

# Speed, Scale, and Storage: Rethinking Data with vSAN

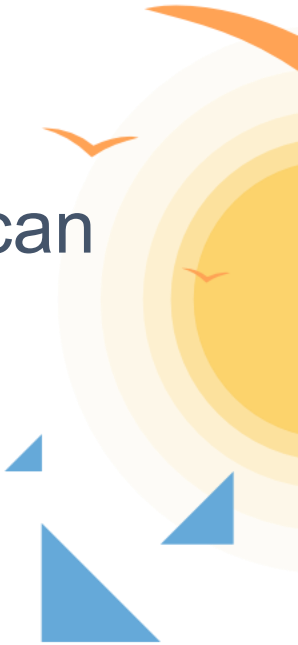
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Solution Engineer

Opatija, 9th September, 2026.

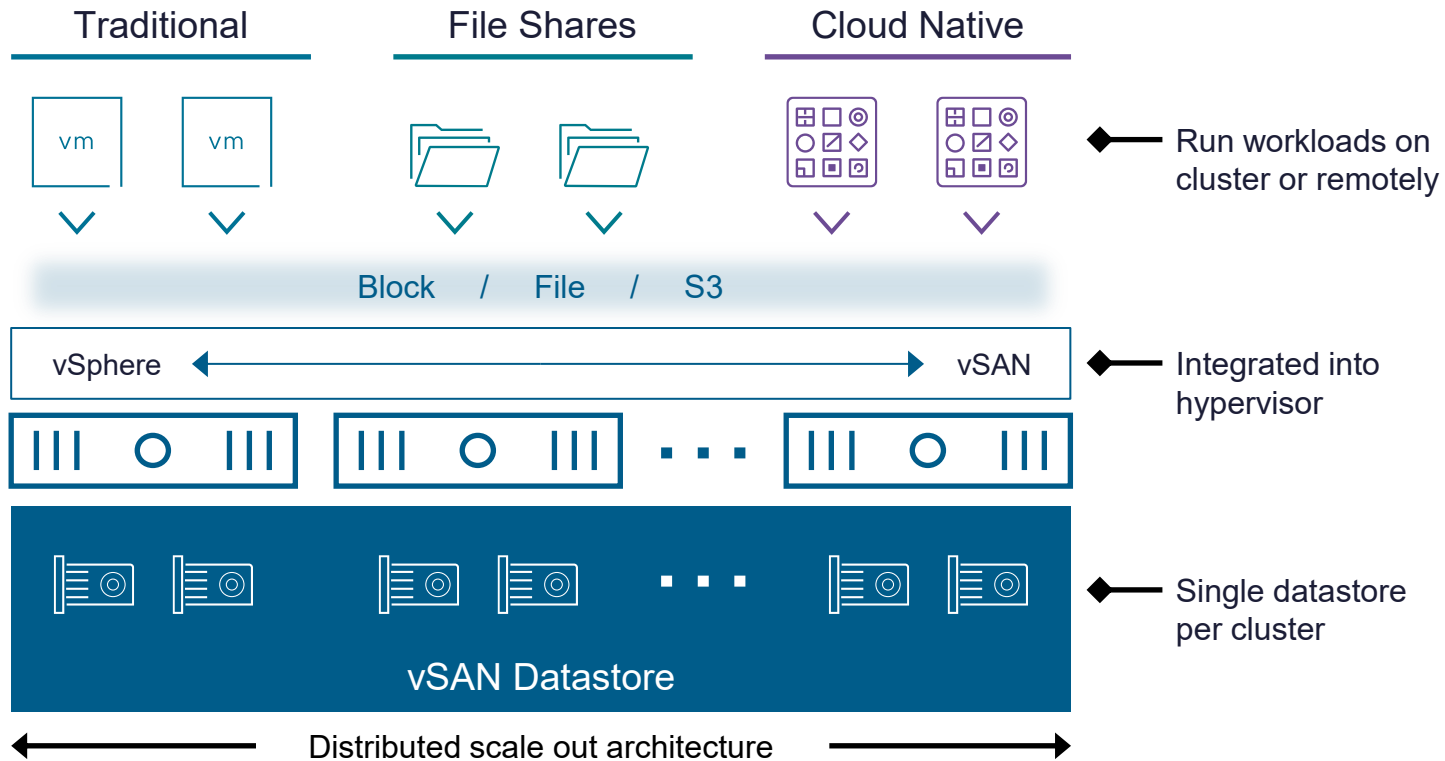


# Rethink data, but why?

- AI and data-intensive workloads are changing performance and capacity demands
- Cyber resilience has become a storage requirement
- Cost, power, and hybrid strategy are limiting how infrastructure can grow



# Speed, scale and storage with vSAN



**Aggregates storage** from hosts in a vSAN cluster, presenting it as a **single datastore**

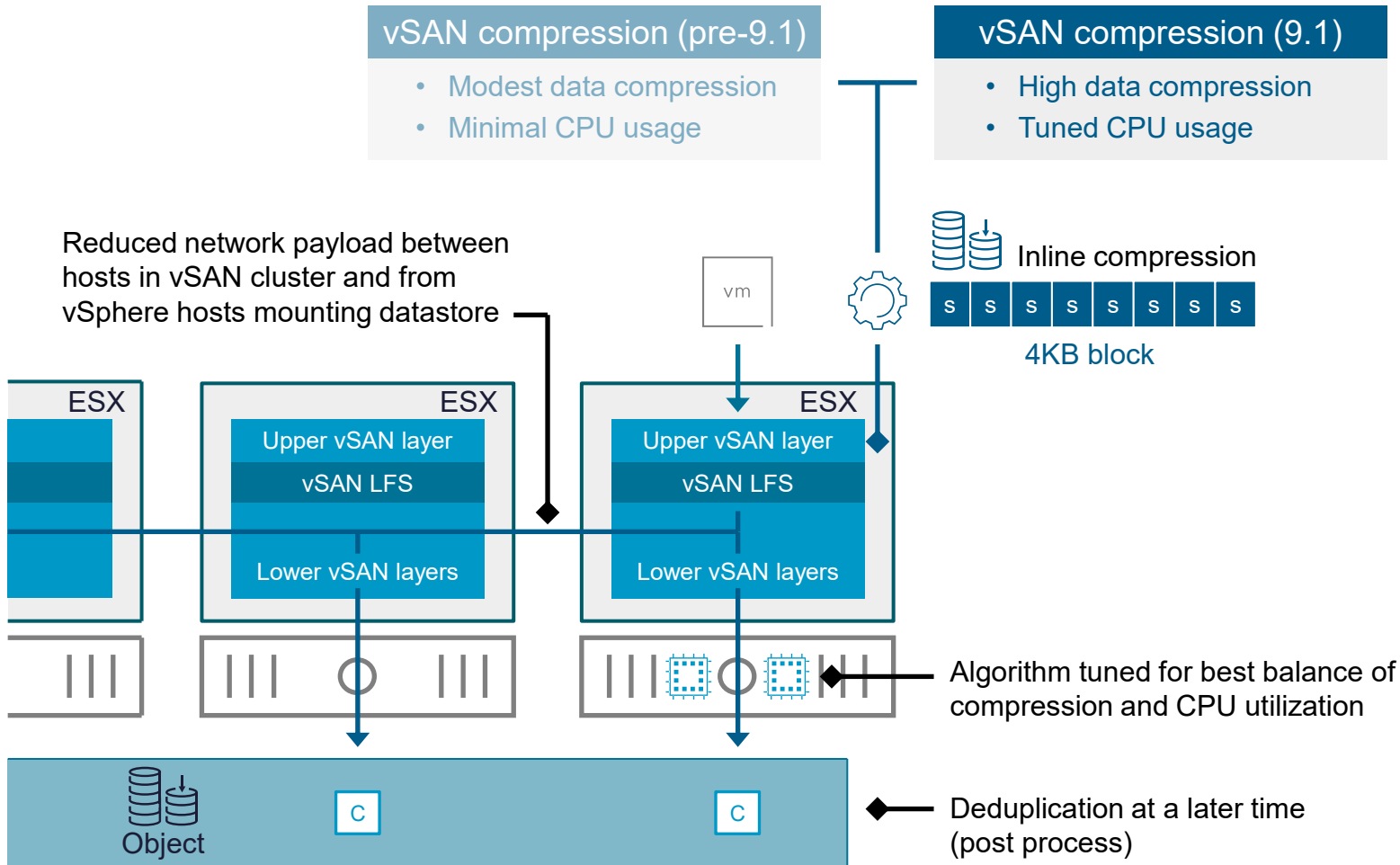
**Stores data resiliently** across hosts in cluster

- Maintain data availability under a variety of failures
- Automatic
- Self healing

**Fast, scalable and efficient** for supreme cost savings

- Integrated into hypervisor
- Eliminates need for traditional storage

# Speed, scale and storage with vSAN



**Reduces data storage** used while maintaining high performance

**Highly space efficient ZSTD** compression algorithm tuned for vSAN

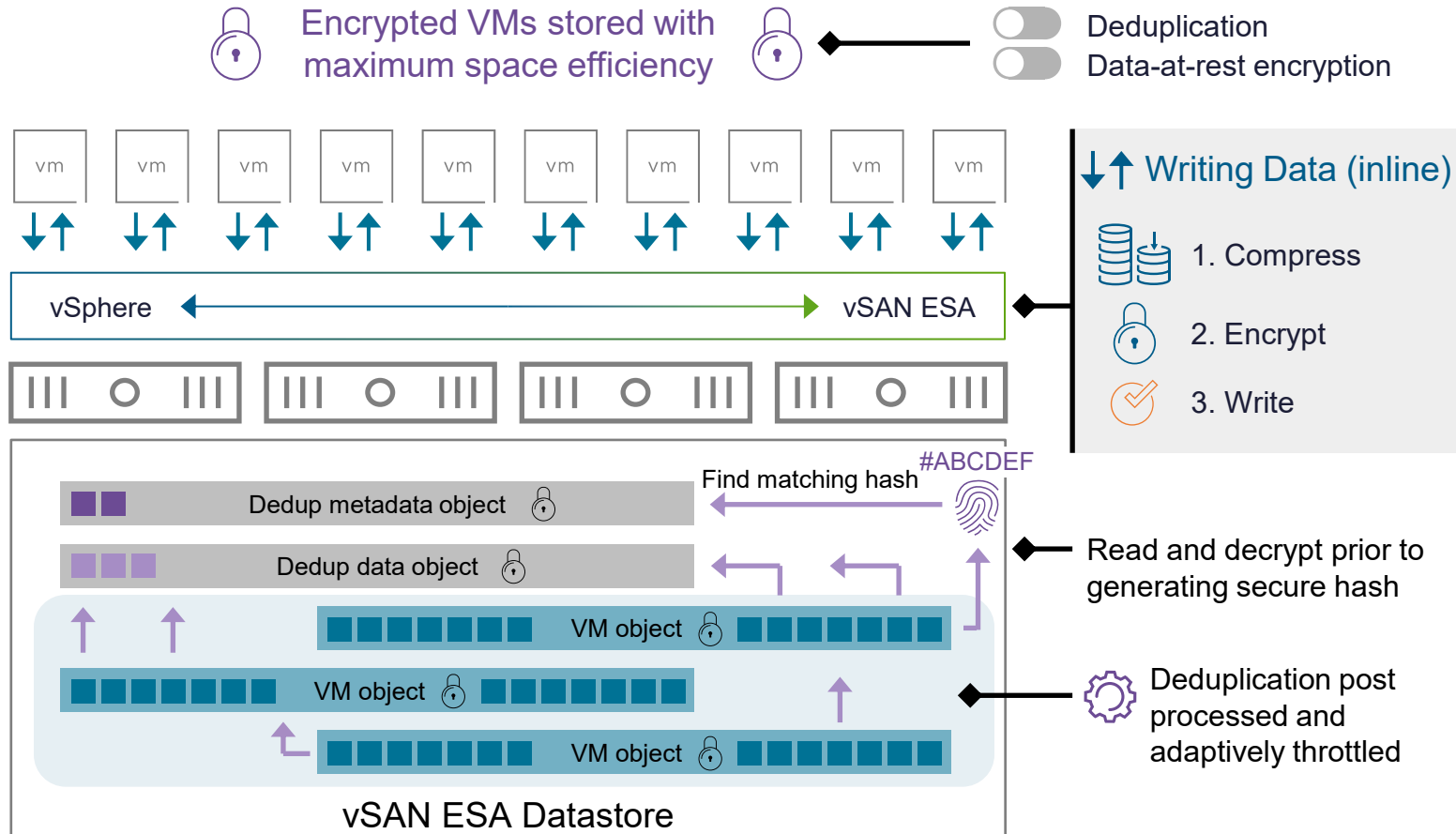
Ideal for workloads including:

- Databases
- VDI
- Backup data

Complements GA of **vSAN Global Deduplication** in vSAN for VCF 9.1

Compression is now an always-on feature of a cluster

# Speed, scale and storage with vSAN



## Run vSAN Data-at-Rest encryption on clusters with vSAN Global Deduplication

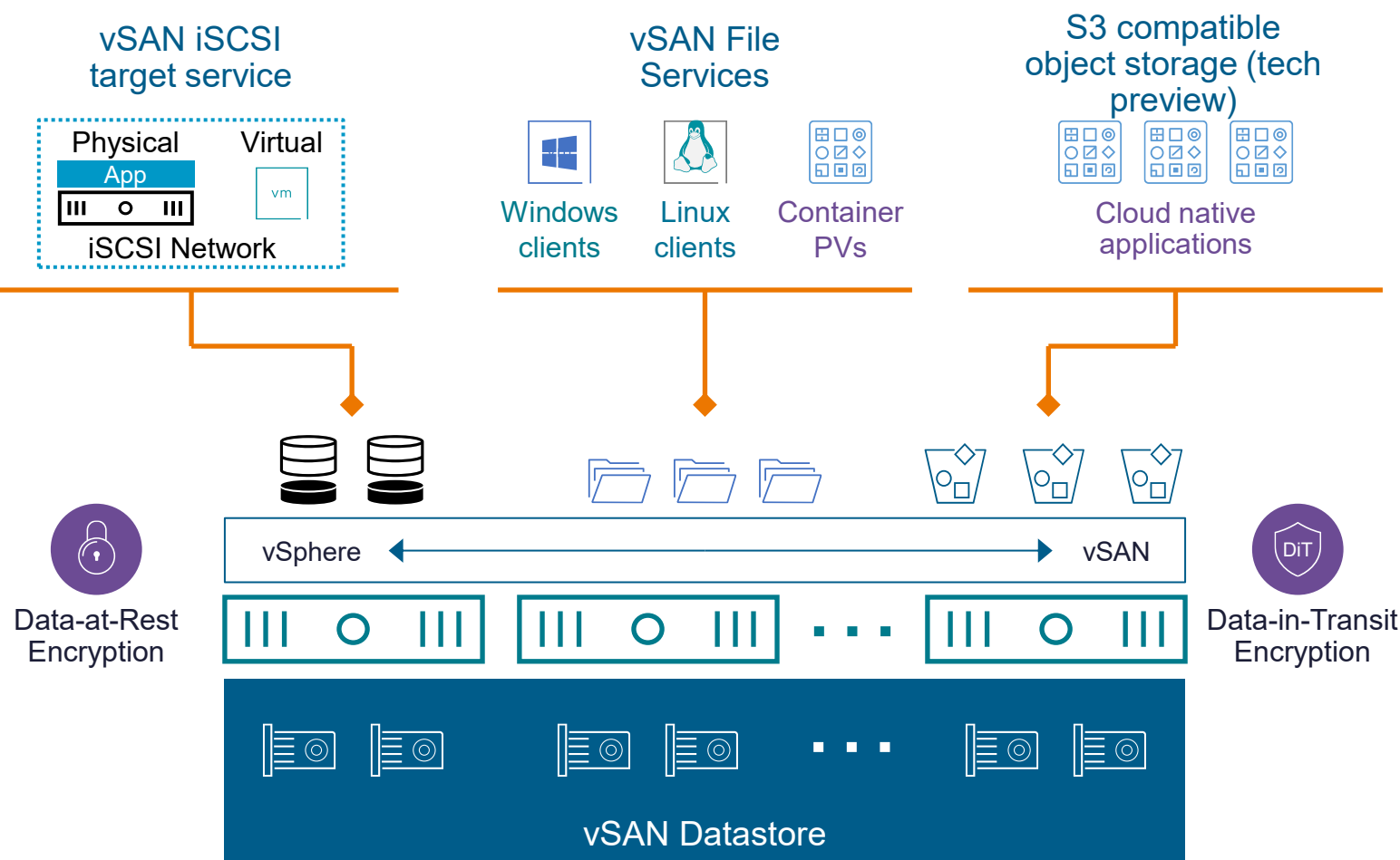
Encrypt data **without any negative impact** on data reduction ratios offered by vSAN

Easily enable using **cluster-based toggles**

New enhancements for **improved processing efficiency** and **durability** of deduplication

Deduplication now supports between 3 and 64 hosts

# Speed, scale and storage with vSAN



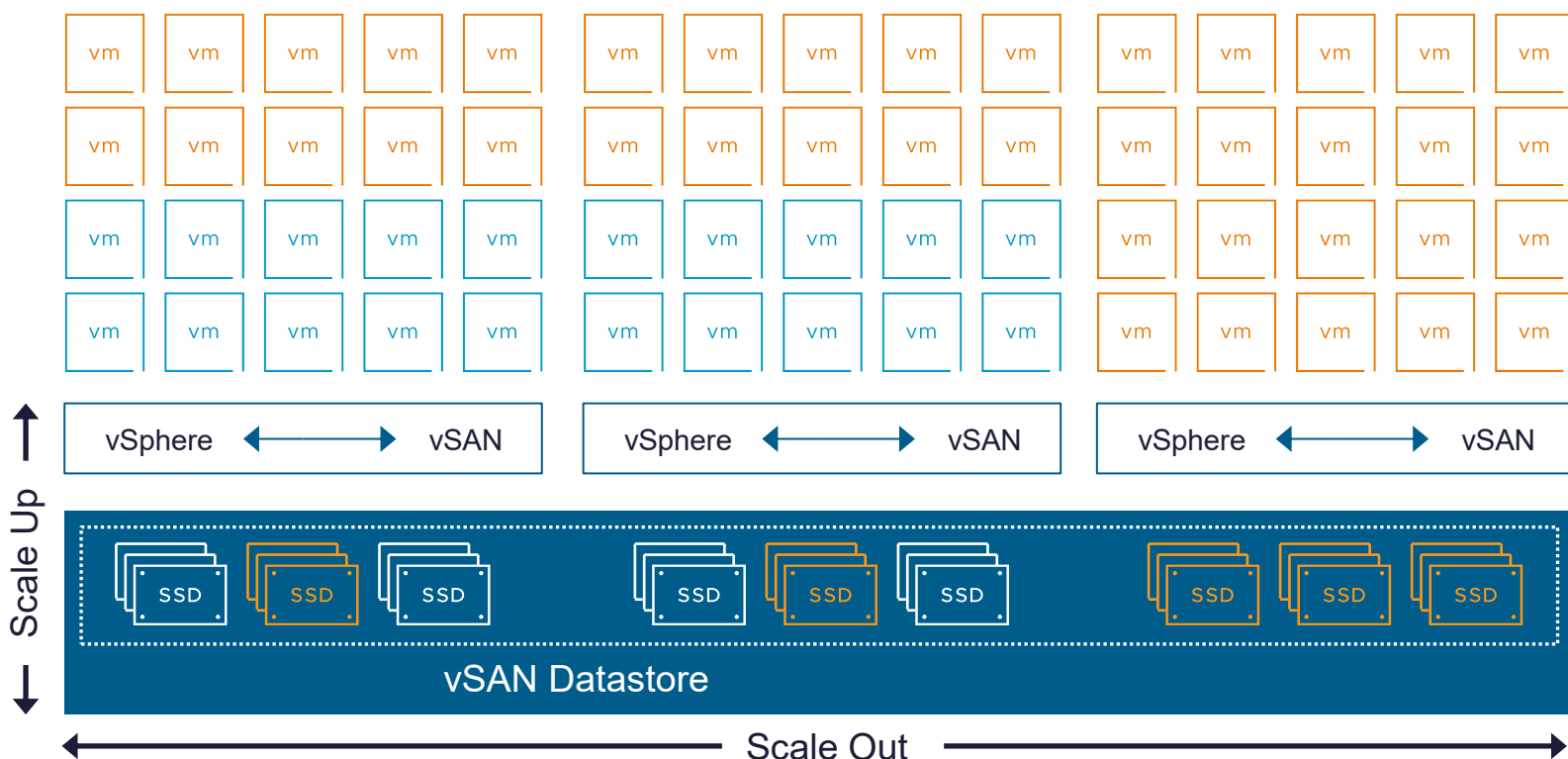
Extend vSAN **beyond native VM storage**

Enable/disable based on **organizational needs**

- SMB and NFS file services
- iSCSI block access for legacy workloads
- S3 compatible object storage (tech preview)

Provide FIPS validated **data-at-rest** and **data-in-transit encryption**

# Scale UP and OUT for maximum agility



Add capacity the way you want

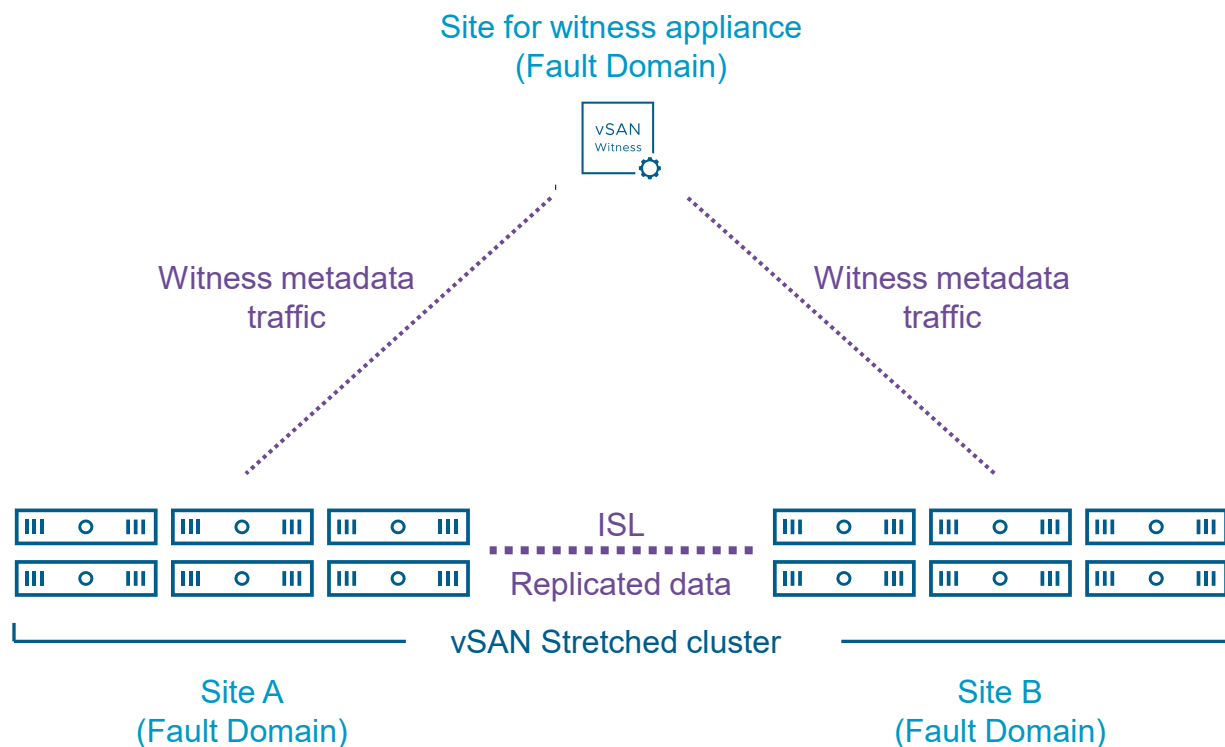
Scale **UP** by adding drives

Scale **OUT** by adding hosts

Agile, cost-effective cluster designs



# Stretch cluster (Active-Active DC) – easy with vSAN



vSAN stretched clusters are **comprised of:**

- 2 data sites
- 1 witness site – for witness host appliance

## Hosts

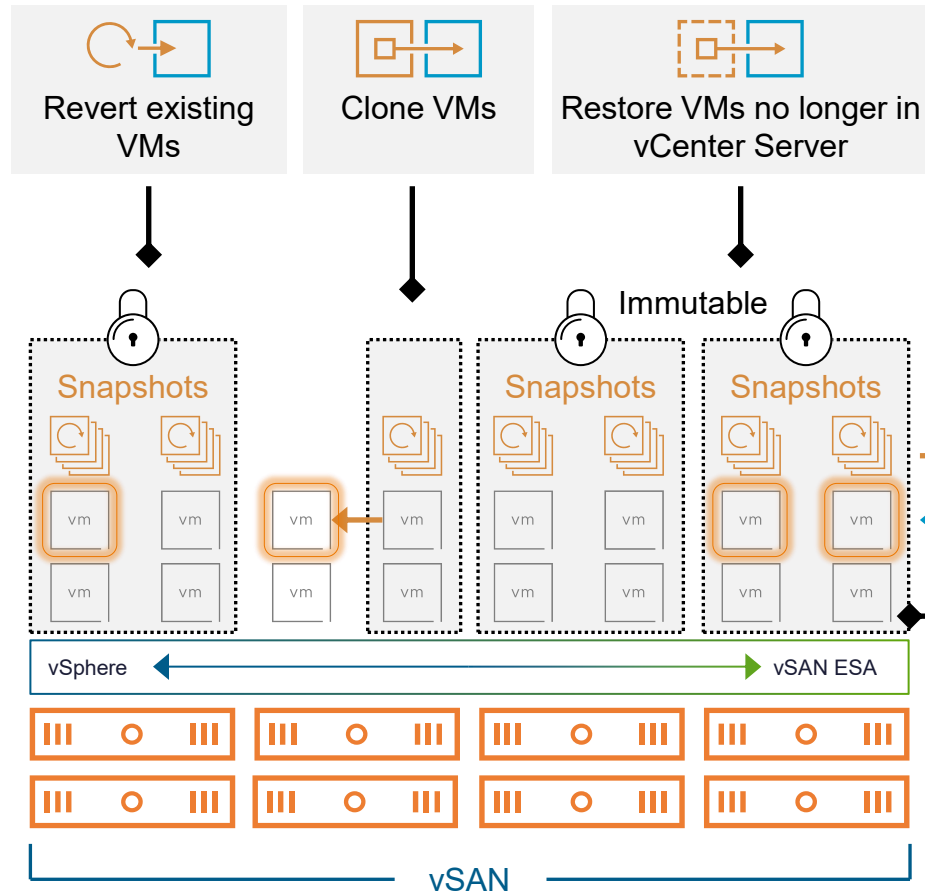
- Practical minimum of 3 hosts per data site
- Maximum of up to 20 hosts in each data site – 40 hosts per cluster

## Networking

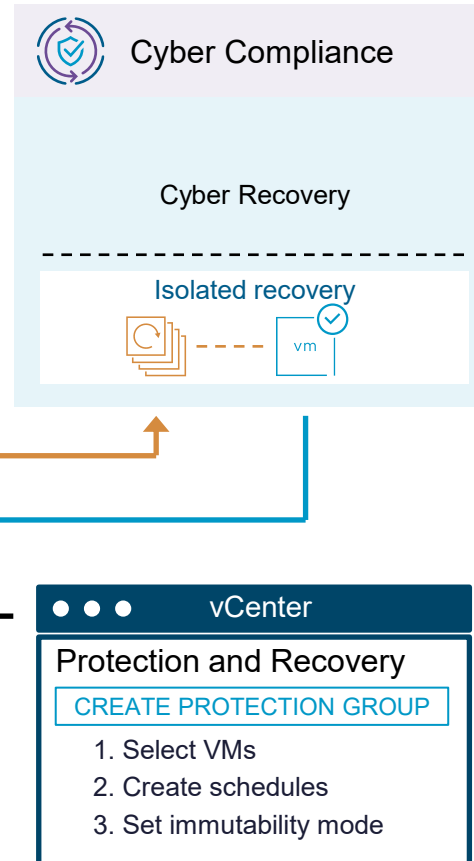
- 10Gbps and <5ms RTT between data sites
- 2Mbps and <200ms RTT between witness site and data sites

# Protect and Recover VMs against Accidental and Malicious Activities

## Local protection & uses



## Protection & recovery



Use vSAN ESA snapshots to provide **immutable protection**

Policy-based **protection groups**

- Group applications & VMs
- Define protection and retention

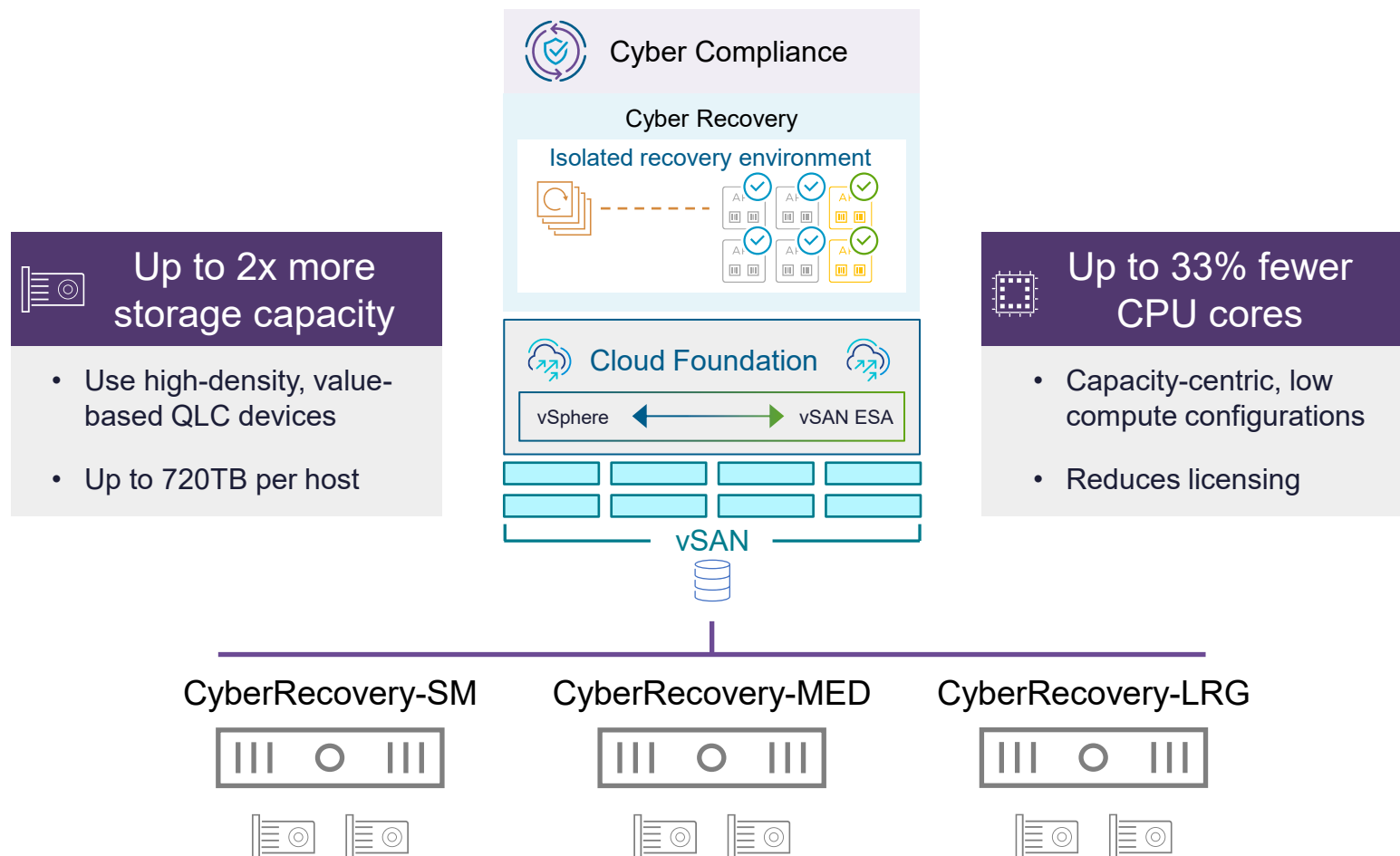
**New UI and scheduler**

Integrates with **VMware Live Cyber Recovery**

Supports **multiple use cases**

- Ransomware recovery
- Recover VMs from accidental deletion
- Clone VMs for operational agility

# Cost Efficient Storage Environments for Cyber Recovery



**New ReadyNodes** tailored specifically for **Cyber Recovery** environments

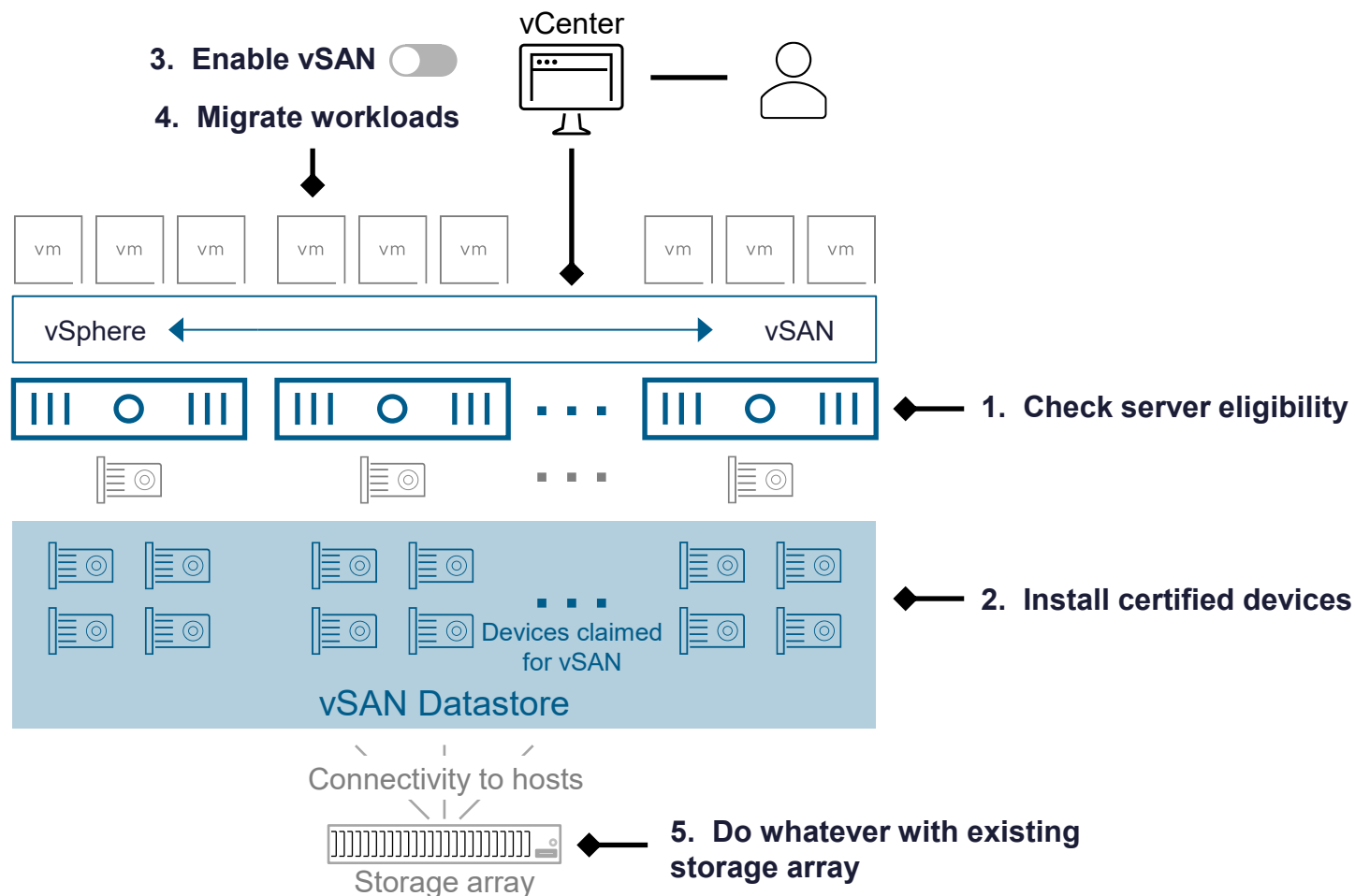
Efficient, cost-optimized configurations

- Value-based, high-density QLC storage devices
- Lower CPU minimums

Create a **secure recovery environment** for **ransomware protection** through VMware Advanced Cyber Compliance (ACC)

Deploy as an **HCI cluster** or **storage cluster** using built-in provisioning workflows

# Deploy vSAN without Purchasing New Servers



Take advantage of your **existing vSAN storage entitlements** with your VCF licensing

**Retrofit eligible servers** running vSphere with as little as additional certified storage devices\*

**Extend life of existing servers** during industry shortages of servers

Functionally equivalent to a vSAN ReadyNode, and **fully supported**

\* Some servers may not be eligible, or may need additional modifications to support NVMe devices

# Deploy vSAN without Purchasing New Servers

- A key objective of VCF 9 is hardware continuity – enable customers to modernize their cloud infrastructure, and part of that design is doing so without forcing unnecessary hardware refresh cycles.
- In short, if your infrastructure is running on supported vSphere or vSAN 8.x hardware today, it is highly likely to be eligible for VCF 9.
- VCF 9 BCG (<https://compatibilityguide.broadcom.com/>) listing now total 3404 server models

Product Release Version ☐ ^

Search

☒ ESXi 9.1

☒ ESXi 9.0

☐ ESXi 8.0 U3

☐ ESXi 8.0 U2

☐ ESXi 8.0 U1

☐ ESXi 8.0

3404 records

# Important – vSAN is part of VVF and VCF license – just use it!

| # | VVF Component                    | Metric Entitlement |
|---|----------------------------------|--------------------|
| 1 | vSphere                          | 1 Core             |
| 1 | Aria Suite Standard              | 1 Core             |
| 2 | vSAN                             | 0.25 TiB           |
| 3 | vCenter Server                   | 1 Instance         |
| 4 | vSphere Kubernetes Service (VKS) | 1 Core             |

| # | VCF Component | Metric Entitlement | Entitlement Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---|---------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | vSphere       | 1 Core             | VMware Tools is a suite of utilities and drivers that can be installed in a Guest Operating System to enhance the performance and functionality of a Guest Operating System when running in a Virtual Machine in conjunction with a vSphere hypervisor. Customer may not use VMware Tools with any other hypervisor. Customer may distribute the VMware Tools to third parties solely when installed in a Guest Operating System within a Virtual Machine. Customer is liable for compliance by those third parties with the terms and conditions of the Agreement. |
| 2 | vSAN          | 1 TiB              | Customer is entitled to 1 TiB of vSAN capacity for each Core licensed for VCF. vSAN can only be aggregated and utilized across Cores where the vSphere in VCF is deployed.                                                                                                                                                                                                                                                                                                                                                                                          |

# Rethink data with vSAN

- **Speed answers AI.** Storage must keep up with data-hungry workloads, vSAN will address this performance and scale requirements.
- **Scale answers cost and power.** Capacity should grow in step with need, not in big purchases, while keeping existing HW and investment.
- **Storage answers cyber resilience.** Data services and policy decide whether data is protected and recoverable, enabling local and remote resilience.



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Thank you!



# THANK YOU!



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