longer provisioning of Maintenance Revisions* For SAP HANA SPS12:

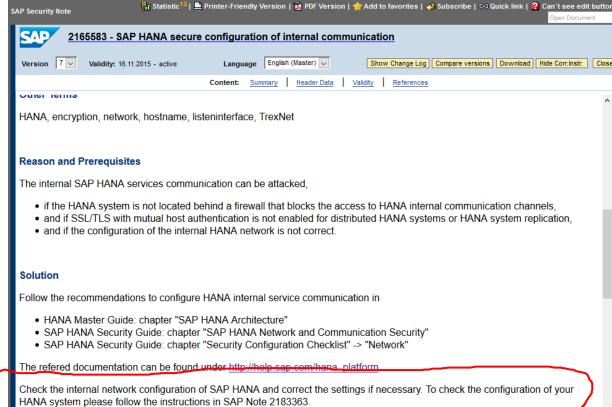
- SAP will provide Maintenance Revisions for a period of 3 years after SPS12 RTC
- There will be regular upgrade paths from SPS12 to any newer SPS



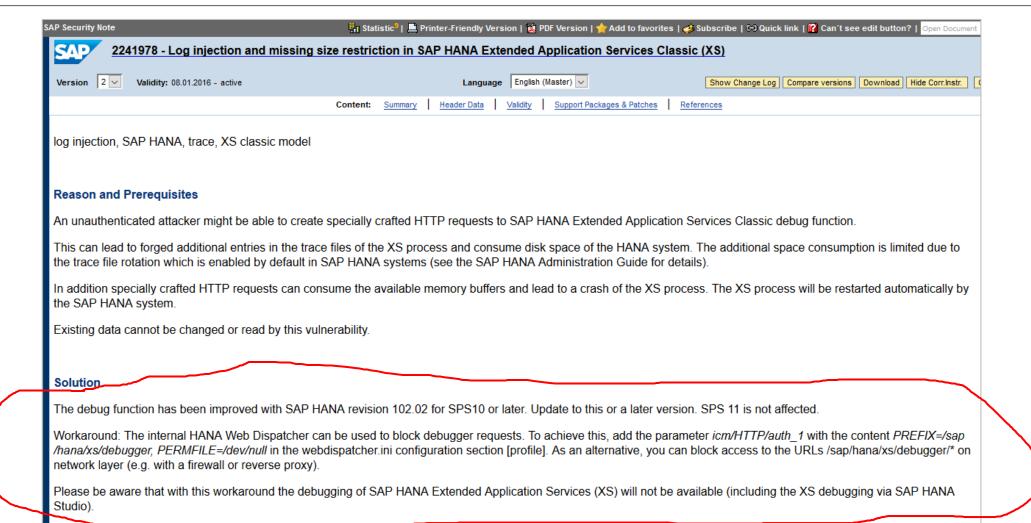
See SAP Note 2021789 for further details

HANA Security Note Example (1/2)

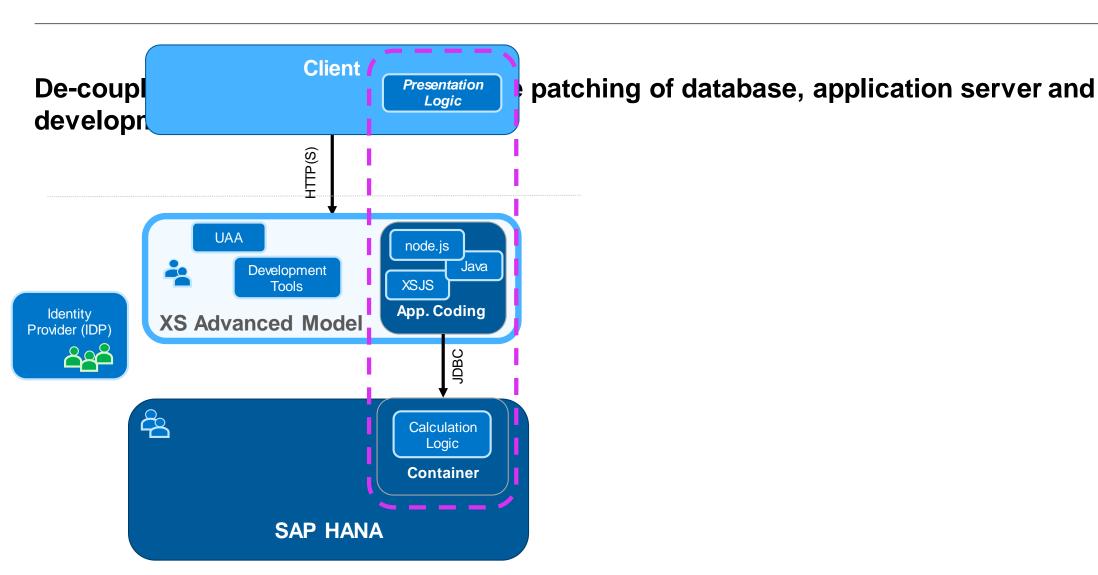




HANA Security Note Example (2/2)



Applications built on SAP HANA XS advanced model (SPS11)



What is preventing you from upgrading your systems?

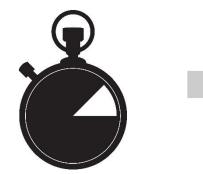
SAP HANA offers features that support you in making revision upgrades as painless as possible

Reduced testing effort



Capture and replay

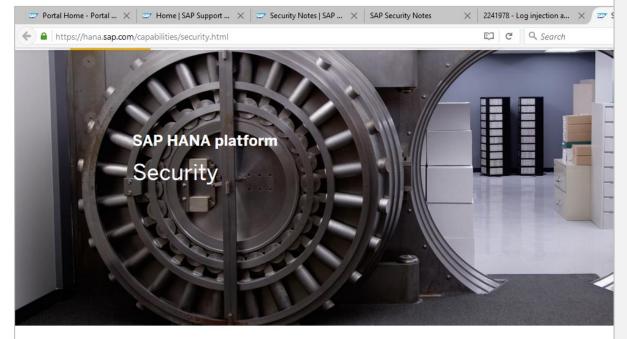
No/reduced downtime



- SAP HANA zero downtime maintenance (based on system-replication)
- Upgrade by moving tenants (based on multi-tenant database container scenarios)

Stay Informed!

http://hana.sap.com/security





Manage secure data access and keep your SAP HAN protected

Protecting corporate information is one of the most important topics for you as an scustomer. You need to meet the ever increasing cyber-security challenges, keep you and stay on top of the compliance and regulatory requirements of today's digital wo

SAP HANA allows you to securely run and operate SAP HANA in a variety of environments and to implement

Manage software security and patching

Prevent - Detect - React

🤛 Portal Home - Portal ... 💢 😅 Home | SAP Support ... 🗶 😇 Security Notes | SAP ... 🗶 SAP Security Notes

https://hana.sap.com/capabilities/security.html

Fundamentally, the security of your environment depends on two things: security in how the underlying products are developed, and all systems being kept up to date with the latest security patches and updates.

As the global leader in business software, SAP takes the security of its customer data seriously. At the core of our development processes is a comprehensive security strategy based on three pillars: Prevent – Detect – React.

SAP stands for secure and reliable software solutions.



× 2241978 - Log injection a... × Security | SAP HANA

☆ 自

C Q Search

► Security Patches & Updates

It is important that customers are always aware of the newest security fixes provided for SAP HANA!

Security fixes are delivered as SAP HANA revisions and can be applied using SAP HANA's lifecycle management tools. Security fixes are announced on the monthly SAP security patch day according to the general SAP security patch strategy in SAP security notes.

For more information visit:

- SAP Product Security Response Team
- SAP Security Notes (requires customer login)
- SAP HANA Revision Strategy visit SAP Note (requires customer login)

Security Services by SAP

SAP offers a wide range of security tools and services to ensure the smooth operation of your SAP solution by taking action proactively, before security issues occur.

Learn more

- · Visit: SAP Support Portal EarlyWatch Alert
- · Visit: SAP Security Optimization Services

► Learn how SAP develops secure software

An important component of SAP's product security strategy is the secure software development lifecycle (secure SDL), which provides a comprehensive framework of processes, guidelines, tools and staff training, and ensures that security is an integral component of the architecture, design, and implementation of SAP solutions.

The secure SDL is a risk-based approach, which uses threatmodeling and security risk assessment methods to determine the security controls enforced during software provisioning and operations, including comprehensive security testing with automated and manual tests.

Learn more how SAP develops secure software:

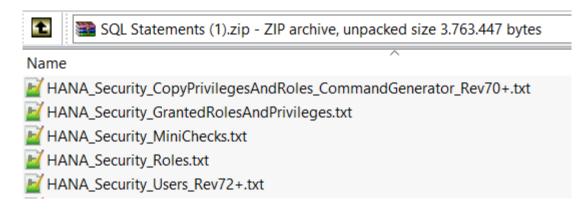
SAP Security @ http://www.sap.com/security

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 <u>1999993</u> - How-To: Interpreting SAP HANA Mini Check Results see Area SECURITY

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 <u>2025307</u> is required. This note is related to note <u>1970644</u> 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

Note <u>2306709</u> - 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)"

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.

Note <u>2195409</u> - 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.

Note <u>1882254</u> - 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 master 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.

Note <u>1882254</u> - Authorization check for logon data not based on passwords

Samples for PRGN_CUST

GEN PSW MAX DIGITS

GEN PSW MAX LENGTH

GEN PSW MAX LETTERS

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)

Values between login/min_password_digits and 40 (default) - max. number of digits in

generic password (Note 662466)

Values between login/min_password_lng - 40 (default)- max. password length of

generated password (Note <u>915488</u>)

Values between login/min_password_letters and 40 (default) - max. number of letters in

generated password (Note <u>662466</u>)

GEN_PSW_MAX_SPECIALS Values between login/min_password_specials and 40 (default) - max.number of special

characters in generated password (Note <u>662466</u>)

W (Default), E, S, I (Ignore) - Message Type When Assigning Reference Users with Other User

Type (Note <u>513694</u>)

Samples for USR CUST

REF USER CHECK

CHECK_NONPW_LGNDATA < SPACE> (default), 'x' - Check for activity 36 during change of non-password-based logon data (Nata 400054)

(Note <u>1882254</u>)

USER GRP REQUIRED Default user group; due to this, the user group becomes a required entry field (Note 1663177)



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 <u>1933375</u> - 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)

News about invoker servlet Alert (TA16-132A)

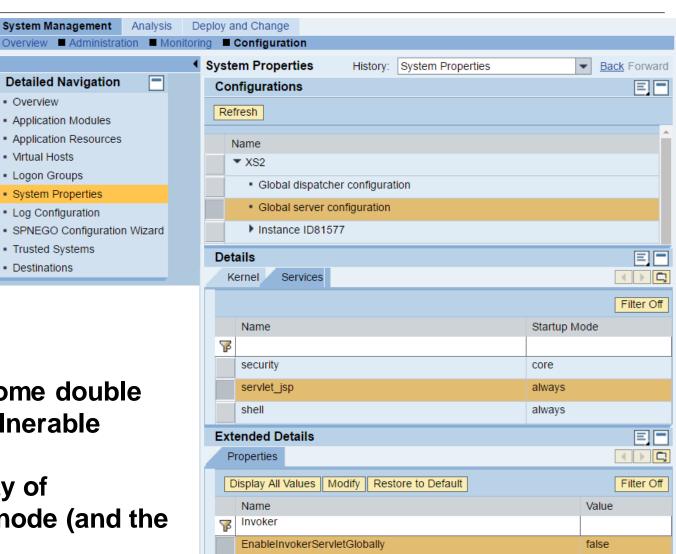
Alert (TA16-132A)
Exploitation of SAP Business Applications
https://www.us-cert.gov/ncas/alerts/TA16-132A

Solution from 2010:

Note <u>1445998</u> - Disabling invoker servlet

Good news: The Invoker Servlet has been disabled by default as of release 7.20.

But: In case of <u>older systems</u> – 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.



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 <u>1445998</u> 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 <u>1467771</u> - Disabling invoker servlet in the portal

Note <u>1488846</u> - CRM ECO. Security - Invoker Servlet

Note <u>1535301</u> - Invoker Servlet Fix for IS-M/AMC

Note <u>1537663</u> - Biller Direct, Security - Invoker Servlet

Note <u>1589525</u> - Verb Tampering issues in CTC

Note <u>1598246</u> - Servlet declaration missing for LWC SOAP Dispatcher servlet

Note 1802092 - PDF display error due to invoker servlet disabled in NW 7.3

Note <u>1900752</u> - VSCANTEST Application returns 403 response code

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.

Evaluated Risk - High

You may want to validate this file, too.

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.

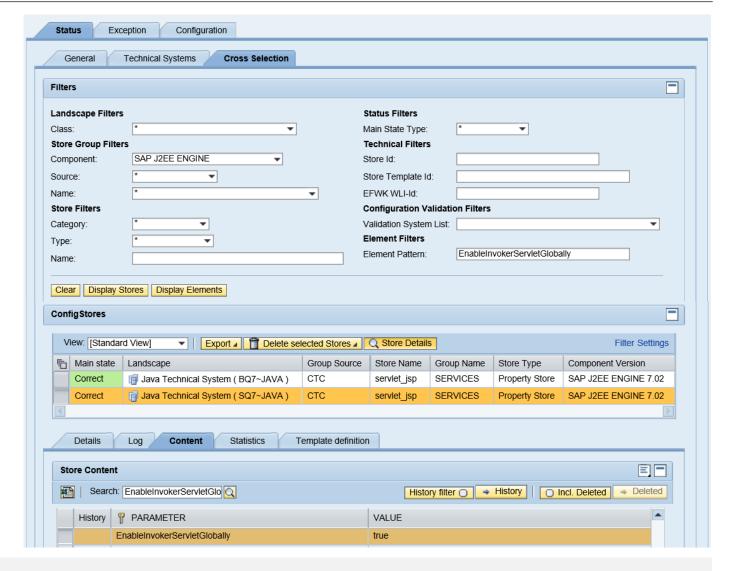
Recommendation: The invoker servlet feature should be disabled to close the security gap described above.

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

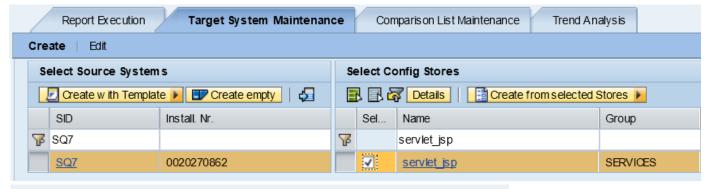
Now, knowing the Configuration Store servlet_jsp we can construct a Target System for Item EnableInvokerServletGlobally in Configuration Validation



News about invoker servlet SAP Solution Manager - Configuration Validation

Configuration Items

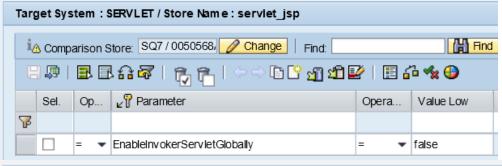
Create Target System from selected store



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



v 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				

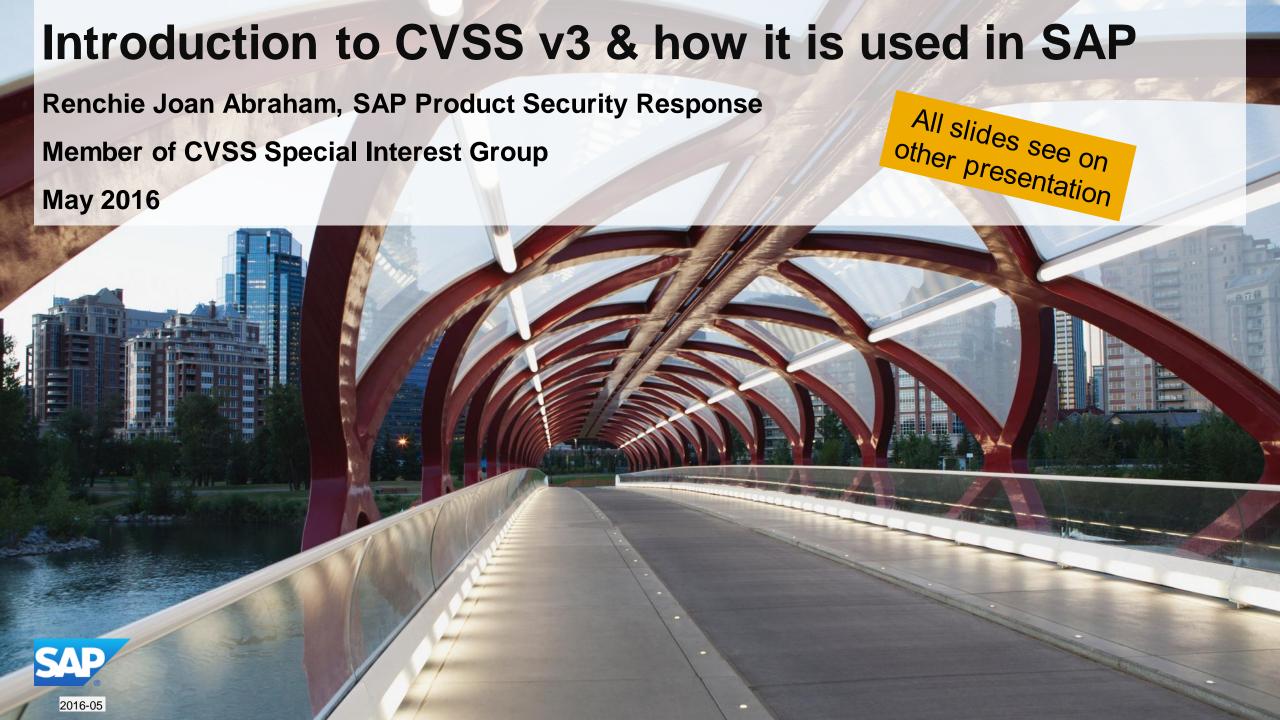
Introduction to CVSS v3

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



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

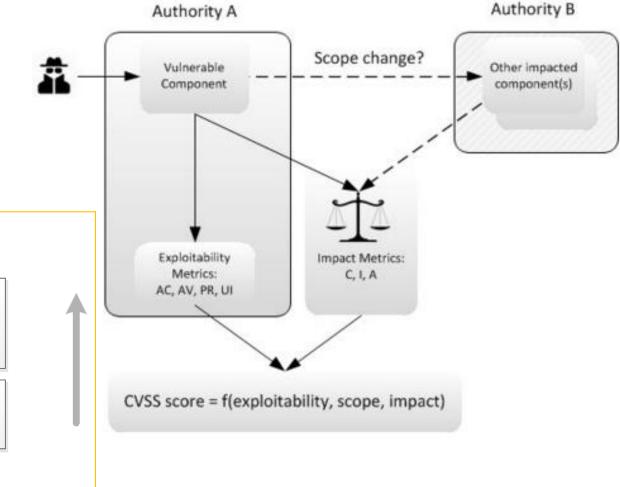
CVSS v3 Base Scoring

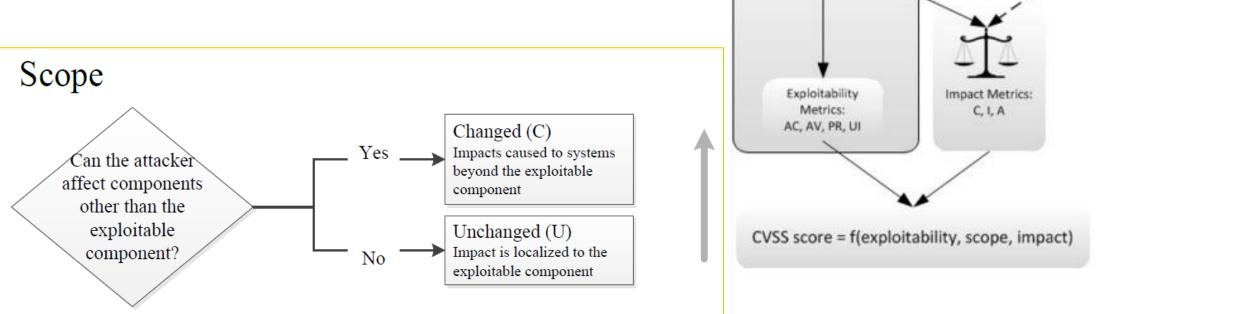
Metric Group	Metric Values		
Attack Vector (AV): NEW	Physical, Local, Adjacent Network, Network		
Attack Complexity (AC): NEW	High, Low		
Privileges required (PR):NEW	High, Low, None		
User Interaction (UI): NEW	None, Required		
Scope (S):	Unchanged, Changed		
Confidentiality (C):	None, Low, High		
Integrity (I):	None, Low, High		
Availability (A):	None, Low, High		

- 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)

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.





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.

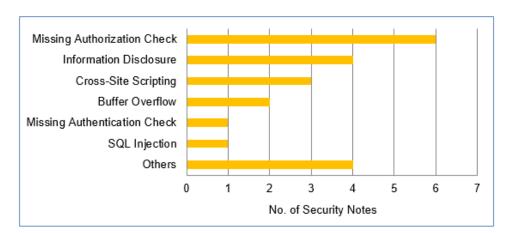
Environmental: represents the characteristics of a vulnerability that are relevant and unique to a particular user's environment.

Publications by PSRT:

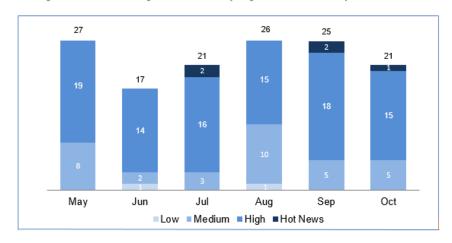
1. The Official SAP Product Security Response Space

https://scn.sap.com/docs/DOC-65837

Security Notes vs Vulnerability Type - October 2015

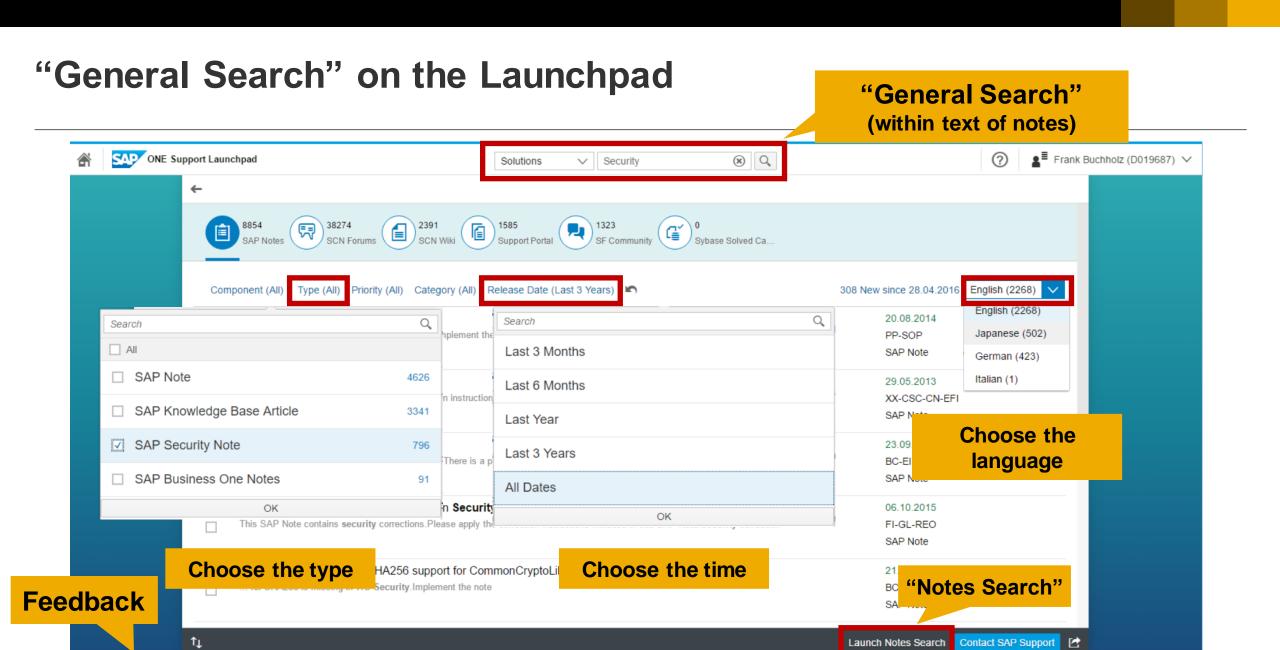


Security Notes vs Priority Distribution (May - October 2015)**



2. CVSS blog posts

https://scn.sap.com/community/security/blog/2016/04/12/introduction-to-cvss-how-sap-uses-ithttps://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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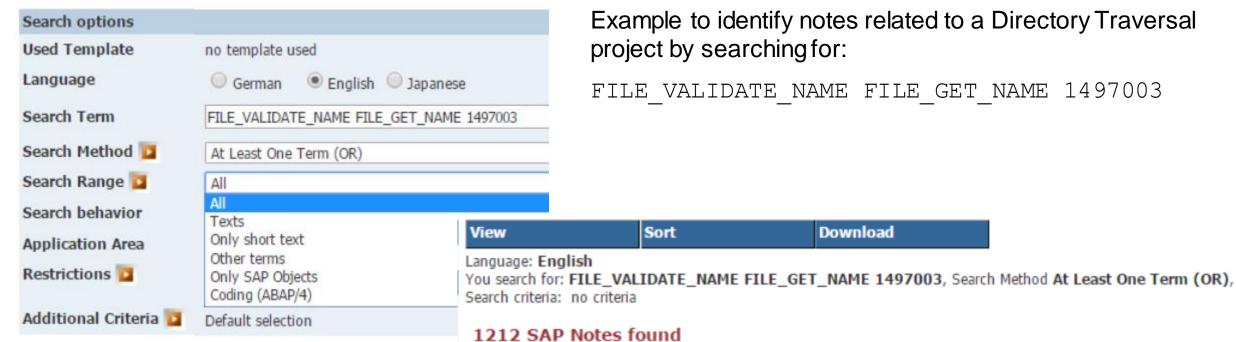
Terms of Use Copyright and Trademarks Legal Disclosure Privacy 沪ICP备09046015号-2

Share Your Feedback

About the Launchpad

Legacy Applications

"Notes Search" in the Support Portal https://support.sap.com/notes



This traditional support app searches in ABAP correction instructions, too.

Example to identify notes related to a Directory Traversal

FILE VALIDATE NAME FILE GET NAME 1497003

10 ...) **Application Area** Ranking Number Short tex 1. 0.430 FI-GL-GL-F1 1906110 RFIDHU DSP: Error in FILE VALIDATE NAME 2. 0.420 Potential directory traversals in applications BC-CCM-FIL 1543851 ASU Toolbox - Function module "FILE VALIDATE NAME **3.** 0.360 SV-SMG-ASU 2021095 FILE VALIDATE NAME dumps with CX FS PATHS INCO 4. 0.360 BC-CCM-FIL 2239115

Note <u>2264239</u> - Failed Trusted System logon is reported as successful logon in the audit log

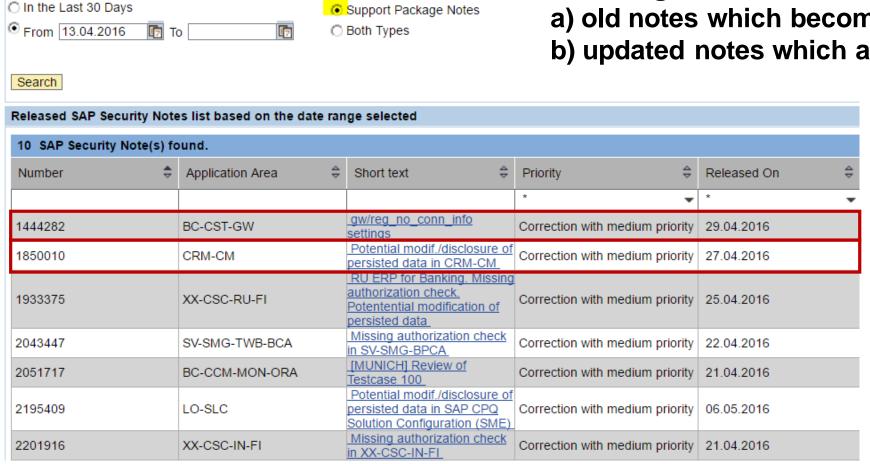
Issue: Last logon date (table USR02 / report RSUSR200) is updated in case of an unsuccessful Trusted-RFC connection because of missing authorizations for S_RFCACL

The Kernel patch solves the issue
The ABAP corrections updates the Security Audit Log

Related note:

Note <u>320991</u> - Error codes during logon (list)

How to analyze old Support Package Notes which become visible now



Category

Patch Day Notes

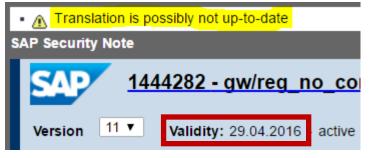
Filter criteria

Released On

All Time

Compare "Released on" date with "Valid from" date to distinguish between

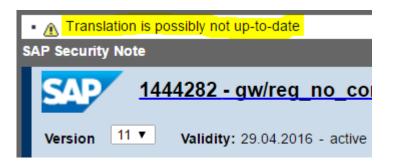
- a) old notes which become visible now and
- b) updated notes which are re-released





RFC Gateway Settings Note 1444282 - gw/reg_no_conn_info settings

Re-released note to describe new setting with value 128 according to note <u>1848930</u> - 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

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 <u>1946751</u>. 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

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 <u>2304353</u>. Do not forget to to implement this 2nd note if you apply the 1st note.

Note <u>2051717</u> - [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.

Note <u>2195409</u> - 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



April 2016

Topics April 2016





Note <u>2285879</u> - SAL | Filter selection by user group as of NetWeaver 7.40

Note <u>2090487</u> - SAL | Enable recording of user groups (kernel part)

Note 2191612 - FAQ | Use of Security Audit Log as of NetWeaver 7.50

Note <u>2201295</u> - Unauthorized modification of displayed content in UR Control

Note <u>2284952</u> - Update 2 to Security Note 1971238

Note <u>2221657</u> - Code injection vulnerability in SAP Internet Communication Manager

How to identify HANA Security Notes

Note 2277492 - Configuration Validation: How-to transport Target Systems

Note <u>2177996</u> - Transaction PFCGMASSVAL Mass maintenance of authorization values in roles

Release 7.31 & 7.40: Improvement for ABAP Role Management

Note <u>2293011</u> - 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 <u>2119627</u>.

On the Managed systems (including the Solution Manager system itself)

- SMDAGENT <SAPSolutionManagerSID> (type system user)
- SAPSUPPORT (type dialog)

Troopers 2016

An easy way into your SAP systems:

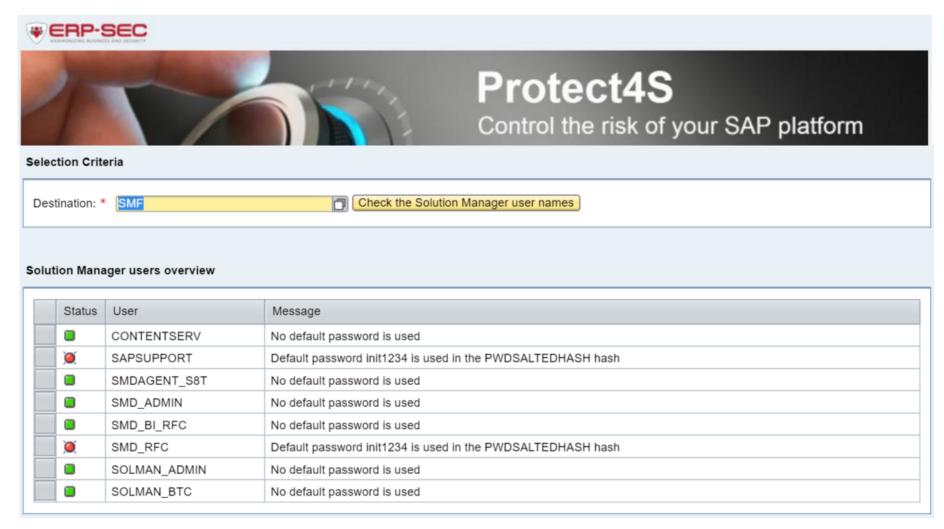
Unknown default SAP accounts

Note <u>2293011</u> - 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/erpsec-releases-free-toolingcheck-sap-platformdefault-solution-managerusers/



(The program works only if default of profile parameter login/password hash algorithm was used while creating the users.)

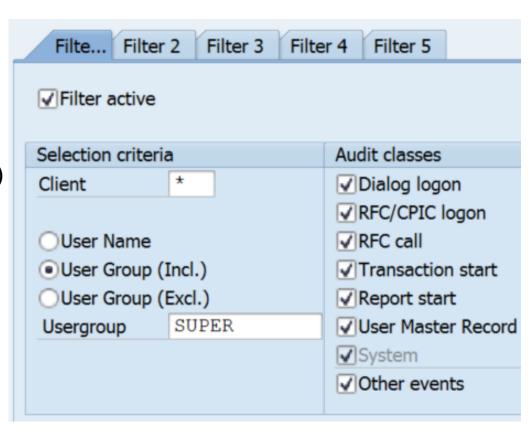
Note <u>2285879</u> - SAL | Filter selection by user group, NetWeaver 7.40 Note <u>2090487</u> - SAL | Enable recording of usergroups (kernel part)

Prerequisites:

- Note <u>2285879</u> SAL | Filter selection by user group SAP_BASIS 7.40 SP 15 (no implementation via SNOTE) SAP_BASIS 7.50 SP 04
- Note <u>2090487</u> 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



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)

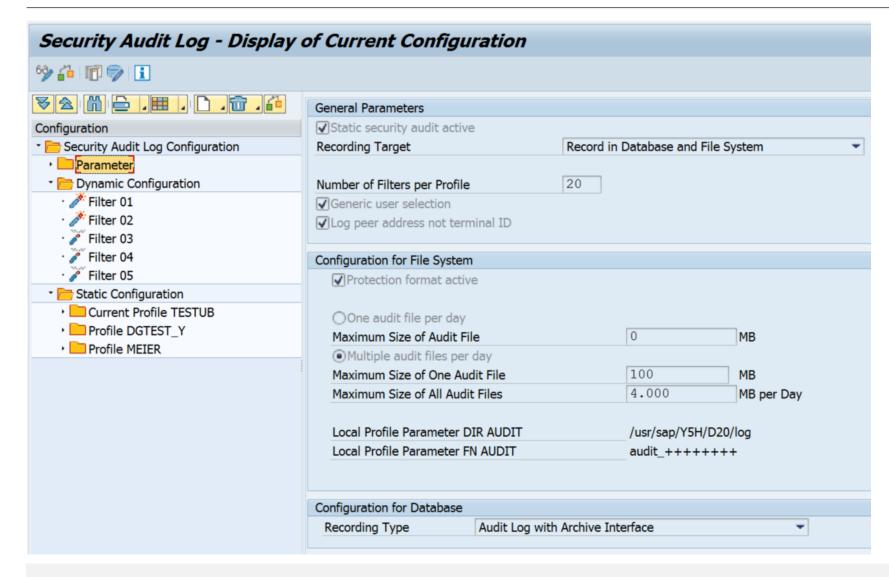
Use this transaction to configure integrity protection for file-based log data and to reorganize obsolete files. In accordance with the parameterization of the recording type in the database, you can use this tool to reorganize the table RSAU BUF DATA by means of deletion or archiving.

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.

SAL: Configuration (Transaction RSAU_CONFIG)



Note <u>2201295</u> - 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.

Note <u>2284952</u> - 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 <u>1971238</u> March 2014 → Note <u>2017050</u> March 2016 → Note <u>2284952</u> April 2016

Note <u>2221657</u> - 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 <u>2221657</u> and <u>2256185</u> you get following required patch level for disp+work respective the WebDispatcher:

```
SAP KERNEL 7.21 patch 623
SAP KERNEL 7.22 patch 110
SAP KERNEL 7.42 patch 325
SAP KERNEL 7.44 patch 39
SAP KERNEL 7.45 patch 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

Note <u>2221657</u> - Code injection vulnerability in SAP Internet Communication Manager (and WebDispatcher)

Now let's check another release of the WebDispatcher:

<u>https://support.sap.com/patches</u>
 → e.g. SAP WEB DISPATCHER
 7.21 → choose any OS → show Info file

The following objects	s are available for dov	wnload:							
File Type	Download Object	Title				Patch Level	Info File	File Size [kb]	<u>Last Changed</u>
SAR	<u>SAPWEBDISP_SP_623</u> <u>20009446.SAR</u>	SAP WEB DISE	PATCHER	7.21		623	<u>Info</u>	49183	04.03.2016
SAR	SAPWEBDISP_SP_624 20009446.SAR	SAP WEB DISE	PATCHER	7.21		624	<u>Info</u>	49333	20.03.2016
sar	sapwebdisp 624- 20009446.sar	sapwebdisp				624	<u>Info</u>	49333	20.03.2016
) lt.				(104)	(0.62	O) Loss of	icm/ser	ver_port_XX	specific CIPH
Result:				(105)	(0.62	l) Potenti	al denia	al of service	e in SAP Inter
oth notes 22	221657 and 2	2256185		(106)	(0.62	l) Dispatc	her and	ICM get bloc	cked (note 226
are part of the patch for 7.21, too				(107)	(0.62	2) Content	Filter	match traced	d wrong data (
		, , , , , ,		(108)	(0.62	3) Code in	jection	vulnerabilit	y in SAP Inte
				(109)	(0.62	4) Request	(type I	IA) cannot h	e processed d

How to identify HANA Security Notes

Number	Application Area 💠	Short text \$	Priority \$	Released On	4
	?		•	*	•
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)

Note <u>2277492</u> - 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.

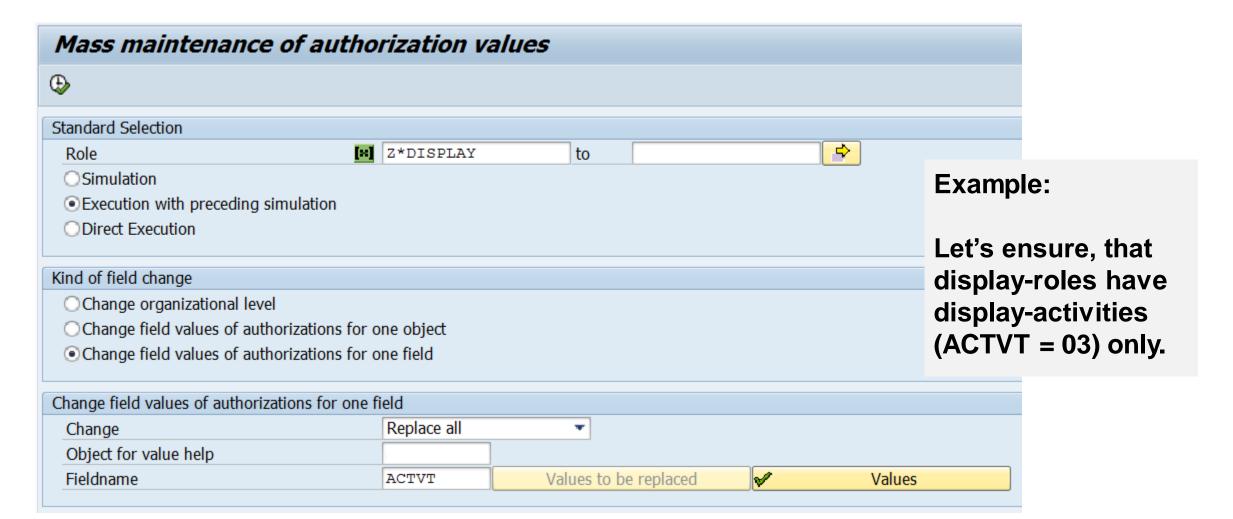
The required transport keys are described in the wiki: ConfigVal: Transport Target Systems

Use this new report DIAGCV_TRANSPORT_TARGET_SYSTEM to add custom defined Target Systems to a transport order.

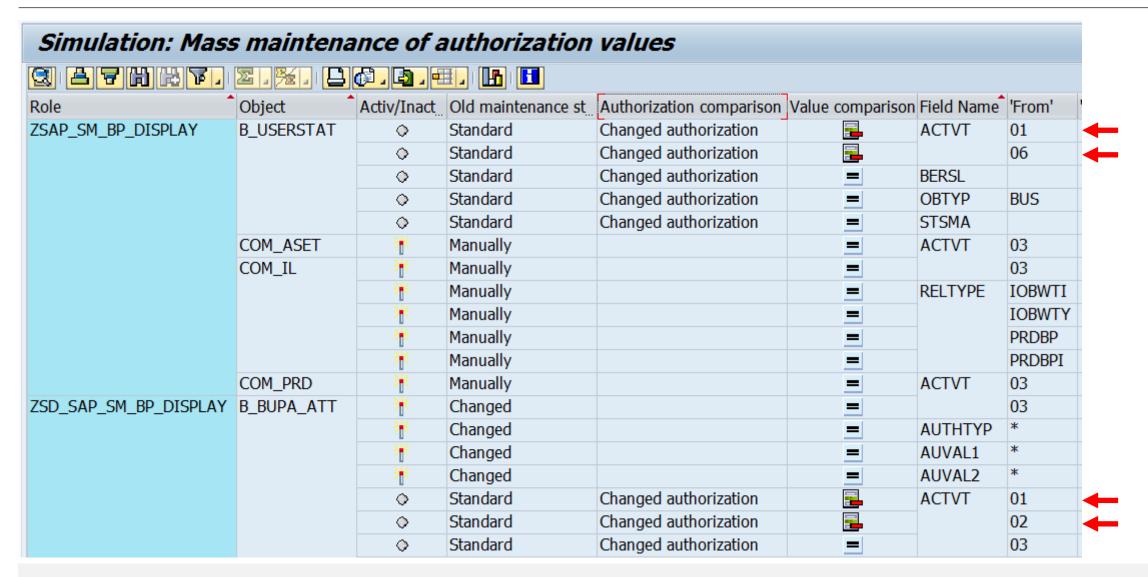
Do you know the <u>Security Baseline Template Version 1.8</u> at the media library of https://support.sap.com/sos?

The new version 2 of the corresponding ConfigVal Package offers transport files to import the template target systems easily.

Note <u>2177996</u> – Transaction PFCGMASSVAL Mass maintenance of authorization values in roles



Note <u>2177996</u> – Transaction PFCGMASSVAL Mass maintenance of authorization values in roles



Note <u>2177996</u> – 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

Old Authorization Status (Irrelevant for Organizational Levels) ✓ Standard ✓ Maintained ✓ Changed ✓ Manual Options ✓ No Switch to Status 'Changed' (Irrelevant for Organizational Levels) Exclude 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.

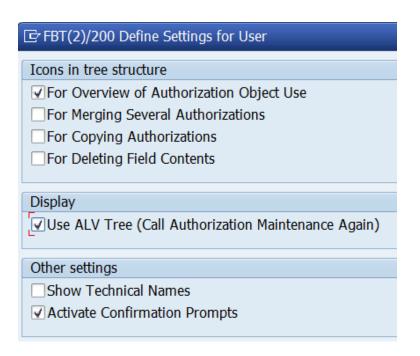
Or use SNOTE plus manual modifications as of:

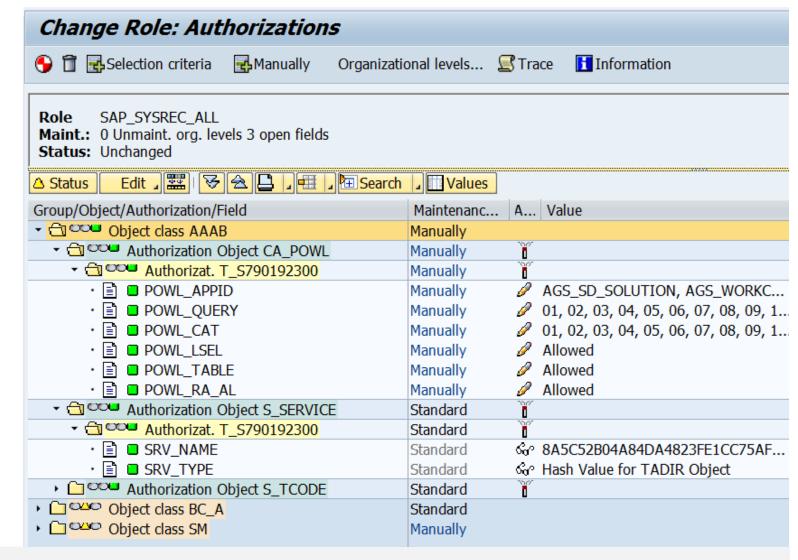
- 7.02 SP 14
- 7.31 SP 09
- 7.40 SP 04
- 7.50 SP -
- see note <u>1842231</u>

Release 7.31 & 7.40: Improvement for ABAP Role Management

New ALV Tree User Interface in transaction PFCG

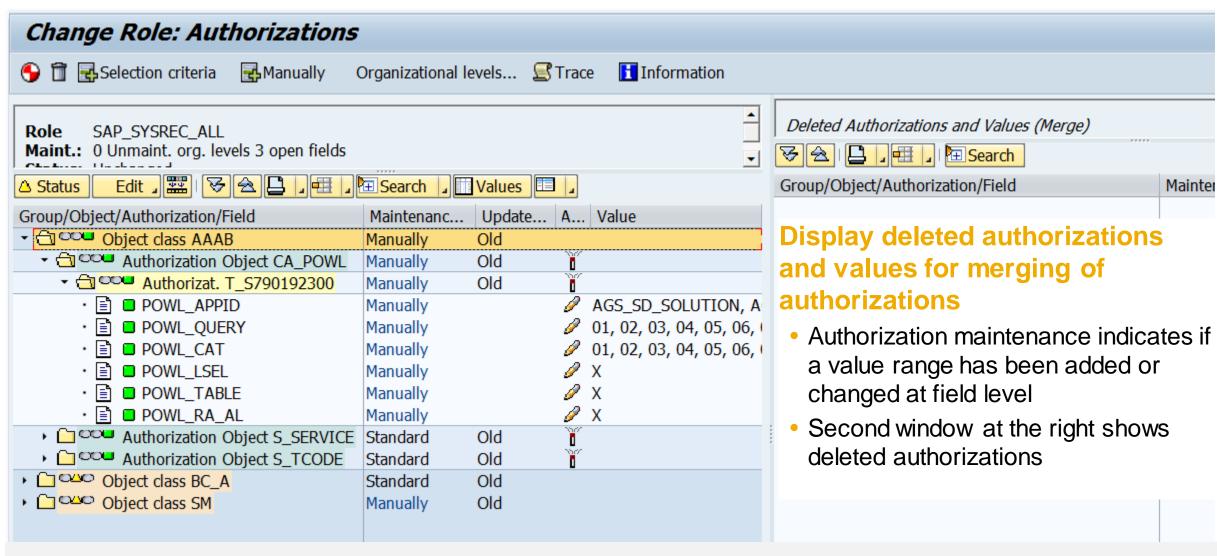
- → Utilities → Settings
- → Set the option to use ALV Tree





Release 7.31 & 7.40: Improvement for ABAP Role Management

Note 2086293 - PFCG: Display of deleted authorizations and values for merging of authorizations



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.

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.



March 2016

Topics March 2016





Note <u>1973081</u> - XSRF vulnerability: External start of transactions with OKCode

Note 870127 - Security note for SAP Web Dispatcher

Note <u>2260323</u> - Internet Communication Manager (ICM) 7.20 security settings

Note <u>2258786</u> - Potential information disclosure relating to SAP Web Administration Interface

Note <u>2260344</u> - Code injection vulnerability in SCTC_* Function modules

Note <u>2251231</u> - File validation enforcement switch for empty physical path

Note <u>2282338</u> = <u>2235412</u> = <u>2074276</u> - SAP Download Manager Password Weak Encryption

Note <u>1553180</u> - Missing authorization check in TH_POPUP

Note 1488609 - Missing Authorization Check in remote ABAP Config Access

Optimizing SACF

Switchable Whitelists (SLDW) Note 1973081 - XSRF vulnerability: External start of transactions with OKCode

Whitelist 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

White 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 whitelist 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.)

Name

BC_CHECK_EXT_SKIP_FIRST_SCREEN

Short Descript.

Chck Stat.

D Recording mode(new elements assigned the status not allowed)

SAL Mode

A Record all checks in the Security Audit Log

Spotlight News

<u>Important security fixes for Startup Service, Startup Framework and Internet Communication Manager</u> (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.

<u>SAP Security Note 2256185</u> – 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)

<u>2281195</u> - 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.

Notes 870127 2260323 2258786 - Internet Communication Manager (ICM)

Note <u>2260344</u> - Code injection vulnerability in SCTC_* Function modules

The prerequisite notes <u>1454575</u> and <u>1454576</u> 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

Note <u>2251231</u> - 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 <u>Security Audit Log</u> 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			

Note <u>2251231</u> - File validation enforcement switch for empty physical path

- 1. Project "Secure File Access" according to note <u>1497003</u>
- 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

Note <u>2282338</u> = <u>2235412</u> = <u>2074276</u> - 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

Note 1553180 - Missing authorization check in TH_POPUP

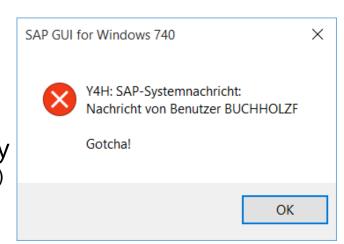
ABAP note with

- 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!



Note <u>1488609</u> - 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?

- Integration Engine

 Administration

 Amanage Queues

 Schedule Archiving Job

 Schedule Delete Jobs

 Error Analysis Settings

 Configuration

 Configure Event-Controlled Message Processing

 Configure Filter for Queue Prioritization

 The Configure Sender/Receiver ID

 The Integration Engine Configuration

 Configure Delete Procedure
- 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!

Optimizing SACF

Implement recent functional notes of component BC-SEC-AUT to improve transaction SACF:

Note <u>2253930</u> - SACF | Error in scenario status check

Note <u>2248439</u> - SACF | Database problems for update of table SACF_ALERT

Note <u>2241352</u> - SACF | Optimization of input help and documentation

Note <u>2225225</u> - SACF | New attribute for default scenario status

Note <u>2124003</u> - SACF | Optimization of log function



February 2016

Topics February 2016



Note 2141744 - SysRec: manual status is lost and replaced with status 'new'

Note <u>2281111</u> - SysRec: recover the status

Note 2236289 BC-DB-MSS Missing authorization check in SMSS_GET_DBCON

Notes <u>1491645</u> <u>1498973</u> <u>2187502</u> - Renewing RFC trust relationships

Note <u>2266565</u> - SAPSSOEXT process crash during ticket verification

Note 2024431 - TDDAT adjustment in customer landscape

Note <u>2141744</u> - SysRec: manual status is lost and replaced with status 'new' Note <u>2281111</u> - 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'.

Underconstruction

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)'.

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</pre>
```

No, there is another correction instruction:

Missing authorizations stop the calling program, e.g. in case of report MSSINJECT.

```
*>>>> START OF DELETION <<<<<
authority-check object 'S_TCODE'
id 'TCD' field 'DBACOCKPIT'. "#EC NOTEXT

*>>>> END OF DELETION <<<<<<
authority-check object 'S_RZL_ADM'
id 'ACTVT' field '03'. "#EC NOTEXT

*>>>> END OF INSERTION <<<<<
```

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.

卧	Status	System ID	Install.no	Precheck Result	Information / Recommendation
	Pi	FB7	0020270862	Already updated	Trust relationship already updated
		FBT	0020270862	Already updated	Trust relationship already updated
	000	SQ7	0020270862	Ready to update	To update, choose "Update"
	000	ST7	0020270862	Ready to update	To update, choose "Update"
	200	CXG		Connection Error	To display details, select a line and choose "Error Details"
	200	MW3		Connection Error	To display details, select a line and choose "Error Details"
	040	A24		Logon error	To log on, select a line and choose "Manual Logon"
	040	AHN		Logon error	To log on, select a line and choose "Manual Logon"

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 T	ype <u>Download Object</u>	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	<u>Info</u>	10127	09.02.2016			

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

Correction notes:

Note <u>2273583</u> - TDDAT_COMPARE | Error in database update

Note <u>2079497</u> - Table authorization group assignment in user management and authorization management

Note <u>1645260</u> - Extended maintenance of table authorization groups

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

<u>1500054</u> - 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.

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 master data including password hash

SCRX RFC Destinations including secret key for Trusted RFC

SECF Content of PSEs



January 2016

Topics January 2016



KBA <u>2253549</u> - The SAP Security Baseline Template & ConfigVal

Switchable Whitelists (SLDW)

Note 1976303 - Missing authorization check in BW-BEX-OT

Notes 1972646, 1971397 - Potential modif./disclosure of persisted data in BW-BEX-OT

Note <u>1973081</u> - XSRF vulnerability: External start of transactions with OKCode

Note <u>2248735</u> - Code injection vulnerability in System Administration Assistant

Note <u>2221986</u> - Too many privileges assigned to HANA hdbrole

Note 2151237 - Potential remote code execution in SAP GUI for Windows

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.

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			

Switchable Whitelists (SLDW) Project plan

- Get Framework (via SP)
- Activate logging via Security Audit Log
- Copy SAP definition to active whitelist and adjust log settings (log all / accept)
- **4.** ...
- 5. Check recorded whitelist entries, and adjust log settings (log error / do not accept)

Some scenarios come with a complete whitelist → go to step 5. at once

Switchable Whitelists (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 <u>1922705</u> - 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)

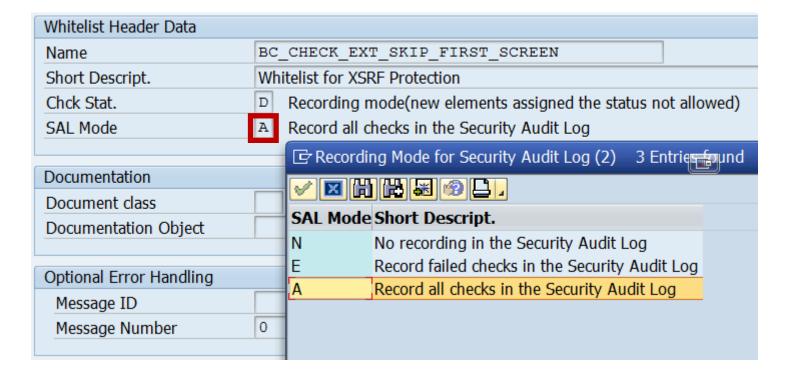
731 SAPKB73114 (18)

740 SAPKB74009 (14)

750 SAPK-75001INSAPBASIS

Switchable Whitelists (SLDW) Activate logging via Security Audit Log

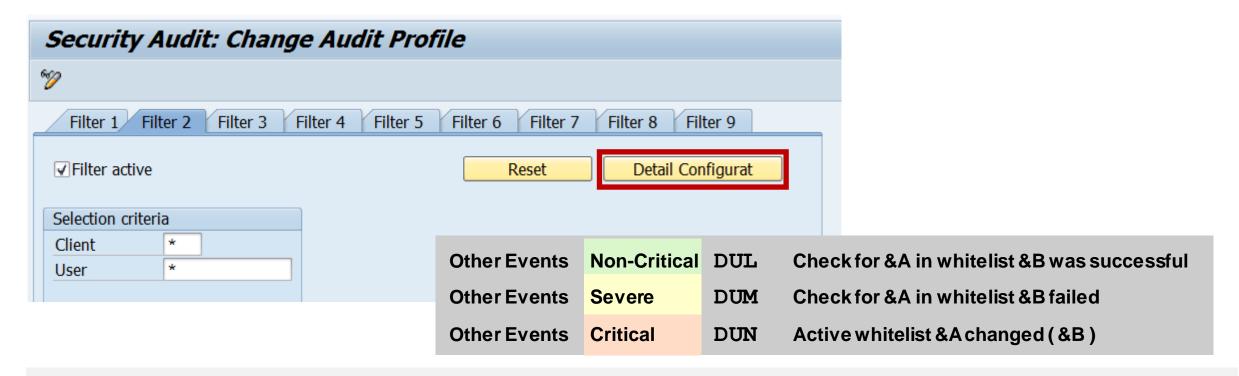
Messages are only written if the Security Audit Log is active and the current filter settings contain the required messages. You can activate and check this with transaction SM19.



Switchable Whitelists (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.



Switchable Whitelists (SLDW) Copy SAP definition to active whitelist and adjust log settings

Transaction SLDW View / maintain whitelists

(definition from SAP / active whitelist of customer)

Transaction SLDW COMPARE Modification adjustment

You can use transaction SLDW_COMPARE to create active versions of a whitelist 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

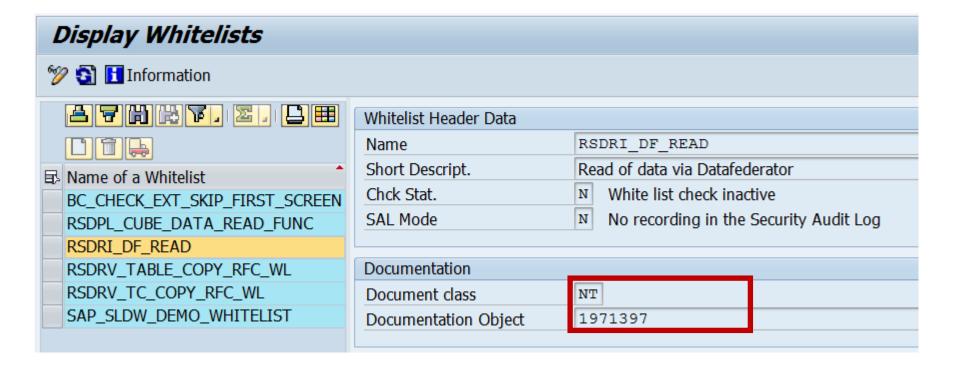
whitelists in development systems. Use transaction SLDW TRANSFER

to transfer data from test or production to development.

Transaction SLDW INFO Infosystem

Switchable Whitelists (SLDW) How to identify notes for installed scenarios

Transaction SLDW shows notes respective documentation:



Switchable Whitelists (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

Search options		
Used Template	no template used	Load Template
Language	German • English Japanese	
Search Term	sldw	Search
Search Method 🔟	All Terms (AND) ▼	
Search Range 🔽	All	
Search behavior	Linguistic search Exact search	

Typical ABAP call:

Switchable Whitelists (SLDW) Applications using SLDW

Note	Scenario Whitelist	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
<u>1972646</u> <u>1971397</u>	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

Switchable Whitelists (SLDW) Note 1973081 - XSRF vulnerability: External start of transactions with OKCode

Whitelist 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

White 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)

Whitelist Header Date

Recommendation: Activate empty whitelist 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.)

whitelist Header Data			
Name	BC_CHECK_EXT_SKIP_FIRST_SCREEN		
Short Descript.	Whitelist for XSRF Protection		
Chck Stat.	Recording mode(new elements assigned the status not allowed)		
SAL Mode	A Record all checks in the Security Audit Log		

Note <u>2248735</u> - 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

🚮 🎖 垣 🖺 📳 😘 inistration Assistant System Basis ₹. Running SAP System st for Operating the Produ System Monitoring Functions) SAP: CC stem Monitoring (Ge SAP: Chec. the System Log ces in the SAP: Output spool System ol Outpu uests for Errors SAP: Checking SAP: Checking W tatus SAP: Checking for rt Dumps SAP: Checking for b Errors SAP: Checking Lock SAP: Checking Ba SAP: Checking ground g a Complete Online Backup ing and Che Archive Log Files DB2 ng Up and Chec. UDB: B f Backup Tapes DB2 UDB: cking the Readabil DB2 UD nitoring Database Gro Checking Disk Space Usage og Files Updating Statistics and Rec eck of Tables DB: Checking the Database Log UDB: Checking Replication of the Add. tration Database FL: Weekly Tasks FBT: Monthly Tasks

System Administration Assistant (Worklist)

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 <u>1923064</u> - Initial Setup: System Configuration using ABAP Task Manager

Transaction STC01, STC02

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 <u>2219894</u> SAP HANA Rules Framework 1.0 SPS06 Release Note Documentation about <u>SAP HANA Rules Framework</u> incl. <u>Installation & Upgrade Guide</u> and <u>Security Guide</u>

System Recommendations may or may not know about the software component and therefore may not show the note.

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

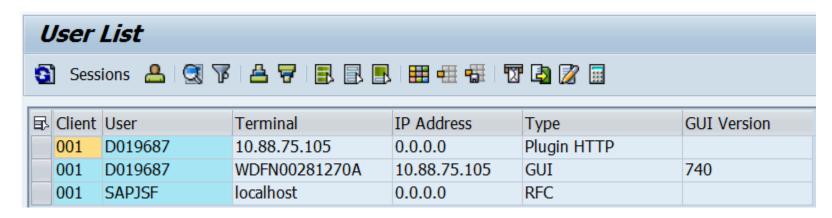
More security notes about SAPGUI:

- Note <u>1564042</u> Security Module: Registry WRITE enabled by default
- Note <u>1678732</u> SAP GUI for Windows 7.20: Client Side Remote Execution
- Note <u>1770722</u> Potential logon information disclosure in SAP GUI
- Note <u>1771201</u> Potential logon information disclosure in SAP Portal & WinGUI
- Note <u>2124806</u> Potential remote termination of running processes in SAP GUI

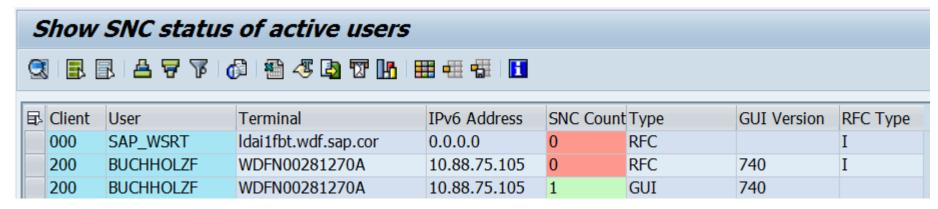
Schedule regular SAPGUI updates

Note <u>2151237</u> - Potential remote code execution in SAP GUI for Windows How to check SAPGUI version

Transaction SM04 = report RSM04000_ALV respective RSM04000 ALV NEW



Report ZSM04000_SNC from SCN Blog



Limitation: The reports inspects the current sessions on the current application server only.

... or use z-reports from note <u>748424</u> - Evaluation of SAP GUI versions and patches



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 <u>2233617</u> - Security Vulnerabilities in SAP Download Manager (reloaded)

Note 2108479 - Missing authorization check in FI-GL-GL-G

Latest questions

Note <u>2234226</u> - 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 <u>2204160</u> - 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 <u>850306</u> - 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.

Ramp-Up for SAP Solution Manager 7.2

SAP Solution Manager 7.2 Product Roadmap

https://service.sap.com/roadmaps

ightarrow Product and solution roadmaps ightarrow Database and Technology ightarrow Platform ightarrow 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: <u>Tim Steuer</u>

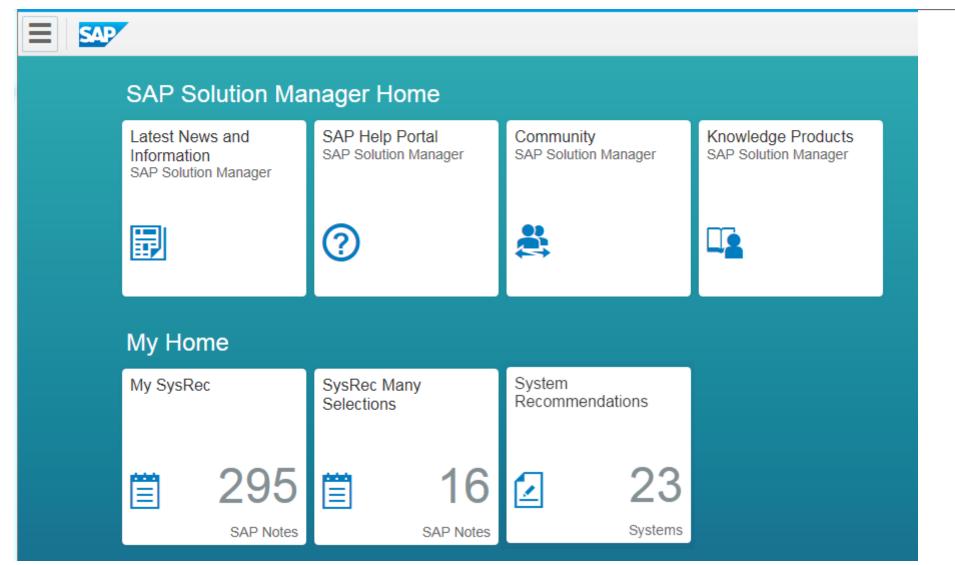
Regional contacts:

Ursula Glas (EMEA/MEE), Lee Gutherman (US/LA), Helen Ding (APA), Imari Okamoto (Japan),

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

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').

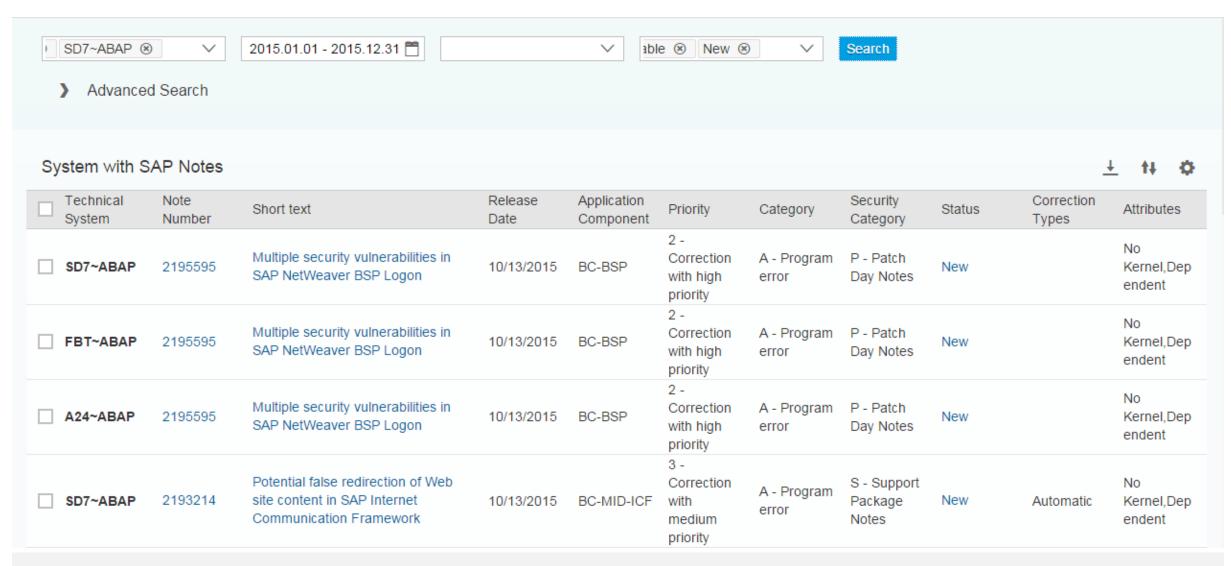
System Recommendations in SAP Solution Manager 7.2 System Overview

23 12 5 3 1 2 All ABAP HANADB JAVA BOBJ ATC

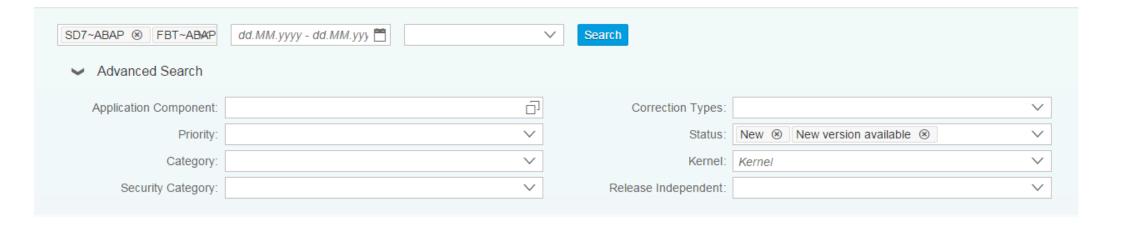
System

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	*

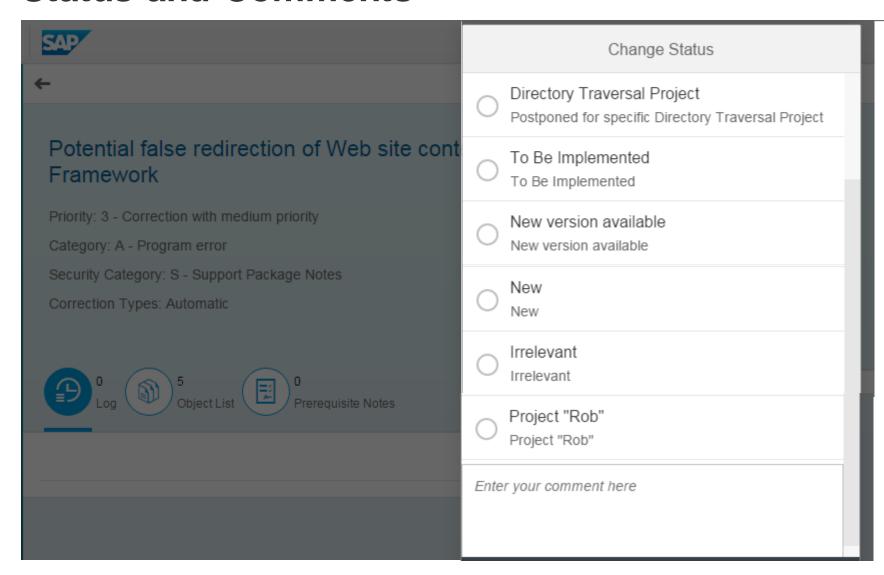
System Recommendations in SAP Solution Manager 7.2 Note Overview



System Recommendations in SAP Solution Manager 7.2 Advanced Search



System Recommendations in SAP Solution Manager 7.2 Status and Comments

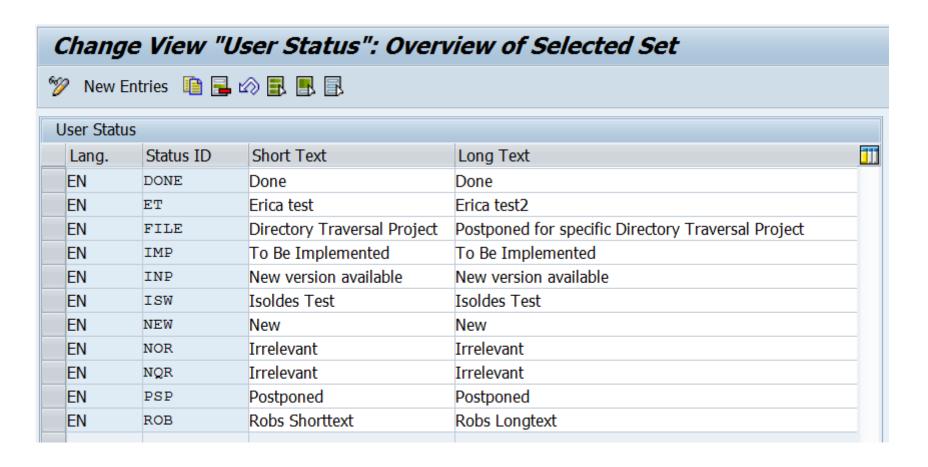


Individual and crosssystem mass status management possible

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.

System Recommendations in SAP Solution Manager 7.2 Status and Comments



Customizing table AGSSR STATUS

System Recommendations in SAP Solution Manager 7.2 Status and Comments

0001487330	EDM	ABAP	NEW	ROB	CD MCM 01	04.09.2015 14:41:24 test with rob# 12.08.2015 14:59:15
0001487606				ET	SR_TST_01	12.08.2015 14:41:24 test with rop#
		ABAP	NEW		SR_TST_01	12.00.2015 14:59:15
0001488406		ABAP	NEW	ET	SR_TST_01	12.08.2015 14:59:15
0001490172		ABAP	NEW	ET	SR_TST_01	12.08.2015 14:59:15
0001494879		ABAP	NEW	PSP	SAVELSBERGW	
	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	· · ·
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
001501945		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		ABAP	NEW	ROB	SR_TST_01	04.09.2015 14:41:24 test with rob#
0001507721		ABAP	NEW	ET	SR_TST_01	12.08.2015 14:59:15
001509604		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 followi
001523254		ABAP	NEW	ET	SR_TST_01	12.08.2015 14:59:15
0001523839		ABAP	NEW	NEW	LUANE	10.11.2015 14:44:51 A change impact analysis has been started in Business Pr
001526853		ABAP	NEW	IMP	SR_TST_01	23.06.2015 10:15:25 Implement me! :)
001528905		HANADB	NEW	NEW	SR_TST_02	11.09.2015 13:11:46 Der Änderungsauftrag 8000011640 wird für die folgenden S
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
001543851	SD7	ABAP	NEW	ET	SR_TST_01	12.08.2015 14:59:15
001550925	SD7	ABAP	NEW	NEW	SR_TST_01	24.06.2015 12:12:58 The change request 8000005935 is created for the followi
001552405	FBT	ABAP	NEW	NEW	LUANE	10.11.2015 14:44:51 A change impact analysis has been started in Business Pr
001555144	SD7	ABAP	NEW	PSP	SR_TST_01	23.06.2015 14:42:52 Das ist ein Test von Gordon - zurück auf New dann New
			ISW	NEW	SR_TST_01	23.06.2015 14:42:29 Das ist ein Test von Gordon - zurück auf New dann New
			INP	ISW	SR TST 01	23.06.2015 14:41:46 Das ist ein Test von Gordon - zurück auf New dann New

System Recommendations in SAP Solution Manager 7.2 Usage count from UPL

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



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_G ROUPS	R3TR	FUGR	HTTPTREE	3742

Hide Application Components which do not match to used DB or OS installations

Тур	Pattern	Application Component	Vendor	Active	1
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	▲ TAG	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

Overview about Application Components for DB/OS:

Datab	pases			Operating	Systems		
ADA ADA	BC-DB-SDB BW-SYS-DB-SDB	LVC	BC-DB-LVC	AIX AIX	BC-OP-AIX BC-OP-BUL	SINIX	BC-OP-FSC-REL
		MSS	BC-DB-MSS			SOLARIS	BC-OP-FSC-SOL
DB2 DB2	BC-DB-DB2 BC-DB-DB2-CCM	MSS	BW-SYS-DB-MSS	HP-UX	BC-OP-HPX	SOLARIS	BC-OP-SUN
DB2 DB2	BW-SYS-DB-DB2	ORA ORA	BC-DB-ORA BW-SYS-DB-ORA	LINUX	BC-OP-LNX	SUNOS	BC-OP-SUN
DB4	BC-DB-DB4		DW-010-DD-ONA	LINUX LINUX	BC-OP-LNX-SUSE BC-OP-PLNX	TRU64-UNIX	BC-OP-CPQ
DB4	BW-SYS-DB-DB4	SAP SAP	BC-DB-SDB BW-SYS-DB-SDB	LINUX	BC-OP-ZLNX	TRU64-UNIX	BC-OP-TRU64
DB6	BC-DB-DB6			LINUX OS/3	BC-OP-LNX	UNIX	BC-OP-CPQ
DB6	BW-SYS-DB-DB6	SYB SYB	BC-DB-SYB BW-SYS-DB-SYB	LINUX OS/3	BC-OP-LNX-SUSE BC-OP-PLNX	UNIX	BC-OP-TRU64
HDB	BC-DB-HDB				BC-OP-ZLNX	WIN-NT	BC-OP-NT
HDB	BW-SYS-DB-HDB	TD	BC-DB-TD				
HDB	HAN-DB	TD	BW-SYS-DB-TD	OS/400	BC-OP-AS4	Z/OS	BC-OP-S390
INF INF	BC-DB-INF BW-SYS-DB-INF						

General Customizing and Personalization Transaction SM30_DNOC_USERCFG_SR

```
SYSREC STATUS FILTER (*)
SYSREC UPL ACTIVE (*)
SYSREC UPL MONTH (*)
                               previous month.
SYSREC NOTE TYPES
SYSREC LAST MONTHYEAR
SYSREC BPCA USER
SYSREC BPCA DATE
SYSREC CHARM LOG TYPE
SYSREC CHARM USER
SYSREC CHARM DATE
SYSREC OBJECT EXP
SYSREC REQ EXP
SYSREC SIDE EFFECT
SYSREC UNSUPPORTED SYSTEM (*)
SYSREC UNUSED SUBHR
(*) User specific personalization
```

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).

Activate/deactivate the integration with UPL while showing the object list of ABAP notes.

Count of month for which UPL data get loaded. The default is 2 which represents the current and the previous month.

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.

Defines the earliest calculated notes. By default the application calculates all SAP Notes which were released between January 2009 and the current month.

Defines if the current user should be added as selection for BPCA.

Defines the earliest filter for BPCA results. You can change the start date for this period.

Defines the text id according to table TTXID for the text object CRM ORDERH.

Defines if the current user should be added as selection for ChaRM.

Defines the earliest filter for ChaRM results. You can change the start date for this period.

Lifetime of the cache which contains the object list of notes. The default is 14 days.

Lifetime of the cache which contains the required notes of notes. The default is 14 days.

Lifetime of the cache which contains the side-effect notes of notes. The default is 14 days.

System types which you want to block from SysRec (one entry per system type)

Calculate results for unused HR components (see note 2712210)

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

How to transport note implementation status for SNOTE for notes which cannot be implemented via SNOTE?

Preparation: Ensure that note <u>1788379</u> 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.

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.

Note <u>2233617</u> - Security Vulnerabilities in SAP Download Manager (reloaded)

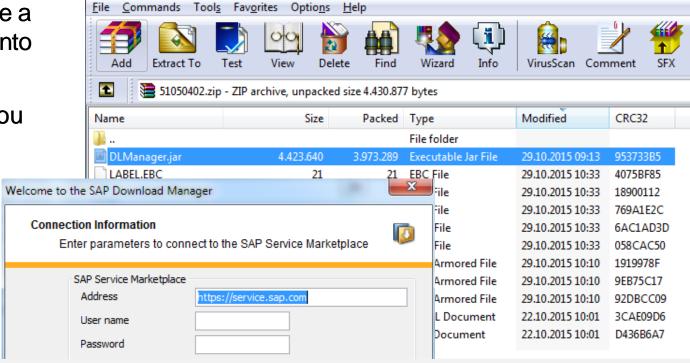
These vulnerabilities can potentially be abused by an attacker to launch man-in-the-middle attacks. Attackers thus could tamper with the content of software downloads and submit malware of their own while the administrator assumes to get software from SAP.

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.



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 BAdl 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.)



November 2015

Topics November 2015



ONAPSIS Advisories 2015 up to 044 about SAP HANA (TrexNet)

Security Fixes to Vulnerabilities Reported in SNOTE Application

Note <u>2233617</u> - Security Vulnerabilities in SAP Download Manager

Note 2197428 - Potential remote code execution in HANA

Note <u>2197100</u> - OS injection through call of function module by SM37

Note <u>1611408</u> - Missing authorization check in SD-SLS

Delta-mode vs. full calculation in System Recommendations

ONAPSIS Advisories 2015 about SAP HANA (TrexNet)

The solutions are available with several notes:

Older notes <u>2140700</u> <u>2153765</u> <u>2153892</u> <u>2153898</u>

Note <u>2148854</u> - Potential information disclosure relating to server information, July 2015 Solution: (SPS 8 is not affected), revision 97 for SPS 9, or SPS 10

Note <u>2165583</u> - SAP HANA secure configuration of internal communication, August 2015 Release independent solution according to manual instruction, see note <u>2183363</u>, too

Note <u>2175928</u> - 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 <u>2197397</u> - 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 <u>2197428</u> - 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

Note <u>2165583</u> / <u>2183363</u> – 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

Ratir	ng	File Name	Layer	Section	Key	Current Value
*		global.ini	SYSTEM	communication	listeninterface	.global
V	•	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 <u>SAP Security Note</u> 2183624 and <u>SAP HANA Administration Guide</u>, <u>Section 'Change the SSFS Master Key'</u>.

Note <u>2165583</u> / <u>2183363</u> – 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 <u>2183363</u> 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).

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 HANAAudit Trail (best practice) is set-up and monitored properly.

Security Fixes to Vulnerabilities Reported in SNOTE Application

Customers are advised to implement these notes immediately.

Note <u>2235513</u> - External RFC callback to customer systems in SNOTE

Note <u>2235514</u> - Standard RFC destination for note download can be overridden Table CWBRFCUSR is not used in customer systems anymore

Note <u>2235515</u> - 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.

Note 2233617 - Security Vulnerabilities in SAP Download Manager

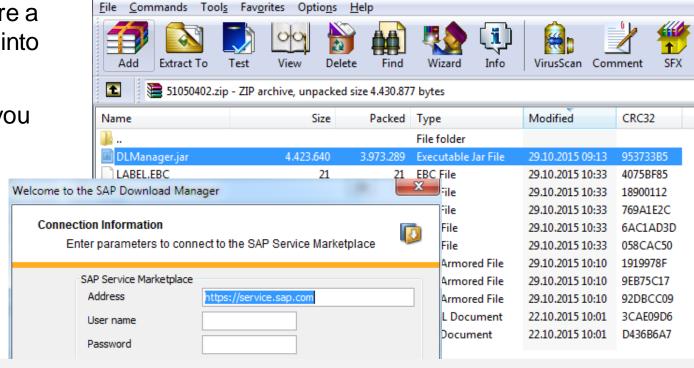
These vulnerabilities can potentially be abused by an attacker to launch man-in-the-middle attacks. Attackers thus could tamper with the content of software downloads and submit malware of their own while the administrator assumes to get software from SAP.

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 <u>2178665</u>.



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)

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.

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 for 2015
- XS2-ABAP: reupdate security notes and hotnews for 2014
- XS2-ABAP: SAP Note 0002064610 is obsolete according to the calculation
- XS2-ABAP: reupdate security notes and hotnews for 2013
- XS2-ABAP: reupdate security notes and hotnews for 2012
- XS2-ABAP: reupdate security notes and hotnews for 2011
- XS2-ABAP: reupdate security notes and hotnews for 2010
- XS2-ABAP: reupdate security notes and hotnews for 2009
- 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



October 2015

Topics October 2015



Note 1677810 - Unauthorized modification in ITS-Service in IS-U-WA

Note <u>2189853</u> - 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 <u>1445998</u> - Disabling invoker servlet

Note <u>2192982</u> - Potential information disclosure relating to TLS 1.1/1.2

Note <u>2080378</u> - Transaction STRFCTRACE: Evaluation of RFC statistic records

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

Note <u>2189853</u> - 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 <u>853878</u> - 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.

Note <u>2189853</u> - SAP Internet Communication Framework fails to validate HTTP_WHITELIST

Related notes:

- Note <u>2032237</u> Using CHECK_HTTP_WHITELIST for server-relative URLs
- Note <u>2193214</u> Potential false redirection of Web site content in SAP Internet Communication Framework
- Note <u>2223891</u> How to configure HTTP_WHITELIST table for public services

Available entry types:

- 01 Portal CSS Theme URL
- 02 sap-exiturl
- 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 <u>1509851</u>)

Table HTT	P_WHITELIST Insert
Reset	
MANDT ENTRY TYPE SORT KEY	001
PROTOCOL	
HOST	
PORT	
URL	

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.



Name	Val.
vmcj/availability/file	/usr/sap/FA7/DVEBMGS00/work/VMCavailable.log
vmcj/debug_proxy/cfg/fileName	/usr/sap/FA7/DVEBMGS00/work/jtmp/backend.properties
vmcj/debug_proxy/cfg/strategy_jars	debugproxy.strategies.jars = /usr/sap/FA7/DVEBMGS00/exe/cfw,
vmcj/debug_proxy/param_0	-Xcp:/usr/sap/FA7/DVEBMGS00/exe/cfw/tools/debug_proxy/debt
vmcj/debug_proxy/param_3	/usr/sap/FA7/DVEBMGS00/work/jtmp/backend.properties

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?

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.

Note <u>2080378</u> - 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?

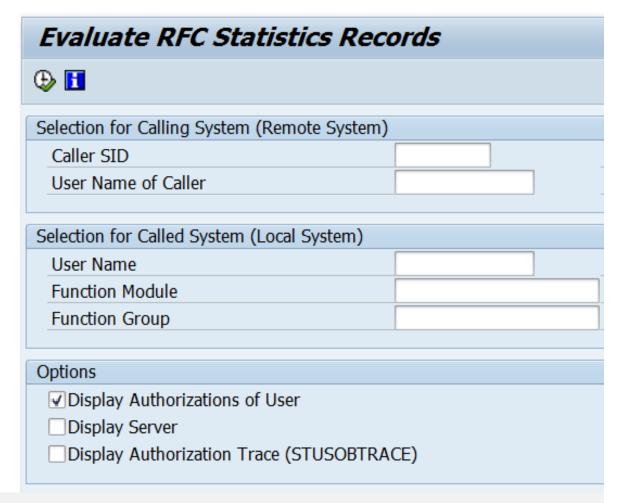
Now you can use the standard transaction

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.



Note <u>2080378</u> - 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
			Idcifbt_F	SMD_RFC_TEST	B System	FM_GET_ISEMS	FG_DIAGSTP_WILY			Generic Authoriz	2
			Idcifbt_F	SMD_RFC_TEST	B System	RFC_GET_FUNCTION_INTERFACE	RFC1		✓		3
			Idcifbt_F	SMD_RFC_TEST	B System	SYSTEM_RESET_RFC_SERVER	SYSU		✓		354
			Idcifbt_FBT_00	SMD_RFC_TEST	B System	RFCPING	SYST		4		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		4		50
		SAPJSF	UMEBackendConnection	SAPJSF	B System	RFCPING	SYST		√		3
CTR	001	D007157	0050569B02731ED58DA	SM_ADMIN_CTR	B System	RFCPING	SYST		4		25
CTR	001	D007157	0050569B02731ED58DA	SM_ADMIN_CTR	B System	RFC_READ_TABLE	SDTX		4		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		4		2
CTR	001	D007157	0050569B02731ED58DA	SM_ADMIN_CTR	B System	/SDF/RFC_READ_R3_DESTINATION	/SDF/COMUSER_UPDATE		4	Generic Authoriz	1
CTR	001	D007157	0050569B02731ED58DA	SM_ADMIN_CTR	B System	FUNCTION_EXISTS	SUNI		4		1
CTR	001	D007157	0050569B02731ED58DA	SM_ADMIN_CTR	B System	RFCPING	SYST		4		1
CTR	001	D007157	0050569B02731ED58DA	AGS_SM_SETUP	S Service	RFCPING	SYST			Full Authorization	1
CTR	001	D007157	0050569B02731ED58DA	AGS_SM_SETUP	S Service	SUSR_LOGIN_CHECK_RFC	SUSO			Full Authorization	1
CTR	001	D007157	0050569B02731ED58DA	AGS_SM_SETUP	S Service	/SDF/DELETE_USER_ROLES	/SDF/COMUSER_UPDATE			Full Authorization	1



August 2015

Topics August 2015



Some words about System Recommendations

SAP Note Enhancer

Note <u>1611408</u> - Missing authorization check in SD-SLS

Note 1922205 - Authorization default value in component BC-XI-IS-WKB

Note <u>1952092</u> - Code injection vulnerability in IDES systems

Note <u>2179384</u> - Traffic control: Wrong request transfer rate calculation

Note 2182842 - Potential information disclosure relating to SAP Customizing

SAP Security Notes Advisory by SAP Consulting

Note <u>1830797</u> - Missing authorization check in BC-MID-ICF

Note <u>2174357</u> - Reflected File Download Vulnerability in KM Documents Servlet

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

Some words about System Recommendations

Q: Which worklists should I feed with notes?

Frank: Use a bunch of them, e.g. the following:

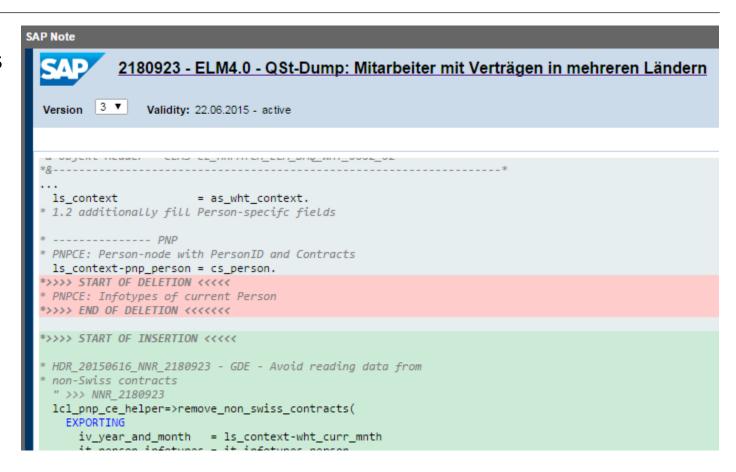
- 1. ABAP Notes having automatic correction instructions which should reach productions as fast as possible using a separate security patch transport
- 2. ABAP Notes having correction instructions which should reach productions as part of your normal transport cycle
- 3. ABAP Notes which require extensive 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

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/keibkcomemkcceddcddidIncidohgedk

Note 1611408 - Missing authorization check in SD-SLS

Deletion of obsolete but critical parameter transactions OVRC, OVRE

Valid for Software Component SAP_APPL

```
Release 311 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

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.

Roles by Complex Selection Criteria

Update Applications

Selection by Assigned Applications in Menu
Type of Application

Transaction Code

AND

AND

AND

AND

AND

AND

Note 1952092 - Code injection vulnerability in IDES systems

Only relevant for IDES Demo Systems.

The correction deletes report ZVUJLOGO, 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

Note <u>2179384</u> - 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 <u>1981955</u> - 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

Note <u>2182842</u> - Potential information disclosure relating to SAP Customizing

Security Note <u>2182842</u> refers to normal note <u>1859065</u> which undo's the critical change made by note <u>1814956</u>.

If you haven't implements note <u>1814956</u> you need note <u>1859065</u> 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 SAPKB731 <mark>08</mark>	731 SAPKB731 <mark>09</mark>	\rightarrow SP 8 is affected
740 SAPKB740 <mark>03</mark>	740 SAPKB740 <mark>04</mark>	→ SP 3 is affected

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 → <u>SAP Security Notes Advisory</u>

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.

Note <u>2174357</u> - 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 <u>2199306</u>:

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



July 2015

Topics July 2015



Note <u>2122578</u> - 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

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):

- 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)

Secure Network Settings

Activate Secure Network Communication

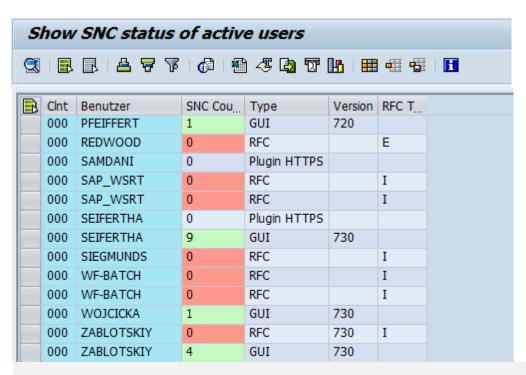
SNC Name

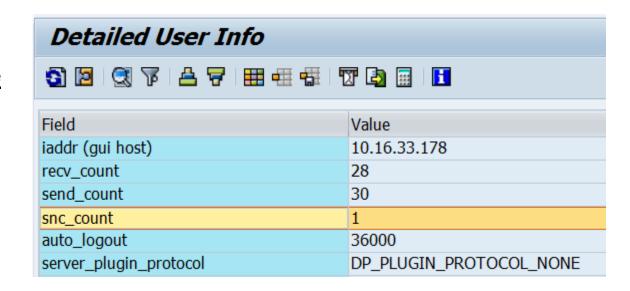
p:CN=XXX, OU=...

How can you verify if all SAPGUI sessions use SNC?

Note 2122578 - Security Audit Log event for unencrypted GUI / RFC

Transaction SM04 \rightarrow User \rightarrow Technical Information shows the SNC status of <u>active</u> connections on <u>one</u> application server.





The custom reports ZSM04000_SNC (based on SM04) and ZRSUSR000_620 (based on AL08) which you can find on <u>SCN</u> show an overview about the SNC status but have the same restrictions as the original transactions.

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

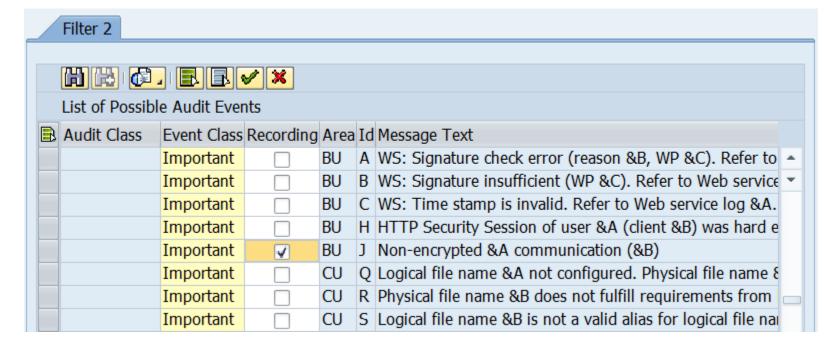
and RFC.

Transaction SM19

 $\rightarrow \dots$

→ Detailed Configuration

→ Log Message BUJ



Prerequisite: Note <u>2104732</u> - 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

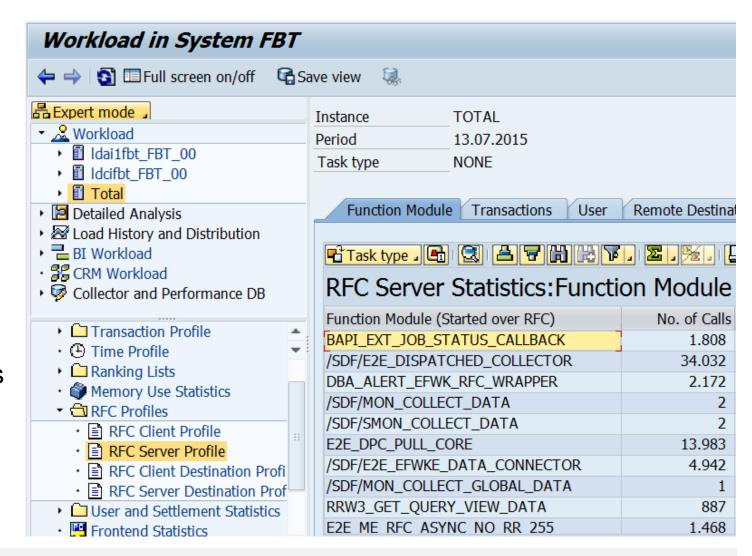
Note <u>2029397</u> - Missing authorization checks for RFC in E-commerce ERP applications

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.



Note <u>2057982</u> - Hardcoded credentials in BC-SRV-DX-DXW Note <u>2059659</u> - Hardcoded credentials in BC-CUS-TOL-CST

Deactivation of obsolete, unused code.

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)"



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 <u>2144333</u> - 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

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 master keys that are issued with SAP HANA installations as described in SAP security note <u>2183624</u>. This is valid as of HANA SPS 06.

The SSFS master 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 <u>114045</u>.

Note <u>2183624</u> - 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 Master Encryption Key has not been changed from its default value.

See:

Note <u>863362</u> - 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.

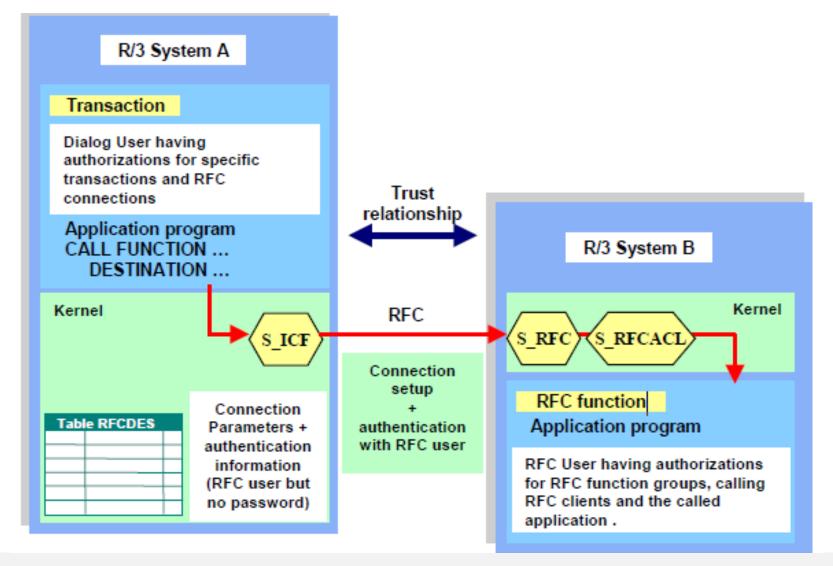
ALERT OVERVIEW

•

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

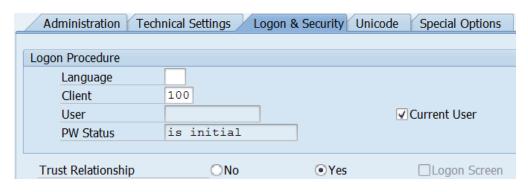


There exist two working modes with Trusted-RFC:

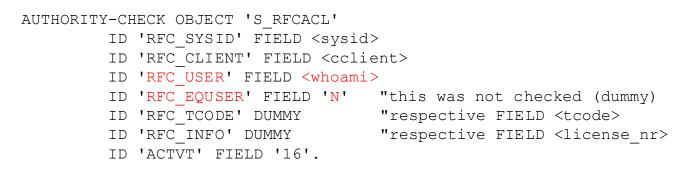
1. Trusted-RFC with same-user

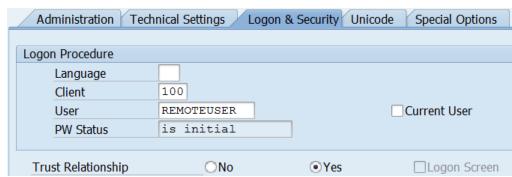
```
AUTHORITY-CHECK OBJECT 'S_RFCACL'

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 ID 'ACTVT' FIELD '16'.
```



2. Trusted-RFC with dedicated user as defined in the RFC destination





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.

Example: Trusted-RFC-same-User

Authorization Field	Authorization Value
ACTVT	Activity: 16=Execute
RFC_SYSID	S1P, S2P,
RFC_INFO	*
RFC_CLIENT	200
RFC_USER	1 1
RFC_EQUSER	Y
RFC_TCODE	*

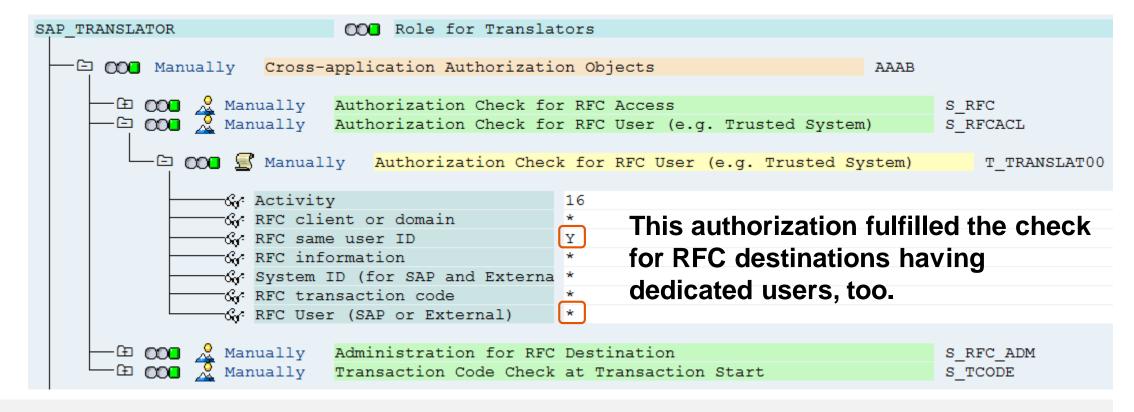
Example: RFC-user for specific application

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	*

How to find critical authorizations, profiles, roles, uses:

Use transaction SUIM and search for authorization values #*

	RFC_USER - RFC User (SAP
Value	#*
AND	



Note <u>2008727</u> - 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)

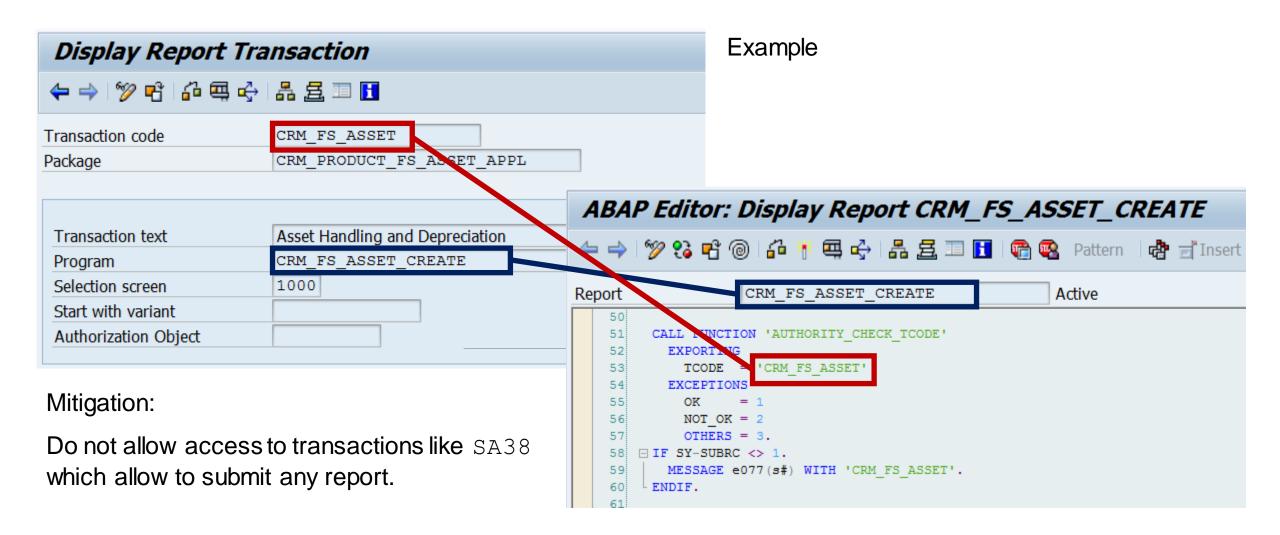
Note 2144333 - Missing authorization check in CRM-LAM

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 <u>2157877</u>, <u>2157877</u>

Note 2144333 - Missing authorization check in CRM-LAM



Note 2163306 - Fixing FREAK vulnerability in Crypto-Library

Assigned Software Component: CRYPROLIB (but not KERNEL or HANA in opposite to similar note 2067859)

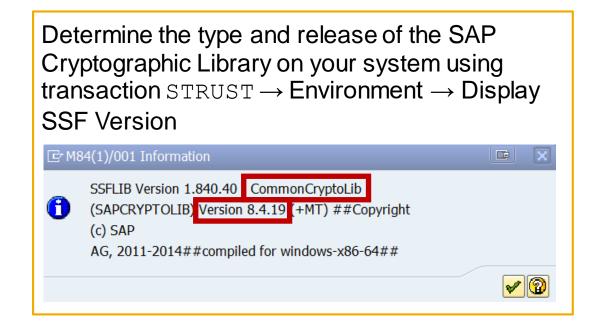
→ not visible in System Recommendations

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.



Other Products:

Note 2152703 - Fixing FREAK vulnerability in Sybase Products

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 $STRUST \rightarrow Environment \rightarrow Display SSF Version.$ 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.

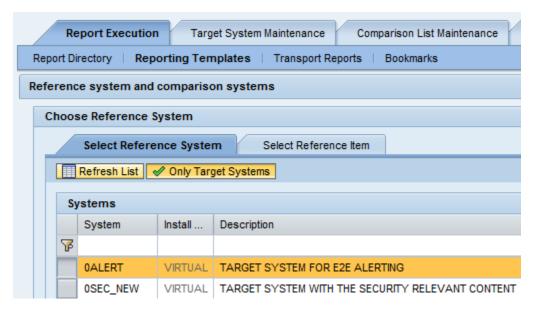
The main preventive measure is to replace the libraries. Do this first. You may consider to renew DSA keys, too. See note <u>2068693</u>.

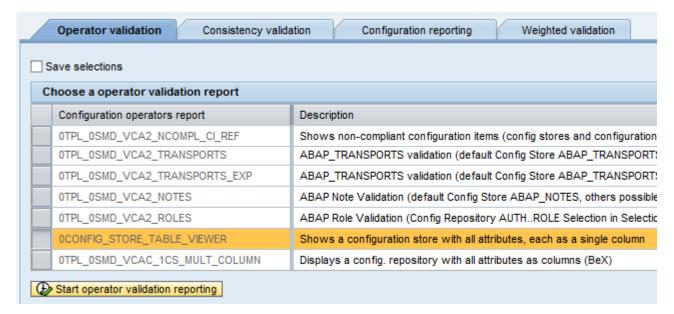
SSFLIB Version 1.840.40 CommonCryptoLib

(SAPCRYPTOLIB) Version 8.4.19 (+MT) ##Copyright
(c) SAP
AG, 2011-2014##compiled for windows-x86-64##

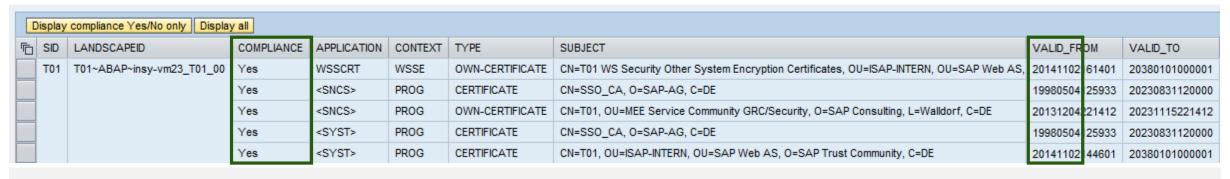
Note 2068693 - Replacing Key Pairs in ABAP and HANA

Report execution in Application Configuration Validation for Config Stores PSE_CERT and J2EE_PSE_CERT:





Result:



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):

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

Note <u>1749142</u> - 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 <u>1749142</u> is solved: Software Update Manager 1.0 SP13 does not request client 066 anymore during upgrade.



May 2015

Topics May 2015



Note <u>1595582</u> - Deletion of temporary RFC destinations

Note <u>1750618</u> - RFC destinations created in SMSU_MANAGED_SYSTEM not delete

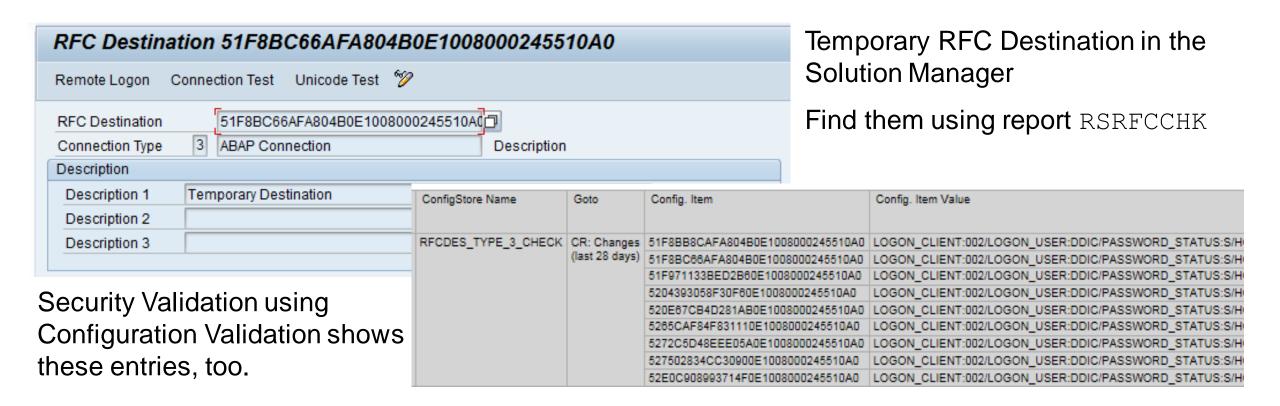
Note 2113995 - Missing authentication check in SAP ASE

Note <u>2078596</u> - 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

Note <u>1595582</u> - Deletion of temporary RFC destinations Note <u>1750618</u> - RFC destinations created in SMSU_MANAGED_SYSTEM



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.

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:

- <u>SAP ASE 16.0</u> SP01
- SAP ASE 15.7 SP132

Install the fixed SAP ASE versions most appropriate for your production environments.

Note <u>2078596</u> - SACF: Switchable Authorization (RFC) Scenarios (reloaded)

The following SAP Notes contain new switchable authorization checks in RFC:

May 2015:

Note <u>2152230</u> - Switchable authorization checks for RFC in Reconciliation Report Scheduler Scenario HRPAYUS_RECON

Note <u>2072357</u> - 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 <u>2053788</u> - Missing authorization check in RFC enabled function module - BC-MOB-MI-SER Scenario BC_MI_RFC_CHECK

Note <u>2078596</u> - 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 <u>2052677</u> - 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 <u>2066851</u> - 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 <u>2105633</u> - Missing authorization check in Alert Management Interface

Note 2105634 - Missing authorization check in ALE Interface

Note <u>2118500</u> - Missing authorization check in SAP Records Management

Note 2122022 - Missing authorization check in function RSPO_R_SAPGPARAM

Note <u>2131334</u> - 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 <u>2149278</u> - 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.

Current notes about System Recommendations

Note 2099728 - SysRec: Object list for ABAP notes does not show Usage Procedure Logging

Note <u>2137673</u> - 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 <u>2146340</u> - SysRec: dump in automatic check

Note 2150787 - SysRec: missing system in reporting

KBA <u>2126621</u> - SysRec: Requirement before opening incident for System Recommendation

KBA 2117439 - SysRec: Notes related to HR sub component are not presented

KBA <u>2041071</u> - 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

KBA <u>2126621</u> - 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 <u>1942291</u>. This is essential due to reason explained in note <u>2046605</u>.
 (Tip: copy job SM: SYSTEM RECOMMENDATIONS and execute it once instead if using 'Refresh')
- \succ Follow the recommendation in note <u>2043295</u> and <u>2137673</u> if SysRec presents non relevant notes.
- In the event that no data (0 count) is listed for UPL in "Show Object List", refer to the note 2099728.

Note 2121661 - Potential remote termination of running processes in ABAP & Java Server

Note 2124806 - Potential remote termination of running processes in SAP GUI

Note <u>2125316</u> - Potential termination of running processes in SAPCAR

Note <u>2127995</u> - Potential remote termination of running processes in Content Server

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	<u>2121661</u>
R3trans	11.02.15	<u>19466</u>
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	<u>2136942, 1724496</u>
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

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	<u>2127995, 514500</u>

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

<u>Info</u>

4433

20.04.2015

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.

4. VULNERABLE PACKAGES

- SAP Netweaver Application Server ABAP.
- · SAP Netweaver Application Server Java.
- SAP Netweaver RFC SDK
- SAP REC 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.

SAP MaxDB does not use the affected code which means it is not affected, therefore MaxDB is not listed in the notes.

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.



April 2015

Topics April 2015



Notes <u>1769064</u> und <u>931252</u>

Profile Parameter auth/rfc_authority_check

[Troopers 2015] RFC callback - A Backdoor in Wonderland

Note <u>2084037</u> - Potential information disclosure relating to RFC SDK

Note <u>2140700</u> - 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 <u>1981955</u> - Enforcing minimal request transfer rates in SAP Web Dispatcher and ICM

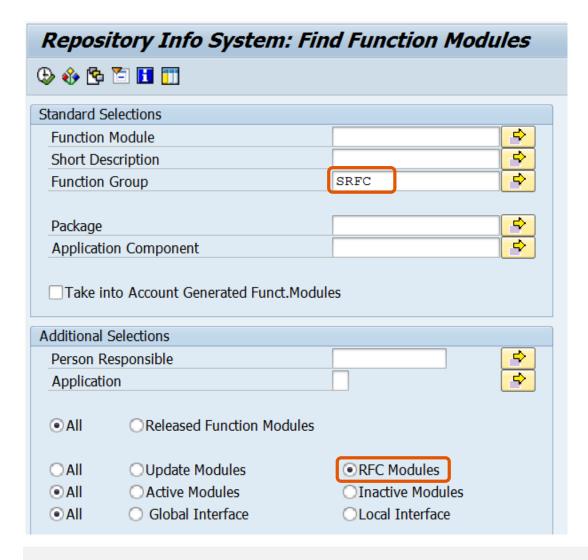
Note <u>2179384</u> - Traffic control: Wrong request transfer rate calculation

Notes <u>1769064</u> und <u>931252</u> 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

Notes <u>1769064</u> und <u>931252</u> 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

[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 <u>2008727</u> - Whitepaper: Securing Remote Function Calls (at 25:35)

http://scn.sap.com/docs/DOC-60424

Note <u>2058946</u> - Maintenance of callback positive lists before Release 7.31 (at 26:30)

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!

References:

Note <u>27517</u> explains the installation of the "Classical RFC Library"

Note <u>413708</u> explains how to verify the version of the RFC library.

Note 1005832 shows an Overview on all RFC Libraries and SDKs.

SAP KERNEL 7.20 patch 715

SAP KERNEL 7.21 patch 332

SAP KERNEL 7.43 patch 11

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".

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"

```
Execute OS Command (Logged in SYSLOG and Trace Files)
 Reset list
            Change current directory
R/3 SI7 200
                                         Date 05.02.2015 Time 15:02:29
                   User
                            BUCHHOLZF
Host ldai1si7
                            si7adm
                   User
Path /usr/sap/SI7/D88/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] ls $(DIR EXECUTABLE)/librfc*
[1]ls /usr/sap/SI7/D88/exe/librfc*
/usr/sap/SI7/D88/exe/librfcum.so
/usr/sap/SI7/D88/exe/librfcum.so.old
[2]strings $(DIR EXECUTABLE)/librfcum.so | grep "LIBRFC"
[2]strings /usr/sap/SI7/D88/exe/librfcum.so | grep "LIBRFC"
@(#)LIBRFC (c) SAP AG: Version: 720 Patch level: 0 Patch number: 611 thread-safe UNICODE build 64 bit
```

Command on Unix: what Linux: strings

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)

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
```

```
Execute OS Command (Logged in SYSLOG and Trace Files)
Reset list
           Change current directory
R/3 M84 001
                  User
                        D019687
                                        Date 05.02.2015 Time 12:49:04
Host wdflbmt8218 User
                           m84adm
Path D:\usr\sap\M84\D10\work
Execute history command number with next command
Execute last history command with next command ...
$(name) replaced by logical OS commands and profile parameters
[1] for %f in ($(DIR EXECUTABLE) \librfc*.dll) do find "LIBRFC" %f
[1] for %f in (D:\usr\sap\M84\D10\exe\librfc*.dll) do find "LIBRFC" %f
D:\usr\sap\M84\D10\work>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
```

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.

Note <u>2121869</u> - 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.

Note <u>1966655</u> - Potential denial of service in ICM Note <u>1981955</u> - Enforcing minimal request transfer rates in ICM

Updated by Note <u>2179384</u> - 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 <u>1981955</u>. 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 <u>icm/server port <xx></u>

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 <u>ICM security log</u> and the dev trace

"This mechanism replaces the previous one configured by parameter <u>icm/traffic control</u> "which offers a timeout only.



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Note <u>2110020</u> - Enabling TLS or disabling SSLv3 protocol versions on SAP WebDispatcher, or SAP WebAS (AS ABAP 6xx, 7xx or AS Java >= 710)

Note <u>1944155</u> - Missing authority check in Report RKEDELE1

Note <u>1970644</u> - 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*

Note <u>2110020</u> - 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 <u>510007</u>.

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.

Note <u>1970644</u> - SAL: Missing overview of message definitions report RSAU_INFO_SYAG

Note <u>1970644</u> is a normal note (not a security note)

More notes about new messages:

Note <u>2073809</u>

Note <u>2128095</u>	SAL Missing parameters in DUI, DUJ, and DUK messages	
Note <u>1963882</u>	SAL: Problems with evaluation of audit log files (+ manual steps)	
Note <u>1968729</u>	SAL: Message definition for RFC callback	
Note <u>2025307</u>	SAL Function module RSAU_GET_AUDIT_CONFIG (+ manual steps)	
Note <u>2124538</u>	SM19 Error during event selection	
Note <u>2104732</u>	SAL - event definition for SNC client encryption	
Note <u>1917367</u>	SACF: supplementary corrections	
Note <u>1995667</u>	SACF: Navigation error	
Note <u>2012767</u>	SACF: Switchable authorization check for other users	

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SAL Optimization of event documentation (only in SP)

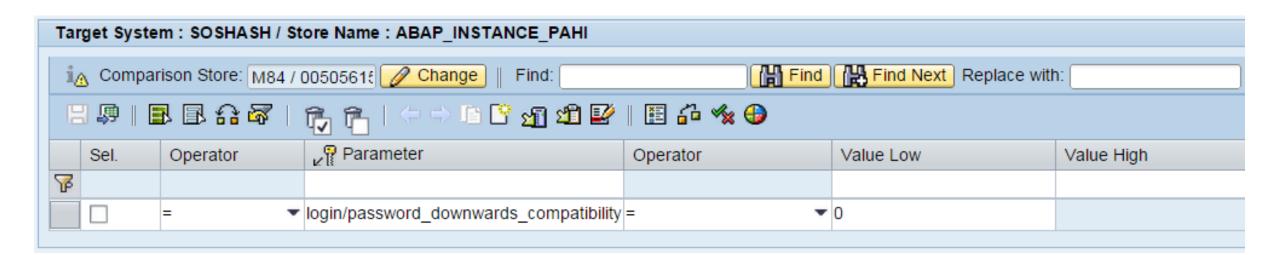
Tips about the Security Audit Log http://scn.sap.com/docs/DOC-60743

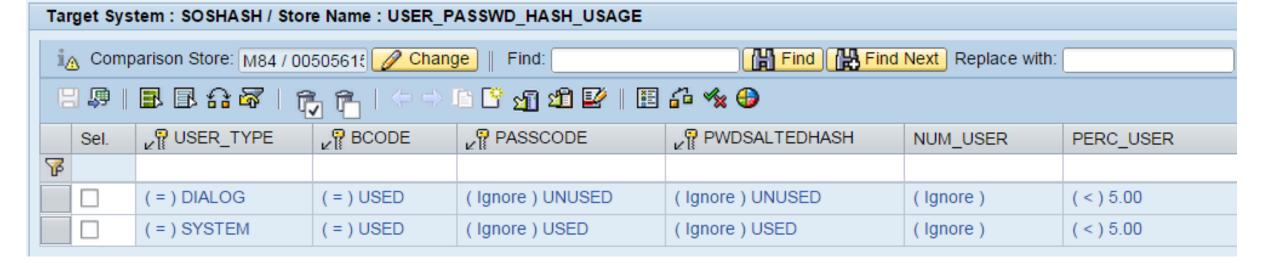
Using note <u>1970644</u> you can get report **RSAU_INFO_SYAG** which shows all events of the Security Audit Log including the current status of activation. The detail view allows you to create an HTML-based event definition print list including the full documentation.

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 <u>1497003</u>)	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 whitelist 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)	

Security Configuration Validation using SAP Solution Manager for: Why you should really get rid of old password hashes *NOW*





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

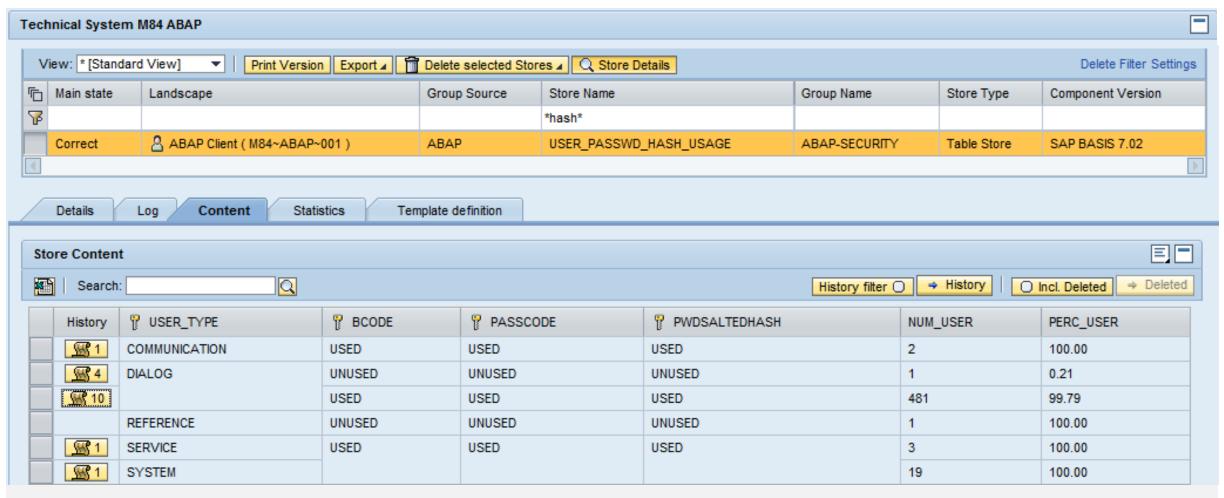
Configuration Items					
SAP System ID	ConfigStore Name	Config. Item	Config. Item Value	Value of Target System	Compliance
M11	ABAP_INSTANCE_PAHI	login/password_downwards_compatibility	1	0	No
	USER_PASSWD_HASH_USAGE	DIALOG/USED/UNUSED/	#	NUM_USER:/PERC_USER:5.00	Item not found
		SYSTEM/USED/USED/	#	NUM_USER:/PERC_USER:5.00	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/	NUM_USER:1/PERC_USER:0.21	Target value not found	Additional in Comparison System
		DIALOG/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/	NUM_USER:19/PERC_USER:100.00	NUM_USER:/PERC_USER:5.00	No

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

How to find Configuration Stores and Documentation?

Transaction CCDB shows Configuration Stores of a specific system:





February 2015

Topics February 2015





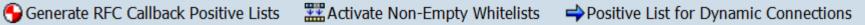
Note 2015232 - Missing authorization check in XX-PART-OPT-INV (from September 2014)

Note <u>1902611</u> - Potential information disclosure relating to BC-SEC (from November 2013)

Note <u>2074736</u> - Directory traversal in GW (from November 2014)

Note 1686632 - Positive lists for RFC callback (extended) **Questions from users**

- Is it possible to use wildcards in whitelists?
 - By using '*' in the whitelist 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 whitelist 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 whitelist using the Security Audit Log



Preparation:

2128095 - SAL

in DUI, DUJ, and DUK messages

Implement note

Missing parameters

Would it be possible to define a blocklist instead of a allowlist?

- No, you only have allow entries and profile parameter rfc/callback security method:
 - 0: All entries are ignored, even the active ones.
 - 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.

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 <u>1721041</u> - SAP Invoice Management by OpenText support for EhP6

Note <u>1598141</u> - SAP Enhancement Package 6 for SAP ERP 6.0:Compatible Add-ons

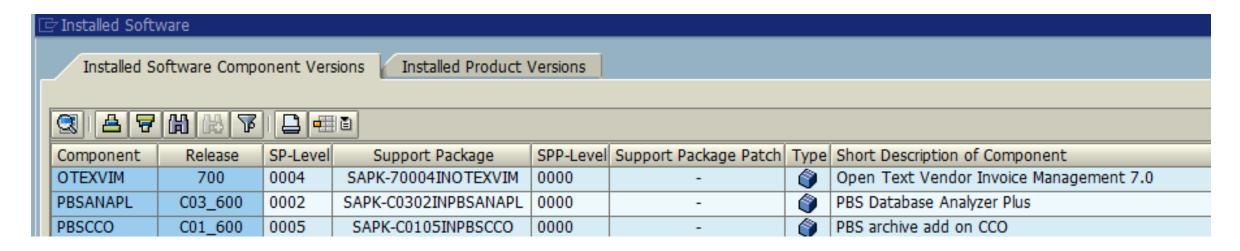
Note 2015232 - Missing authorization check in XX-PART-OPT-INV

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:



Note 1902611 - Potential information disclosure relating to BC-SEC

The Secure Storage (ABAP) is based on a static master key by default. You can set an individual master key by yourself.

Report by ERPScan:

http://erpscan.com/press-center/blog/sap-passwords-part-1/

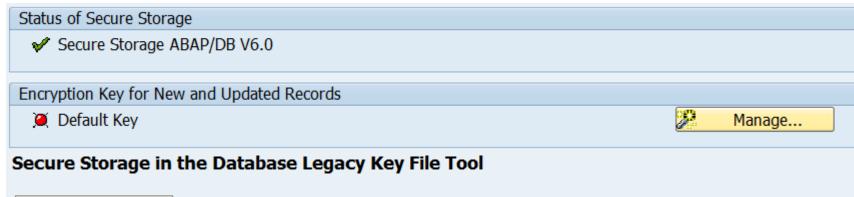
Online Help:

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 master 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

Note 1902611 - Potential information disclosure relating to BC-SEC



Use transaction SECSTORE to check the status of the Secure Store and to generate an individual random key.

Check Key Status

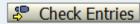
4 Check No, Status

This tool enables you to check the current key status and manage encryption keys based on a key file.

See SAP Note 1902258 for general information and help with errors ("RSECWnnn").

First, the system checks the key status of all instances for consistency.

Step 1: Review the Results of the Key Consistency Check



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

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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 Date 23.02.2015 Time 18:56:54 User D019687 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\qlobal\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 837 SecStore.properties 07.07.2014 12:25 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 RSBDCOSO.

Note 2074736 - Directory traversal in GW

Transaction SMGW and profile parameter gw/logging now restrict allowed pathnames to specific directories.

Solution:

Check value of profile parameter <u>gw/logging</u>
 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



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 <u>1985387</u> - Potential information disclosure relating to SAP Solution Manager

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 <u>991968</u> / <u>2076925</u> - List of values for "login/password_hash_algorithm" (SHA-1, SHA-256, SHA-384, SHA-512)
```

- Note <u>1023437</u> ABAP syst: Downwardly incompatible passwords (since NW 2004s)
- Note <u>1237762</u> ABAP systems: Protection against password hash attacks
- Note <u>1300104</u> CUA|new password hash procedures: Background information
- Note <u>1458262</u> ABAP: recommended settings for password hash algorithms
- Note <u>1484692</u> 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

Password hashes in SAP NetWeaver ABAP

Introduction to the vulnerability

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 Password:

Thisisastrongpassword



9d6fffda73e361025b92fb702aabf5e0

 But password hashes can be generated from potential passwords until password hashes match Password:
 Hash:

Welcome



83218ac34c1834c26781fe4bde918ee4

Thisisastrongpassword

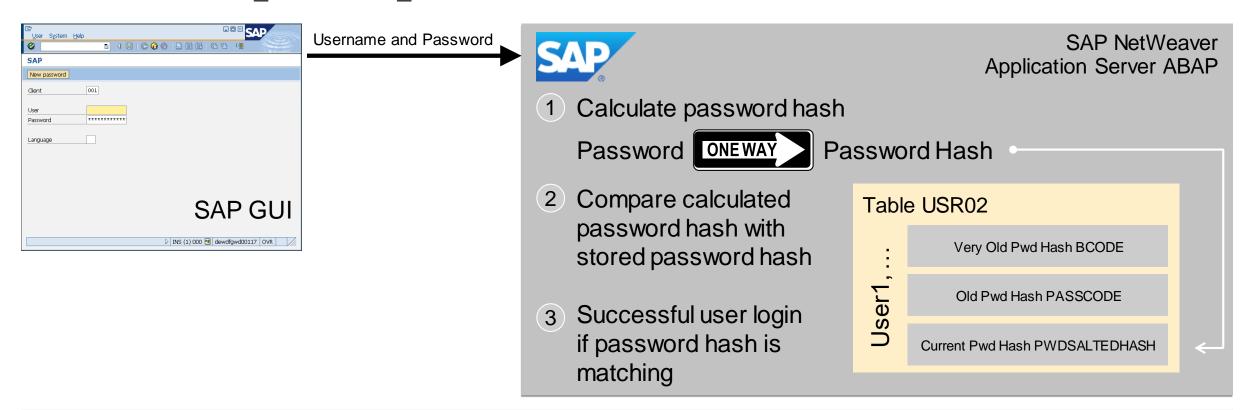


9d6fffda73e361025b92fb702aabf5e0

Which password hash is compared during user login?

User login in AS ABAP 7.02 with login/password_downwards_compatibility* = 0/1

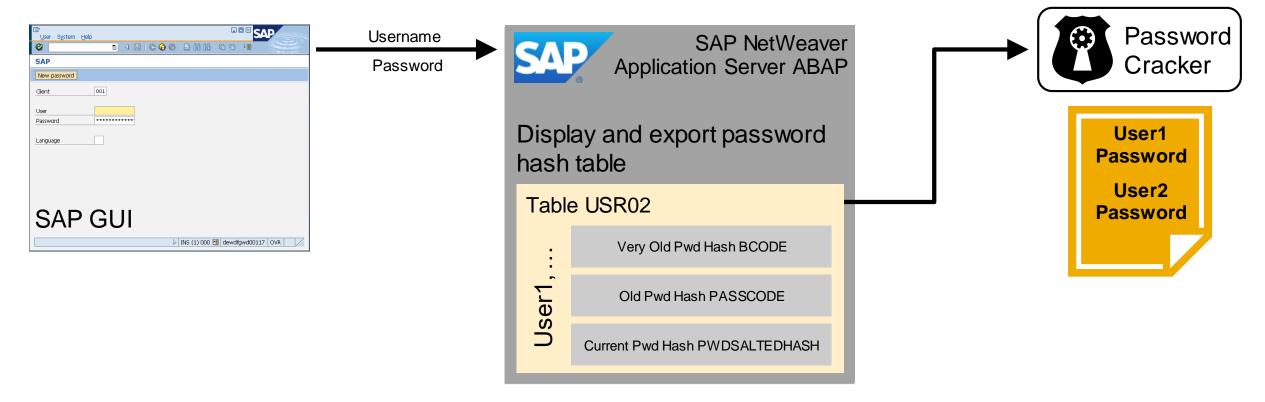
- Code Version per user (field CODVN) controls which password hash is used for a user authentication
- login/password downwards compatibility >= 2 can activate check of old BCODE in addition



Let's hack an SAP system by weak password hashes!

Attack scenario

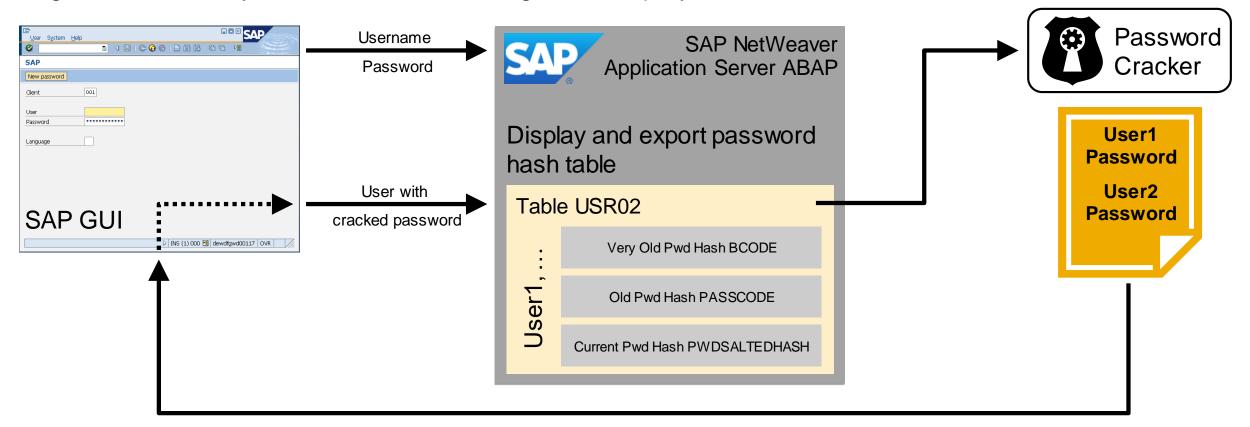
Logon to an SAP system with a user having table display access to USR02



Let's hack an SAP system by weak password hashes!

Attack scenario

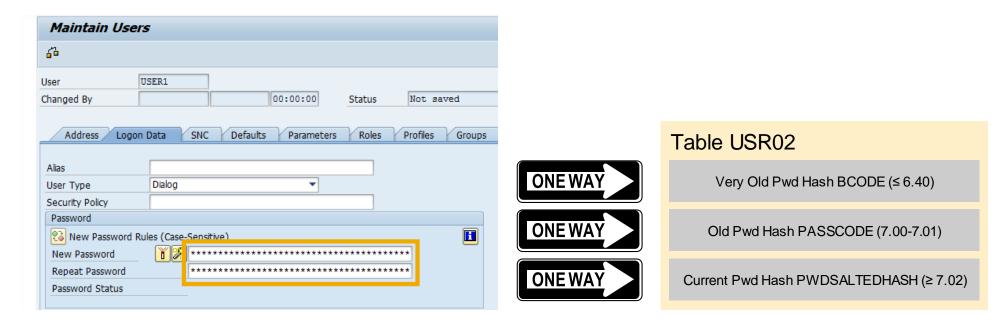
Logon to an SAP system with a user having table display access to USR02



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



^{*} Depends on profile parameter login/password_downwards_compatibility

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

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 <u>1237762</u> and <u>1458262</u>

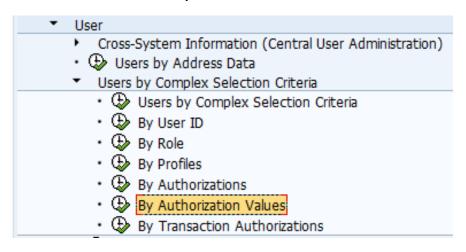
Password hashes are stored in several tables and tables are not assigned to special table authorization groups

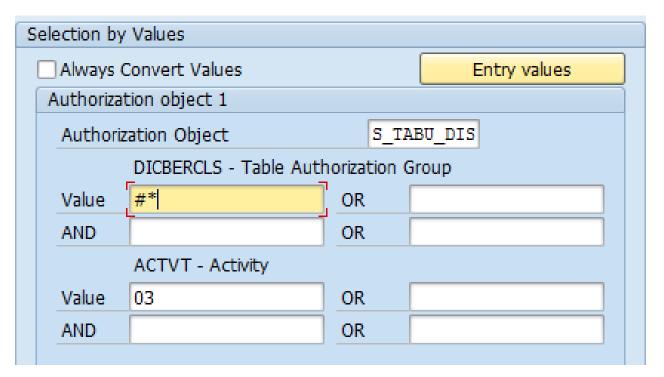
- Depending on the SAP release, password hashes are stored in up to 6 tables / views
- By default, password hash tables are assigned to table authorization group SC (which contains many tables)
- Refer to SAP note <u>1484692</u>
- Refer to SAP note <u>2024431</u> that provides a report to adjust TDDAT in customer landscapes

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 #*





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 Permit Password Logon for SAP GUI (User-Specific)
- Enforce single-sign on for SAP GUI communication with (snc/accept_insecure_gui = U)

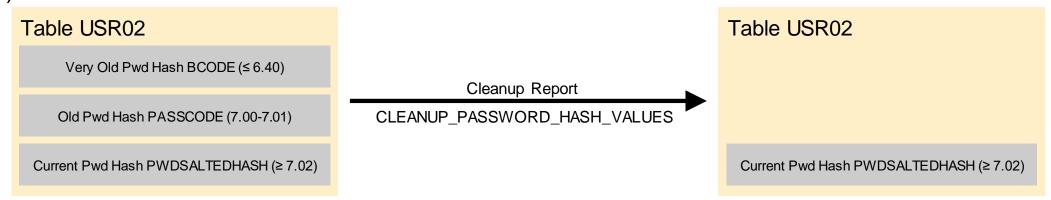
SAP Runs SAP: Approach for password hash protection

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)



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

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

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

		Config. Item	Compliance System	Compliant (1=Yes, -1=No, ''=Not valuated)					
ConfigStore Name	Client			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/	No	-1	1	-1			
		SERVICE/USED/UNUSED/UNUSED/	Yes	1	7	1			
	001	COMMUNICATION/USED/UNUSED/UNUSED/	No	-1	-1				
			Yes	2	1	1			
		DIALOG/USED/UNUSED/UNUSED/	No	-2		-1			
			Yes	1	1				
		SERVICE/USED/UNUSED/UNUSED/	No	-1	-1				
		SYSTEM/USED/UNUSED/UNUSED/	No	-1	-1				
			Yes	2		1			
	200	COMMUNICATION/USED/UNUSED/UNUSED/	No	-1			-1	4	
			Yes	3	1	1			

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		Release date	Туре
1985387	SV-SMG-INS-AGT	Potential information disclosure relating to SAP Solution Manager		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
S 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!

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 <u>1868094</u> Overview: Oracle Security SAP Notes (updated on 03.12.2013) This note lists ~60 security related notes
- Note <u>850306</u> 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: <u>Database Security for Oracle</u> (PDF) from 2012.
- > SAP NetWeaver Security Guide Oracle on Windows
- SAP NetWeaver Security Guide Oracle on UNIX

Note <u>2094598</u> - 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.

Note <u>1985387</u> - 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?
 - o 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 <u>2119627</u> Change the Password for the Diagnostics Agent Connection User in SAP Solution Manager



December 2014

Topics December 2014



Recent notes for application System Recommendations

Note <u>1987344</u> - Code injection vulnerability in the OCS functionality (SPAM)

Note 2039348 - Missing whitelist check in GRC-ACP

Note <u>2046493</u> - Privilege escalation vulnerability in saposcol

Note 2091973 - Missing authorization check in FS-CD

Note <u>1686632</u> - Positive lists for RFC callback (extended)

Note 1800603 / 2074889 - Potential remote code execution in Message Server

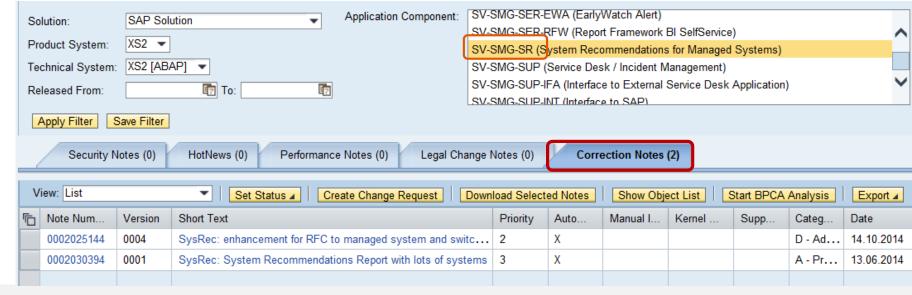
Recent notes for application System Recommendations

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:

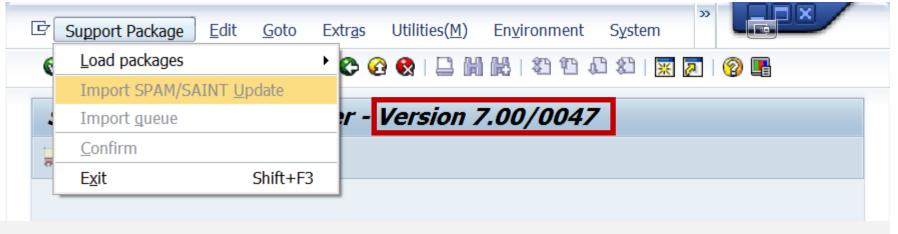
- Select notes by Application Component SV-SMG-SR
- Show Correction Notes



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



Note <u>2039348</u> - Missing whitelist check in GRC-ACP Questions from users

- Which applications use this whitelist framework?
 - This whitelist framework was published using note <u>1560878</u>. 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 a whitelist for GRC-ACP?
 - You only need to maintain a whitelist 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 <u>S RFC</u> and/or remote security based on <u>UCON</u>.
 - S RFC respective UCON secure who is able to execute which RFC enabled functions. This includes RFC functions from GRC. The whitelist as described in note 2039348 secures which other functions can be indirectly called via the RFC interface of GRC.

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 <u>726094</u>), or use SAPHOSTAGENT package which contains the new saposcol and handles it's starting/stopping automatically in a safe way (see Note <u>1031096</u> - Installing Package SAPHOSTAGENT)

Other references:

- Note <u>19227</u> Open newest saposcol
- Installation and Configuration of saposcol
 http://help.sap.com/saphelp_nw70ehp2/helpdata/en/aa/b8c93a8aaa2b28e10000000a114084/content.htm

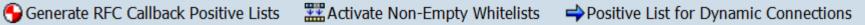
Note 2091973 - Missing authorization check in FS-CD

Deactivation of obsolete report in software component INSURANCE.

As usual with this type of corrections: Just do it!

Note 1686632 - Positive lists for RFC callback (extended) **Questions from users**

- Is it possible to use wildcards in whitelists?
 - By using '*' in the whitelist 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 whitelist 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 whitelist using the Security Audit Log



Preparation:

2128095 - SAL

in DUI, DUJ, and DUK messages

Implement note

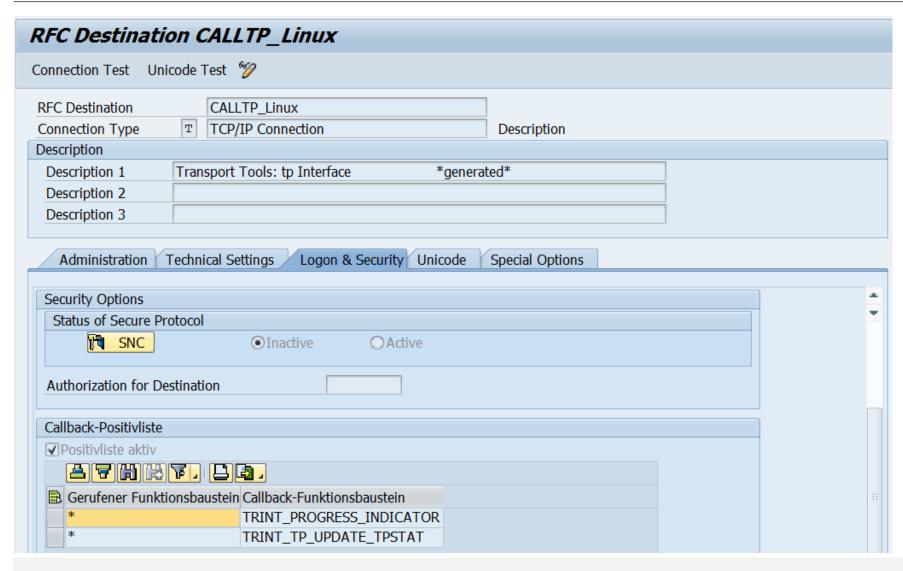
Missing parameters

Would it be possible to define a blocklist instead of a allowlist?

- No, you only have allow entries and profile parameter rfc/callback security method:
 - 0: All entries are ignored, even the active ones.
 - 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.

Note <u>1686632</u> - Positive lists for RFC callback (extended) Example

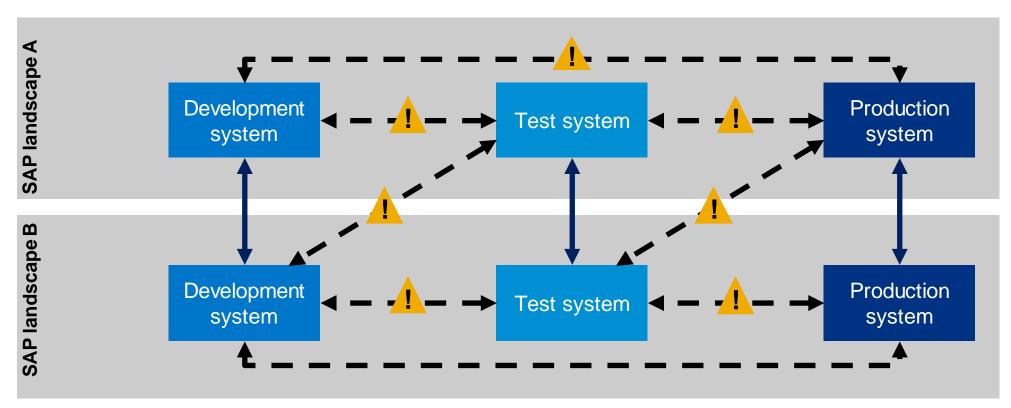


"Standard" scenario

tp is allowed to send status information back to ABAP.

No restriction, which of the functions within tp is allowed to callback to ABAP.

Note <u>1686632</u> - Positive lists for RFC callback (extended) System landscape



OK: RFC destinations between systems of same security classification

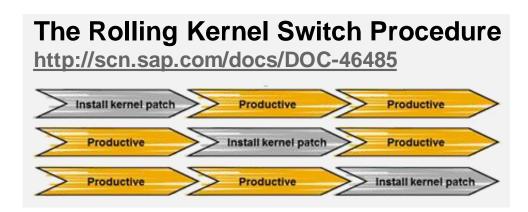
CHECK: RFC destinations from low security level to high security level (trust relationship, stored credentials) RFC destinations from high security level to low security level (callback)

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



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



November 2014

Topics November 2014





Note <u>2078596</u> - 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 <u>1686632</u> - Positive lists for RFC callback (updated)

Note <u>1738988</u> - 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
- PERFORM form IN PROGRAM
- 6. Gotcha!

See also:

Note <u>1872638</u> - Code injection vulnerability in CRM-MKT-MPL-TPM-PPG (October 2014)

Note 1835691 - Code injection vulnerability in CRM-MKT-MPL-TPM-PPG (September 2014)

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 <...>

Prerequisite notes are referenced in SAP Note 2054522.

Additional information on switchable authorization checks (SACF) is available in note 1922808

Online Help - Switchable Authorization Check Framework

http://help.sap.com/saphelp_nw74/helpdata/en/ff/599a937a9a43f8927040b63ce08cc4/content.htm

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

Kernel

7.20 patch 618

7.21 patch 227

7.38 patch 51

7.40 patch 44

7.41 patch 10

Note 2078596 - SACF: Switchable Authorization (RFC) Scenarios

Goal: Switch on all RFC scenarios ...

- ... for <u>used</u> scenarios including verification and adjustment of the authorization concept
- ... for <u>not used</u> 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

Note 2078596 - Further improvements for RFC security

Caution: Other notes about "Missing authorization check in ..." might not be related to Switchable Authorization Scenarios!

Note <u>2078596</u> 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

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

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

Note <u>2086818</u> - 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 WebApplication Server ABAP
<u>2089135</u>	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

Note 1686632 - Positive lists for RFC callback (updated)

The solution provided by note <u>1686632</u> is incomplete and got updated:

Credits for this tip:
SAP Security Consulting

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 <u>2058946</u> 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/48/8c727789603987e100000000a421937/frameset.htm

See note <u>2102941</u> - Update 1 to Security Note <u>1686632</u>



October 2014

Topics October 2014



Note <u>2067859</u> - Potential Exposure to Digital Signature Spoofing

Note <u>1686632</u> - Positive lists for RFC callback

Note <u>1872638</u> - Code injection vulnerability in CRM-MKT-MPL-TPM-PPG

Integration of System Recommendations and Usage Procedure Logging as of SolMan 7.1 SP 11

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 $STRUST \rightarrow Environment \rightarrow Display SSF Version.$ 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 <u>2068693</u>.

SSFLIB Version 1.840.40 CommonCryptoLib

(SAPCRYPTOLIB) Version 8.4.19 (+MT) ##Copyright
(c) SAP
AG, 2011-2014##compiled for windows-x86-64##

☑ M84(1)/001 Information

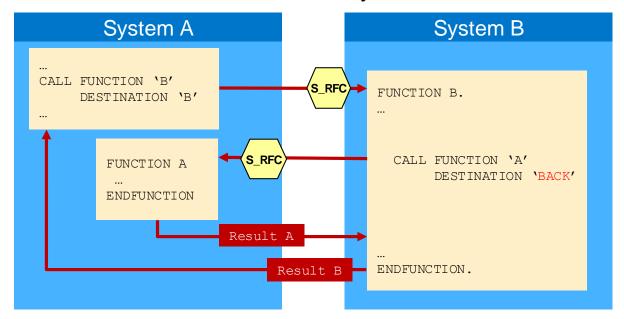
Note 1686632 - Positive lists for RFC callback

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.



Note <u>1872638</u> - 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
- GENERATE SUBROUTINE
- PERFORM form IN PROGRAM
- 6. Gotcha!

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:

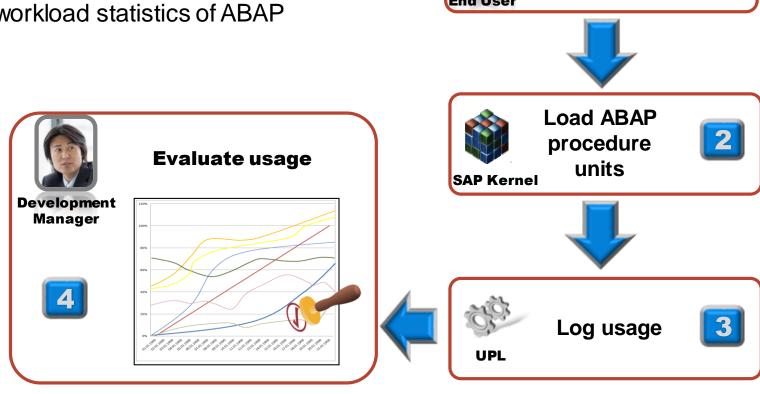
- ✓ No performance impact
- √ 100% coverage of usage
- ✓ Detection of dynamically called ABAP elements
- Secured access to UPL data to protect information
- ✓ The full reporting capabilities with enriched information in BW of the Solution Manager will give you the flexibility to analyze ABAP usage on your demands.

UPL, a prerequisite for several new SAP Solution Manager applications like BPCA and EHP Scope & Effort Analyzer

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.



Execute

business transaction

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

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)

DateAll 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.

TypeType 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

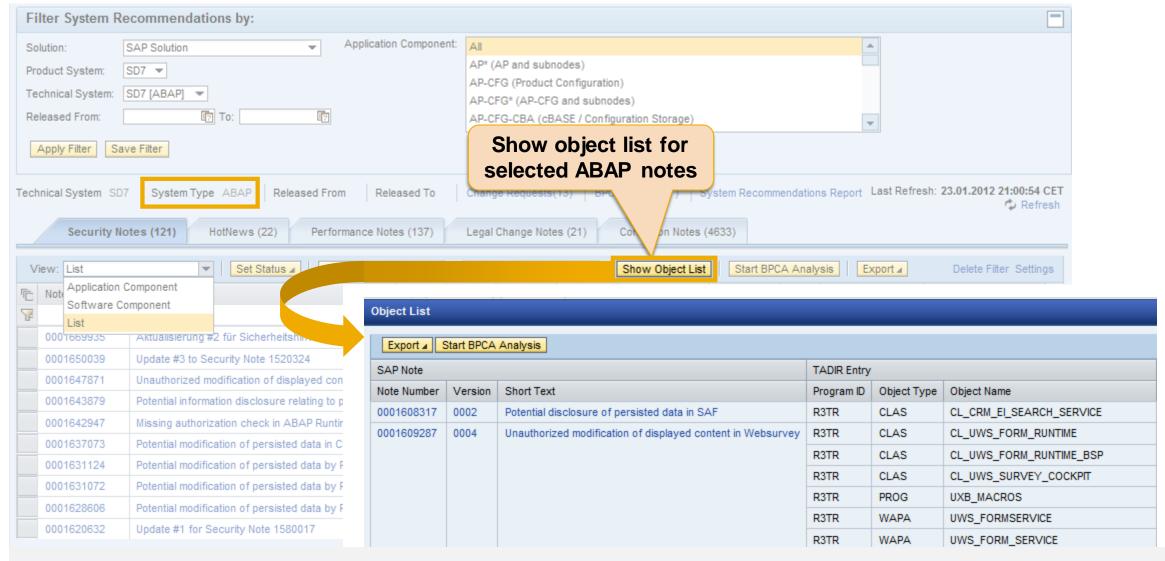
Accumulated Executions Number of executions

SAP Usage and Procedure Logging (UPL) Usage Analysis (local in managed system)

Display Usage & Procedure Logging Data											
3 A 7	7 Z) 								
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				

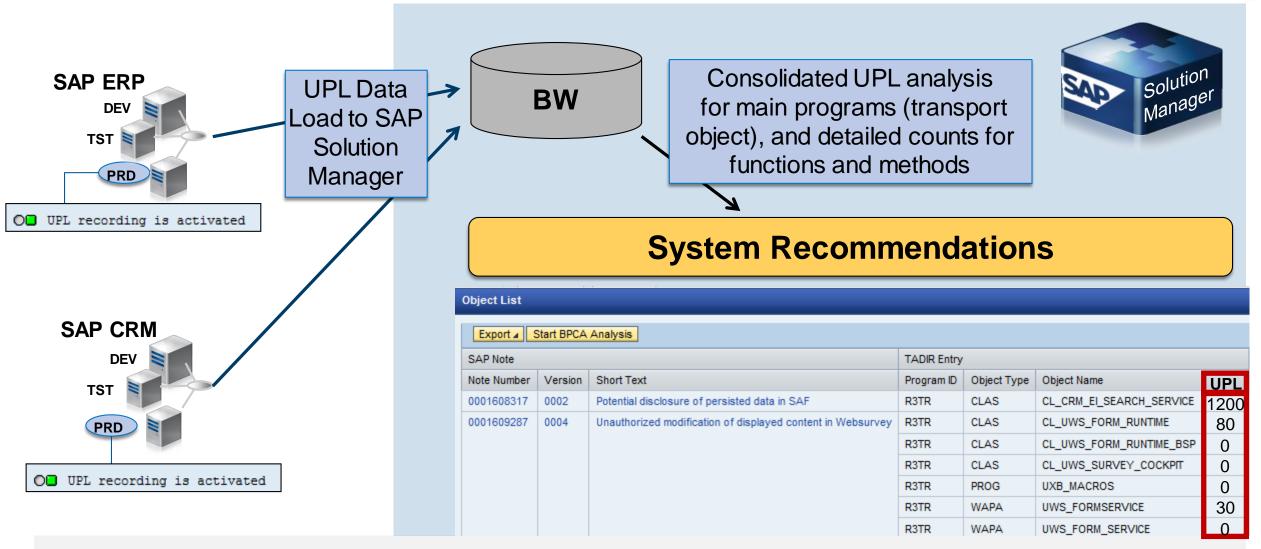
Extended Functions in System Recommendations Show object list for selected ABAP notes

Available as of SolMan 7.1 SP 5



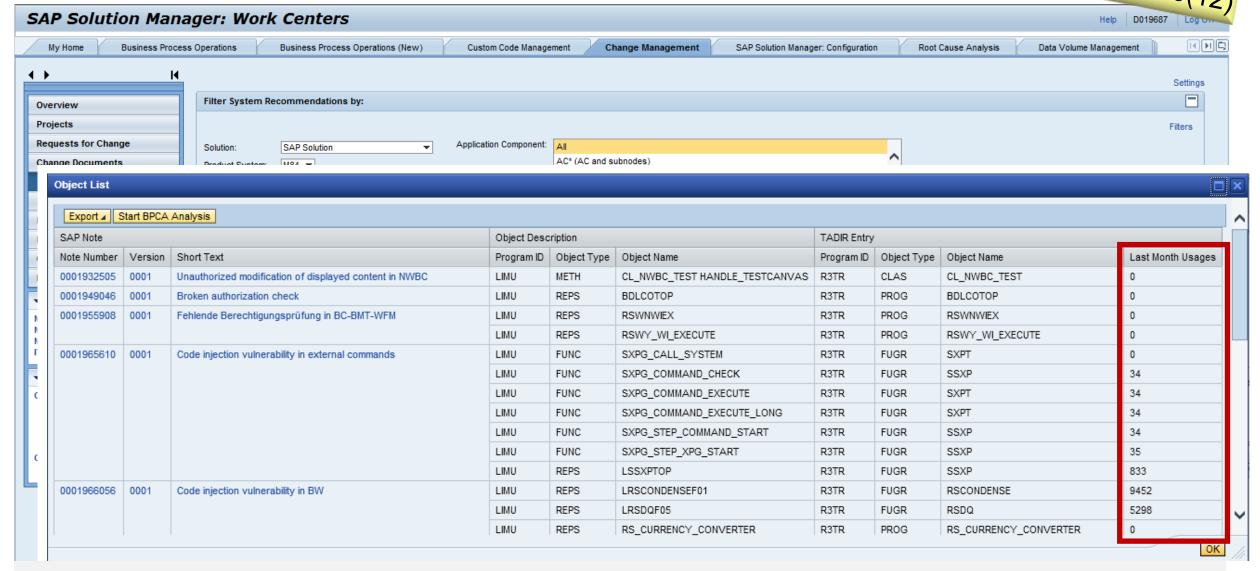
Analysis of Object Usage in System Recommendations Data Collection of Usage Procedure Logging (UPL)

Available as of SolMan 7.1 SP 10(12)



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)



Cross-System check for System Recommendations Report ZSYSREC_NOTELIST with object list and usage data

Available as of SolMan 7.1 SP 10(12)



Systems: M84 ABAP 21.07.2014 04:02:00

M84 JAVA 21.07.2014 04:02:46

Maintain status: Use functions NEW (new), IMP (to be implemented), NOR (irrelevant), PSP (postponed) and SAVE to maintain status

Object list: Use function OBJ to show the object list of selected notes including usage data

3	SID	Sys-Type	Note	version	Application	area P	riority Note short text		Rel.date	Note U	SysRecSt	t
	M84	ABAP	2017050	1	BC-CUS-TO	L-H 2	Update 1 to Security Note 19	71238	08.07.2014	(a)	New	
	M84	ABAP	2000476	1	CRM-MKT-M	IPI 2	Missing authorization check in	CRM-MKT-MPI	13.05.2014	(6)	New	
	M84	ABAP	1998770	_ Ot	oject list of n	otes wit	h usage data					Г
	M84	ABAP	1997788					届 [日]				
	M84	ABAP	1988956	SI		Type	Name	Obj.	Transport object name	Cou	ınt	
	M84	ABAP	1985100	M84	1955908	REPS	RSWNWIEX		RSWNWIEX	0		1
	M84	ABAP	1984057	14104	1933900					0		
	M84	ABAP	1983739			REPS	RSWY_WI_EXECUTE		RSWY_WI_EXECUTE	0	<u> </u>	-
		ABAP	1977547		1965610	REPS	LSSXPTOP	FUGR	SSXP	908	3	H
		ABAP	1974016	_		FUNC	SXPG_STEP_XPG_START	FUGR	SSXP	38		H
						FUNC	SXPG_COMMAND_CHECK	FUGR	SSXP	37		H
	M84	ABAP	1971238			FUNC	SXPG COMMAND EXECUTE		SXPT	37	# #	
	M84	ABAP	1966896						SXPT	37		
	M84	ABAP	1966056			FUNC	SXPG_COMMAND_EXECUTE_LON					
	M84	ABAP	1965610			FUNC	SXPG_STEP_COMMAND_START	FUGR	SSXP	37		
		ADAD	1055010			FUNC	SXPG_CALL_SYSTEM	FUGR	SXPT	0		H

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 <u>1785251</u> SCOV/UPL: Error messages in monitor (Kernel 720 Patch 410 / 721 Patch 112)
- SAP Note <u>1822227</u> (to allow changing the data retention time using report/SDF/UPL_CONTROL)
- SAP Note <u>1906451</u> 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



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 Uls to handle UPL configuration end to end including job scheduling of related UPL jobs.

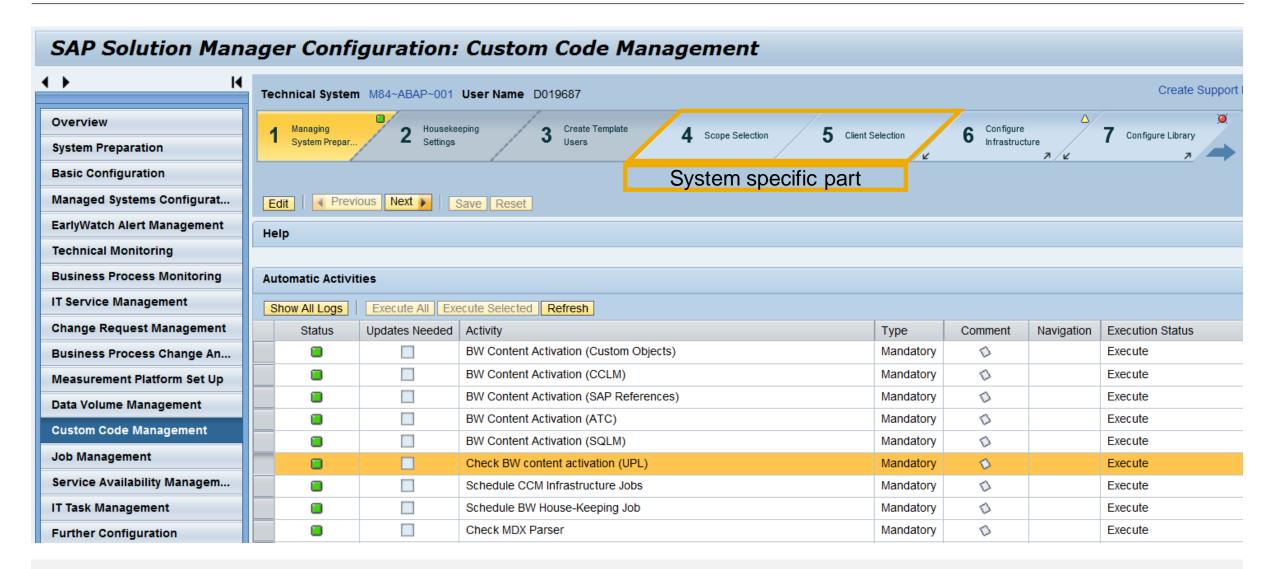
See

Note <u>1955847</u> - UPL: Activation Procedure and Authorization Handling in SAP Solution Manager

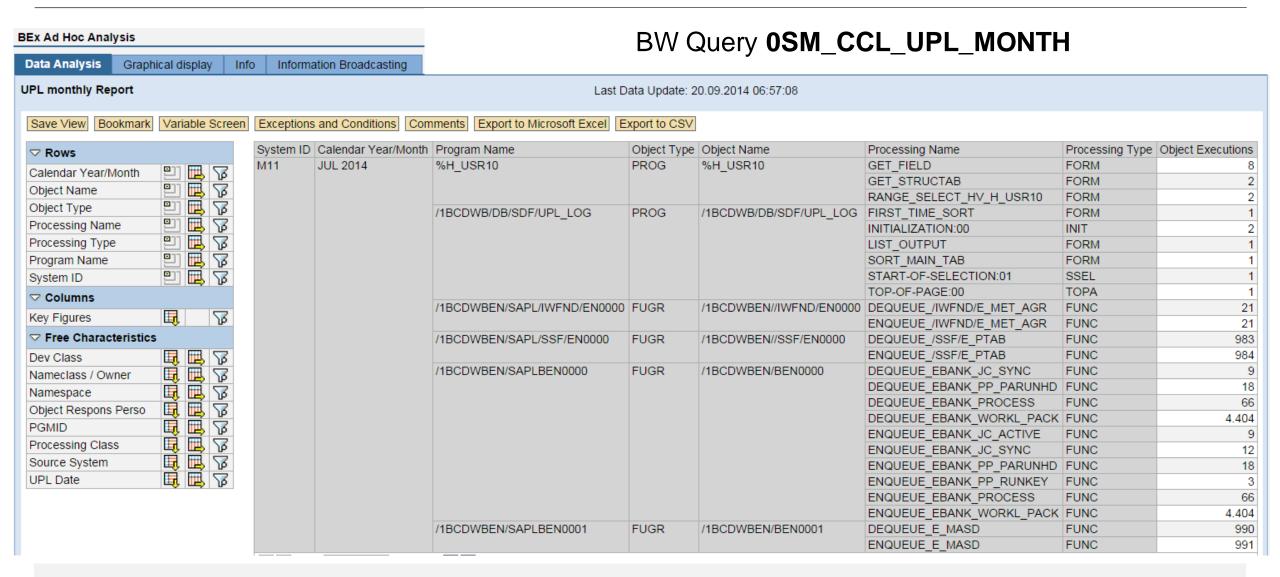
Additional authorizations:

- S_COV_ADM with change activity
- S_RFC for function group /SDF/SCOV_LITE

SAP Usage and Procedure Logging (UPL) Guided Procedure as of SAP Solution Manager 7.1 SP 11



SAP Usage and Procedure Logging (UPL) Central Analysis using BW in SAP Solution Manager



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 UPL recording is activated
 - 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 OSM_UPL_DATE_RANGE_BPCA respective OSM_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 <u>2099728</u> 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



September 2014

Topics September 2014



Note 1909442 - Incorrect authorization check in IAC post processing

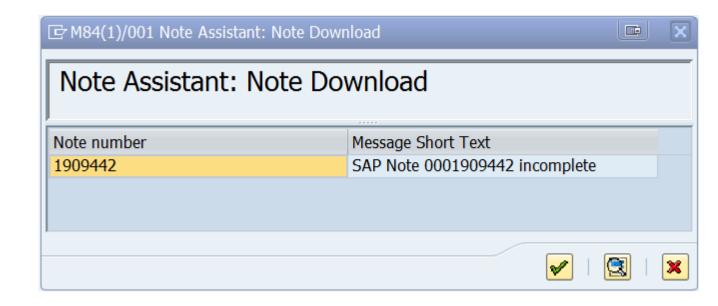
Note 1971397 - Missing authorization check in BW-BEX-OT

Note 1909442 - Incorrect authorization check in IAC post processing

Issue: You cannot download note <u>1909442</u> 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!

Note 1971397 - Missing authorization check in BW-BEX-OT

Use of new 'Repository Whitelists' (transaction SLDW) for a specific application.

Make sure note <u>1919573</u> and <u>2061628</u> 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 Whitelists'

Note <u>1919573</u> - SLDW: Environment for maintaining switchable whitelists

Note <u>1922712</u> - SLDW: FAQ: Supplementary notes for whitelist maintenance

Note <u>2061628</u> - SLDW: Transport connection for new whitelists



August 2014

Topics August 2014



Note 2020395 - Sapinst used static salt for password encryption on UNIX / Linux

Note <u>1917381</u> - Missing authorization check in Profile Maintenance

Note <u>1769064</u> - 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

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.

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 deimplement version 1 in this case.

Note <u>1769064</u> - 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 <u>1769064</u> 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

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

Tips & Tricks: Notes referring to other notes at Causes - Side Effects

Example: Note <u>1674132</u> contains a reference to an update note <u>1826162</u> 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			
<u>1674132</u>	0	0	<u>1826162</u>	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						

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.

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).

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.



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 <u>1881073</u> - Unauthorized modification of displayed content in BSP

Note 1971238 - Missing authorization check in BC-CUS-TOL-HMT

Note <u>2017050</u> - Update 1 to Security Note 1971238

Note <u>1808003</u> is not visible anymore

Note <u>1967780</u> - Missing authorization check in BW-WHM-DST

Note 2006974 - Code injection vulnerability in PP-PI-CFB

Note <u>2026132</u> - Update 1 to security note 1483548

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

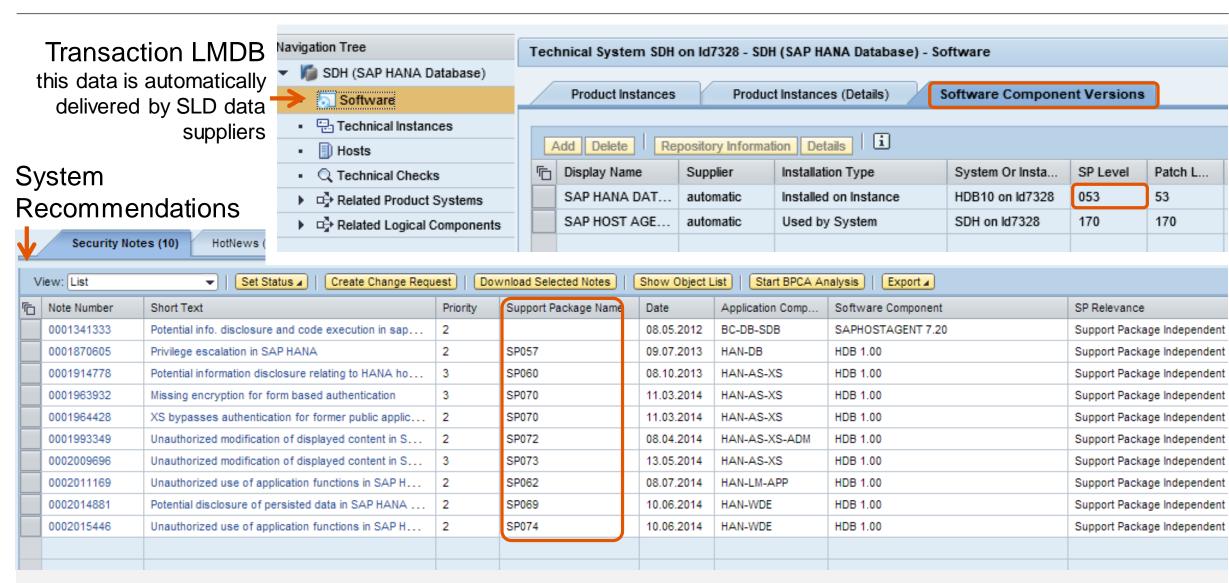
MOB-AFA Afaria

MOB-SUP Sybase Unwired Platform

PP-PI Production Planning for Process Industries

PY-PH Philippines

Small patch days in June (19+3) and July (8+3) mostly for non-ABAP / non-Java



Note <u>1988956</u> - Unauthorized modification of displayed content in BSP Note <u>1881073</u> - 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."

Note <u>1971238</u> - Missing authorization check in BC-CUS-TOL-HMT Note <u>2017050</u> - Update 1 to Security Note 1971238

Note <u>1971238</u> 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

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 <u>2032840</u> - 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 deimplement note <u>1808003</u> if you have implement it.

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.

Note 2006974 - Code injection vulnerability in PP-PI-CFB

What happens if you ignore the manual instruction to create a message via modiffication?

... 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)

Note <u>2026132</u> - 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



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

<u>1966995</u> - 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

1808003 - Potential information disclosure relating to BC-CST

Currently we have some issues with note <u>1808003</u> 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)

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 <u>documentation</u> \rightarrow Operations \rightarrow <u>Security Guide SAP Solution Manager 7.1 SP10</u>.

How to run BW reporting on System Recommendations

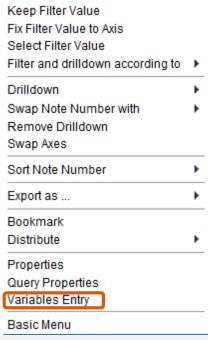
1. via System Recommendations

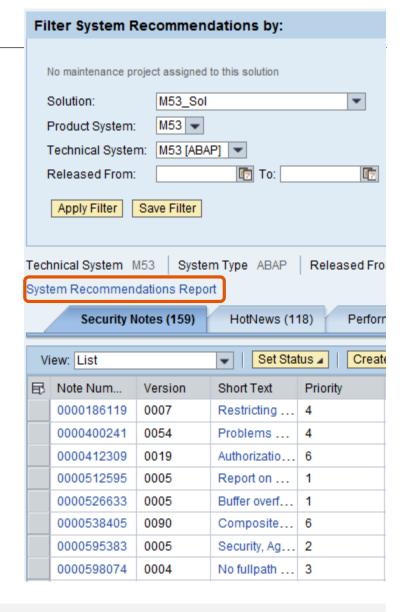
Execute BW reporting via System Recommendations

- 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"

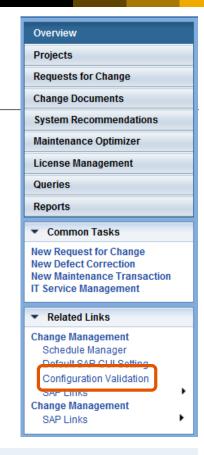


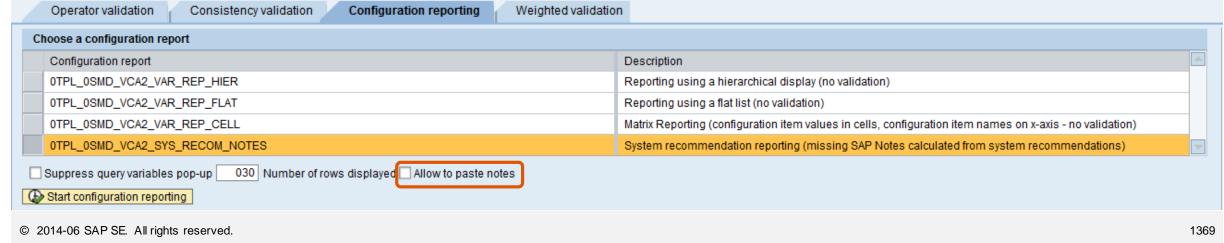


How to run BW reporting on System Recommendations 2. via Configuration Validation

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





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/700b405bacdd5fe100000000a155106/frameset.htm

You need note <u>1880710</u> "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"

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.

How to send e-mails with results of System Recommendations via BW Broadcasting (3)

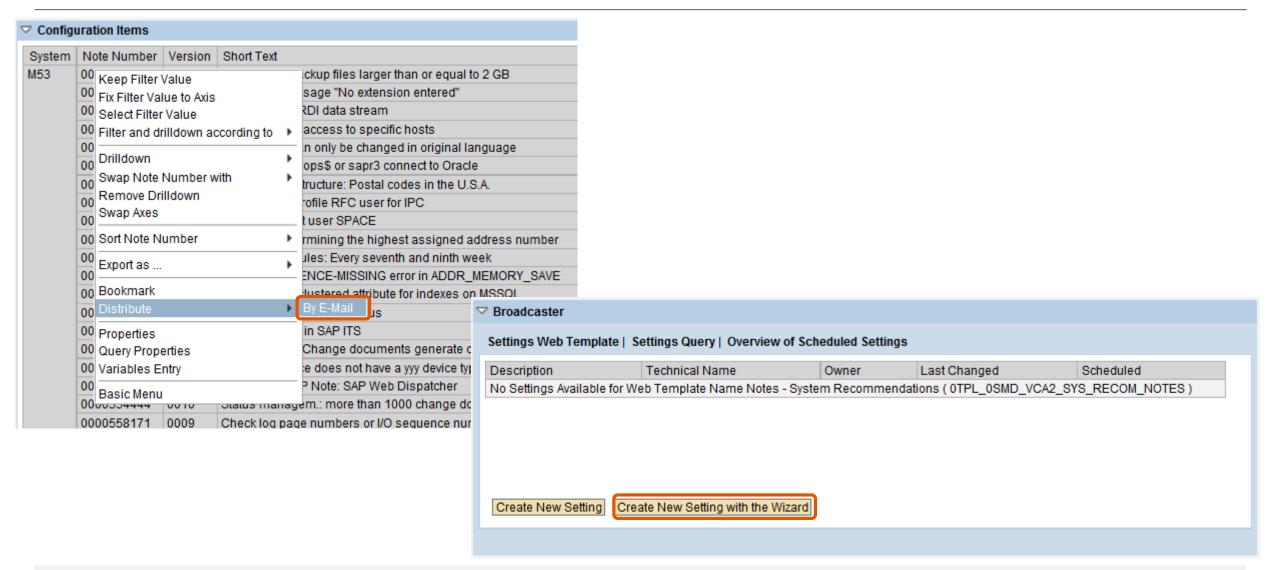
Options for Sending

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.

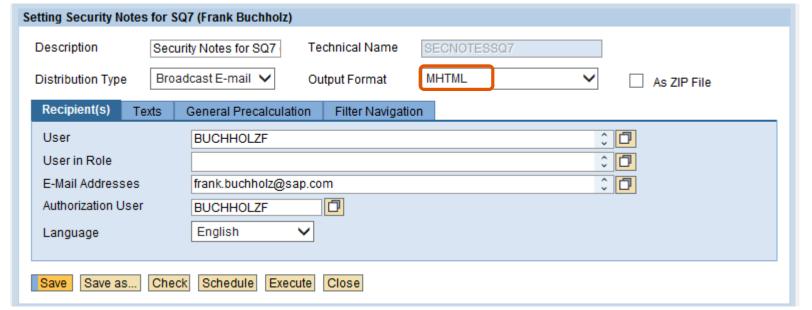
You define the scheduling on a new screen. To create a new periodic schedule, activate the two indicators *Create New Scheduling* and *Periodic...*. Now select the desired period and the next start time.

Choose the *Transfer* button, and save your changes. You have now completed the scheduling. The desired recipients will now regularly receive the desired reports.

How to send e-mails with results of System Recommendations via BW Broadcasting



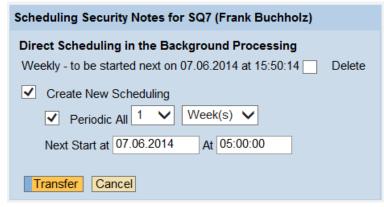
How to send e-mails with results of System Recommendations via BW Broadcasting

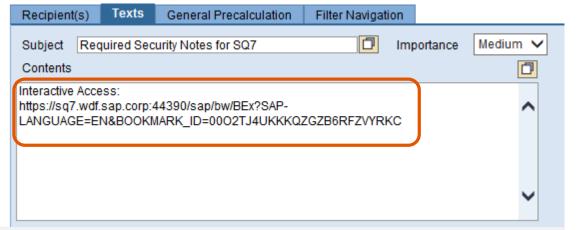


Settings

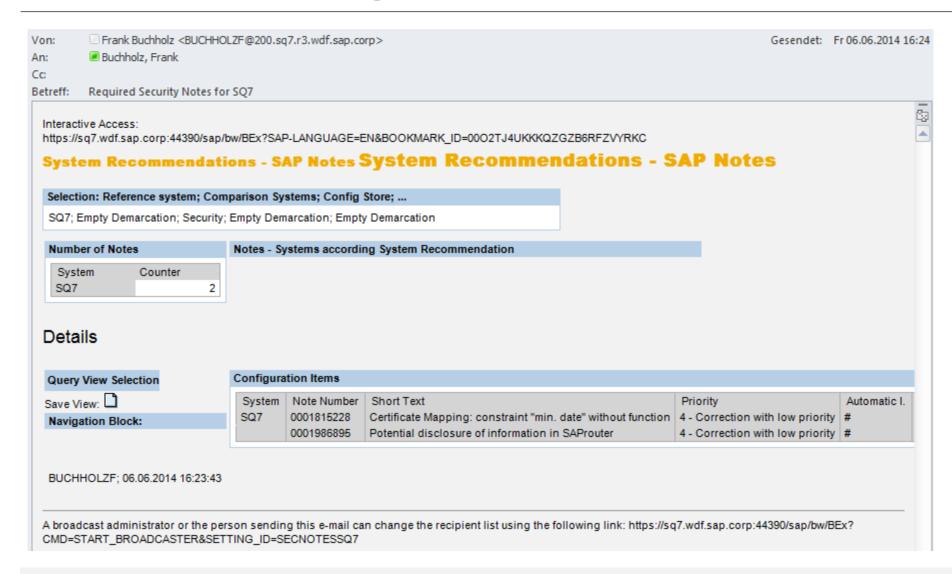
Define description, output format (MHTML), recipients, and text of the e-mail (which should contain the Bookmark URL, too, to allow interactive access).

Choose either Schedule or Execute to send the e-mail





How to send e-mails with results of System Recommendations via BW Broadcasting



Result

E-mail with Result of the BW report including a Bookmark URL to the interactive BW report

1889999 - Missing authorization check in LCAPPS DP

No impact to existing authorization concept, as

- critical code gets deactivated
- a predefined whitelist gets introduced

<u>1966995</u> - 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 <u>1966995</u> using SNOTE but you can implement note <u>1946911</u>.

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

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 preimplementation 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"?

1997455 - Potential information disclosure in BC-SEC-USR-ADM

Only customers running a CUA are affected by this vulnerability. Only the CUA master 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

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	\rightarrow You get the solution if you apply both.
701	To SAPKB70114	
700	SAPKB70009 - SAPKB70030	

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.

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.

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

<u>2015446</u> - 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

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
- \rightarrow 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
- \rightarrow BI 4.1 oder Edge 4.1



April 2014

Topics April 2014



Info: OpenSSL Heartbleed Bug

Note <u>1974046</u> - Potential information disclosure relating to Business Data

Note <u>1971516</u> - Code injection vulnerability in SV-SMG-SDD

Q: How much staff do companies have to allocate to this process?

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

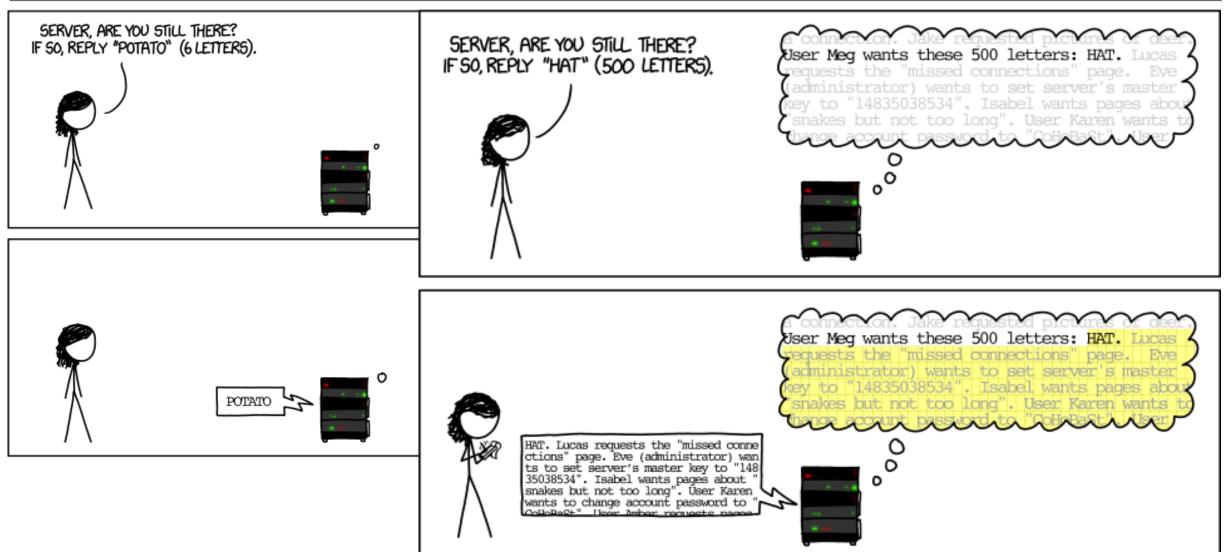
"Users unable to immediately upgrade can alternatively recompile OpenSSL with -DOPENSSL_NO_HEARTBEATS."

Bruce Schneier: "Heartbleed is a catastrophic bug in OpenSSL"

https://www.schneier.com/blog/archives/2014/04/heartbleed.html

OpenSSL Heartbleed Bug How the heartbleed bug works: http://xkcd.com/1354/





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**

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

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.

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.

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.)?



March 2014

Topics March 2014





Note <u>1900200</u> - Directory traversal in BC-SRV-ARL

Note <u>1966056</u> - Code injection vulnerability in BW

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 <u>Support Packages can be found on SAP Service Marketplace</u> 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.

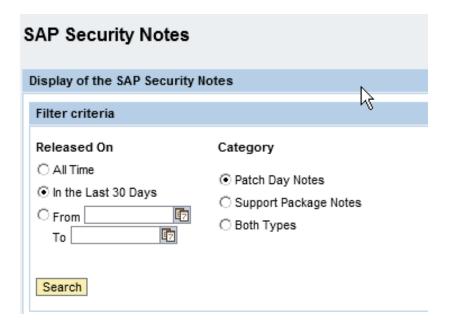
PD Notes

- 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

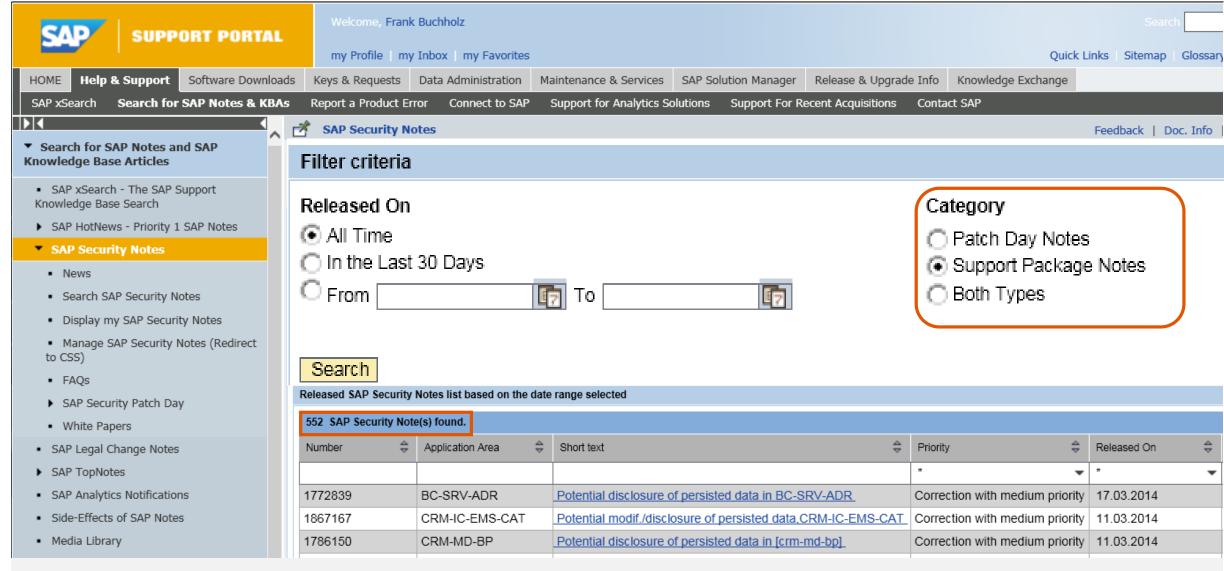
Re-classification in March 2016 covering "minor, medium or high"

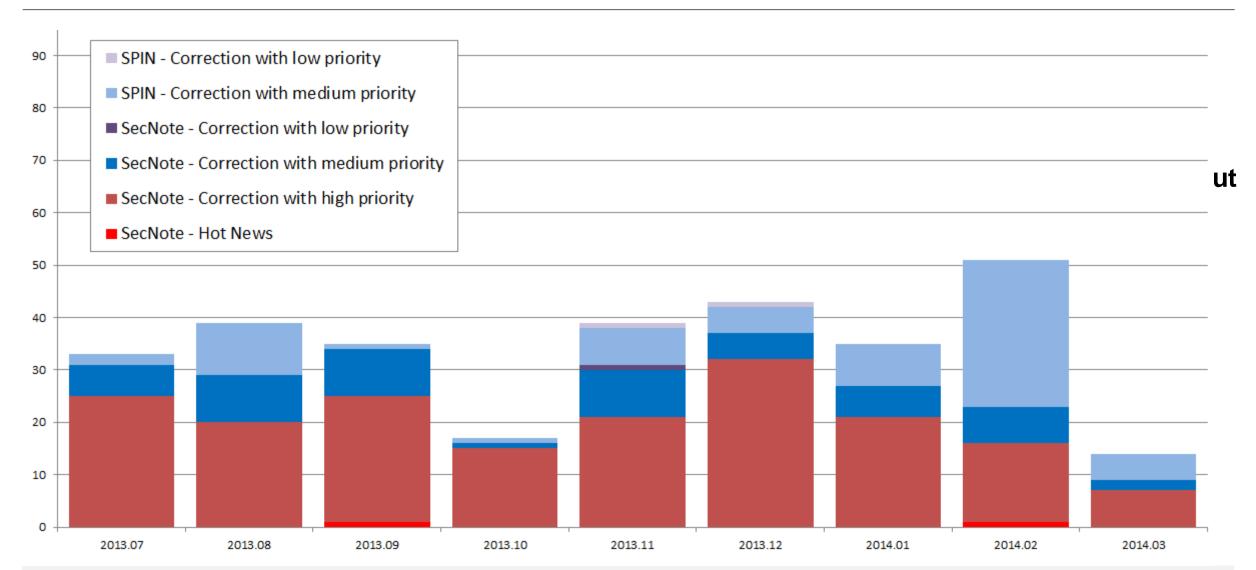
SPIN

- 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!





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"

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.



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. <u>1964428</u> - XS bypasses authentication for former public applications

Note <u>1903756</u> - DB6: Authorization to execute operating system commands

Note <u>1963100</u> - Disabling execution of operating system commands using a CTC URL

Various notes about hard coded user names

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.

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 Al_LMDB_PS and Al_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

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

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.

How to find HANA Security Notes, e.g. <u>1964428</u> - 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
<u>1964428</u>	BC-DB-HDB-XS	XS bypasses authentication for former public applications	high	SP 70 / SP 69 patch 2	11.02.2014
<u>1914778</u>	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

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

Fol	Following SAP Notes are implemented in this step:								
Note Action Note Version									
Implement SAP Note 1903756		10							
С	Status	Obj. Ty	Object				Message Text		
	200	FUNC	DB6 DIAG GET PROGRAM VERSION				Object FUNC DB6 DIAG GET PROGRAM VERSION does not exist; create it		
4	000	<u>FUNC</u>	DB6 PM OSCMDSYSOUT2				Changes can be copied		
4	COM	<u>METH</u>	CL DB6 RDI	GET	OS COMMAND OUTPUT		Changes can be copied		
4	CC-	<u>FUNC</u>	DB6 DIAG LIST D	<u>IRECTORY</u>			Changes can be copied		
4	000	<u>FUNC</u>	DB6 DIAG READ F	<u>-ILE</u>			Changes can be copied		
4	000	<u>FUNC</u>	DB6 XPLN DOWNL	<u>OAD</u>			Changes can be copied		
4	000	<u>METH</u>	CL DB6 ACTION M	MONITOR !	SETTINGSIF DB6 ACTION CONTROL		Changes can be copied		
4	000	<u>METH</u>	CL DB6 DBCON	М	IGRATE PARAMETERS FROM RFC		Changes can be copied		

- Create Support Ticket if you run into trouble while implementing security notes!
- Solved since end of January.

Note <u>1963100</u> - 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 <u>1445998</u> - Disabling invoker servlet (Released in December 2010)

The Invoker Servlet has been disabled by default as of 7.20

Various notes about hard coded user names

Note <u>1738965</u>	BW-WHM-DBA-OHS	Hard-coded credentials in Open Hub	(BRANDTTH)
Note <u>1768049</u>	XX-CSC-BR	Hard-coded credentials in XX-CSC-BR	(TESTER)
Note <u>1789569</u>	PP-CRP-LVL	Hard-coded credentials in capacity leveling	(C1155522)
Note <u>1791081</u>	PS-ST	Hard-coded credentials in PS-ST and PS-MAT-PRO	(RSHANBHAG)
Note <u>1795463</u>	IS-B-DP	Hard-coded credentials in IS-B-DP	(XXXX)
Note <u>1911174</u>	BC-CCM-MON	Hard-coded credentials in CCMS	(CSMREG)
Note <u>1914777</u>	CA-WUI-WST	Hard-coded credentials in CA-WUI-WST	(OHLIGER)
Note <u>1920323</u>	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

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.

Topics



Note <u>1773912</u> - Missing authorization check in message server

Note <u>1906927</u> - Missing authorization check in Accounting BAPIs

Note <u>1931016</u> - Missing authorization check in ABAP Runtime Analysis

Note <u>1942424</u> - Missing authorization check in SV_SMG-ASU

Patch Day Notes vs. Support Package Implementation Notes

Note <u>1853616</u> - Missing authorization check in XX-IDES

Note <u>1864518</u> - Security Improvements for MOB-APP-EMR-AND

Security Notes of software component ST-PI

Note <u>1854408</u> - Potential information disclosure relating to user password in GRC AC 10

Note <u>1823566</u> - Potential information disclosure relating to SAP Solution Manager

Note 1820666 - Potential remote code execution in SAProuter

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.

Note 1906927 - Missing authorization check in Accounting BAPIs

Requires note 1882417 and 1908870 and 1923728 including extensive manual activities.

Note <u>1931016</u> - Missing authorization check in ABAP Runtime Analysis

No influence to productive business processes

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.

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 <u>Support Packages can be found on SAP Service Marketplace</u> 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.

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"

Patch Day Notes vs. Support Package Implementation Notes

Support Package Implementation Notes from November / December 2013

<u>1677912</u>	SD-BIL-IV-PC	Credit cards in order
<u>1735308</u>	BC-CUS-TOL-ALO	Security issues for report TAB_INTO_AUTH_GRP Refers to note <u>1909124</u>
<u>1786150</u>	CRM-MD-BP	Potential disclosure of persisted data in [crm-md-bp]
<u>1787032</u>	FI-AP-AP-B1	FI: Potential Directory Traversal
<u>1788562</u>	LO-LIS-REP	Potential modif./disclosure of persisted data in LO-LIS-REP
<u>1794273</u>	LO-MAP	Persisted data in MAP may be changed/disclosed
<u>1813155</u>	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)
<u>1785662</u>	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

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.

Note <u>1864518</u> - 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

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
<u>1896785</u>	SV-SMG-SDD	Missing authorization check in ST-PI	High	10.09.2013	4/4/2
<u>1861791</u>	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
<u>1774432</u>	SV-SMG-SDD	Missing authorization check in ST-PI	Medium	11.06.2013	4/0/0
<u>1788614</u>	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
<u>1727119</u>	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

Note <u>1854408</u> - 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.

Note <u>1823566</u> - 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).

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





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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