

VMware Cloud Foundation Frequently Asked Questions (FAQs)



Table of Contents

[VCF Releases](#)

[GPU Support](#)

[Perpetual Offerings](#)

[Subscription Offerings](#)

[License Portability](#)

[VCF Operations fleet management \(formerly SDDC Manager\)](#)

[Hardware](#)

[Workload Domains](#)

[Compute](#)

[Storage](#)

[Networking](#)

[Data Services](#)

[Application Platform](#)

[VCF Operations](#)

[VCF Automation](#)

[VCF Edge](#)

[VCF Import – vSphere/vSAN](#)

[Lifecycle Management](#)

[Patching and Upgrading](#)

[Config Max and Mins](#)

[Security Advanced Services](#)

VMware Cloud Foundation Releases

VMware Cloud Foundation 5.2.1

Q1. What are the new features in VMware Cloud Foundation 5.2 and 5.2.1?

- A. Refer to the [latest release notes](#) to learn more about the features and capabilities provided by VCF.

Q2. What is being delivered in VMware Cloud Foundation 5.2.1?

- A. VMware Cloud Foundation 5.2.1 includes the following components:
- VMware SDDC Manager 5.2.1
 - ESX 8.0 U3 P04
 - vCenter Standard 8.0 U3
 - vSphere Kubernetes Service
 - vSAN 8.0 U3 P04
 - VCF Operations 8.18
 - VCF Operations Network Insight 6.14
 - VCF Operations HCX 4.10
 - VCF Automation 8.18.1
 - NSX 4.2.1 (L2-L3 Networking)
 - Data Services Manager 2.2



VMware Cloud Foundation Frequently Asked Questions (FAQs)



Q3. What are the advanced services available for VMware Cloud Foundation?

- A. The following advanced services (add-ons) are available for VMware Cloud Foundation:
- VMware Live Recovery
 - VMware vDefend Firewall
 - VMware vDefend Firewall with Advanced Threat Protection
 - VMware Avi Load Balancer
 - vSAN Add-On
 - VMware Tanzu Application Platform
 - Tanzu Intelligence Services
 - VMware Private AI
 - Professional Services

Note - Advanced services are available for separate purchase and are not included in the core VCF offerings.

Q4. What is VMware Cloud Foundation?

- A. VMware Cloud Foundation is a comprehensive, private-cloud platform with integrated, enterprise-class compute, storage, networking, management, and security, delivering a leading TCO as highlighted in an IDC report: [The Business Value of VMware Cloud Foundation](#).

Q5. Can I install the VMware Cloud Foundation software myself?

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

Visit the [Documentation](#) page for more information on how to deploy Cloud Foundation.

Q6. What technical support options are available for VMware Cloud Foundation?

- A. Broadcom Software Maintenance Essential Support is included with VCF.

Q7. What other Services and Lifecycle Support are offered?

- A. Broadcom Software Maintenance Essential Support is included with VCF. In addition, the following options are available:
- VMware Pro Cloud Services: help customers adopt and consume VCF faster. These Professional Services are aligned to common customer use cases and were built by combining VMware Validated Solutions with field-proven best practices.
 - Extended Expert Services: provide a flexible way to add experienced VMware consultants to your team to accelerate your project timelines.
 - VCF Technical Adoption Manager (TAM): provides subject matter expertise to help you speed adoption by conducting technology assessments, providing solution guidance, and recommending operations optimizations.
 - Learning: training and certification programs to grow your skills.

Q8. Where can I find more information and resources?

- A. You can find additional VMware Cloud Foundation information here:
- Product Page: vmware.com/go/cloudfoundation



VMware Cloud Foundation Frequently Asked Questions (FAQs)



- Documentation: vmware.com/go/cloudfoundation-docs
- Community: <https://community.broadcom.com/vmware-cloud-foundation/home> Talk to your VMware Sales team.
- Broadcom Software Maintenance Essential Support <https://www.broadcom.com/support>
- Professional Services and Lifecycle Support <https://www.vmware.com/professional-services.html>
- VMware Learning <https://www.vmware.com/learning.html>

GPU Support

Q9. Does VMware Cloud Foundation support the NVIDIA AI Enterprise platform and GPUs?

- A. Yes, VMware Cloud Foundation 4.4 or later supports the NVIDIA AI Enterprise platform. This integration with NVIDIA AI Enterprise allows IT admin teams to deliver and provision GPU resources easily while allowing data scientists to easily consume and scale GPU resources quickly when they need.

Perpetual Offerings

Q10. Does VMware by Broadcom offer perpetually licensed products?

- A. No, learn more about Broadcom's Business Transformation. [Learn more](#)

Subscription Offerings

Q11. Can a customer purchase individual products a-la-carte?

- A. No, customers can only purchase the following offerings: VMware Cloud Foundation or vSphere Foundation.

Q12. Where can I go for additional information on VMware Cloud Foundation Pricing and Packaging?

- A. Consult with your Broadcom Sales Representative, channel partner or qualified OEM partner for pricing.

License Portability

Q13. What is the new VCF License Portability entitlement for customers?

- A. VCF License Portability allows customers to port their purchased licenses of qualified VCF and any applicable Add-On(s) to any compatible endpoint whether that's in their own data center, a hosting provider, a cloud service provider or hyperscaler cloud environment as their needs evolve. There is feature parity across the deployment options when customers participate in [License Portability](#).

Q14. What are the benefits of License Portability?

- A. License Portability enables customers to preserve the investments that customers make in VCF by providing an option for customers to port their VCF licenses to any endpoint as their IT strategies shift. Over time, Broadcom will work with cloud service providers offering fully integrated managed solutions with VCF to develop a list of certified destination endpoints.

Q15. Will customers have the option to port their eligible VCF licenses as part of the cloud provider's fully integrated solution?

- A. Yes, Broadcom is working with cloud service providers offering managed solutions with fully integrated VCF to be part of the VCF ecosystem



VMware Cloud Foundation Frequently Asked Questions (FAQs)



that ensures a consistent experience for customers porting their eligible VCF licenses. The VMware software deployed by cloud service providers in their integrated offerings will be the same for the License Portability Offering.

Q16. What are the qualified licenses eligible for the VCF License Portability?

- A. VCF and applicable add-on(s) licenses purchased directly from Broadcom or an authorized reseller or distributor after December 13th, 2023, and where the end customer is the licensee, are eligible for License Portability. Here are the qualified licenses for the Program:

Product	SKU
VMware Cloud Foundation	VCF-CLD-FND-5
Add-Ons	
vSAN	VCF-VSAN-8
vDefend Firewall	ANS-VMW-FW-B
vDefend Firewall with Advanced Threat Prevention (or Add-On)	ANS-FW-ATP-B (ANS-FW-ATPAD-B)
Avi Load Balancer (ALB)	ANS-VMW-ALB

Table 1: Qualified licenses for the Program.

New licenses may be added to the table once licenses become qualified. Licenses obtained through a Value-Added OEM or through a Broadcom cloud provider program, (e.g., VMware Cloud Service Provider, Metal-as-a-Service), where the provider is the licensee, are not eligible for License Portability.

Q17. Can customers port individual components of VCF?

- A. No, the entire set of VCF components must be ported to the cloud service endpoint.

Q18. Can customers port older or upgraded VCF licenses that are not on the qualified list?

- A. No, only the qualified VCF and Applicable Add-On licenses purchased after December 13th, 2023, and listed above, will be eligible. Customers upgrading older VCF licenses to the latest version do not qualify for License Portability entitlements.

Q19. Can customers use any other Broadcom (or VMware) licenses to port to any endpoints?

- A. Only the list of qualified VCF and applicable add-on(s) licenses are eligible (e.g., VVF & Add-Ons used with VVF, VCF Edge, vSphere STD, vSphere Essentials Plus are not eligible for license portability).

Q20. Where can I find a list of certified partner endpoints?

- A. The [List of License Portability Certified Cloud Providers](#) provides the most up-to-date listing of certified partner endpoints when they are made available.

VCF Operations fleet management (formerly SDDC Manager)

Q21. What is VCF Operations fleet management (formerly SDDC Manager) ?

- A. VCF Operations fleet management is a management appliance that helps customers

VMware Cloud Foundation Frequently Asked Questions (FAQs)



deploy, manage, and operate their private cloud. It simplifies the process of provisioning new infrastructure, patching, and upgrading infrastructure, and managing passwords and certificates.

Q22. Can I add VCF Operations fleet management to an existing vSphere deployment?

- A. Yes, If you have an existing VMware vSphere environment that you want to manage like VMware Cloud Foundation, but you do not have any pre-existing VCF Operations fleet management instances deployed, you can convert the environment to VCF. To learn more, visit [here](#).

Q23. What is the difference between VCF Operations fleet management and VCF Automation (formerly Aria)?

- A. VCF Operations fleet management automates the installation and lifecycle management of the vSphere, vSAN, NSX, and VCF Automation, VCF Operations components from bring-up and configuration to patching and upgrading, making it simple for the cloud admin to build and maintain VCF. VCF Operations fleet management brings in capabilities from both SDDC Manager and Aria Suite Lifecycle Manager (vRSLCM). VCF Automation is different from VCF Operations fleet management because VCF Automation provides a self-service consumption experience of infrastructure resources “as a Service” to application teams with an automated self-service environment.

Q24. Does VCF Operations fleet management replace other existing management tools, such as vCenter server?

- A. No, VCF Operations fleet management is exclusive to VMware Cloud Foundation and is used to automate the deployment, scale, and lifecycle management of a VCF instance.

VCF Operations fleet management deploys a vCenter for each new workload domain. Once the workload domain has been configured through VCF Operations fleet management, administrators can access the vCenter console directly to manage the virtualized environment for that workload domain.

Q25. What is Cloud Builder?

- A. Cloud Builder is a Photon OS VM that is delivered as an OVA file. It contains all code and product bits to automate the deployment of the full SDDC stack for the management domain for your VMware Cloud Foundation instance. The VM can be deployed on any physical device that has connectivity with the ESX hosts, including laptops and external hosts. Follow the Cloud Builder UI on the VM to deploy the SDDC stack. Input parameters are entered using the Deployment Parameters Workbook.xlsx or a JSON file can be used.

Q26. How can VCF Operations fleet management be protected by backup?

- A. In Cloud Foundation 4.3 and later releases, VCF Operations fleet management backup and recovery capabilities have been enhanced, allowing administrators to configure external backup targets as well as scheduled backups.

Hardware

Q27. What are the physical server requirements?

- A. VMware Cloud Foundation is supported on vSphere-compatible server hardware which meets



VMware Cloud Foundation Frequently Asked Questions (FAQs)



the minimum requirements for VMware Cloud Foundation and the desired workloads.

For additional detailed hardware compatibility information, please reference the [VMware Compatibility Guide](#).

Workload Domains

Q28. What is a workload domain?

A. Workload Domains provide a unit of consumption at the SDDC level by presenting an integrated selection of compute, storage and network resources for business workloads to run in. Workload domains are created by allocating new capacity (greenfield) or by importing existing vSphere infrastructure (brownfield).

Q29. How many vCenter instances can be deployed in a workload domain?

A. Each workload domain has one dedicated vCenter instance. (Note: Only one vCenter license is needed per VMware Cloud Foundation instance).

Q30. Can I extend/delete a workload domain after it has been created?

A. Yes, VMware Cloud Foundation provides a fully automated process for creating, extending, and deleting workload domains using VCF Operations fleet management. It also allows removing hosts and clusters from a workload domain. Note, some VCF Operations fleet management operations may be blocked when working with imported/converted domains. When this happens, use the vSphere client to

make changes. This functionality is unique to domains created from the VCF Operations fleet management.

Q31. Can I reduce the size of a workload domain?

A. Yes, VMware Cloud Foundation allows removing hosts and clusters from workload domains.

Q32. What is a management domain?

A. The management domain is a special purpose workload domain that is used to host the infrastructure components needed to instantiate, manage, and monitor the Cloud Foundation infrastructure. The management domain is automatically created using the Cloud Builder appliance when it is initially configured, or by manually deploying a new VCF Operations fleet management instance to an existing vSphere cluster and converting it to a Management Domain.

Q33. Can we have Isolated SSO Workload Domains for multi-tenancy?

A. Yes. Workload domains can be created with a dedicated vCenter SSO domain to provide a degree of tenancy. Note, when deploying isolated domains customers can choose to deploy with a dedicated NSX instance or to use a shared NSX instance.

Q34. In a VCF consolidated architecture (the management domain runs both the management workloads and tenant workloads), can we create two or more clusters?

A. Yes.



VMware Cloud Foundation Frequently Asked Questions (FAQs)



Q35. What are the different options for Single Sign-On (SSO) in VCF?

- A. VCF deploys Workload Domains with vCenter instances in Enhanced Link Mode (ELM), where all vCenter instances and VCF Operations fleet management in a single VCF deployment share the same local authentication credentials. Note that you can deploy some VI Workload domains in their own ELM configuration, called Isolated WLDs. vCenter also supports Single Sign-On with external Identity Providers for federated authentication. The VCF Operations fleet management has a dedicated workflow to configure federated SSO on all vCenter and NSX instances (Local Managers). SSO can be enabled manually on NSX Global Managers.

Compute

Q36. Will VKS on a vSAN stretched cluster, introduced in vSphere 8u3, be supported on VCF 5.2 as well?

- A. Yes, VKS on a vSAN stretched cluster are supported.

Storage

Q37. What is the difference between Principal storage and Supplemental storage within VMware Cloud Foundation?

- A. Principal storage is selected when creating a management domain, workload domain, or when creating a new cluster within a workload domain. Supplemental storage may be added to management or workload domain clusters after their creation. Principal storage is required for every cluster. Supplemental storage can be used for additional storage options. Both principal and supplemental storage can be used for primary workloads/use-cases.

Q38. Can I change the principal storage selection after creating a workload domain cluster?

- A. No, you must create a new cluster within the workload domain or a new workload domain to change the principal storage selection. vMotion can be used to move the VMs to the newly created cluster. Supplemental storage can be manually added or removed without re-creating the cluster.

Q39. Which principal storage options are supported with VMware Cloud Foundation?

- A. VMware Cloud Foundation can consume and is validated against vSAN, vVols, NFS v3, and VMFS on FC. NVMe-oF and iSCSI are not currently supported as principal storage for Workload Domains.

VMware recommends using vSAN as the principal storage for all workload domains to leverage the benefits of managing and maintaining a full software-defined stack. vSAN is also updated and patched by VCF Operations fleet management. Updating and patching non-vSAN storage is a manual task and falls outside of the lifecycle management offered by VCF Operations fleet management. For more detailed compatibility information, please reference the [VMware Compatibility Guide](#).

Q40. Which supplemental storage options are supported with VMware Cloud Foundation?

- A. VMware Cloud Foundation supports the use of NFS (v3, or v4.1), VMFS on FC, iSCSI, NVMe-oF, and vVols as supplemental storage. Supplemental storage is not integrated to or shown within VCF Operations fleet management.



VMware Cloud Foundation Frequently Asked Questions (FAQs)



Q41. Can I use any server to create a workload domain when utilizing non-vSAN storage?

A. Yes, any vSphere-compatible server can be used for a workload domain cluster not using vSAN. They do not need to be vSAN ReadyNodes in this case. Please reference the [VMware Compatibility Guide](#).

Q42. Is stretched clustering supported for a workload domain configured for Kubernetes?

A. Yes, vSAN 8 U3, available in VCF 5.2, supports vSAN Stretched Clustering for workload domains that are configured for Kubernetes Workload Management.

Q43. What is vSAN ESA?

A. The vSAN Express Storage Architecture (ESA) is designed to process and store data with all new levels of efficiency, scalability, and performance. This architecture is optimized to exploit the full capabilities of the very latest in hardware. It was introduced in vSAN 8 and enhanced in vSAN 8 U1 and U2. The ESA in vSAN is an alternative to the Original Storage Architecture (OSA) found in all previous editions of vSAN, as well as an optional architecture in the very latest version.

Q44. Is vSAN ESA supported on VMware Cloud Foundation?

A. Yes, vSAN ESA is supported on VCF 5.1 or later.

Q45. Which vSAN features are not supported by VMware Cloud Foundation?

A. Please see the [VMware Feature Comparison](#) document for detailed information on included features.

Q46. What's new in vSAN 8.0 U3?

A. To learn about the latest features and capabilities provided by vSAN, please see the [release notes](#).

Q47. Does vSAN support a mix of OSA and ESA in the same workload domain?

A. Yes, VCF 5.2.1 supports it.

Q48. What are vSAN storage clusters (formerly vSAN MAX)?

A. vSAN storage cluster is a new deployment option in vSAN that provides petabyte-scale disaggregated storage for vSphere clusters. It is powered by the vSAN Express Storage Architecture, or ESA. It provides our customers the ability to deploy a highly scalable storage cluster to be used as primary storage for vSphere clusters, or augment storage for traditional vSAN HCI clusters. Customers can start small and scale up. This makes vSAN the premier storage platform for powering VMware Cloud Foundation.

Q49. Does VCF 5.2 support vSAN storage clusters?

A. Yes. This is our first release of vSAN storage clusters on VCF. Customers can scale-out storage-only clusters from 4 node minimum to 24 node maximum, and on a per-host basis from 20TB to 360TB.

Q50. Does vSAN Storage Clusters support File Services?

A. Yes.

Q51. Is HCI Mesh still supported?

A. Yes, but the official name has changed to vSAN Remote Datastore. All the configuration and support capabilities are still intact.



VMware Cloud Foundation Frequently Asked Questions (FAQs)



Q52. Does VCF 5.2 support stretched clusters with vSAN ESA?

A. Yes, support for deploying stretched clusters in VCF is via API only. Just as with the OSA, the workflows in VCF Operations fleet management currently do not include a stretched cluster deployment. Support for stretched clusters in VCF is limited to aggregated vSAN HCI clusters. Support for ESA in a stretched cluster configuration while running VCF 5.2 assumes a new deployment of the cluster, as an in-place conversion from OSA to ESA is not supported. Stretched clusters using ESA assumes the use of vLCM, since this is a requirement of ESA powered clusters. VxRail will not support the changing of a stretched cluster to a non-stretched cluster. Also, vSAN Storage Clusters in a stretched cluster configuration is not supported in VCF 5.2.

Q53. What are the requirements for VMware VCF stretched clusters with vSAN ESA?

A. The requirements for vSAN ESA stretched cluster support with VCF 5.2 are the same as for OSA.

Networking

Q54. What is included in VCF Networking?

A. VCF Networking services include:

- NSX
- Antrea container networking
- vSphere networking
- VCF Operations Network Insight (formerly Aria Operations for Networking)

Q55. How is NSX integrated into VCF Networking?

A. VMware NSX provides virtualized network services such as distributed switching, routing, bridging, load balancing, NAT, VPN, and automation services in VMware Cloud

Foundation. Security services such as distributed and gateway firewalling and advanced threat prevention are now available in a new [VMware vDefend Security Solutions](#) offering that requires additional entitlement.

Q56. Can a customer connect externally configured vCenter servers or NSX instances to a VMware Cloud Foundation deployment?

A. Yes.

Q57. What is NSX Federation and how does it work in VMware Cloud Foundation?

A. NSX Federation simplifies the consumption of networking and security in VCF. Customers can federate and manage multiple NSX data centers from a single pane of glass using the NSX Global Manager (GM). GM provides a graphical user interface and REST APIs to configure consistent stretched networking and security policies, workload mobility, and simplified disaster recovery across multiple locations. Please consult the [NSX Administration Guide](#) for more details.

Q58. What VCF deployment models does NSX Federation support?

A. NSX Federation supports the following deployment models:

- Two or more Mgmt WLD of different VCF instances (standard and consolidated VCF architecture)
- Two or more VI WLD of different VCF instances (standard VCF architecture)
- Two or more VI WLD in the same VCF instance using dedicated LM in each (standard VCF architecture)



VMware Cloud Foundation Frequently Asked Questions (FAQs)



- Mgmt WLD and VI WLD in the same VCF instance (using dedicated LM in each).
- Non-VCF NSX Local Manager (LM) deployment and any WLD in a VCF deployment
- GM-Active cluster and GM-Standby cluster
- Single GM-Active cluster cross location (low latency cross locations).

Please consult [VMware Configuration Min/Max Tool](#) page for details about the NSX Federation scale.

Q59. What are the limitations of NSX Federation in VMware Cloud Foundation deployments?

A. Here are some notable limitations to be aware of:

1. VCF Operations fleet management functions (such as password rotation, certificate replacement, LCM, etc.) do not support the NSX Global Manager. Further, VCF Operations cannot collect data from the Global Manager, and VCF Automation cannot provision workloads with Global Managers.
2. VMware Cloud Foundation does not support NSX Federation between a VI WLD in one VCF instance and a Mgmt WLD in another VCF instance.
3. NSX Federation in VCF 4.2 or later releases only supports greenfield deployments. Please raise a ticket with GSS and your account team to evaluate if NSX Federation is suitable for your existing VCF deployment (production).

Q60. Does NSX Federation support VxRail deployments?

A. Yes, NSX Federation is supported in the following deployments:

- NSX Federation for multiple VxRail greenfield deployments are supported from VCF 4.3. There is no

support available for brownfield environments prior to VCF 4.3.

- NSX Federation for VxRail and non-VxRail greenfield deployments are supported from VCF 4.3. There is no support available for brownfield environments prior to VCF 4.3.

Q61. What are the NSX Edge clusters and when should they be used?

A. NSX Edge clusters connect your virtual network domain to the physical domain, providing ingress and egress access as well as other networking services such as routing, bridging, gateway firewalling, load balancing, VPN, and NAT. NSX Edge clusters in VMware Cloud Foundation comprise of two or more NSX Edge transport nodes (VMs) that can be deployed on a per-workload domain or per-cluster basis. Edge clusters are recommended for all workload domains. Edge clusters are required prior to deploying vSphere Kubernetes Service and when deploying VCF Operations and VCF Automation components in VCF-aware mode connected to AVN (Application Virtual Network).

Q62. How is the new Data Center Network Assessment in VCF Operations for networks different from the existing Virtual Network Assessment?

A. The new Data Center Network Assessment provides more details on network traffic, such as inefficient hair-pinned traffic, and how VMware NSX can help improve application performance. The previous Virtual Network Assessment focused more on security traffic policy and network segmentation.



VMware Cloud Foundation Frequently Asked Questions (FAQs)



Q63. What are my NSX networking options when deploying a new Workload Domain?

A. Customers now have the option to deploy a new WLD with one of 2 choices in the VCF Operations fleet management UI.

1. Deploy with a new NSX instance
2. Join the WLD to an existing NSX instance. Note: you cannot share the NSX instance that is part of the Management Domain. The Management Domain NSX is always dedicated to just the Management Domain.

Note: Imported domains always get a new NSX instance. We currently don't have support for importing domains with shared NSX fabrics.

Q64. Can I connect my workloads to either NSX virtual networks or VLAN port groups in a WLD?

A. Yes. Customers have the option to connect workloads to either NSX virtual networks or VLAN based port groups.

Q65. Am I able to manage NSX Advanced Load Balancer from VCF Operations fleet management?

A. VCF Operations fleet management will deploy the AVI controller cluster, perform password management of the AVI controller, and provide certificate management.

Q66. Can VCF 5.2 deploy NSX VLAN-backed networking to domains originally configured using vSphere Networking?

A. Yes, it has scripted workflows useful for organizations who have converted and/or imported vSphere clusters into VMware Cloud Foundation.

Q67. What are Edge TEP Groups?

A. Tunnel End Point (TEP) Groups provide additional bandwidth and reliability for traffic that is routed through the

NSX Edges by allowing flows to be hashed across the multiple-edge TEPs.

Q68. Does NSX support Enhanced Data Path (EDP)?

A. Yes. Enhanced Data Path (EDP), a network stack mode, offers improved performance that results in higher throughput. It's designed for workloads that require high throughput and low latency, such as Network Function Virtualization (NFV), common in the telco industry.

Q69. Why is VCF introducing an XL NSX Manager Appliance?

A. To provide increased scale.

Data Services Manager

Q70. What is a Data Services Manager?

A. VMware Data Services Manager simplifies the management of a set of popular databases like Postgres, MySQL, and Object Storage. It is purpose-built for VMware Cloud Foundation and streamlines the process of provisioning, configuring, backing up, and patching. Data Services Manager empowers users to quickly deploy new data services while ensuring efficiency, security and control.

Q71. What are the requirements to use Data Services Manager?

A. The only required component of VCF to deploy and run Data Services Manager is vSphere.



VMware Cloud Foundation Frequently Asked Questions (FAQs)



Application Platform

Q72. Can customers deploy VMware Tanzu with VMware Cloud Foundation?

- A. VMware Tanzu is a broad portfolio of products. Specifically, vSphere Kubernetes Service (formerly Tanzu Kubernetes Grid) is included in VMware Cloud Foundation. Additional Tanzu products are available for purchase and can be deployed as advanced services (add-ons) on top of VMware Cloud Foundation.

continuous integration and continuous delivery (CI/CD) tool used to build pipelines that model the software release process in DevOps lifecycle. This feature is being deprecated in VCF 9. The intention to deprecate has been communicated in the release notes for VCF 5.2.1 and the software bits will be removed with the launch of VCF 9.

VCF Operations

Q73. What are the different options for Single Sign-On (SSO) in VCF?

- A. VCF deploys Workload Domains with vCenter instances in Enhanced Link Mode (ELM), where all vCenter instances and SDDC Manager in a single VCF deployment share the same local authentication credentials.

Note that you can deploy some VI Workload domains in their own ELM configuration, called Isolated WLDs. vCenter also supports Single Sign-On with external Identity Providers for federated authentication. The SDDC Manager has a dedicated workflow to configure federated SSO on all vCenter and NSX instances (Local Managers). SSO can be enabled manually on NSX Global Managers.

VCF Automation

Q74. What is happening to VCF Automation Pipelines?

- A. VCF Automation Pipelines (formerly VMware Aria Automation Pipelines and VMware vRealize Code Stream) is a

Q75. How do I purchase VCF Automation Config (formerly, Aria Automation SaltStack Config) and VCF Automation for Secure Hosts (formerly, Aria Automation SaltStack SecOps) capabilities?

- A. Workload Configuration Management (formerly, VMware Aria Automation Config) and Workload Compliance and Vulnerability Management (formerly, VMware Aria Automation for Secure Hosts) are now features of VMware Tanzu Salt, which is a component of VMware Tanzu Platform. VMware Tanzu Platform is available as an add-on to VMware Cloud Foundation (VCF). To learn more, visit [VMware Tanzu Platform](#).

VMware Cloud Foundation Edge

Q76. What is VMware Cloud Foundation Edge?

- A. VMware Cloud Foundation Edge is an optimized configuration of VMware Cloud Foundation specifically designed for edge use cases. VMware Cloud Foundation Edge augments the remote cluster capability and delivers a private cloud infrastructure-as-a-service solution optimized for edge sites with integrated enterprise-class compute, storage, networking, management and security capabilities. Please note that VMware Cloud Foundation Edge should be deployed at the Edge sites ONLY.



VMware Cloud Foundation Frequently Asked Questions (FAQs)



Q77. Where can I get pricing and licensing information for VMware Cloud Foundation Edge?

A. Please consult with your Broadcom Sales Representative, channel partner or qualified OEM partner to get pricing information for VMware Cloud Foundation Edge.

Q78. How is VMware Cloud Foundation Edge different from VMware Cloud Foundation?

A. VMware Cloud Foundation Edge contains all the core components of VMware Cloud Foundation. Additionally, it provides vSphere with vSAN Witness Appliance that can be deployed locally which is specifically useful in scenarios where customers do not want to use VCF Operations fleet management.

Q79. Do I need to use VCF Operations fleet management to deploy Edge?

A. No, it is not mandatory. VMware Cloud Foundation Edge provides customers flexibility to choose and deploy either a full stack or only the components of an infrastructure (compute, networking, storage, management, VCF Operations fleet management etc.) as per their business needs.

Q80. What are the minimum requirements for VMware Cloud Foundation Edge instances for each edge site?

A. With VMware Cloud Foundation Edge, customers have the option to deploy the full stack or elements of the full stack at the edge. See table below, but for additional information, go to: <https://configmax.esp.vmware.com/home>.

VMware Cloud Foundation Edge - Minimum Nodes by configuration

	VCF Operations fleet management	No VCF Operations fleet management
vSAN	4	3
vSAN w/ Shared Witness	Not Supported	2
External Storage	4	2

*Min 2 nodes are recommended for failover and high availability. But customers can deploy 1-node minimum in case of external storage or local storage without VCF Operations fleet management.

Q81. How is VCF Edge licensed?

A. VCF Edge licensing can be purchased (in place of standard VCF licensing) for deployments spanning a minimum of 10 sites. Customers have a year to achieve that quantity of edge sites. Licensing can span multiple VCF instances. VCF Edge SKUs support a minimum of 8 cores per CPU with a 256-core max per site.

Q82. Can I configure a domain with clusters configured at multiple sites?

A. Yes, the VCF Edge SKU does not dictate the architecture. This means that a customer can deploy any architecture they see fit for the edge environment. However, we recommend staying within the architecture boundaries of the VCF Operations

VMware Cloud Foundation Frequently Asked Questions (FAQs)



fleet management automated deployment workflows for the best cloud experience.

Q83. What storage options do I have for VCF Edge?

A. The VCF Edge SKU does not dictate a specific storage or Architecture. The VCF Edge SKU allows hosts or clusters to be composed using vSAN, vVols or external storage (NFS, VMFS on FC). Remote sites deployed as a VCF Workload Domain using the VCF Operations fleet management must follow the requirements of the VCF Operations fleet management automated architecture. Using the VCF Operations fleet management architecture requires a minimum of 3 vSAN nodes or 2 ESXi hosts configured with external storage.

VCF Import – vSphere/vSAN

Q84. What is the VCF Import CLI tool?

A. VCF Import is a CLI tool that can be used to convert/import existing vSphere infrastructure into VMware Cloud Foundation.

Q85. What are the available options for turning existing vSphere clusters into VCF instances?

A. Customers now have two options.

- You can convert a vSphere 8.0u3 environment to a VMware Cloud Foundation management domain.
- You can import a vSphere 7.0u3 (and above) environment to a VMware Cloud Foundation VI domain.

Both approaches allow customers to leverage existing infrastructure and don't require a migration of applications or data.

Q86. Can I import vSphere Clusters with non-vSAN storage?

A. Yes. We support vSAN, NFS, and VMFS on FC.

Q87. Can I import vSphere Clusters where NSX has been installed/enabled?

A. No. Importing a vSphere cluster where NSX has been installed/configured is not yet available.

Q88. Is the Cloud Builder appliance needed to convert a vSphere cluster to a VCF management domain?

A. No, the conversion of a vSphere cluster to a VCF management domain is accomplished by (1) manually deploying an instance of the VCF Operations fleet management appliance to the vSphere cluster, (2) copying the VCF conversion scripts to the appliance, and (3) running the scripts on the VCF Operations fleet management appliance to perform the conversion.

Q89. Will it be a GUI enabled function?

A. No. In VCF 5.2.x the VCF Import is a command line tool only.

Q90. What is the minimum version of vSphere/vSAN required?

A. To convert, you need to be on the VCF 5.2 build or higher.

To import, you need to be on the VCF 4.5 build or higher.

Q91. What is the minimum cluster size that can be imported as a VI workload domain?

A. 3 nodes when using vSAN. 2 nodes when using NFS or FC.



VMware Cloud Foundation Frequently Asked Questions (FAQs)



Q92. Can I deploy NSX onto a converted or imported domain?

A. Yes, the VCF Import CLI allows you to deploy NSX to a converted or imported domain.

Q93. Can I use NSX virtual networks (i.e. overlay networking) on a converted or imported domain?

A. Yes. While virtual networking is not enabled during the domain convert/import (TEP is not configured on ESXi), customers can manually update the NSX configuration to add TEP on the ESXi + create Edge Nodes. From there Network Virtualization (L2/DHCP/L3/NAT/VPN/etc) is available.

Q94. Are single host clusters, 2-node vSAN clusters, or vSAN stretched clusters supported with import scenarios.

A. No.

Q95. When importing vSphere clusters to VCF workload domains, do I need to upgrade everything to VCF 5.2?

A. No, VCF 5.2 allows running workload domains at different versions. Refer to the VCF documentation for supported versions for a given VCF release.

Q96. Can the source clusters being imported be configured using either vLCM baselines or vLCM images or a combination of both?

A. Yes. You can choose between vLCM baselines (VUM) and vLCM images for each workload domain.

Q97. Can I import clusters with different NIC and/or VDS configurations?

A. Yes, different NIC and VDS topologies across clusters are supported. However, hosts within a cluster must be homogenous.

Q98. Can a VCF administrator visually identify through VCF Operations fleet management if a domain/vCenter server was imported into VCF?

A. No

Q99. Where does the customer get the import script?

A. The import script can be downloaded from Broadcom Software Portal. It can be run using several different parameters. Follow the runbook in the VCF Admin Guide.

Q100. Is NSX required when converting/importing domains?

A. Yes

Q101. Do I have to change my vSphere networking when I convert/import a domain?

A. No network changes are required for converted/imported domains.

Q102. Can I continue to manage my vSphere infrastructure using the vSphere client after it has been converted/imported?

A. Yes, you can continue to manage the vCenter Server from the vSphere client following the convert/import. Use the VCF Import CLI 'sync' parameter to update the SDDC-M when changes are made in vCenter.

Lifecycle Management

Q103. How am I notified when patches/upgrades become available?

A. Users need to log into the repository/VMware depot. Once logged in, users are automatically

VMware Cloud Foundation Frequently Asked Questions (FAQs)



notified from the VCF Operations fleet management user interface when patches and upgrades become available.

Q104. Does SDDC-M perform LCM for the Aria Suite?

A. No, the product formally known as Aria Suite is LCM'd from the Aria Suite Lifecycle Manager. SDDC-M and Aria Suite LCM work together to provide LCM across the full SDDC stack.

Q105. Can VCF Operations fleet management be upgraded by itself, asynchronously?

A. Yes. VCF Operations fleet management is now decoupled from the VCF upgrade. We can now release critical VCF Operations fleet management fixes and features without upgrading the full stack and add new VCF Operations fleet management specific features at a faster pace. You have been able to do this previously, but it was not supported and could cause functions to break. It is now a supported feature.

Q106. Does this mean you don't have to upgrade the management domain first?

A. Yes, you only upgrade VCF Operations fleet management.

Q107. What performs all Day-N operations, scaling, and lifecycle management for domains?

A. VCF Operations fleet management automation

Q108. Can you upgrade a WLD to a version without upgrading the management domain?

A. Yes, you can upgrade a workload domain (WLD) without upgrading the Management Domain. Note that the Management Domain always needs to be upgraded first and be at the highest version.

Q109. Can we deploy flexible target BOMs with different component releases?

A. Yes, each domain will be able to deploy different BOMs based on the needs of the workload applications. You start by selecting the target BOM, ie: 5.2, then you can choose to customize that 5.2 BOM for a given Domain. This will allow you to select versions of the components as needed. There are in-built compatibility checks eliminating the need to use the compatibility matrix. Only the versions that are compatible will show up. If there's an error, it'll tell you what needs to change. This is applied at the domain level only, not the cluster level.

Q110. Will there be a GUI for the offline depot?

A. Yes.

Q111. How does VCF handle synchronizing changes between vCenter Server and VCF Operations fleet management?

A. Administrators can perform changes from vCenter Server and then synchronize the changes to the VCF Operations fleet management inventory using a script. In-built guardrails have been introduced to prevent some VCF Operations fleet management workflows of vCenter Server and VCF Operations fleet management are not in-sync.

Patching and Upgrading

Q112. What software components can be patched/upgraded using VCF Operations fleet management?

A. VMware vSphere, vSAN, NSX, vCenter, and VCF Operations fleet management components are



VMware Cloud Foundation Frequently Asked Questions (FAQs)



patched and upgraded using VCF Operations fleet management UI or the API. VCF Operations fleet management is used to manage the inventory and lifecycle management of a VMware Cloud Foundation instance and should be used to operate and maintain the environment.

Q113. Can I schedule when patches and upgrades are applied?

A. Yes, VCF Operations fleet management allows patches and upgrades to be scheduled to coincide with regular maintenance windows.

Q114. Can I patch/upgrade workload domains independently of each other?

A. Yes, workload domains and clusters can be upgraded independently of each other. VMware Cloud Foundation lifecycle management allows workload domains and clusters to be updated sequentially (one after another) or in parallel (at the same time).

Q115. Can critical patches be applied to a VMware Cloud Foundation component?

A. The Async Patch Tool (AP Tool) can be used to apply critical patches to VCF components between VCF releases. The AP Tool is supported for VCF 4.2.1 and above.

Config Max and Mins

Q116. What are the minimum/maximum host requirements to configure a VMware Cloud Foundation environment with a single VI workload domain?

A. For detailed information, please reference the [Config Min/Max Tool](#).

Q117. How many workload domains can a VMware Cloud Foundation instance have?

A. With VCF 5.2.x, you can have up to 25 WLDs.

Q118. How do I properly size my VCF environment?

A. Please review sizing information on <https://configmax.broadcom.com/home>.

Q119. Where can I find my license entitlements?

A. It's found on the Broadcom Support Portal. Go to support.broadcom.com and then visit "My Entitlements".

Q120. Where is VCF Documentation stored?

A. Please review documentation on <https://docs.vmware.com/en/VMware-Cloud-Foundation/index.html>

Security Advanced Services

Q121. What are the security add-ons available with VMware Cloud Foundation?

A. VMware Cloud Foundation customers are eligible to add on the following security services:

- VMware vDefend Firewall
- VMware vDefend Advanced Threat Prevention
- VMware vDefend Firewall with Advanced Threat Protection
- VMware Avi Load Balancer

Q122. What is VMware vDefend Firewall?

A. VMware vDefend Firewall is a software-defined Layer 2-7 firewall purpose-built to help secure



VMware Cloud Foundation Frequently Asked Questions (FAQs)



virtualized workloads in a private cloud. It provides stateful firewalling capabilities that can be used by organizations to protect against the lateral movement of threats. VMware vDefend Firewall is available in two form factors: a Distributed Firewall that can be deployed at each vSphere workload and a Gateway Firewall that can be deployed on a vSphere host, either as a Virtual Machine (VM) or as an ISO image on a physical server.

Q123. What is VMware vDefend Firewall with Advanced Threat Protection?

A. VMware vDefend Firewall with Advanced Threat Prevention (ATP) is a software-defined Layer 2–7 firewall purpose-built to help secure virtualized workloads in a private cloud. It provides stateful firewalling with threat prevention capabilities that protect organizations against advanced threats. ATP combines multiple detection technologies—Intrusion Detection/Prevention System (IDS/IPS), Network Sandboxing, and Network Traffic Analysis (NTA)—with aggregation, correlation, and context engines from Network Detection and Response (NDR).

Q124. What is VMware vDefend Advanced Threat Protection?

A. VMware vDefend Advanced Threat Prevention (ATP) provides network security capabilities that protect organizations against advanced threats. vDefend ATP combines multiple detection technologies – Intrusion Detection/Prevention System (IDS/IPS), Network Sandboxing, and Network Traffic Analysis (NTA) – with aggregation, correlation, and context engines from Network Detection and Response (NDR).

Q125. What is VMware Avi Load Balancer?

A. VMware Avi Load Balancer provides local and global load balancing, Kubernetes ingress, web application firewall and application analytics across on-premises data centers and

any cloud. Avi is an API-first and self-service software-defined platform that delivers applications consistently across bare metal servers, virtual machines and containers to ensure a fast, scalable, and a more secure application experience. Customers get the best of both worlds by deploying enterprise-grade features in private and hybrid cloud environments such as VMware Cloud Foundation and consuming application services with cloud-native elasticity and automation. It is available as an add-on to VCF and VVF, as well as standalone.

Q126. Will Security Add-Ons for VMware Cloud Foundation work in a vSphere environment?

A. VMware Avi Load Balancer is the only Security Add-On that will work in a standalone environment or in VMware vSphere Foundation/vSphere environments. All other Security add-ons can only be used as a part of VMware Cloud Foundation environments running NSX 3.2 or later.



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