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# Scalable, Secure Object Storage Solutions for Veeam 12



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# Agenda

- Malware Scenarios & Protections
- Importance of Immutability
- OSNexus+Seagate Veeam Ready Object Storage Solutions
- Optimizing Object Storage for Veeam
- Dynamic Scaling & Tiering
- Using Double-Layer EC for Ultra-Durability

# Malware Scenarios Overview

## Scenario 1

Sleeping malware



## Scenario 2

Malware encrypting data but not deleting itself



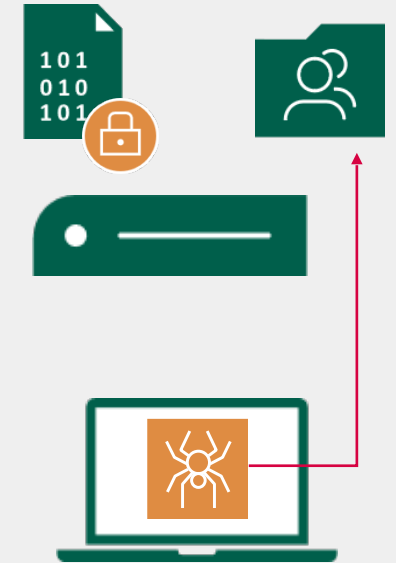
## Scenario 3

Malware encrypting data and deleting itself or only in memory



## Scenario 4

Remote encryption via SMB / NFS



# Malware Detection Overview

## Secure Restore

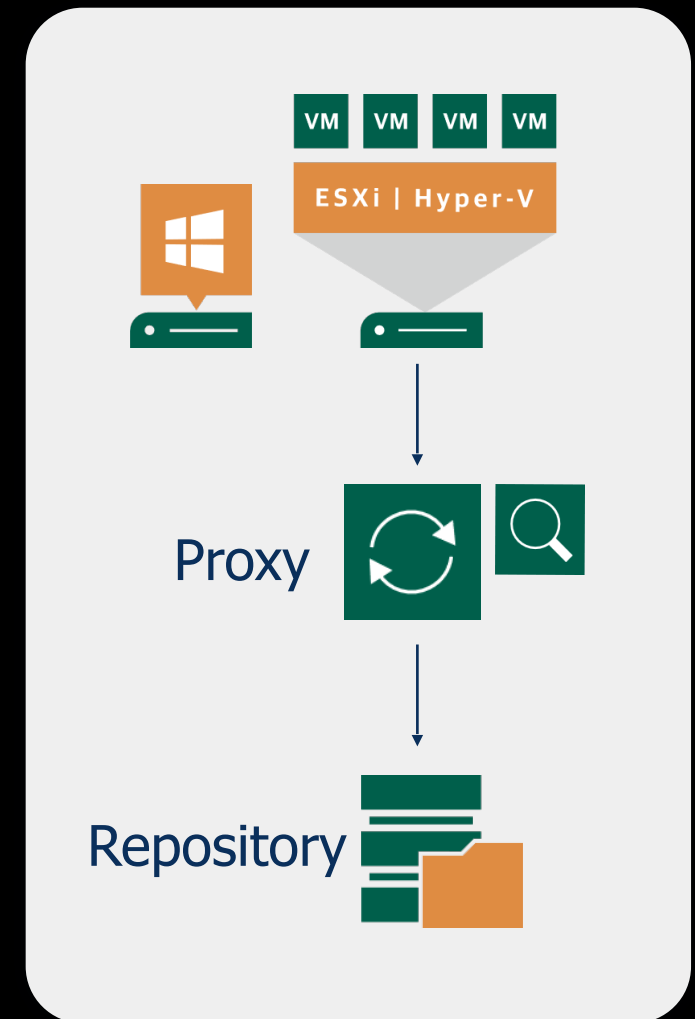
- Anti-virus scan during restore
- Backed by security vendor

## On-demand and automatic anti-virus & YARA scans

- Finds malware binaries via guest-index scan

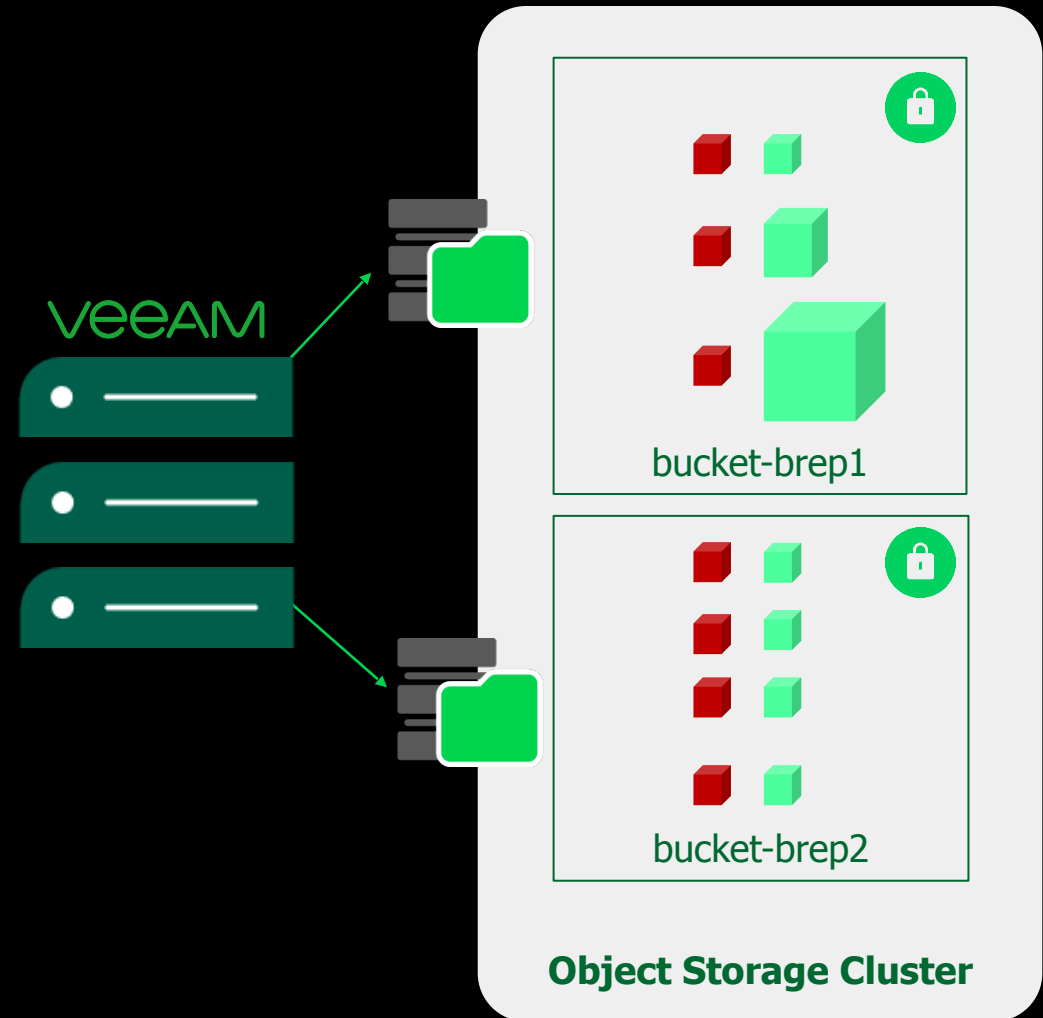
## Detection of malware encrypted data

- AI / ML model performing inline entropy analysis
- Inline text content analysis
- Compares file system indexes after backup finished



# Importance of Immutability

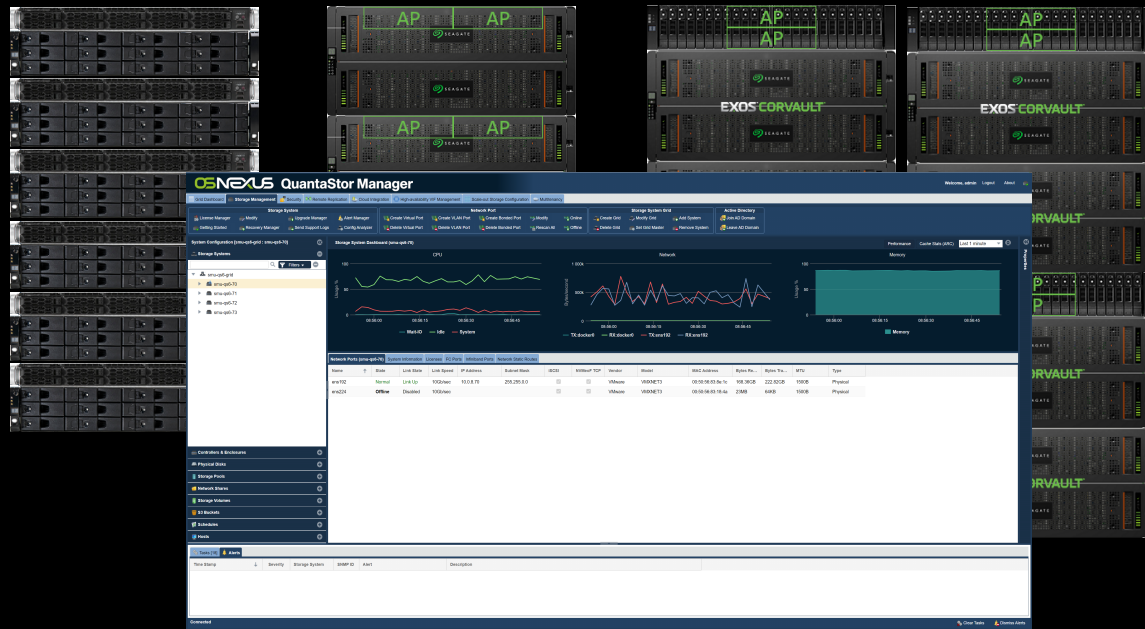
- Strong protections and simplified recovery from malware attacks.
- Compliance & Governance modes prevent deletion of objects for a set period of time.
- Ransomware attacks will leave 'delete markers' in the object storage which can be easily removed.
- Strongest protection comes from Compliance mode, which has no 'admin' override allowing deletion of data.
- Test your retention policies using Governance mode first so that test data can still be removed.



# Veeam Backup Solutions for any Scale

OSNexus + Seagate  
Veeam Optimized Object Storage Solutions

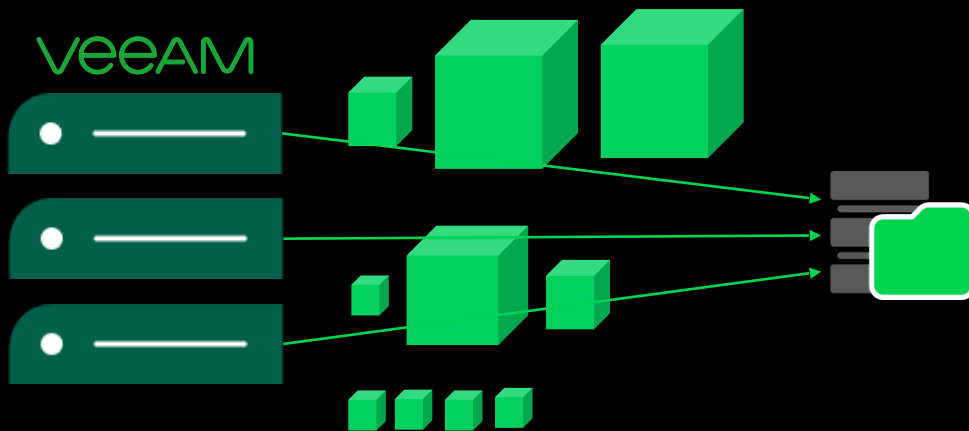
Cost Effective  
Cloud Object Storage



- Veeam Ready for Object Storage w/ Immutability
- Veeam SOSAPI Integrated

# Object Storage Optimized for Veeam

- QuantaStor dynamically routes small Veeam objects to flash storage
- Large objects are routed to erasure coded (EC) storage for efficiency



# Eliminate Complex Data Migrations



- Data rebalances across the cluster automatically
- Expand cluster by adding media and/or additional storage system with zero downtime
- Shrink cluster to phase-out old hardware and media with zero downtime

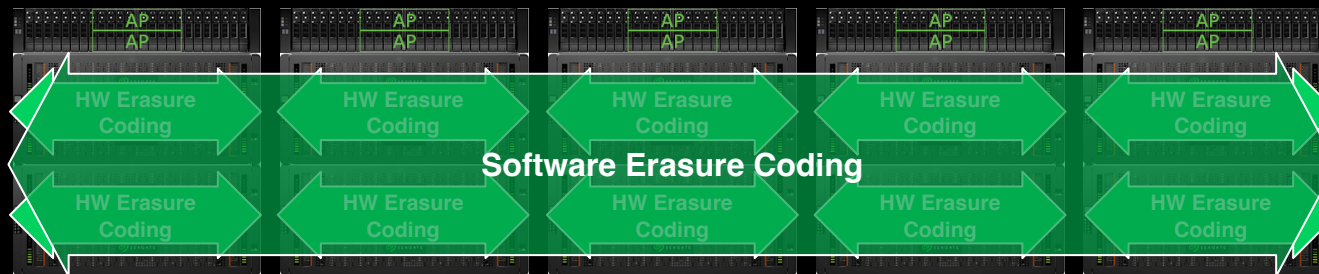
# Double-Layer EC for Ultra-High Durability

## Industry Leading Durability

- Hardware Erasure Coding (Seagate ADAPT) provides 99.9999% durability
- Software Erasure Coding (Ceph based) provides 99.9999% durability
- Combined they provide 99.999999999999% (14 nines) of durability

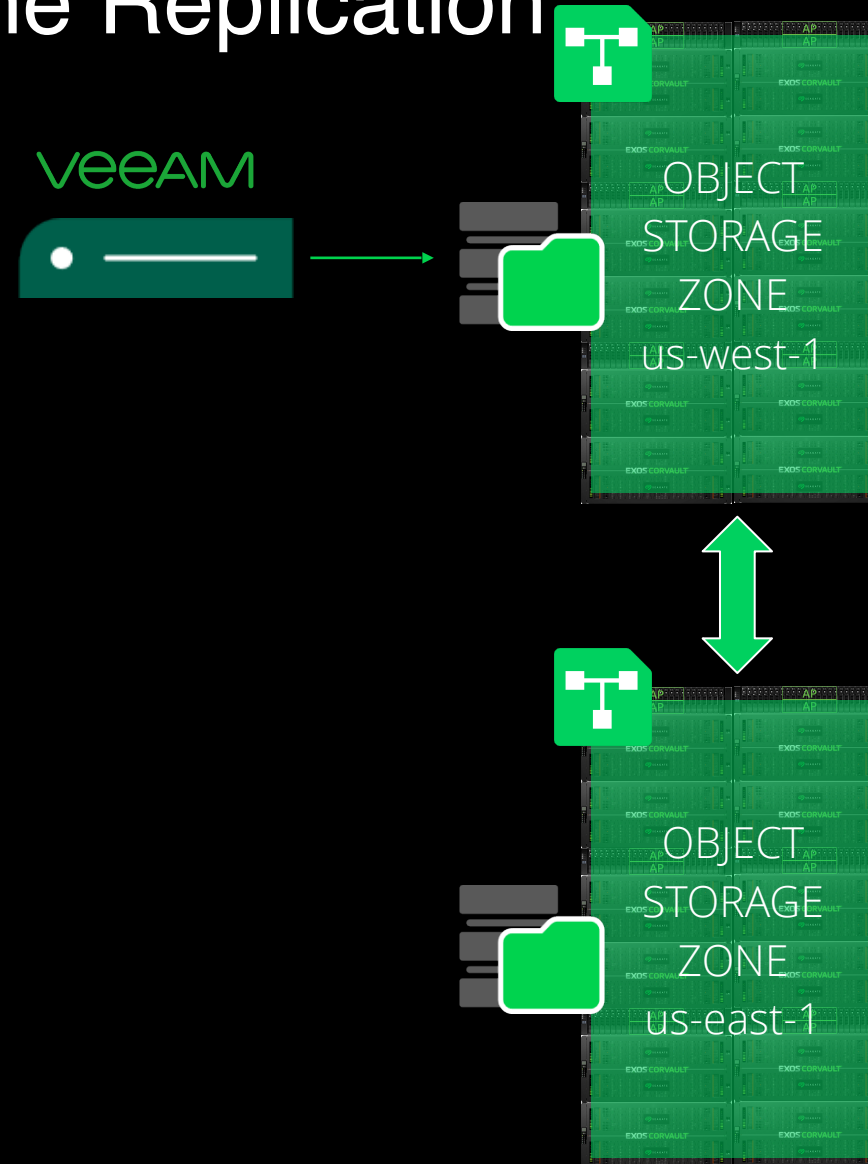
## Simplified Maintenance

- Drive rebuilds are localized to the Seagate Corvault units, no network impact
- Can handle multiple drive failures in every node simultaneously with no downtime



# Multisite Object Storage Zone Replication

- Easily fail-over backups to a second site.
- Objects bi-directionally replicate between zones.
- Supports asymmetrical hardware and cluster designs



# Q&A

## Scale-Out Solution Designer

<https://link.osnexus.com/stx-scale-out>

## More Information

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<https://www.seagate.com/solutions/osnexus/>

<https://www.osnexus.com>

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