

# Achieving SAP HANA Data Resilience with Lenovo and Veeam

## Solution Brief

Data resilience has become a fundamental requirement for organizations that depend on SAP HANA to support critical operations. The challenge extends beyond simple backups—it involves ensuring rapid recovery, meeting compliance obligations and minimizing complexity in increasingly dynamic environments. As SAP HANA deployments expand in scale and diversity, a strategy that delivers reliability, security and scalability is essential.

This document presents a solution from Lenovo and Veeam designed to address these demands. It details the key challenges faced by enterprises, outlines the components of the joint architecture and explains the benefits in terms of performance, cost efficiency and security. Additionally, it provides guidance on deployment models, hardware and software requirements and licensing considerations, enabling informed planning for resilient SAP HANA environments.

## Business Challenges

Enterprises running SAP HANA face increasing challenges in ensuring the availability, integrity and recoverability of their mission-critical data. As SAP HANA often underpins core business operations, even a brief downtime or data loss incident can lead to significant financial and reputational damage.

Several key challenges must be addressed:

- **Mission-Critical Nature of SAP HANA**  
SAP HANA databases demand extremely low Recovery Point Objectives (RPOs) and Recovery Time Objectives (RTOs). Legacy backup methods often fail to meet these stringent requirements, creating the risk of long downtimes or data inconsistencies.
- **Complexity of Backup for Large-Scale Databases**  
SAP HANA instances can grow into multi-terabyte or even petabyte-scale deployments. Legacy backup solutions can be expensive and can struggle with the volume, throughput and performance of protecting such large datasets without disrupting production workloads.
- **Heterogeneous Infrastructure**  
Many organizations operate SAP HANA across a mix of bare-metal servers and virtualized environments. Protecting these diverse platforms with a unified backup strategy is complex, often requiring multiple siloed tools or workflows that increase administrative overhead and create vulnerabilities.
- **Storage Performance and Cost Constraints**  
High-performance primary storage is optimized for running SAP HANA workloads but is not cost-effective for long-term data retention. At the same time, backup storage must balance speed (for rapid restores), scalability and cost-efficiency. Without the right tiered storage strategy, organizations either overspend or risk slow, unreliable recovery.
- **Regulatory and Compliance Requirements**  
Highly regulated industries such as finance, healthcare and manufacturing often require strict

adherence to data protection regulations. Backup solutions must ensure not only rapid recovery but also secure, verifiable and auditable retention of SAP HANA data.

In short, businesses need a solution that can:

- Deliver secure, reliable, cost effective and high-performance backup for SAP HANA
- Secure data resilience across both bare-metal and virtualized environments
- Provide efficient storage utilization without compromising performance
- Support regulatory compliance and reduce operational complexity

## Solution Components

To address the challenges of protecting and recovering SAP HANA workloads, Veeam in combination with Lenovo ThinkSystem servers and Lenovo DM, DE, and DG Series storage systems, provides a unified, high-performance, and cost-effective data resilience solution. Together, these technologies simplify SAP HANA backup and recovery across both bare-metal and virtualized environments, ensuring business continuity for mission-critical applications.

- **Veeam Plug-in for SAP HANA**
  - A certified, secure SAP-integrated backup and recovery solution that leverages SAP HANA's native Backint interface for application-consistent protection, providing direct integration with Veeam Data Platform
  - Support for SAP S/4 HANA, SAP BW Data Warehouse and SAP Business ONE
- **Lenovo ThinkSystem Servers**
  - Enterprise-grade, high-performance servers designed for SAP HANA production and backup environments
  - As backup infrastructure, Lenovo ThinkSystem servers provide the computational power to run Veeam Data Platform to manage backup jobs and orchestrate fast recovery operations
- **Lenovo DM, DE, and DG Series Storage Systems**
  - DM Series: Unified storage with integrated snapshots and replication, reducing production workload impact during backup operations
  - DE Series: Flash-optimized systems for ultra-fast data restores, minimizing downtime for business-critical SAP HANA applications
  - DG Series: Cost-optimized, high-capacity storage designed for efficient long-term retention of SAP HANA backup data

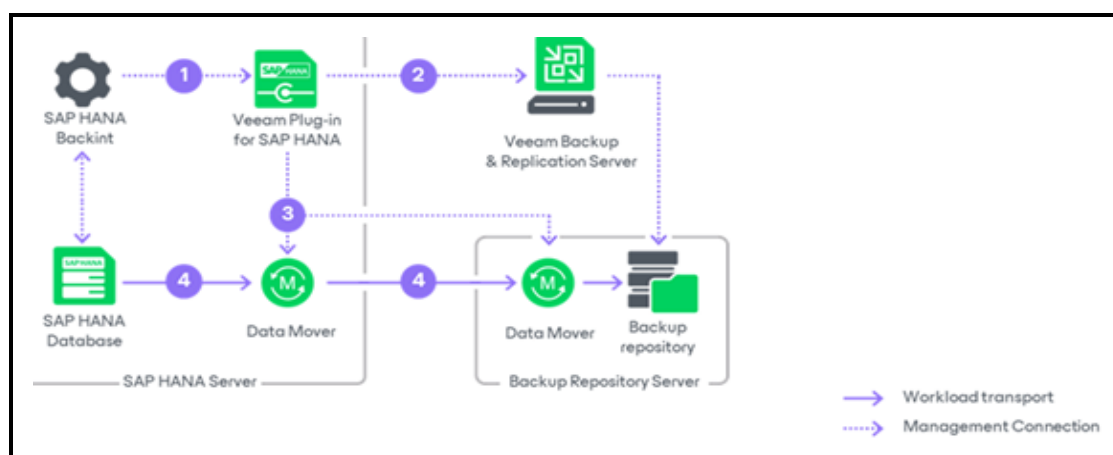


Figure 1. Veeam for SAP HANA Plug-in architecture

For more information, see [How Veeam Plug-in for SAP HANA Works](#)

## Solution Benefits

The joint solution from Veeam and Lenovo delivers a powerful, integrated approach to safeguarding SAP HANA environments. By combining application-consistent backup, enterprise-grade infrastructure and intelligent storage, organizations gain measurable advantages across performance, cost, security and operations.

- **Improved Uptime and Availability**
  - Certified Veeam Plug-in for SAP HANA ensures application-consistent backups with minimal production impact
  - Complete and recovery operations directly from the SAP HANA Studio or SAP HANA Cockpit, giving database administrators (DBAs) full visibility and control leveraging standard SAP HANA tools without the need of additional tools
  - Lenovo DE and DM Series storage enable ultra-fast restores, reducing downtime for mission-critical SAP HANA workloads
  - Full, differential and incremental backups, point-in-time recovery and log backup management support. This provides customers with flexibility in their backup strategies and helps meet various compliance or stringent recovery objectives.
- **Cost Efficiency and Optimized Resources**
  - Tiered storage architecture with Lenovo DM, DE and DG systems balances performance and cost by placing backups on the most appropriate layer
  - Use Veeam's Scale-out Backup Repository (SOBR) for maximum throughput during backup and restore operations. Additional server and storage can be used to scale throughput and capacity
  - Scalable Lenovo ThinkSystem infrastructure and flexible Veeam licensing reduce overprovisioning and future-proof the environment
  - Lower operational costs by consolidating backup management for SAP HANA and other enterprise applications into a single Veeam platform
- **Enhanced Security and Compliance**
  - Veeam's immutability and encryption features protect backup data against ransomware and unauthorized access
  - Centralized audit trails and reporting support regulatory compliance across industries such as finance, healthcare and manufacturing
  - Lenovo storage systems provide secure data isolation and replication, further strengthening data resilience
- **Streamlined Operations and Simplified Management**
  - Unified management for both physical and virtual SAP HANA instances reduce operational complexity and administrative overhead
  - Automated workflows, policy-driven retention and integrated snapshot technologies accelerate backup tasks while minimizing manual intervention
- **Scalability for Future Growth**
  - Modular Lenovo ThinkSystem servers and storage arrays scale easily as SAP HANA databases expand in size
  - Veeam's flexible platform adapts to evolving IT landscapes, supporting hybrid and multi-cloud strategies for SAP HANA workloads

## Customer Scenario

### Ensuring Data Resilience and Compliance for a Healthcare Provider

A large healthcare organization relies on SAP HANA to manage patient records, billing and clinical analytics. With strict regulatory requirements (HIPAA, GDPR) and the need for uninterrupted access to critical data, the IT team sought a solution that could deliver robust backup, rapid recovery and secure offsite protection.

By deploying Lenovo ThinkSystem servers and storage with Veeam Data Platform, the organization achieved:

- **Automated, application-consistent backups** of SAP HANA databases using Veeam's Backint integration
- **Rapid point-in-time recovery** to minimize downtime during system failures or cyber incidents
- **Immutable offsite backups** on Lenovo DM Series storage, ensuring data integrity and compliance with healthcare regulations

The result: The healthcare provider now confidently meets audit requirements, protects sensitive patient data from ransomware and ensures business continuity—even in the face of unexpected disruptions.

Together, Lenovo and Veeam help enterprises protect SAP HANA environments with confidence, efficiency and resilience ensuring critical business operations run without disruption, while lowering costs and simplifying day-to-day management.

## Requirements and Licensing

To ensure a successful and supported implementation of Veeam with Lenovo ThinkSystem servers and Lenovo DM/DE/DG storage for SAP HANA environments, customers should consider the following licensing models and minimum system requirements.

### Veeam Licensing

- **Veeam Universal License (VUL):**
  - Portable license that protects any workload physical, virtual, or cloud under a single subscription model
  - Fully supports the Veeam Plug-in for SAP HANA, certified with SAP's Backint interface
  - Provides access to enterprise features including immutability, monitoring, and replication
- **Included Plug-ins and Add-ons:**
  - Veeam Plug-in for SAP HANA – native application-consistent backup and recovery.
  - Veeam Data Platform – centralized management console and enterprise-wide orchestration.
  - Optional Add-ons such as Veeam ONE for advanced monitoring and reporting can extend visibility into SAP and non-SAP workloads

### Minimum Infrastructure Requirements

- **Veeam Backup Server and Backup & Replication Console (on Lenovo ThinkSystem)**
  - Processor: Minimum 4 cores (Intel Xeon recommended), scalable based on workload size
  - Memory: At least 16 GB RAM; 32 GB+ recommended for larger HANA environment
  - Storage:
    - System: 100 GB minimum for OS and Veeam installation
    - Repository cache/logging: SSD tier recommended
  - Operating System: Microsoft Windows Server (latest supported versions)
- **SAP HANA Database Servers**
  - Must run on SAP-certified Lenovo ThinkSystem Servers
  - Supported operating systems: SUSE Linux Enterprise Server (SLES) or Red Hat Enterprise Linux (RHEL), as certified for SAP HANA
  - Network connectivity: 10/25/100GbE recommended to meet backup throughput requirements
- **Lenovo Backup Storage (DM/DE/DG)**
  - Lenovo DM Series: For snapshot integration and hybrid workload performance
  - Lenovo DE Series: Flash-based for ultra-fast recovery SLAs
  - Lenovo DG Series: High-capacity, cost-optimized storage for long-term retention
- **Best Practice Deployment Model**
  - Backup Server: Hosted on Lenovo ThinkSystem with Veeam Backup & Replication
  - Repositories: Located on Lenovo DM/DE/DG storage, configured for tiered retention
  - Network: Redundant 10/25/100GbE links for throughput and failover
  - Security: Use Veeam Hardened Repositories or Lenovo immutable/WORM storage options for ransomware resilience

## Ready to take the next step?

Through a strong integrated partnership, Lenovo and Veeam deliver a unified, modern backup and recovery solution that combines Veeam's secure data resilience software with high-performance Lenovo hardware that empowers customers to minimize downtime, recover any workload anywhere, and helps ensure business continuity with confidence and peace of mind.

- **Multi-Cloud Support:** This allows you to protect your data no matter where it resides, whether it be private, public, or hybrid cloud environments. This ensures that your data is secure and can be accessed at any time.
- **Infrastructure Modernization:** Enables seamless migration and future-ready performance with Lenovo ThinkAgile and ThinkSystem platforms.
- **Unified Protection:** Provides a single platform for Microsoft, VMware, Nutanix, cloud, and physical workloads, simplifying operations and reducing complexity.
- **Verified Recovery and Resilience:** Ensures clean, bootable VMs with SureBackup and protects against ransomware with immutable backups.
- **Operational Efficiency:** Reduces manual effort and risk through a centralized management console and standardized policies.
- **Seamless Integration with Existing Infrastructure:** To ensures that you can easily integrate Lenovo and Veeam into your existing IT environment
- **Scalability for Growing Businesses:** Easy to scale data protection and recovery operations

[Try Veeam Data Platform free for 30 days](#)

## Related product families

Product families related to this document are the following:

- [DE Series Storage](#)
- [DG Series Storage](#)
- [DM Series Storage](#)
- [SAP HANA](#)

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