

ASUG Webcast - SUSE for SAP

featuring

A Virtual Coffee Tasting Around the World Experience

11 April 2023

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Business Development Director, SUSE

Mark Gordon

Senior Solution Engineer, SUSE



Introductions

- **Mike Nelson**
 - Mechanical Engineer (I know, right?)
 - + MBA (getting closer...)
 - Marketing, sales, business development for Sun Microsystems, HPE, SUSE
 - Focus on SAP market for past 10 years (ok, then)
- **Mark Gordon**
 - 25-year career with IBM in a variety of technical roles
 - SAP focus for past 20 years, especially IBM Power
 - SUSE deep-dive field specialist on SAP infrastructure

Agenda

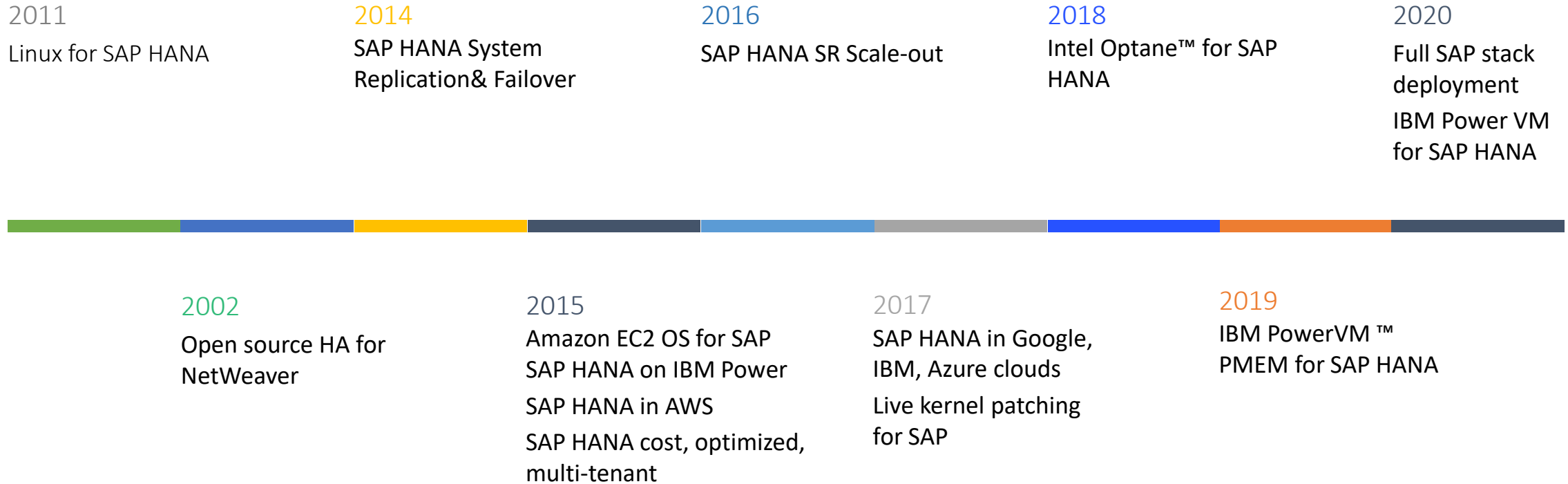
- SAP & SUSE – how & why?
- Linux as a requirement for S/4HANA
- High Availability topics
- Management/maintenance
- A bit about Security



Unrivalled Relationship Makes SUSE the Smart Choice for SAP Workloads

- The only pure infrastructure software provider in SAP's [Endorsed Apps](#) program
- 18+ years of joint testing and development with SAP at the SAP LinuxLab
- SUSE Linux Enterprise is the leading OS platform for SAP workloads
- SUSE Linux Server for SAP Applications (aka SLES4SAP) delivers built-in high availability, superior performance and security
- First available and leading OS for SAP HANA
- "SLES4SAP" = core OS platform for SAP S/4HANA Cloud
- Seamless support

A decade of co-invention with SAP





APRIL 11, 2023

Meeting business requirements

by transforming
your SAP infrastructure



Deliver services faster, efficiently and with less risk



IMPROVE SAP AVAILABILITY

- Automated system recovery
- OS security updates with no downtime



DEPLOY SAP SERVICES FASTER

- Automated S/4HANA system installation
- Built-in best practices to speed up provisioning and reduce errors



STRENGTHEN OPERATIONS

- Performance optimization for real-time insights
- Enhanced security prevents unauthorized data access



MANAGE COMPLEX SYSTEMS

- Automated configuration management
- Automated and guided set-up and update tools



Reduce downtime of key SAP applications



SUSE Linux Enterprise Server for SAP Applications

SUSE Linux Enterprise High Availability Extension

SAP system failover in seconds

- Full clustering solution
- High Availability / Disaster Recovery

SAP HANA System Replication Agents

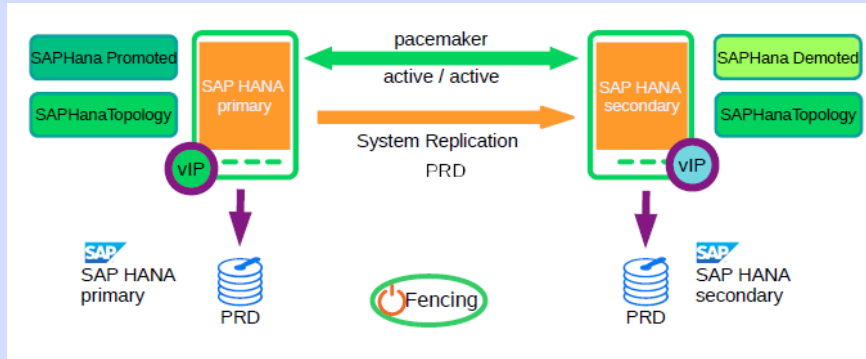
Fast, reliable recovery

- Automate SAP HANA failover, recovery
- Many recovery scenarios

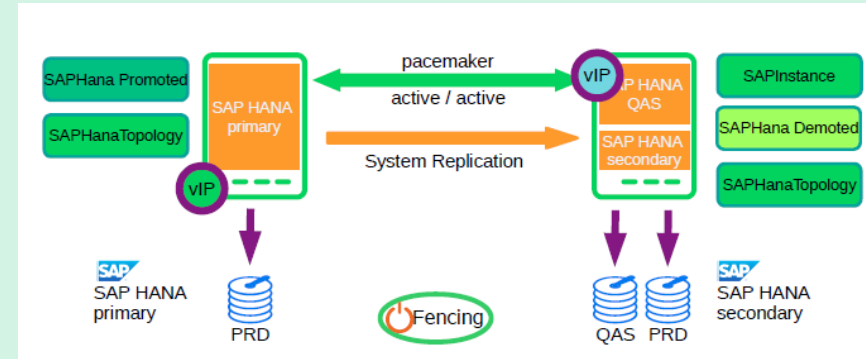


Automate SAP HANA System Replication for faster recovery

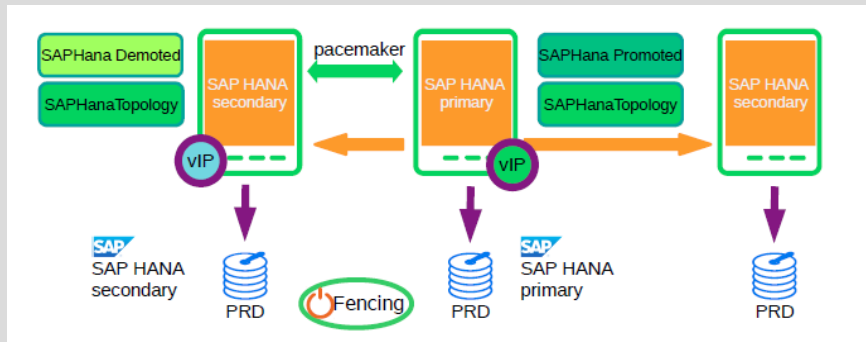
Performance Optimized – Scale Up



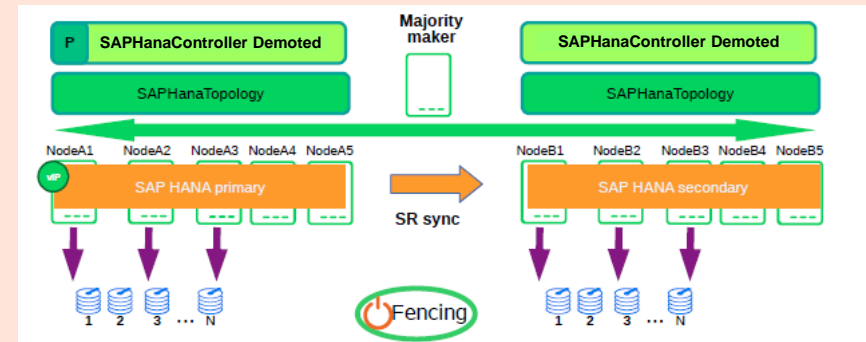
Cost Optimized – Scale Up



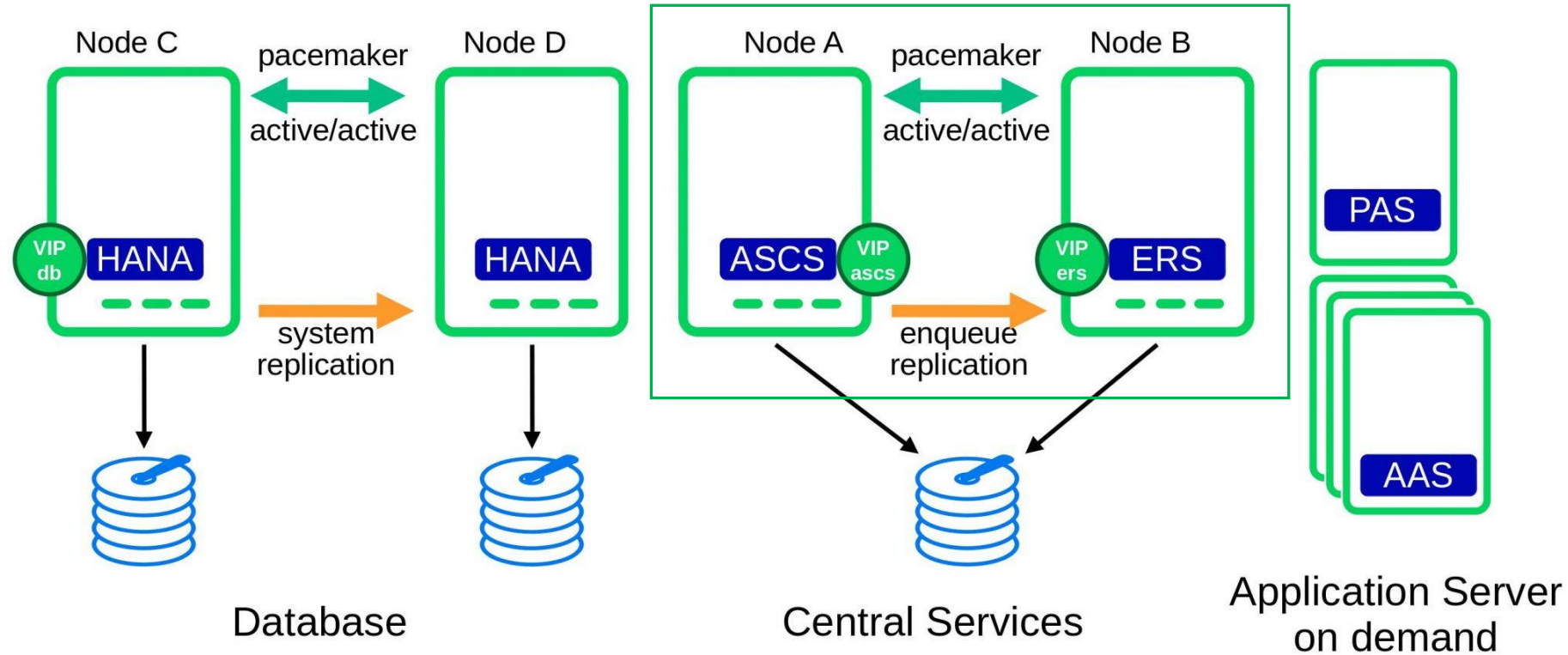
Multi-Target – Scale Up



Performance Optimized – Scale out



Make critical SAP services highly available



Enhance security and maintain uptime



SUSE Linux Enterprise Live Patching
SUSE Linux Enterprise Server for SAP Applications

Live Linux kernel patching

Maintain SAP System Security

- Fix Linux kernel vulnerabilities
- No planned downtime or user impact
- In selected SLES for SAP Applications subscriptions

SAP HANA Firewall

In-memory system protection

- Protect SAP HANA from attacks
- Automated set up
- In SLES for SAP Applications



Impact of Software Changes without SLE Kernel Live Patching

Software Maintenance		SAP Instance (ABAP)	HANA Database Instance	Linux Host
	SAP Kernel	Yes	No	No
	HANA Database	Yes	Yes	No
	Linux Kernel	Yes	Yes	Yes

Component Affected



Fix Linux kernel vulnerabilities with no downtime

SUSE Linux Enterprise Live Patching*

Reduce SAP downtime

Maintain security audit compliance

Fewer lengthy SAP HANA restarts

Fewer SAP instance restarts

No reboots for up to 12 months



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* Separate subscription required



SUSE Linux Enterprise Live Patching is included with on-demand cloud instances and unlimited VM subscriptions

Impact of Software Changes with SLE Kernel Live Patching

Component Affected

Software
Updated

	SAP Instance Restart	HANA DB Instance Restart	Linux Reboot
SAP Kernel	Yes	No	No
HANA Database	Yes	Yes	No
Linux Kernel	No	No	No



Userspace Live Patching available with SLES15 SP4



APPLICATIONS

- Update applications without disruption, when prerequisites are met, and the user space live patching toolkit is used



LIBRARIES

- Update key libraries (e.g., glibc, openssl) without disruption
- Avoid application restarts



LINUX KERNEL

- Update the Linux kernel without disruption
- Avoid system reboots



Adapt to business requirements with faster service delivery

Virtual server deployment

- Automated installation
- SAP Notes included

Public cloud deployment

- SAP deployment templates
- Bring-Your-Own-Subscription or Marketplace Subscription
- Hardened images for cloud providers



Install new systems faster, with fewer errors

New SAP S/4HANA in just a few clicks

- Fully-automated installation
- SAP HANA and NetWeaver
- Single nodes and HA clusters
- On-premise and cloud
- Implement monitoring



Saptune implements SAP best practices

saptune

- ✓ Included with SLES for SAP Applications
- ✓ Implements SAP Notes
- ✓ Designed for specific SAP Applications
- ✓ Ready for IHV and cloud platforms



Trento validates best practices for clustered systems

The screenshot displays the Trento web interface. The left sidebar contains navigation links: Home, Hosts, Pacemaker Clusters (selected), SAP Systems, HANA Databases, Settings, and About. The main content area is titled 'Pacemaker Cluster details' and shows information for the 'hana_cluster'. It includes a 'Health' summary with 84 Passing, 8 Warning, and 6 Critical checks. Below this, it lists various cluster parameters like Cluster name, Cluster type, HANA system replication mode, SID, SAPHanaSR health state, HANA secondary sync state, Stonith type, CIB last written, and HANA system replication operation mode. A 'Stopped resources' section indicates no resources are stopped. At the bottom, 'Pacemaker Site details' are shown for Site1 and Site2, with Site1 having one host (vmhana01) in a HANA Primary role.

Pacemaker Cluster details

Pacemaker Clusters > hana_cluster Updated at: 10/12/2021, 3:21:32 PM

Cluster name:	Cluster type:	HANA system replication mode:
hana_cluster	HANA scale-up	sync

SID:	SAPHanaSR health state:	HANA secondary sync state:
PRD	4	SFAIL

Stonith type:	CIB last written:	HANA system replication operation mode:
external/sbd	Tue Oct 12 13:20:27 2021	logreplay

Health

Health	Count
Passing	84
Warning	8
Critical	6

Checks result

Stopped resources

No stopped resources

Pacemaker Site details

Site1				
Hostname	IP	Virtual IP	Role	
vmhana01	10.74.1.10	10.74.1.12	HANA Primary	Details

Site2				
Hostname	IP	Virtual IP	Role	

Key Capabilities

- Checks configuration against best practices
- Reflects hyperscaler requirements
- Stays up-to-date with evolving SAP, SUSE and hyperscaler recommendations
- Monitors SAP landscape



SUSE delivers broad Hyperscaler support

Transform faster with less risk

- Security-hardened images available
- Single, hybrid or multi-cloud

Centralize infrastructure management

- Proactively identify and fix issues
- SLES for SAP Applications CSP Marketplace subscriptions include:
 - SUSE Linux Enterprise Live Patching
 - SUSE Manager Lifecycle Management Module



Ensure SAP system compliance

SUSE Manager identifies and fixes security and compliance issues

- Manage SAP systems at scale
 - Configuration files
 - Software updates
 - Audit for vulnerabilities



Quickly resolve problems with 24x7 Priority Support

Single Point of Entry

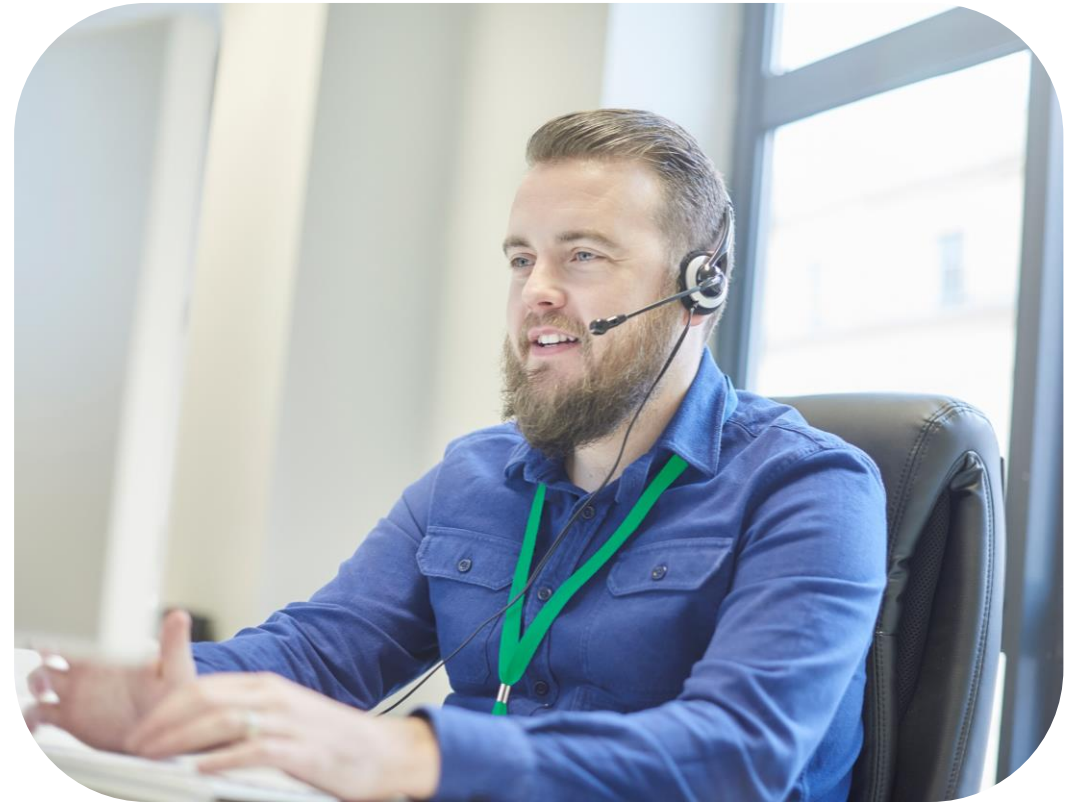
- Standard SAP escalation channels
- Seamless connection to SUSE

SUSE 24 x 7 Priority Support for Severity 1 issues

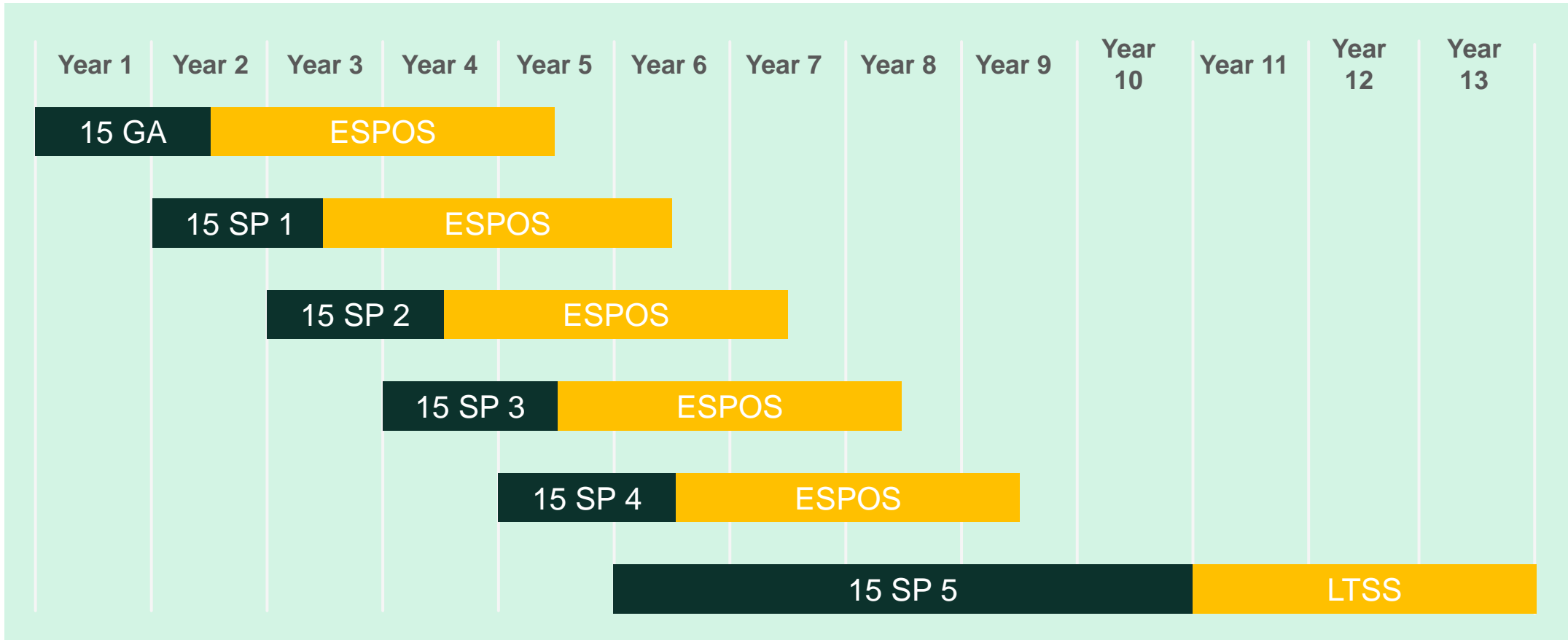
- 1-hour phone response
- 4-hour email response

Direct contact to SUSE Level 3

Dedicated SUSE update channel



A long lifecycle balances innovation and stability¹



SUSE consistently leads in innovation for SAP systems

SUSE
Advantage

Reduce downtime

- Automated SAP HANA recovery
- Certified for SAP NetWeaver clusters
- SAP HANA Firewall
- 4 PB virtual address space for SAP HANA

Sustain performance

- SAP performance tuning
- Workload Memory Protection

Automate Administration

- SAP application stack installation
- Updates for SAP HANA software
- Monitoring and visualization



Endorsed by SAP:

SUSE Linux Enterprise Server for SAP Applications



Trusted by SAP

SAP is both a SUSE partner and a customer

Preferred by SAP customers

Market leading Linux for SAP

Preferred by SAP partners

Your choice of platforms

- Hardware vendors / onprem & hybrid solutions
- Broad choice of Hyperscalers

Questions?

For questions after this session, contact us at

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Thank you

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