Better Performance and High Availability: Cisco and SUSE Help You Do SAP HANA Right

Improve performance and virtually eliminate downtime with SAP HANA on Cisco UCS, SUSE® Linux Enterprise Server for SAP Applications, and SUSE Linux Enterprise Live Patching.

Solution at a Glance:

Gain a competitive edge with a highly available, end-to-end, certified implementation of SAP HANA from Cisco and SUSE.

+ Improve SAP HANA performance.
+ Apply critical operating system patches live, with no downtime and reboots.
+ Seamlessly scale up or out as needed.

■ **Products:**

SAP HANA
Cisco Unified Computing System
SUSE Linux Enterprise Server for SAP
  Applications
SUSE Linux Enterprise Live Patching

Simplify IT Architecture without Sacrificing Speed and Availability

SAP HANA can be a powerful catalyst to your digital transformation. It speeds up the processing time of huge amounts of data so you can put that data to use immediately. It enables innovative applications that can help you serve customers better, expand your business and take advantage of agile operations. How you implement it can make all the difference.

You have a variety of options for implementing SAP HANA, but none combine flexibility and a simplified implementation like this offering from Cisco and SUSE. Together, Cisco Unified Computing System (UCS) and SUSE® Linux Enterprise Server for SAP Applications form a complete, tested and validated foundation for SAP HANA's in-memory computing capabilities—a foundation that helps you get more out of SAP HANA as well as your hardware and software investments, and that delivers the reliability, availability and security your business requires.

Add SUSE Linux Enterprise Live Patching to the solution, and you get the ability to perform patching without interrupting your mission-critical workloads and in-memory databases. It delivers the ability to apply security and stability patches to the kernel without the need to reboot. Even when urgent kernel updates are needed, it allows SUSE Linux Enterprise Server to run continuously—with zero execution interruptions, not even a millisecond.

Cisco and SUSE: Optimized for SAP HANA

Cisco UCS and SUSE Linux Enterprise Server for SAP Applications make implementation, maintenance and management of SAP HANA seamless and transparent.

Cisco UCS is a data center platform that unites computing, network, storage access and virtualization into a single cohesive system. It provides the hardware and management software to unify your technology stack and helps increase agility by:

- **Reducing time and effort** *in configuring and validating the SAP HANA solution, with its prevalidated, ready-to-deploy infrastructure that can speed implementation from months or weeks to just days*
- **Simplifying scalability and management** *by supporting a range of deployment options and minimizing latency between SAP HANA nodes*
- **Streamlining operations** *by enabling you to run multiple SAP HANA production systems on a shared infrastructure or to run SAP applications and SAP HANA on the same infrastructure*
- **Reducing downtime** *with support for multiple SAP HANA workloads with high availability and server redundancy*

SUSE Linux Enterprise Server for SAP Applications is a secure open-source server operating system, built to power physical, virtual and cloud-based mission-critical

Why SUSE Linux Enterprise Server for SAP Applications?
- **The number-one platform for SAP HANA**
- **Currently running in approximately 90 percent of SAP HANA installations**
- **Can shorten the time it takes to patch your system by up to 75 percent**
- **Can boost overall performance by up to 60 percent**

workloads. As the number-one Linux platform for SAP applications, it helps increase agility by:

- **Meeting your varying computing needs** *with outstanding performance, even under full CPU loads and high memory stress*
- **Optimizing SAP HANA performance** *by continually improving the operating system to accommodate new SAP features and capabilities*
- **Helping unlock the intelligence in your data** *by working with SAP to support deployment of multiple nodes and true big data environments*
- **Boosting overall system performance** *with features such as the page cache limit and tuning options*
- **Ensuring business continuity** *with features such as integrated clustering for physical and virtual Linux systems, automated data recovery for SAP HANA databases and full system rollback to mitigate change errors*
- **Delivering high availability** *with resource agents that continually monitor the SAP HANA system and provide automatic failover operations when needed*
- **Providing robust security** *from years of SAP and SUSE co-development centered on kernel hardening and ready-to-use firewalls*

SUSE Linux Enterprise Live Patching is a simple, subscription-based solution based on an open source technology called kGraft. It builds onto the existing SUSE Linux Enterprise kernel infrastructure and uses familiar deployment methods. It helps increase business agility by:

- **Improving service availability** *with live patching that keeps your systems running smoothly and securely on the front end while critical updates are applied on the back end*
- **Reducing planned downtime** *with unobtrusive kernel patching, so even time-consuming operations can run to completion without being interrupted by urgent updates*
- **Maintaining security and stability** *by making it simple to update the kernel at any time and reduce vulnerabilities*

Both Cisco and SUSE have been recognized by SAP as valuable partners. Cisco is the only SAP partner offering policy-based solutions for SAP HANA. SUSE Linux Enterprise Server for SAP Applications is the only operating system with features

Why Cisco UCS?
Customers who deployed Cisco UCS for running SAP workloads reported:
- **48 percent lower IT infrastructure costs**
- **98 percent reduction in unplanned downtime**
- **67 percent reduction of staff time spent "keeping the lights on"**
- **29 percent faster application development lifecycles**

Source: *Peter Rutten, Matthew Marden, "The Business Value of Cisco UCS Integrated Infrastructure Solutions for Running SAP Workloads," IDC report, March 2016.*

specifically optimized to improve perfor-mance of SAP HANA in-memory process-ing for big data on UCS. And even SAP uses the SUSE operating system for its produc-tion and development environment.

Choosing solutions from SAP partners guarantees robustness and ensures smooth SAP HANA integration because there will have been the highest level of scrutiny on patches and fixes, reducing the possibility of incompatibilities when patches are applied.

Conclusion

If you want to minimize latency for SAP HANA, improve performance and seam-lessly scale up or out as needed, combine the power and simplicity of Cisco UCS with a reliable, end-to-end, certified im-plementation on SUSE Linux Enterprise Server for SAP Applications.

Learn More

Learn more about how SUSE and Cisco can simplify your SAP HANA deployment and operations at: **www.suse.com/cisco**

Choose Cisco and SUSE for a tested, configured SAP HANA deployment that will get you up and running fast.

- High availability with automated failover
- Live kernel patching for security and stability without interrupting the front end
- Fast, easy implementation
- Easy support and management
- Convenient, flexible update cycle
- Operating system security hardening

Learn More
To learn more about how SUSE and Cisco can simplify your SAP HANA deployment and operations, please visit: www.suse.com/cisco

www.suse.com

Contact your local SUSE Solutions Provider, or call SUSE at:

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