High Performance, Flexible Backup and Storage with SUSE and Veeam

SUSE

Introduction

Modern data storage requirements are prompting organizations to move to software-defined storage. It can accommodate today's massive volumes of data and is more flexible and scalable than traditional, proprietary storage systems.

But while storage platforms have evolved, so have threats to business data and industry regulations. Organizations are now faced with a growing need for powerful protection of stored data and always-on accessibility of their most critical applications. That means they also need solutions for reliable backup and fast recovery of data, in case the worst happens.

Finding the right combined storage and backup solution isn't easy. As data centers expand, applications are spread across a variety of servers and systems. The IT team wants a solution that will scale easily and include seamless support for all of the organization's most critical systems and applications, such as SAP HANA and other SAP applications. The solution should integrate well with existing infrastructure and make it simple for IT to manage storage and backup tools without having to add extra staff. Business leaders want a solution that can scale with the business as it grows and keep the organization compliant with data protection regulations—and it must be cost-efficient, with a low total cost of ownership (TCO).

SUSE and Veeam have the storage and backup solution that can meet the demands of both IT and business leaders alike. With SUSE Enterprise Storage as a disk-to-disk backup target for Veeam Backup & Replication, you get high-performing and flexible backup with significant long-term scalability. Together, SUSE and Veeam deliver an extremely cost-effective, flexible solution for enterprise archive, backup and recovery implementations.

Storage, Backup and Recovery from Industry Leaders

Together, Veeam Backup & Replication and SUSE Enterprise Storage deliver the flexibility and near-unlimited scalability you want for long-term data retention, plus a single storage architecture that delivers the various performance requirements a Veeam backup solution needs. It's ideal for mission-critical applications and platforms such as SAP HANA, and enables you to recover vital data fast when failures occur.

SUSE Enterprise Storage and Veeam Backup & Replication offer robust storage and disk-to-disk backup with:

- *The ability to use commodity hardware, for greatly reduced TCO*
- *Open source software, for minimal software cost and maximum flexibility*
- *A self-managing, self-healing architecture, for reduced management overhead*
- *A flexible, cluster-based design, for graceful and inexpensive upgrade*
- *An innovative licensing model that avoids per-gigabyte software licensing charges, resulting in much lower TCO at scale*

SUSE Enterprise Storage accommodates file, object and block storage, making it truly unified storage. It can help to protect data in geo-distributed locations within the same cluster, at three different service levels: performance, archive and cloud. Your mission-critical production data goes into the performance tier; a copy of that goes into an archive; and a copy for long-term retention goes into the cloud tier. This tiered storage architecture can help to keep you compliant with evolving industry regulations, such as the General Data Protection Regulation (GDPR) and others.

Implementation guides are available online:
SUSE Enterprise Storage Implementation Guide for Veeam Archive

Using SUSE Enterprise Storage for Veeam Backup and Restore

SUSE Enterprise Storage
Linux Target for Veeam with SUSE Enterprise Storage
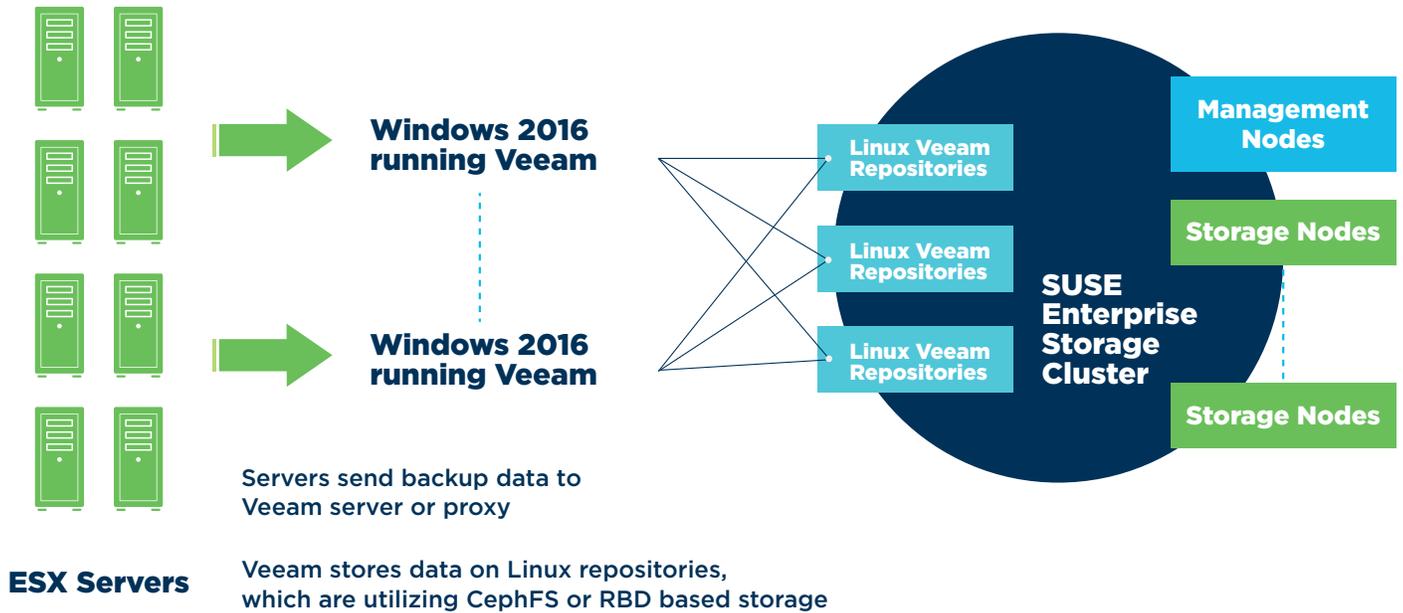
Figure 1. *Veeam backup environment leveraging block storage provided by SUSE Enterprise Storage using the SES iSCSI Gateway.*

Backup & Recovery for SAP HANA Is Easier Than Ever

When you evaluate any configuration management solution or One of the best things about the SUSE-Veeam storage and backup solution is the Veeam Plug-in for SAP HANA, an easy-to-integrate and SAP-certified BACKINT plug-in that gives SAP administrators 100 percent control of the backup and restore processes. The plug-in makes it simple to seamlessly integrate your SAP HANA backup with Veeam Backup & Replication.

The SUSE-Veeam solution provides the following options to protect your SAP HANA environment:

- *SAP HANA-based backups should be always run with the Veeam SAP HANA Plug-In*
  - *This leverages SAP HANA backint and can be run in any environment, including VMs, physical servers and cloud.*

For the SUSE operating system and HANA installation files, we recommend:

- *Virtual machines running the SAP HANA database – agentless virtual machine image-level backup*
- *Physical servers running the SAP HANA database – Linux agent-based backup*

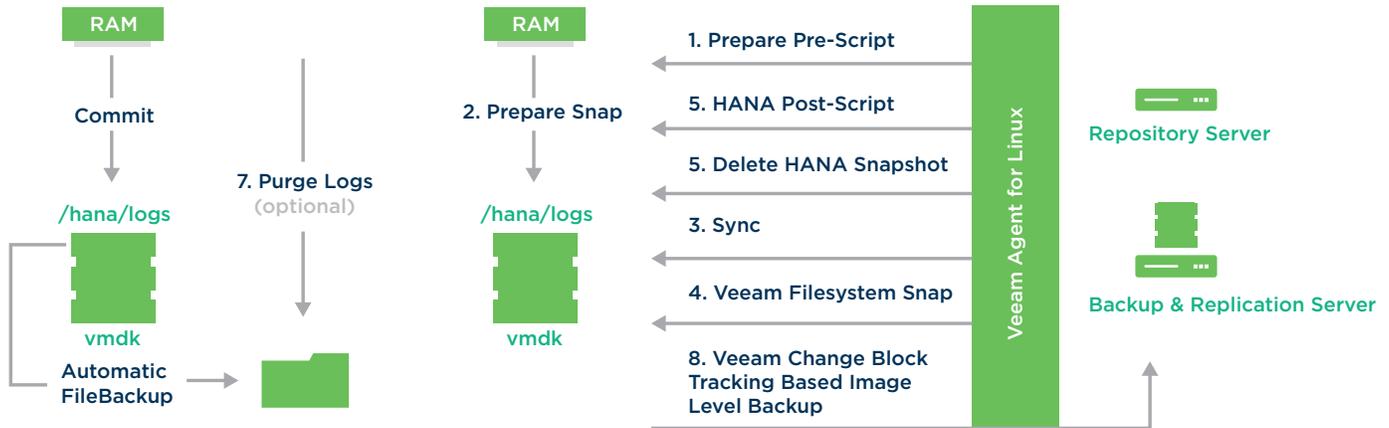# HANA BACKUP WITH VEEAM AGENT FOR LINUX

Physical Server with SAP HANA DB

Figure 2: *SAP HANA backup with Veeam Agent for Linux*

Save on Costs without Sacrificing Performance

With SUSE Enterprise Storage and Veeam Backup & Replication, you get a cost-effective solution that delivers high performance. The solution uses off-the-shelf hardware that is at least 30 percent less expensive than traditional proprietary systems—enabling you to avoid large, up-front capital expenditures.

Operating expenses are also kept in check with SUSE's innovative licensing model that helps you avoid per-gigabyte software licensing charges. That means you don't owe more for storing more data. Using open source software also helps to minimize software costs.

Finally, Veeam Backup & Replication comes in three editions—Standard, Enterprise and Enterprise Plus—so you can choose the one that best meets your needs and budget.

Reduce Complexity and the Need for IT Oversight

Implementation and management of the combined SUSE-Veeam storage and backup solution is simple for IT and doesn't tax the team's time and effort. The solution is easy to set up and deploy—and SUSE Enterprise Storage meets all of Veeam's guidelines for system hardware, networking and environmental prerequisites. Self-healing capabilities free up IT and also help to optimize data placement, which builds redundancy into the infrastructure.

The SAP-certified Veeam Console enables you to integrate and manage virtual, physical and cloud workloads—and centralized backup agents—directly within a single pane of glass. Automated rebalancing means the system continuously monitors data utilization and infrastructure without the need for manual intervention, ensuring that resources are available when needed.

With Veeam, you can generate extremely fast backups with low Recovery Point Objectives (RPOs) from storage snapshots. Built-in WAN acceleration enables you to get backups off site up to 50 times faster than other backup solutions.

Stay Flexible with Ultra-Scalable Storage and Backup

As data volumes grow exponentially, the SUSE-Veeam solution can keep pace with its unlimited scalability. It features a distributed storage cluster that is designed to scale to many nodes and petabyte-scale environments and beyond—including longer-term data retention.

The solution can provide optimized object and block services to client access nodes, either directly or through gateway services. The flexibility of the solution makes it resilient to changes in physical infrastructure, whether caused by failure or required maintenance. The solution's redundancy boosts data availability with no single points of failure.

With disk-to-disk backup, you get a short Recovery Time Objective (RTO) and automated data durability—as well as a range of disaster recovery options, including disaster recovery support for applications such as SAP S/4 HANA, SAP BW Data Warehouse and SAP Business ONE.

A Closer Look at the Components
SUSE Enterprise Storage
This intelligent, software-defined storage solution is based on Ceph, an industry-leading SDS solution and the most popular one among OpenStack users. With Ceph, a single system administrator can manage up to 4 PB of data—six times more than an administrator in an equivalent block-storage environment.

Ceph also comes with erasure coding, which enables you to

define settings for data protection. The latest iteration of Ceph, available in SUSE Enterprise Storage, offers BlueStore, which doubles the write performance of previous releases and significantly reduces input and output latency. It can also help you free up capacity via data compression.

The solution can also scale horizontally, with increasing performance results as it grows. It provides a simple-to-manage, agile infrastructure with increased speed of delivery, durability and reliability.

"Now, SAP HANA enterprise customers can take advantage of Veeam's No.1 backup solution for their mission-critical, performance-sensitive SAP HANA environments, leading to lower management overhead with a more intuitive, integrated and seamless solution to address the business-critical demands required for application and data availability."

RATMIR TIMASHEV
co-founder and Executive Vice President of Sales & Marketing
Q Veeam

Veeam Backup & Replication
As part of the Veeam Availability Suite, Veeam Backup & Replication delivers availability for all of your virtual, physical and cloud-based workloads. Through a single management console, you can manage fast, flexible and reliable backup, recovery and replication of all your applications and data, enabling you to eliminate legacy backup solutions. The solution includes native, certified SAP support for backups and recoveries.

Backup capabilities include unlimited capacity for long-term data retention so you can scale on-premises and in the cloud. You can also simplify the management of your backups by creating a single virtual pool of backup storage, including support for on-premises and cloud-based object storage. The SureBackup feature enables you to automatically test and verify every backup and VM to ensure recoverability.

Recovery through Veeam means quick, reliable restoration of individual files, entire VMs and application items, so you can have
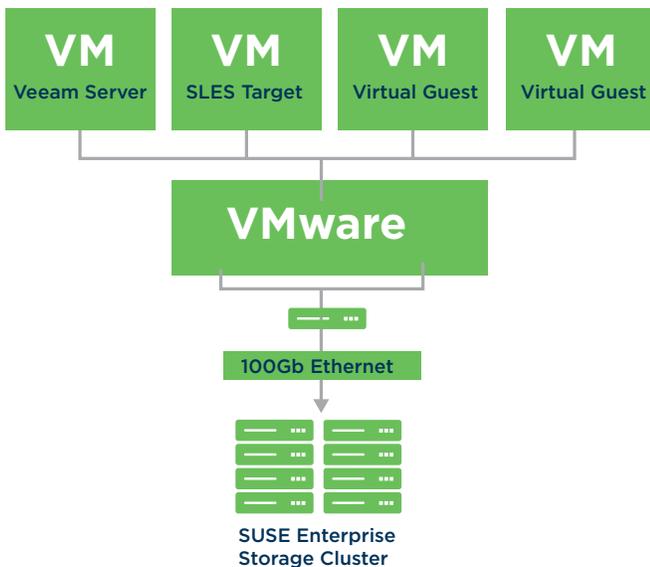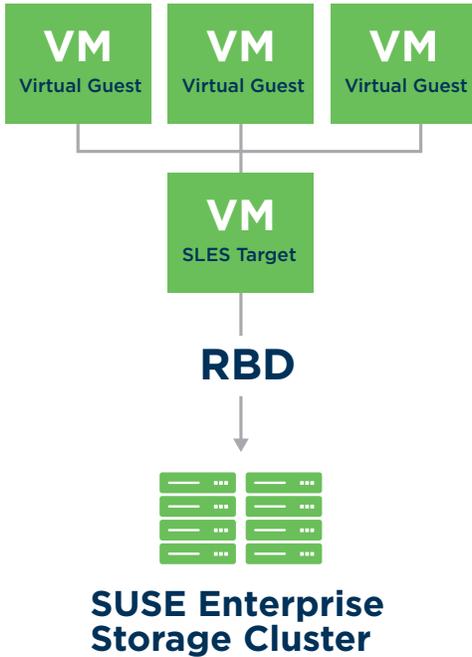

Figure 3

VEEAM TRAFFIC FLOW

Figure 4

confidence in virtually every recovery scenario. You can recover a failed VM in less than two minutes and recover guest OS files and folders on the fly. And you can add extra protection to your backups with security, antivirus and intrusion-prevention capabilities from Veeam DataLabs Secure Restore.

Veeam also provides advanced, image-based VM replication and streamlined disaster
recovery to help ensure the availability of your mission-critical applications. Other features, such as replica rollback and assisted failover and failback, enable you to keep business up and running with little to no interruption.

Transform Your Enterprise with SUSE and Veeam

Veeam Backup & Replication combined with SUSE Enterprise Storage offers powerful storage, backup and recovery that you can rely on to protect your data—even mission-critical platforms and applications such as SAP HANA. The solution is a cost-effective choice for high-performance, flexible storage and backup. It is also easy to manage, with minimal IT oversight, and can help you stay compliant with evolving data protection regulations. Its flexibility and near-unlimited scalability enables long-term data retention and means that the solution will grow with your business in the years to come.

Additional contact information and office locations:
www.suse.com

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