

SUSE Linux Enterprise Server for SAP Applications

Frequently Asked Questions

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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 offerings that enable greater reliability and security, high performance, as well as ease of deployment and maintenance. It is built on SUSE Linux Enterprise Server and supports server, virtualization and cloud environments.

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
- 24 x 7 Priority Support
- Extended Service Pack Overlap 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**

Performance

- **Workload Memory Protection**
- **Performance and Configuration Tuning Packages**

Ease of use and deployment

- **Installation Wizard**
- **Public Cloud Platform Images**
- **SAP S/4HANA Transition to Linux Support**
- **SUSE Connect**
- 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 benefits for SAP systems:

- **Faster recovery of SAP NetWeaver and SAP HANA environments** with a full high availability/disaster recovery (HA/DR) solution certified by SAP and optimized for
- **High performance for mission-critical SAP applications** with the Linux OS that is optimized and configurable to sustain high performance of SAP applications
- **Reduced time and effort to deploy and manage SAP systems** with a unified solution that includes automated installation, productivity aids for transitioning to SAP S/4HANA and superior support

How do customers receive support for SAP Systems?

SUSE Priority Support is delivered with the product subscription, which 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?

There are two options for customers who want to run SAP HANA on IBM Power Systems. IBM POWER8 and higher processor-based servers running in the legacy Big Endian mode (ppc64) need SUSE Linux Enterprise for SAP Applications 11 SP4. IBM Power servers running in Little Endian mode (ppc64le) require version 12 SP1 or higher. Version 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 support SAP HANA databases greater than 32 TB when using IBM PowerVM.

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

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

- **Non-Volatile Dual In-line Memory Module (NV-DIMM)** support for disk-less databases paves the way for instant database recovery after system reboots.
- **Support for up to 512 TB virtual address space** enables support for SAP HANA databases that are greater than 32 TB on IBM Power Systems. Larger databases reduce the frequency of re-starts due to memory fragmentation.
- **Relax and Recover (ReaR) for ppc64le** provides an open-source disaster recovery solution for SAP HANA on IBM Power Systems that is similar to the AIX *mksysb* function. This means that ReaR is now available for all supported SAP HANA platforms.
- **Operations Pre/Post-scripts** gives system administrators the flexibility to adapt SAP HANA system failover and recovery to their own HA scenarios and tools.
- **New SAP HANA System Replication (SAPHanaSR) agent service provider calls** enable faster takeovers after being notified about service changes, for example, a problem with the index server, rather than waiting for the entire landscape to report an error.

Maintain the high performance of SAP systems

- **Workload Memory Protection** is a new feature that replaces *Page Cache Management* in prior releases. This feature is based on open source *cgroup* and provides a highly scalable solution to protect the memory where SAP applications store data for fast access from Linux kernel memory management.
- **Configurable TCP connection sharing** improves communications throughput on platforms with a high NFS load.

Reduce the time and effort to deploy SAP landscapes

- **Immediately start SAP configuration (sapconf) package changes** rather than rebooting after each manual update saves time during system set-up.
- **System role** enables easier installation with customized scenarios specifically for SAP environments. This includes the Installation Wizard option, special partition recommendations, Microsoft Remote Desktop Protocol (RDP) enablement and Base, Gnome Basic and SAP Server Pattern installation.

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, and if the application is built on Java then the "garbage collection" process makes it even worse. SUSE has developed Workload Memory Management, which is based on open source *cgroup*, to give administrators control over which applications' memory to isolate from Linux kernel memory caching.

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 SAP HANA Enterprise Cloud, SAP HANA One, SAP Cloud Platform and SAP-certified Amazon EC2 instances. SUSE Linux Enterprise for SAP Applications 15 images are available to run SAP HANA with high availability from Amazon Web Services, Google Compute Engine, IBM Cloud, and Microsoft Azure public cloud services.

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 S/4HANA 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.

What is SUSE Connect?

The SUSE Connect Program provides a way to access, download and evaluate complementary solutions for SAP environment from the SUSE partner ecosystem products and services listing. Viewing and automated installation of applications for free testing and evaluation is available with YaST in SUSE Linux Enterprise Server for SAP Applications. Learn more at www.suse.com/suseconnect.