

Transform Your Existing vSphere Infrastructure to VMware Cloud Foundation the Easy Way

A Best Practice and Validation Guide Optimized for Hitachi
Integrated Systems for VMware and ESXi Clusters

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Revision history

Changes	Date
■ Minor updates	November 2025
■ Support for VCF 9.0.	October 2025
■ Initial release.	August 2025

Best Practice and Validation Guide

Introduction

Are you facing the challenge of upgrading your current VMware vSphere infrastructure to VMware Cloud Foundation (VCF)? You are not alone. Many large-enterprise customers that previously were using vSphere Enterprise Plus must now transition to Broadcom's VCF subscription for their renewals. For existing ESXi hosts, such as those running in our customers' converged and hyperconverged infrastructures, we have a brownfield ingestion procedure that will help ease the transition from vSphere to VCF, without having to migrate their VM workloads or Virtual Disks!

This technical white paper will show you how this is accomplished, breaking down the requirements and best practices for each supported scenario. Whether your ESXi clusters run on top of Hitachi VSP and VSP One storage, or on VMware vSAN Ready Nodes, there is an easy ingestion method to turn your existing environment into a VMware Cloud Foundation Private or Hybrid Cloud Infrastructure.

For greenfield deployments of VMware Cloud Foundation, and as an expansion of your existing VMware infrastructure, Hitachi Vantara recommends using Hitachi Integrated Systems for VMware, a pre-validated and fully-racked VMware Cloud Foundation-ready platform. Offering integrated lifecycle management of all hardware components in the stack (including firmware updates for compute nodes EFI and IO cards, as well as for LAN/SAN network switches), and engineered to provide the resilience of a Multi-Region Multi-AZ (Availability Zone) Failure Domain across three data centers (3DC), a feature only available previously with public hyperscalers, Hitachi Integrated Systems enables the ultimate private cloud!

VSP customers who are not already attached to a Hitachi Integrated Systems platform can also bolt-on their existing storage (or get a new VSP storage subsystem with Hitachi Integrated Systems). Doing so will allow them to manage their external FC-SAN datastores as seamlessly as with vSAN clusters in their respective VCF Workload Domains, by virtue of the Hitachi Storage VASA Provider's integration into VMware's Storage Policy-Based Management (SPBM) framework, and thanks to Hitachi UCP Advisor's automation framework and security policies.

Standalone VSP customers attached to other ESXi servers can also leverage both our Hitachi Storage Plug-in for VMware vCenter and our Hitachi Infrastructure Management Pack for VMware Operations to achieve similar benefits.

Whether you want to easily deploy VCF in a new environment for a new project, or you need to upgrade your existing vSphere/vSAN clusters into VCF, Hitachi Vantara has the right solution for you.

Solution description

The best and most practical solution for customers who want to expand or upgrade their vSphere environment, is to convert their existing vSphere (non-vSAN and vSAN) clusters into a Cloud-ready VMware Cloud Foundation (VCF) platform.

Target customers

This paper is intended for Hitachi Vantara customers who are considering adopting VMware Cloud Foundation (VCF). This is especially the case for strategic Broadcom accounts, because those customers are only allowed to subscribe to the VCF core bundle going forward (their existing vSphere | vCenter | vSAN perpetual licenses' support maintenance cannot be renewed, and those nodes must be converted to a VCF subscription to continue to receive support).

Overview of the VCF Installer for VCF 9.0

With the release of VMware Cloud Foundation (VCF) 9.0, the deployment and integration experience has been significantly enhanced through the introduction of the VCF Installer. This modern tool replaces the standalone Cloud Builder and consolidates key deployment workflows, offering a streamlined path to building and expanding VCF environments.

The VCF Installer enables organizations to convert existing vSphere 9.0 environments into VCF management domains, allowing them to leverage current infrastructure without requiring downtime or migrating applications and data.

Key Features of VCF Installer

The following are some of the key features of VCF Import Tool:

- Integrated Conversion Workflow converts existing vSphere 9.0 environments into VCF management domains. Supports infrastructure running vSAN, NFS, or VMFS on Fibre Channel.
- Seamless Integration with VCF Operations, the VCF Import functionality, first introduced in VCF 5.2, is now split in VCF 9:
 - VCF Installer does management domain conversions.
 - VCF Operations imports vSphere 8.x environments as VI domains.
- Infrastructure Reuse Without Downtime enables reuse of existing compute, storage, and networking resources. No need for application or data migration during conversion.
- Support for NSX Features fully supports NSX capabilities in both converted and imported domains:
 - Virtual Private Clouds (VPCs)
 - Overlay networking
 - Edge cluster deployment
 - Edge services enablement

- Fleet Creation and Expansion use VCF Installer to create new VCF instances (fleets). Use VCF Operations to import additional vSphere environments into existing fleets as VI domains.
- Simplified Deployment Architecture eliminates the need for a separate import tool. Reduces complexity and improves usability through unified workflows.

Overview of the VCF Import Tool for VCF 5.2

The VCF Import Tool is a CLI tool for [VCF version 5.2](#). This import tool enables vSphere administrators to easily convert existing vSphere and vSAN infrastructures to a Cloud Foundation Private Cloud.



Note: If using VCF 9, you will instead use the VCF Installer and VCF Operations conversion and import features respectively. This document covers the conversion/migration validation under both versions of VCF.

The VCF Import tool enables customers to expedite their move to a modern private cloud by enabling them to quickly implement Cloud Foundation directly on top of their existing vSphere infrastructure.

By using this tool, converting/importing your existing VMware vSphere environment using non-vSAN vSphere clusters into VCF has never been easier.

In addition to onboarding vSphere environments, VCF Import tool can also prepare the imported vSphere clusters with NSX on vCenter port groups (DVPGs), thereby offering distributed firewalling and other security features available in NSX.

VCF Import Tool key features

The following are some of the key features of VCF Import Tool:

- Compatibility check: Basically, it assures you your current workload are compatible with VCF before migration.
- Automated Workload Migration: It reduces the complexity and time required for migration.
- Rollback Capabilities: The VCF Tool allows you to roll back to your previous environment, in case of any issues.
- Comprehensive Reporting: VCF Tool provides detailed reports on the migration process, helping customers to track the progress and to identify any issues.

Supported scenarios

There are two main use cases for using the VCF Import Tool, depending on whether or not you already have SDDC Manager deployed.

Scenario	Description
Scenario A: Convert	Your environment does not have SDDC Manager, and you want to convert your existing vSphere infrastructure to the VMware Cloud Foundation Management Domain
Scenario B: Import	Your environment does have SDDC Manager deployed, and you want to import your existing vSphere infrastructure as VI Workload Domain

In these main use cases, we can consider multiple scenarios with some of the major ones listed as follows.

- Converting | importing vSphere environment with non-vSAN (VMFS) as primary storage
- Converting | importing vSphere environment with vSAN as primary storage
- Converting | importing vSphere environment with both non-vSAN and vSAN datastores
- Converting | importing vSphere environment with or without NSX

Conversion process

In general, the requirement for conversion process can be categorized as follows:

Requirements for converting a vSphere cluster to a VCF Management Domain

To convert an existing vSphere environment into a VCF management domain there are two requirements that you need to be aware of

- First, the vSphere environment that you convert needs to be running vSphere 8.0 update 3 or higher. This includes both the vCenter Server instance and the ESX hosts. This is the version of vSphere that is associated with the VCF 5.2 Bill of Materials (BOM). This requirement is due, in part, to the fact that you must first deploy the SDDC manager appliance into the cluster, and the 5.2 version of the SDDC Manager appliance requires vCenter and ESXi version 8.0 update 3 (or above).
- Second, when converting a vSphere environment, the vCenter server must be running on the cluster that is being converted. The documentation refers to this as the vCenter server needing to be “co-located” with the cluster.

Requirements for importing a vSphere cluster to a VCF VI Domain

Similar to converting a new management domain, there are two key requirements that you need to be aware of when importing a vSphere environment into a VCF VI domain:

- First, the supported vSphere versions that can be imported as a VI domain are vSphere 7.0 update 3 (or above). Again, this includes both the vCenter Server instance and the ESXi hosts. Note that the minimum version of 7.0 update 3 is the vCenter and ESXi version that corresponds with the VCF 4.5 Bill of Materials (BOM).
- Second, when importing a vSphere environment, the vCenter server must either be running on the cluster that is being converted (co-located) or running on the cluster in the management domain.

Common requirements when converting and importing vSphere clusters

Along with the requirements noted previously, the following requirements apply to both converting and importing vSphere infrastructure.

- All hosts within a vSphere cluster must be homogeneous. Essentially, all the hosts in a cluster need to be the same in terms of capacity, storage type, and configuration (pNICs, VDS, etc.). Server configurations can be different across clusters, but within a cluster the hosts must be the same.
- Clusters to be converted and imported must be running one of the three supported storage types: vSAN, NFS, or VMFS on Fibre Channel (FC). This is often an area of confusion because when doing a greenfield deployment of VCF using the Cloud Builder appliance the storage for the management domain must always be vSAN. Note that the vSAN requirement does not apply to converted management domains where the storage can be either vSAN, NFS, or VMFS on FC.
- When using vSAN, the minimum number of hosts required for the management domain is always four. However, when using NFS or VMFS on FC the minimum number of hosts required is three. Here again, this is different than when doing a greenfield deployment with the Cloud Builder.
- Enhanced Linked Mode (ELM) is not supported with the VCF Import Tool. Each vCenter Server instance to be converted or imported as a VCF workload domain must be in its own SSO domain. As such, each converted or imported vCenter instance will instantiate an isolated workload domain in VCF. This can be a concern for customers who are accustomed to having a single pane of glass with their VCF environment. Be sure to check out the new dashboards provided by VCF Operations (formerly Aria Operations) because they can help mitigate this change.
- All clusters in the vCenter inventory must be configured with one or more dedicated vSphere Distributed Switches (VDS). Note that vSphere Standard Switches (VSS) are not supported. What's more, if you have a VSS configured in your cluster it will need to be removed before you can import the cluster. Also, it is important to note that a VDSs cannot be shared across vSphere clusters.
- There can be no standalone ESXi hosts in the vCenter inventory. Standalone hosts will need to either be moved to a vSphere cluster or removed from the vCenter inventory.
- All clusters must have DRS enabled in fully automated mode and all hosts must have a dedicated vMotion network configured.
- All vmkernel adapters must have statically assigned IP addresses. As part of the convert/import process, a network pool will be created inside the SDDC Manager using the assigned IPs. After the import is complete, these IP addresses must not change. As such, the IP addresses need to be statically assigned.
- vSphere environments cannot have multiple vmkernel adapters configured for a single traffic type.
- It is highly recommended to configure NTP on all cluster nodes, vCenter, and SDDC manager.

Considerations before converting or importing vSphere clusters

The [VCF Administration Guide](#) is the main reference to create this technical paper and it describes the supported and unsupported configurations for converting an existing vSphere environment into a VMware Cloud Foundation management domain or importing an existing vSphere environment as a VI workload.

Hitachi UCP Advisor

Hitachi UCP Advisor provides detailed information about the infrastructure components and allows you to manage operations for connected devices.


UCP Advisor simplifies infrastructure operations. Seamless integration allows automated provisioning of Hitachi Integrated Systems platform—for both the converged and hyperconverged infrastructures. It provides unified management, central oversight, and smart life-cycle management for firmware upgrades, element visibility, and troubleshooting. UCP Advisor simplifies IT management and orchestration for faster and easier deployment of converged and hyperconverged systems.





Note: Hitachi UCP Advisor and its respective software elements remain functional after converting the target cluster into the VCF environment.

Considerations before converting or importing by Domain Type

Category	Management Domain Considerations	VI Workload Domain Considerations	Recommendation
VMware Cloud Foundation Software BOM Alignment	<ul style="list-style-type: none"> Minimum 5.2 vCenter Server & ESXi 8.0U3 	<ul style="list-style-type: none"> Minimum 4.5.0 vCenter Server & ESXi 7.0U3 	<p>Upgrade the domain to the minimum bill of materials.</p> <div> <p>Caution: vCenter Servers originally deployed at a version below 6.5 may encounter an issue upgrading to 8.0U3. See KB370882 for more details.</p> </div>

Category	Management Domain Considerations	VI Workload Domain Considerations	Recommendation
Ports & Protocols	Must align with https://ports.esp.vmware.com/home/VMware-Cloud-Foundation <div>  Caution: vCenter Server must be using port 443. </div>		Custom ports for vCenter Server are not currently supported for import. Please wait for a future version of VCF that will support importing vCenter Server using custom ports.
vCenter Server VM Location	Must be co-located.	Must be located in the management domain, or co-located.	Move the vCenter Server VM to a supported location. See this for more information on cross vCenter vMotion.
Single Sign-On	SSO domain names for imported environments do not need to be unique within a VMware Cloud Foundation instance.		
	Each SSO domain should contain only a single vCenter Server. ELM is not supported.		Break the ELM ring creating multiple SSO domains.
Cluster - Storage	<ul style="list-style-type: none"> Default cluster must be one of vSAN, NFS, VMFS-FC. NFS 4.1, FCoE, VVOLs or native iSCSI are not supported. 		Select a cluster with primary storage from the supported list.
	Clusters cannot be stretched vSAN.		vSAN stretched clusters are not currently supported. Please wait for a future version of VCF that will support importing vSAN stretched clusters.
	<ul style="list-style-type: none"> When using vSAN, all clusters must be 4 nodes minimum. When using NFS or FC the default cluster must be 2 nodes minimum. 	<ul style="list-style-type: none"> When using vSAN, all clusters must be 3 nodes minimum. When using NFS or FC all clusters must be 2 nodes minimum. 	Expand the cluster to the minimum number of nodes for the relevant storage type.

Category	Management Domain Considerations	VI Workload Domain Considerations	Recommendation
	 Note: Deploying NSX requires a minimum of 3 nodes.	 Note: Deploying NSX requires a minimum of 3 nodes.	
	When using vSAN, compression only (applicable for OSA) is not supported.		Dedupe and compression are supported together. Either enable dedupe, or disable compression.
Cluster - Network	vCenter Server must not have an existing NSX instance registered.		vCenter Servers with existing NSX registrations are not currently supported for import.
	LACP not supported.		Use teaming options available with vSphere Distributed Switch and N-VDS to provide load balancing and failover.
	Use vSphere Distributed Switches only. Standard or Cisco virtual switches are not supported.		Move to vSphere Distributed Switch. See this procedure .
	VMkernel IP addresses must be statically assigned.		Move to statically assigned IP addresses.
	Multiple VMkernels for a single traffic type (vSAN, vMotion) are not supported.		Reconfigure to a single VMkernel per traffic type.
	ESXi hosts must have the same number of physical uplinks (minimum 2) assigned to a vSphere distributed switch. Each uplink must be a minimum of 10 GB.		Reconfigure uplinks accordingly.
	vSphere distributed switch teaming policies must match VMware Cloud Foundation standards.		See here for VMware Cloud Foundation teaming policies.
	Dedicated vMotion network must be configured.		Configure a dedicated vMotion network.

Category	Management Domain Considerations	VI Workload Domain Considerations	Recommendation
	Each cluster must have a dedicated vSphere distributed switch.		Ensure that each cluster has its own vSphere distributed switch.
Cluster - Compute	Cluster must not be VxRail managed.		VxRail is not currently supported. Please wait for a future version of VCF that will support importing VxRail.
	All clusters must be running vSphere 8.0U3.	ESXi build number must be consistent within a cluster.	Upgrade hosts to align build numbers.
	DRS must be fully automated.		Enable DRS and set to fully automated.
	Standalone hosts are not supported.		Remove the standalone host from the vCenter Server inventory.

Configurations supported by Domain Type

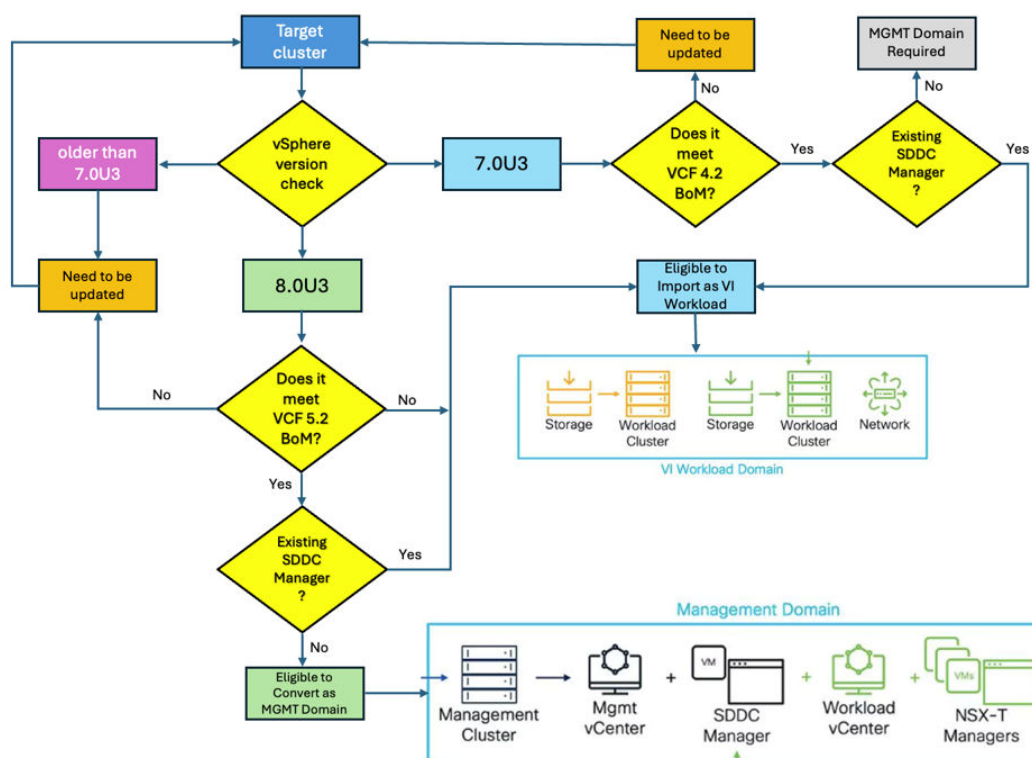
Configuration	Converted Management Domain	Imported VI Workload Domain	VCF Deployed Management Domain	VCF Deployed VI Workload Domain	Additional Information
Deployment with NSX VLAN Only (no overlay networking)	Yes*	Yes*	No	No**	<p>* NSX deployment requires a minimum of 3 hosts.</p> <p>** No native UI/API support but can be achieved using the workload domain import scripts.</p>

Configuration	Converted Management Domain	Imported VI Workload Domain	VCF Deployed Management Domain	VCF Deployed VI Workload Domain	Additional Information
vSphere networking only (No NSX)	Yes	Yes	No	Yes*	* VCF 5.2 minimum
NSX Edge deployment	No	No	Yes	Yes	
AVN	No	No	Yes	N/A	Requires NSX edge cluster
Aria Lifecycle deployment in VCF aware mode	No	No	Yes	N/A	Requires NSX Overlay networking
Fibre channel storage as primary storage	Yes	Yes	No	Yes	
NFS storage as primary storage	Yes	Yes	No	Yes	
vCenter Appliances co-located in a workload domain cluster	Yes	Yes	Yes	No	
Non-standard VCF networking, such as link aggregation to the hosts (LACP)	No	No	No	No	
Enhanced Link Mode (ELM)	No	No	Yes	Yes	
NSX Overlay networking	No	No	Yes	Yes	Requires NSX Overlay networking

Configuration	Converted Management Domain	Imported VI Workload Domain	VCF Deployed Management Domain	VCF Deployed VI Workload Domain	Additional Information
AVI Load Balancer	No	No	Yes	Yes	Requires NSX Overlay networking
vSAN Stretched Cluster	No	No	Yes	Yes	Requires NSX Overlay networking
WCP Enabled clusters	No	No	Yes	Yes	Requires NSX Overlay networking
L3 vSphere Cluster create/Add Host	No	No	No	Yes	Requires NSX Overlay networking
vVOL enabled storage	No	No (New clusters can be added post import that utilize vVOL enabled storage)	No (Supplemental only)	Yes	
Multi-Region/DR	No	No	Yes	Yes	Requires NSX Overlay networking
VMware Validated Solutions	No	No	Yes	Yes	
ESXi Host Password management	No	No	Yes	Yes	
Add host to a cluster	Yes*	Yes*	Yes	Yes	* Must be done in vCenter and then perform a sync operation

Configuration	Converted Management Domain	Imported VI Workload Domain	VCF Deployed Management Domain	VCF Deployed VI Workload Domain	Additional Information
	Yes*	Yes*	Yes	Yes	* Must be done in vCenter and then perform a sync operation

The following diagram shows vSphere version prerequisites. Based on the type of workloads, the target cluster is designated either for convert or import and needs to meet certain vSphere versioning requirements depending on the migration plan. This means the cluster is either going to be converted to the VCF MGMT Domain or to be imported as a VI workload.



Required resources

Make sure you have enough resources on the target vSphere cluster which is going to be converted to VCF Management Domain. The number of required resources that you will need depends on your convert scenario.

For example; having or not having plan to deploy NSX and VMware Aria or how many VI workload domain you want to add, of course, by considering [VCF configuration limitation](#). For a simple conversion process, you should have enough resources for SDDC Manager appliance.

The following table illustrates approximate required resources (including compute and storage) for some of the VCF components. Please consult the VMware documentation for resource requirements for VCF Operations/Automation/Log Insight (formerly VMware Aria Suite Lifecycle) and other VMware product that you want to deploy on the Management Domain.

Component	vCPU	Memory	Storage
SDDC Manager	4	16 GB	980 GB
vCenter Server (small)	4	19 GB	480 GB
NSX-T Manager 01 (medium)	6	24 GB	300 GB
NSX-T Manager 02	6	24 GB	300 GB
NSX-T Manager 03	6	24 GB	300 GB
NSX-T Edge 01 (medium)	4	8 GB	200 GB
NSX-T Edge02	4	8 GB	200 GB

If you do not want to use an existing vSphere production cluster as the VCF Management Domain, whether due to security/isolation considerations, or lack of resource availability, you also have the option to procure a new Hitachi Integrated Systems platform, which will include a Management Workload Domain with its vSphere cluster pre-allocated and pre-configured for you, and follow the rest of this document to ingest your existing vSphere environment as VI Workload Domains.

Tested scenarios

The following table lists all the tested scenarios including the results for each test case. The environment used either a “SAN-Attached Cluster” where the vSphere hosts used VMFS Datastores on an external VSP storage system, or a “vSAN Cluster” where the vSphere hosts were hyperconverged (local storage), or “vSphere hybrid SAN+vSAN Cluster” where the same vSphere hosts attached to both external VSP storage and local vSAN-certified storage at the same time.

Environment	Number of nodes	vSphere version	Datastore	NSX Deployment	Converted / Imported to	Outcome Result
SAN-Attached Cluster	2	9.0	VMFS	No	Management Domain	Converted Successfully
SAN-Attached Cluster	3	9.0	VMFS	No	Management Domain	Converted Successfully
SAN-Attached Cluster	4	8.0U3	VMFS	No	Management Domain	Converted Successfully
vSAN Cluster	4	8.0U3	vSAN	No	Management Domain	Converted Successfully
vSphere hybrid SAN +vSAN Cluster	4	8.0U3	VMFS + vSAN (Hybrid)	No	Management Domain	Converted Successfully
SAN-Attached Cluster	2	8.0U3	VMFS	No	Management Domain	Failed: required minimum 4 hosts
SAN-Attached Cluster	3	8.0U3	VMFS	No	Management Domain	Failed: required minimum 4 hosts
vSAN Cluster	3	9.0	VSAN	No	VI Workload Domain	Converted Successfully
vSAN Cluster	3	8.0U3	VSAN	No	VI Workload Domain	Converted Successfully
SAN-Attached Cluster	2	8.0U3	VMFS	No	VI Workload Domain	Converted Successfully
SAN-Attached Cluster	2	7.0U3	VMFS	No	VI Workload Domain	Converted Successfully
vSAN Cluster	4	8.0U3	vSAN	No	VI Workload Domain	Converted Successfully

Environment	Number of nodes	vSphere version	Datastore	NSX Deployment	Converted / Imported to	Outcome Result
vSAN Cluster	4	7.0U3	vSAN	No	VI Workload Domain	Converted Successfully
vSphere hybrid SAN +vSAN Cluster	4	8.0U3	VMFS + vSAN (Hybrid)	No	VI Workload Domain	Converted Successfully
SAN-Attached Cluster	4	8.0U3	VMFS	Yes	Management Domain	Failed: NSX version mismatched
vSAN Cluster	4	8.0U3	VMFS	Yes	Management Domain	Failed: NSX version mismatched

Tested software

The following software was used to run the previous multiple scenarios.

Software	Version	Details
ESXi	9.0	Convert vSphere cluster into MGMT Domain as well as VI Workload Domain
ESXi	8.0U3	Convert vSphere cluster into MGMT Domain as well as VI Workload Domain
ESXi	7.0U3	Convert vSphere environment as VI Workload Domain
vCenter	9.0	Convert vSphere cluster into MGMT Domain as well as VI Workload Domain
vCenter	8.0U3	Convert vSphere cluster into MGMT Domain as well as VI Workload Domain
vCenter	7.0U3	Convert vSphere environment as VI Workload Domain.
vSAN	9.0	As primary storage as well as secondary storage option
vSAN	8.0U3	As primary storage as well as secondary storage option

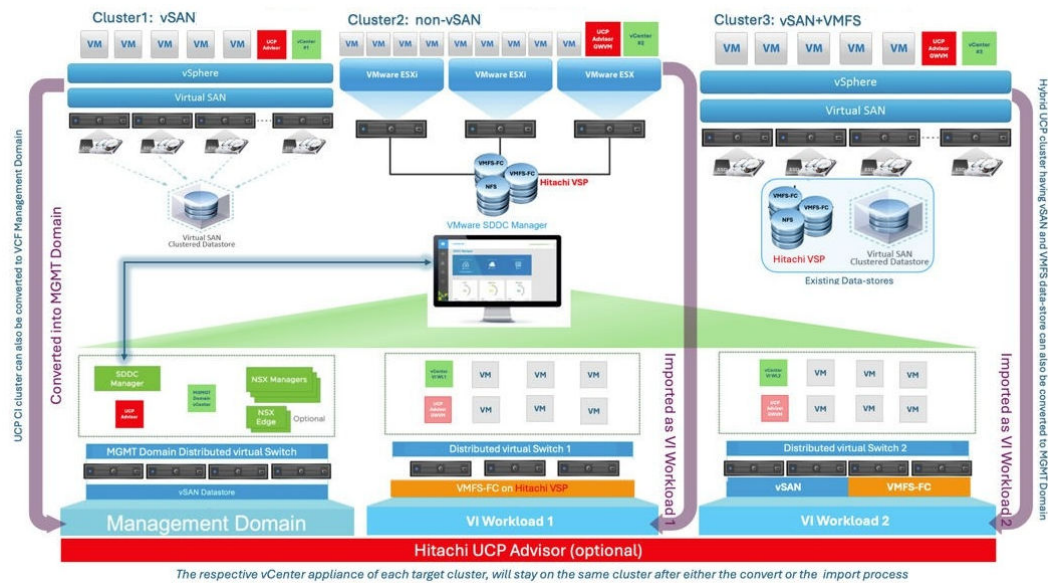
Software	Version	Details
vSAN	7.0U3	As primary storage as well as secondary storage option
VCF Installer	9.0	Required for convert, import and sync workflows.
SDDC Manager Appliance	5.2.0.0-24108943	Required for convert, import and sync workflows.
VCF Import Tool	5.2.0.0-24108578	Required for convert, import, and sync workflows.
NSX_T_Manager	4.2.0.0	Only required for convert or import workflows when you plan to deploy VMware NSX as part of the workflow or if you plan to deploy VMware NSX as a day-N operation for workload domains imported or deployed without NSX.

Tested hardware

The following hardware was used to run the previous multiple scenarios.

Hardware	vSphere version	Details
Hitachi Advanced Server HA825 G3	9.0	Tested as MGMT Domain as well as VI Workload Domain
Hitachi Advanced Server HA810 G3	8.0U3	Tested as MGMT Domain as well as VI Workload Domain
Hitachi Virtual Storage Platform One Block 28	8.0U3 & 7.0U3	As primary storage on both DS and HA Chassis As external storage beside vSAN
Cisco 93180YC-FX3	N/A	As ToR switches
Brocade Fibre Channel Switch	G720	As a fabric switch

The following diagram illustrates an example of different clusters and workloads, a vSAN cluster that is converted as MGMT Domain and it forms a VCF environment managed by SDDC-Manager, and a SAN-attached cluster, plus a hybrid cluster (having both local vSAN storage and external VMFS|NFS datastores) that are also imported to VCF as VI Workloads. Also, a single instance of UCP Advisor is located on MGMT Domain that serves all VCF workloads.



Note: The VCF Import Tool keeps the respective vCenter appliance of each target cluster on the same cluster, and it will not relocate any vCenter from target cluster onto the MGMT Domain after the import and convert process. Unlike VCF greenfield deployment which keeps all vCenters under the MGMT Domain.

Conversion prerequisites

The following criteria must be met before conversion:

- Download required software from [Broadcom support portal](#) for converting or importing existing vSphere environment.
- All hosts should be identical.
- All hosts must be registered on vCenter/Cluster using their FQDN (Fully Qualified Domain Name).
- No Standard Switch on any host in cluster (even a Standard Switch without any uplink).
- Distributed virtual switch v.8.0.3 is required on the cluster that designated to be converted into a Management Workload Domain.
- HA must be enabled, and DRS need to be configured fully automated on the designated cluster.
- SFTP must be enabled on vCenter.
- The ESXi upgrade policy needs to be configured on the designated cluster.
- Make sure FIPS has been enabled on vCenter if you plan to use FIPS on SDDC manager.
- It is highly recommended that you Configure vSphere Lifecycle Manager Remediation Settings for Clusters or Standalone Hosts that You Manage with a Single Image instead of the baseline due to the baseline becoming deprecated.
- Network and Compute Requirements:

Component	Network Requirement	Compute Requirement
SDDC Manager (for convert only)	<ul style="list-style-type: none"> 1 management IP address with corresponding DNS entry Must be routable to all components 	<ul style="list-style-type: none"> 4 vCPU 16 GB RAM 908 GB disk (Thin Provisioned)
NSX Manager (optional)	<ul style="list-style-type: none"> 4 IP addresses in the same subnet as the associated vCenter Server with corresponding DNS entries <ul style="list-style-type: none"> 3 × NSX Manager nodes 1 × NSX Manager VIP 	<ul style="list-style-type: none"> Compute requirements for NSX will vary depending on the appliance size chosen. Review the NSX documentation for sizing guidance. For management domain NSX Managers will be deployed in the management domain vCenter Server NSX deployment requires a minim

Tasks to convert vSphere environments to a Management Domain in VCF

To convert an existing vSphere cluster into a Management Workload Domain in VCF 9.0 use the instructions in the following table.

Step	Task Name
1	Install the VCF installer into Target vCenter Appliance.
2	Download VCF 9.0 Binaries using online or offline depot settings.
3	Deploy the VCF using the VCF deployment wizard and select existing vCenter in the configuration to start the conversion.
4	Configure the VCF Operations and Fleet Manager.
5	Validate a Converted Management Domain.

To convert an existing vSphere cluster into a Management Workload Domain in VCF 5.2 use the instructions in the following table.

Step	Task Name	Additional Info
1	Copy the VCF Import Tool to the Target vCenter Appliance	

Step	Task Name	Additional Info
2	Run a Precheck on the Target vCenter Before Conversion	The precheck determines if the environment can be converted to the management domain
3	Remove the VCF Import Tool from vCenter.	The convert operation is run from SDDC Manager, once deployed.
4	Generate an NSX Deployment Specification for Converting or Importing Existing vSphere Environments	Only required if you plan to deploy NSX during the convert operation.
5	Deploy the SDDC Manager Appliance on the Target vCenter	
6	Upload the Required Software to the SDDC Manager Appliance	
7	Run a Detailed Check on the Target vCenter Before Conversion or Import	
8	Convert or Import the vSphere Environment into the SDDC Manager Inventory	The workload domain will be marked type: MGMT
9	Add Licenses for Converted or Imported Workload Domains in SDDC Manager	
10	Validate a Converted Management Domain or Imported VI Workload Domain	

Tasks to import a vSphere environment as a VI Workload in VCF 5.2

Use the following procedure if your environment already has SDDC Manager deployed and you want to import an existing vSphere environment as a VI Workload Domain.

Step	Task Name	Additional Info
1	Upload the Required Software to the SDDC Manager Appliance	
2	Generate an NSX Deployment Specification for Converting or Importing Existing vSphere Environments	Only required if you plan to deploy NSX during the import operation.
3	Run a Detailed Check on the Target vCenter Before Conversion or Import	

Step	Task Name	Additional Info
4	Convert or Import the vSphere Environment into the SDDC Manager Inventory.	The workload domain will be marked type: VI
5	Add Licenses for Converted or Imported Workload Domains in SDDC Manager	
6	Validate a Converted Management Domain or Imported VI Workload Domain	

Tasks to import a vSphere environment as a VI Workload in VCF 9.0

Use the following procedure if your environment already has SDDC Manager deployed and you want to import an existing vSphere environment as a VI Workload Domain.

Step	Task Name
1	Import vCenter using VCF Operations
2	Deploy NSX-T
3	Add Licenses for Converted or Imported Workload Domains in SDDC Manager
4	Validate the Imported VI Workload domain

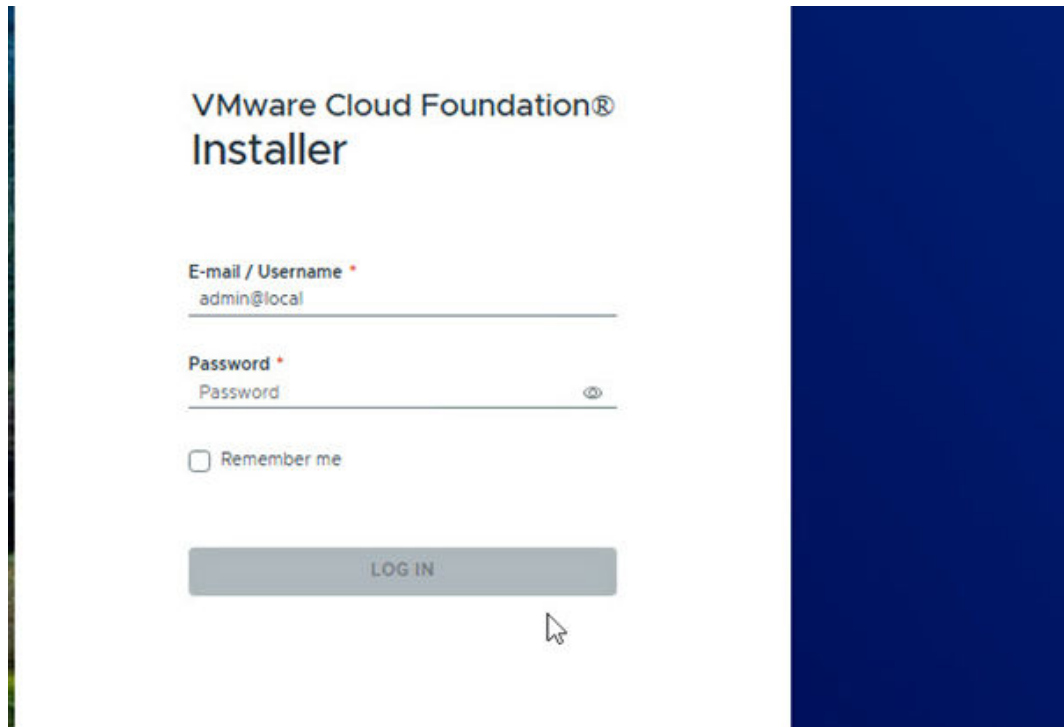
Process overview

Convert an existing vSphere environment into a Management Domain in in VCF 9.0

Use this procedure to convert an existing vSphere cluster into a Management Workload Domain in VCF 9.0.

Procedure

1. Install the VCF Installer on the target vCenter.



2. Download the VCF Binaries on VCF installer using the Online Depot or the Offline Depot which requires a generated download token from the Broadcom support portal.

Depot Settings

You can only connect the VCF Installer to one depot at a time. Configuring another depot connection deactivates and deletes any existing configuration.

Alternatively you can use the Binary Transfer utility to manually download the binaries from the depot to your local computer and then upload them to the VMware Cloud Foundation installer appliance. [Read more](#)

Connect to the online depot

☒ Depot connection active
☐ Proxy settings are not configured

[EDIT DEPOT CONNECTION](#) [DISCONNECT](#)

Offline Depot

Offline depot connection not set up. Start setup and enter the offline depot settings to setup connection.

[CONFIGURE](#)

Binary Management

Download Summary

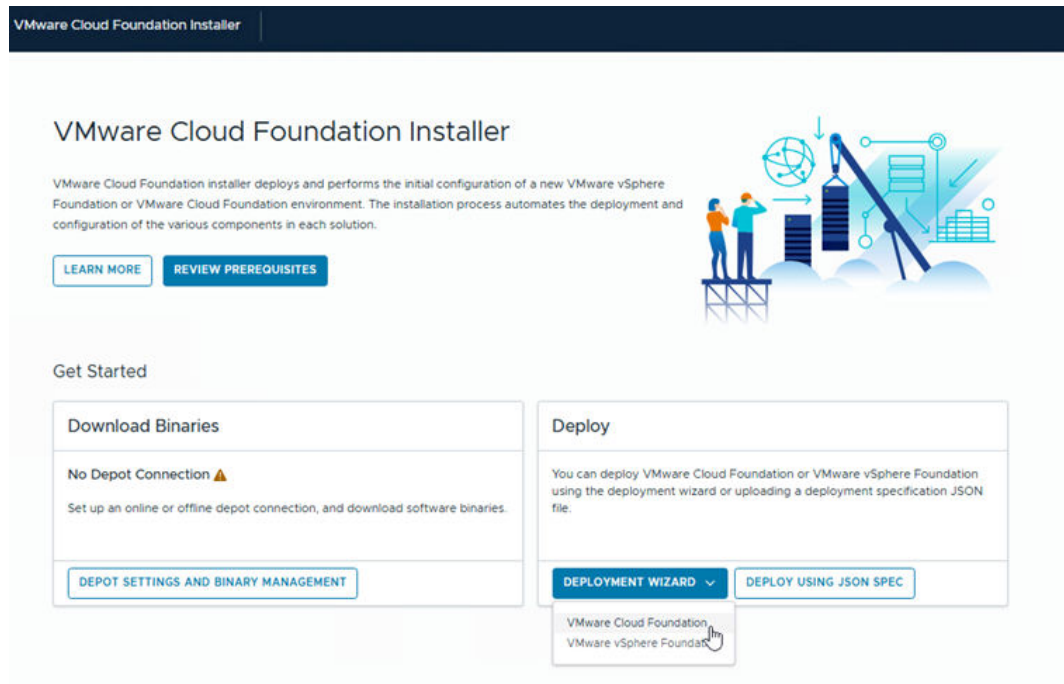
Version: 9.0.0.0 VMware vSphere Foundation [Downloaded](#) VMware Cloud Foundation [Downloaded](#)

Filter the list by product and version and download the required component binaries. For additional guidance, refer to the [Product Interoperability Matrix](#)

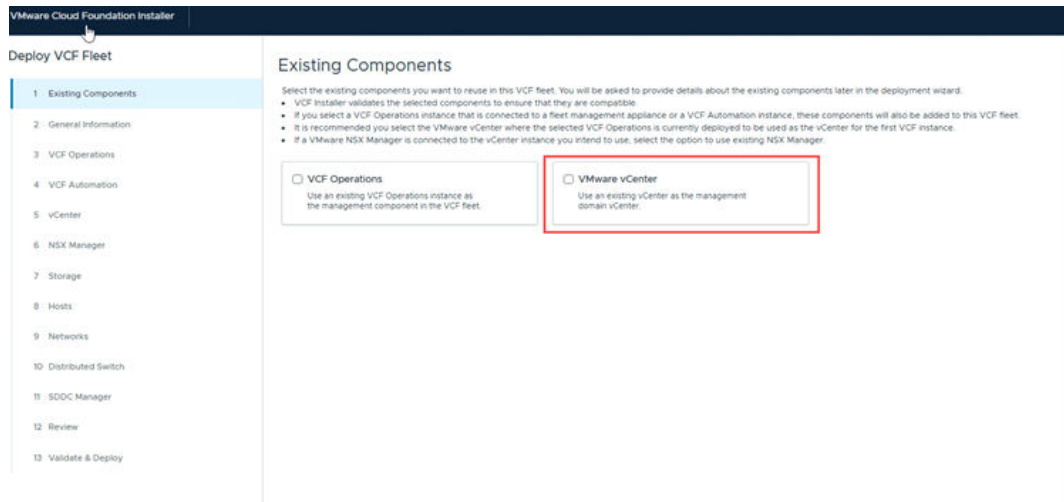
Product: VMware Cloud Foundation Version: 9.0.0

Component	Version	Size	Download Status
SDOC Manager	9.0.0.0	2.00 GB	Success
VMware Cloud Foundation Automation	9.0.0.0	21.17 GB	Success
VMware Cloud Foundation Operations	9.0.0.0	2.63 GB	Success
VMware Cloud Foundation Operations Collector	9.0.0.0	2.68 GB	Success
VMware Cloud Foundation Operations fleet management	9.0.0.0	1.49 GB	Success
VMware NSX	9.0.0.0	9.99 GB	Success
VMware vCenter	9.0.0.0	12.04 GB	Success

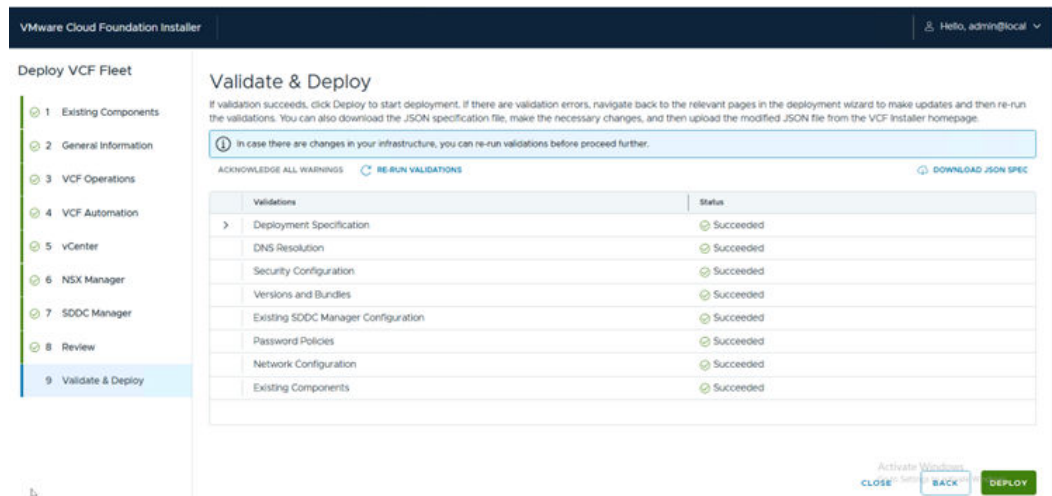
3. Select VMware Cloud Foundation in the Deployment wizard.



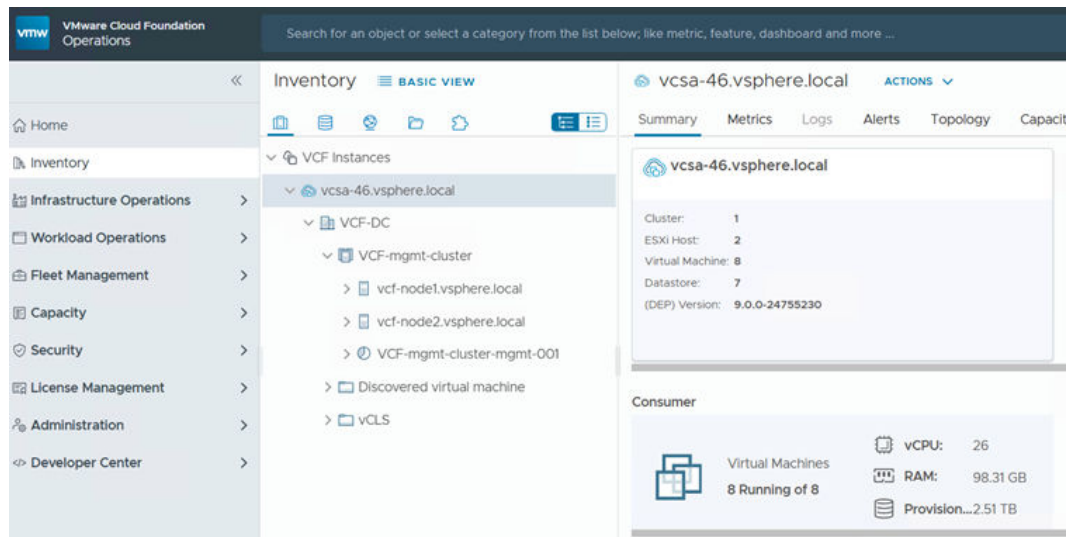
4. Under **Existing Components**, select **VMware vCenter** and provide the necessary information in further steps.



5. Validate the deployment details and click **Deploy** to convert the existing vSphere to VCF Management Domain.



6. Validate the VCF instance from VCF Operation.



Convert an existing vSphere environment into a Management Domain in VCF 5.2

Use this procedure to convert an existing vSphere cluster into a Management Workload Domain in VCF 5.2. The following example illustrates the conversion process with the option to skip NSX deployment.

Procedure

1. Copy the VCF import Tool to the target vCenter.
2. Run the Precheck in the Target vCenter before conversion.
 - a. SSH to the vCenter Server VM as user **root**.
 - b. Navigate to the directory where you copied the VCF Import Tool.

For example:

```
cd /tmp/vcfimport/vcf_brownfield
```

- c. Run the following command to precheck the target vCenter:

```
python3 vcf_brownfield.py precheck --vcenter '<my-vcenter-address>' --sso-user '<my-sso-username>' --sso-password '<my-sso-password>'
```

```
root@vsa-hall1: /tmp/vcfimport # cd /tmp/vcfimport/vcf-brownfield-import-5.2.0-2410876/vcf-brownfield-toolset/
root@vsa-hall1: /tmp/vcfimport/vcf-brownfield-import-5.2.0-2410876/vcf-brownfield-toolset # pwd
/tmp/vcfimport/vcf-brownfield-import-5.2.0-2410876/vcf-brownfield-toolset
root@vsa-hall1: /tmp/vcfimport/vcf-brownfield-import-5.2.0-2410876/vcf-brownfield-toolset # python3 vcf_brownfield.py precheck --vcenter 'vsa-hall1.vsphere.local' --sso-user 'administrator@vsa-hall1.vsphere.local' --sso-password 'vsa-hall1'
2024-08-30 20:17:19.423 [INFO] vcf_brownfield: Brownfield import main version: 5.2.0-2410876
2024-08-30 20:17:19.423 [INFO] vcf_precheck: Starting VCF Brownfield precheck script version 1.0.0...
2024-08-30 20:17:19.434 [INFO] vcf_precheck: Connected to vCenter vsa-hall1.vsphere.local in 0.1 seconds
2024-08-30 20:17:19.549 [INFO] vcf_precheck: Running pre-checks for vCenter vsa-hall1.vsphere.local...
2024-08-30 20:17:19.620 [INFO] vcf_precheck: [1/10] VC ROM version check... PASS
2024-08-30 20:17:19.562 [INFO] vcf_precheck: [2/10] VMX generation cluster check... PASS
2024-08-30 20:17:19.579 [INFO] vcf_precheck: [3/10] Supported storage available check... PASS
2024-08-30 20:17:19.564 [INFO] vcf_precheck: [4/10] Content VM location check... PASS
2024-08-30 20:17:19.657 [INFO] vcf_precheck: [5/10] Vmtoolsd registration check... PASS
2024-08-30 20:17:19.761 [INFO] vcf_precheck: [6/10] ESX-T registration check... PASS
2024-08-30 20:17:19.773 [INFO] vcf_precheck: [7/10] Provisioning host check... PASS
2024-08-30 20:17:20.200 [INFO] vcf_precheck: [8/10] All cluster hosts connected to vDS check... PASS
2024-08-30 20:17:20.900 [INFO] vcf_precheck: [9/10] ESX hard memory check... PASS
2024-08-30 20:17:21.210 [INFO] vcf_precheck: [10/10] VCF import check... PASS
2024-08-30 20:17:21.210 [INFO] vcf_precheck: All pre-checks passed!
2024-08-30 20:17:21.210 [INFO] vcf_precheck: Pre-checks for vCenter vsa-hall1.vsphere.local completed in 1.49 seconds
root@vsa-hall1: /tmp/vcfimport/vcf-brownfield-import-5.2.0-2410876/vcf-brownfield-toolset #
```

3. Remove the VCF Import Tool from vCenter.
4. Generate an NSX Deployment Specification for converting or importing existing vSphere environments. (Deploying NSX Manager is optional. If you do not deploy NSX during a convert or import operation, you can always deploy it later).
 - a. Create a JSON file with the details of your NSX deployment.

```
{
  "license_key": "AAAAA-BBBBBB-CCCCC-DDDDD-EEEEEE",
  "form_factor": "medium",
  "admin_password": "VMw@rel!VMw@rel!",
  "install_bundle_path": "/nfs/vmware/vcf/nfs-mount/bundle/bundle-124941.zip",
  "cluster_ip": "172.16.11.71",
  "cluster_fqdn": "sfo-m01-nsx01.sfo.rainpole.io",
  "manager_specs": [{
    "fqdn": "sfo-m01-nsx01a.sfo.rainpole.io",
    "name": "sfo-m01-nsx01a",
    "ip_address": "172.16.11.72",
    "gateway": "172.16.11.1",
    "subnet_mask": "255.255.255.0"
  },
  {
    "fqdn": "sfo-m01-nsx01b.sfo.rainpole.io",
    "name": "sfo-m01-nsx01b",
    "ip_address": "172.16.11.73",
    "gateway": "172.16.11.1",
    "subnet_mask": "255.255.255.0"
  },
  {
    "fqdn": "sfo-m01-nsx01c.sfo.rainpole.io",
    "name": "sfo-m01-nsx01c",
    "ip_address": "172.16.11.74",
    "gateway": "172.16.11.1",
    "subnet_mask": "255.255.255.0"
  }]
}
```

- b. Replace the content in the sample JSON with the information for your environment.

- c. Copy the completed JSON file into the SDDC Manager appliance.
5. Deploy the SDDC Manager appliance on the target vCenter.
6. Upload the required software to the SDDC Manager appliance.
 - a. SSH to the SDDC Manager appliance as user `vcf`.
 - b. Copy the NSX deployment bundle `bundle-<buildnumber>.zip` to the `/nfs/vmware/vcf/nfs-mount/bundle/` folder.
 - c. Copy the VCF Import Tool to the SDDC Manager appliance.
 - i. Create a folder for the VCF Import Tool.

For example:

```
mkdir /home/vcf/vcfimport
```

- ii. Copy `vcf-brownfield-import-<buildnumber>.tar.gz` to the folder.
- iii. Navigate to the folder and extract the bundle.

```
tar -xvf vcf-brownfield-import-<buildnumber>.tar.gz
```

- iv. Navigate to the `vcf-brownfield-toolset` folder.

```
cd vcf-brownfield-import-<buildnumber>/vcf-brownfield-toolset
```

- v. Verify that the scripts extracted correctly.

```
python3 vcf_brownfield.py --help
```

7. Run a detailed check on the target vCenter before conversion or import.
 - a. SSH to the SDDC Manager appliance as user `vcf`.
 - b. Navigate to the directory where you copied the VCF Import Tool.

For example:

```
cd /home/vcf/vcfimport/vcf-brownfield-import-<software-version>/vcf-brownfield-toolset
```

- c. Run the following command to verify that the vSphere environment can be converted or imported.

```
python3 vcf_brownfield.py check --vcenter '<my-vcenter-address>' --sso-user '<my-sso-username>'
```

Convert an existing vSphere environment into a Management Domain in VCF 5.2

```

root@kali:~/vuln# ./vuln-browserfield-import-5.2.0-0-24108578/vcf-browserfield-toolset [5]
root@kali:~/vuln# ./vuln-browserfield-import-5.2.0-0-24108578/vcf-browserfield-toolset [5 wd
root@kali:~/vuln# ./vuln-browserfield-import-5.2.0-0-24108578/vcf-browserfield-toolset
root@kali:~/vuln# ./vuln-browserfield-import-5.2.0-0-24108578/vcf-browserfield-toolset [5 python3 vcf-browserfield.py check --vcenter 'vrsa-hat10.vsphere.local' --sso-user 'administrator@vsphere.local'
2024-09-04 22:21:50.478] [INFO] vcf-browserfield: Browserfield import main version: 5.2.0-0-24108578
Enter vCenter SSO password:
Enter SDDC Manager local admin password:
2024-09-04 22:21:50.395] [INFO] addc_manager_helper: Generating SDDC Manager public API token
2024-09-04 22:21:50.443] [INFO] request_helper: Response status from SDDC Manager token generation: 200
2024-09-04 22:21:50.521] [INFO] request_helper: Response status from retrieving domain: 200
2024-09-04 22:21:50.821] [INFO] addc_manager_helper: Generating SDDC Manager public API token
2024-09-04 22:21:50.860] [INFO] request_helper: Response status from SDDC Manager token generation: 200
2024-09-04 22:21:50.961] [INFO] addc_manager_helper: Retrieving SDDC Manager controller info
2024-09-04 22:21:50.961] [INFO] addc_manager_helper: Using cached SDDC Manager token header
2024-09-04 22:21:50.919] [INFO] request_helper: Response status from SDDC Manager controller info retrieval: 200
2024-09-04 22:21:50.921] [INFO] addc_manager_helper: Generating SDDC Manager public API token
2024-09-04 22:21:50.959] [INFO] request_helper: Response status from SDDC Manager token generation: 200
2024-09-04 22:21:50.919] [INFO] addc_manager_helper: Generating SDDC Manager public API token
2024-09-04 22:21:50.900] [INFO] request_helper: Response status from SDDC Manager token generation: 200
2024-09-04 22:21:50.976] [INFO] request_helper: Response status from retrieving domain: 200
2024-09-04 22:21:50.976] [INFO] addc_manager_helper: Using cached SDDC Manager token header
2024-09-04 22:21:51.047] [INFO] request_helper: Response status from retrieving domain: 200
2024-09-04 22:21:51.047] [INFO] vcf-browserfield: Going to check vcenter vrsa-hat10.vsphere.local
2024-09-04 22:21:51.064] [INFO] addc_manager_helper: Retrieving SDDC Manager trusted certificates
2024-09-04 22:21:51.064] [INFO] addc_manager_helper: Generating SDDC Manager public API token
2024-09-04 22:21:51.106] [INFO] request_helper: Response status from SDDC Manager token generation: 200
2024-09-04 22:21:51.151] [INFO] request_helper: Response status from retrieving trusted certificates: 200
2024-09-04 22:21:51.120] [INFO] addc_manager_helper: Importing trusted certificates to SDDC Manager trust store
2024-09-04 22:21:51.122] [INFO] request_helper: Response status from certificates import: 200
2024-09-04 22:21:51.365] [INFO] request_helper: Response status from certificates retrieval: 200
2024-09-04 22:21:51.366] [INFO] addc_manager_helper: Retrieving SDDC Manager controller info
2024-09-04 22:21:51.366] [INFO] addc_manager_helper: Using cached SDDC Manager token header
2024-09-04 22:21:51.461] [INFO] request_helper: Response status from SDDC Manager controller info retrieval: 200
2024-09-04 22:21:51.464] [INFO] addc_manager_helper: Setting pre-check engine datasource
2024-09-04 22:21:51.700] [ERROR] request_helper: Result status code not set datasource: 400
2024-09-04 22:21:51.700] [INFO] addc_manager_helper: Datasource already configured
2024-09-04 22:21:51.921] [INFO] addc_manager_helper: Using cached SDDC Manager token header
2024-09-04 22:21:51.778] [INFO] request_helper: Response status from retrieving domain: 200
2024-09-04 22:21:51.911] [INFO] request_helper: Response status from trigger import guardrails: 202
2024-09-04 22:21:51.939] [INFO] addc_manager_helper: monitor import guardrails - IN PROGRESS
2024-09-04 22:21:54.994] [INFO] addc_manager_helper: monitor import guardrails - IN PROGRESS
2024-09-04 22:21:52.032] [INFO] addc_manager_helper: monitor import guardrails - COMPLETED
2024-09-04 22:21:52.070] [INFO] check_domain_response: Total checks: 65, Successful checks: 65, Failed checks: 0, Internal errors: 0
2024-09-04 22:21:52.075] [INFO] check_domain: No more details, please, check:
2024-09-04 22:21:52.075] [INFO] check_domain: No more details, please, check:
Failed guardrails: VMcme:/vcf/vcf-browserfield-import-5.2.0-0-24108578/vcf-browserfield-toolset/output/guardrails_report_vrsa-hat10.vsphere.local.yml
Failed guardrails: VMV:/vcf/vcf-browserfield-import-5.2.0-0-24108578/vcf-browserfield-toolset/output/guardrails_report_vrsa-hat10.vsphere.local.yml
Failed guardrails: VMV:/vcf/vcf-browserfield-import-5.2.0-0-24108578/vcf-browserfield-toolset/output/guardrails_report_vrsa-hat10.vsphere.local.yml
root@kali:~/vuln# ./vuln-browserfield-import-5.2.0-0-24108578/vcf-browserfield-toolset [5]

```

- d. If any checks fail, refer to the `guardrails` YAML file for information on the failed check. Refer to the troubleshooting section of this guide for more information on remediation.

8. Convert the vSphere environment into SDDC Manager Inventory.



Note: The following instructions skip NSX deployment.

- SSH to the SDDC Manager VM as user `vcf`.
- Navigate to the directory where you copied the VCF Import Tool.

For example:

```
cd /home/vcf/vcfimport/vcf-brownfield-import-<software-version>/vcf-  
brownfield-toolset
```

- c. Run the `vcf_brownfield.py` script and enter the required passwords when prompted.

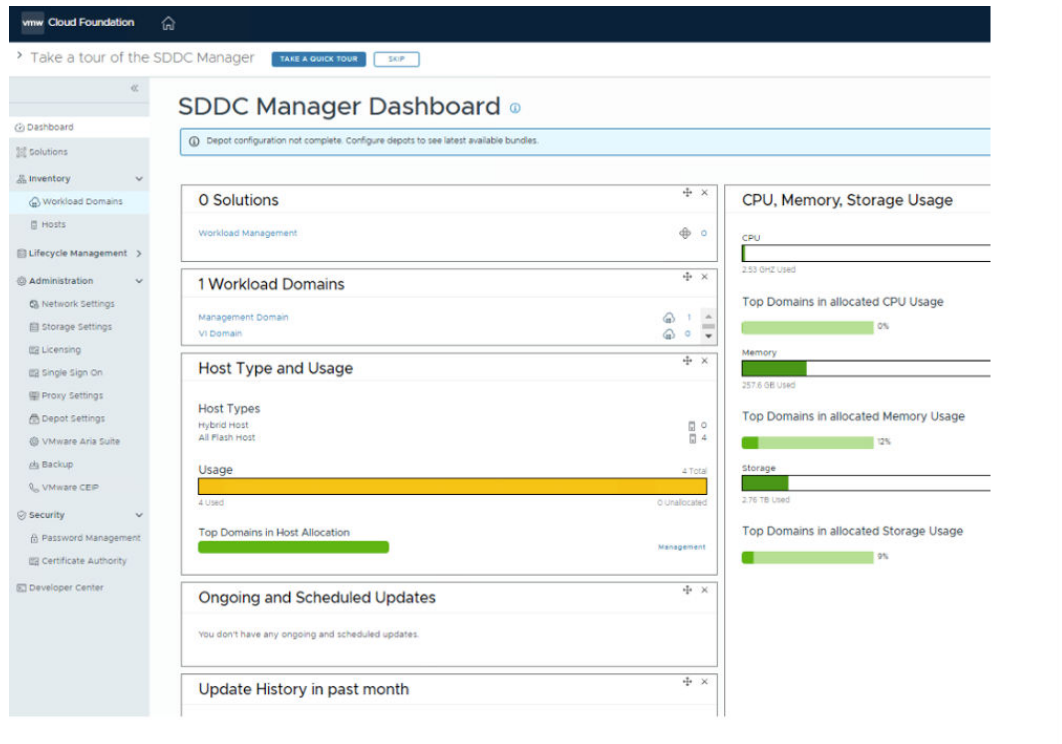
```
python3 vcf_brownfield.py convert --vcenter '<vcenter-fqdn>' --sso-user
'<sso-user>' --domain-name '<wld-domain-name>' --skip-nsx-deployment
```

```

2024-08-29 16:01:19.700 [INFO] wof_broofid: NFOs found: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 83
```

```
[2024-08-29 20:22:39,140] [INFO] sddc_manager_helper: Using cached SDDC Manager token header
[2024-08-29 20:22:39,183] [INFO] request_helper: Response status from polling SDDC Manager brownfield initialization workflow progress: 200
[2024-08-29 20:22:39,184] [INFO] sddc_manager_helper: Task is still in progress, polling...
[2024-08-29 20:22:59,204] [INFO] sddc_manager_helper: Polling status of task with URL: /vi/tasks/b29db172-cb61-4de0-92d0-c7e5b4031b40
[2024-08-29 20:22:59,205] [INFO] sddc_manager_helper: Using cached SDDC Manager token header
[2024-08-29 20:22:59,251] [INFO] request_helper: Response status from polling SDDC Manager brownfield initialization workflow progress: 200
[2024-08-29 20:22:59,252] [INFO] sddc_manager_helper: Task is still in progress, polling...
[2024-08-29 20:23:19,272] [INFO] sddc_manager_helper: Polling status of task with URL: /vi/tasks/b29db172-cb61-4de0-92d0-c7e5b4031b40
[2024-08-29 20:23:19,273] [INFO] sddc_manager_helper: Using cached SDDC Manager token header
[2024-08-29 20:23:19,320] [INFO] request_helper: Response status from polling SDDC Manager brownfield initialization workflow progress: 200
[2024-08-29 20:23:19,320] [INFO] sddc_manager_helper: Task is still in progress, polling...
[2024-08-29 20:23:39,341] [INFO] sddc_manager_helper: Polling status of task with URL: /vi/tasks/b29db172-cb61-4de0-92d0-c7e5b4031b40
[2024-08-29 20:23:39,341] [INFO] sddc_manager_helper: Using cached SDDC Manager token header
[2024-08-29 20:23:39,387] [INFO] request_helper: Response status from polling SDDC Manager brownfield initialization workflow progress: 200
[2024-08-29 20:23:39,387] [INFO] sddc_manager_helper: Task is still in progress, polling...
[2024-08-29 20:23:59,388] [INFO] sddc_manager_helper: Polling status of task with URL: /vi/tasks/b29db172-cb61-4de0-92d0-c7e5b4031b40
[2024-08-29 20:23:59,388] [INFO] sddc_manager_helper: Using cached SDDC Manager token header
[2024-08-29 20:23:59,426] [INFO] request_helper: Response status from polling SDDC Manager brownfield initialization workflow progress: 200
[2024-08-29 20:23:59,426] [INFO] sddc_manager_helper: Task is still in progress, polling...
[2024-08-29 20:24:19,428] [INFO] sddc_manager_helper: Polling status of task with URL: /vi/tasks/b29db172-cb61-4de0-92d0-c7e5b4031b40
[2024-08-29 20:24:19,428] [INFO] sddc_manager_helper: Using cached SDDC Manager token header
[2024-08-29 20:24:19,467] [INFO] request_helper: Response status from polling SDDC Manager brownfield initialization workflow progress: 200
[2024-08-29 20:24:19,467] [INFO] sddc_manager_helper: Task is still in progress, polling...
[2024-08-29 20:24:39,472] [INFO] sddc_manager_helper: Polling status of task with URL: /vi/tasks/b29db172-cb61-4de0-92d0-c7e5b4031b40
[2024-08-29 20:24:39,472] [INFO] sddc_manager_helper: Using cached SDDC Manager token header
[2024-08-29 20:24:39,522] [INFO] request_helper: Response status from polling SDDC Manager brownfield initialization workflow progress: 200
[2024-08-29 20:24:39,522] [INFO] sddc_manager_helper: SDDC Manager configuration has completed with status: successful
[2024-08-29 20:24:39,523] [INFO] utils: Phase '5. Brownfield initialization of SDDC Manager' completed with 0 warnings
[2024-08-29 20:24:39,523] [INFO] vcf_brownfield: Operation convert completed on target: vcsm-mgmt.vsphere.local with status: PASS in 207.84s
[2024-08-29 20:24:39,523] [INFO] vcf_brownfield: Successfully completed convert domain operation for vCenter: vcsm-mgmt.vsphere.local
vcf@sddc-mgmt [ ~/vcf-brownfield-import-5.2.0.0-24108578/vcf-brownfield-toolset ]$
```

9. Add licenses for converted or imported workload domains in SDDC Manager.
10. Validate a converted Management Domain or imported VI Workload Domain.



Import an existing vSphere environment as a VI Workload Domain in VCF 9.0

Use this procedure to import an existing vSphere environment as a VI Workload domain from VCF Operations.

Procedure

1. Log in to VCF Operations using the **Local Account** method.

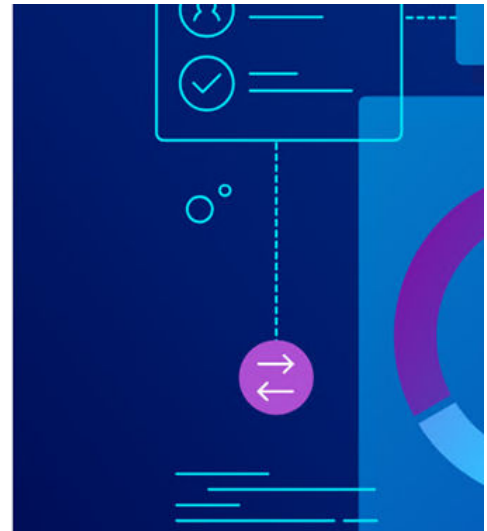
VMware Cloud Foundation Operations™

Login Method *
Local Account

Username *
Enter Username

Password *
Enter Password

LOG IN



2. Select **Import a vCenter** under the **ADD WORKLOAD DOMAIN** tab.

Search for an object or select a category from the list below, like metric, feature, dashboard and more ...

Inventory BASIC VIEW

VCF-Instance ACTIONS ADD WORKLOAD DOMAIN

Summary Metrics Logs Alerts Create New... Import a vCenter

VCF-Instance

Domain:	2
vCenter Server:	2
NSX:	2
Cluster:	2
ESXi Host:	5
Virtual Machine:	14
Datastore:	13
Number of Kubernetes clusters:	0
VCF Version:	9.0.0.0.24703748

3. Provide the existing vCenter information.

Import a vCenter

1 General Information

2 Specify a vCenter

3 Certificate Thumbprint

4 Prechecks

5 Networking

6 Validate

7 Review

Select a vCenter to import as a Workload Domain

The vCenter you specify here will be imported into the VCF Instance as a workload domain

☐ Select an existing standalone vCenter from the inventory ☒ Specify an external vCenter

Specify an external vCenter

All the fields marked with * are required

vCenter server FQDN * ds-vcsa.vsphere.local

vCenter Server Root Password *

SSO user name * administrator@vsphere.local

SSO user password *

☐ This vCenter is connected to an NSX instance

CANCEL BACK NEXT

Activate

4. Accept the Certificate Thumbprint.

5. Validate the Prechecks.

Validation Item	Status
> The number of resources matching definition 'vCenter' is correct. Count 1 for vSphere	Success
> The number of resources matching definition 'vCenterPerspectiveTargetStatesMessages.BASE_VCENTER' is correct. Count 1 for vSphere	Success
> The number of resources matching definition 'Base Cluster' is correct. Count 1 for vSphere	Success
> The number of resources matching definition 'vCenter' is correct. Count 1 for vSphere	Success
> The number of resources matching definition 'Cluster' is correct. Count 1 for vSphere	Success
> VMware Cloud Foundation is compatible with the versions of ESXi, vCenter Server, and NSX for ds-vcsa.vsphere.local	Success
> Conforming cluster detected for ds-vcsa.vsphere.local	Success
> SDDC Manager DNS server Configured for ds-vcsa.vsphere.local	Success
> SDDC Manager NTP server Configured for ds-vcsa.vsphere.local	Success
> vCenter root account is accessible with the provided password for ds-vcsa.vsphere.local	Success
> The total number of hosts managed by SDDC Manager would not exceed 2500 for ds-vcsa.vsphere.local	Success

6. Provide the NSX manager appliance FQDNs.

Import a vCenter

1 General Information

2 Specify a vCenter

3 Certificate Thumbprint

4 Prechecks

5 Networking

6 Validate

7 Review

Networking

NSX Manager Instance Options

☒ Create new NSX Manager Instance
 ☐ Join existing NSX Manager Instance

NSX Manager Appliances

⚠ It is recommended to deploy a three-node NSX Management Cluster to enhance the availability of management and control plane functions, as well as minimize downtime during upgrades.

Deployment Size *

☐ Single NSX Manager Appliance
 ☒ NSX Management Cluster Recommended

All the fields marked with * are required

Appliance Size *

Medium

6 vCPU | 24 GB RAM | 300 GB Storage

Appliance 1 FQDN *

vcf-nsx3.vsphere.local

Appliance 2 FQDN *

ds-nsx1.vsphere.local

Appliance 3 FQDN *

ds-nsx2.vsphere.local

Appliance Cluster FQDN *

ds-nxsm.vsphere.local

NSX Overlay using ESXi Management VMkernel Networking

NSX 9.0 introduces the capability to configure Overlay using ESXi Management VMkernel Networking. The

CANCEL

BACK

NEXT

7. Review the import details and click **Finish**.

Import a vCenter

1 General Information

2 Specify a vCenter

3 Certificate Thumbprint

4 Prechecks

5 Networking

6 Validate

7 Review

Review

Review import details and click finish to initiate the import process

▼ vCenter Server

vCenter server FQDN

ds-vcsa.vsphere.local

▼ Networking

Create new NSX Manager Instance

true

Deployment Node Size

3

Form Factor Size

medium

Appliance Cluster FQDN

ds-nxsm.vsphere.local

Appliance 1 FQDN

vcf-nsx3.vsphere.local

Appliance 2 FQDN

ds-nsx1.vsphere.local

Appliance 3 FQDN

ds-nsx2.vsphere.local

NSX overlay VMkernel Networking

false

CANCEL

BACK

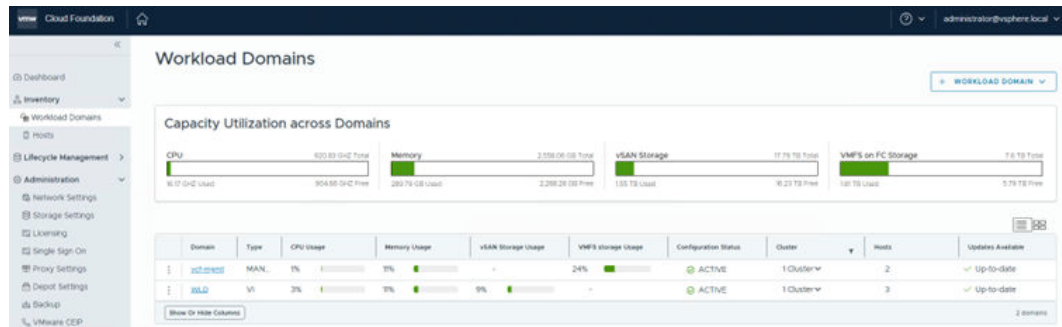
FINISH

8. Validate the imported VI Workload domain.

Best Practice and Validation Guide

Transform Your Existing vSphere Infrastructure to VMware Cloud Foundation

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Import an existing vSphere environment as a VI Workload Domain in VCF 5.2

The steps to import an existing vSphere environment as a VI Workload domain, are almost the same as the previous steps explained in *Convert an existing vSphere environment into a Management Domain*, except for the following:

- There is no need to deploy SDDC Manager (it must be already deployed).
- You need to run the following on SDDC Manager command to import a vSphere cluster as a VI Workload domain to the VCF environment:

```
python3 vcf_brownfield.py import --vcenter '<vcenter-fqdn>' --sso-user '<sso-user>' --domain-name '<wld-domain-name>' --skip-nsx-deployment
```

[Convert a vSphere Environment to a Management Domain or Import a vSphere Environment as a VI Workload Domain in VMware Cloud Foundation](#) provides more information about how to import an existing vSphere environment as a VI Workload Domain when the SDDC Manager is already deployed.

Common errors

The following is a list of the most common errors that you might face.

- The hosts are not registered with an FQDN on the target cluster.
- Having a Standard Switch even without having any uplink, on any host on the target cluster.
- The ESXi upgrade policy is not correctly configured.
- DRS is not enabled.
- Not having distributed virtual switch v.8.0.3 on the target cluster designated for convert into Management Workload Domain.
- The vSphere Lifecycle Manager remediation setting is not configured.
- There is a FIPS mismatch configuration between the vCenter on the target cluster and SDDC Manager.
- There is a time difference between SDDC Manager and the rest of the cluster members (NTP is not configured).

References

See the following references for more information:

- [VMware Cloud Foundation Administration Guide](#)
- [Introduction to the VMware Cloud Foundation Import Tool](#)
- [Convert a cluster or host that uses baseline into a cluster or a host that uses vSphere Lifecycle manager Images](#)

