

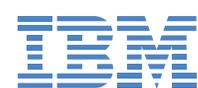
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## White Paper

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

# Ease Your Transition from AIX to SAP HANA on Linux

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# The Reliability, Availability and Serviceability You've Come to Expect

Running SAP solutions on IBM AIX on IBM Power Systems has led you to expect robust reliability, constant availability and excellent serviceability. But with SAP's announcement that it is moving to SAP S/4HANA by 2025, you're faced with a migration. Adopting the many benefits of SAP HANA means leaving AIX behind.

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Luckily, by choosing to run SAP HANA on IBM Power and SUSE Linux Enterprise Server for SAP Applications, you get the ideal solution for your SAP environment. You can stay with the industry-leading hardware you love while adopting a Linux operating system that offers the reliability, availability and serviceability (RAS) you've come to expect.

## Target Audience

This white paper is meant for CIOs, solution architects and technical architects who already deploy SAP solutions and are planning an upgrade to SAP HANA. This paper contains links in various sections to more technical guides for those in search of more detailed information.

## Partnerships Designed to Support SAP HANA

The strength of the IBM and SAP partnership is probably one reason you chose to rely on solutions from those companies. SUSE has long-standing strong relationships with both SAP and IBM.

SUSE and IBM have been collaborating on the world's most mission-critical systems for over two decades. SUSE engineers have worked closely with IBM to not just support the IBM platform, but to embrace it. SUSE Linux Enterprise Server was the first

supported Linux distribution available on Power Systems, and today, SUSE offerings are optimized so you can take advantage of the full power and qualities of service of your IBM technology.

SUSE has maintained a joint testing and development relationship with SAP that started at the SAP LinuxLab in Germany in 1999. Ninety percent of all SAP HANA installations run on SUSE, and SUSE was recently named an SAP HANA Innovation Award Winner 2017.\* Currently, more than 1,000 customers use SAP HANA on IBM systems and SUSE Linux Enterprise Server.

Perhaps most importantly, SUSE Linux Enterprise Server is the most recommended operating system for SAP HANA on IBM Power Systems—and the number-one recommended operating system for SAP on any system, with more than 90 percent market share.

## New Operating System: Same Powerful Platform

While moving off AIX may feel like a daunting operating system migration, the truth is that the robust capabilities of SUSE Linux

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\* [www.suse.com/communities/blog/suse-receives-sap-hana-innovation-award-2017-industry-disruptor/](http://www.suse.com/communities/blog/suse-receives-sap-hana-innovation-award-2017-industry-disruptor/)

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Enterprise Server for SAP Applications and the many transferable skills of your AIX administrators can make it one of the easier transitions of its kind.



- #1 on IBM Power Systems, and still the best
- #2 Thousands of customers can't be wrong
- #3 Can you say "live patching?"
- #4 How do you like zero downtime?
- #5 SUSE Manager for SAP HANA on IBM Power Systems
- #6 The ONLY Linux solution certified to be HA certified for SAP HANA
- #7 Superior Support

### Sticking with IBM Power

Because SUSE Linux Enterprise Server for SAP Applications works with and takes advantage of the features of IBM Power Systems, you can leverage the high number of cache layers, more threads per core, and other features you love about IBM Power to support SAP HANA. You'll get maximum power and availability, with world-record performance and downtime-reducing features for true peace of mind.

By staying on IBM Power, you can run SAP HANA alongside other SAP workloads on a single server or run multiple production SAP HANA instances on one system, virtualizing without compromise with SUSE Linux Enterprise Server's support for PowerVM. Running SAP HANA on SUSE Linux Enterprise Server for SAP Applications and IBM Power Systems also boosts your flexibility by allowing you to adopt SAP's Tailored Datacenter Integration (TDI) approach.

### TDI Approach

SUSE and IBM take SAP's TDI approach to implementing SAP HANA, combining the simplicity of preselected configurations with the convenience of using your existing resources and simply modifying the installation to match your unique requirements and environment.

### Virtual Machine Support

As part of the shared SUSE-IBM commitment to speed up Linux adoption across the enterprise, SUSE Linux Enterprise Server supports PowerVM virtualization technologies at no charge. If your administrators are familiar with PowerVM, they can continue to use that technology in your SAP HANA implementation. In fact, one way to ease your transition would be to run AIX in one PowerVM logical partition (LPAR) and SUSE Linux Enterprise Server for SAP Applications in another LPAR, giving you some flexibility in timing your migration.

SAP supports multiple virtual machines (VMs) of SAP HANA running on the same Power Systems server in production.

### Transfer Your Skills

IBM AIX users will also see similarities in some key Linux operations and processes to make migration a little easier.

- *The SUSE Linux systems management tool, YaST®, offers a graphical user interface or menu-driven functionality much like IBM AIX's System Management Interface Tool (SMIT).*
- *The Linux backup and restore tool Relax and Recover that is included in SUSE Linux Enterprise Server for SAP Applications is similar to the UNIX-based mksysb recovery tool.*
- *The SUSE Linux Enterprise Server automated installation tools (which are further enhanced with SUSE Manager) allow you to automate the installation of multiple operating system instances in much the same way that IBM AIX Network Installation Management (NIM) does for AIX users.*
- *Storage management in SUSE Linux Enterprise Server uses many concepts, such as volume groups and logical volumes, that will be familiar to users of AIX. SUSE Linux Enterprise Server offers a choice of three file systems: Extended File System (Ext), XFS, and Btrfs. Btrfs offers system rollback for the root, another feature familiar to AIX administrators. You can read more about storage on SUSE Linux Enterprise Server in the [storage administration guide](#).*

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**“The SUSE OS provides everything we need in a single license—including high availability and integrated support from SUSE and SAP.”**

**RAMAZAN YILDIRIM**

*ET Manager & SAP Basis Manager*  
Boydak Holding

### Superior Integrated Support

The joint support process with SAP allows you to get support for SUSE Linux Enterprise Server for SAP Applications in a single ticket or phone call. Together with SUSE, IBM Technology Support Services also provides a variety of support options for SUSE Linux solutions to help you reduce costs and complexity.

### A Closer Look at the Components

#### SUSE Linux Enterprise Server for SAP Applications

To meet the demands of an organization used to AIX, you need to select an enterprise Linux distribution from an innovative leader and SAP partner. SUSE Linux Enterprise Server for SAP Applications is the leading Linux platform for SAP HANA, SAP NetWeaver and SAP S/4HANA. It is the premier operating environment for SAP solutions.

#### AVAILABILITY

SUSE Linux Enterprise Server protects the availability of mission-critical operations with built-in business continuity features that include automated data recovery; resource agents that automate the takeover in SAP HANA system replication setups; and full operating system rollback. You can find best practices for mission-critical SAP applications, including setup guides for system replication, [here](#).

The solution includes a built-in firewall for the SAP HANA system and encryption management to protect data in remote data centers. SUSE also offers a unique guide to help you secure SUSE Linux Enterprise Server for SAP Applications for running HANA: "[Operating System Security Hardening Guide for SAP HANA](#)."

An SAP-certified high-availability extension provides an integrated clustering solution for physical and virtual Linux deployments, which allows you to implement highly available Linux clusters to eliminate single points of failure. This is similar to the functionality provided by PowerHA SystemMirror for AIX, although unlike PowerHA, it is included in SUSE Linux Server for SAP Applications and does not cost extra.

The SAP-focused SUSE operating system also comes with extended service pack support. This increases the time you have to upgrade to the next operating system service pack from six to 18 months. The idea isn't to put off upgrades, but to allow you to perform upgrades on the best schedule for your organization. For instance, you can align your operating system update with your SAP HANA updates to minimize planned downtime.

#### PERFORMANCE

The SUSE Linux Enterprise Server feature Page Cache Management sustains high performance by allowing the administrator to limit the amount of page cache used by the operating system and free up memory for more important tasks.

A dedicated update channel delivers SAP-specific operating system enhancements beyond the normal SUSE Linux updates.

#### EASY DEPLOYMENT

SUSE Linux Enterprise Server includes an installation wizard with tuning parameters; an installation configuration package that allows you to quickly and accurately configure SAP applications for optimal performance; and easy integration with SUSE Manager.

#### SUSE Linux Enterprise Live Patching

Business success often depends on the high availability of your SAP applications. With SUSE Linux Enterprise Live Patching for IBM Power Systems, you can apply Linux kernel fixes on the fly without interrupting your business-critical applications. SUSE Linux Enterprise Live Patching is an open source solution that delivers live kernel patching for stability and security updates without the need to reboot.

SUSE Linux Enterprise Live Patching is built on an open source technology that allows for runtime patching of the Linux kernel without having to stop the kernel. It keeps mission-critical systems running and allows you to avoid downtime with workloads such as in-memory databases, time-sensitive simulations and compliance tasks.

#### SUSE Manager

SUSE Manager is a best-in-class open source IT infrastructure management solution for your software-defined infrastructure. Empower your DevOps and IT operations teams to reduce

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**“On average, reports complete three times faster than before. One report is a remarkable 400 times faster than before, while 20 reports are over 100 times quicker.”**

#### RAINER STEFFL

*Information Management Director  
Mondi Europe and International*

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complexity and regain control of IT assets by enabling comprehensive management of multiple Linux distributions, systems, VMs and containers—all within a single, centralized solution.

Most importantly for organizations undergoing a move from AIX to Linux, SUSE Manager can help automate a lot of the processes involved in setting up your new Linux environment.

The solution provides a graphical visualization of IT systems' status and their relationships and allows you to organize your Linux servers into logical groupings for easier management. You can also identify which Linux assets need attention at any time. From automated Linux server provisioning and patching to the configuration of tens of thousands of servers, SUSE Manager helps you reduce costs, secure enterprise systems, streamline operations and improve compliance and service quality.

### **SUSE Consulting**

If you're concerned about your move, our experts can help. We offer multiple engagements that can help you maintain RAS and peace of mind.

- **SUSE Implement—SAP replatforming.** *A full OS and database migration service for the migration of SAP environments to the SUSE Linux platform. As part of our service, we collaborate with our SAP migration partners to give you access to the best SAP migration experts and SUSE Linux experts.*
- **SUSE Implement—SUSE Linux Enterprise Server for SAP HANA.** *We can ensure that SUSE Linux Enterprise*

*Server is configured and optimized to meet your SAP HANA requirements in terms of performance, security, availability and continuity.*

- **SUSE Assist—SUSE Linux Enterprise Server expert.** *We provide you with an expert to join your SAP migration team for a set period of time so you have access to the expertise you need.*

### **Making the Move from AIX in Good Company**

Leading global enterprises have already made the move from AIX to SUSE Linux Enterprise Server. [Boydak Holding](#), a Turkish holding company with interests in 29 companies in seven industries, is now generating SAP reports 120 times faster after moving to SAP HANA on SUSE Linux.

Pharmaceutical giant [Pfizer's](#) SAP Business Warehouse system was over 25 TB in size, complex and hard to manage. A move to SAP HANA on a single IBM POWER8 system led to faster data loads and reports and a 70 percent reduction in job failures.

[HappyNarae](#), which is the largest seller of back-office services to social enterprises in Korea, moved its SAP ERP applications to SAP S/4 HANA. The company can now analyze data much faster, offering better service to its clients.

International packaging manufacturer [Mondi](#) kept up with rapid growth by moving to SAP HANA on IBM Power and saved over 200 hours of wasted time a month.

Additional contact information and office locations:  
[www.suse.com](http://www.suse.com)

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