



THE GLOBAL AND INDEPENDENT PLATFORM FOR THE SAP COMMUNITY.



ERP Architectures with Suse

Suse is much more than just an SAP operating system provider: The company serves as a strategic anchor for Europe's digital sovereignty. Amid the pressure of SAP's end of maintenance, forced cloud migration, and increasing monopolization within the AI market, Suse offers a reliable, technically mature alternative. From left to right: Thomas Herrmann, SoftwareOne; Jens Gleichmann, XLC – Crossload Consulting; Jens Adam, Suse; and Friedrich Krey, Suse.

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ERP Architectures with Suse

Suse is far more than just an operating system provider for the SAP world. It is an indispensable strategic anchor for the digital sovereignty of Europe's industrial sector. At a time when existing SAP customers are under mounting pressure from the planned end of maintenance for older ERP systems, the push towards the cloud, and the unpredictable monopolization of the AI market, Suse offers a reliable and technically mature way out.

By Peter M. Färbinger

Anyone analyzing developments in the global ERP landscape in 2026 is confronted with a highly charged environment. The latest export controls imposed by the U.S. government—such as restrictions on access to advanced foundation models from Anthropic in foreign markets—have sent a seismic shock through the industry, exposing just how vulnerable Europe's digital economy has become. At the same time, Walldorf-based software giant SAP is relentlessly pushing its existing customers toward dependence on major U.S. hyperscalers through aggressive sales initiatives such as Rise with SAP.

Anyone who naively follows this imposed transformation path risks losing not only control of their IT budget but also their fundamental digital sovereignty. Without a viable and legally robust exit option—a cloud-exit and AI-exit strategy—the ERP system, the nerve center of the SAP customer's operations, risks becoming hostage to foreign legislation and unpredictable cost models. In this uncertain environment, one player is moving to the center of strategic considerations for SAP customers, having often served in the past as a reliable but quiet foundation in the background: Suse. Founded in Nuremberg, the European open-source pioneer now more than ever represents the technical antithesis of proprietary vendor lock-in. With an estimated market share of 80 to 90 percent in SAP Hana in-memory database environments, Suse Linux Enterprise Server

(SLES) for SAP Applications is the undisputed lifeline of the global SAP community.

SAP Basis with Open Source

Suse has demonstrated a detailed understanding of the real pain points facing users at the SAP Basis level (Customer Center of Competence, CCoE). This applies whether the challenge is avoiding the VMware cost trap through SAP-certified KVM virtualization, orchestrating modern, decentralized side-by-side extensions with Suse Rancher, or enabling highly secure and privacy-compliant use of artificial intelligence through the Suse AI Factory.

Suse's importance within the global SAP community can therefore be regarded as vital. For every CIO, IT manager, CCoE leader, and enterprise architect who does not want to sacrifice the future viability of their ERP environment on the altar of SAP marketing, integrating Suse open-source technology into the ERP roadmap is a strategic imperative. Only those who build their digital foundation on a sovereign open-source platform will retain control over their own actions in the age of artificial intelligence.

In the age of agentic AI, Kubernetes clusters, and the dismantling of traditional virtualization structures, Suse's relevance to SAP customers extends far beyond the provision of an operating system. Suse is positioning itself as an enabler of digital sovereignty. It provides

Modern AI-based tools, such as those from Nova Intelligence, make it possible to automate large parts of custom code analysis and transformation

*Joachim Hackmann,
Cluster Head BAS,
PAC*



SMEs and large industrial enterprises with the safeguards and tools they need to run innovations such as artificial intelligence and highly flexible, containerized applications on premises, in hybrid environments, or in sovereign clouds without dependence on a single vendor. It also supports the Cleanfield approach to SAP Clean Core in coordination with the start-up Nova Intelligence, co-founded by Professor Alexander Zeier.

The technical symbiosis between SAP and Suse is not a product of the current AI hype, but the result of a deep partnership spanning more than 25 years. As early as 1999, with the founding of the SAP Linux Lab in Walldorf, the two companies laid the foundation for running business-critical enterprise software on an open-source platform. This cooperation represented a deliberate break from the dominance of expensive proprietary Unix systems at the time and established Linux as the new industry standard. When SAP later decided to radically consolidate the market with the introduction of its Hana in-memory database, Linux was designated as the sole operating system foundation.

Architectural Continuity

For SAP customers, this history means one thing above all else: investment protection and architectural continuity. While proprietary IT vendors change their licensing models and support structures at irregular intervals, the open-source approach provides a reliable basis for long-term planning. Suse follows the principle of providing SAP customers with the same technical solutions, functions, and security capabilities regardless of whether a company opts for a traditional on-premises data center, a private cloud, or a hybrid scenario with one of the major public cloud providers.

From a business perspective, an ERP system is not an ordinary IT system but the heart of operational value creation. Unplanned system outages can cost companies in manufacturing or global trade tens of thousands of euros per minute. The overarching goal of every modern SAP Basis infrastructure is therefore “Towards Zero Downtime”—uninterrupted operation around the clock.

This is where the difference between a generic enterprise Linux distribution and the specifically optimized Suse Linux Enterprise Server (SLES) for SAP Applications becomes clear. The latter is more than just an operating system: it is a specialized, SAP-certified software and ►



From left to right: Thomas Herrmann, SAP Consultant, SoftwareOne; Jens Gleichmann, Managing Director, XLC – Crossload Consulting; Jens Adam, Global Alliance Director, Suse; and Friedrich Krey, Director SAP Market EMEA Central, Suse.



service package developed specifically to meet the extreme demands of memory-intensive in-memory environments.

Those who ignore these open-source tools and rely on cheaper, non-optimized operating system derivatives are cutting costs in the wrong place. In a crisis, SAP customers pay for these supposed savings through unpredictable downtime and a drastic increase in administrative overhead at the SAP Basis level (CCoE).

For more than a decade, virtualization of SAP landscapes was regarded as an industry standard dominated almost exclusively by VMware's vSphere platform. However, Broadcom's acquisition of VMware has shaken up the market. The radical shift in licensing models toward more expensive subscription contracts, the dismantling of the established partner ecosystem, and the forced bundling of software packages have created a TCO scenario with potentially existential consequences for European SAP customers. The default hypervisor has evolved from a neutral infrastructure tool into an unpredictable strategic cost risk.

SAP Virtualization 2.0

In this situation, Suse occupies a unique position in the market. It is currently the only provider offering a fully open-source virtualization alternative based on KVM (Kernel-based Virtual Machine) that has been fully validated and certified by SAP. The strategic and economic advantage of this approach is clear: because the KVM hypervisor is included as an integral part

of the SLES for SAP Applications operating system subscription (see below), separate hypervisor licensing fees are eliminated entirely. SAP customers can continue using their existing server hardware in their own data centers without major disruption or additional investment.

The move from VMware to Suse KVM is not a simple lift-and-shift project, as established vSphere functionality has to be reimplemented at the architectural level. Nevertheless, in cooperation with specialized global IT service providers such as SoftwareOne or hosting specialist FIS-ASP, the transition can be carried out in a controlled, low-risk manner with a measurable return on investment (ROI).

The technology debate in 2026 is inevitably dominated by AI and agentic AI. But while SAP CEO Christian Klein is seeking to push users toward the costly Business Technology Platform (SAP BTP) and its Generative AI Hub in order to generate new revenue streams through consumption-based AI Units and difficult-to-predict token pricing, resistance is growing across the installed base. The unresolved key question is: How can sensitive, business-critical ERP data—the crown jewels of the company—be enhanced with modern AI models without surrendering it to the uncontrollable black boxes of U.S. hyperscalers?

The answer lies in the strategic combination of open-source technologies, Kubernetes, and the concept of open weights. Open-weight models include advanced large language models (LLMs) such as Meta's Llama, Mistral AI, or IBM Granite,

whose trained neural weights are openly available, unlike those of closed systems such as GPT-4 or Claude. This makes it possible to run state-of-the-art models entirely in a company's own data center, on premises, or in a controlled private cloud.

It is precisely for this promising use case that Suse has developed an AI platform—and the Suse AI Factory concept—based on the Suse Rancher Kubernetes management platform. For enterprises, Suse AI serves as a digital safe harbor.

Cleanfield and AI Strategy

This architecture enables SAP customers to establish a tailored private AI strategy characterized by several key advantages, including cost predictability instead of a token trap. Companies can move away from unpredictable, usage-based API transaction costs in the public cloud toward a predictable investment model (CapEx). By implementing end-to-end zero-trust concepts, software bills of materials (SBOMs), and fully isolated, network-disconnected environments (air-gapped deployments), companies can meet even the strictest regulatory requirements in sensitive industries.

Through open AI stacks, Suse frees SAP customers from geopolitical dependence on proprietary U.S. laboratories. Intelligence returns to where it belongs: within the company itself, under the control of its own ERP organization.

One of the challenges in modernizing historically grown SAP infrastructures such as ECC 6.0 is the burden of custom

The Added Value of Open Source:	What Does the Strategic Shift to Suse and Open Source Offer SAP Customers?	
	The Proprietary Path (SAP BTP & VMware)	The Sovereign Open-Source Path (Suse & KVM)
Cost and Strategic Factors		
Infrastructure Licensing Fees	Exorbitantly rising annual VMware subscription fees; expensive base fees for the SAP BTP platform	Integrated virtualization (KVM) included in the SLES operating system subscription; €0 in separate hypervisor licensing fees
AI Operating Costs	Unpredictable token pricing, API fees, and unused "AI Units" expiring at the end of the year	Predictable CapEx model; maximum utilization of in-house GPUs through NVIDIA MIG and multitenancy
Interfaces and Data Access	Restrictive API policies limit third-party providers; artificial pressure to use Datasphere and BDC	Open standards and native APIs; direct, fee-free access to local data sources and open weights
Upgrade and Maintenance Flexibility	Enforced upgrade cycles in the public cloud; immediate loss of usage rights upon termination	Flexible scheduling; third-party maintenance and KVM architecture enable stable on-premises operation at the customer's own pace
Security and Compliance	Dependence on the global security architecture of the respective cloud provider	BSI-hardened stack (CC EAL 4+); EU-only support; signed SBOMs and reproducible builds

The economic implications become particularly clear when it comes to vendor lock-in. Companies that lock themselves into SAP's proprietary cloud contracts exchange valuable, perpetual on-premises usage rights for a volatile subscription model. If the system runs into difficulties or subscription fees rise dramatically, exiting the cloud can become almost impossible from both a technical and contractual perspective, as SAP customers may be left with little more than unusable raw data without the necessary algorithms and licenses.

Suse and the open-source ecosystem help eliminate this risk by restoring technical freedom of choice for SAP customers. A composable ERP based on Suse KVM, Rancher, and a private AI infrastructure allows companies to use the S/4 core as a standardized backend for structured data, while innovation and cognitive algorithms can be operated flexibly within a sovereign, self-controlled container environment. This not only significantly reduces ongoing operating costs but also fundamentally strengthens the customer's negotiating position with SAP in upcoming contract negotiations. (pmf)



Jens Adam,
Global Sales Director Fujitsu Alliance,
Suse



Thomas Herrmann,
SAP Consultant, SoftwareOne



Jens Gleichmann,
Managing Director,
XLC – Crossload Consulting

With Primeflex for SAP Landscapes, Fsas offers the only SAP-validated KVM-based solution that provides a genuine alternative for running SAP Hana in virtualized environments.

The migration to S/4 is an ideal opportunity to rethink your virtualization strategy. KVM offers a powerful, open, and cost-effective alternative to traditional hypervisors

KVM is a stable virtualization alternative with a proven track record among hyperscalers such as AWS and GCP

developments, or Z modifications. Over the decades, internal developers have modified the SAP standard with millions of lines of ABAP code to address specific process requirements. This organizational and technical sprawl makes subsequent release upgrades or a migration to S/4HANA a risky undertaking.

This is where SAP's prescribed Clean Core doctrine comes into play: the S/4 core must remain untouched, while necessary modifications and process-related extensions are consistently moved outside the core and implemented according to the side-by-side model in a separate, agile application architecture.

In this transformation scenario, the partnership between Suse and AI platforms such as Nova Intelligence can realize its full potential. Nova Intelligence acts as a cognitive bridge for the Clean Core transition. Under the Cleanfield approach, the platform uses autonomous AI agents to analyze legacy ABAP code, reconstruct the business intent behind it, and translate that intent into near-standard S/4HANA structures or cloud-native microservices. Based on an ECC 6.0 system, Nova generated a virtual functional specification.

Kubernetes provides the technical platform on which decentralized side-by-side extensions and AI agents can be securely orchestrated in production. With its Suse Rancher for SAP Applications container management platform, Suse builds the crucial bridge. This combina-

tion enables a scalable and flexible infrastructure specifically suited to modern, cloud-native ERP satellites.

Sovereign Premium Support

With Suse Sovereign Premium Support, the open-source company is taking a significant step further in meeting the compliance requirements of sensitive sectors. This dedicated service package guarantees that all support data is stored and encrypted exclusively within the European Union. In addition, technical support is provided exclusively by specialized support engineers based in the EU, thereby legally and physically preventing unauthorized access by foreign authorities, for example under the U.S. Cloud Act.

Suse translates these complex requirements into a structured and practical methodology: the Cycle of Digital Sovereignty. This holistic consulting and technology approach guides SAP decision-makers through four systematic phases—from analyzing dependencies and evaluating sovereign open-source architectures to business continuity testing—in building a compliant and resilient ERP infrastructure.

For SAP customers taking a critical view of current market developments, Suse is proving to be an indispensable, vendor-independent foundation for securing their own IT sovereignty amid the pressure created by cloud and AI adoption. The optimized SLES for SAP Applica-

tions operating system platform provides business-critical continuity at the ERP core through integrated high availability (HAE), automated system optimization (SAPtune), and live patching without downtime. In light of the Broadcom-VMware dilemma, Suse also provides KVM as an SAP-certified virtualization alternative that eliminates expensive third-party subscriptions and avoids hardware lock-in.

For SAP's Autonomous Enterprise, Suse provides a safety net against uncontrolled data leakage and geopolitical blockades. SLES 16 is the first enterprise Linux distribution to be AI-ready for automated system administration and root-cause analysis through the integration of the Model Context Protocol (MCP) directly into the platform. Suse Rancher for SAP Applications enables containerized side-by-side extensions—such as the local SAP Edge Integration Cell (EIC)—to be reliably orchestrated and operated, while the Suse AI Platform allows customers to run their own LLMs entirely within their own data centers.

This sovereign open-source stack enables an efficient private AI strategy. It protects sensitive corporate ERP data from the black boxes of U.S. hyperscalers, ensures compliance with stringent European regulations, and provides SAP customers with a genuine AI exit strategy outside the restrictive SAP BTP model and without dependence on proprietary usage-based pricing. ■

The Great Hypervisor Revolt



The post-VMware era in the SAP environment is built around KVM and can be combined with a sovereign private AI strategy platform. The Broadcom shock runs deep. Virtualization is becoming a board-level issue.

By Friedrich Krey, Suse

The era of “business as usual” in virtualization is definitively over. Recent upheavals in the virtualization market—particularly the massive price increases and the forced shift to subscription models following Broadcom’s acquisition of VMware—have created a major pain point across the market. IT leaders are facing escalating costs, unpredictable renewal cycles, and a dangerous “TCO explosion.”

The VMware Burden

Average licensing costs rise dramatically at contract renewal, while the shift from CPU socket-based to core-based licensing often results in artificial overlicensing.

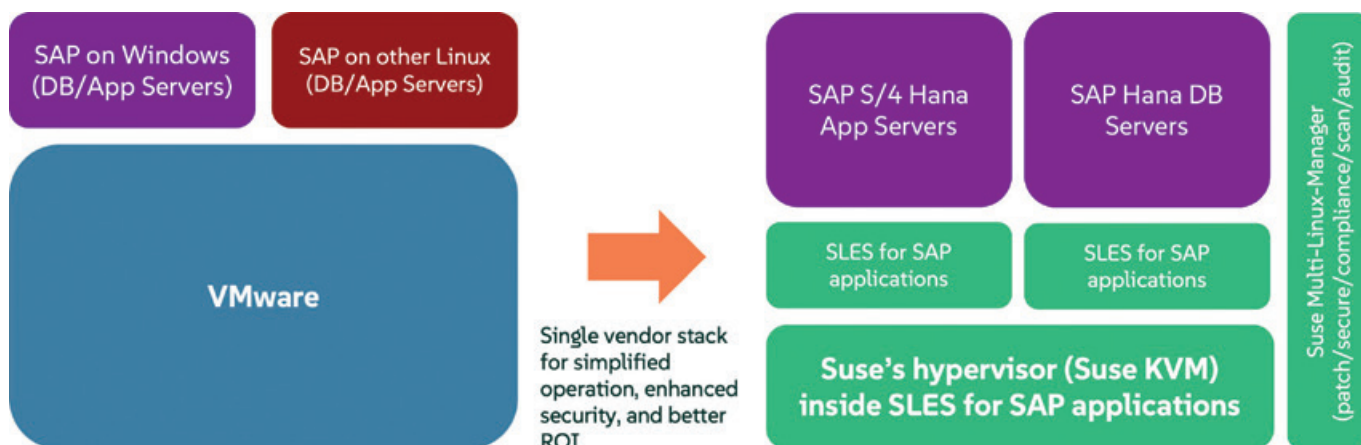
For medium-sized and large enterprises, the annual cost of operating and managing ESX environments can range from several hundred thousand to several million euros.

Against this backdrop, IT consolidation has become a necessity. Companies urgently need to streamline their IT landscapes and free themselves from the proprietary “VMware burden”—the so-called hypervisor tax—in order to establish a new, future-proof operating model and reduce costs. Financial pressure is turning the inefficiency of legacy hypervisors into a board-level risk. Particularly in memory-intensive and business-critical SAP environments, it is no longer economically justifiable to pay a premium

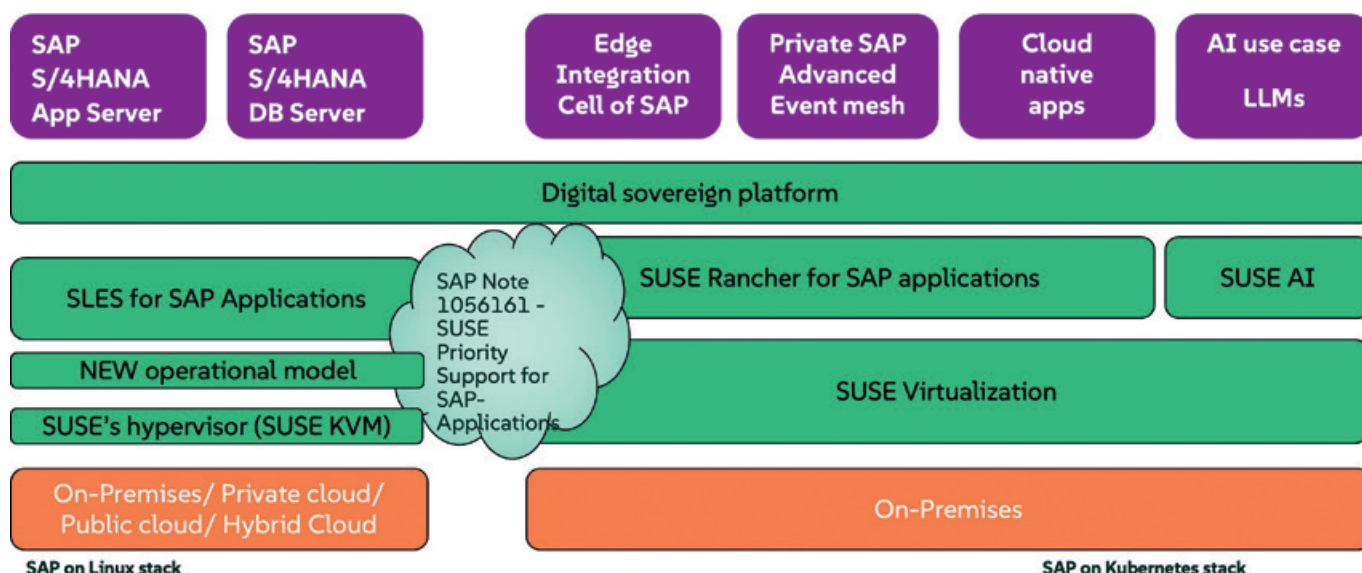
for a virtualization layer that essentially performs a commodity function. Proprietary models tie companies to a single vendor’s roadmap and pricing structure, limiting both their negotiating power and flexibility.

This is precisely where the core message for modern data centers comes into play: Suse provides SAP-validated KVM (Kernel-based Virtual Machine) as part of its Suse Linux Enterprise Server (SLES) for SAP Applications platform and, with Suse Virtualization, offers a genuine, stable, and enterprise-ready open-source alternative.

Instead of spending their budgets on proprietary software subscriptions, companies can shift their investment to a Li-



Opportunity for IT landscape consolidation.



Virtualization concept for SAP on a digitally sovereign platform.

nux operating system subscription in which the virtualization layer is already integrated. This protects existing investments, prevents hardware lock-in, and provides a high-performance foundation for some of the world's most demanding workloads. A key differentiator for Suse in this highly competitive environment is that it currently offers the only SAP-validated KVM solution on the market. In addition, Suse delivers the hypervisor for SAP directly and natively as part of the Linux platform.

Suse Linux Enterprise Server for SAP Applications includes not only the operating system but also Suse KVM, the hypervisor for SAP, as an integral component—eliminating the need for separate hypervisor licensing fees. This deep integration delivers the high performance required for business-critical S/4 environments and memory-intensive in-memory databases such as Hana. KVM typically adds only 5 to 10 percent overhead, delivering near-bare-metal performance. This meets SAP's stringent performance KPIs while also ensuring high availability (HA) and business continuity during maintenance.

From a technology perspective, the platform also stands out for its scalability. Based on the Intel Sapphire Rapids architecture, for example, Hana instances with up to 8 TB of RAM are supported. The hypervisor and the operating system for SAP applications can be managed centrally through Suse Multi-Linux Manager.

SAP Hana on KVM

The biggest challenge is to optimally align existing Hana systems with the target platform in terms of data volume,

memory requirements, and workload distribution. Without a thorough analysis, resources are often oversized or performance potential remains untapped. To fully exploit the potential of this architecture, customers can draw on a strong partner ecosystem. XLC (Crossload Consulting), led by Jens Gleichmann, provides extensive architectural expertise in Hana environments and establishes the technical foundation for running Hana on KVM.

The focus is on a systematic health check of the existing landscape. Memory consumption and workloads are analyzed, and optimization potential is identified. Techniques such as SAP Hana Native Storage Extension (NSE), optimized indexes, or the conversion of suitable data types (Varbinary to Large Objects) can significantly reduce memory requirements without noticeably affecting the performance of business-critical applications.

Sizing and workload management have become so important that Matthias Sander and Jens Gleichmann devote dedicated chapters to these topics in their specialist book *SAP Hana Deep Dive*. Practical experience shows that structured analysis and optimization can reduce required system resources by 30 to 40 percent in many projects. Given the high investment costs associated with RAM and current Intel server generations such as Emerald Rapids, this can deliver significant long-term financial benefits.

In a Discovery Workshop, XLC works with the customer to analyze the existing landscape. Based on the results, the target architecture and operating model for KVM are developed. A preliminary health check provides the necessary transparen-

cy and lays the foundation for a migration that is both economically and technically successful.

NetApp: Performance Booster

NetApp delivers business value for SAP landscapes running on Suse KVM by providing the highly available, high-performance data foundation required to operate Hana at near-bare-metal speed. While Suse KVM already minimizes virtualization overhead and delivers SAP-validated performance, its full potential is realized in combination with NetApp's enterprise storage and data management capabilities.

In Suse virtualization environments, NetApp provides persistent, highly available storage, either as FC LUNs or NFS volumes, helping to ensure uninterrupted operation. Storage provisioning in ONTAP can be fully automated using open standards and APIs. Whether using in-guest NFS mounts or Fibre Channel (FC)—provided that the HBA is assigned directly to the VM in accordance with Suse recommendations—seamless backup and recovery through SnapCenter integration are available as standard.

NetApp's first-party cloud storage solutions on Microsoft Azure (ANF) and AWS (FSx for NetApp ONTAP) are Hana-certified. They enable customers to replicate data to the cloud using native NetApp technologies such as SnapMirror. This allows temporary on-premises capacity bottlenecks to be addressed through the flexible use of cloud resources without requiring changes to the existing operating model. For customers relying on the combination of Suse, NetApp, and SAP, a hybrid multi-cloud architecture thus becomes a practical reality.



SAP Orchestration with Fsas

For end-to-end orchestration, automation, and hardware integration, Fsas Technologies provides Primeflex for SAP Landscapes and the FlexFrame Orchestrator (FFO), an established SAP platform that natively supports KVM. While Suse provides the technological foundation for the operating system and virtualization, FFO enables a standardized and highly automated operating model across the entire SAP landscape.

SAP systems can be automatically provisioned, moved, scaled, and maintained, reducing administrative overhead and simplifying operational processes. FFO's orchestration capabilities support stable and efficient operations, particularly during updates, maintenance windows, and high-availability and disaster-recovery scenarios. This gives IT departments more time to focus on strategic tasks rather than constantly operating in day-to-day firefighting mode.

Freedom of Hypervisor Choice

Andreas Spiegler, SAP Basis Administrator at the Kuka Group, provides an example of this added value: "With Primeflex for SAP Landscapes, we were able to significantly reduce our virtualization costs while maintaining the familiar standardized processes and automation for our SAP systems."

Spiegler emphasizes that Kuka, a global leader in intelligent robotics, plant engineering, and systems technology, has strengthened its digital sovereignty and regained freedom of choice in its hypervisor strategy by adopting the open-source platform.

More Than Lift-and-Shift

Migrating Hana workloads to Suse KVM is far more than a simple lift-and-shift project. Because proprietary vSphere functionality has no direct equivalent in the KVM world, migration requires new architectural approaches and a fundamental change in the operating model. Specialized expertise is therefore essential for this complex technological transition.

This is where SoftwareOne and Suse come in. Suse's technological leadership in the open-source market is combined with SoftwareOne's extensive implementation and consulting expertise. A comprehensive all-in-one approach covers the entire lifecycle of the SAP landscape. Following a secure KVM migration

delivered through professional services, SoftwareOne can, if required, take over proactive system management as a managed service, support further S/4 transformation projects, and provide consulting and development services for the SAP Business Technology Platform.

Through the targeted use of FinOps, proprietary tools, and precise license optimization in SAP Rise projects, SoftwareOne delivers ongoing cost reductions. Every successful and secure modernization starts with the right first step.

That is why SoftwareOne begins its projects with a thorough assessment. In a detailed scoping call, its experts analyze the customer's current VMware environment, identify technical legacy issues, and design a tailored, low-risk KVM target architecture.

However, IT infrastructure modernization must not stop at SAP core applications. To realize its full economic and technological potential, companies need to take the strategic step beyond the core. This means extending the replacement of VMware with Kubernetes-based Suse Virtualization to SAP and non-SAP cloud-native workloads as well as traditional non-SAP workloads.

Kubernetes for Edge Integration Cell

Suse Virtualization provides a hyperconverged infrastructure (HCI) based entirely on open-source technologies, combining a Kubernetes-based virtualization layer (KubeVirt) with integrated storage and networking capabilities. This enables companies to securely and efficiently manage both traditional virtual machines and modern containerized applications on a single, consistent platform.

Modern SAP architectures also benefit from this expansion into cloud-native technologies. The platform is ideally suited to deploying advanced SAP solutions such as the Edge Integration Cell (EIC) and SAP Digital Manufacturing for Edge—all on a unified, cost-efficient foundation.

The SAP Edge Integration Cell is a next-generation hybrid integration runtime offered as an extension of the SAP Integration Suite. It enables companies to manage APIs and execute integration scenarios directly within customer-managed private environments, whether on premises or in a private cloud. By running SAP EIC on Suse Rancher for SAP Applications, sensitive data remains within the company's own network, helping to meet even the strictest regulatory compliance requirements and ensuring full data sov-

ereignty. Another major advantage of the Edge Integration Cell is its offline capability: it can continue operating reliably even during temporary disruptions to the connection with the SAP Business Technology Platform (BTP).

SAP Digital Manufacturing for Edge also benefits from this open, containerized infrastructure. The solution brings data processing close to machinery on the shop floor, significantly reducing latency and enabling faster decision-making directly on the production line.

By synchronizing master data between the cloud and the edge system, the solution acts as a critical buffer. Transactions and production-related data, such as orders and recipes, are continuously synchronized, allowing manufacturing to continue seamlessly even during planned or unplanned cloud outages. Once connectivity is restored, the relevant data can be synchronized back to the cloud.

Conclusion

In addition to providing a way out of the VMware dilemma, Suse KVM and Suse Virtualization create a future-proof, sovereign, and fully integrated platform that brings together everything from high-performance SAP databases to decentralized AI and edge scenarios on the modern shop floor.

FlexFrame and Suse KVM

SAP on KVM and the FlexFrame Orchestrator reduce virtualization costs while maintaining a high degree of flexibility.

They address the growing cost pressure surrounding virtualized SAP workloads through seamless integration and freedom of choice in hypervisor strategy.

- **Cost-effective:** SAP on KVM provides an answer to rising licensing costs and growing uncertainty.
- **Sovereign:** Open-source technologies such as KVM reduce dependence on proprietary vendors and technologies.
- **Validated for SAP:** Suse KVM validation for SAP and Hana is officially referenced in SAP Note 1522993.
- **Result:** Lower operating costs, reduced dependence on individual vendors and U.S. technology, and a future-proof virtualization solution.

FIS-ASP

VMware Pivot: A Reality Check

Rising VMware costs and the desire for digital sovereignty forced full-service IT provider FIS-ASP to rethink its approach. Through a phased migration to an open Suse stack, the company significantly reduced costs and created a future-proof infrastructure.

For FIS-ASP, an established full-service IT provider with more than 25 years of market experience and three redundant data centers in Bavaria, the reliable operation of critical systems is core business. The company currently manages around 1,000 SAP systems for more than 50,000 users at mid-sized companies. For many years, the hosting specialist relied on a virtualization infrastructure based on VMware vSphere, with Red Hat Enterprise Linux (RHEL) as the operating system.

However, Broadcom's acquisition of VMware radically changed the market landscape. FIS-ASP quickly realized that, as a mid-sized service provider, it would no longer play a relevant role in the new VMware partner ecosystem. At the same time, the company anticipated massive cost increases.

Digital Sovereignty Without Vendor Lock-in

A change in the underlying technology was therefore essential to protect the company's business model and continue offering customers cost-effective solutions. FIS-ASP chose Suse because the European open-source provider could offer a fully sovereign infrastructure without vendor lock-in. In addition, FIS-ASP already had valuable hands-on experience with the KVM hypervisor and Suse Linux Enterprise Server for SAP Applications.

The validation of and migration to the new solution were carried out in a highly structured and measured manner. Instead of opting for a risky "big bang" migration, FIS-ASP chose a phased transition. The first workloads migrated to the new platform were non-critical development and test systems. Following the successful validation of these environments, the company gradually migrated its business-critical production systems. This approach enabled the IT service provider to ensure that its customers' strict service level agreements (SLAs) were met at all times and that ongoing business operations continued without disruption.

The strategic shift to Suse has deliv-

ered measurable and far-reaching benefits for FIS-ASP, particularly in terms of cost control. Without the platform change, total virtualization and operating system costs would have more than doubled from 2027 onward, according to the company's internal estimates. Renewing the existing subscriptions alone would have resulted in a cost increase of more than 100 percent. By consistently relying on open-source technologies, FIS-ASP was able to avoid this extreme price shock and restore long-term cost predictability, independent of proprietary licensing models.

The project has also exceeded initial expectations in terms of performance and stability. Manuel Sammeth, Managing Director of FIS-ASP, says that in practice, the feature set of Suse KVM is fully comparable to that of VMware ESXi. In day-to-day administration, parameters such as I/O limits, bandwidth, and system burst behavior can now be controlled even more precisely than before. Even highly complex environments, such as very large Hana databases with several terabytes of RAM, were migrated reliably and without interruption.

Compliance: ISO 27001 and NIS2

The project also addressed the issue of digital sovereignty. Customers in regulated industries increasingly demand complete transparency regarding their data. With its open infrastructure stack, FIS-ASP can now provide end-to-end transparency across the entire software supply chain. This makes it easier to meet strict compliance requirements such as ISO 27001 and NIS2. Technological flexibility has also increased significantly: The company can now seamlessly integrate hybrid multi-cloud strategies, including AWS and Azure, into its own on-premises offering.

The technical architecture at FIS-ASP demonstrates how various Suse components work together to efficiently orchestrate both traditional SAP workloads

and modern SAP and non-SAP workloads. Suse Linux Enterprise Server for SAP Applications provides the robust foundation for the new hosting services. The VMware layer has been replaced by Suse KVM, an enterprise implementation of the open-source KVM hypervisor integrated directly into Suse Linux. This allows FIS-ASP to continue using its existing server hardware in its own data centers without disruption or additional investment.

Suse Multi-Linux Support

A particularly important component in ensuring a smooth transition is Suse Multi-Linux Support. It enables the service provider to continue running RHEL in parallel as a guest operating system on the new virtualization platform for the time being. This allows complex SAP landscapes to be migrated gradually without being tied to a single vendor's release cycle.

A Bridge to the Cloud-Native World

At the same time, Suse Virtualization provides a bridge to the cloud-native world. This hyperconverged infrastructure (HCI) uses KubeVirt as a Kubernetes-based virtualization layer with integrated storage and networking.

This agile layer makes it possible to run virtual machines and containerized SAP applications—such as the SAP Edge Integration Cell, AI tools, and edge workloads—on a single platform. FIS-ASP uses Suse Rancher Prime for fully automated provisioning and centralized management of Kubernetes clusters across hybrid cloud environments. Automation tools such as Ansible and an in-house-developed management interface handle provisioning and resource management.

This combination provides a future-proof, API-based architecture that can be seamlessly integrated into modern DevOps workflows as Infrastructure as Code. (Source: Suse) ■

Why business-critical SAP data belongs in private AI

The Future Is Private Enterprise AI



GenAI and Agentic AI are radically reshaping software and infrastructure stacks. However, the indiscriminate use of public AI services for business-critical SAP data poses a major business risk.

By Friedrich Krey, Suse

Today, as companies move beyond the purely experimental phase—the so-called “POC playground”—and aim to run AI workloads in production with a measurable return on investment (ROI), IT decision-makers are under significant pressure.

The indiscriminate use of AI services from major hyperscalers’ public clouds for

business-critical SAP data exposes companies to the risk of dangerous vendor lock-in through proprietary ecosystems at both the language-model and infrastructure levels. Compounding this is the serious risk of sudden and unpredictable loss of access to models. Just how real this risk can be became clear, for example, when

Anthropic models were withdrawn at short notice following changes to U.S. government export control regulations. Companies that were entirely dependent on these specific models at the time were left without a viable alternative, putting the continuity of their entire business operations at immediate risk.

Reality Check: More Than Just “Lift and Shift”

No one-to-one mapping: Features in vSphere do not always have a direct equivalent in KVM. Different architectural approaches are there often required.

Changes to operations: Your team’s day-to-day work will change. Moving from a GUI-centric, proprietary model to an open-source platform requires a shift in mindset, as well as new tools and ways of integrating them into your workflow.

Migration Process: While the migration can be carried out independently, support from experienced specialists makes the process significantly smoother.

Assessment

A 30-minute scoping call to assess your existing environment and your goals. We strongly recommend completing this step together with Suse.

Formalization

Identification of technical debt and the specific requirements of the workloads.
Creation of a binding Statement of Work that clearly defines the project scope, objectives, responsibilities, and boundaries.

Transformation

The transformation journey begins—including setting up the target environment, migrating data, and ensuring a structured handover to operations.

Transformation strategy: moving from VMware to Suse KVM.

At the same time, companies lose control over their most sensitive corporate data and fall into the so-called “egress trap”: Data transfer fees charged by hyperscalers can quickly account for 30 to 50 percent of total monthly costs, compounded by unpredictable pay-per-token pricing models. Another critical issue is enterprise security. With public cloud services, SAP users effectively rent the AI capabilities they rely on while entrusting their most important data to an opaque third-party “black box.”

Private Enterprise AI

The future-proof answer to this dilemma lies in Private Enterprise AI and an uncompromising commitment to digital sovereignty. It is crucial to understand that “private” in this context primarily means operating AI entirely under a company’s own control—it does not simply refer to conventional deployment in a private cloud. Rather, this approach ensures that companies cannot be denied access to their models and eliminates the risk of data compromise by external third parties.

Private Enterprise AI describes an architecture that guarantees maximum control, the highest level of data protection, and strict compliance by running AI models directly in a company’s own data center, at the edge, or in a dedicated, highly secure private cloud. Sovereign AI therefore means retaining full control over hosting, models, and, above all, the underlying hardware infrastructure.

The fact is that a company cannot reliably safeguard its business processes unless it controls the foundation on which its artificial intelligence is built and draws its inferences. Private Enterprise AI ensures that your intellectual property is fully protected, that you comply with legal requirements such as the EU AI Act, and that you benefit from the efficiency gains of modern AI without ever relinquishing control.

Beyond the POC Playground

To make this vision of Private Enterprise AI tangible and scalable for enterprises, Suse offers Suse AI Factory, an open, highly secure infrastructure platform. Suse AI Factory enables generative AI solutions and MLOps to be deployed seamlessly across data centers, cloud, and edge environments without compromising flexibility or data control. Suse AI Factory forms the technological core for industrializing these complex AI process-

es. It transforms fragmented AI experiments into secure, predictable, highly repeatable, and standardized production environments. At its core, Suse AI Factory is an integrated software layer built on Suse Rancher Prime. Its primary purpose is to replace the error-prone manual integration of typically 15 to 20 different open-source tools. Instead, the solution establishes a reproducible “digital production line” for deploying and scaling AI workloads. This is enabled by pre-validated, version-controlled blueprints (master templates) designed specifically for the most demanding enterprise use cases.

For IT teams responsible for critical SAP environments, this eliminates operational disruption. Instead of tying up highly skilled developers with maintaining the underlying AI infrastructure, teams can focus on creating value at the model level. Suse AI Factory integrates seamlessly with existing Linux and Kubernetes environments and enables a smooth transition from intuitive “Click-Ops” user interfaces to highly scalable “GitOps” automation. This ensures that no unwanted environment drift occurs between the sandbox development environment and production.

Predictability with Suse AI Factory

Suse AI Factory also addresses the key challenge of predictability. Companies can shift from unpredictable public cloud API costs to a controllable CapEx model in which expensive hardware resources are utilized to the fullest through features such as fractional GPU scaling—for example, Nvidia MIG—and AI-powered observability.

From an IT security perspective, the platform acts as a digital safe harbor. With end-to-end zero-trust concepts, native software bills of materials (SBOMs), and support for fully isolated, air-gapped deployments, it provides a fully auditable AI supply chain. This enables even the most sensitive SAP financial or HR data to be processed securely by large language models.

Experts and innovators are the missing piece of the puzzle when it comes to moving AI from the lab into the heart of enterprise IT. They combine the analytical capabilities of locally deployed LLMs and agents with the highly complex reality of existing SAP landscapes, enabling use cases to be automated and delivering major gains in operational excellence. While Suse AI Factory provides the open foundation and guardrails for data sover-

eignty, partners such as Nova Intelligence and PAC ensure that AI is deeply embedded in companies’ core processes. This combination makes AI an integral, highly secure part of the SAP world, fully aligned with the principles of data sovereignty and capable of generating measurable value directly from a company’s own data center.

Sovereignty as a Driver of Returns

As this cover story has shown, the strategic shift to open virtualization technologies such as KVM and Suse Virtualization is the fundamental first step toward shedding the burden of expensive, proprietary hypervisor costs.

Successful real-world examples, such as the FIS Group’s consistent deployment of secure, container-based AI workloads in its German data centers, clearly demonstrate that highly available SAP infrastructures and Private AI can already be implemented today with high performance, strong security, and, above all, cost efficiency.

The future of SAP-enabled value creation inevitably lies in Private AI. Platforms such as Suse AI Factory pave the way for companies to fully harness the enormous potential of AI without handing their sensitive data over to the “black boxes” of public cloud hyperscalers. They ensure compliance with the strictest requirements and protect every company’s most valuable asset.

For SAP decision-makers and IT leaders, this is a wake-up call to free their system landscapes from proprietary constraints and unpredictable cost models. Powerful KVM-based infrastructure, combined with sovereign Private AI, provides an independent, future-proof foundation. The concepts, ecosystem, and tools for an AI-ready SAP environment are in place—now is the time to make your IT sovereign and future-proof. ■



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See the E3 partner entry on page 61

