



veeam

Solution Brief  
BACKUP

# High Performance and Scalable Veeam Ready iSCSI SAN Storage Solutions

## Challenge Summary

Veeam's Backup and Replication repository supports wide variety of workloads from virtual machines and physical machines to databases and network attached storage. The Veeam Backup software is deployed in a variety of configurations and capacities and is deployed in a range of scenarios from Remote Office / Branch Office to the enterprise — making efficient, high-performance, flexible storage systems critical.

## Benefits Summary

- Certified for Veeam's Windows Server
- Certified for VMware ESXi
- Seagate ADAPT makes it easy to expand virtual volumes
- Data Protection with Seagate ADAPT or RAID
- Fast rebuild times with Seagate ADAPT
- Seagate ADAPT supports much larger volumes, not limited like RAID
- Seagate ADAPT protects against double disk failures and provides automatic spares
- Efficient, dense storage systems requiring lower power and less rack space
- Low-cost storage platform to build upon for Windows Server
- High performance, scalability, and built-in data protection and built-in data protection

Veeam's popular Backup and Replication repository combined with Seagate's dense storage systems create efficient, flexible backup storage solutions.

Seagate® storage systems have been certified as primary data storage solutions for Windows Servers, providing an efficient, low-cost platform that the Veeam Backup Repository can build upon in the back end. These systems ensure high performance, scalability, and built-in protection.

## The Need for Powerful Enterprise Storage

Veeam, one of the most popular backup applications on the market today, features several components which make up the Veeam Backup and Replication solution and Availability Suite—and many run on the Microsoft Windows Server operating system. One component in particular, the

Veeam Backup Repository, is responsible for keeping all of Veeam's backup data. Therefore, it requires efficient, flexible, high-performance data storage to support a variety of scenarios, capacity demands, and performance needs.

## The Seagate Solution

Seagate offers a variety of SAN (storage area network) and DAS (direct-attached storage) enterprise storage systems that are ideal solutions for the Veeam Backup Repository's primary and archive storage, delivering high performance,

scalability, and built-in data protection. Available from selected distributors worldwide, they feature a variety of pre-integrated Seagate's enterprise nearline capacity-optimized hard drives and high-performance SSDs.





**The Seagate Exos® X** system series offers families of 2U and 5U form-factor chassis using one of Seagate's hardware RAID controllers, enabling Fibre Channel or iSCSI SAN solutions. These capacity-optimized disk and hybrid disk/flash SAN arrays enable up to 84 drives and 1.3PB of raw data storage with integrated Seagate hardware-based data protection using RAID and Seagate ADAPT erasure coding technology.



**The Seagate Exos E** system series offers families of 2U and 5U form-factor chassis with high-performance interfaces to enable DAS for JBOD (just a bunch of disks) server-attached solutions. These disk and hybrid disk/flash DAS JBODs in 2U and 5U form factors support up to 84 drives and 1.3PB of raw data storage with a 12Gb/s SAS interface for up to 28.8GB/s throughput in a dual controller configuration.



**The Seagate Nytro X** features SAN controllers (3005, 4005, and 5005) that use Seagate's proven RAID and erasure coding ASICs and Seagate ADAPT (Autonomic Distributed Allocation Protection Technology) next-gen erasure coding technology to enable rebuilds that are up to 95% faster than traditional solutions. As capacity grows, rebuild times can be cut from many hours or days to minutes using ADAPT. These controllers also provide thin provisioning, snapshots, asynchronous replication, and allow capacity expansion beyond the chassis by adding Seagate's optional expansion disk arrays (EBODs).



**The Seagate Nytro® E 2U24** system is a high-performance SAS-based all-flash array that supports up to 24 SSDs and provides throughput of 28.8GB/s with dual 12Gb/s SAS controllers for maximum throughput and expansion to up to 16 enclosures and up to 384 drives.

All of Seagate's enterprise storage systems are built for demanding data centers and include active-active redundant components (hot-standby spare) with automatic failover and redundant hot-swap of key components. Enterprise system management features ensure they're simple to maintain while

Seagate's patented AcousticShield™ technology in certain models enables maximum performance from every drive. Additionally, they've been certified by VMware as primary data storage solutions for their popular ESXi server software, offering an efficient, low-cost storage platform to build upon.



## Seagate & Veeam Storage Solution Benefits

All system components—enclosure, controller, firmware, and drives—are developed and optimized by Seagate engineers to work together seamlessly. This reduces support calls and eliminates

technical learning curves. Our modular architecture makes components interchangeable between systems, and upgrades are simple due to common FRUs, PCMs, controllers, and software.

- High-performance, flexible connectivity options for any VMware environment with iSCSI
- High-density solutions built for modern data center or server closet
- Unfettered data access with dual-redundant controllers capable of achieving up to 7GB/s sequential read, 5.5GB/s sequential write performance
- Seamless data center scalability with single enclosures that host up to 1.3PB of data
- Thin provisioning saves on storage costs by dedicating storage only when needed
- Virtual storage pools streamline management
- Improved performance for read-intensive workloads while minimizing SSD cost
- SED- and FIPS-capable devices extend data security with array-based data-at-rest encryption
- Auto tiering (with optional software bundle) accelerates performance with SSDs while providing the cost and capacity benefits of HDD
- Snapshots (with optional software bundle) reduces RPO and RTO with efficient, block-based hardware snapshots
- Asynchronous replication (with optional software bundle) replicates data between arrays for business continuity and disaster recovery
- Easy setup, maintenance, and expansion

### Why Seagate ADAPT Makes a Difference with Veeam

Seagate ADAPT data protection, a form of distributed parity RAID, enables faster-than-ever drive rebuilding.

- Automatic rebalancing of stripe health (REFT) allows more drive failure protection
- Avoids idle spare drives (all drives provide performance and spare capacity is distributed evenly)
- Allows mixed drive sizes and easy capacity expansion
- Supports from 12 up to 128 drives per disk group
- Works with SSD and HDD groups



## Seagate Veeam Ready Systems

Seagate systems are Veeam Ready and have been certified with both Windows Server and VMware ESXi, which are very often used together with Veeam.

**Windows Server versions tested with Seagate systems:** 2008, 2008 R2, 2012, 2012 R2, 2016, 2019

**VMware ESXi versions tested and certified with Seagate systems:** 7.0, 6.7 U3, 6.7 U2, 6.7 U1, 6.7, 6.5 U3, 6.5 U2, 6.5 U1, 6.5, 6.0 U3, 6.0 U2, 6.0 U1, 6.0, 5.5 U3, 5.5 U2, 5.5 U1, 5.5

For the most up-to-date list of supported Seagate models, visit the Microsoft Windows Server Catalog:

<https://www.windowsservercatalog.com/results.aspx?&text=seagate&bCatID=1511&cpID=24239>

## In Conclusion

Seagate systems provide high-performance, scalable storage to Windows Servers, ensuring the Veeam Backup Repository can do its job: storing

important data efficiently and securely. Seagate ADAPT provides high performing large volumes with fast rebuild times and protection against double disk failures.



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