



NetApp and Veeam Solutions for Data Protection



Protect Your Business with NetApp and Veeam

Protect your critical business data with NetApp® and Veeam® Solutions that can help meet your business demands for faster recovery, higher storage efficiency, and risk avoidance. You will enhance application availability, simplify IT operational management, and lower costs when NetApp modern storage is paired with the Veeam Availability Suite™.

The Cost of Downtime

According to IHS Infonetics in [The Cost of Server, Application, and Network Downtime: Annual North American Enterprise Survey and Calculator, 2016](#), the annual cost of downtime from IT outages for North American companies is \$700 billion. According to the survey:

- 95% of this cost is attributed to lost productivity and lost revenue.
- Only 5% is identified as the cost to fix the problem.

In a recent research report that was sponsored by Veeam and that compared 2015 with 2014:

- IT downtime increased from:
 - 1.4 to 1.9 hours for mission-critical applications.
 - 4.0 to 5.8 hours for nonmission-critical applications.
- The average recovery time objective for mission-critical applications is 3.0 hours versus SLAs that require 1.6 hours. Similarly, the current recovery point objective is 4.2 hours but should ideally be 2.9 hours.
- The average annual cost of downtime has risen a staggering \$6 million within a 12-month period ([2016 Veeam Availability Report](#)).

Get Started with NetApp and Veeam

NetApp and Veeam have developed solutions to meet the challenges of IT downtime. We jointly developed this guide by identifying use cases that are based on often-seen customer needs and high ROI scenarios and that:

- Accelerate enterprise application performance.
- Protect and recover data.
- Build cloud-ready data centers.

Solution Components

These solutions are built on high-demand products, including:

- NetApp FAS and All Flash FAS
- NetApp AltaVault™ cloud-integrated storage
- NetApp E-Series
- Cisco and NetApp FlexPod® solutions
- Veeam Availability Suite

Let NetApp and Veeam help you keep your business running 24/7 with industry-leading data storage and protection solutions.

NetApp: <http://www.netapp.com/us/forms/sales-contact.aspx>

Veeam: <https://www.veeam.com/salesinc.html>

Array-based Backup

SnapVault for FAS and All Flash FAS (AFF) Backup

Customer Benefits

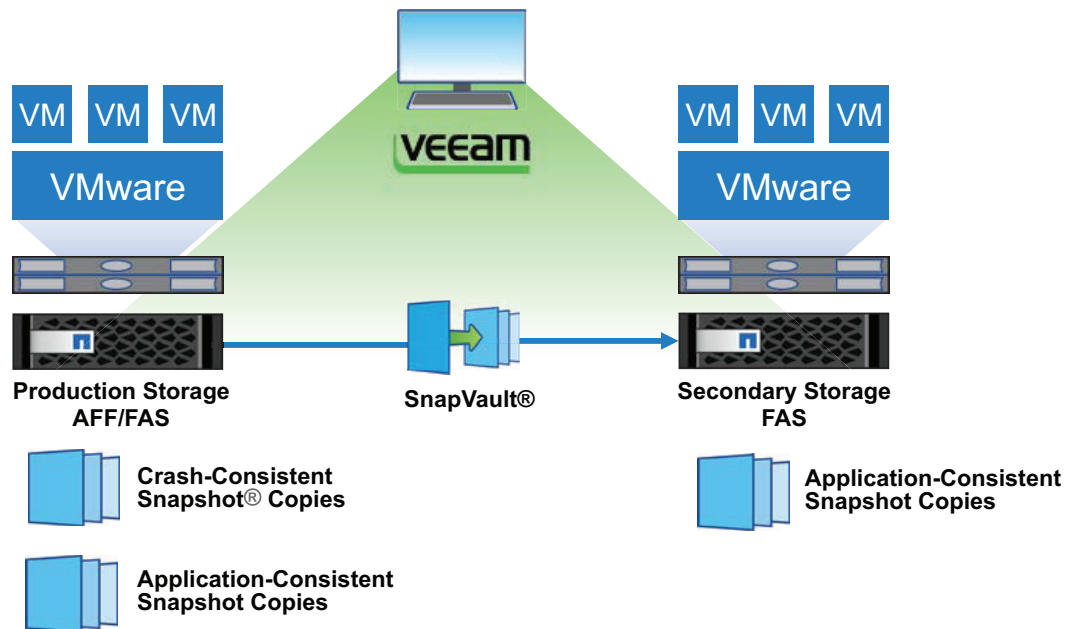
- Rapid, granular recovery of application items
- Protection of NetApp FAS or All Flash FAS storage

NetApp Solutions

- NetApp FAS or All Flash FAS primary, with FAS secondary leveraging SnapVault for array-based backup
- Fast, efficient block-level data replication, built on NetApp Snapshot technology; SnapVault offers “incremental forever” backup and recovery, with native data format of secondary copies to enable multi-use for testing and development, analytics, and reporting.

Veeam Solutions

- Veeam simplifies management for virtualized environments with Snapshot and SnapVault integration
- Veeam delivers easy, fast recovery of both VM and application items from both crash-consistent and application-consistent NetApp Snapshot copies



Unified Replication

SnapMirror for DR and Backup;

Veeam On-Demand Sandbox™ for Storage Snapshots

Customer Benefits

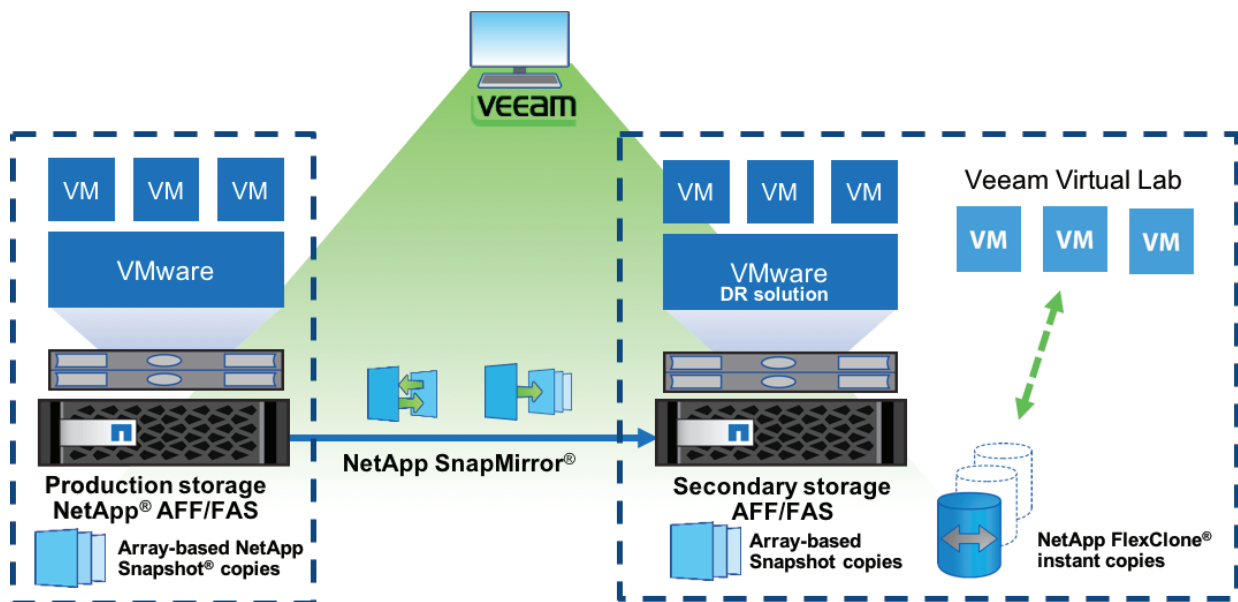
- Reduce cost and increase service-levels by using a single remote copy for backup and DR

NetApp Solutions

- NetApp FAS or All Flash FAS primary, with FAS or AFF secondary leveraging a single SnapMirror target for array-based DR and backup
- Unified replication with SnapMirror offers a high-performance and efficient array-based data replication solution with network compression and deduplication; native data format means that customers can leverage secondary storage for analytics, testing and development, and reporting

Veeam Solutions

- Veeam simplifies management for virtualized environments with Snapshot and SnapMirror integration
- With Veeam On-Demand Sandbox, customers leverage existing backups or Snapshot copies (primary, SnapMirror) to quickly spin up an isolated, exact, near-real-time copy of your production environment for testing and development



Unified Replication Plus Cloud Backup

SnapMirror for DR and Backup plus AltaVault

Customer Benefits

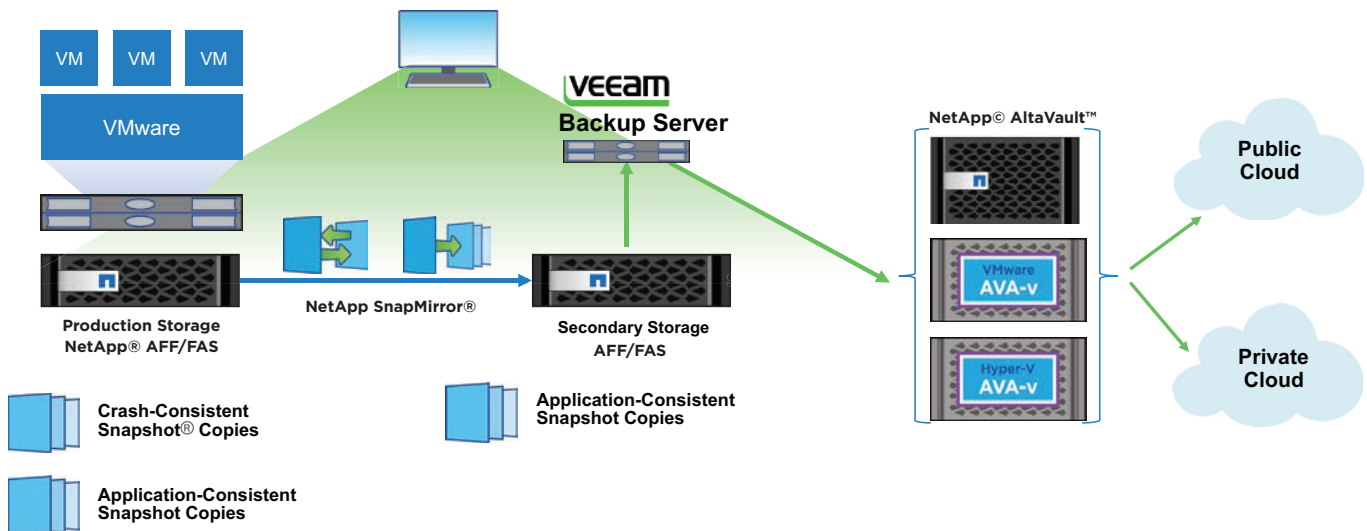
- High-service-level backup and DR solution with backup and/or archiving to the cloud

NetApp Solutions

- FAS or All Flash FAS for primary storage and FAS or AFF for backup or DR target; AltaVault technology is added for cloud-integrated backup, recovery, and archiving from the secondary FAS or All Flash FAS
- Unified replication with SnapMirror offers a high-performance and efficient array-based data replication solution with network compression and deduplication; native data format means that customers can leverage secondary storage for analytics, testing and development, and reporting

Veeam Solutions

- Veeam provides backup replication to AltaVault secondary storage
- The flexibility of the backup architecture allows you to back up to AltaVault from a primary or secondary location



Cloud-Integrated Backup

Backup, Recovery, and Archiving with AltaVault

Customer Benefits

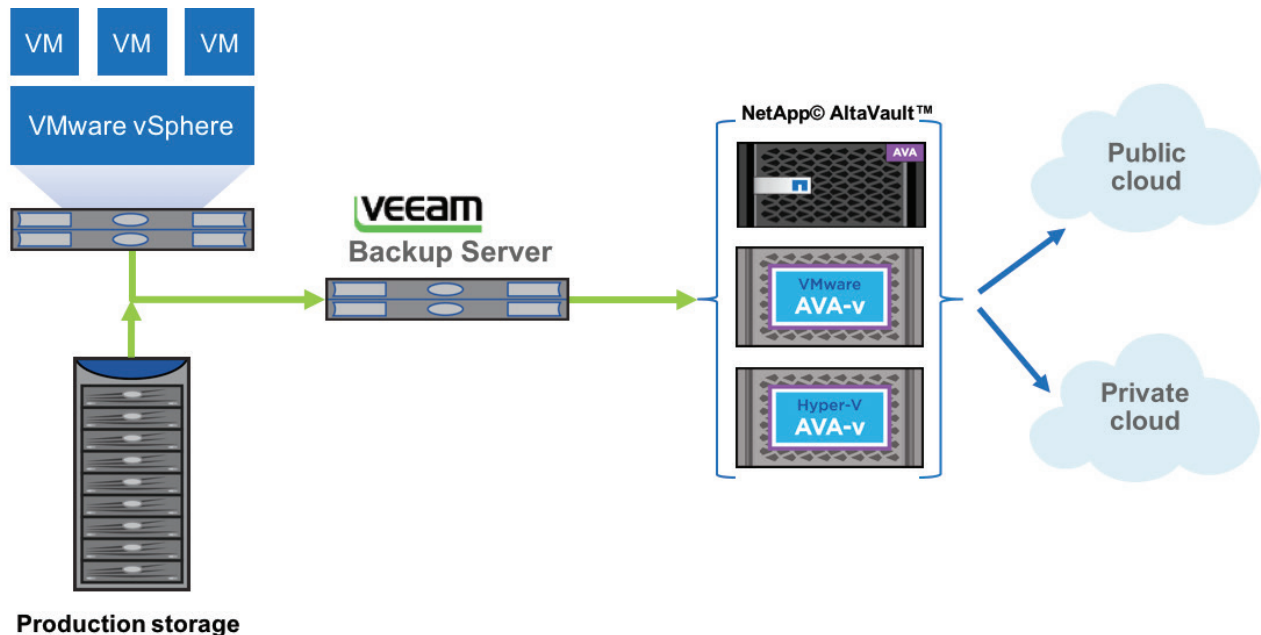
- Upgrade backup solution to replace tape with cloud-integrated backup and archiving.

NetApp Solutions

- Any storage to AltaVault as a backup target. AltaVault offers superior efficiency and ironclad security on an open platform. Inline deduplication and compression coupled with encryption shrink and protect data, before rapidly streaming that data to the cloud.

Veeam Solutions

- Veeam provides a management plane for backup to the cloud and local restore from an AltaVault local cache or the cloud.
- Veeam integrates with AltaVault to provide local backup copies for both VM and item-level recovery in a hybrid cloud environment. AltaVault manages and moves backup and archived data to lower-cost, cloud-based storage compared with tape. The Veeam interface is used to recover the exact data needed from AltaVault, which could reside either on or off the premises.



Heterogeneous Backup

On the Premises with NetApp E-Series

Customer Benefits

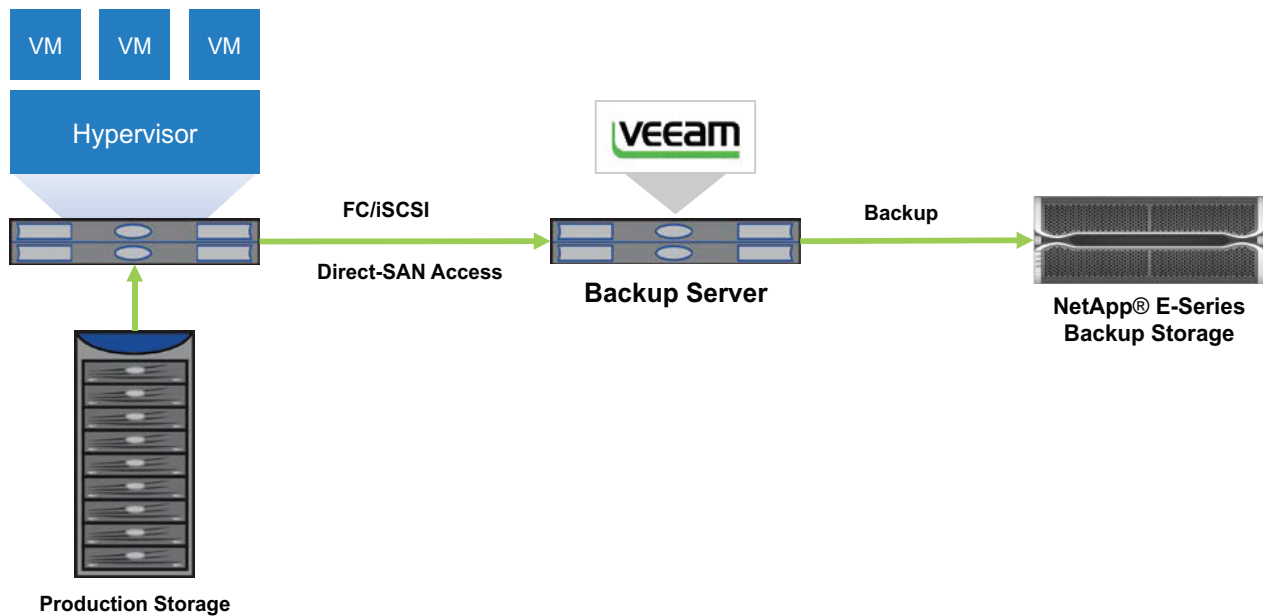
- Upgrade your backup solution for virtual environments
- Reduce dependency on tape backup

NetApp Solutions

- Any storage to E-Series as a backup target
- E-Series offers a high-density disk target with very high bandwidth, optimal for disk-to-disk backup solutions

Veeam Solutions

- Veeam delivers a management plane and data movement engine for backup and recovery
- Veeam simplifies orchestration of backups to on-site or off-site disk-to-disk solutions to facilitate easy tape replacement, fast recovery times, and enterprise management



Glossary

NetApp Products

NetApp® All Flash FAS (AFF) One of the all-flash arrays in the NetApp portfolio that deliver high performance at consistent low latency. All Flash FAS has only solid-state drives (SSDs) attached and runs the NetApp ONTAP® data management software. The architecture is similar to FAS systems.

NetApp AltaVault™ A cloud-integrated backup appliance. It integrates cloud storage as a low-cost storage tier for backup and archived data, with a focus mainly on long-term storage. Products integrate with existing backup applications for both data in flight and data at rest, with functions such as deduplication and security encryption.

NetApp cluster A functionality of ONTAP that introduces massive scalability and nondisruptive operations. With ONTAP, two or more controllers (nodes) operate as one shared resource pool or storage cluster. The storage cluster can be expanded, contracted, and subdivided nondisruptively into secure partitions, called NetApp storage virtual machines.

NetApp E-Series NetApp high-performance SAN storage with low latency, high availability, and high bandwidth.

NetApp FAS NetApp storage products that run ONTAP that receive data from and send data to native disk shelves. Sometimes referred to as storage appliances, storage systems, or systems. FAS stands for fabric-attached storage.

NetApp FlexClone® Software technology that allows instant replication of data files, LUNs, and volumes without requiring additional storage space. Each cloned file, LUN, or volume is a virtual read/write copy of the original data.

NetApp ONTAP The NetApp software product that runs on FAS and All Flash FAS systems. With its optimizations and leading data management capabilities, it delivers high performance for flash, agility for changing business requirements, and flexibility for private, public, and hybrid cloud deployment options.

NetApp SnapMirror® Data replication technology that provides backup and disaster recovery protection and simplifies the management of data replication. SnapMirror performs automated file system replication of a volume onto a separate disk or storage system.

NetApp Snapshot® A Snapshot copy is a point-in-time file system copy with no performance impact and minimal storage consumption. Snapshot copies protect against accidental deletions or modifications of files without duplicating file contents. Snapshot technology is the underlying basis for NetApp SnapRestore®, SnapVault®, SnapMirror technologies.

NetApp SnapVault Part of the NetApp Integrated Data Protection portfolio, SnapVault provides efficient disk-to-disk backup by copying only the data blocks that have changed since the last backup, instead of copying entire files.

Glossary

Veeam Products

Veeam Availability Suite™ combines the backup, restore, and replication capabilities of Veeam Backup & Replication™ with the monitoring, reporting, and capacity planning functionality of Veeam ONE™.

Veeam Backup & Replication is an easy-to-use and affordable backup and availability solution. It provides fast, flexible, and reliable recovery of virtualized applications and data, bringing VM backup and replication together in a single solution for VMware vSphere and Microsoft Hyper-V virtual environments.

Veeam Backup from Storage Snapshots is a Veeam Backup & Replication capability that creates true backups and replicas from NetApp® SnapVault® and SnapMirror® software, with little to no impact to a production environment.

Veeam Explorer™ for Storage Snapshots is a Veeam Backup & Replication capability for granular recovery for VMware vSphere VMs directly from NetApp Snapshot® copies. Veeam Explorer also provides granular, item-level recovery for Microsoft Active Directory, Exchange, SharePoint, SQL Server, and Oracle databases.

Veeam On-Demand Sandbox for Storage Snapshots

is a Veeam Backup & Replication capability that leverages primary storage snapshots to create a complete, isolated copy of a production environment in just a few clicks by running copies of production VMs directly from storage snapshots.

Veeam ONE provides monitoring, reporting, and capacity planning tools for the Veeam backup infrastructure and VMware vSphere and Microsoft Hyper-V virtual environments. It is available as a standalone product or as part of the Veeam Availability Suite.



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