Hewlett Packard Enterprise

Put your backup data to work with Nimble Storage and Veeam Software

Leverage backup for more than just operational recovery with Nimble Secondary Flash

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Technical white paper

Introduction

Nimble Secondary Flash array represents a new type of data storage, designed to maximize both capacity and performance. By adding high-performance flash storage to a capacity-optimized architecture, it provides a unique backup platform that lets you put your backup data to work.

Nimble Secondary Flash array uses flash performance to provide both near-instant backup and recovery from any primary storage system. It is a single device for backup, disaster recovery, and even local archiving. By using flash, you can accomplish real work such as dev/test, QA, and analytics. Deep integration with Veeam's leading backup software simplifies data lifecycle management and provides a path to cloud archiving.

Solution overview

Nimble Secondary Flash solution with Veeam Software simplifies data management and enables many powerful capabilities beyond that of the array itself. Tight integration between the Nimble Secondary Flash array and Veeam Backup & Replication software lets backup administrators access Nimble capabilities without using a separate interface. They can focus on using the software they know, without having to become storage hardware experts. Key array-based features can be managed through the Veeam interface, including managing snapshots and replication (Veeam Explorer), as well as instant cloning for test-dev (On-Demand Sandbox).

Starting with Veeam Backup & Replication 9.5, specific integrated features available for Nimble systems include:

- Back up from storage snapshots (both primary and replicated snapshots)
- Veeam Explorer for storage snapshots
- Veeam On-Demand Sandbox for storage snapshots

Veeam-Nimble Integration—details and installation considerations (VMware vSphere® only)

Create fast backups from storage snapshots for quick and efficient item-level recovery. Nimble snapshots and replicated snapshots create a robust, enterprise-level data protection solution. Veeam Backup & Replication lets you leverage Nimble snapshots as part of a comprehensive backup and recovery strategy, with snapshots and image-level backups that complement each other.

With Veeam Backup & Replication, you can:

- Perform backups from Nimble snapshots
- Restore data directly from Nimble snapshots
- Orchestrate snapshots on both primary and secondary arrays

Veeam Backup & Replication pre-installation considerations

The following capabilities are required for installing Veeam:

- Veeam Availability Suite 9.5 Enterprise Plus License Key
- Veeam Availability Suite 9.5 Installation ISO
- Available HBA for direct storage fabric connection (10GbE/FC) and network connectivity
- NimbleOS version 2.3.16 or higher
- Available Windows Server® with the following:
  - 64-bit OS
  - x86-64 processor with 4 cores minimum
  - Recommended 12 GB RAM plus 2 GB RAM per concurrent task
  - 2 GB of available disk space for installation

Performing backup from Nimble snapshots

Backups can be configured to use backup-from-storage snapshot technology. Instead of reading data from VMware® VM snapshots, Veeam reads data from Nimble snapshots, which accelerates backup operations and improves recovery-point objectives (RPOs). Veeam can also orchestrate snapshots between Nimble Storage arrays without taking a backup. However, combining snapshot orchestration and backups can offer RPOs that are more aggressive.

Integration with Nimble is configured through the Advanced Settings window, on the Integration tab. Once selected, Veeam backups can be enabled from Nimble array-based snapshots.

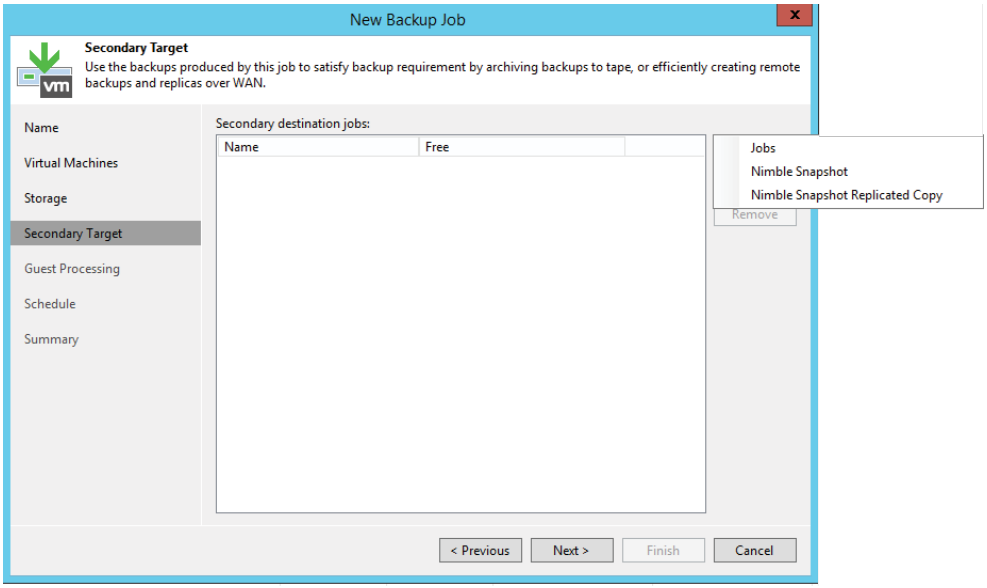

Figure 1. Secondary target selection
Integrated snapshots or replication can be selected from a drop-down menu.

Restoring VM data from Nimble snapshots

If important VM data is accidently lost or corrupted, VM data can be restored directly from Nimble snapshots. The restoration process is similar to a restoration from image-level backups of VMs. Veeam Backup & Replication offers the following restore options for Nimble snapshots:

- Instant VM recovery
- Restoring VM guest OS files (Windows®, Linux®, and others)
- Restoring application items (Exchange, Active Directory, SQL, SharePoint, and Oracle)

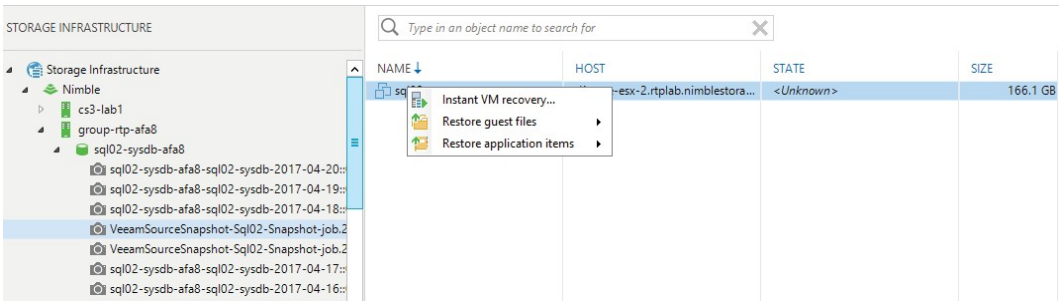

Figure 2. Veeam Explorer for Nimble snapshots
Veeam Explorer for Nimble snapshots lets you perform granular recovery for VMware vSphere VMs directly from Nimble snapshots.

On-Demand Sandbox for Nimble snapshots

The On-Demand Sandbox for Nimble snapshots is a great way to leverage snapshots on either primary or secondary Nimble arrays for testing. Veeam's On-Demand Sandbox consists of three different components: an application group, a virtual lab, and a SureBackup Job.

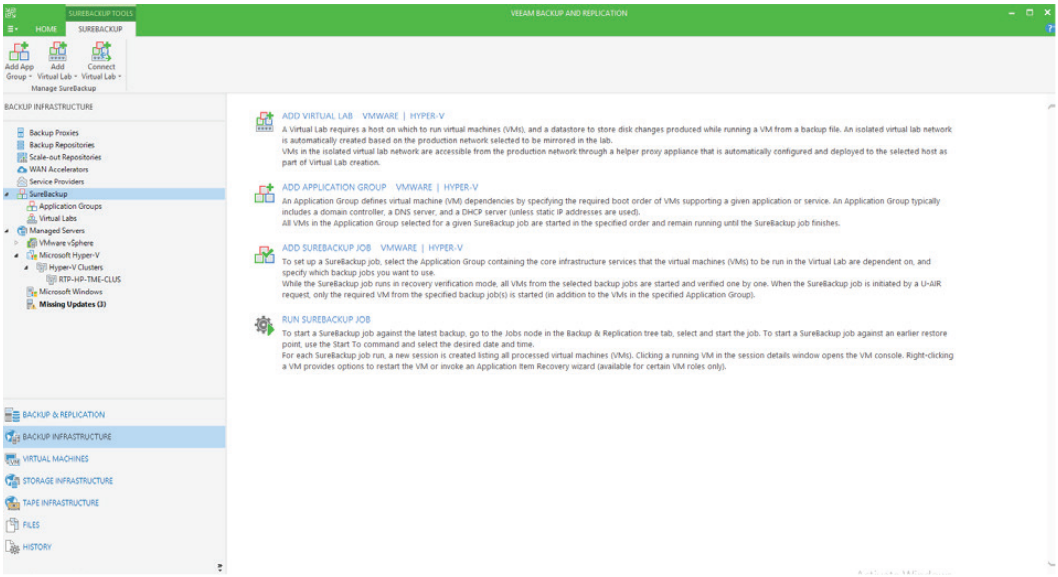

Figure 3. Backup infrastructure—SureBackup
The SureBackup feature uses the On-Demand Sandbox to create isolated copies of VMs to then enable automated series of verification tests.

Flash-enabled data protection with Veeam and Nimble

Veeam and Nimble capabilities allow for a comprehensive data protection solution. Leverage the space efficiency of Nimble snapshots for more frequent Veeam backups to improve RPOs. And with fast recovery capabilities direct from a snapshot or backup, you can improve recovery-time objectives (RTOs) as well.

The combination of Veeam software and Nimble flash hardware enables both near-instant backups and near-instant recovery directly from the snapshot, down to the granularity of a VM. In addition, the Nimble Secondary Flash system has the performance to allow fast and frequent verification of VM backups (SureBackup), which often takes too long to run regularly on typical backup systems. Flash lets you quickly protect and verify your data, providing peace of mind.

Put your backup data to work

You should have a data availability solution able to run real workloads with flash performance, such as dev/test, QA, patch testing, reporting, and analytics. Zero-copy clones let you reuse backup data and instantly create hundreds of application copies.

In conjunction with leading availability software from Veeam Software, the Nimble Secondary Flash array lets you quickly and easily get to your data, with reads that are over 100 times faster than traditional hard drive-based backup appliances. Restores are nearly instantaneous, or you can run your application directly from the array for performance, similar to primary storage. With the Nimble Secondary Flash with Veeam, you can improve your data availability while increasing IT agility and infrastructure ROI.

About Nimble

Nimble, a Hewlett Packard Enterprise company (NYSE: HPE) is the leader in predictive cloud infrastructure. Its Predictive Cloud Platform gives users fast, reliable access to data. By combining predictive analytics with flash storage, IT teams radically simplify operations in their data center and in the cloud. Over 10,000 customers rely on Nimble to power their businesses.

About Veeam Software

Veeam Availability Suite combines the industry-leading backup, restore, and replication capabilities of Veeam Backup & Replication with the advanced monitoring, reporting, and capacity planning functionality of Veeam ONE. Veeam Availability Suite delivers everything you need to reliably ensure and manage your VMware vSphere and Microsoft® Hyper-V environments. The Veeam agentless design provides multiple backup options to meet your needs. Features such as source-side deduplication and compression, change block tracking, parallel processing, and automatic load balancing provide the fastest and the most efficient backups possible.

For more detailed documentation including installation instructions, please see the following:
Veeam Backup & Replication user guide for VMware vSphere

Learn more at

nimblestorage.com/solutions/data-protection

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