White Paper
SAP Solutions

Becoming the Intelligent Enterprise

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SAP's Intelligent Enterprise technologies promise efficiency and new insights, but before you sign on, pay attention to the core infrastructure that will serve as the foundation for your SAP environment.

Today's enterprises operate with speed and precision. Employees, managers, departments and branch offices are more interconnected than ever before. New techniques such as data mining dig down into the data to discover patterns and look for connections. But is this deep knowledge only available after the fact, through post-processing on a supercomputer, by a team of disconnected experts? Or can this search for patterns and insights happen naturally as a seamless part of daily operations?

Many organizations are investing in a concept known as the Intelligent Enterprise. This new vision imagines data as a source for intelligence and insights that emerge organically from the business environment.

SAP and its toolkit of business applications is at the center of the quest for the Intelligent Enterprise. SAP business tools are designed to easily adapt to the needs of the organization—integrating Enterprise Resource Planning (ERP), supply chain, customer data, marketing, fulfillment and sales information, as well as building in analytics and visualization services to deliver insights and maximize efficiency.

But the SAP software is only part of the solution. If you want to implement SAP's Intelligent Enterprise in an intelligent and efficient way, you need to make sure it is seamlessly integrated with the other components of your IT landscape. In recent years, enterprise organizations have adopted containers, cloud computing, software-defined storage and other innovations. If you're serious about integrating SAP technology in a way that enhances but doesn't restrict the further growth of your enterprise environment, you'll need to deploy these advanced technologies in a way that is compatible and fully integrated with the SAP toolset.

Your SAP business environment rests upon a foundation of compute, storage and networking services. Much of the power and versatility of the SAP environment (not to mention the expense) depends upon the choices you make when you assemble the core infrastructure to support your SAP environment.

Building the Core

The SAP HANA in-memory database is at the heart of SAP's new vision for the Intelligent Enterprise. SAP HANA supports a number of roles, including transaction processing, analytics, planning, simulations and machine learning. The first component you'll need for your SAP-ready infrastructure is a platform for SAP HANA.

This first building block is Linux. SAP HANA runs only on Linux (see the box entitled "Why Linux?"), so you'll need an enterprise-grade Linux environment to serve as the backbone for your core infrastructure.

Why Linux?

The open source revolution is closely intertwined with the Intelligent Enterprise. SAP developers have good reasons for building their infrastructure on Linux and open source. The versatility of Linux provides strong support for container environments and runs equally well in the cloud or onpremises. Open source systems are portable, secure, versatile and easy to customize. The open development model enables rapid evolution and innovation. Open source also offers permanent protection from the persistent problem of vendor lock-in that affects closed-source, proprietary software.

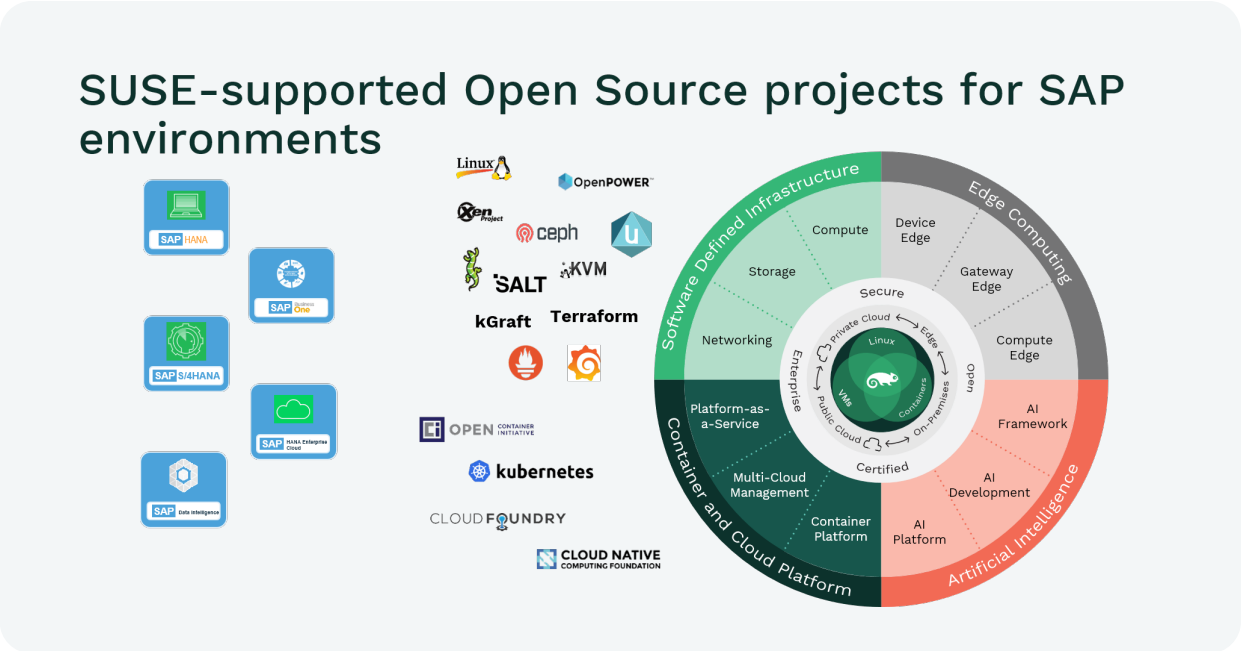

Figure 1. SUSE supports the full range of SAP technologies. A versatile and well-integrated infrastructure includes services for public and private cloud, object storage, containers, lifecycle management and more

If you are currently running SAP with a legacy database alternative, you might be able to use another operating system in the short term. However, you should be aware that SAP has declared an intention to discontinue the legacy alternatives and focus on HANA as the foundation for their future business application portfolio (see the box entitled "The Future Is SAP HANA").

Insist on Open

To stay flexible and adapt to changing conditions, you will want an infrastructure that is all open source, with open APIs.
An open architecture ensures:

- **Interoperability** – Freely available source code and open interfaces ensure that different tools from different vendors will fit together and interact seamlessly
- **No vendor lock in** – Because no provider has absolute control over the technology, you avoid the monopolistic effects of walled gardens and maximize your options for future expansion.
- **Community support** – Open development and cooperative testing unleash the power of a global community to ensure better and more secure code.

The need for open APIs is especially important for technologies such as SAP that support customization and combine collections of diverse components. Proprietary tools and closed APIs impose constraints on the environment that add cost and limit future growth. Insist on open tools, and be aware that some vendors that present their tools as "open source" still include components with proprietary interfaces. Be sure your core infrastructure is built on open source with open APIs.

Shopping for a Solution

To summarize, as you start to build a core infrastructure for your SAP applications, look for a solution that provides:

- Enterprise-grade Linux for supporting the SAP HANA in-memory database
- Broad support for hyperscalers and regional cloud service providers
- Features that reduce or eliminate service outages
- Automation options that reduce the IT administration workload
- Open source components with open APIs

SUSE is a leading Linux vendor, with the deep knowledge to support the SAP HANA in-memory database and its surrounding services. The SUSE solution is all open source and uses only open APIs. SUSE currently supports 85 percent of all SAP HANA deployments around the world, as well as 100 percent of all SAP Business One version for SAP HANA deployments. SUSE developers have had a close working relationship with SAP for 20 years, and SAP HANA was developed from the ground up on SUSE Linux Enterprise Server. The SUSE team includes experts who specialize in SAP infrastructure consulting, implementation and infrastructure support services.

In addition to deep Linux knowledge and a strong affinity for SAP, SUSE provides a complete portfolio of advanced technologies for cloud computing, containers, software-defined infrastructure and DevOps-ready system management—all aligned with SAP's Intelligent Enterprise and available with integrated, single-vendor support. Figure 1 shows some of the important SAP services supported through SUSE technology.

The SUSE Global Services team can help you build a core infrastructure that is tailored to your SAP business needs. By leveraging the power of SUSE Linux in the public cloud, you can test the waters and create a test solution without taking your existing systems offline. Once your SAP environment is tested and working smoothly, you can scale it up, transitioning the rest of the enterprise gradually for a stable and efficient transformation.

Conclusion

The Intelligent Enterprise offers a new vision for data in the business environment and provides tools that transform data into insights. SAP is the global leader in the tools and services of the Intelligent Enterprise. To maximize efficiency and flexibility for your infrastructure, you will need a core infrastructure that supports the advanced tools of the modern enterprise (containers, cloud computing, software-defined infrastructure) in a way that maintains a high level of compatibility and integration with SAP. Look for a partner that understands SAP and offers a broad portfolio of enterprise-ready services and tools with SAP integration.

SUSE has worked with SAP for 20 years as a co-innovation partner and as a customer. SUSE Linux Enterprise Server for SAP Applications is an endorsed application by SAP. Contact the experts at SUSE to learn more about building a versatile and well-integrated SAP environment.

The Future Is SAP HANA

SAP's announcement that it will discontinue legacy database options has put the focus on SAP HANA as the future foundation for the SAP environment. In the next few years, thousands of SAP customers will have to migrate to SAP HANA to stay current. If you are currently using SAP with a legacy backend database, now is the time to start thinking about your HANA migration. If you are new to SAP and looking for a place to start, building around SAP HANA will futureproof your enterprise.

Thank You

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