VMware vSphere Foundation 9.1 Frequently Asked Questions (FAQs)

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Q. What is VMware vSphere Foundation?

A. VMware vSphere Foundation is the enterprise workload platform, provides a unified environment where both VMs and containerized applications share the same infrastructure, lifecycle management, security policies and operational tooling. This consolidation simplifies day-to-day operation, accelerates application delivery, and ensures consistent performance and compliance across workloads.

VMware vSphere Foundation brings together compute virtualization via core vSphere and vCenter Server for centralized management. Software defined storage with vSAN, enabling you to pool and manage storage across standard x86 servers. Infrastructure operations and analytics through VMware Cloud Foundation, delivering advanced health monitoring, capacity planning and predictive alerts. VMware vSphere Foundation delivers native Kubernetes services for running containerized workloads alongside traditional VMs.

Q. What is VMware vSphere Foundation 9.1?

A. VMware vSphere Foundation 9.1 modernizes infrastructure economics by slashing operational downtime and delivering superior workload performance for the modern IT environment. It eliminates the "Maintenance Tax" through lower costs and non-disruptive resilience without adding operational complexity. VMware vSphere Foundation 9.1 also offers expanded hardware support, deeper ecosystem openness, and ongoing enhancements including real-time observability and many others.

Q. What's included with VMware vSphere Foundation 9.0?

A. New Highlighted Features in VMware vSphere Foundation 9.0

- Boost Operational Efficiency:
  - Installer for simplified VMware vSphere Foundation deployments
  - Enhanced Integrated storage dashboards
  - NVMe Memory Tiering
- Supercharge Workload Performance:
  - Faster vMotion for GPU workload
  - vSAN traffic separation for improved scalability and performance
  - Monster VM support (increased scale)
- Accelerate Innovation:
  - Quick Supervisor deployment with future scalability and flexibility
  - Independent Supervisor Upgrades from vSphere
  - Unified SDK for Simplified Automation
- Elevate Security & Resilience:
  - Enable agile security with Live Patching for ESX
  - Secure by default the TLS 1.3 enforcement and out-box FIPS 140-2 compliance support
  - Protect against unplanned events with vSAN-to-vSAN Replication

Please reference the respective sections of this FAQ document for additional information.

Q. What's new with VMware vSphere 9.1?

A. New Highlighted Features in VMware vSphere Foundation 9.1:

- Boost Operational Efficiency:
  - Reduce server TCO 40% using NVMe tiering.
  - Reduce troubleshooting effort 60% with proactive insights.
  - Slash vCenter maintenance windows to under five minutes.
  - Capture transient anomalies using two second telemetry.
  - vSAN Scale instantly with zero touch elastic provisioning.
  - Eliminate configuration drift with enhanced vSphere profiles.
- Supercharge Workload Performance:
  - Typology aware scheduling delivers gains on four sockets
  - Accelerate migrations 65% via parallel DRS processing.
  - Lower storage TCO 39% via extended vSAN deduplication.
  - Save 70% CPU using Intel QAT encryption.
  - Share high performance storage via vSAN cluster enhancements.
- Elevate Security & Resilience:
  - Patch TPM enabled hosts with zero downtime.
  - Reduce storage operational effort 70% via vSAN.
  - Lower disaster recovery costs 27% using vSAN.
  - Site wide maintenance mode speeds site resynchronization.

Please reference the respective sections of this FAQ document for additional information.

Q. What are the new features in VMware vSphere Foundation 9.1?

A. Refer to the latest release notes to learn more details and capabilities provided by VMware vSphere Foundation.

Q. When will VMware vSphere Foundation 9.1 be generally available?

A. VMware vSphere Foundation 9.1 is generally available as of May 05, 2026.

Q. Can I install the VMware vSphere Foundation software myself?

A. Yes. VMware provides documentation for customers to deploy the foundation software on their own. However, it is highly recommended that you work with Professional Services or your Solution Provider to receive assistance with your deployment.

Q. What operational benefit can I expect from VMware vSphere Foundation?

A. VMware vSphere Foundation offers several operational benefits that simplify IT management and enhance efficiency. Fewer consoles and agents, manage compute, storage and containers from one pane of glass, simplified patching, Live Patching for ESX and one-click vSAN upgrades, predictive health, machine learning alerts, anomaly detection and capacity forecasting.

Q. How steep is the learning curve for existing vSphere admins adopting VMware vSphere Foundation?

A. Nearly zero, admins use the same vCenter UI and familiar Lifecycle Manager workflows and VCF Operations is loaded by the quick start. New tabs appear in VCF Operations for vSAN, Kubernetes, but all other operations follow the same inventory model as the vCenter client.

Overall, vSAN in vSphere Foundation extends a familiar environment with a few clicks—no new appliances, no complex storage OS to learn—delivering enterprise-grade storage.

Subscription and License Management

Q. Are all features available in all variations of vSphere?

A. No. Please refer to the a) vSphere Version Comparison and b) vSphere Product Line Comparison and c) VCF Feature Comparison docs for a detailed description of which features are available with which versions of vSphere, VVF, VCF and ACC.

Q. What are the components of VMware vSphere Foundation?

A. VMware vSphere Foundation includes the following components:

- VMware vSphere Enterprise Plus
- VMware vCenter Standard
- VMware vSphere Kubernetes Service *(formerly Tanzu Kubernetes Grid)*
- VMware Cloud Foundation (VCF) Operations*, which include:
  - VCF Operations for logs
  - VCF Operations diagnostics

**Formerly Aria Suite Standard - Aria Operations Advanced, Aria Operations for Logs, and Skyline.*

- VMware vSAN - *includes 0.25 TiB* capacity per core.*

**TiB is a tebibyte (TiB), a unit of measure used to describe storage capacity.*

Q. What are the advanced add-on services available for VMware vSphere Foundation 9.0?

A. The following advanced add-on services are available for VMware vSphere Foundation:

- VMware vSAN Add-on (additional capacity)*
- VMware Live Recovery Cloud
- Site Recovery Manager
- VMware Avi Load Balancer

**VMware vSphere Foundation entitles a customer to vSAN for 0.25 TiB of raw capacity for each VMware vSphere Foundation core. Capacity can be aggregated and used across VMware vSphere Foundation core licenses. Additional capacity can be purchased separately as vSAN Add-on.*

Q. What technical support options are available for VMware vSphere Foundation 9.0?

A. Broadcom Software Maintenance Essential Support is included in VMware vSphere Foundation

Q. How does the vSAN entitlement work

A. Each licensed VMware vSphere Foundation core includes 0.25 TiB of vSAN capacity. This capacity is pooled across your VMware vSphere Foundation environment, allowing flexibility in allocating storage where it's needed. If additional storage is required beyond the included entitlement, you can license a vSAN add-on for additional capacity.

Q. What if I have compute-only clusters?

A. No problem. vSAN entitlement can be aggregated across clusters, so unused capacity from compute-only clusters can be applied to vSAN-enabled clusters, improving overall efficiency.

Q. Do I need to enable vSAN in all clusters?

A. No. You're not required to enable vSAN in every cluster. However, the included entitlement can be used in any clusters where vSAN is enabled, giving you the flexibility based on your architecture and use cases.

Q. Can I use VMware vSphere Foundation in a compute-only cluster, or does vSAN need to be enabled?

A. You can run compute-only clusters with VMware vSphere Foundation. The entitlement can be pooled across your VMware vSphere Foundation environment, allowing unused vSAN capacity from compute only clusters to be allocated to storage clusters.

Q. Is vSAN required for VMware vSphere Foundation?

A. No, vSAN is not required for the VMware vSphere Foundation 9.0. VMware vSphere Foundation 9.0 supports either vSAN, NSF and FC.

Q. Is VMware vSphere Virtual Volumes (vVols) supported in VMware vSphere Foundation 9.0?

A. VMware vSphere Virtual Volumes (vVols) capabilities will be depreciated beginning with the release of VMware vSphere Foundation 9.0 and VMware Cloud Foundation 9.0 and will be fully removed at a future release. Support for vVols (critical bug fixes only) will continue for versions vSphere 8.x, VMware vSphere Foundation 5.2, and other older supported versions until end-of-support of those releases.

Limited time support may be considered on a case-by-case basis for customers desiring vVols support in VMware vSphere Foundation 9.0. Such customers should contact their Broadcom representative or Broadcom support for further guidance

Q. What happens if I exceed the included vSAN capacity?

A. If your usage goes beyond the entitled amount, you can purchase additional capacity through vSAN advanced add on service.

Q. What set of vSAN features are included in VMware vSphere Foundation?

A. VMware vSphere Foundation delivers every vSAN capability—no more editions to choose from. Advanced features like data-at-rest and in-transit encryption, stretched clusters, vSAN storage clusters (formerly vSAN Max), and comprehensive storage protection are all included for VMware vSphere Foundation customer.

Q. How do I monitor my vSAN entitlement usage?

A. You can track vSAN capacity through vCenter or VCF Operations, both which are included in VMware vSphere Foundation. These tools provide real time visibility into storage consumption and cluster health. In VMware vSphere Foundation environment is where VCF Operations can provide that view vs a single vCenter only view of vSAN.

Q. Does vSAN require a specific hardware configuration?

A. Yes, vSAN required certified vSAN Ready nodes, from a certified hardware from Broadcom Compatibility Guide.

Q. Are standalone SKUs for vSphere Standard and vSphere Enterprise Plus available for version 9.0?

A. No. Version 9.0 will only be available for VMware Cloud Foundation and VMware vSphere Foundation.

Q. I've heard that updates going forward will involve a unique URL with a client ID for every customer, and there will be no general download mirror anymore. Will this only be for 9.0 release forward?

A. In March 2025, we ended all vSphere, vSphere Foundation and VMware Cloud Foundation downloads.

Q. What are the feature differences between editions VMware vSphere Foundation and VMware Cloud Foundation?

A. To understand the feature differences between VMware vSphere Foundation and VMware Cloud Foundation Foundation, refer to this link. The document provides a detailed comparison of features across various vSphere editions, including VMware vSphere Foundation.

Q. What are the licensing changes in VMware vSphere Foundation 9.1?

A. VMware vSphere Foundation 9.1 transitions from traditional twenty-five-character keys to subscription-based license files. These are managed through the Business Services console and assigned using VCF

Operations. This change only applies when deploying or upgrading to version 9.1, while previous environments continue to use existing keys.

Q. Is VCF Operations required to license VMware vSphere Foundation 9.1?

A. Yes. VCF Operations is a required component for centralized license management. License files created on the Business Services console are uploaded directly to VCF Operations and assigned to vCenter instances to ensure compliant platform consumption.

Q. What is the VCF License Server?

A. The VCF License Server is a new, headless appliance introduced in version 9.1. It offloads license logic from VCF Operations to provide centralized management on a protected appliance within the environment. It is deployed and lifecycled automatically during installation or upgrades.

Q. Can I port VMware vSphere Foundation licenses to other clouds?

A. Yes. VMware vSphere Foundation supports license portability, allowing customers to move qualified licenses and applicable add-ons to any certified cloud service. This entitlement is available for licenses purchased directly from Broadcom after December thirteen, 2023.

Q. Can I upgrade a perpetual license to VMware vSphere Foundation 9.1?

A. No. Customers with perpetual licenses must transition to subscription-based licensing before they can upgrade to the version 9.1 platform. VMware vSphere Foundation 9.1 licensing is designed specifically for the new subscription model.

Q. Where can I find my license entitlements?

A. License entitlements are found on the Broadcom Support Portal. Administrators can visit the "My Entitlements" section at support.broadcom.com to view current subscriptions and usage details.

Boost Operational Efficiency

Q. What is the VMware Cloud Foundation Installer in vSphere Foundation 9.0?

A. The VMware Cloud Foundation Installer is a guided deployment tool that simplifies the setup of VMware vSphere Foundation components in greenfield deployment. The installation process automates the deployment and configuration of the various components. It's part of the broader VMware Cloud Foundation Operations experience and is designed to accelerate time to value while reducing manual efforts, errors and configuration inconsistencies.

Q. What is NVMe Memory Tiering in VMware vSphere Foundation 9.0, what are the benefits?

A. NVMe Memory Tiering in VMware vSphere Foundation 9.0 enables hosts to use local NVMe drives as a secondary memory tier alongside DRAM, transparently offloading less-frequently accessed pages to high-speed NVMe storage without requiring any changes to VMs or guest operating systems. This approach effectively increases available memory capacity, allowing larger or more virtual machines to run on the same hardware while alleviating core-to-memory bottlenecks.

Q. Is the memory tiering with NVMe supported on both traditional VMs and VM Service Based VMs?

A. Memory tiering happens transparently at host level. This is done at the ESX level, completely transparent to how the VM was created, so it works for both traditional VMs and Kubernetes VMs.

Q. What is the Storage Dashboard in VMware vSphere Foundation 9.0?

A. The new Storage Dashboard in vSphere Foundation 9.0 provides a unified, federated view of all storage components, offering a single pane of glass for operational data such as alerts, health, performance, and capacity metrics. It delivers a complete performance overview of the entire vSAN infrastructure, including latency, IOPS, throughput, and storage diagnostics.

New in this release is support for vSAN Performance Diagnostics, which allows users to run diagnostics tests on clusters facing performance issues. The dashboard

provides real-time insights and actionable recommendations to help identify root causes and resolve problems quickly. This capability enables organizations to proactively manage storage, improve availability, and optimize performance—while reducing costs and operational complexity.

Q. What is Enhanced NVMe Memory Tiering?

A. This feature modernizes infrastructure economics by using high-performance NVMe as a second tier of memory. It reduces server TCO by up to 40% and delivers up to 15% better database performance compared to previous versions. The update introduces zero-downtime activation and software-based mirroring to remove hardware RAID dependencies.

Q. How does the 9.1 release simplify the troubleshooting workflow?

A. VMware vSphere Foundation 9.1 introduces native diagnostic analysis that reduces administrative troubleshooting effort by 60%. By surfacing root causes and guided remediation directly within the console, IT teams can resolve issues without disconnected tools or scheduled diagnostic tests.

Q. How does VMware vSphere Foundation 9.1 reduce vCenter maintenance windows?

A. Quick Patching transitions from broad service restarts to targeted updates. This slashes maintenance windows from thirty minutes to under five minutes with little to no service interruption. It ensures effortless compliance by dramatically shortening the time required for critical platform updates.

Q. How does VMware vSphere Foundation 9.1 improve visibility for mission-critical applications?

A. VMware vSphere Foundation 9.1 provides high-fidelity telemetry with two-second ESXi, twenty-second vCenter, and thirty-second vSAN granularity. This ensures transient performance spikes, often hidden by traditional five-minute averaging, are captured. Real-time data streams accelerate mean-time-to-resolution and preserve application service levels.

Q. What is vSphere Elastic Provisioning?

A. This feature provides a zero-touch provisioning experience for scaling infrastructure. It automates host discovery and uses remote imaging to move hardware to production readiness instantly. This eliminates manual configuration and truck rolls across the data center and edge.

Q. How does VMware vSphere Foundation 9.1 ensure architectural consistency?

A. Enhanced configuration profiles eliminate drift by automating full-stack setup for storage, networking, and memory tiering. By replacing hundreds of manual API calls with desired-state profiles, it ensures system-wide consistency and brings hosts to a usable stage faster.

Q. How does VMware vSphere Foundation 9.1 handle support bundles?

A. The Log Assist feature in VCF Operations allows customers to generate and send support bundles directly to Broadcom support. This integration is natively accessible within the operations console to streamline troubleshooting and reduce the time required to resolve support cases.

Q. How are administrators notified of platform updates?

A. Once logged into the repository, users are automatically notified within the VCF Operations user interface when patches and upgrades become available. This centralized visibility ensures that administrators can maintain a current and secure platform with minimal manual effort.

Q. Can I convert existing vSphere clusters into VMware vSphere Foundation?

A. Yes. Version 9.1 integrates the VCF Import feature into VCF Operations, allowing administrators to add existing vSphere infrastructure to the managed platform. This approach leverages existing hardware without requiring application downtime or data migrations.

Accelerate Innovation - Modern Workloads and Developer Experience

Q. What is VMware vSphere Kubernetes Service (VKS)?

A. VMware vSphere Kubernetes (VKS) in a built-in Kubernetes runtime service in VMware vSphere Foundation. IT run modern applications alongside traditional workloads. Running modern applications on VKS within VMware vSphere Foundation offers enterprises a powerful, unified platform that integrates with the broader VMware ecosystem, delivering a scalable, secure and efficient foundation for modern workloads.

Q. Does vSphere upstream conformant Kubernetes?

A. Yes, VMware vSphere Foundation runs a fully conformant Kubernetes distribution that is certified by Cloud Native Computing Foundation (CNCF).

Q. What's VMware Broadcom's contribution to the CNCF community?

A. VMware by Broadcom ranks among the top three contributors to the CNCF ecosystem over the past decade, demonstrating a deep and sustained commitment to open source and cloud-native innovation. Originating several key Kubernetes projects—such as Velero, Contour, Harbor, Antrea, and Pinniped—Broadcom has helped shape the Kubernetes ecosystem. The company also supports critical upstream projects including Cluster API, etcd, containerD, run, and controller-runtime. Beyond code, Broadcom actively champions Kubernetes through advocacy and thought leadership: supporting CNCF and the Linux Foundation, organizing Kubernetes Community Days and Meetups, engaging in Special Interest Groups (SIGs) to drive innovation, and contributing to CNCF Technical Advisory Groups (TAGs).

Q. How quickly can Kubernetes be deployed with VMware vSphere Kubernetes Services?

A. vSphere Kubernetes Service (VKS) offers minimal day 0 configuration, so teams can set up Kubernetes quickly and evolve later as needed.

Q. How does VMware vSphere Foundation 9.0 simplify Day 0 Kubernetes setup?

A. A Minimal Day 0 Supervisor configuration allows teams to deploy Kubernetes with default settings and evolve the architecture later (e.g. load balancers and Workload Zones).

Q. What is the benefit of decoupling Supervisor lifecycle for VMware vSphere Foundation?

A. It allows asynchronous updates to the Kubernetes layer, enabling access to the latest innovations without waiting for VMware vSphere Foundation upgrades.

Q. How does unified SDK tooling accelerate innovation for developers?

A. The unified SDK simplifies automation and integration by providing a single, OpenAPI 3.0–compliant interface across the entire vSphere Foundation stack. With a consolidated API set and tooling, developers and administrators no longer need to manage multiple toolchains for different infrastructure components. This streamlines development, enables faster automation, and accelerates innovation.

Q. What is the VMware vSphere Kubernetes Service?

A. VKS is a CNCF-certified Kubernetes runtime integrated into VMware vSphere Foundation. It enables secure, simplified Kubernetes deployment and lifecycle management for modern applications. It provides twenty-four months of support for releases to stabilize environments and reduce upgrade pressure.

Q. What are the key use cases for VKS in VMware vSphere Foundation?

A. Key use cases include application modernization, building isolated dev/test environments, and running AI or machine learning workloads. It ensures consistent Kubernetes operations across private cloud and edge environments without requiring infrastructure silos.

Supercharge Workload Performance

Q. How does VMware vSphere Foundation 9.0 support high performance and large-scale enterprise applications?

A. VMware vSphere Foundation 9.0 is designed to run demanding, large-scale enterprise applications by delivering industry-leading performance and scalability. It supports large VMs with up to 950 vCPUs and 16TB of memory, making it ideal for workloads like SAP HANA. Customers can consolidate workloads onto fewer hosts while improving power efficiency and simplifying infrastructure. With enhanced processor support, VMware vSphere Foundation 9.0 accommodates modern CPUs such as AMD Turin/Venice and Intel Sapphire Rapids, scaling 960 cores per socket to support the most compute-intensive environments.

Q. How does traffic separation improve performance in vSAN storage clusters?

A. Traffic separation in vSAN storage clusters enables the use of dedicated networks for storage and compute traffic, improving efficiency and performance. By isolating storage traffic, customers can boost storage performance by up to 25%, avoid traditional I/O bottlenecks, and accelerate storage operations.

This approach allows organizations to leverage existing network infrastructure for compute, reducing costs while freeing up bandwidth for storage. In a disaggregated architecture, it also enables independent scale of compute and storage resources, providing flexibility, resilience and performance as business needs grow.

Q. How does VMware vSphere Foundation 9.0 enhance vMotion for GPU workloads?

A. VMware vSphere Foundation 9.0 introduces faster vMotion for GPU-enabled workloads, dramatically reducing migration times and minimizing disruption. With stun times under 2 seconds, organizations can achieve near-zero downtime during live migrations of AI/ML applications. This improvement is powered by parallel TCP connections, support for 100 Gbps networks, and secure memory transmission using offload engines like Intel QAT, ensuring faster and encrypted data transfer without performance overhead. These enhancements make it easier to keep GPU-intensive workloads highly available and mobile across the infrastructure.

Q. Does migration encryption impact workload performance?

A. Hardware-accelerated encryption leverages Intel QAT to protect data in transit without performance penalties. Offloading encryption tasks saves up to 70% of source CPU usage. This ensures secure workload mobility for resource-intensive applications while enhancing overall cluster efficiency.

Q. How does VMware vSphere Foundation 9.1 improve usable storage capacity?

A. Performance-optimized data reduction increases usable capacity to deliver up to 39% lower storage TCO. Next-generation compression algorithms run opportunistically to protect application performance. This drives cluster-wide efficiency across up to sixty-four hosts to maximize existing hardware ROI.

Q. Can I share high-performance storage across different environments?

A. VMware vSphere Foundation 9.1 allows management and vCenter boundaries to share high-performance ESA storage across mixed-storage clusters. This eliminates stranded capacity silos by allowing OSA and ESA datastores to be mounted concurrently, enabling incremental hardware modernization.

Q. How does VMware vSphere Foundation 9.1 accelerate host evacuations?

A. Parallel processing removes sequential bottlenecks to improve end-to-end migration times by up to 65%. This significantly reduces the time required for DRS to balance workloads. By eliminating VM batching bottlenecks, the platform ensures faster cluster balancing during peak I/O periods.

Q. How does the 9.1 release optimize performance for high-density processors?

A. Topology-aware scheduling delivers up to 68% performance gains on four-socket systems and 44% gains on two-socket systems. By optimizing NUMA-aware placement and reducing page-migration costs, the platform eliminates node overpacking and unnecessary migrations to improve application responsiveness.

Security, Resilience & Compliance

Q. What are the compliance packs included in VMware vSphere Foundation 9.0?

A. The compliance packs are:

New Compliance Packs:

a. NIST SP 800-171, Protecting Controlled Unclassified Information in Nonfederal Systems and Organizations
b. NIST SP 800-53 R5
c. CIS Compliance Pack for VMware vSphere Foundation

Upgrade Compliance Packs:

a. PCI DSS Defined Approach Requirements, Version 4.0
b. The International Organization for Standardization ISO/IEC 27001:2022
c. HIPAA

Q. What encryption standards are included in VMware vSphere Foundation 9.0?

A. Encryption standards:

a. NIST SP 800-171, Protecting Controlled Unclassified Information in Nonfederal Systems and Organizations
b. Fallback to TLS 1.2 support for legacy systems
c. FIPS 140-2 certified cryptographics modules are active out of the box
d. vTMP, Secure Boot, Single Sign On and Multi Factor Authentication (MFA), further enhance platform hardening.

Q. What version of TLS does VMware vSphere support?

A. VMware vSphere Foundation supports both TLS 1.2 and TLS 1.3. With the latest release, VMware vSphere Foundation supports the TLS 1.3 protocol by default. If needed, vSphere provides the ability to fail back to TLS 1.2 as well to support legacy product integration.

Q. What is new FIPS compliance?

A. VMware vSphere Foundation runs in FIPS-compliant mode by default, utilizing FIPS 140-2 certified cryptographic modules as recommended by the US government. This ensures compliance with regulations, enhances data security by protecting sensitive information from breaches and cyberattacks, and faster trust and confidence in the VMware software.

Q. Is license management in this VMware vSphere Foundation 9.0 release?

A. The unified licensing model gives customers a single place to manage license keys across deployments, providing a centralized view of license, reducing administrative overhead, improving license tracing accuracy, and providing a centralized view of license consumption. This saves time and effort during audits and planning, ensuring more efficient management license entitlement.

Q. How does Live Patching of ESX enhance security?

A. VMware vSphere Foundation includes built-in dashboards and alerts that proactively monitor security posture, patch compliance, and operational anomalies. These tools help IT teams detect risks early, ensure environments remain secure, and maintain continuous compliance across the infrastructure.

Q. What is vSAN-to-vSAN Replication with Deep Snapshots in vSphere Foundation 9.0?

A. vSAN-to-vSAN Replication with Deep Snapshots is a simple, high-performance, and cost-effective replication solution for vSphere VMs and containers. Built on vSAN ESA (Express Storage Architecture) snapshots, it offers scalable, low-overhead replication with minimal performance impact. This feature is easy to configure using a guided workflow in vCenter, requires minimal infrastructure, and is more affordable than traditional array-based solutions. It helps enhance resilience and accelerate recovery, making it ideal for modern workloads in both primary and secondary sites.

Q. Can security patches be applied without planned downtime?

A. VMware vSphere Foundation 9.1 enables zero-downtime security updates for up to 80% of patches on TPM-enabled hosts. This allows critical updates to be applied without host evacuations. It ensures hardware is always

protected while maintaining compliance without disrupting production workflows.

Q. What data protection capabilities are included in VMware vSphere Foundation?

A. VMware vSphere Foundation entitlements include native vSAN snapshots for operational recovery, vSphere Replication for remote protection, and file-based backups for VM-based management components. These built-in tools simplify day-to-day data protection and metadata-based automation.

Q. Are the locally stored snapshots for Operational Recovery immutable?

A. Yes. Administrators can choose to make native snapshots immutable to protect against unauthorized changes or accidental deletion. This provides a secure, point-in-time recovery history that is natively visible and manageable within the operations console.

Q. How does VMware vSphere Foundation 9.1 simplify local data protection?

A. vSAN for Operational Recovery uses metadata-based automation to reduce storage operational effort by up to 70%. It supports up to two hundred snapshots per VM for deep recovery history. Administrative productivity is improved by monitoring snapshot health natively within the operations console.

Q. Can I standardize disaster recovery across different storage vendors?

A. Disaster recovery outcomes are standardized using a high-performance vSAN target for workloads on any primary storage. This reduces recovery costs by up to 27% compared to dedicated appliances. FIPS 140-3 validated encryption ensures data integrity for both data-at-rest and data-in-flight.

Q. How does VMware vSphere Foundation 9.1 speed up maintenance for stretched clusters?

A. Site-wide maintenance mode shrinks windows by resynchronizing only differential data, returning sites to high availability faster. Automated vMotion orchestration reduces operational risk for replicated workloads. Built-in pre-checks ensure graceful entry and exit for entire sites to expedite site-level operations.

vSAN/HCI Storage

Q. What is vSAN?

A. VMware vSAN is enterprise software-defined storage built natively into the vSphere hypervisor. It aggregates the local disks and flash devices of ESX hosts into a single, shared datastore—eliminating the need for traditional SAN or NAS arrays and delivering storage services right in the hypervisor layer.

Q. How does VMware vSAN deliver hyperconverged infrastructure (HCI)?

A. VMware vSAN is embedded in the ESX hypervisor on standard x86 servers, allowing compute and storage to share a common hardware pool. Each host contributes its local disks to a single, distributed datastore, and Storage Policy-Based Management (SPBM) defines performance, capacity, and resilience at the VM, virtual disk, or Kubernetes persistent-volume level. Policy-driven automation places, replicates, or erasure-codes data across nodes to ensure workloads—whether traditional VMs or containerized applications—meet SLAs. Adding another host immediately increases CPU, memory, and storage resources in one step. All SPBM policies, health monitoring, and lifecycle updates are managed through vCenter Server via the vSphere Client, resulting in a unified, scale-out platform that delivers simplicity, cost savings, and operational agility.

Q. Can I use vSAN for Kubernetes workloads with VMware vSphere Foundation?

A. Yes, vSAN is fully supported for vSphere with Kubernetes (VKS) workloads, which is also supported in VMware vSphere Foundation. This helps deliver a performant and resilient storage layer for modern apps.

Resources

Q. Where can I find more information and resources?

A. Additional VMware vSphere Foundation information is available on the VMware vSphere Foundation Product Page. Customers can also access official documentation, community forums, and training programs through VMware Learning to maximize their platform investment. In addition, some of this information is linked here:

- VMware vSphere Foundation
- Tech Doc

  Component Product Pages:

  - vSphere
  - vSAN
  - VCF Operations

- Community
- Broadcom Software Maintenance Essential Support
- VMware Learning