



SUSE Linux Enterprise Server for SAP Applications

January 2021

What is SUSE Linux Enterprise Server for SAP Applications?

SUSE Linux Enterprise Server for SAP Applications is a Linux platform that is uniquely optimized for SAP NetWeaver, SAP HANA and SAP S/4HANA solutions. It is a collection of software, maintenance and support features that enable greater reliability and security, automation for routine maintenance and faster service deployment on premise and in the cloud. It is built on SUSE Linux Enterprise Server and supports server, virtualization and cloud environments. SUSE Linux Enterprise Server for SAP Applications is an SAP endorsed app.

What are SAP Endorsed Apps?

In 2020, SAP launched an initiative to give customers confidence in selected partner applications that have demonstrated proven results, and have been properly evaluated and tested by SAP, earning SAP's premium certification. SAP Endorsed Apps complement and extend SAP's own solutions and can be found on the SAP App Center at <https://www.sapappcenter.com/en/search/endorsed>. Learn more about SAP Endorsed Apps in this blog <https://store.sap.com/en/news-blogs/blogs/sap-endorsed-apps-helping-customers-become-best-run-intelligent-enterprises>.

What is included as part of the SUSE Linux Enterprise Server for SAP Applications offering?

Features in bold are only available with SUSE Linux Enterprise Server for SAP Applications. For details, visit suse.com/products/sles-for-sap.

Base Operating System and Support

- SUSE Linux Enterprise Server
- **Lifecycle 24 x 7 Priority Support**
- **SAP-specific Update Channel**

Reliability and Resilience

- SUSE Linux Enterprise High Availability
- **SAP HANA HA Resource Agents**
- **SAP HANA Firewall**
- **Remote Storage Encryption Management**
- **SAP HANA persistent memory support**
- **Workload Memory Protection**
- Full System Snapshot and Rollback

Maintenance Automation

- **Operational data monitoring and export**
- **View and replay cluster transition data**
- **Clustered SAP HANA software update wizard**
- **SAP S/4HANA Transition to Linux Support**

Ease of use and deployment

- **Installation Wizard**
- **Support for Hyperscaler Platform Images**
- **SAP S/4HANA stack configuration and deployment automation**
- System Roles
- SUSE Package Hub

What are the benefits of SUSE Linux Enterprise Server for SAP Applications compared to the base operating system?

SUSE Linux Enterprise Server for SAP Applications is uniquely designed to deliver reduced downtime of

critical operations with a built-in business continuity, including an advanced high availability solution and automated data recovery for SAP HANA. It includes SUSE Linux Enterprise Server as a fast, reliable and secure Linux operating system plus the following capabilities for SAP systems:

- **Reduce risk from outages of critical services** with built-in business continuity including an advanced high availability solution, automated data recovery for SAP HANA and enhanced security for SAP application data
- **Foster innovation for new service delivery** with automated data collection, graphical displays and wizards that proactively identify errors and reduce routine maintenance time
- **Minimize time and effort to deploy SAP landscapes** and transition to SAP S/4HANA with automated installation of the SAP software stack and 24 x 7 support

How do customers receive support for SAP Systems?

SUSE Priority Support is delivered with the product subscription for its entire lifecycle of all service packs. This includes 24 hours a day, 7 days a week and as fast as 1-hour response time for access to information and updates. Direct contact with a SUSE® Level 3 support specialist is also available with SUSE Linux Enterprise Server for SAP Applications.

For SAP environments, however, the preferred approach is to initiate a support request via regular SAP escalation channels: telephone, web front-end, CSN or SAP Solution Manager. The request will be immediately assigned to the SAP support request system. SAP will get SUSE involved if required.

What is different for SUSE Linux Enterprise for SAP Applications on IBM Power Systems?

SUSE Linux Enterprise Server for SAP Applications 12 SP3 and higher have a common set of features available for both x86-64 and ppc64le. Version 15 introduces specific enablement and optimizations for POWER9-based systems, and supports SAP HANA databases greater than 32 TB and virtual persistent memory (PMEM) when using IBM PowerVM.

What is new in SUSE Linux Enterprise Server for SAP Applications 15 SP2?

This release includes enhancements and updates to deliver and maintain a reliable and high-performance SAP infrastructure. New features in version 15 enable IT systems and SAP Basis administrators to:

Reduce downtime of critical operations

- **SAP HANA Persistent Memory** support enables instant database recovery after system re-boots. Loading large SAP HANA databases from storage into traditional RAM can take several hours. The IBM PowerVM(tm) Virtual PMEM solutions is now validated by SAP and supported by SUSE.
- **Ensure compliance** with HA/DR requirements to reduce downtime with support for the latest enqueue fail-over and recovery options.

Foster innovation with maintenance automation

- **Server and SAP-specific operational data collection** and export to a graphical display tool, such as SUSE Manager. This enables SAP Basis Administrators to reduce their workloads by proactively identifying system issues before failures occur, on premise and in the cloud.
- **New tooling to visualize and validate cluster decisions and replay transitions** improves the effectiveness of troubleshooting SAP HANA System Replication problems.

Reduce the time and effort to deploy SAP landscapes

- **Accelerate time to deploy SAP S/4HANA** clusters in the cloud with the fully automated installation and configuration of SAP S/4HANA software stacks using Salt-based configuration scripts and Terraform deployment of single-node and clustered configurations, on premise and in the cloud.

What problem does Workload Memory Protection solve?

Many SAP applications are designed to use large amounts of memory for optimal performance. The Linux kernel pages out rarely-accessed memory to maintain filesystem performance. These optimizations conflict causing SAP application performance to slow down, SUSE has developed Workload Memory Management, which is based on open source cgroup,

to ensure that SAP transactional and analytics data remains in memory.

Are ISV Partner applications that are certified for SUSE Linux Enterprise Server also considered certified for SUSE Linux Enterprise Server for SAP Applications?

Yes, since SUSE Linux Enterprise Server and SUSE Linux Enterprise Server for SAP Applications with the same version and service pack have the same base code, third party applications that are certified on SUSE Linux Enterprise Server will function the same on SUSE Linux Enterprise Server for SAP Applications.

Can SAP applications be run on SUSE Linux Enterprise Server for SAP Applications in the cloud?

SUSE Linux Enterprise for SAP Applications is based on SUSE Linux Enterprise, a Linux platform that is proven in the cloud and selected for use with SAP Cloud solutions such as HANA Enterprise Cloud, SAP HANA One. SUSE Linux Enterprise for SAP Applications 15 images are available to run SAP HANA with high availability from Alibaba, Amazon Web Services, Google Cloud, IBM Cloud and Microsoft Azure public cloud services.

Pay-as-you-go (PAYG) or “on-demand” subscriptions include additional capabilities to reduce downtime and administration of SAP infrastructures. Built-in entitlements to SUSE Linux Enterprise Live Patching and the SUSE Manager Lifecycle Management Module make it easier to centralize management of the entire infrastructure. This includes reserved instances offered by some hyperscalers. Contact your Cloud Service Provider to learn more.

How does SUSE Linux Enterprise Server for SAP Applications help in the transition to SAP S/4HANA?

SAP’s strategy is to support Linux as the sole OS for the SAP HANA database as the foundation for SAP

S/4HANA ERP, BPM and other applications. IT staff who are familiar with UNIX for their SAP environments will not have a difficult time learning how to work with Linux. However, users of Microsoft Windows Server will find Linux to be very different and becoming comfortable with it will be more challenging.

To help these administrators become productive more quickly, SUSE Linux Enterprise Server for SAP Applications provides support for the Microsoft Remote Desktop Protocol. This working environment combined with a guide for administrators to perform common Windows Server tasks with SUSE Linux Enterprise Server will ease the transition to running SAP S/HANA environments on Linux.

SUSE Linux Enterprise Server for SAP Applications also includes Enhanced Active Directory Integration to support existing Microsoft user IDs and passwords to save time and effort with transitioning security to the new environment.

Is SUSE Linux Enterprise Live Patching included in SUSE Linux Enterprise Server for SAP Applications?

SUSE Linux Enterprise Live Patching requires a separate subscription, and is ideal for fixing Linux kernel security vulnerabilities or stability problems without downtime for SAP systems.

Where can I get more information about automated installation in the cloud?

S/4HANA software stacks using Salt-based configuration scripts and Terraform deployment of single-node and clustered configurations, on premise and in the cloud. To learn more, including which Hyperscalers are supported, please see the Release Notes at www.suse.com/documentation/sles-for-sap.