

PS Tech Airlift

Upgrade Pathways to VCF 9



By the end of this training
you will be able to

01

Understand what product transitions and VCF Upgrade Pathways Exist as options to move to VCF 9.0

02

Describe what key concepts for considerations to take into account for VCF 9.0 upgrades.

03

Understand the key principles and processes within a VCF Upgrade from vSphere to VCF or VCF to VCF

Upgrade Path Overview

Understanding Your VCF 9 Upgrade Choices



Deploy New VCF 9 Environment

New deployment of VCF 9 environment (side by side). Workloads from existing environments can be migrated to the new setup after deployment.



Upgrade vSphere Environment to VCF 9

Upgrades an existing legacy vSphere environment to version 8.x, followed by importing the upgraded environment into VCF 9, including sub-cases: vSphere + (vSAN, NSX, VCF Ops and VCF Automation).



Upgrade existing VCF Environment to VCF 9

Upgrades outdated versions of VCF which may include 2 upgrades, first to VCF 5.x and then to VCF 9.

What's New in VCF 9.0

Overview of Concepts



By the end of this training
you will be able to

01

Understand and explain the VCF 9.0 key terminology and high-level constructs.

02

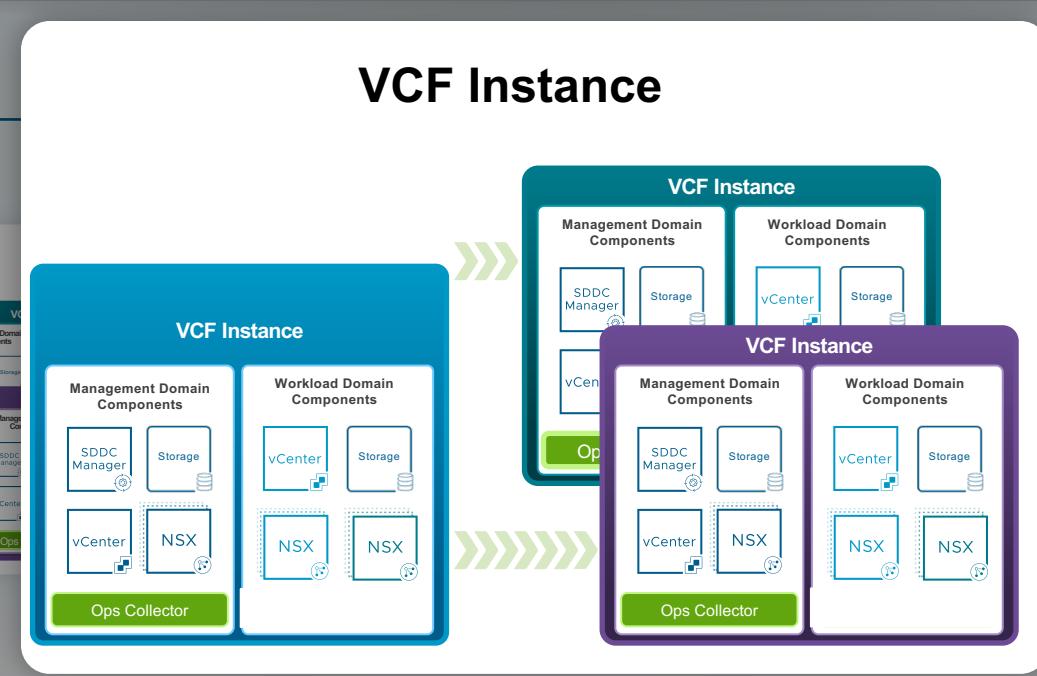
Understand the key considerations to consider for an VCF 9.0 environment.

03

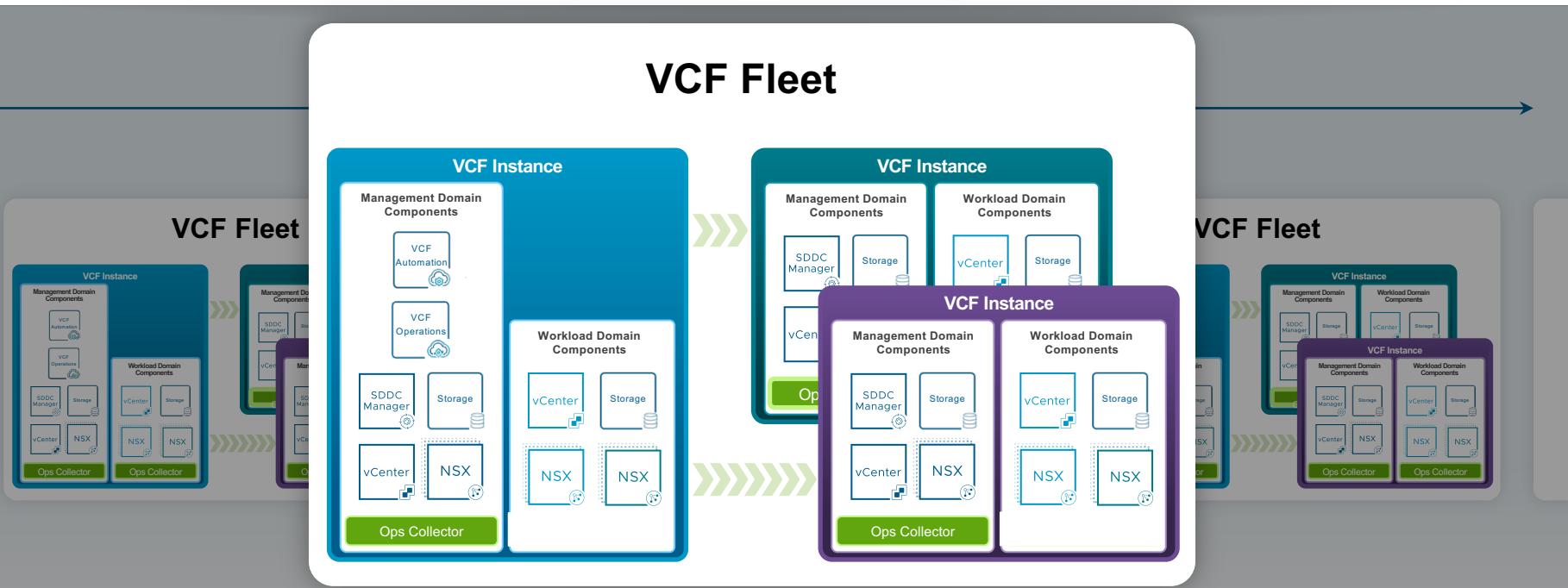
Understand the various design models for a VCF 9.0 environment and what benefits each model provides.

VCF Taxonomy

What is a VCF Instance?



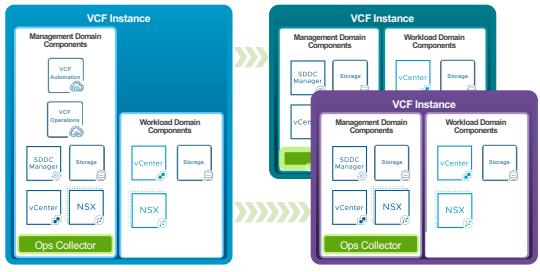
What is a VCF Fleet?



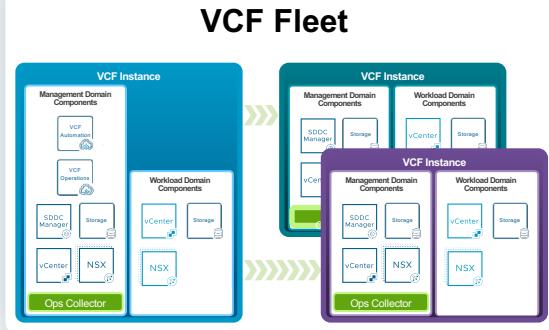
What is a VCF Private Cloud?

VCF PRIVATE CLOUD

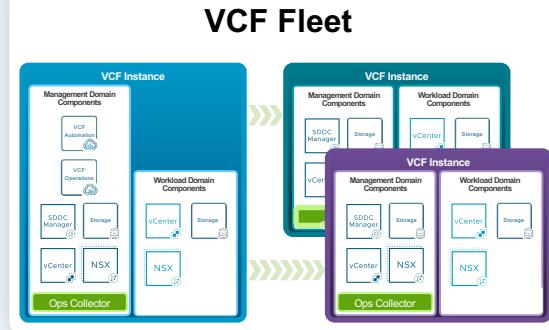
VCF Fleet



VCF Fleet



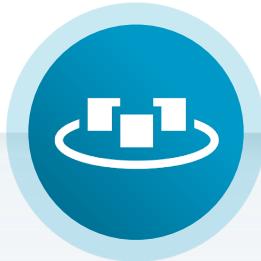
VCF Fleet



Key Considerations

VCF Operations

Placement Considerations



Scale

Ensure sufficient Compute, Memory and Storage resources are available to VCF Operations Appliances

Consider the scale of the environment and ingestion rate



Network Connectivity

Placed in a low latency and high bandwidth network segment

Insures efficient communication with VCF components and other monitored components

Insures capacity as environment scales

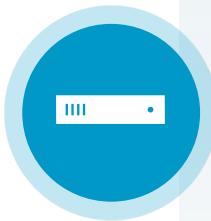


Organizational Separation

Different organizations within your environment might require segregation at the management layer.

If so customers can setup multiple VCF Fleets each with its own VCF Operations Instance

VCF Fleet Design Considerations



Latency

- VCF Operations Primary Cluster to VCF Collector
 - 500ms roundtrip
 - VCF Instance to Remote Workload Domain
 - 100ms roundtrip
 - Network Bandwidth 10Mbps
-

Object and Metrics

objects are the physical and virtual infrastructure components being monitored, while metrics are the data points collected to measure their performance and health

- Single-Node maximum objects and metrics numbers
 - Small: 10,000
 - Medium: 30,000
 - Large: 44,000
 - X-Large: 100,000

Maximum number of objects in a Operations cluster

- Small: 12,000
- Medium: 136,000
- Large: 576,000
- X-Large: 1,056,000

Maximum number of metrics in a Operations cluster

- Small: 2,800,000
 - Medium: 32,000,000
 - Large: 81,600,000
 - X-Large: 126,000,000
-

VCF Instance Design Considerations



vCenter Maximum

- Maximum of 25 vCenters per VCF Instance
 - 1 Management vCenter
 - 24 Workload vCenters

If this limit is exceeded, customer needs to deploy a second VCF Instance in VCF Fleet

ESX Maximum - *New Maximum from 5.x*

- Maximum of 2500 hosts per VCF instance

If this limit is exceeded, customer needs to deploy a second VCF Instance in VCF Fleet

NSX Manager Maximum

- Maximum of 25 NSX Manager Instances per VCF Instance

If this limit is exceeded, customer needs to deploy a second VCF Instance in VCF Fleet

VCF Operations

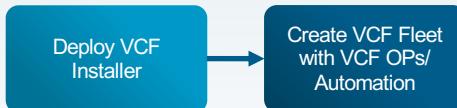
Network Placement

Preferred

Deploy on the Default VM Management Network or ESX Management Network (Day 0 Activity)

Things to consider:

- Simplified Deployment
- VCF Ops can be deployed during initial deployment
- May result in share traffic between management and VCF Operations network
- Limited network isolation for VCF Operations which may not meet security requirements or compliance

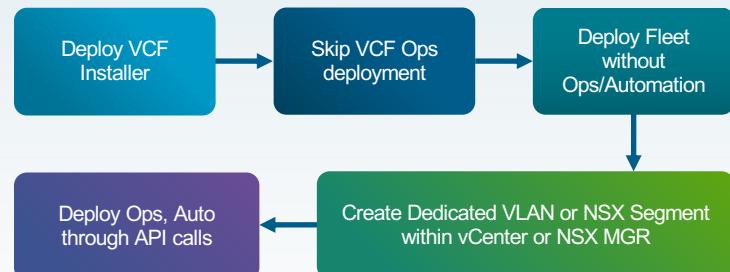


Optional

Deploy on a Separate VLAN or NSX Segment (Day 1 Activity)

Things to consider:

- Requires a dedicated VLAN or NSX segment
- Requires additional planning and configuration
- VCF Ops deployment must be skipped during initial deployment
- Not possible through UI need to use API



Prerequisite Checklist

Items	VCF 9.0
Hardware (Processors, IO Devices, etc)	<ul style="list-style-type: none">Check VCG (now BCG)Intel Skylake (Broadwell, Kabylake & Skylake) Processors no longer supported (deprecated in earlier releases)
3rd Party Solutions (Monitoring, Agents, Backups, etc)	<ul style="list-style-type: none">No VMware API changes, qualification is performed by 3rd party
Dell VxRAIL	<ul style="list-style-type: none">WIP, update later point
Dell PowerFlex	<ul style="list-style-type: none">RPQ required for Storage Device Client (SDC)
vVOL	<ul style="list-style-type: none">Supported but will be deprecated
vCloud Director	<ul style="list-style-type: none">No

Resource Requirement Overview

All resources below **include** VCF Automation

Source	VCF 9.0
vSphere only	<ul style="list-style-type: none">Total: 48 vCPU x 190 GB memoryDelta: N/A
vSphere + vRops (with or w/o vSAN)	<ul style="list-style-type: none">Total: 48 vCPU x 190 GB memoryDelta: 34 vCPU x 136 GB memory
vSphere + vROps + NSX	<ul style="list-style-type: none">Total: 60 vCPU x 238 GB memory*Delta: 28 vCPU x 112 GB Memory*
vSphere + vRops + vRA	<ul style="list-style-type: none">Total: 48 vCPU x 190 GB memoryDelta: 10 vCPU x 40 GB Memory
10,000 Hosts full stack w/HA (assumes vCenters deployed)	112 vCPU x 446 GB memory (Ops / Collector / Auto all configured in HA)
VCF 5.2 with Aria Suite	Similar to VCF 5.2 resources

Detailed Resource Requirements

- Assumes full VCF Private Cloud w/Aria Suite

Source	VCF 9.0
vSphere only	<ul style="list-style-type: none">3 x ESX host minimum48 vCPU x 190 GB memory<ul style="list-style-type: none">1 x SDDC Manager (4 vCPU x 16GB)1 x NSX Manager (6 vCPU x 24GB)1 x VCF Operations (8 vCPU x 32 GB)1 x Unified Collector (4 vCPU x 16GB)1 x Fleet Manager (2 vCPU x 6GB)1 x VCF Automation (24 vCPU x 96GB)
vSphere + vRops (with or without vSAN)	<ul style="list-style-type: none">3 x ESX host minimum48 vCPU x 190 GB memory<ul style="list-style-type: none">1 x SDDC Manager (4 vCPU x 16GB)1 x NSX Manager (6 vCPU x 24GB)1 x VCF Automation (24 vCPU x 96GB)[EXISTING] 1 x VCF Operations Fleet Manager (2 vCPU x 6GB)[EXISTING] 11 x VCF Operations & Unified Collector (12 vCPU x 48GB)
vSphere + vROps + NSX	<ul style="list-style-type: none">3 x ESX host minimum60 vCPU x 238 GB memory<ul style="list-style-type: none">1 x SDDC Manager (4 vCPU x 16GB)1 x VCF Automation (24 vCPU x 96GB)[EXISTING] 1 x VCF Operations Fleet Manager (2 vCPU x 6GB)[EXISTING] 3 x NSX Manager (6 vCPU x 24GB)[EXISTING] 1 x VCF Operations & Unified Collector (12 vCPU x 48GB)
vSphere + vROps + vRA	<ul style="list-style-type: none">3 x ESX host minimum48 vCPU x 190 GB memory<ul style="list-style-type: none">1 x SDDC Manager (4 vCPU x 16GB)1 x NSX Manager (6 vCPU x 24GB)[EXISTING] 1 x VCF Operations Fleet Manager (2 vCPU x 6GB)[EXISTING] 1 x VCF Operations & Collector (12 vCPU x 48GB)[EXISTING] 1 x VCF Automation (24 vCPU x 96GB)

Compliance

Items	VCF 9.0
STIG Requirement	Yes <ul style="list-style-type: none">Excludes vRO / vRNI
FIPS	Yes <ul style="list-style-type: none">Enabled by default

Design Models for VCF

Fault Domains



Local Fault Protection

Appliances can be configured in simple or high availability mode for local protection



Protection Across Availability Zones

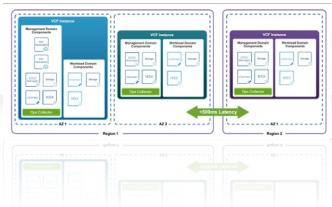
If your fault domain is a single AZ you might want to configure HA across AZs



Protecting Against Disasters

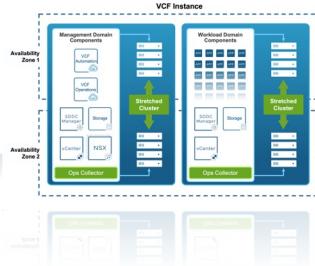
If you want protection for your entire site then a Disaster Recovery solution is recommended

VCF 9 Deployment Design Summary



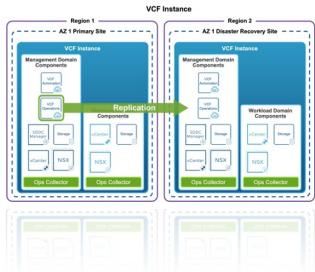
Single Site Design

The VCF Fleet Single Site Deployment Design is an ideal choice for organizations seeking a streamlined and scalable approach to deploying VMware Cloud Foundation with only local fault tolerance.



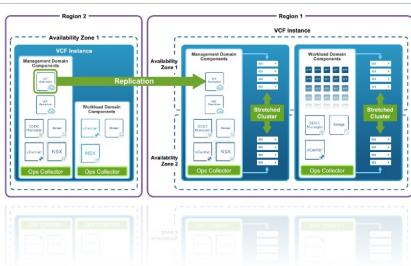
Fault Domains Design

The VCF Fleet with Fault Domains Design is an excellent choice for organizations that prioritize fault tolerance across availability zones.



Disaster Recovery Design

The VCF Fleet with Disaster Recovery Design is an ideal choice for organizations that require robust protection against site-wide failures and the ability to recover critical workloads in the event of a disaster.



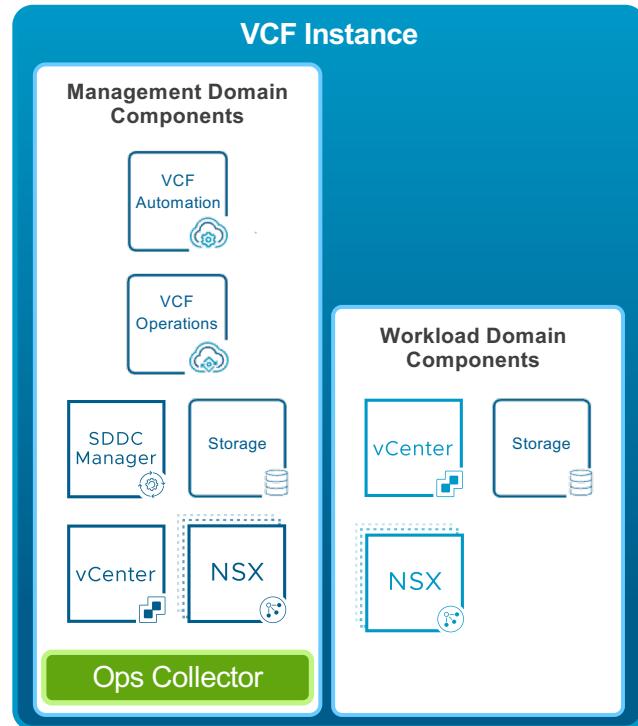
Fault Domain and Disaster Recovery Design

The VCF Fleet with Fault Domains and Disaster Recovery Design is an optimal choice for organizations that require a comprehensive solution combining high availability and disaster recovery capabilities.

VCF Fleet Deployment Design Single Site

Design Focus

- Designed for a single VCF Fleet Instance built in one Availability Zone or Region.
- Design is the foundation to all other VCF Fleet Deployments Design
- Does not establish infrastructure in multiple availability zones for high availability of fault tolerance.

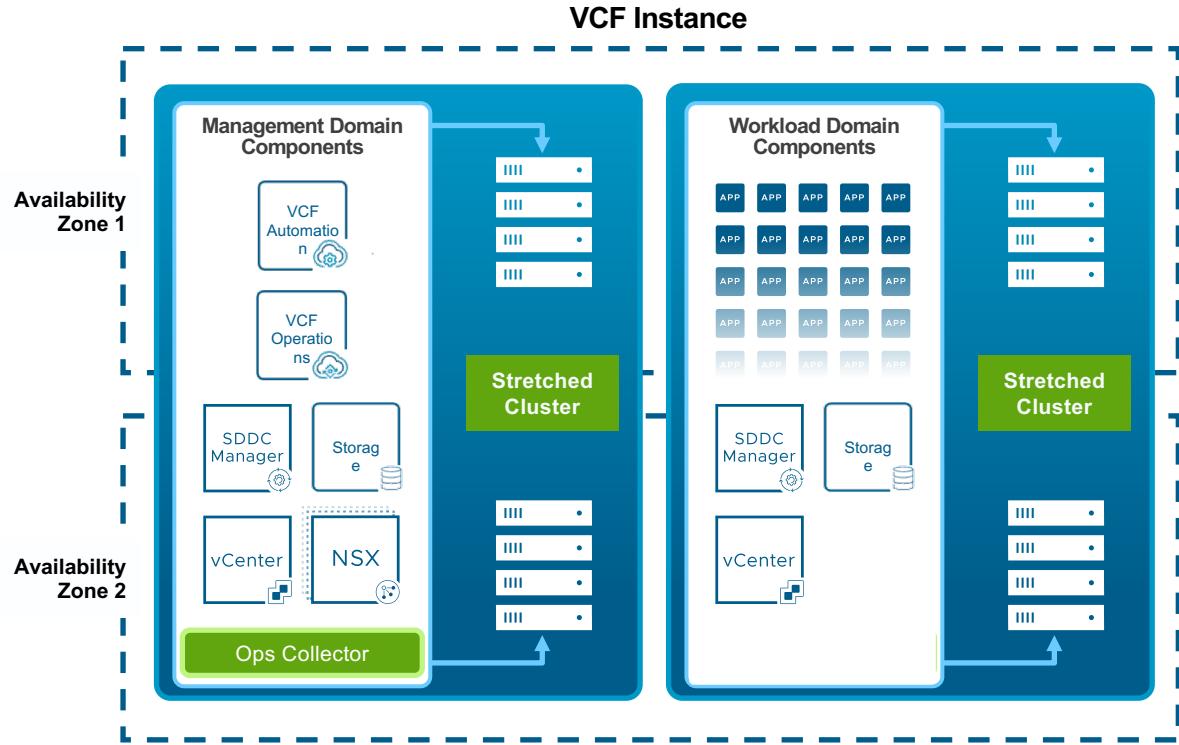


Deployment with Site High Availability (Across Zones)

Design Focus

Enhanced High Availability

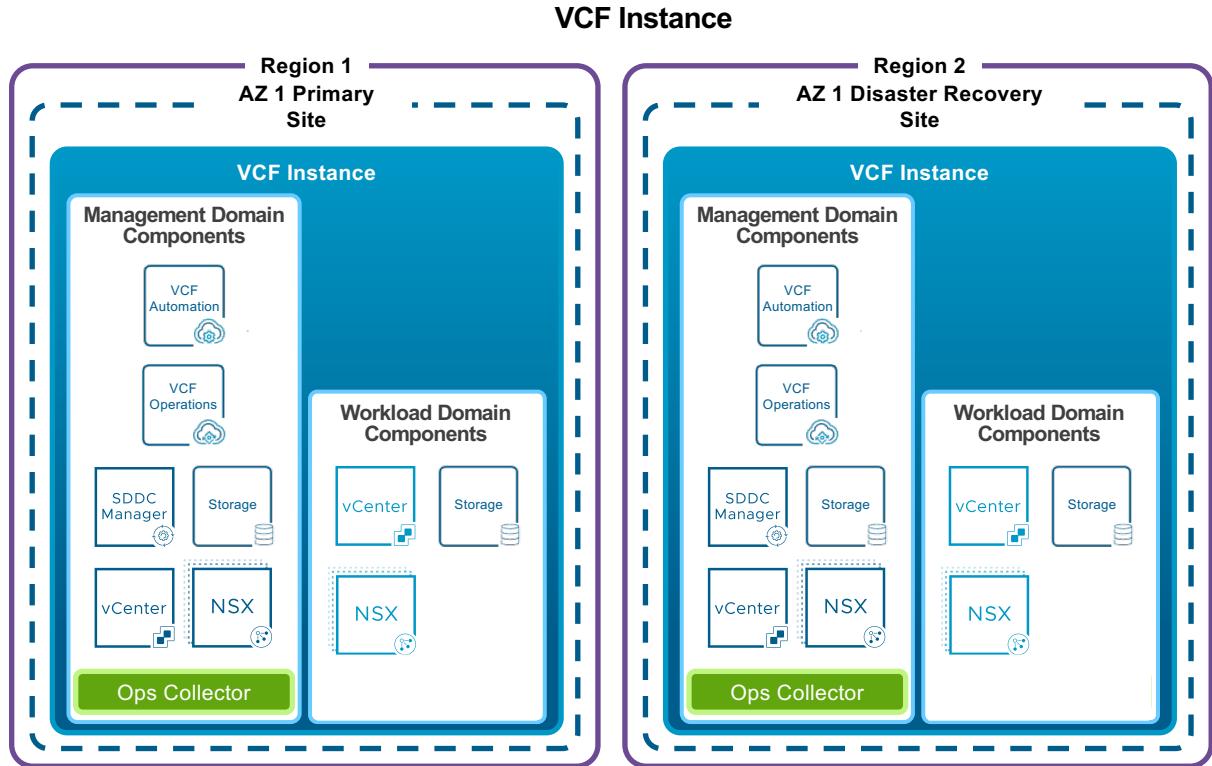
- Provides fault domains
- Distributes resources across fault domains to minimize impacts of an outage



Deployment with Disaster Recovery

Design Focus

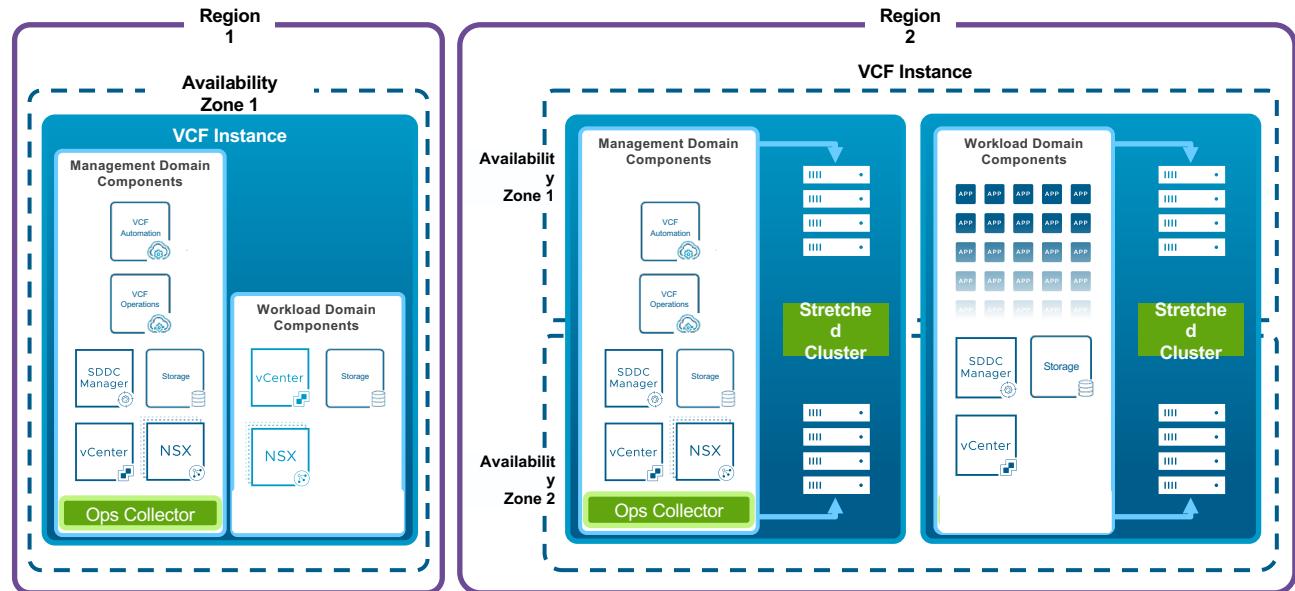
Provides robust disaster recovery mechanisms to ensure business continuity in the event of a disaster, including strategies for DR, failover and recovery.



VCF Fleet with Fault Domains and Disaster Recovery Design

Design Focus

- Provides fault domains to ensure high availability.
- Distributes resources across fault domains to minimize impact of hardware failures.
- Provides DR mechanisms to ensure business continuity in the event of a disaster.



Key Takeaways



VCF 9.0 has some new key terminology and high level constructs which are to be considered when building or moving to VCF 9.0

VCF 9.0 has some key considerations that will need to be understood and taken into account for the deployment or upgrade when moving to VCF 9.0

VCF has some new design models which have various design focus which will help meet a variety of objectives when moving to VCF 9.0

Upgrade Path #1

Deploy New VCF 9.0 Environment



By the end of this training
you will be able to

01

Architectural and Design a New Deployment of VCF 9.0

02

How to Plan and Prepare a New Deployment of VCF 9.0

03

How to Implement a New Deployment of VCF 9.0

Architecture and Design

Upgrade Path 1: Deploy a New VCF 9.0 Environment

Common Considerations

- **Objective:** Build a fresh VCF 9 environment. This is suitable for new deployments, customer POCs, or when a customer cannot or does not wish to upgrade their existing vSphere environment.
- **Tools Involved:** Primarily the VCF Installer (for deploying components)
- **Key Activities:**
 - Deploy the VCF Installer.
 - Configure the VCF installer depot to download bundles.
 - Deploy and configure the VCF Instance.
 - Implement third-party integrations (if required).
 - Optional workload migration from existing environments.
 - Optional existing environment imports (day 2).
- **Considerations:**
 - architecture and design
 - hardware and software compliance
 - network configuration planning for new appliances
 - readiness for workload migration.

Key Considerations

1. Keyless licensing activation (90 days)
2. Compliant hardware to support VCF 9
3. Sufficient CPU, memory, IPs, and storage available
4. Choose between Simple or HA appliance model.
5. Choose VCF Fleet deployment design

Readiness Checklist

1. Check VCF 9.0 Hardware & Software Compliance
2. Plan Network Configuration: IP, DNS, FW rules
3. Ensure 3rd party integration support from vendors

About the VCF Private Cloud Constructs

A VCF 9.0 deployment involves several key components.

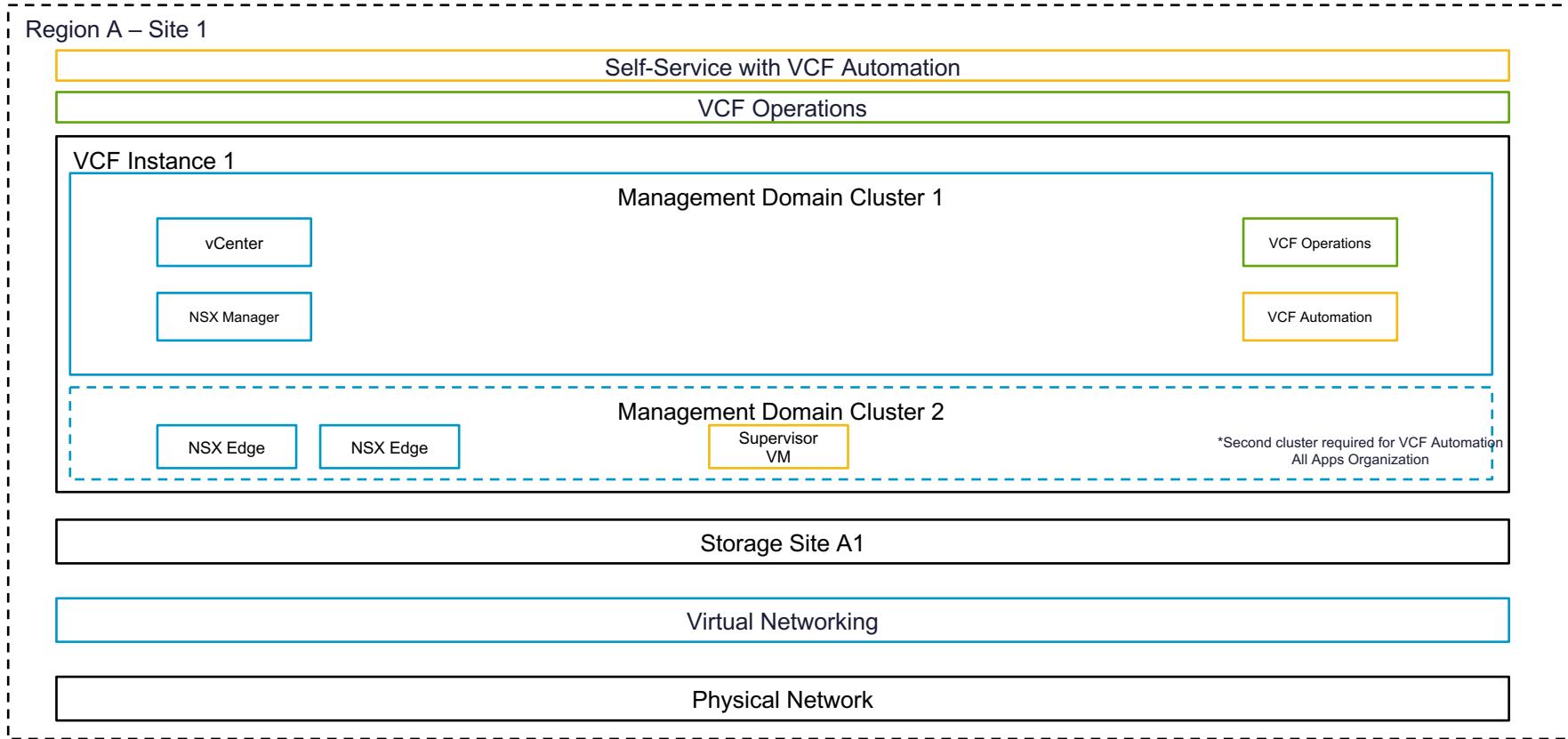
Term	Description
VCF Private Cloud	Part of the customer's enterprise private cloud infrastructure that is managed by a single automated deployment
VCF Fleet	Environment that is managed by a single set of Fleet-level management components (VCF Operations and VCF Automation)
VCF Instance	Contains a management domain and, optionally, one or more workload domains
Management Domain	Includes all the infrastructure components necessary to deploy, manage, and monitor the entire VCF instance
Workload Domain	Runs customer workloads such as virtual machines or containers
Region	Geographical area that includes one or more data centers
Availability Zone	Represents a fault domain in the private cloud

VCF Fleet Deployment Options

VCF offers the following design blueprints and deployment options for your VCF private cloud:

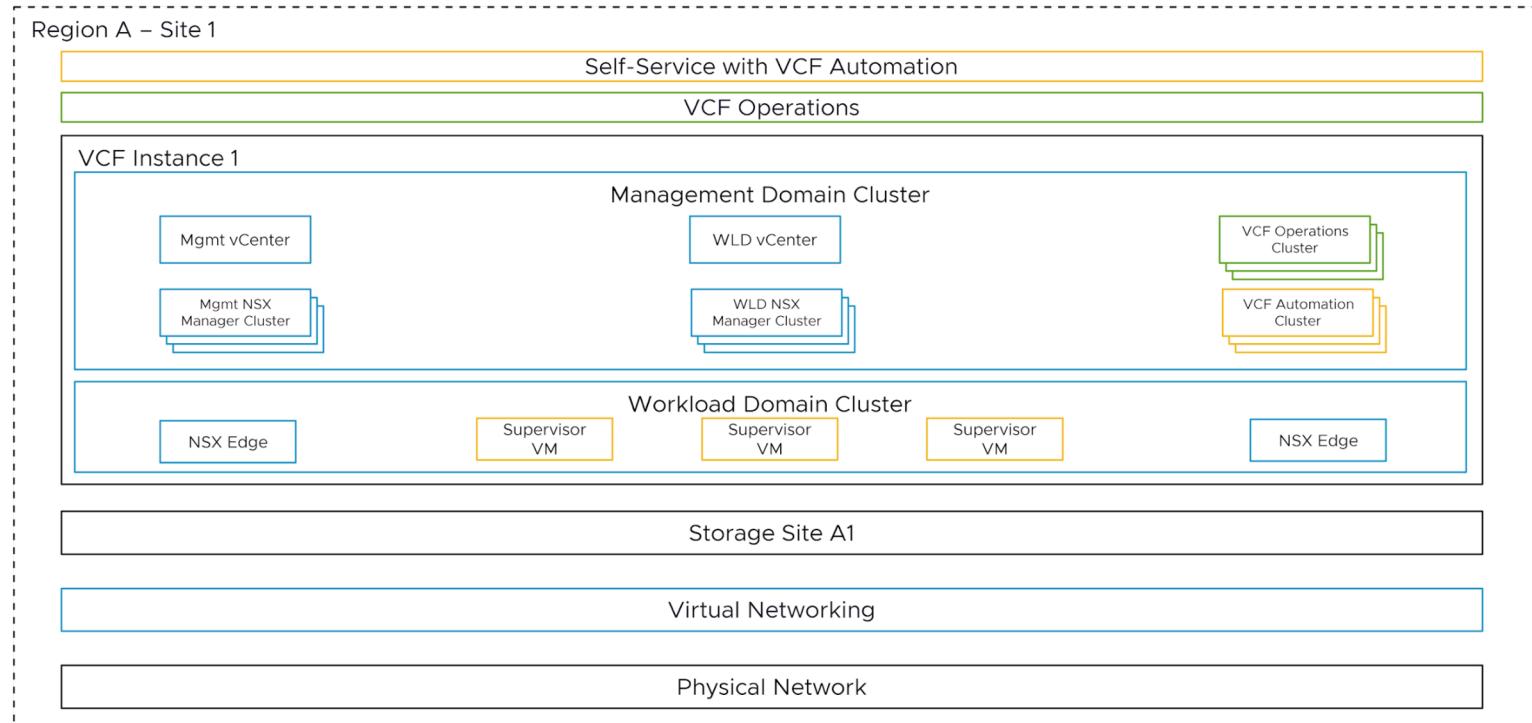
- VCF Fleet in a Single Site with Minimal Footprint
- VCF Fleet in a Single Site
- VCF Fleet with Multiple Sites in a Single Region
- VCF Fleet with Multiple Sites across Multiple Regions
- VCF Fleet with Multiple Sites in a Single Region plus Additional Regions

VCF Fleet in a Single Site with Minimal Footprint



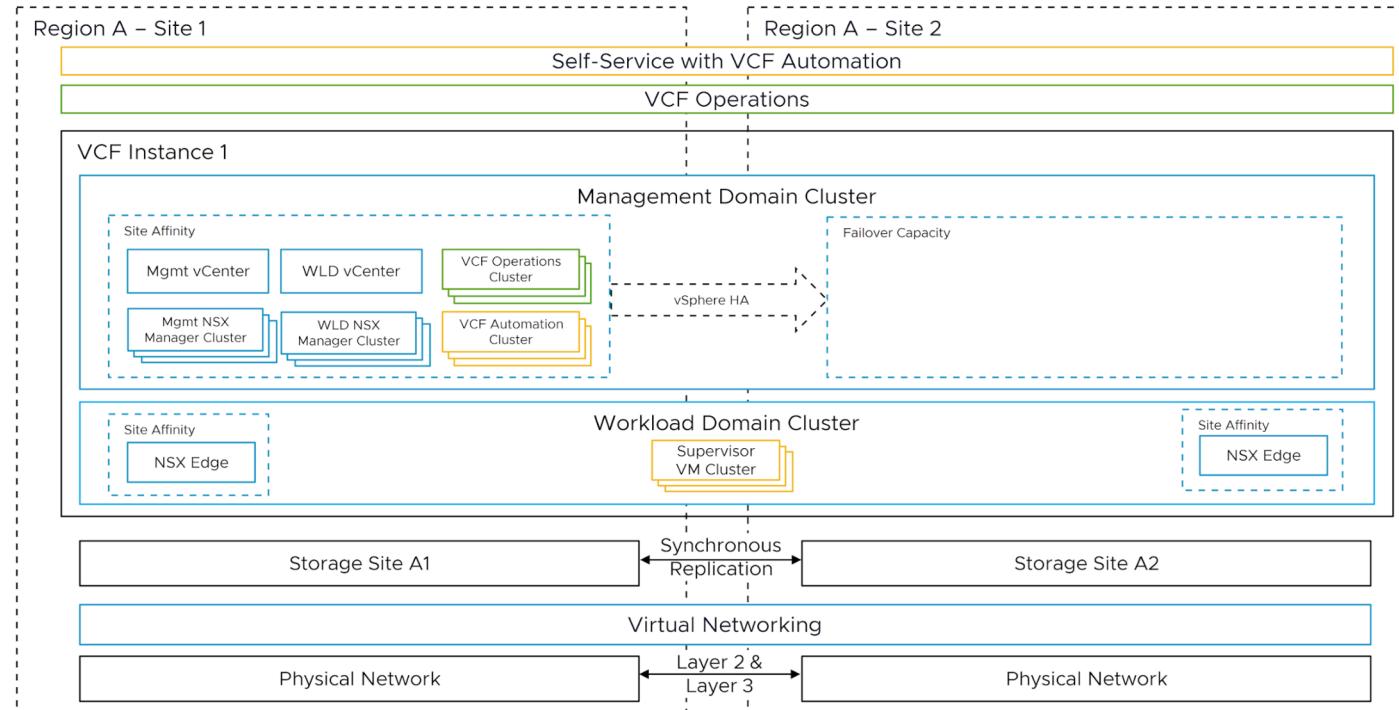
VCF Fleet in a Single Site

This design is suitable for environments with one primary data center with a single availability zone where workloads are deployed.



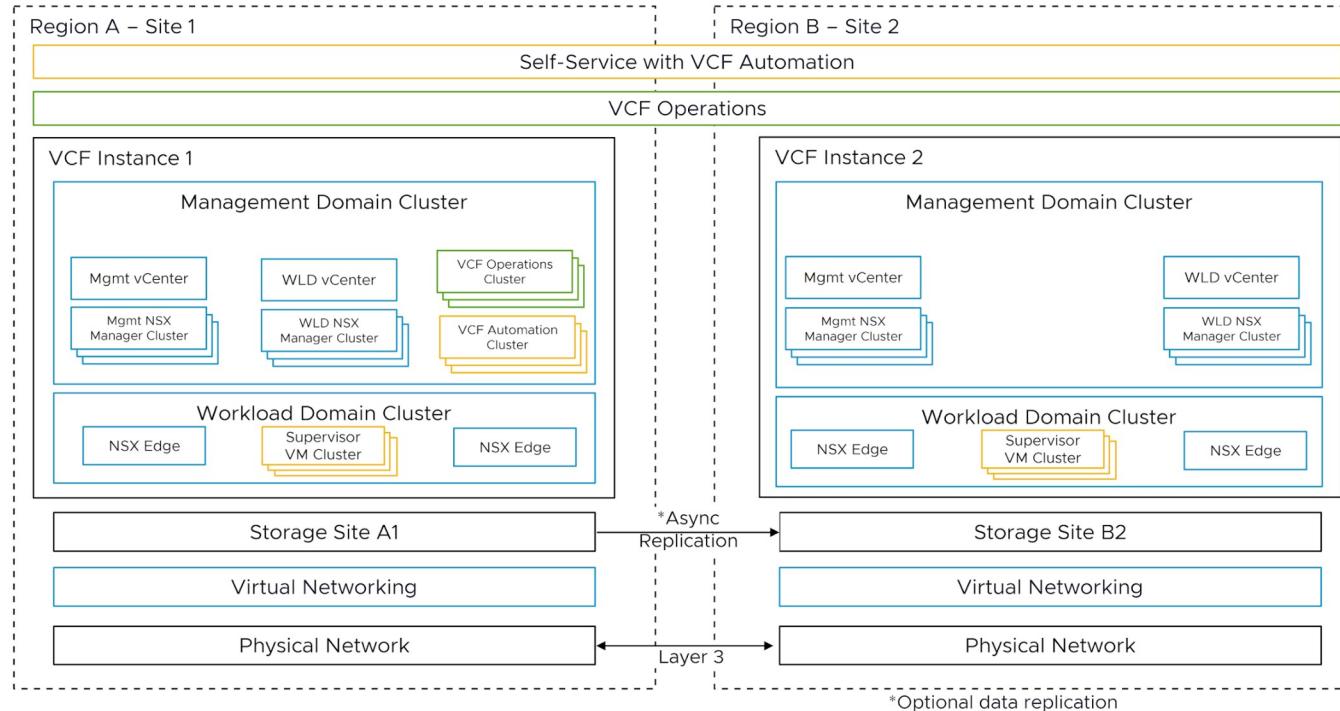
VCF Fleet with Multiple Sites in a Single Region

In this design, the management domain of the first VCF instance is deployed with high availability across multiple sites, utilizing stretched clusters to enhance availability.



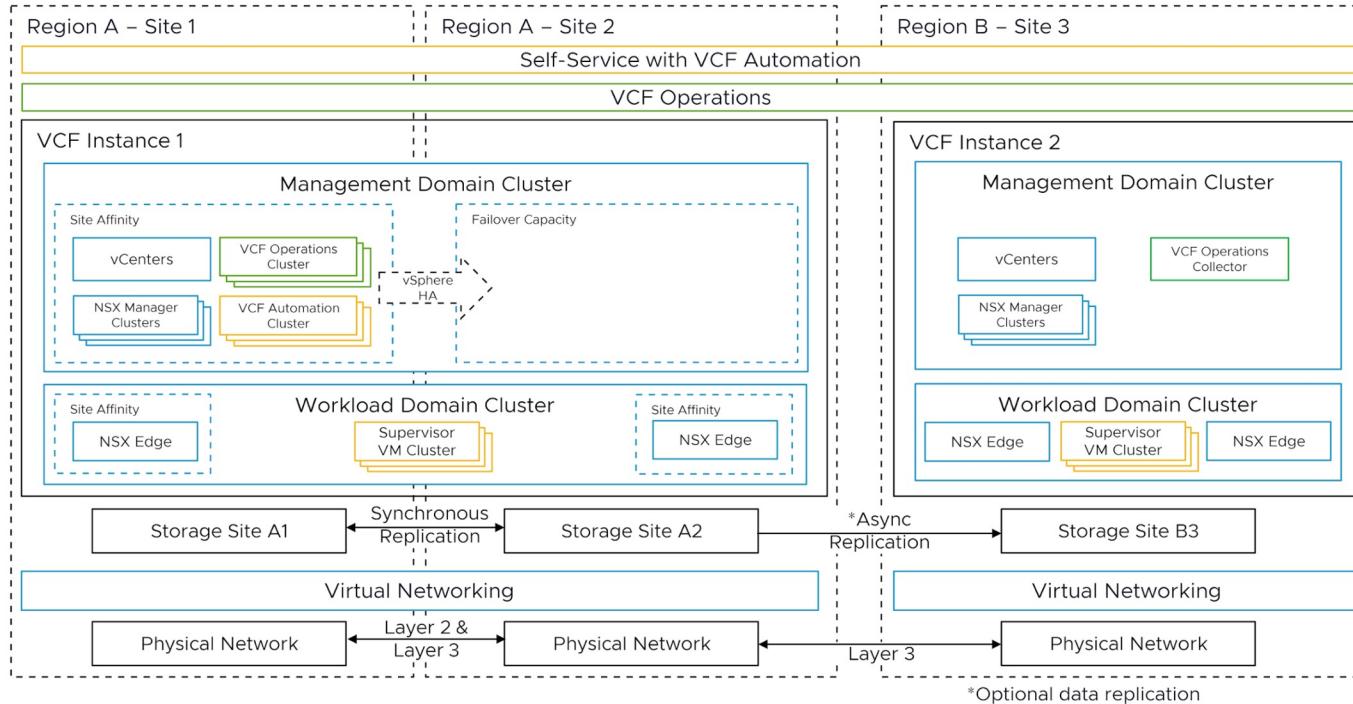
VCF Fleet with Multiple Sites Across Multiple Regions

In this design, the management domain of the first VCF instance is deployed with high availability for management components across multiple sites in different regions.



VCF Fleet with Multiple Sites in a Single Region Plus Additional Regions

In this design, the management domain of the first VCF instance is deployed with high availability across multiple sites, where some sites coexist in the same region and other sites exist in a different region.



VCF Fleet Appliance Deployment Models

You can choose to deploy NSX, VCF Operations, and VCF Automation either as stand-alone appliances or in a high availability configuration.

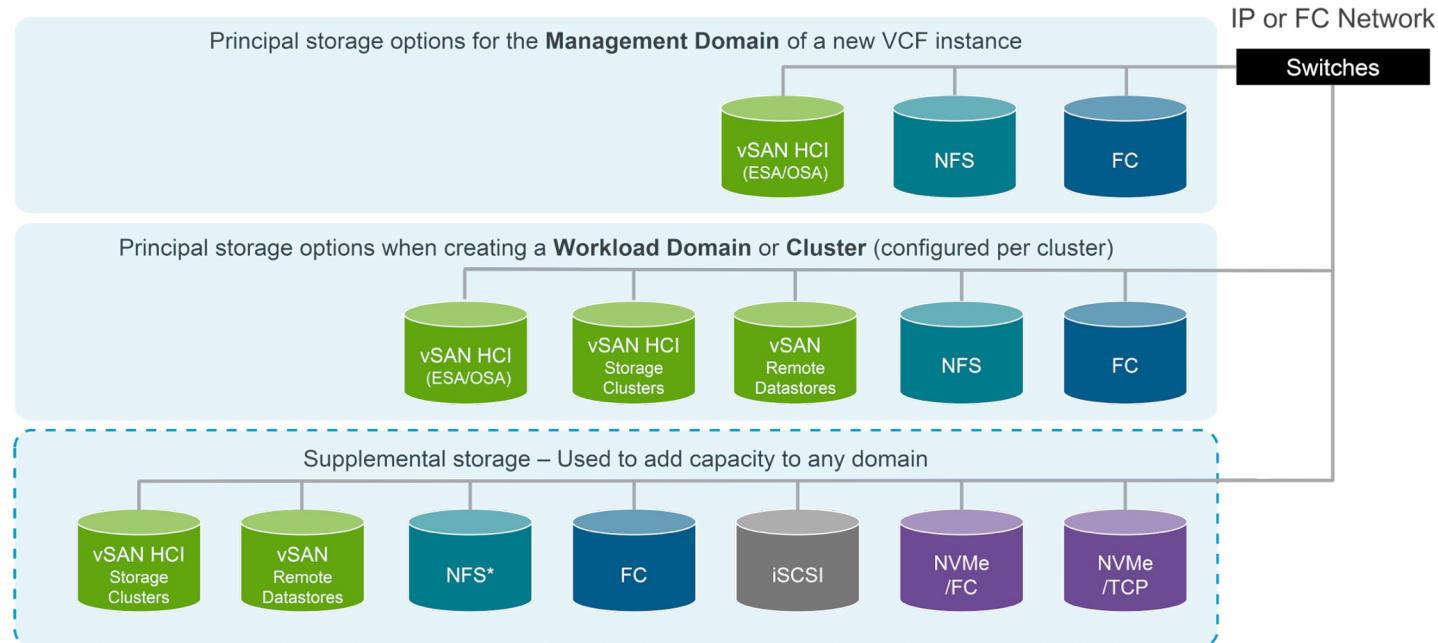
Attribute	Simple Model	High Availability Model
vCenter	One appliance	One appliance
ESX hosts	Minimum 3 hosts	Minimum 4 hosts
SDDC Manager	One appliance	One appliance
NSX Manager	One appliance One VIP	Three appliances One VIP Anti-affinity vSphere HA protection
VCF Automation	One node One extra IP for upgrades	Three nodes One extra IP for upgrades
VCF Operations	One Analytics node One Unified Collector node One Fleet Manager node	One Analytics node One Replica node One Data node One Unified Collector node One Fleet Manager (Optional) VIP

Supported Storage Models in VCF

Storage Type	Management Domain: Primary Cluster	Management Domain: Additional Clusters	Workload Domain
vSAN Original Storage Architecture (OSA)	Principal	Principal	Principal
vSAN Express Storage Architecture (ESA)	Principal	Principal	Principal
vSAN storage clusters	Not supported	Principal	Principal
VMFS on FC	Principal Supplemental	Principal Supplemental	Principal Supplemental
NFS	Principal (NFSv3) Supplemental (NFSv3 and NFSv4.1)	Principal (NFSv3) Supplemental (NFSv3 and NFSv4.1)	Principal (NFSv3) Supplemental (NFSv3 and NFSv4.1)
iSCSI	Supplemental	Supplemental	Supplemental
NVMe	Supplemental	Supplemental	Supplemental

About Principal Storage

Principal storage is used in the creation of a domain and cannot be changed after domain creation. VMware Cloud Foundation has a wide range of principal storage options.

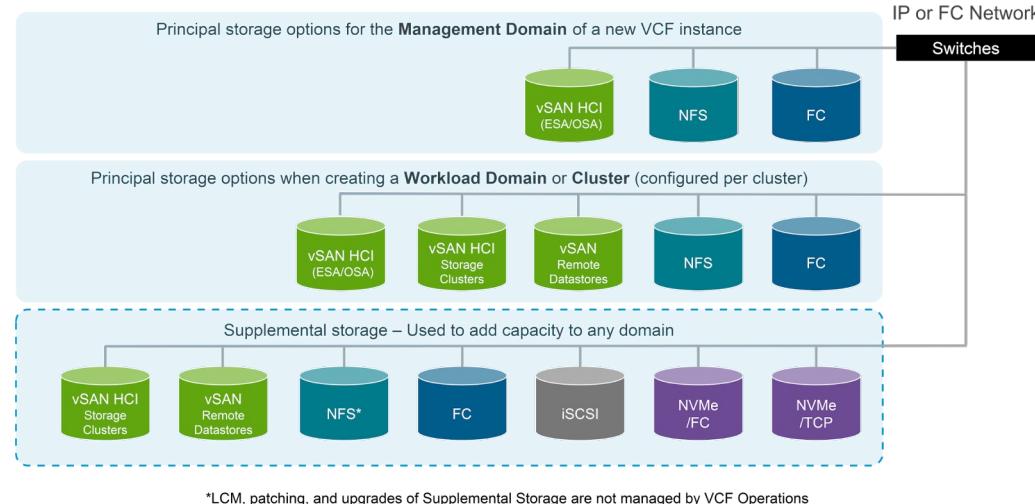


*LCM, patching, and upgrades of Supplemental Storage are not managed by VCF Operations

About Supplemental Storage

Supplemental storage for management and workload domains is configured after the workload domain is created for additional capacity:

- This option requires manual provisioning of the storage solution.
- Storage configuration is executed the same way as for a traditional vSphere deployment.



Planning and Preparation



Preparing Infrastructure for VCF Deployment

Before deploying a new platform, you must first deploy and configure the necessary infrastructure.

To prepare the infrastructure:

- Use the Planning and Preparation Workbook to gather all of the information you need to deploy VMware Cloud Foundation.
- See the Design Guide for specific requirements and recommendations for the design of each component
- Review the Prerequisite Checklist in the Planning and Preparation Workbook.
- Download the VCF Installer appliance from the Broadcom Support Portal.

Planning and Preparation Workbook: VCF Planning

The Planning and Preparation Workbook is a structured guide to gather information, document requirements, and plan the various aspects of the deployment. To complete the Planning and Preparation Workbook:

1. Download the Excel workbook from the Broadcom techdoc.
2. Gather information.

VMware Cloud Foundation and VMware vSphere Foundation Planning

Use this page to select your options for a VMware Cloud Foundation Deployment

At VMware we value inclusion. To foster this principle within our customer, partner, and internal community, we are replacing some of the terminology in our content. We have updated this document to remove instances of non-inclusive language.

Version
VMware Cloud Foundation
9.0.0

Deployment Type
Select Option
VMware Cloud Foundation
Additional Instance
Create VI Workload Domain

Feature	Final Result	Information
Deployment Specification	Included	VMware Cloud Foundation Version 9.0.0 selected
- Instance to perform operation on	Included	VMware Cloud Foundation Private Cloud will be deployed
- Operation to be performed	Included	Operation will be performed on an additional VCF Instance
		A VI Workload Domain will be added on an existing VCF Instance

Link to Task

Prerequisite Checklist • VCF & VVF Planning • Management Domain Sizing • Deploy Management Domain • Configure Management Domain • Deploy Fleet Management Day-N • Deploy Workload Domain • Configure Workload Domain • Deploy Cluster • Static Reference Tables • Value Reference Tables • Additional Racks • On-Premise Ransomware Recovery •

Planning and Preparation Workbook: Prerequisite Checklist

The **Prerequisite Checklist** tab is a summary of infrastructure configuration requirements that must be met before you deploy VMware Cloud Foundation.

Prerequisite Checklist

The following pre-requisites need to be met:

Hardware (Management Domain)

Server Component	Minimum Requirements	Notes
Server Type	Two Supported Servers - Simple (Single-Node) Deployment or Four Supported Servers - High Availability (Three-Node) Deployment	Refer to the VMware Compatibility Guide at https://compatibilityguide.broadcom.com/ for supported configurations. Note that VMware Cloud Domains. VMware recommends a minimum of four nodes for production.
CPU	Supported Configurations	None
Memory	Supported Configurations	Rainpole example suggests - 1TB per host based on 4 hosts with ability to tolerate failure of a single host. Use Management Domain Sizing for sizing based on your chosen options.
Storage (Boot)	Supported configurations	SD-Cards are considered legacy and not recommended.
Storage VSAN-OSA (Cache)	Supported Configurations	Rainpole example suggests - 1.2TB of Raw Capacity for the Caching Tier (All-Flash) per host. - Two disk groups, 600GB cache per disk group. Ensure no existing partitions exist on disks intended for use See Designing and Sizing a vSAN Cluster from the VMware vSAN documentation for guidelines about cache sizing. Use Management Domain Sizing for sizing based on your chosen options.
Storage vSAN-OSA (Capacity)	Supported Configurations	Rainpole example suggests - 12.5TB of Raw Capacity for the Capacity Tier (All-Flash) per host. - Two disk groups, 6.25TB per disk group Ensure no existing partitions exist on disks intended for use Use Management Domain Sizing for sizing based on your chosen options.
Storage vSAN-ESA	Supported Configurations	Rainpole example suggests - 12.5TB of Raw Capacity for the Capacity Tier (All-Flash) per host. - 4 x 3.2TB NVMe SSD Drives per node. Ensure no existing partitions exist on disks intended for use Use Management Domain Sizing for sizing based on your chosen options.
Storage NFS	Supported Configurations	Use Management Domain Sizing for sizing based on your chosen options.
Storage FC	Supported Configurations	Use Management Domain Sizing for sizing based on your chosen options.
NICs per server	- One 10 GbE NICs - One 1 GbE BMC NIC	Single NIC is supported with API Only 25GbE NICs are recommended for vSAN ESA

Hardware (Workload Domain)

Server Component	Minimum Requirements	Notes
Processor	Three Co-ordinated Cores	

Prerequisite Checklist < VCF & VVF Planning Management Domain Sizing Deploy Management Domain Configure Management Domain Deploy Fleet Manager

Planning and Preparation Workbook: Management Domain Sizing Input

The Planning and Preparation Workbook includes several input tabs, including the **Management Domain Sizing Inputs** tab, to be completed by Networking, DNS/IP Allocation, Virtual Infrastructure, and Active Directory teams.

VMware Cloud Foundation Management Domain Sizing Inputs

Management Domain Assumptions	
Component	Value
Host and Operations Reserve (%)	30
Storage Estimated Growth (%)	10

Management Domain Host Parameters	
Attribute	Value
CPU Cores	128
RAM Count (GB)	1024
CPU Oversubscription (X:1)	1
Memory Oversubscription (X:1)	1

VCF Operations and Automation	
Component	Value
Appliance Deployment Model	Deploy HA
VCF Operations	Medium
VCF Operations Collector	Exclude
VCF Automation	Exclude
VCF Operations for logs	Exclude
VCF Operations for network	Exclude
VCF Operations for network collector	Exclude
Identity Broker	Exclude

Management Domain Virtual Machine Requirement Summary	
Component	Nodes
SDDC Manager	1
Management Domain vSphere Cluster Services	2
Management Domain vCenter Server	1
Management Domain NSX Managers (Local / Global)	3
Management Domain NSX Edges	0
Management Domain AVI Load Balancer	0
Virtualized Domain vCenter Services	0
Virtualized Domain NSX Managers (Local / Global)	0
Virtualized Domain AVI Load Balancer	0
VMware Cloud Foundation Operations fleet management	1
VMware Cloud Foundation Operations	3
VMware Cloud Foundation Operations collector	0
VMware Cloud Foundation Automation	0
VMware Cloud Foundation Operations for logs	0
VMware Cloud Foundation Operations for network	0
VMware Cloud Foundation Operations for networks collector	0
Identity Broker	0
Validation Solution Requirements	0
Totals	11
	61 vCPUs
	227 GB

Management Domain								
Domain	Select	vCenter	CPU : RAM	vCenter	Disk	NSX Model	NSX LM	CPU : RAM : Disk
m01	Included	Medium	- 8 CPUs : 30 GB	Default	+ 908 GB	Mandatory - HA Cluster	Medium	- 24 CPUs : 6 GB : 300 GB

Workload Domains								
Domain	Select	vCenter	CPU : RAM	vCenter	Disk	NSX Model	NSX LM	CPU : RAM : Disk
w01	Excluded	Medium	- 0 CPUs : 0 GB	Default	+ 0 GB	Mandatory - HA Cluster	Large	- 0 CPUs : 0 GB : 0 GB
w02	Excluded	Medium	- 0 CPUs : 0 GB	Default	+ 0 GB	Dedicated - HA Cluster	Large	- 0 CPUs : 0 GB : 0 GB
w03	Excluded	Medium	- 0 CPUs : 0 GB	Default	+ 0 GB	Dedicated - HA Cluster	Large	- 0 CPUs : 0 GB : 0 GB
w04	Excluded	Medium	- 0 CPUs : 0 GB	Default	+ 0 GB	Dedicated - HA Cluster	Large	- 0 CPUs : 0 GB : 0 GB

Prerequisite Checklist < VCF & VVF Planning < Management Domain Sizing < Deploy Management Domain < Configure Management Domain < Deploy Fleet Management < > < >

Planning and Preparation Workbook: Workflow Tabs

Several workflow tabs automatically populate with values driven from the input tabs to assist with management domain sizing, configuration, and certificate generation.

/Mware Cloud Foundation Management Domain Deployment using VCF Installer

This page contains all user required values used during the deployment of a VMware Cloud Foundation Management Domain. Each table and value maps directly to a process in the deployment guidance document.

VCF Fleet

- VCF Operations
- VCF Automation**

VMware Cloud Foundation Instance

Components

- vCenter
- NSX Manager
- vSphere Cluster
- SDDC Manager

Download Binaries

Depot Settings and Binary Management

Configuration	Sample	Your Value
Depot Type	Online	Online
Offline Depot - Hostname	my-offline-depot.rainpole.io	
Offline Depot - Port	443	
Download Token	rqkOYDQRWJJb07F1xIMfgcKF0zPZRg4	
Enable Proxy Server	Unselected	Unselected
Protocol	HTTPS	
Proxy Address	internet-proxy.rainpole.io	
Proxy Port	443	
Authenticated	Unselected	Unselected
Username	my_proxy_username@rainpole.io	
Password	VMw@re1!VMw@re1!	

Deploy

Configuration	Sample	Your Value
Deployment Wizard	VMware Cloud Foundation	VMware Cloud Foundation
Deployment Type	Deploy a new VCF fleet	

Existing Components

Select the existing components you want to reuse in this VCF fleet

Configuration	Sample	Your Value
VCF Operations	Unselected	Unselected
VMware vCenter	Unselected	Unselected
VMware NSX	Unselected	Unselected

General Information

Enter the general configuration details for this deployment

Configuration	Sample	Your Value
Version	Q n n n	Q n n n

Deployment Process

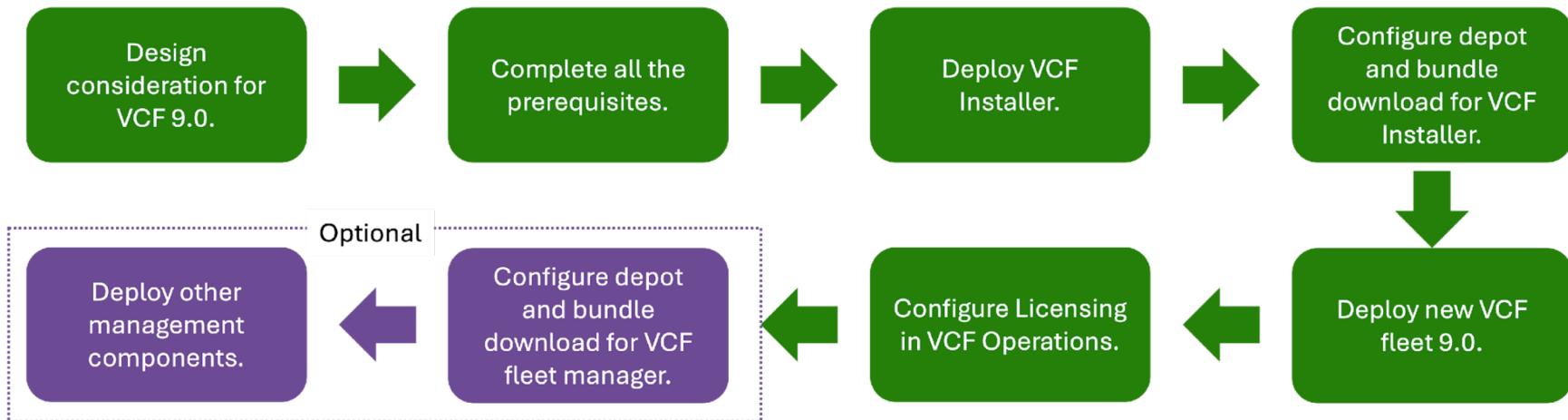


Learner Objectives

- Explain the high-level steps to deploy VCF private cloud
- Outline the sequence for deploying the VCF private cloud
- Describe the deployment configuration of VCF instance core components
- Explain the deployment configuration of VCF Fleet management components
- Use the VCF Installer deployment wizard to deploy a new VCF Fleet
- Use a deployment specification JSON file to deploy a new VCF Fleet

VCF Fleet Deployment: Installation Workflow

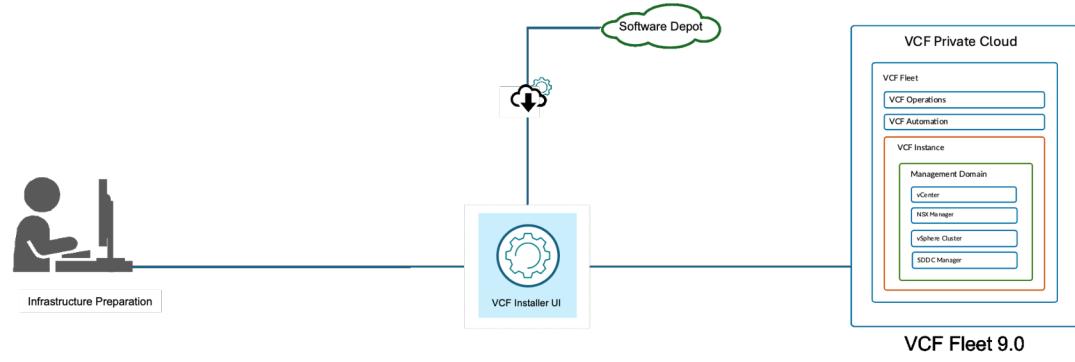
Based on the selected design plans, you develop a deployment path. The following example demonstrates the process of deploying a VMware Private Cloud using a single-site design.



VCF Fleet Deployment: Prerequisites (1)

Before deploying a new platform, you must first ensure that the following requirements are met:

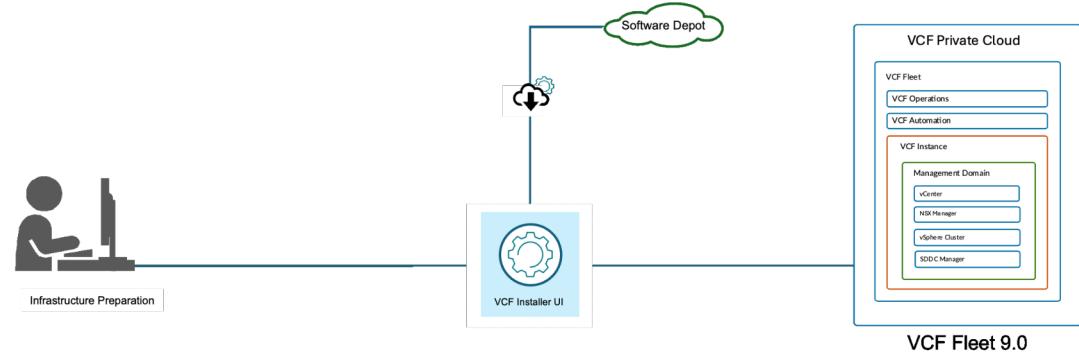
- VLANs with resilient gateway configuration on physical fabric:
 - Management VM, ESX Management, vMotion, Storage, Host TEP, Edge Uplink (optional)
- Ensure IP connectivity.
- Configure forward and reverse DNS records for all management components.
- Configure time synchronization using an internal NTP time source for all management components



VCF Fleet Deployment: Prerequisites (2)

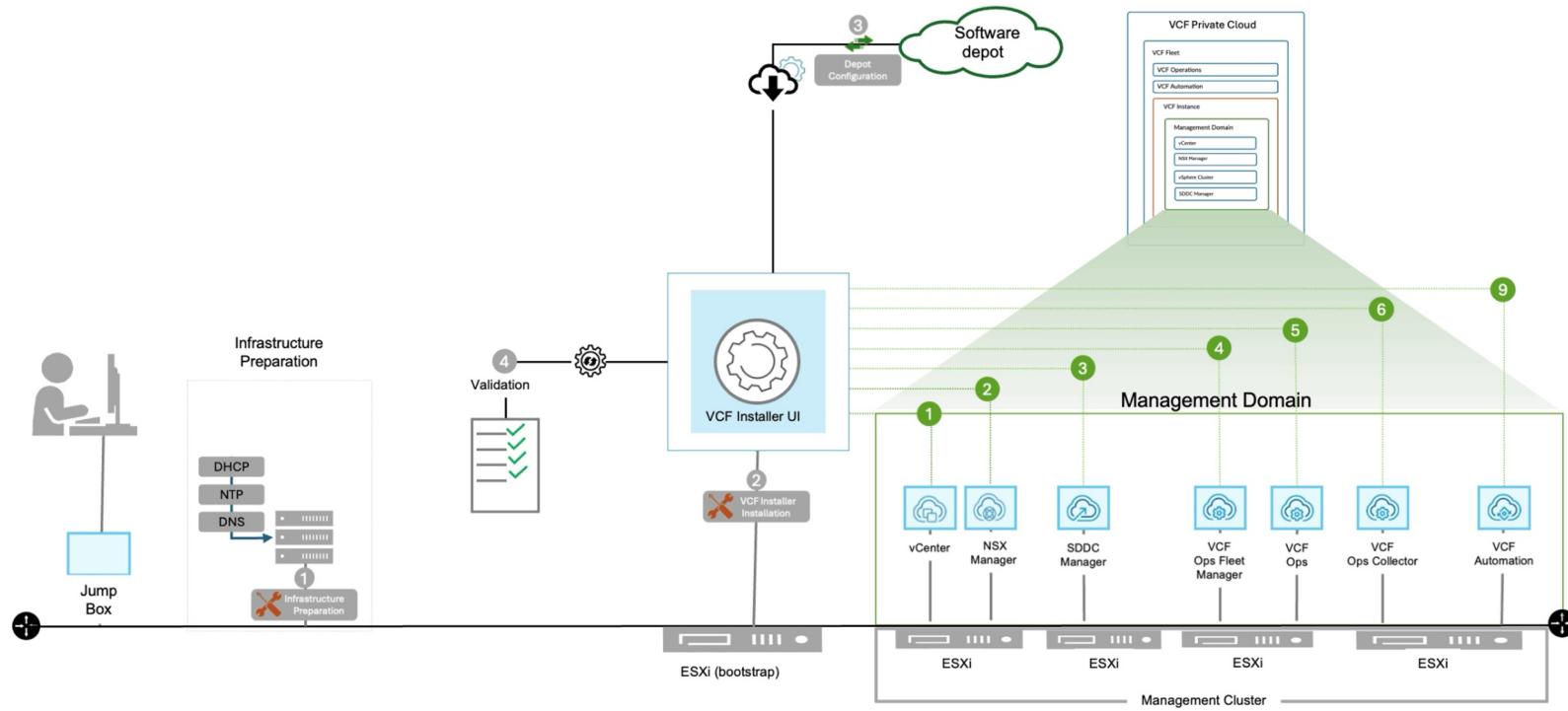
Before deploying a new platform, you must first ensure that the following requirements are met:

- Image the hosts with the ESX 9.0 build.
- Assign static IP address and host name to ESX hosts.
- For air-gapped environments, set up an offline depot with all the Install bundles.
- Deploy the VCF Installer VM and map online or offline depots.



VCF Fleet Deployment: Sequence

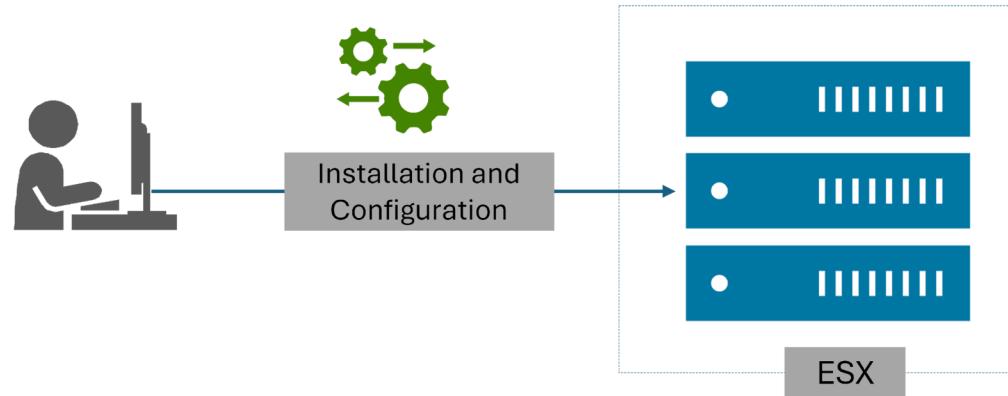
You deploy VMware Cloud Foundation in the following steps, and the installer deploys the VCF Fleet components in a specific order.



VCF Fleet Deployment: Preparing ESX Hosts

Before proceeding with the VMware Cloud Foundation installation, you must perform some basic configuration on each of the ESX hosts that participate in the management domain:

- Perform ESX 9.0 installation.
- Configure the VLAN ID of the ESX host Management Network.
- Configure the VLAN ID of the VM Network.
- Configure NTP.

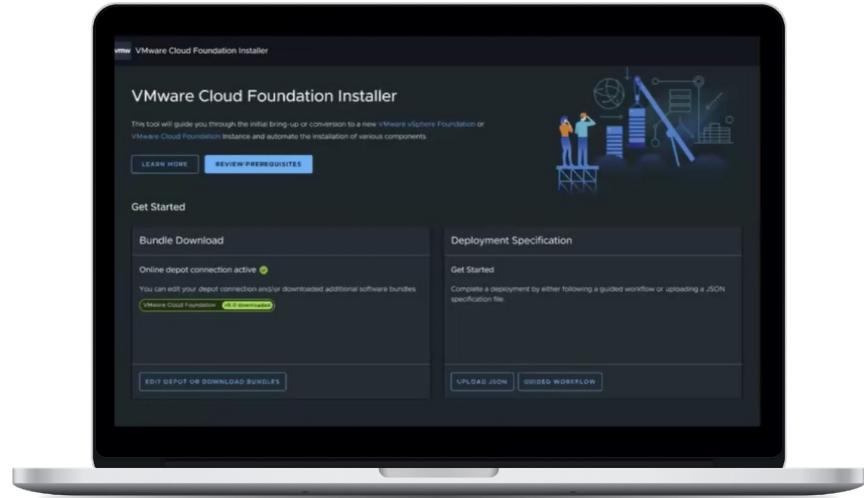


VMware Cloud Foundation Installer: Overview

VCF Installer is used to deploy or expand a VCF Fleet.

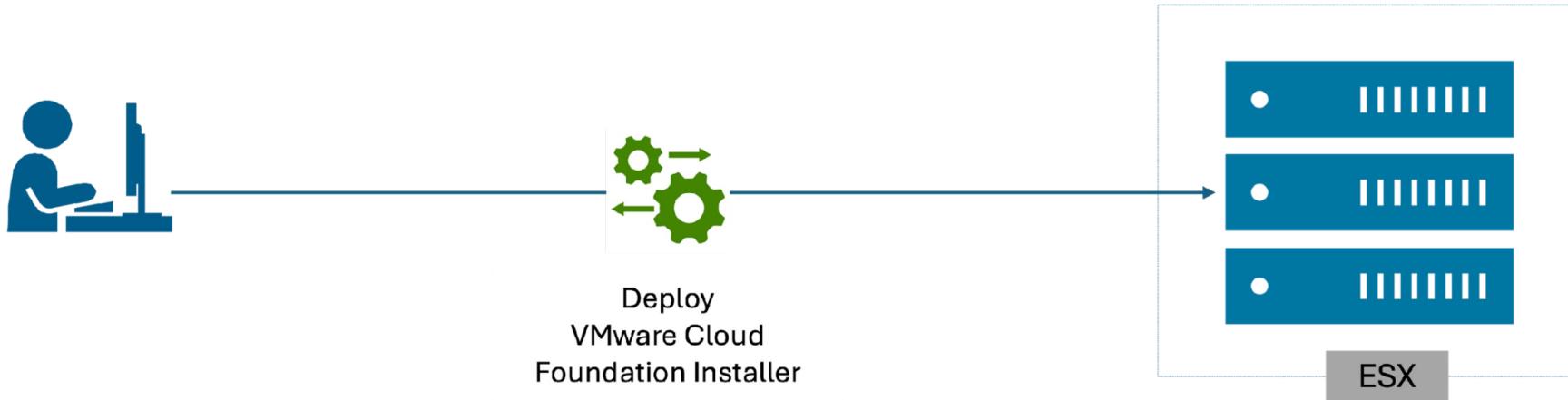
Benefits of VCF Installer include:

- Simplifies the deployment of VCF or vSphere Foundation for new and existing deployments
- Eliminates the need for individual VCF component installations
- Reduces risks by using a validated topology



Deploying VCF Installer

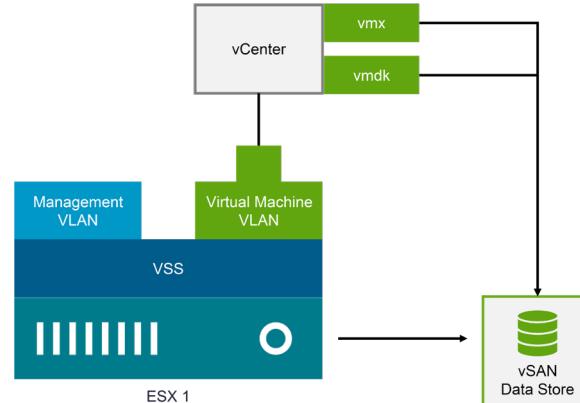
As part of the initial VMware Cloud Foundation installation or conversion process, you deploy a VCF Installer virtual appliance, which automates the deployment of the entire VCF Fleet.



About vCenter Deployment

During the vCenter deployment stage, the following steps are performed by the VCF Installer:

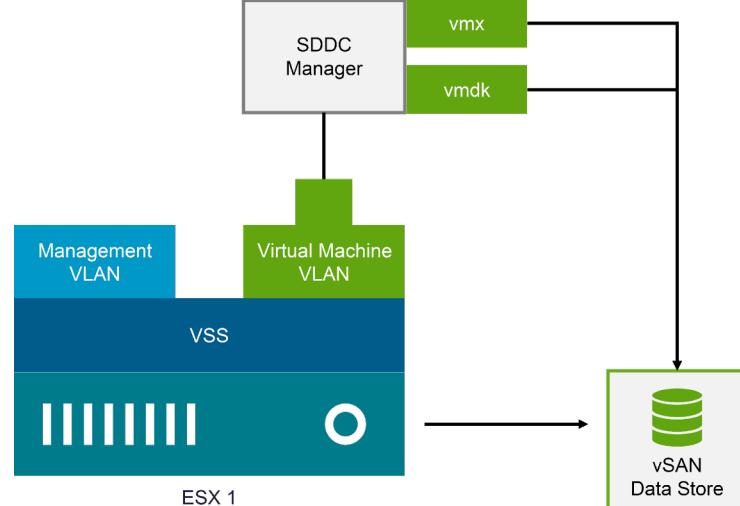
- The vCenter appliance is deployed to the first ESX host of the management domain.
- vCenter is connected to the VM Network port group on the ESX host VSS.
- A vSAN datastore is configured on the ESX host to store the vCenter appliance files.
- First boot scripts are run on the vCenter appliance.



About SDDC Manager Deployment

During the SDDC Manager deployment stage, the following steps are performed by the VCF Installer:

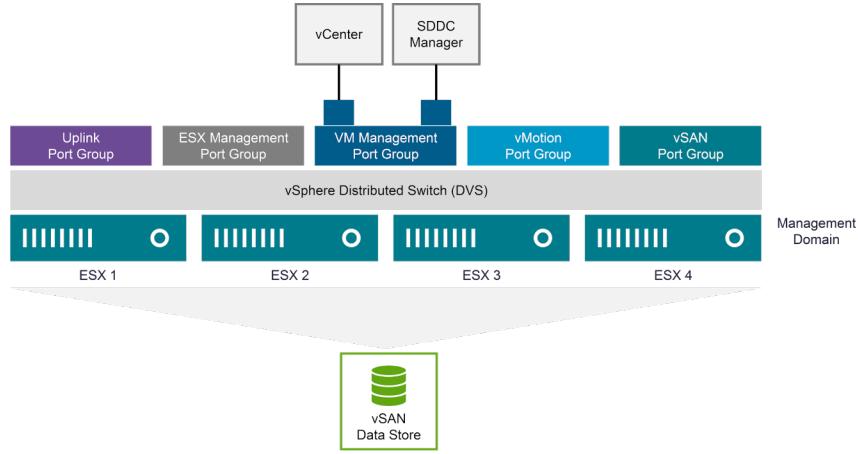
- The SDDC Manager appliance is deployed to the first ESX host of the management domain.
- The SDDC Manager appliance is connected to the VM Network port group on the ESX host VSS.
- The SDDC Manager appliance files are stored in the vSAN datastore configured on the ESX host.



About vSphere Cluster Configuration

During the vSphere Cluster configuration stage, the following steps are performed by the VCF Installer:

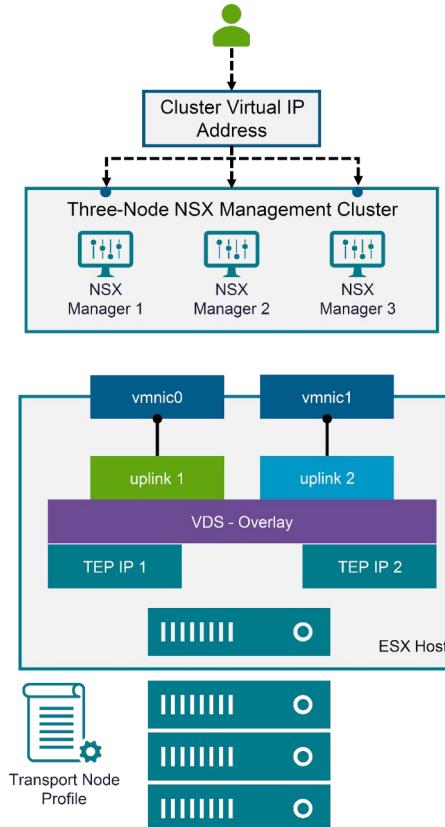
- A new data center and vSphere cluster are created on vCenter.
- All ESX hosts in the management domain are added to the vSphere cluster.
- A vSphere Distributed Switch is created for all hosts in the management domain.
- VMs are migrated to the VM Management distributed port group.
- ESX host management vmknics are migrated to the vSphere Distributed Switch.
- The vSAN data store is expanded to all hosts in the management domain.
- HA and DRS are configured in the vSphere cluster.



About NSX Deployment and Configuration

During the NSX deployment and configuration stage, the following steps are performed by the VCF Installer:

- The first NSX Manager node is deployed.
- vCenter is added as a Compute Manager.
- An overlay transport zone is created.
- A TEP IP pool is created.
- An NSX uplink profile is created for the ESX hosts.
- A transport node profile is created and applied to all ESX hosts in the management domain cluster to prepare them for NSX.

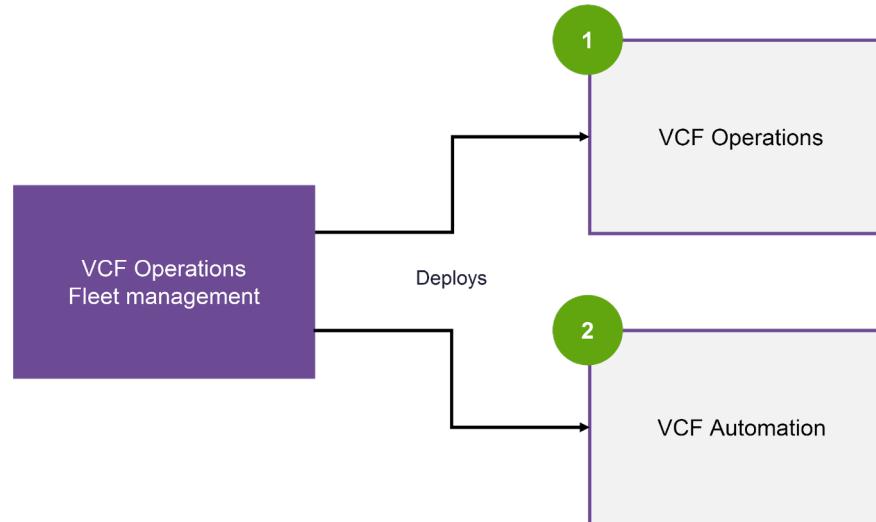


About VCF Operations Fleet Management Deployment and Configuration

After the NSX configuration is complete, the VCF Installer deploys the VCF Operations Fleet management appliance.

VCF Operations Fleet management is then used to deploy:

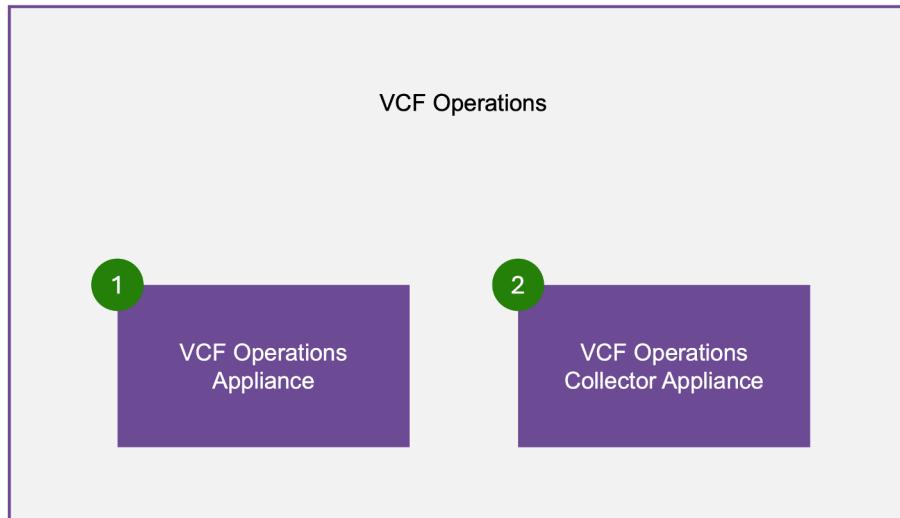
1. VCF Operations
2. VCF Automation



About VCF Operations Deployment and Configuration

During the VCF Operations deployment, the following appliances are created:

1. VCF Operations appliance
2. VCF Operations collector appliance

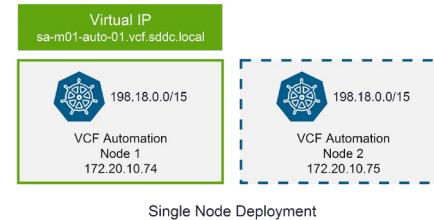


About VCF Automation Deployment and Configuration

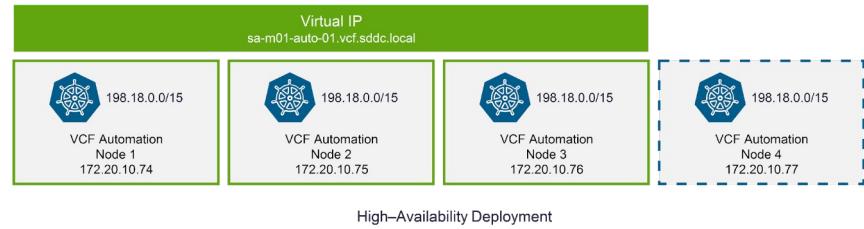
VCF Automation can be deployed in a single node or in a three-node high availability cluster.

During the deployment of VCF Automation, appliances are configured as follows:

- A Virtual IP is created to load-balance traffic across all nodes in the cluster.
- A spare IP address is used to deploy an additional node if one of the other nodes in the cluster fails.
- The Kubernetes-based solution is configured in each appliance to deploy the pods and containers for the VCF Automation components.
- An internal network is created for communication between containers.



Single Node Deployment



High-Availability Deployment

iSIM #1

"VCF 9.0 Deploy VCF Fleet iSIM"

iSIM #1

"VCF 9.0 Deploy VCF Fleet iSIM" (Screenshots and Walkthrough)

VCF Installer: Accessing

To access the VCF Installer, use the FQDN specified during the deployment of the appliance and the configured password for the admin@local user.

**VMware®
by Broadcom**

**VMware Cloud Foundation®
Installer**

E-mail / Username *

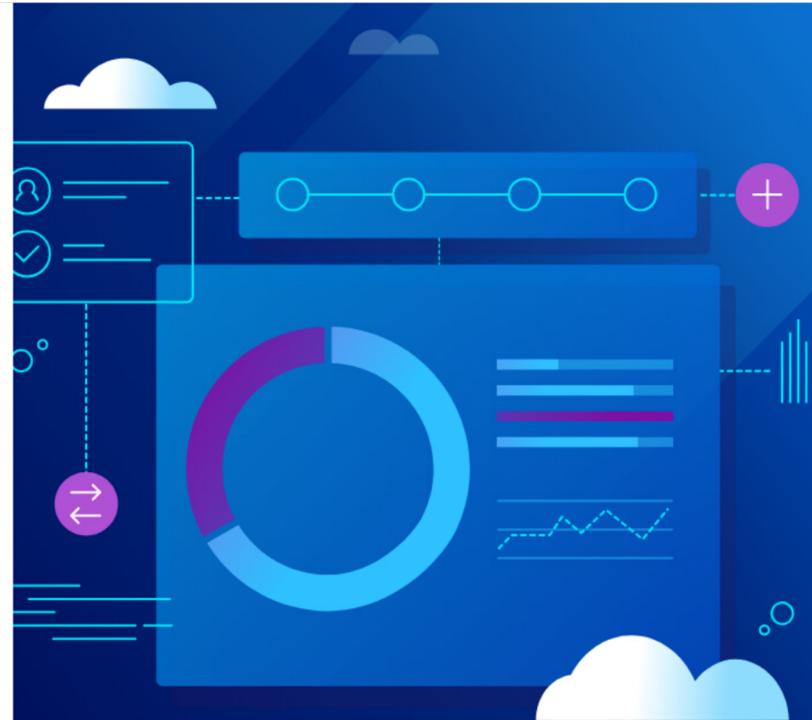
Password *
 [①](#)

Remember me

LOG IN

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[Terms of Use](#) [Privacy](#)

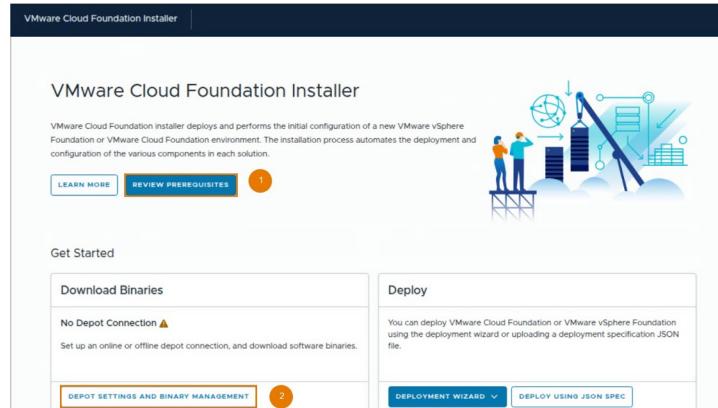


VCF Installer: Navigating the Main Screen

Before you proceed with the VMware Cloud Foundation installation:

1. Verify that all required prerequisites are satisfied by clicking **REVIEW PREREQUISITES**.
2. Download the VMware Cloud Foundation binary files from an online or offline depot.

You configure the depot settings by clicking **DEPOT SETTINGS AND BINARY MANAGEMENT**.



VCF Installer: Generating a Download Token

Before configuring the depot, you must generate a token to download the required binaries.

Important: You are accessing an internal view of this application.

VMware vSphere Foundation and VMware Cloud Foundation 9.0 is now available! Click [HERE](#) to download the appropriate attached PDF Guide to learn more about what's new and how to get started today.

My Dashboard - VMware Cloud Foundation

Search the entire site Search

Browse All

Knowledge Base Articles

Trending Latest

Article Title	Published Date	Article ID
License VMware Workstation Player/Pro	10/16/2024 1:13 PM	323903
FOS (Fabric OS) downloads and documentation	11/10/2023 12:14 PM	267270
VMware Workstation VM does not start after OS upgraded to Windows 11	6/2/2024 9:59 PM	368989

VMware Workstation Pro 17.5.2 VM does not start after upgrading OS from Windows ...

Broadcom semiconductor and infrastructure software specifications, datasheets, drivers.

- Mainframe Software
- Enterprise Software
- Cyber Security Software
- Payment Security Software
- VMware Cloud Foundation**
- Tanzu
- Application Networking and Security
- VeloCloud
- Brocade Storage Networking
- Semiconductors

[View All](#)

VCF Installer: Configuring the Depot Settings

To reduce the footprint of the VCF Installer, the VMware Cloud Foundation product binaries are not included as part of the appliance.

The binaries must be downloaded either from an online or offline depot.

The screenshot shows the 'Depot Settings' page of the VMware Cloud Foundation Installer. At the top, there's a navigation bar with 'VMware Cloud Foundation Installer' on the left and a user dropdown on the right. Below the header, there's a 'RETURN HOME' link. The main content area has a heading 'Depot Settings' and a note: 'You can only connect the VCF installer to one depot at a time. Configuring another depot connection deactivates and deletes any existing configuration.' A callout box provides an alternative method: '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.' A 'Read more' link is also present. There are two main sections: 'Connect to the online depot' and 'Offline Depot'. Both sections have a note about not being set up and a 'CONFIGURE' button, which is highlighted with a red border. The 'Offline Depot' section also includes a note about starting setup and entering offline depot settings.

VCF Installer: Managing the Binaries

You can review the version, size, and status of the binaries for all VMware Cloud Foundation components on the **Binary Management** page of the installer interface.

The screenshot shows the 'Binary Management' page of the VMware Cloud Foundation Installer. At the top, there's a navigation bar with 'Hello, admin@local'. Below it, the title 'Binary Management' is displayed. A 'Download Summary' section shows the version 9.0.0.0 for 'VMware vSphere Foundation' (Downloaded) and 'VMware Cloud Foundation' (Downloaded). A note below says to filter by product and version and refers to the 'Product Interoperability Matrix'. The main area has filters for 'Product: VMware Cloud Foundation' and 'Version: 9.0.0'. It includes 'DOWNLOAD' and 'DELETE' buttons. A table lists the following components:

	Component	Version	Size	Download Status
<input type="checkbox"/>	SDDC Manager	9.0.0.0	2.00 GB	Success
<input type="checkbox"/>	VMware Cloud Foundation Automation	9.0.0.0	21.17 GB	Success
<input type="checkbox"/>	VMware Cloud Foundation Operations	9.0.0.0	2.63 GB	Success
<input type="checkbox"/>	VMware Cloud Foundation Operations Collector	9.0.0.0	2.68 GB	Success
<input type="checkbox"/>	VMware Cloud Foundation Operations fleet management	9.0.0.0	1.49 GB	Success
<input type="checkbox"/>	VMware NSX	9.0.0.0	9.99 GB	Success
<input type="checkbox"/>	VMware vCenter	9.0.0.0	12.04 GB	Success

VCF Installer: Launching the Deployment Wizard

After downloading the VMware Cloud Foundation component binaries, you can start the deployment wizard by selecting **VMware Cloud Foundation** from the drop-down menu.

VMware Cloud Foundation Installer

VMware Cloud Foundation installer deploys and performs the initial configuration of a new VMware vSphere Foundation or VMware Cloud Foundation environment. The installation process automates the deployment and configuration of the various components in each solution.

[LEARN MORE](#) [REVIEW PREREQUISITES](#)



Get Started

Download Binaries

Online depot connection active ✓

You can edit your depot connection and/or downloaded additional software binaries

[VMware vSphere Foundation 9.0.0 Downloaded](#)

[VMware Cloud Foundation 9.0.0 Downloaded](#)

[DEPOT SETTINGS AND BINARY MANAGEMENT](#)

Deploy

You can deploy VMware Cloud Foundation or VMware vSphere Foundation using the deployment wizard or uploading a deployment specification JSON file.

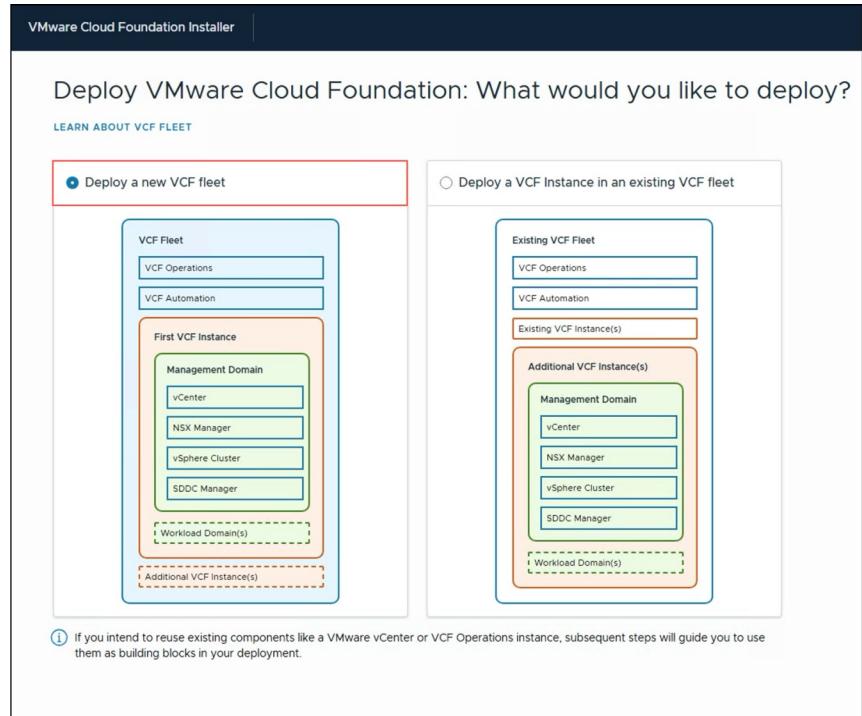
[DEPLOYMENT WIZARD](#) [DEPLOY USING JSON SPEC](#)

VMware Cloud Foundation VMware vSphere Foundation

VCF Installer: Deploying a New VCF Fleet

The VCF Installer can be used to deploy the first VCF instance or to add a new VCF instance to an already existing VCF Fleet:

- A VCF instance must have a management domain. One or more workload domains might be created in a VCF instance to run workloads
- A VCF Fleet includes VCF Operations, VCF Automation, and one or more VCF instances.



VCF Installer: Existing Components

If you have a VCF Operations instance, you can reuse it as the management component of your new VCF Fleet and use the existing vCenter as a Management Domain vCenter.

VMware Cloud Foundation Installer

Hello, admin@local ▾

Deploy VCF Fleet

1 Existing Components

2 General Information

3 VCF Operations

4 VCF Automation

5 vCenter

6 NSX Manager

7 Storage

8 Hosts

9 Networks

10 Distributed Switch

11 SDDC Manager

12 Review

13 Validate & Deploy

Existing Components

Select the existing components you want to reuse in this VCF fleet. You will be asked to provide details about the existing components later in the deployment wizard.

- VCF Installer validates the selected components to ensure that they are compatible.
- If you select a VCF Operations instance that is connected to a fleet management appliance or a VCF Automation instance, these components will also be added to this VCF fleet.
- It is recommended you select the VMware vCenter where the selected VCF Operations is currently deployed to be used as the vCenter for the first VCF instance.
- If a VMware NSX Manager is connected to the vCenter instance you intend to use, select the option to use existing NSX Manager.

VCF Operations
Use an existing VCF Operations instance as the management component in the VCF fleet.

VMware vCenter
Use an existing vCenter as the management domain vCenter.

VCF Fleet

- VCF Operations
- VCF Automation

VCF Instance

- Management Domain**

 - vCenter
 - NSX Manager
 - vSphere Cluster
 - SDDC Manager

CLOSE **NEXT**

VCF Installer: Providing General Information

When deploying a new VCF instance, the deployment wizard requires that you provide details such as the VCF instance name, management domain name, deployment model, DNS, and NTP settings.

The screenshot shows the 'General Information' step of the VMware Cloud Foundation Installer. The left sidebar lists steps 1 through 13. Step 2, 'General Information', is selected and highlighted in blue. The main panel contains fields for 'Version' (set to 9.0.0), 'VCF Instance Name' (set to EDU), and 'Management domain name' (set to EDU). Below these, there's an 'Advanced' section about networking, a 'Deployment model' section (with 'Simple (Single-node)' selected), and sections for 'DNS and NTP servers'. A note at the bottom says 'Auto-generate passwords for newly installed appliances'. On the right, a sidebar titled 'VCF Fleet' shows 'VCF Operations' and 'VCF Automation' under 'VCF Fleet'. Under 'VCF Instance', it shows 'Management Domain' with 'vCenter', 'NSX Manager', 'vSphere Cluster', and 'SDDC Manager' listed. At the bottom right are 'CLOSE', 'BACK', and 'NEXT' buttons.

VCF Installer: Configuring VCF Operations

In the VCF Operations wizard, you provide the configuration details for the VCF appliances.

VMware Cloud Foundation Installer

Hello, admin@local ▾

Deploy VCF Fleet

1 Existing Components
2 General Information
3 VCF Operations
4 VCF Automation
5 vCenter
6 NSX Manager
7 Storage
8 Hosts
9 Networks
10 Distributed Switch
11 SDDC Manager
12 Review
13 Validate & Deploy

VCF Operations

Enter the configuration details for the VCF Operations appliances. All fields marked with a * are required.

1 VCF Operations Appliance

Operations Appliance Size * Small
Operations primary FQDN * sa-m01-vcops01.vcf.sddc.local

Administrator Password * VMware123!VMware123!
Confirm Administrator Password *
Root Password *
Confirm Root Password *

2 Fleet Management Appliance

Appliance FQDN * sa-m01-vcopsfm01.vcf.sddc.local
 Use same password as VCF Operations

3 Operations Collector Appliance

Provide details for deploying a new operations collector appliance for this VCF instance.

Appliance FQDN * sa-m01-vcopsoc01.vcf.sddc.local
 Use same password as VCF Operations

VCF Fleet

VCF Operations

VCF Automation

VCF Instance

Management Domain

- vCenter
- NSX Manager
- vSphere Cluster
- SDDC Manager

Activate Windows
Go to Settings to activate Windows

CLOSE BACK NEXT

VCF Installer: Configuring VCF Automation

As part of the VCF Automation configuration, you provide the appliance FQDN, user name, and password.

VMware Cloud Foundation Installer | Hello, admin@local ▾

Deploy VCF Fleet

1 Existing Components
2 General Information
3 VCF Operations
4 VCF Automation
5 vCenter
6 NSX Manager
7 Storage
8 Hosts
9 Networks
10 Distributed Switch
11 SDDC Manager
12 Review
13 Validate & Deploy

VCF Automation

Enter the configuration details for VCF Automation appliance. All fields marked with a * are required.

I want to connect a VCF Automation instance later

Choose this option if you wish to use an existing Aria Automation instance that is not currently connected to the VCF Operations instance you specified in the previous step. By doing so, you agree to use VCF Operations to import your Aria Automation instance once the installer is complete.

Appliance FQDN * sa-m01-vaa01.vcf.sddc.local

Administrator Password ⓘ * ⌂

Confirm Administrator Password * ⌂

VCF Automation requires single node in a simple deployment. In addition provide second address to be used when recreating a node for upgrade

Node IP 1 * 172.20.10.36

Node IP 2 * 172.20.10.37

Node name prefix ⓘ * sa-m01-vcfa

Internal Cluster CIDR ⓘ * 198.18.0.0/15

VCF Fleet

VCF Operations

VCF Automation

VCF Instance

Management Domain

- vCenter
- NSX Manager
- vSphere Cluster
- SDDC Manager

CLOSE BACK NEXT

VCF Installer: Configuring vCenter

As part of the vCenter configuration, you provide the FQDN for the appliance, the data center name, vSphere cluster name, and domain name.

The screenshot shows the 'Deploy VCF Fleet' wizard in progress, specifically step 5: vCenter. A red box highlights the configuration details for the management domain vCenter. To the right, a blue box highlights the VCF Fleet and VCF Instance components.

vCenter Configuration Details:

- Appliance FQDN: sa-m01-vc01.vcf.sddc.local
- Appliance Size: Small (4 vCPUs and 21 GB of memory)
- Appliance Storage Size: Default (694 GB of disk space)
- Datacenter Name: EDU-dc01
- Cluster Name: EDU-cl01
- SSO Domain Name: vsphere.local
- Administrator Password: [REDACTED]
- Confirm Administrator Password: [REDACTED]
- Root Password: [REDACTED]
- Confirm Root Password: [REDACTED]

VCF Fleet Components:

- VCF Operations
- VCF Automation

VCF Instance Components:

- Management Domain:
 - vCenter
 - NSX Manager
 - vSphere Cluster
 - SDDC Manager

At the bottom right are buttons for CLOSE, BACK, and NEXT.

VCF Installer: Configuring NSX Manager

On the NSX Manager configuration page, you provide the appliance size and FQDN. You also create passwords for the admin, root, and audit users.

The screenshot shows the VMware Cloud Foundation Installer interface. On the left, a vertical navigation bar lists 13 steps: 1 Existing Components, 2 General Information, 3 VCF Operations, 4 VCF Automation, 5 vCenter, 6 NSX Manager (which is selected and highlighted in blue), 7 Storage, 8 Hosts, 9 Networks, 10 Distributed Switch, 11 SDDC Manager, 12 Review, and 13 Validate & Deploy. The main content area is titled "NSX Manager" and contains a form for entering configuration details. The form fields are: "Appliance Size" (set to "Medium"), "Cluster FQDN" (set to "sa-m01-nsxt-vip.vcf.sddc.local"), "Appliance FQDN" (set to "sa-m01-nsxt01.vcf.sddc.local"), "Administrator Password" (a masked password field), "Confirm Administrator Password" (a masked password field), "Root Password" (a masked password field), "Confirm Root Password" (a masked password field), "Audit Password" (a masked password field), and "Confirm Audit Password" (a masked password field). A red box highlights the "Appliance Size" dropdown and the "Cluster FQDN" and "Appliance FQDN" fields. To the right of the form, there is a sidebar titled "VCF Fleet" which shows "VCF Operations" and "VCF Automation" are checked. Below it, a box titled "VCF Instance" shows the "Management Domain" components: "vCenter" (checked), "NSX Manager" (unchecked), "vSphere Cluster" (unchecked), and "SDDC Manager" (unchecked). At the bottom right are buttons for "CLOSE", "BACK", and "NEXT" (with a hand cursor icon).

VCF Installer: Configuring Management Domain Storage

For management domain storage, you configure the type of storage and relevant settings for the selected storage.

VMware Cloud Foundation Installer | Hello, admin@local

Deploy VCF Fleet

1 Existing Components
2 General Information
3 VCF Operations
4 VCF Automation
5 vCenter
6 NSX Manager
7 Storage
8 Hosts
9 Networks
10 Distributed Switch
11 SDDC Manager
12 Review
13 Validate & Deploy

Storage

Select your desired storage type and fill out the corresponding fields. All fields marked with a * are required.

Select Storage type *

vSAN
Configure a vSAN datastore

VMFS on Fibre Channel (FC)
Configure a Fibre Channel datastore

NFS v3
Configure an NFS datastore

vSAN Architecture * vSAN ESA

vSAN Datastore Name * EDU-cl01-ds-vsan01

VCF Fleet

VCF Instance

Management Domain

vCenter
NSX Manager
vSphere Cluster
SDDC Manager

CLOSE BACK NEXT

VCF Installer: Adding Hosts to the Management Domain

You configure the ESX hosts to add to the management domain of your VCF instance. You must verify the fingerprint for each ESX host.

VMware Cloud Foundation Installer

Hello, admin@local

Deploy VCF Fleet

- 1 Existing Components
- 2 General Information
- 3 VCF Operations
- 4 VCF Automation
- 5 vCenter
- 6 NSX Manager
- 7 Storage
- 8 Hosts
- 9 Networks
- 10 Distributed Switch
- 11 SDDC Manager
- 12 Review
- 13 Validate & Deploy

Hosts

Select the hosts to add to the management domain of your VCF instance. All fields marked with a * are required.

ESX Root Password *

Add Hosts

The minimum number of required hosts is displayed in the table. Click Add Host to add more ESX hosts.

CONFIRM ALL FINGERPRINTS

FQDN	Confirm Fingerprint
esx-4.vcf.sddc.local	8A:08:51:45:B9:96:E2:81:52:59:C8:2F:4F:FE:28:34:C3:AD:EA:2A:E8:F0:79:99:E3:35: 32:E9:4C:0D:DB:EE
esx-1.vcf.sddc.local	86:7D:08:B1:76:1E:59:C7:69:B4:38:D3:7B:FF:C3:FA:5C:5F:08:9F:54:5E:92:58:43:CE:1 0:C:E1:8:1B:2:151
esx-2.vcf.sddc.local	7B:27:9C:A6:DB:8D:64:51:B3:80:3F:54:AB:39:FB:62:93:88:7D:44:49:57:B7:06:A5:5 5:07:10:79:C3:EA:46
esx-3.vcf.sddc.local	16:34:D0:70:52:D4:27:18:92:12:30:1F:4C:66:F3:19:1B:8E:19:92:6B:7D:50:54:E0:85:02: C3:55:7C:A4:B1

VCF Fleet

VCF Instance

Management Domain

- vCenter
- NSX Manager
- vsphere Cluster
- SDDC Manager

CLOSE BACK NEXT

VCF Installer: Configuring Host Networks

You configure the VLAN ID, CIDR notation, MTU size, and default gateway for the ESX Management, VM Management, vMotion, and vSAN networks.

VMware Cloud Foundation Installer | Hello, admin@local ▾

Deploy VCF Fleet

1 Existing Components
2 General Information
3 VCF Operations
4 VCF Automation
5 vCenter
6 NSX Manager
7 Storage
8 Hosts
9 Networks **Selected**
10 Distributed Switch
11 SDDC Manager
12 Review
13 Validate & Deploy

Networks

Enter VLANs, gateways, subnet masks (CIDR notion), MTUs, and expected IP ranges for each network configured on the physical switches in your environment. All fields marked with a * are required.

1 ESX Management Network

VLAN ID *	2010	MTU *	1500
CIDR Notation *	172.20.10.0/24	Gateway *	172.20.10.254

2 VM Management Network

Use same inputs from ESX Management Network ⓘ

VLAN ID *	2008	MTU *	8900
CIDR Notation *	172.20.8.0/24	Gateway *	172.20.8.254
IP Address Range *	172.20.8.101	To *	172.20.8.104

3 vMotion Network

VLAN ID *	2008	MTU *	8900
CIDR Notation *	172.20.8.0/24	Gateway *	172.20.8.254
IP Address Range *	172.20.8.101	To *	172.20.8.104

4 vSAN Network

VLAN ID *	2009	MTU *	8900
CIDR Notation *	172.20.9.0/24	Gateway *	172.20.9.254
IP Address Range *	172.20.9.101	To *	172.20.9.104

VCF Fleet

- VCF Operations
- VCF Automation

VCF Instance

Management Domain

- vCenter
- NSX Manager
- vSphere Cluster

SDDC Manager

CLOSE BACK NEXT ↗

VCF Installer: Distributed Switch Configuration Options

You provide the vSphere Distributed Switch configuration for the management domain hosts. Depending on the number of physical NICs available on the ESX hosts, you can select different VDS configuration profiles.

The screenshot shows the 'Deploy VCF Fleet' wizard in progress, specifically step 10: 'Distributed Switch'. The left sidebar lists steps 1 through 13, with 'Distributed Switch' currently selected. The main panel displays three configuration options:

- Default**: This profile is recommended and the default configuration. It provides a unified fabric for all traffic types. A red box highlights this option.
- Storage Traffic Separation**: This profile creates two distributed virtual switches with separate physical NICs. One switch is dedicated for storage traffic while the other is used for all other traffic. A red box highlights this option.
- NSX Traffic Separation**: This profile creates two distributed virtual switches with separate physical NICs. One switch is dedicated for NSX Edge and overlay traffic while the other is used for all other traffic.
- Storage Traffic and NSX Traffic Separation**: This profile creates three distributed virtual switches with separate physical NICs. One switch is dedicated for storage traffic, one for NSX Edge and overlay traffic, and one for all other traffic. A red box highlights this option.

A callout box on the right side of the screen shows the 'VCF Fleet' and 'VCF Instance' configurations. The 'VCF Fleet' section shows 'VCF Operations' and 'VCF Automation' checked. The 'VCF Instance' section shows 'Management Domain' (with 'vCenter', 'NSX Manager', 'vSphere Cluster', and 'SDDC Manager' checked) and 'SDDC Manager' highlighted with a red border.

VCF Installer: Configuring the Distributed Switch (1)

You configure the switch name, MTU size, and mapping of host uplinks to physical adapters. For each enabled network, you set the distributed port group name and load-balancing algorithm.

The screenshot shows the 'Deploy VCF Fleet' wizard in progress, specifically step 10: 'Distributed Switch'. A red box highlights the 'Selected Profile: Custom Switch Configuration' dropdown. Another red box highlights the 'Map uplinks to physical network adapters on host' section, which lists 'uplink1' mapped to 'vmnic0' and 'uplink2' mapped to 'vmnic1'. A third red box highlights the 'Configure network traffic(s) for this Distributed Switch' section, where all five traffic types (ESX Management, VM Management, vMotion, VSAN, NSX) are selected. To the right, a sidebar titled 'VCF Instance' shows the 'Management Domain' components: vCenter, NSX Manager, vSphere Cluster, and SDDC Manager, all marked as green.

VMware Cloud Foundation Installer

Hello, admin@local

Deploy VCF Fleet

1 Existing Components

2 General Information

3 VCF Operations

4 VCF Automation

5 vCenter

6 NSX Manager

7 Storage

8 Hosts

9 Networks

10 Distributed Switch

11 SDDC Manager

12 Review

13 Validate & Deploy

Distributed Switch

Selected Profile: Custom Switch Configuration

Distributed Switches

Distributed Switch Name: EDU-cl01-vds01

Distributed Switch Name *: EDU-cl01-vds01

MTU *: 8900

Number of Uplinks *: 2

Map uplinks to physical network adapters on host

uplink1: vmnic0

uplink2: vmnic1

Configure network traffic(s) for this Distributed Switch

ESX Management VM Management vMotion VSAN NSX

Network Traffic: ESX Management

PortGroup Name *: EDU-cl01-vds01-pg-esx-mgmt

Load Balancing *: Route Based on Physical NIC Load

uplink1: Active Standby Unused

uplink2: Active Standby Unused

CLOSE BACK NEXT

VCF Installer: Configuring the Distributed Switch (2)

You configure the distributed port group name and load-balancing algorithm for the ESX Management networks, VM Management, vMotion, and vSAN.

VMware Cloud Foundation Installer

Hello, admin@local

Deploy VCF Fleet

- 1 Existing Components
- 2 General Information
- 3 VCF Operations
- 4 VCF Automation
- 5 vCenter
- 6 NSX Manager
- 7 Storage
- 8 Hosts
- 9 Networks
- 10 Distributed Switch
- 11 SDDC Manager
- 12 Review
- 13 Validate & Deploy

Distributed Switch

Network Traffic: ESX Management

PortGroup Name * EDU-cl01-vds01-pg-esx-mgmt

Load Balancing * Route Based on Physical NIC Load

uplink1 Active

uplink2 Active

Network Traffic: VM Management

PortGroup Name * EDU-cl01-vds01-pg-vm-mgmt

Load Balancing * Route Based on Physical NIC Load

uplink1 Active

uplink2 Active

Network Traffic: vMotion

PortGroup Name * EDU-cl01-vds01-pg-vmotion

Load Balancing * Route Based on Physical NIC Load

uplink1 Active

uplink2 Active

Network Traffic: vSAN

CLOSE BACK NEXT

VCF Installer: Configuring the Distributed Switch (3)

You configure the NSX overlay transport zone. The parameters include the pool of IP addresses that are used to configure the TEP interfaces on the ESX hosts.

The screenshot shows the VMware Cloud Foundation Installer interface. On the left, a sidebar lists steps from 1 to 13, with step 10 'Distributed Switch' currently selected. The main panel is titled 'Distributed Switch' and contains two sections: 'Network Traffic: NSX' and 'Transport Zones'. The 'Transport Zones' section is expanded and highlighted with a red box, showing the configuration for the 'NSX-Overlay' transport zone. The configuration includes:

Setting	Value
Transport Zone Name *	sa-m01-tz-overlay01
VLAN ID *	2011
IP Assignment (TEP) *	<input type="radio"/> DHCP <input checked="" type="radio"/> IP Pool
Pool name *	NSX-Pool
Description	NSX-Pool
CIDR *	172.20.11.0/24
IP Range Start: *	172.20.11.200
End: *	172.20.11.210
Gateway *	172.20.11.254

At the bottom right of the main panel, there are 'CLOSE', 'BACK', and 'NEXT' buttons.

VCF Installer: Configuring SDDC Manager

You specify configuration details for the SDDC Manager appliance.

The screenshot shows the VMware Cloud Foundation Installer interface. On the left, a sidebar lists steps from 1 to 13, with step 11 (SDDC Manager) highlighted. The main area is titled "SDDC Manager" and contains fields for configuration details. A red box highlights the password input fields: "Root Password", "Confirm Root Password", "VCF Password", "Confirm VCF Password", "Administrator Password", and "Confirm Administrator Password". To the right, there are two panels: "VCF Fleet" (with "VCF Operations" and "VCF Automation" checked) and "VCF Instance" (with "Management Domain" containing "vCenter", "NSX Manager", "vSphere Cluster", and "SDDC Manager" all checked). At the bottom right are buttons for "CLOSE", "BACK", and "NEXT" (with a hand cursor icon).

VMware Cloud Foundation Installer | Hello, admin@local ▾

Deploy VCF Fleet

1 Existing Components
2 General Information
3 VCF Operations
4 VCF Automation
5 vCenter
6 NSX Manager
7 Storage
8 Hosts
9 Networks
10 Distributed Switch
11 SDDC Manager
12 Review
13 Validate & Deploy

SDDC Manager

Enter the configuration details for the SDDC Manager appliance. All fields marked with a * are required.

① The VMware Cloud Foundation installer appliance is not deployed on one of the hosts in the management domain. During the deployment process, a new SDDC Manager appliance will be deployed.

Appliance FQDN * sa-m01-sddc01.vcf.sddc.local
Either a Fully Qualified Domain name e.g host.vsphere.local or just the hostname e.g. host

Root Password *
Confirm Root Password *

VCF Password *
Confirm VCF Password *

Administrator Password *
Confirm Administrator Password *

VCF Fleet

VCF Operations
VCF Automation

VCF Instance

Management Domain

vCenter
NSX Manager
vSphere Cluster
SDDC Manager

CLOSE BACK NEXT

VCF Installer: Reviewing Deployment Configuration

You can review the VMware Cloud Foundation configuration and make any required changes before proceeding with the installation.

The screenshot shows the 'Review' step of the 'Deploy VCF Fleet' process. The left sidebar lists steps 1 through 13, with '12. Review' currently selected. The main area displays a summary of deployment settings under three expandable sections: General Information, DNS and NTP servers, and VCF Operations. A red box highlights the 'General Information' section, which includes fields for Version (9.0.0.0), VCF Instance Name (EDU), Management domain name (EDU), Deployment model (Simple (Single-node)), and DNS and NTP servers (DNS domain name: vcf.sddc.local, DNS servers: 172.20.10.10, NTP servers: 172.20.10.25). It also shows options for generating passwords (No) and enabling CEIP (Yes). A note at the bottom states: 'Skip the automated deployment of VCF Operations and VCF Automation on distributed port groups to manually deploy them on NSX segments later. By skipping, you agree to complete the deployment of these components later.' The 'VCF Operations' and 'VCF Operations Appliance' sections are also shown. At the bottom right are 'CLOSE', 'BACK', and 'NEXT' buttons.

VMware Cloud Foundation Installer | Hello, admin@local

Deploy VCF Fleet

Review

Summary

General Information

Version	9.0.0.0
VCF Instance Name	EDU
Management domain name	EDU
Deployment model	Simple (Single-node)

DNS and NTP servers

DNS domain name	vcf.sddc.local
DNS servers	172.20.10.10
NTP servers	172.20.10.25

Auto-generate passwords for newly installed appliances

Enable Customer Experience Improvement Program (CEIP)

Skip the automated deployment of VCF Operations and VCF Automation on distributed port groups to manually deploy them on NSX segments later. By skipping, you agree to complete the deployment of these components later.

VCF Operations

VCF Operations Appliance

Operations Appliance Size

Small

CLOSE BACK NEXT

VCF Installer: Validating and Deploying

Before proceeding with the deployment, the VCF Installer validates the parameters provided during the deployment wizard.

The screenshot shows the 'Validate & Deploy' step of the VCF Installer. On the left, a sidebar lists the deployment wizard steps: 1 Existing Components, 2 General Information, 3 VCF Operations, 4 VCF Automation, 5 vCenter, 6 NSX Manager, 7 Storage, 8 Hosts, 9 Networks, 10 Distributed Switch, 11 SDDC Manager, 12 Review, and 13 Validate & Deploy. Step 13 is highlighted with a blue background. The main area contains a 'Validate & Deploy' section with instructions and a note about re-running validations if infrastructure changes occur. It includes buttons for 'ACKNOWLEDGE ALL WARNINGS', 'RE-RUN VALIDATIONS', and 'DOWNLOAD JSON SPEC'. A table lists validation items and their status:

Validations	Status
Deployment Specification	Succeeded
DNS Resolution	Succeeded
Security Configuration	Succeeded
Versions and Bundles	Succeeded
ESX Host Configuration	Succeeded
Time Synchronization	Succeeded
Existing SDDC Manager Configuration	Succeeded
vSAN ESA Disks Eligibility	Succeeded
ESX Host vSAN HCL Compatibility	Succeeded
Password Policies	Succeeded
Network Configuration	Succeeded
vMotion Network Connectivity	Succeeded
vSAN Network Connectivity	Succeeded
NSX Host Overlay Network Connectivity	Succeeded

At the bottom right are buttons for 'CLOSE', 'BACK', and 'DEPLOY'.

VCF Installer: Monitoring the Deployment Process

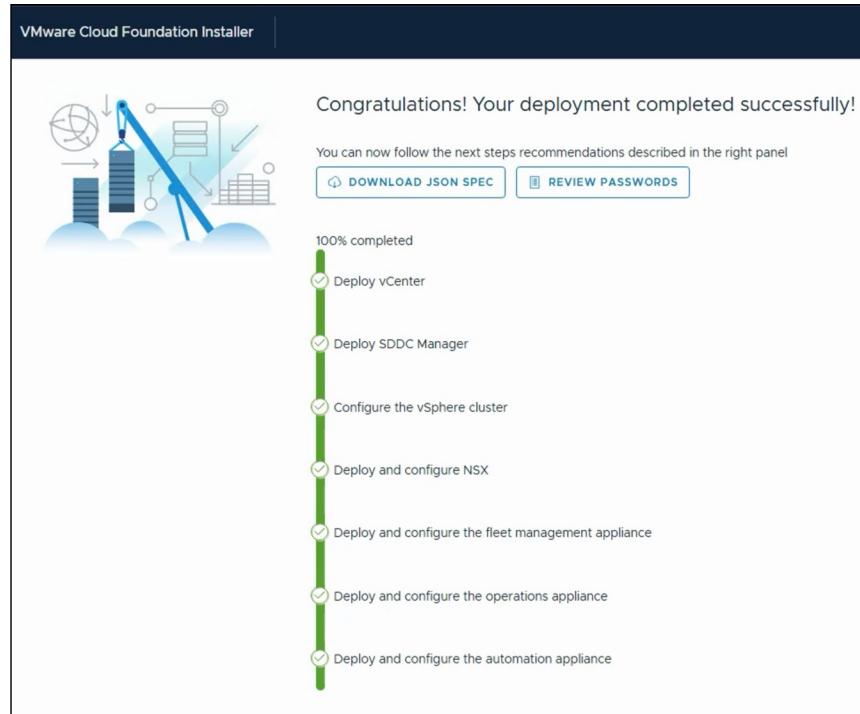
You can follow the VMware Cloud Foundation installation process from the VCF Installer. For more details, you can check the entries in the **Tasks** section.

The screenshot shows the VMware Cloud Foundation Installer interface. At the top, there are buttons for 'DOWNLOAD JSON SPEC' and 'REVIEW PASSWORDS'. On the left, there's a sidebar with a 'Tasks' button highlighted by a red box. The main area features a vertical progress bar with a green line and circular markers. The tasks listed are: Deploy vCenter, Deploy SDDC Manager, Configure the vSphere cluster, Deploy and configure NSX, Deploy and configure the fleet management appliance, Deploy and configure the operations appliance, and Deploy and configure the automation appliance. All tasks are marked as '100% completed' with a checkmark. To the right of the progress bar, there's a 'Next Steps' section with two items: 'Log in to the VCF Operations UI' and 'Navigate to License Management, and apply your VCF license keys within the 60-day evaluation period'. Below this is a 'VCF Operations Login' section with fields for 'Username' (sa-m01-vcops01.vcf.sddc.local) and 'Password' (*****). A blue 'OPEN VCF OPERATIONS UI' button is present. At the bottom right, there's an 'Activate Windows' message: 'Go to Settings to activate Windows.' The bottom left corner has the VMware logo with 'by Broadcom'.

Deployment Summary

VCF Installer performs the following tasks as part of the deployment process:

- Deploys vCenter
- Deploys SDDC Manager
- Configures the vSphere cluster
- Deploys and configures NSX Manager
- Deploys and configures Fleet Management Appliance



Deploying VMware Cloud Foundation Using a Deployment Specification JSON File

To deploy VMware Cloud Foundation using a deployment specification JSON file, you select **DEPLOY USING JSON SPEC** on the main installer page.

The screenshot shows the VMware Cloud Foundation Installer interface. At the top, there's a dark header bar with the title "VMware Cloud Foundation Installer". Below it, the main title "VMware Cloud Foundation Installer" is displayed, followed by a brief description: "VMware Cloud Foundation installer deploys and performs the initial configuration of a new VMware vSphere Foundation or VMware Cloud Foundation environment. The installation process automates the deployment and configuration of the various components in each solution." There are two buttons at the bottom of this section: "LEARN MORE" and "REVIEW PREREQUISITES". To the right of the text is a stylized illustration of two people interacting with a globe and server racks. Below this, there are two main sections: "Get Started" and "Deploy". The "Get Started" section contains a "Download Binaries" sub-section with a message about an active online depot connection and two download buttons: "VMware vSphere Foundation 9.0.0.0 Downloaded" and "VMware Cloud Foundation 9.0.0.0 Downloaded". It also has a "DEPOT SETTINGS AND BINARY MANAGEMENT" button. The "Deploy" section contains a message about deploying using the wizard or JSON file, and two buttons at the bottom: "DEPLOYMENT WIZARD" and "DEPLOY USING JSON SPEC", where "DEPLOY USING JSON SPEC" is highlighted with a red box.

Uploading the Deployment Specification JSON File

You can upload the deployment specification JSON file by browsing your local system or by dragging the file into the VCF Installer deployment wizard.

The screenshot shows the VMware Cloud Foundation Installer interface. At the top, it says "VMware Cloud Foundation Installer" and "Hello, admin@local". On the left, there's a sidebar with "Deploy using JSON Specification" and two steps: "1 Upload Deployment Specification" (which is selected) and "2 Validate & Deploy". The main area is titled "Upload Deployment Specification" and has a sub-instruction "Upload a deployment specification JSON file". It features a dashed rectangular area for dragging files, a "CHOOSE FILE" button with a blue border, and a note "Json -- Maximum file size XX MB".

Reviewing the Deployment Specification JSON File

After uploading the deployment specification JSON file, you can verify its name, preview the file in JSON format, and edit configuration settings using the VMware Cloud Foundation deployment wizard.

The screenshot shows the 'Upload Deployment Specification' screen of the VMware Cloud Foundation Installer. The left sidebar has two tabs: 'Deploy using JSON Specification' (selected) and 'Validate & Deploy'. The main area has two tabs: 'SUMMARY' (selected) and 'JSON PREVIEW' (highlighted with an orange border). The 'SUMMARY' tab shows a file upload interface with a placeholder 'Drag and drop file to replace or CHOOSE OTHER FILE' and a section for uploaded files named 'VCF90-Tue-Jan-28-2025-C10-Rm2.json' (7.26 KB). The 'JSON PREVIEW' tab displays the JSON code:

```
+ vcenterSpec:  
  sslThumbprint: ""  
  vcenterHostname: "sa-m01-vc01.vcf.sddc.local"  
  rootVcenterPassword: "Vmware123!Vmware123!"  
  vsSize: "small"  
  storageSize: ""  
  administratorSsPassword: "Vmware123!Vmware123!"  
  ssoDomain: "vsphere.local"  
  useExistingDeployment: false  
+ nsxtSpec:  
  sslThumbprint: ""  
  nsxtManagerSize: "medium"
```

At the bottom right of the JSON Preview panel is a 'EDIT IN WIZARD' button.

Validating and Deploying VMware Cloud Foundation

Before proceeding with the deployment, the VCF Installer validates the parameters configured in the deployment specification JSON file. If validation errors occur, you must address them before proceeding with the deployment.

Validate & Deploy

If validation succeeds, click Deploy to start deployment. If there are validation errors, navigate back to the relevant pages in the deployment wizard to make updates and then re-run the validations. You can also download the JSON specification file, make the necessary changes, and then upload the modified JSON file from the VCF installer homepage.

Validation in progress... 10 / 15 completed

ACKNOWLEDGE ALL WARNINGS RE-RUN VALIDATIONS DOWNLOAD JSON SPEC

Validations	Status
Deployment Specification	Succeeded
VCF Installer Configuration	Succeeded
DNS Resolution	Succeeded
Security Configuration	Succeeded
Versions and Bundles	Succeeded
ESX Host Configuration	Succeeded
Time Synchronization	Succeeded
Existing SDDC Manager Configuration	Succeeded
vSAN Disks Availability (AllFlash)	Succeeded
Password Policies	Succeeded
Network Configuration	In Progress
vMotion Network Connectivity	Not Started
vSAN Network Connectivity	Not Started
NSX Host Overlay Network Connectivity	Not Started
Network IP Pool	Not Started

VCF Installer: Monitoring the Deployment Process

You can follow the VMware Cloud Foundation installation process from the VCF Installer. For more details, you can check the entries in the **Tasks** section.

The screenshot shows the VMware Cloud Foundation Installer interface. At the top, there are two buttons: "DOWNLOAD JSON SPEC" and "REVIEW PASSWORDS". On the left, there's a sidebar with a "Tasks" tab highlighted by a red border. The main area displays a vertical progress bar with a green line and circular markers. The tasks listed are:

- Deploy vCenter (100% completed)
- Deploy SDDC Manager
- Configure the vSphere cluster
- Deploy and configure NSX
- Deploy and configure the fleet management appliance
- Deploy and configure the operations appliance
- Deploy and configure the automation appliance

To the right of the progress bar, there's a "Next Steps" section with two items:

- Log in to the VCF Operations UI.
- Navigate to License Management, and apply your VCF license keys within the 60-day evaluation period.

Below this is a "VCF Operations Login" section with fields for "Username" (admin) and "Password" (redacted). A "OPEN VCF OPERATIONS UI" button is also present. At the bottom right, there's an "Activate Windows" message: "Go to Settings to activate Windows." The VMware logo is at the bottom left.

Key Takeaways



VCF Fleets have a variety of blueprints that can be followed in order to build the VCF environment for optimal operations for specific scenarios.

Planning and Preparation is critical to a successful VCF deployment.

VCF Installer streamlines the deployment of VCF 9.

Upgrade Path #2

Upgrade vSphere Environments to VCF 9.0



By the end of this training
you will be able to

01

Design and Implement an Upgrade from vSphere to VCF 9.0

02

Design and Implement an Upgrade from vSphere with Aria Operations to VCF 9.0

03

Design and Implement an Upgrade from vSphere with Aria Operations, Automation and LCM to VCF 9.0

Importance

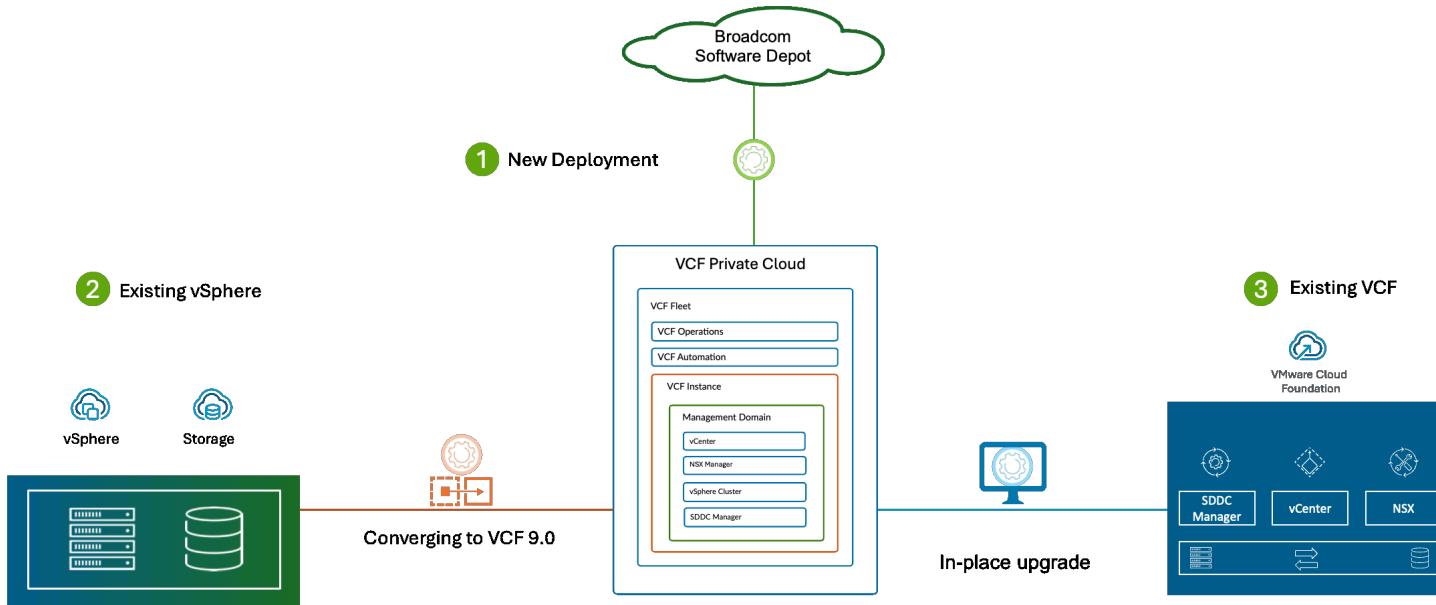
As an architect and implementer, you must understand the supported upgrade paths, key prerequisites, design considerations, and step-by-step processes. This knowledge equips you to plan and execute upgrades from various existing infrastructures, while addressing compatibility, risk, and operational requirements to ensure a smooth upgrade to a modern, scalable private cloud.

-Design and Implement-

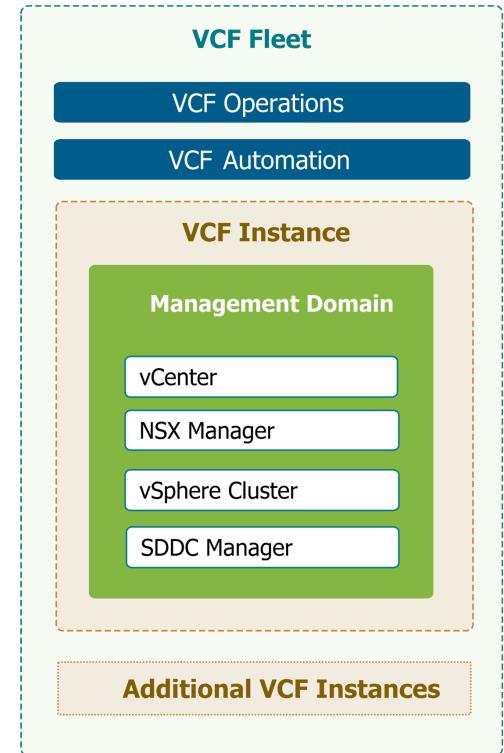
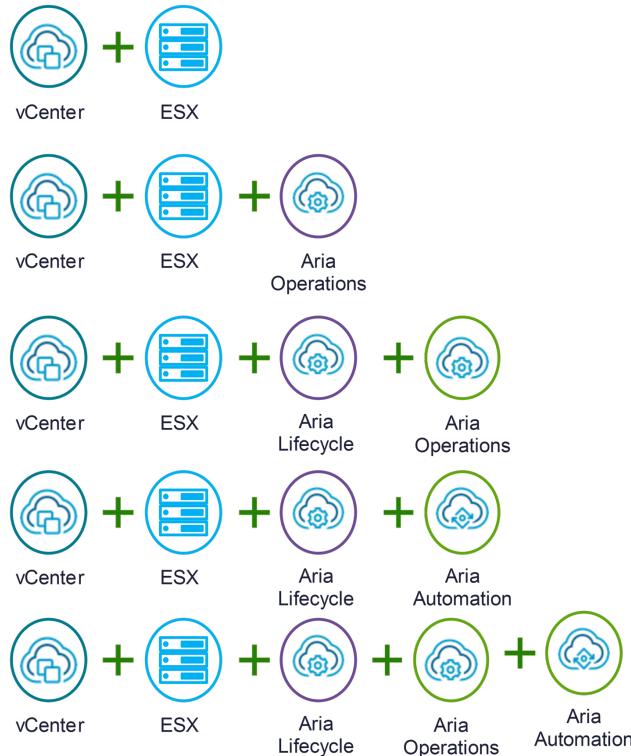
Upgrade from vSphere to VCF
9.0

Starting the Journey to VCF Private Cloud

You can begin your journey to VCF private cloud as a new deployment or using your existing vSphere 9.0 or VCF 5.x infrastructure.

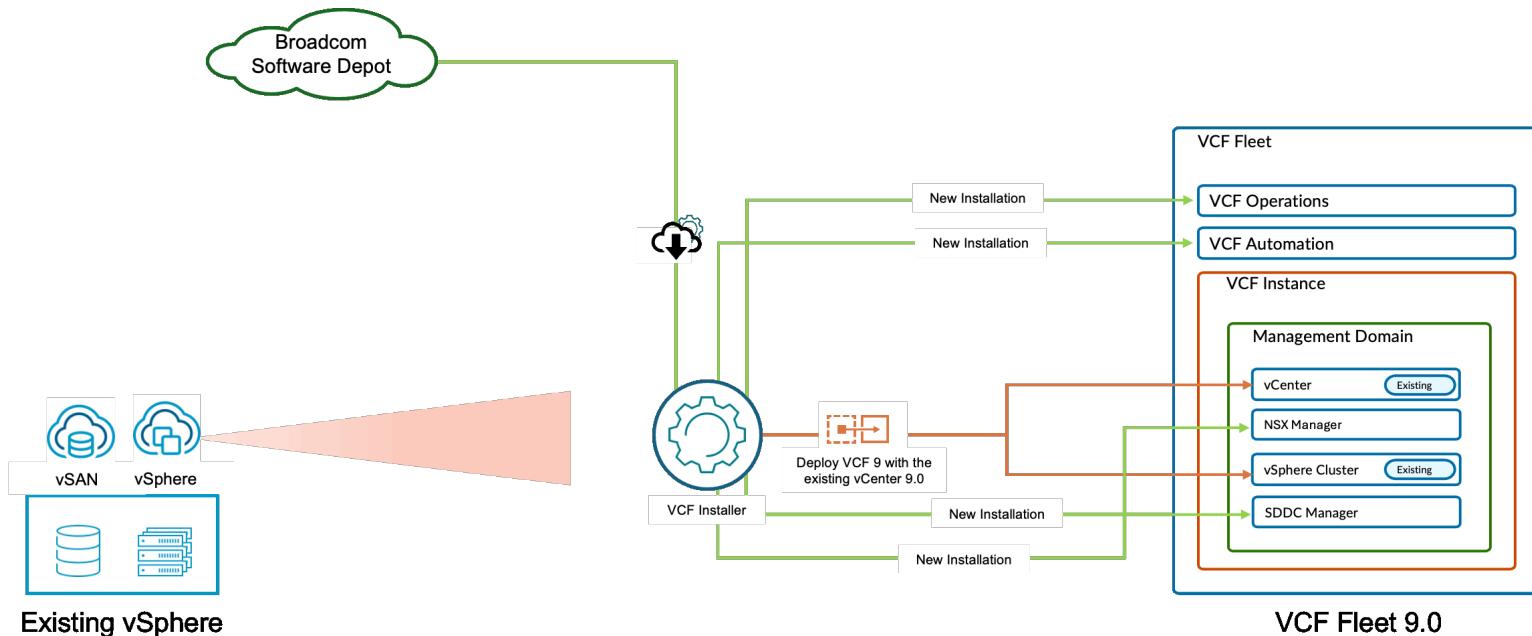


Supported Upgrade Path: Existing vSphere Infrastructure



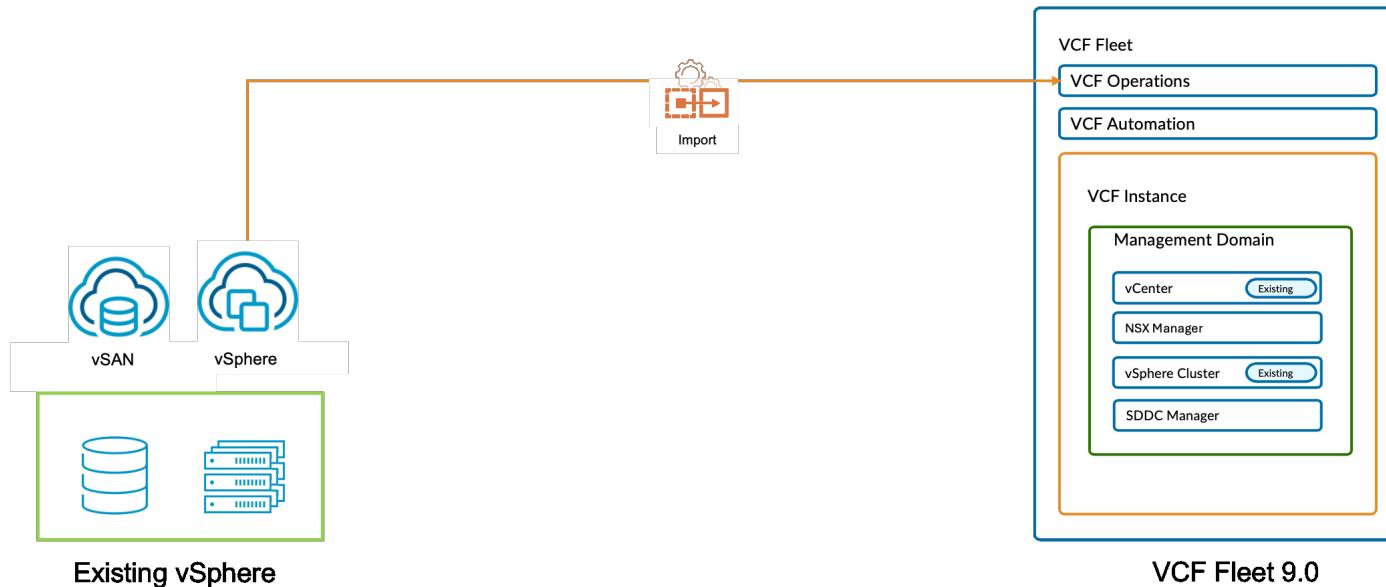
Overview of the Upgrade Process with the Existing vCenter Instance

You deploy a new VCF private cloud using the existing vCenter instance. The VCF Installer uses the existing vCenter 9.0 system in the management domain vCenter of the first VCF instance.



Overview of Importing a vCenter Instance as a Workload Domain

You import an existing vCenter instance as a VI workload domain using the VMware Cloud Foundation Operations UI.



Key Differences Between Upgrading with Existing vSphere and Import (1)

The table outlines key differences and use cases of upgrading with existing vSphere and import.

Category	Upgrading with Existing vSphere	Import
Tool	Deploy with existing VC 9.0 or VCF Operations 9.0 through the VCF Installer.	Import the existing vCenter instance through the VCF Operations UI.
Primary purpose	The existing vCenter instance becomes the management domain vCenter.	The existing vCenter instance becomes an isolated workload domain.

Key Differences Between Upgrading with Existing vSphere and Import (2)

The table outlines key differences and use cases of upgrading with existing vSphere and import.

Category	Upgrading with Existing vSphere	Import
Use case	Onboarding a stand-alone vSphere environment into a VCF deployment.	Consolidation of workload domains under a new or existing SDDC Manager.
Minimum supported vCenter version	vCenter and VCF Operations 9.0.	vCenter 8.0 Update 1.
Minimum supported ESX version	ESX 9.0.	ESX 8.0 Update 1.

Preparing for the Upgrade to VCF 9.0



Upgrades Versus New Deployments: Key Considerations

When upgrading to VCF 9.0, consider compatibility, complexity, risk, timeline, and scalability, because business requirements and priorities often differ between upgrades and new

Requirements	Upgrade	New Deployment
Compatibility	Compatibility with existing hardware and software must be considered.	The latest hardware and software can be used.
Complexity	Deployments tend to be complex as they require integration with existing systems.	Deployments are less complex because you start from scratch, but predicting resource utilization might be difficult.
Risk Assessment	A risk assessment must be performed to determine the impact of new systems on existing systems.	You must predict potential risks before deployment.
Scalability	Scalability might be limited by existing platforms, site footprints, power delivery, cooling capabilities, and so on.	Components can be designed into the infrastructure from the start.

General Upgrade Prerequisites: Compute and Storage

Before upgrading to VCF 9.0, you must address the following general prerequisites for compute and storage for a smooth upgrade:

- Ensure that the customer has a valid VCF 9.0 subscription.
- Verify that the virtual machine of your vCenter instance is hosted on a cluster managed by the same vCenter system.
- Verify that your clusters use vSphere Lifecycle Manager images.
- You must deactivate vCenter High Availability (VCHA).
- You must remove your vCenter from ELM.
- You must set DRS to fully automated mode.
- Verify that you have enough free space for the full deployment of VMware Cloud Foundation, according to the Planning and Preparation Workbook.
- Verify that your data store is shared across all hosts in the cluster, accessible from all hosts in the cluster, and writable by all hosts in the cluster.

General Upgrade Prerequisites: Networking

Before upgrading to VCF 9.0, you must address the following general prerequisites for networking for a smooth upgrade:

- You must have vSphere Distributed Switch (VDS) version 8.0 or later.
- Ensure that your vCenter instance uses TCP port 443 for client connections.
- You must have a temporary IP address for your vCenter instance.
- You must have a dedicated network for vMotion.

General Upgrade Prerequisites: VCF Operations

You must consider the common VCF Operations prerequisites for upgrades:

- If you use VMware Aria Operations or VMware Aria Lifecycle, verify that you activated SSH.
- If you use VMware Aria Operations, verify that your vCenter instance is registered.

VCF fleet Deployment Options

VCF offers the following design blueprints and deployment options for your VCF private cloud:

- VCF fleet in a Single Site
- VCF fleet with Multiple Sites in a Single Region
- VCF fleet with Multiple Sites across Multiple Regions
- VCF fleet with Multiple Sites in a Single Region plus Additional Regions

VCF 9.0 Appliance Design Considerations: Simple or High Availability

During the upgrade, you can deploy some VCF 9.0 components in a simple or high availability model for additional resiliency.

Attribute	Simple Model	High Availability Model
SDDC Manager	One appliance	One appliance
NSX Manager	One appliance One VIP	Three appliances One VIP Anti-affinity vSphere HA protection
VCF Automation	One node One extra IP for upgrades	Three nodes One extra IP for upgrades
VCF Operations	One Analytics node One Unified Collector node One Fleet Manager node	One Analytics node One Replica node One Data node One Unified Collector node One Fleet Manager (Optional) VIP

Gathering Requirements for IP and DNS Entries (1)

You must consider the common IP addresses and DNS entry prerequisites for upgrades. These prerequisites apply across all scenarios.

Attribute	Simple Model	High Availability Model
vCenter	One temporary IP address for vCenter upgrade	One temporary IP address for vCenter upgrade
SDDC Manager	IP address and DNS record	One IP address and DNS record
NSX Manager	One NSX Manager node and DNS record	Three NSX Manager nodes and DNS record
	One virtual IP for load balancer and DNS record	One virtual IP for load balancer and DNS record
VCF Automation	One VCF Automation node and DNS record	Three VCF Automation nodes and DNS record
	One extra IP for upgrades	One extra IP for upgrades

Gathering Requirements for IP and DNS Entries (2)

You must consider the common IP addresses and DNS entry prerequisites for upgrades. These prerequisites apply across all scenarios.

Attribute	Simple Model	High Availability Model
VCF Operations	One VCF Operations Analytics node and DNS record	One VCF Operations Analytics node and DNS record
	One VCF Operations collector node and DNS record	One VCF Operations Replica node and DNS record
		One VCF Operations Data node and DNS record
	One VCF Operations fleet manager node and DNS record	One virtual IP for load balancer and DNS record
		One VCF Operations fleet manager node and DNS record
		One virtual IP for load balancer and DNS record

Feature Compatibility Assessment: Current Versus VCF 9.0 (1)

When upgrading from vSphere to VCF 9.0, assess the compatibility of current components and features in relation to VCF 9.0, and plan the upgrade process accordingly.

Component	vSphere Deployment	9.0 VCF Deployment
Licensing	Individual product license key-based entitlement or subscription	Keyless subscription entitlement
vCenter Availability	vSphere HA	Same
vCenter Availability	vCenter High Availability (vCHA)	1: Disable vCHA. 2: Perform Upgrade. 3: Reconfigure vCHA (Lifecycle through vCenter).
vSphere Cluster	- Single - Multiple	Same.
Enhanced Linked Mode (ELM)	- Configured - Not configured	Replaced with VCF Operations and VCF Identity Broker.

Feature Compatibility Assessment: Current Versus VCF 9.0 (2)

When upgrading from vSphere to VCF 9.0, assess the compatibility of current components and features in relation to VCF 9.0, and plan the upgrade process accordingly.

Component	Current vSphere Deployment	9.0 VCF Deployment
Networking Management Domain	<ul style="list-style-type: none">- VSS, VDS, or both- No NSX deployed	VSS, VDS, or both NSX deployed
Networking Workload Domains	<ul style="list-style-type: none">- VSS, VDS, or both- NSX can be deployed	VSS, VDS, or both If not already, NSX will be deployed.
Storage	<ul style="list-style-type: none">- vSAN- Vendor (third party)	Same
Aria Operations (VCF Operations)	Not deployed	Deployed
Aria Automation (VCF Automation)	Not deployed	Deployed

Feature Compatibility Assessment: Current Versus VCF 9.0 (3)

When upgrading from vSphere to VCF 9.0, assess the compatibility of current components and features in relation to VCF 9.0, and plan the upgrade process accordingly.

Component	Current vSphere Deployment	9.0 VCF Deployment
Container/Kubernetes	Not deployed	Available through VCF Automation
VxRAIL	Not used	Not supported
Heterogeneous clusters	Not used	Not supported
FIPS	Enabled on vCenter Disabled on vCenter	Enabled on new components: - vCenter - SDDC Manager - NSX - VCF Operations - VCF Automation

Feature Compatibility Assessment: Current Versus VCF 9.0 (4)

When upgrading from vSphere to VCF 9.0, you must consider the final VCF 9.0 deployment outcome.

Component	Current vSphere Deployment	9.0 VCF Deployment
Scale	vCenter	<p>New components:</p> <ul style="list-style-type: none">- SDDC Manager- NSX- VCF Operations- VCF Operations fleet management- VCF Operations collector- VCF Automation

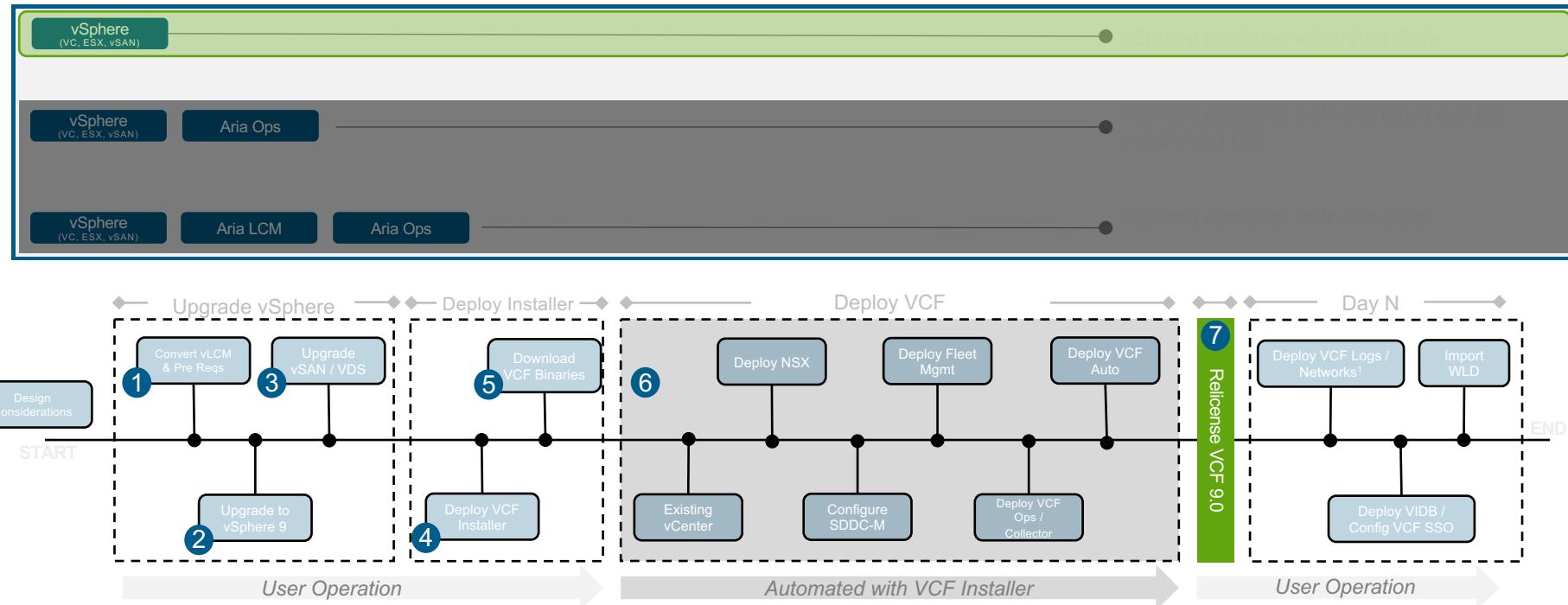
3 Upgrade Scenarios

Variations



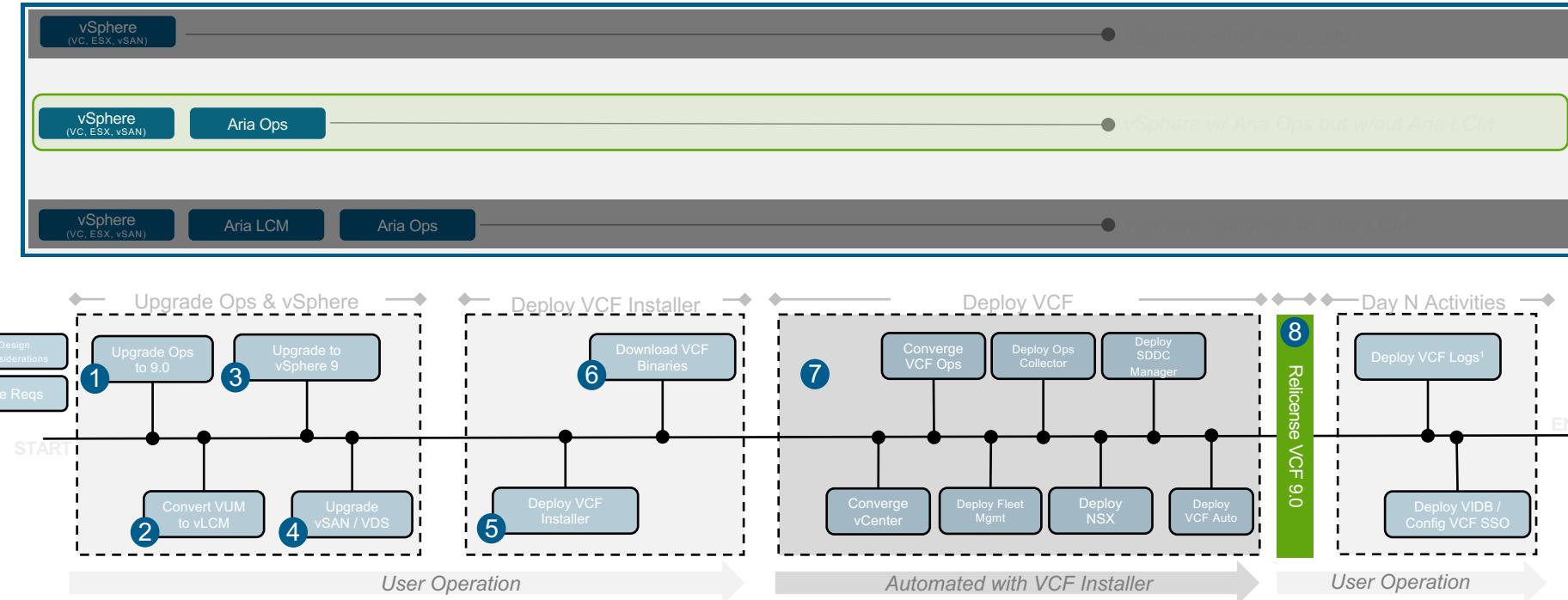
Paths to VCF 9

vSphere 8 Only to VCF 9



Paths to VCF 9

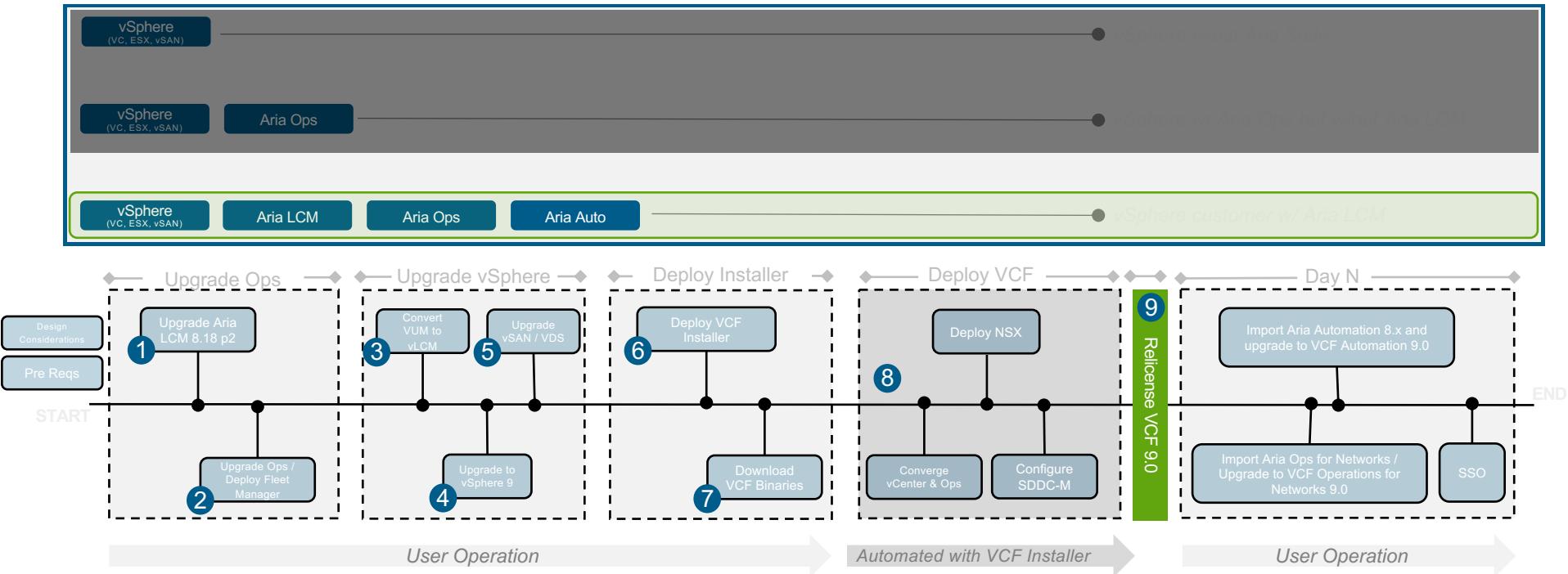
vSphere with Standalone Operations to VCF 9



¹ There is no upgrade path from VCF Logs 8.x to 9.x. Deploy a new VCF Logs 9 instance after VCF deployment. Import/upgrade other components (e.g., Ops for Networks, HCX) after upgrade to VCF 9.

Paths to VCF 9

vSphere with Aria Lifecycle Manager + Operations to VCF 9



Upgrade Scenario: vSphere 8.0 to VCF 9.0



Completing the Prerequisites for the Upgrade (1)

You must complete all the prerequisites to upgrade from vSphere with vSAN to VCF 9.0.

Attribute	Description
Licensing (Entitlement)	Ensure that the customer has a valid subscription for VCF 9.0.
vSphere version	vSphere version must be 8.0 update 1 or later to perform the upgrade to VCF 9.0.
Scale	VCF 9.0 might require additional resources for storage, CPU, and memory compared to the existing environment.

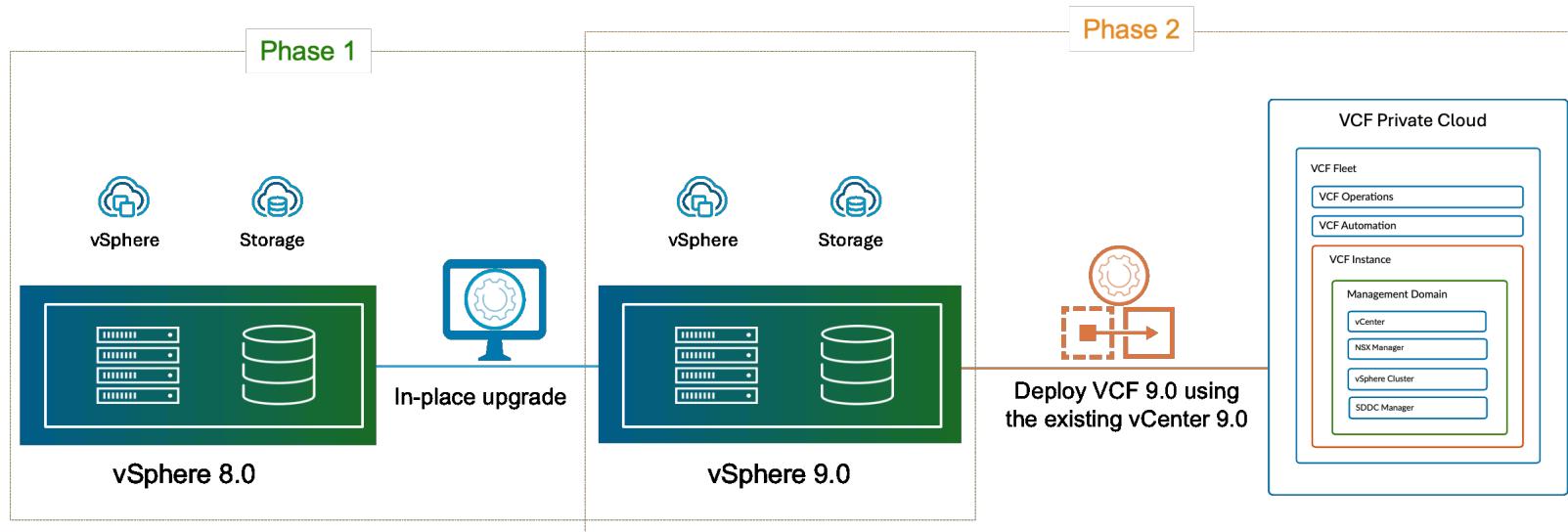
Completing the Prerequisites for the Upgrade (2)

You must complete all the prerequisites to upgrade from vSphere with vSAN to VCF 9.0.

Attribute	Description
Networking	<p>Ensure that the vSphere Distributed Switch (VDS) is on version 8.0 or later. A temporary IP address is required to upgrade the vCenter to a Management vCenter. IP addresses and DNS records are required for all additional VCF components being deployed: - SDDC Manager - NSX - VCF Operations - VCF Automation</p>
vSphere Cluster	<p>All clusters that require an upgrade as part of the new management vCenter must be on vSphere Lifecycle Management (vLCM).</p>
Enhanced Link Mode (ELM)	<p>The ELM configuration must be removed from the vCenter instance before upgrading to VCF 9.0.</p>

Upgrade Phases from vSphere 8.0 to VCF 9.0

You upgrade to VCF 9.0 using your existing vSphere 8.0 in two phases. First, you upgrade the existing vSphere to version 9.0.



Phase 1: Upgrade vSphere 8.0 to vSphere 9.0

In phase 1, you upgrade the existing vSphere 8.0 to 9.0 using the in-place upgrade method.



Phase 1: Upgrade vCenter 8.0 to vCenter 9.0

You upgrade the existing vCenter to serve as the future management domain in VCF 9.0.

Before upgrade:

- Check vCenter infrastructure compatibility with vCenter 9.0.
- Back up your vCenter Server and all essential data in your vSphere environment.
- Take snapshots of the vCenter VM.
- Remove vCenter HA

The screenshot shows the 'Upgrade - Stage 2: vCenter Server' window. On the left, a vertical navigation bar lists the steps: 1. Introduction, 2. Connect to source vCenter Server, 3. Select upgrade data, 4. Configure CEIP, and 5. Ready to complete. Step 5 is highlighted with a blue background. The main pane on the right displays upgrade settings under three sections: Source vCenter Server, Target vCenter Server, and Upgrade Data. Under Source vCenter Server, FQDN or IP address is sfo-m01-vc01.sfo.rainpole.io and Version is 8.0. Under Target vCenter Server, FQDN or IP address (temporary) is 10.11.10.68 and FQDN or IP address (post-upgrade) is sfo-m01-vc01.sfo.rainpole.io, with Version set to 9.0. Under Upgrade Data, Data to copy includes Configuration, Inventory, Tasks, Events and Performance Metrics, and Size is 2.09 GB. A section for Customer Experience Improvement Program shows 'CEIP setting' as 'Opted out'. At the bottom, there is a checkbox labeled 'I have backed up the source vCenter Server and all the required data from the database.' followed by 'CANCEL', 'BACK', and 'FINISH' buttons.

Source vCenter Server	
FQDN or IP address	sfo-m01-vc01.sfo.rainpole.io
Version	8.0

Target vCenter Server	
FQDN or IP address (temporary)	10.11.10.68
FQDN or IP address (post-upgrade)	sfo-m01-vc01.sfo.rainpole.io
Version	9.0

Upgrade Data	
Data to copy	Configuration, Inventory, Tasks, Events and Performance Metrics
Size	2.09 GB

I have backed up the source vCenter Server and all the required data from the database.

CANCEL BACK FINISH

Phase 1: Upgrade ESX - Using the vSphere Lifecycle Manager image

Starting with VMware Cloud Foundation 9.0, only vSphere Lifecycle Manager image clusters are supported.

The screenshot shows the vSphere Lifecycle Manager interface for a cluster named 'sfo-m01-cl01'. The 'Image' tab is selected. A message states: 'Hosts in this cluster are managed collectively. This image below will be applied to all hosts in this cluster.' The image details are as follows:

- Image Name:** esxi 8.0u2
- Default Image:** (selected)
- ESXi Version:** 8.0 U2 - 22380479
- Vendor Addon:** None
- Firmware and Drivers Addon:** None
- Components:** No additional components. [SHOW DETAILS](#)

A warning message at the bottom left says: '⚠ Device compatibility must be verified manually. [See details](#)'.

Below this, the 'Image Compliance' section shows the last check was on 01/30/2025, 8:14:06 PM (0 days ago). It indicates 4 hosts are unknown. A button to 'CHECK COMPLIANCE' is present.

The 'RUN PRE-CHECK (ALL)' button is highlighted. Below it, a table lists hosts:

	Hosts
<input type="checkbox"/>	sfo01-m01-r01-esx01.sfo.rainpole.io
<input type="checkbox"/>	sfo01-m01-r01-esx02.sfo.rainpole.io
<input type="checkbox"/>	sfo01-m01-r01-esx03.sfo.rainpole.io
<input type="checkbox"/>	sfo01-m01-r01-esx04.sfo.rainpole.io

A tooltip on the right side of the table says: '⚠ The image of the entity 'sfo-m01-cl01' has changed or this host is added after checking compliance. Rerun compliance check for 'sfo-m01-cl01''. The page footer shows '14 / 4' and navigation arrows.

Phase 1: Upgrade ESX - Import the ESX upgrade ZIP file

You import the ESX upgrade ZIP file for ESX 9.0 to create an image.

The screenshot shows the vSphere Client interface with the 'Lifecycle Manager' tab selected. In the 'Image Depot' section, there are tabs for 'Updates' (which is highlighted), 'Imported ISOs', and 'Baselines'. Below these tabs are three buttons: 'ESXi VERSIONS', 'VENDOR ADDONS', and 'COMPONENTS'. The 'ESXi VERSIONS' button is also highlighted. On the right side, under the 'ACTIONS' dropdown, there are several options: 'Sync Updates', 'Import Updates' (which is highlighted with a red box and has a red arrow pointing to it from the left), 'Hardware Compatibility List', and 'Sync HCL'. To the right of this dropdown is a modal dialog titled 'Import Updates'. The dialog contains the text: 'You can import by selecting a .zip file or a URL. Contents will be imported to Image Depot and Updates.' It has a 'Update' section with a 'Filename or URL' input field, a 'BROWSE' button, and two buttons at the bottom: 'CANCEL' and 'IMPORT'.

Phase 1: Upgrade ESX - Assigning image

Select the cluster to upgrade, ASSIGN IMAGE

sfo-m01-cl01 | ACTIONS

Summary Monitor Configure Permissions Hosts VMs Datastores Networks Updates

Hosts ▾

Image

Hosts in this cluster are managed collectively. This image below will be applied to all hosts in this cluster.

Image Name esxi 9.0

Default Image

ESXi Version 9.0.0.0.24518876

Vendor Addon ⓘ None

Firmware and Drivers Addon ⓘ None

Components ⓘ No additional components [SHOW DETAILS](#) ▾

⚠ Device compatibility must be verified manually. [See details](#)

Image Compliance

Last checked on 01/30/2025, 11:44:45 PM (0 days ago)

⚠ 4 hosts not compliant

[RUN PRE-CHECK \(ALL\)](#) [STAGE \(ALL\)](#) [REMEDIATE \(ALL\)](#)

Hosts

CHECK COMPLIANCE ⋮

Phase 1: Upgrade ESX - Remediating

You review the remediation impact and initiate the remediation to complete the upgrade of ESX.

Review Remediation Impact

Impact summary

Applicable remediation settings

Foundation Agreement

Impact to specific hosts

- sfo01-m01-r01-esx01.sfo.rainpole.io
- sfo01-m01-r01-esx02.sfo.rainpole.io
- sfo01-m01-r01-esx03.sfo.rainpole.io
- sfo01-m01-r01-esx04.sfo.rainpole.io

Notes

VM states honor remediation settings
VMs may be powered off, suspended or migrated to other hosts based on the applicable remediation settings.

Pre-check will be run again as a part of the remediation
Pre-check will be run again as a part of the remediation process. This is to ensure that no new issues have arisen on the cluster or hosts since the last pre-check (if any) that prevent remediation.

Hosts are remediated one at a time
Hosts will be remediated one at a time, so hosts will not reboot/go into maintenance mode simultaneously.

Order of host remediation is determined at runtime
Hosts will be remediated in an order determined at runtime. Hence that order may not correspond to the order in which they appear here.

Quick Boot
Quick Boot optimizes the reboot path to avoid the hardware full power cycle, saving considerable time from the upgrade process.

I accept the [Foundation Agreement](#)

[EXPORT IMPACT DETAILS](#)

[CLOSE](#) [START REMEDIATION](#)

Phase 1: Upgrade vSAN On-Disk Format Versions - Prerequisites

Before you start, make sure.

- ESX and vCenter Upgrades are completed
- The disks are healthy. Navigate to the Disk Management to verify the status.
- ESX hosts are not in maintenance mode.
- In the vSAN cluster, there are currently no component rebuilding tasks in progress.
- The upgrade may lead to temporary resynchronization traffic and may require additional space by moving data or rebuilding object components to a new data structure.

Phase 1: Upgrade vSAN On-Disk Format Versions - Upgrading

Upgrade the vSAN on-disk format version to take advantage of features that are only available in later versions.

vSphere Client Search in all environments Administrator@VSPHERE.LOCAL

sfo-m01-cl01 ACTIONS

Summary Monitor Configure Permissions Hosts VMs Datastores Networks Updates

SHUTDOWN CLUSTER TURN OFF VSAE

Host Options Host Profile Licensing Alarm Definitions

All 12 disks on version 19.0. Some services may not provide the complete feature set.

Ready to upgrade - pre-check completed successfully on --.

UPGRADE PRE-CHECK UPGRADE

Phase 1: Upgrade vSphere Distributed Switch Versions

You must upgrade ESX and vCenter before upgrading the vSphere Distributed Switch to use features from later versions.

The screenshot shows the 'Ready to complete' step of the vSphere Distributed Switch Upgrade Wizard. On the left, a sidebar lists three steps: 'Configure upgrade', 'Check compatibility', and 'Ready to complete' (which is highlighted). The main panel displays a summary of the upgrade configuration:

Ready to complete

Review your selections before finishing the wizard

Configure upgrade

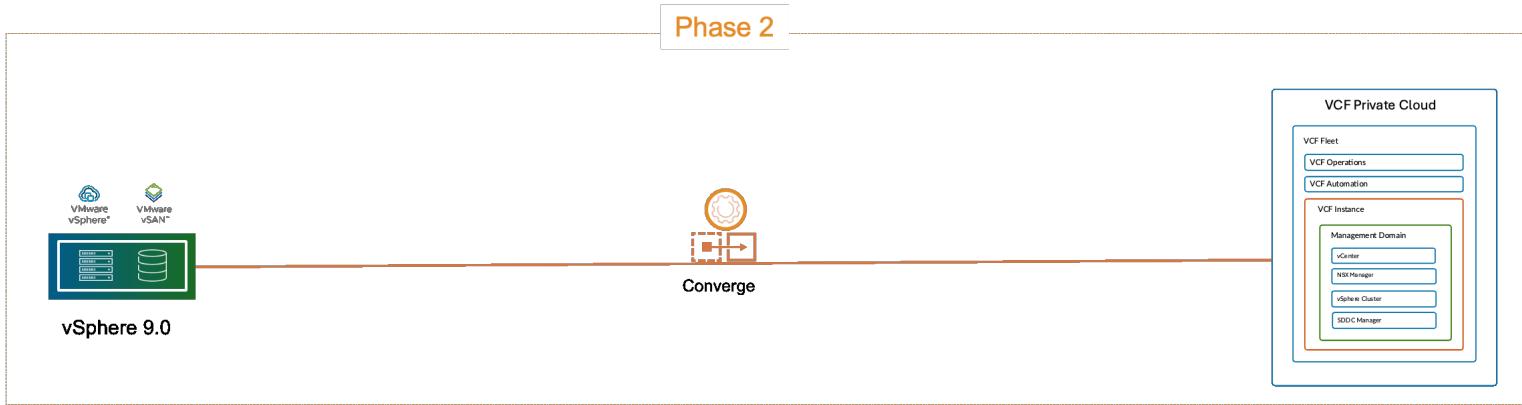
Once upgraded the distributed switch cannot be downgraded to a previous distributed switch version. You will not be able to add older VMware ESX Server members that are not compatible with the new distributed switch.

Distributed switch	sfo-m01-cl01-vds01
Current version	8.0.0
Upgrade version	9.0.0

Actions: CANCEL, BACK, FINISH

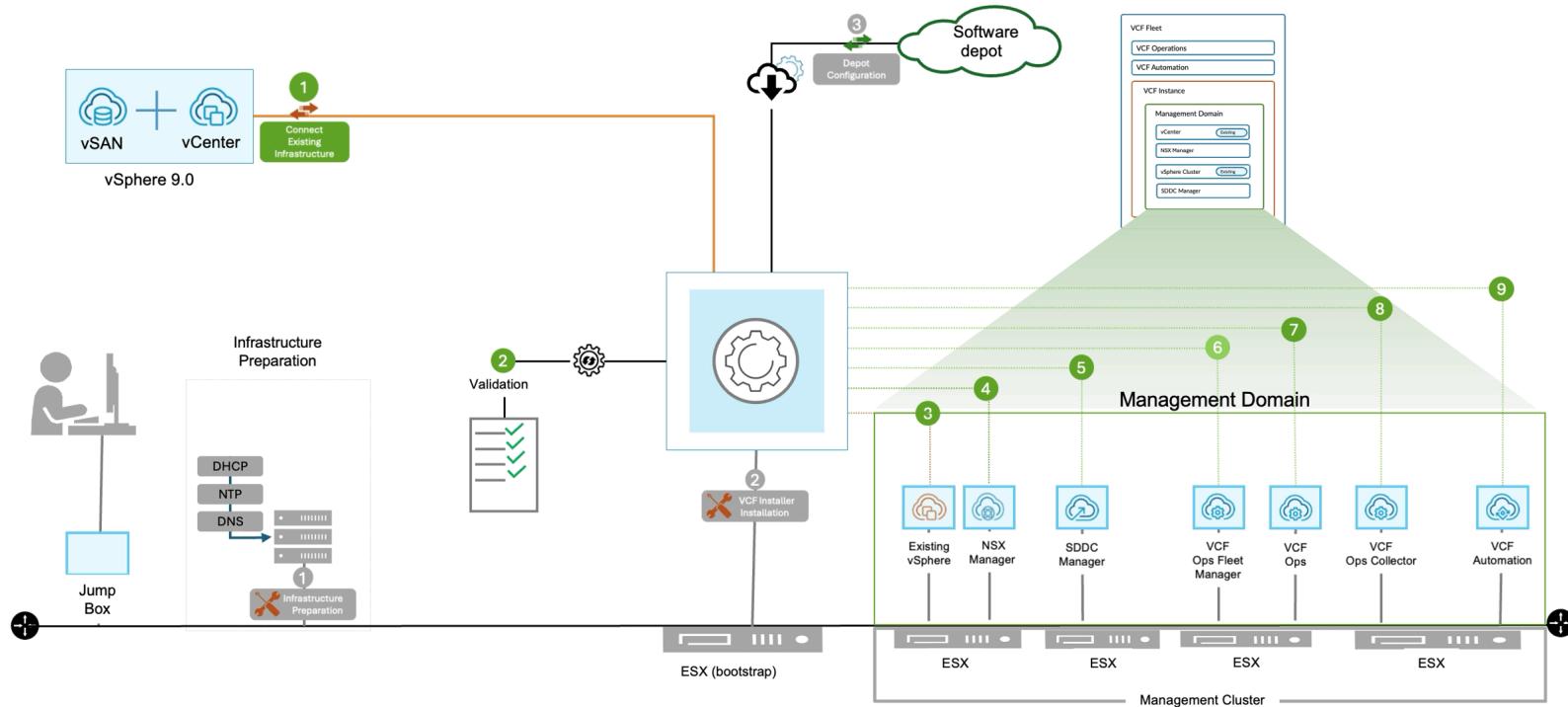
Phase 2: Converge vCenter 9.0 to VCF 9.0 - Overview

In Phase 2, after upgrading your existing vSphere to 9.0, you converge it to VCF 9.0 using the VCF Installer.



Deploying VCF 9.0 Using the Existing vCenter Instance: Sequence

After upgrading your existing vSphere to version 9.0, you deploy VCF 9.0 with the existing vSphere 9.0 using the VCF Installer in a specific sequence.



Phase 2: Converge vCenter - Deploying the VCF installer

As part of the initial VMware Cloud Foundation installation or converge process, you deploy a VMware Cloud Foundation Installer virtual appliance, which automates the deployment of the entire VCF fleet.

1. Login to support.broadcom.com
2. Go to downloads ->VMware Cloud Foundation->9.0 and download the VCF Installer
3. Deploy the VCF Installer file (OVA) based on the design option chosen above.
4. To access the VMware Cloud Foundation Installer, use the FQDN specified during the deployment of the appliance, and the configured password for the admin@local user.

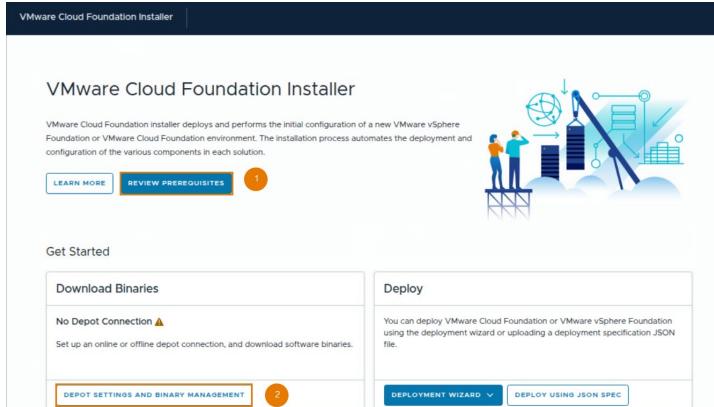
The screenshot shows the VMware Cloud Foundation® Installer login interface. It features a header with the VMware by Broadcom logo and the text "VMware Cloud Foundation® Installer". Below the header are fields for "E-mail / Username" (admin@local) and "Password". There is also a "Remember me" checkbox and a "LOG IN" button. At the bottom of the page, there is a copyright notice: "Copyright © 2005-2025 Broadcom. All Rights Reserved. The term 'Broadcom' refers to Broadcom Inc. and/or its subsidiaries." followed by links to "Terms of Use" and "Privacy".



Phase 2: Converge vCenter - Reviewing the Prerequisites

Before you proceed with the VMware Cloud Foundation installation, you must take the following steps:

1. Verify that all required prerequisites are satisfied by clicking **Review Prerequisites**.
2. Download the VMware Cloud Foundation binary files from an online or offline depot.
You configure the depot settings by clicking **Depot Settings and Binary Management**.



Phase 2: Converge vCenter - Configuring the Depot Settings

To reduce the footprint of the VMware Cloud Foundation Installer, the VMware Cloud Foundation product binaries are not included as part of the appliance.

You must configure the depot and download the binaries either from an online or an offline depot.

[RETURN HOME](#)

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.

(i) 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

(i) Proxy settings are not configured

Username : user@broadcom.net

[EDIT DEPOT CONNECTION](#)

[DISCONNECT](#)

Offline Depot ✗

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

[CONFIGURE](#)

Phase 2: Converge vCenter - Reviewing the VCF 9.0 binaries

You can review the version, size, and status of the binaries for all VMware Cloud Foundation components in the **Binary Management** page of the installer interface.

The screenshot shows the 'Binary Management' page of the VMware Cloud Foundation Installer. At the top, there's a navigation bar with 'VMware Cloud Foundation Installer' and a user session 'Hello, admin@local'. Below the header, the title 'Binary Management' is displayed. A dropdown menu 'Download Summary' is open, showing 'Version 9.0.0.0' selected. Underneath, two download links are shown: 'VMware vSphere Foundation' (Downloaded) and 'VMware Cloud Foundation' (Downloaded). A note below says 'Filter the list by product and version and download the required component binaries. For additional guidance, refer to the [Product Interoperability Matrix](#)'. There are filters for 'Product' (set to 'VMware Cloud Foundation') and 'Version' (set to '9.0.0.0'). Below these are 'DOWNLOAD' and 'DELETE' buttons. The main table lists eight components with their details:

	Component	Version	Size	Download Status
<input type="checkbox"/>	VMware Cloud Foundation Automation	9.0.0.0.24458060	23.71 GB	Success
<input type="checkbox"/>	VMware NSX	9.0.0.0.24466999	10.40 GB	Success
<input type="checkbox"/>	VMware Cloud Foundation Operations fleet management	9.0.0.0.24466766	1.80 GB	Success
<input type="checkbox"/>	VMware Cloud Foundation Operations	9.0.0.0.24466769	2.72 GB	Success
<input type="checkbox"/>	VMware vCenter	9.0.0.0.24469172	10.75 GB	Success
<input type="checkbox"/>	VMware Cloud Foundation Operations Collector	9.0.0.0.24466770	2.49 GB	Success
<input type="checkbox"/>	SDDC Manager	9.0.0.0.24466701	2.01 GB	Success

Phase 2: Converge vCenter - Launching the VCF Installer Deployment Wizard

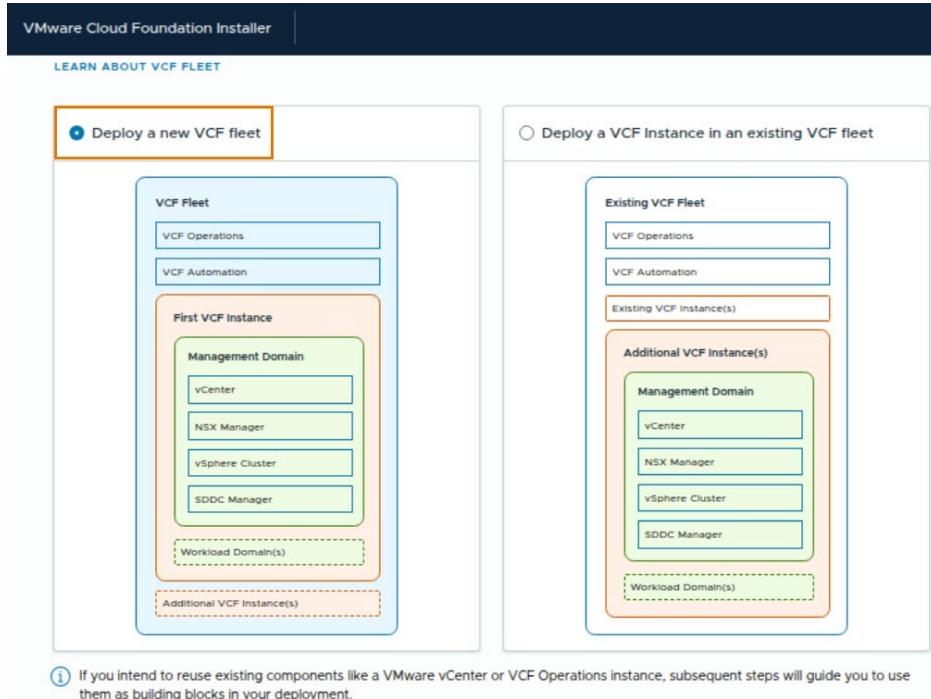
After downloading the VMware Cloud Foundation component binaries, you can initiate the deployment wizard by selecting VMware Cloud Foundation from the Deployment Wizard dropdown.

The screenshot shows the VMware Cloud Foundation Installer interface. At the top, there's a dark header bar with the title "VMware Cloud Foundation Installer". Below it is a main content area with the following sections:

- VMware Cloud Foundation Installer**: A brief description stating it deploys and performs initial configuration of a new VMware vSphere Foundation or VMware Cloud Foundation environment, automating component deployment and configuration.
- LEARN MORE** and **REVIEW PREREQUISITES** buttons.
- Get Started**: This section contains two main boxes:
 - Download Binaries**: Shows an "Online depot connection active" status with a green checkmark. It lists "VMware vSphere Foundation 9.0.0 Downloaded" and "VMware Cloud Foundation 9.0.0 Downloaded". There's also a "DEPOT SETTINGS AND BINARY MANAGEMENT" button.
 - Deploy**: Describes deploying using the "DEPLOYMENT WIZARD" or "DEPLOY USING JSON SPEC". The "VMware Cloud Foundation" option is highlighted with an orange border.

Phase 2: Converge vCenter - Deploying a New VCF Fleet

The VMware Cloud Foundation Installer can deploy the first VCF fleet or add a new instance to an existing one. You choose to deploy a new VCF fleet.



Phase 2: Converge vCenter - Selecting the Existing vCenter

You select VMware vCenter under Existing Components to convert the existing vCenter instance into a vCenter instance for your new management domain.

The screenshot shows the 'Deploy VCF Fleet' wizard in the 'Existing Components' step. On the left, a sidebar lists steps 1 through 9. Step 1, 'Existing Components', is selected and highlighted in blue. The main panel title is 'Existing Components'. Below it, a note says: 'Select the existing components you want to reuse in this VCF fleet. You will be asked to provide details about the existing components later in the deployment wizard.' A bulleted list provides instructions:

- VCF Installer validates the selected components to ensure that they are compatible.
- If you select a VCF Operations instance that is connected to a fleet management appliance or a VCF Automation instance, these components will also be added to this VCF fleet.
- It is recommended you select the VMware vCenter where the selected VCF Operations is currently deployed to be used as the vCenter for the first VCF instance.
- If a VMware NSX Manager is connected to the vCenter instance you intend to use, select the option to use existing NSX Manager.

Two options are shown:

- VCF Operations**: Use an existing VCF Operations instance as the management component in the VCF fleet.
- VMware vCenter**: Use an existing vCenter as the management domain vCenter.
 - Existing VMware NSX: Use the NSX Manager connected to this vCenter as the management domain NSX Manager.

To the right, a large callout diagram illustrates the 'VCF Fleet' and 'VCF Instance'. The 'VCF Fleet' section shows 'VCF Operations' and 'VCF Automation'. The 'VCF Instance' section shows a 'Management Domain' containing 'vCenter' (marked as 'Existing') and 'NSX Manager', and a 'vSphere Cluster' containing 'SDDC Manager' (also marked as 'Existing').

Phase 2: Converge vCenter - Providing General Information About VCF

When deploying a new VCF instance using an existing vCenter, the deployment wizard prompts you to provide details such as the VCF instance name, management domain names, and deployment model settings.

The screenshot shows the 'Deploy VCF Fleet' wizard interface. On the left, a vertical navigation bar lists steps 1 through 9. Step 2, 'General Information', is highlighted with a blue background. The main panel is titled 'General Information' and contains the following fields:

- Version:** A dropdown menu set to '9.0.0'. Below it, a note states: 'The latest downloaded version of each component will be used'.
- VCF Instance Name:** A text input field containing 'vc90'.
- Management domain name:** A text input field containing 'vc9-mgmt'. A note below it says: 'This name will also be used to generate names for objects in the management domain, like the vCenter, distributed switches etc.'
- Deployment model:** A note stating: 'This selection only applies to newly deployed appliances. Existing VCF Operations, VCF Automation, or NSX Manager appliances that you plan to use in your VCF fleet will not be modified.' A link 'Learn more' is provided. Two radio buttons are shown: 'Simple (Single-node)' (unchecked) and 'High Availability (Three-node)' (checked).
- Password creation:** A note: 'Auto-generate passwords for newly installed appliances' followed by an unchecked checkbox.
- Other:** A note: 'Enable Customer Experience Improvement Program (CEIP)' followed by an unchecked checkbox.

Phase 2: Converge vCenter - Configuring VCF Operations

As part of the VCF Operations configuration, you provide details for the following components:

- VCF Operations appliances
- VCF Operations Fleet Management appliance
- VCF Operations Collector appliance

Hello, admin@local ▾

VCF Operations

Enter the configuration details for the VCF Operations appliances. All fields marked with a * are required.

VCF Operations Appliance

Operations Appliance Size * 4 vCPUs and 16GB Memory
Operation primary FQDN *

Administrator Password *

Confirm Administrator Password *

Fleet Management Appliance

Appliance FQDN *
 Use same password as VCF Operations

Operations Collector Appliance

Provide details for deploying a new operations collector appliance for this VCF instance.

Appliance FQDN *
 Use same password as VCF Operations

VCF Fleet

VCF Instance

- Management Domain
 - vCenter
 - NSX Manager
 - vSphere Cluster
 - SDDC Manager

Phase 2: Converge vCenter - Configuring VCF Automation

As part of the VCF Automation configuration, you provide the appliance FQDN, user name, and password.

You also specify the following information:

- IP address for the active or primary node
- Additional IP address for deploying a secondary node if the primary node fails
- CIDR for internal communication between the VCF Automation containers

VCF Automation

Enter the configuration details for VCF Automation appliance. All fields marked with a * are required.

I want to connect a VCF Automation instance later

Choose this option if you wish to use an existing Aria Automation Instance that is not currently connected to the VCF Operations instance you specified in the previous step. By doing so, you agree to use VCF Operations to import your Aria Automation instance once the installer is complete.

Appliance FQDN *

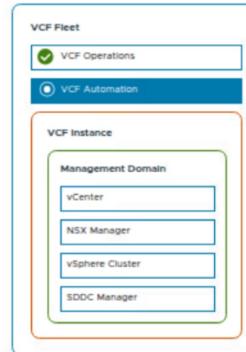
Administrator Password *

Confirm Administrator Password *

Node IP 1 *

Node IP 2 *

Internal Cluster CIDR *

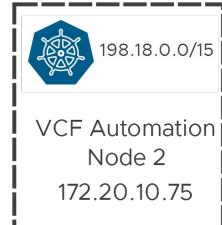


Virtual IP
sa-m01-auto-01.vcf.sddc.local



198.18.0.0/15

VCF Automation
Node 1
172.20.10.74



198.18.0.0/15

VCF Automation
Node 2
172.20.10.75

Single Node Deployment

Phase 2: Converge vCenter - Provide the details for the existing vCenter

As part of the vCenter conversion, you provide the details of the existing vCenter that you want to use as the management domain vCenter.

VMware Cloud Foundation Installer | Hello, admin@local ▾

Deploy VCF Fleet

1 Existing Components
2 General Information
3 VCF Operations
4 VCF Automation
5 vCenter
6 NSX Manager
7 SDDC Manager
8 Review
9 Validate & Deploy

vCenter

Enter the credentials of the VMware vCenter you want to convert. All fields marked with a * are required.

Existing VMware vCenter

You indicated that you want to use your existing VMware vCenter instance. Enter the details for the existing vCenter instance that you want to use as the management domain vCenter.

vCenter *

sa-vcsa-01.vcf.sddc.local

Root Password *

.....

SSO user name *

administrator@vsphere.local

SSO password *

.....

VCF Fleet

- VCF Operations
- VCF Automation Skipped

VCF Instance

Management Domain

- vCenter Existing
- NSX Manager
- vSphere Cluster Existing
- SDDC Manager

Phase 2: Converge vCenter - Configuring NSX Manager

On the NSX Manager configuration page, you provide the appliance size and FQDN. You also create passwords for the admin, root, and audit users.

The screenshot shows the VMware Cloud Foundation Installer interface. On the left, a sidebar lists steps from 1 to 9: Existing Components, General Information, VCF Operations, VCF Automation, vCenter, **NSX Manager**, SDDC Manager, Review, and Validate & Deploy. Step 6 is highlighted in light blue. At the top right, a header bar shows "Hello, admin@local".

NSX Manager Configuration:

- Appliance Size ***: Medium (6 vCPU, 24GB RAM, 300GB Storage)
- Cluster FQDN ***: sa-m01-nsxt-vip.vcf.sddc.local
- Appliance FQDN ***: sa-m01-nsxt01.vcf.sddc.local

NSX Overlay using ESX Management VMkernel Networking

NSX 9.0 introduces the capability to configure overlay using ESX Management VMkernel Networking. The imported vCenter Server clusters will be configured for NSX VLAN transport zone and overlay over VMKO. It will not require VLAN-backed configuration, thus negating the need for you to allocate dedicated IP addresses.

Configure overlay using ESX Management VMkernel Networking

If this option is unchecked, NSX will be configured in VLAN transport zone mode.

Administrator Password *: VMware123!VMware123!

Confirm Administrator Password *: (redacted)

Root Password: (redacted)

Confirm Root Password: (redacted)

Audit Password: (redacted)

Confirm Audit Password: (redacted)

VCF Fleet Summary:

- VCF Operations**: Completed (Green checkmark)
- VCF Automation**: Skipped (Grey box)

VCF Instance Summary:

- Management Domain**:
 - vCenter**: Existing (Green checkmark)
 - NSX Manager**: Selected (Blue circle)
 - vSphere Cluster**: Existing (Green checkmark)
- SDDC Manager**: Pending (Orange border)

Phase 2: Converge vCenter - Configuring SDDC Manager (1)

You provide the details for the SDDC Manager appliance if the VCF Installer is not deployed on the vCenter being upgraded.

VMware Cloud Foundation Installer

Hello, admin@local ▾

Deploy VCF Fleet

1 Existing Components
2 General Information
3 VCF Operations
4 VCF Automation
5 vCenter
6 NSX Manager
7 SDDC Manager
8 Review
9 Validate & Deploy

SDDC Manager

Enter the configuration details for the SDDC Manager appliance. All fields marked with a * are required.

Info The VMware Cloud Foundation installer appliance is not deployed on one of the hosts in the management domain. During the deployment process, a new SDDC Manager appliance will be deployed.

Appliance FQDN * sa-sddc-01.vcf.sddc.local
Only a Fully Qualified Domain name is allowed, e.g. host.vsphere.local
VMware123!VMware123!

Root Password *
Confirm Root Password *

VCF Password *
Confirm VCF Password *

Administrator Password *
Confirm Administrator Password *

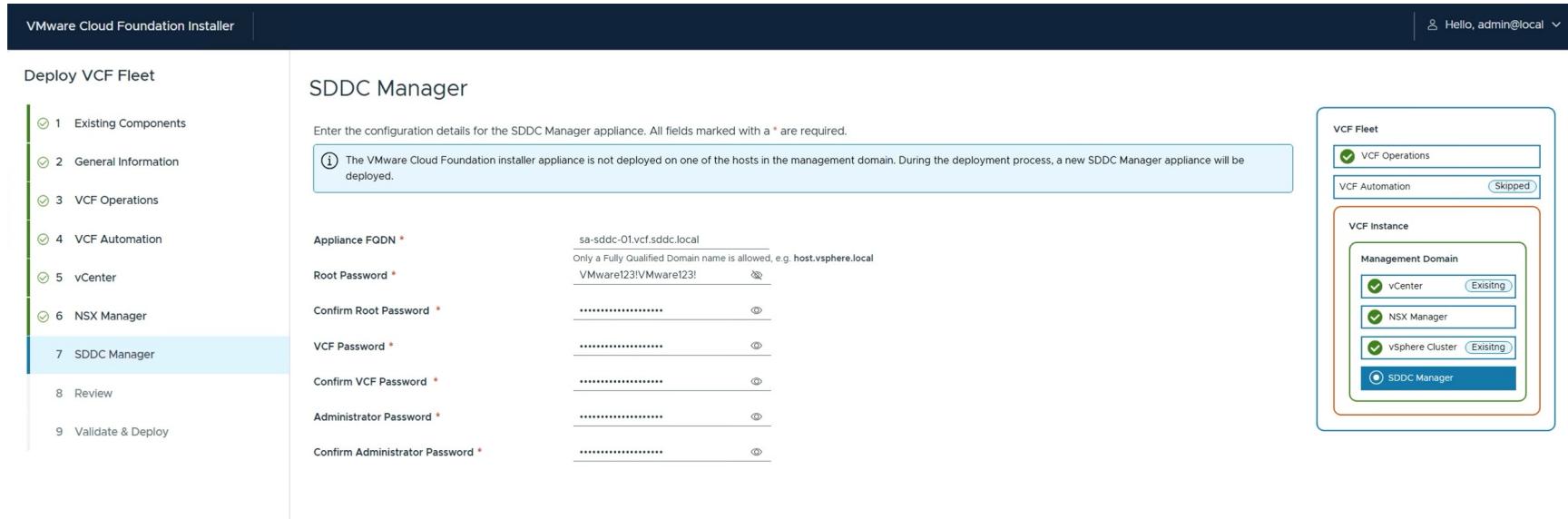
VCF Fleet

VCF Operations (Skipped)
VCF Automation

VCF Instance

Management Domain

vCenter (Existing)
NSX Manager
vSphere Cluster (Existing)
SDDC Manager



Phase 2: Converge vCenter - Configuring SDDC Manager (2)

If the VCF Installer is deployed on the vCenter and is being upgraded, provide the details for the VCF Installer to become the SDDC Manager.

The screenshot shows the 'Deploy VCF Fleet' wizard in progress, specifically step 7: SDDC Manager. The left sidebar lists steps 1 through 8, with step 7 highlighted. The main panel is titled 'SDDC Manager' and contains fields for 'Appliance FQDN *' (set to 'sfo-vi01.sfo.rainpole.io') and 'Administrator Password *'. A note at the top states: 'Enter the configuration details for the SDDC Manager appliance. All fields marked with a * are required.' Below the main form, a callout box provides additional context: 'The VMware Cloud Foundation installer appliance is deployed on one of the hosts in the management domain. During the deployment process, the installer appliance will be converted into the SDDC Manager appliance. Provide the installer appliance password.' On the right, a 'VCF Fleet' summary panel shows the status of components: 'VCF Operations' and 'VCF Automation' are green (Completed), while 'SDDC Manager' is blue (In Progress). The 'VCF Instance' section shows the 'Management Domain' with 'vCenter' (Existing), 'NSX Manager' (Completed), 'vSphere Cluster' (Existing), and 'SDDC Manager' (In Progress).

Phase 2: Converge vCenter - Reviewing the Deployment Configuration

You can review the VMware Cloud Foundation configuration and make any required changes before proceeding with the installation.

The screenshot shows the 'Review' step of the VMware Cloud Foundation Installer. On the left, a sidebar lists the steps: Deploy VCF Fleet, Existing Components, General Information, VCF Operations, VCF Automation, vCenter, NSX Manager, SDDC Manager, Review (which is selected), and Validate & Deploy. The main area is titled 'Review' and contains a table of deployment configurations. The table includes sections for VCF Operations, VCF Automation, and Existing Infrastructure (vCenter). The configuration details are as follows:

Review	
I want to connect a VCF Automation instance later	
Yes	
VCF Operations	
VCF Operations Appliance	
Operations Appliance Size	Small
Operation primary FQDN	sa-vcops-01.vcf.sddc.local
Administrator Password	***** @
Fleet Management Appliance	
Appliance FQDN	sa-vcopsfm-01.vcf.sddc.local
Use same password as VCF Operations	Yes
Operations Collector Appliance	
Appliance FQDN	sa-vcopsoc-01.vcf.sddc.local
Use same password as VCF Operations	Yes
VCF Automation	
I want to connect a VCF Automation instance later	
Yes	
Existing Infrastructure	
vCenter	
FQDN	sa-vcsa-01.vcf.sddc.local
Thumbprint	C9:43:8B:DE:9D:D7:3F:88:53:78:52:11:D7:FF:30:75:D6:AC:9A:13:1D:6B:48:1D:4E:07:B4:26:C1:56:3D:7D
Root Password	***** @
SSO user name	administrator@vsphere.local

Phase 2: Converge vCenter - Validating and Deploying VCF 9.0

Before proceeding with the deployment, the VMware Cloud Foundation Installer validates the parameters provided during the deployment wizard. If validation errors occur, you must navigate to the relevant pages in the deployment wizard to make updates and rerun the validations. You can acknowledge warnings that appear after the validation process.

The screenshot shows the VMware Cloud Foundation Installer interface. On the left, a sidebar lists the deployment steps: Deploy VCF Fleet, Validate & Deploy, and other steps numbered 1 through 8. Step 9, Validate & Deploy, is currently selected and highlighted in blue. The main pane is titled "Validate & Deploy" and contains a message: "JSON specification file, make the necessary changes, and then upload the modified JSON file from the VCF installer homepage." Below this is a note: "In case there are changes in your infrastructure, you can re-run validations before proceed further." There are two buttons: "ACKNOWLEDGE ALL WARNINGS" and "RE-RUN VALIDATIONS". A "DOWNLOAD JSON SPEC" link is also present. The validation results table has columns for "Validations", "Status", and "Details". It shows several validation items, mostly succeeded, with some acknowledged warnings. For example, under "Deployment Specification", it says: "Cannot check compatibility of VROPS 9.0.0.24566540, because no compatibility data is available for the following components: VRSLCM 9.0.0.0, VCF_OPS_CLOUD_PROXY 9.0.0.0, VROPS 9.0.0.0". Under "Existing Components", it says: "Cluster vsphere Cluster: Evacuate Offline VMs upgrade policy configured for cluster vsphere Cluster on vCenter does not match default SDDC Manager ESXi upgrade policy. It has value false in vCenter, and default value true in SDDC Manager. Remediation: Review and apply the desired upgrade policy options from the "Upgrade Options" page during "ESX Configure Update". NextCluster sa-m01-nxst-vip vct.sddc.local: For vCenter version < 9.0.0.0, 3-node NSX is required. For vCenter versions >= 9.0.0.0, 1-node NSX Cluster is allowed, but 3-node NSX cluster is recommended. Remediation: Please ensure that specification contains 3-node NSX Cluster".

VCF Installer: Monitoring the Deployment Process

You can follow the VMware Cloud Foundation installation process from the VCF Installer. For more details, you can check the entries in the **Tasks** section.

The screenshot shows the VMware Cloud Foundation Installer interface. At the top, there are buttons for 'DOWNLOAD JSON SPEC' and 'REVIEW PASSWORDS'. Below this is a progress bar titled '100% completed' with a green vertical line and several task items, each with a checkmark and a green circle icon:

- Deploy vCenter
- Deploy SDDC Manager
- Configure the vSphere cluster
- Deploy and configure NSX
- Deploy and configure the fleet management appliance
- Deploy and configure the operations appliance
- Deploy and configure the automation appliance

A red rectangular box highlights the list of tasks. In the bottom left corner of the main window, there is a small red box around the 'Tasks' tab. On the right side of the screen, there is a sidebar titled 'Next Steps' with two numbered items:

- Log in to the VCF Operations UI.
- Navigate to License Management, and apply your VCF license keys within the 60-day evaluation period.

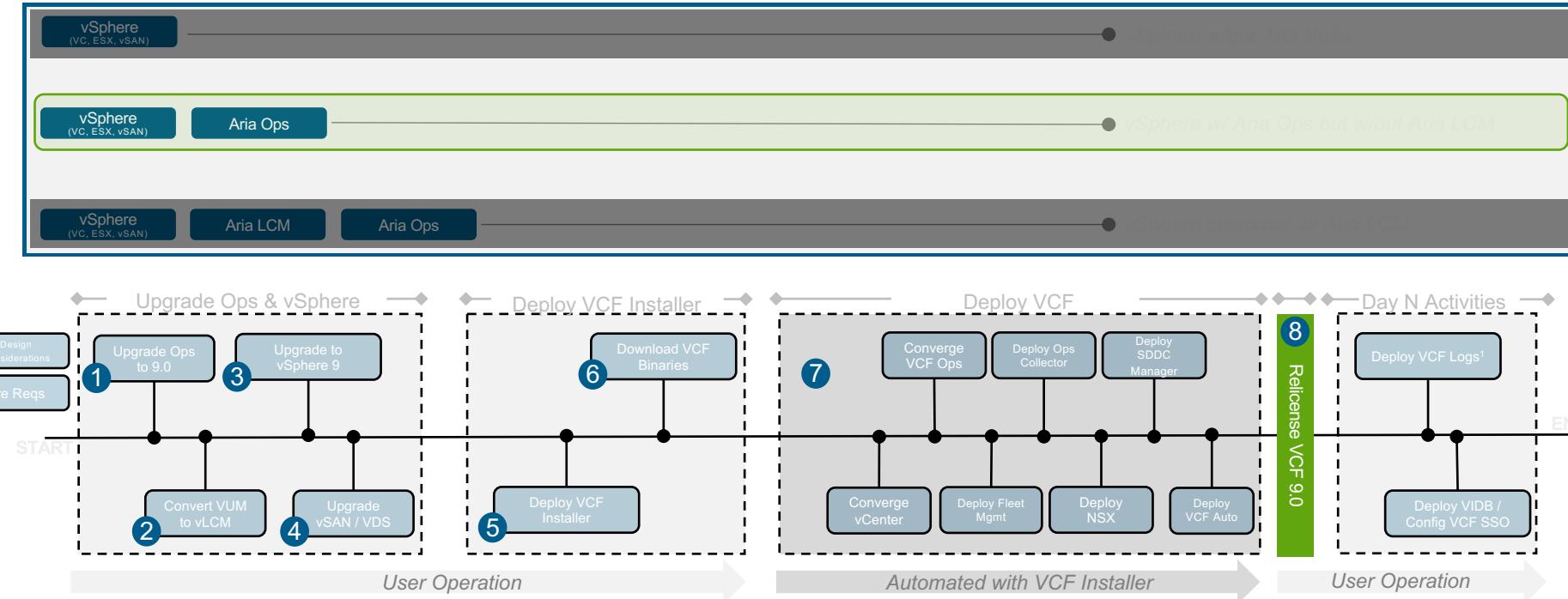
Below this is a 'VCF Operations Login' section with fields for 'Username' (set to 'admin') and 'Password' (represented by a series of asterisks). There is also a link labeled 'OPEN VCF OPERATIONS UI' with a blue arrow icon. At the very bottom of the screen, there is a message about activating Windows.

Upgrade Scenario: vSphere 8.0 with Aria Operations to VCF 9.0



Paths to VCF 9

vSphere with Standalone Operations to VCF 9



¹ There is no upgrade path from VCF Logs 8.x to 9.x. Deploy a new VCF Logs 9 instance after VCF deployment. Import/upgrade other components (e.g., Ops for Networks, HCX) after upgrade to VCF 9.

Completing the Prerequisites for the Upgrade (1)

You must complete all the prerequisites to upgrade from vSphere with vSAN to VCF 9.0.

Attribute	Description
Licensing (Entitlement)	Ensure that the customer has a valid subscription for VCF 9.0.
vSphere version	The vSphere version must be 8.0 update 1 or later to perform the upgrade to VCF 9.0.
Scale	VCF 9.0 might require additional resources for storage, CPU, and memory compared to the existing environment.

Completing the Prerequisites for the Upgrade (2)

You must complete all the prerequisites to upgrade from vSphere with vSAN to VCF 9.0.

Attribute	Description
Networking	<p>Ensure that the vSphere Distributed Switch (VDS) is on version 8.0 or later. A temporary IP address is required to upgrade the vCenter to a Management vCenter. IP addresses and DNS records are required for all additional VCF components being deployed: - SDDC Manager - NSX - VCF Operations - VCF Automation</p>
vSphere Cluster	<p>All clusters that require an upgrade as part of the new management vCenter must be on vSphere Lifecycle Management (vLCM).</p>
Enhanced Link Mode (ELM)	<p>The ELM configuration must be removed from the vCenter instance before upgrading to VCF 9.0.</p>

Upgrade Considerations

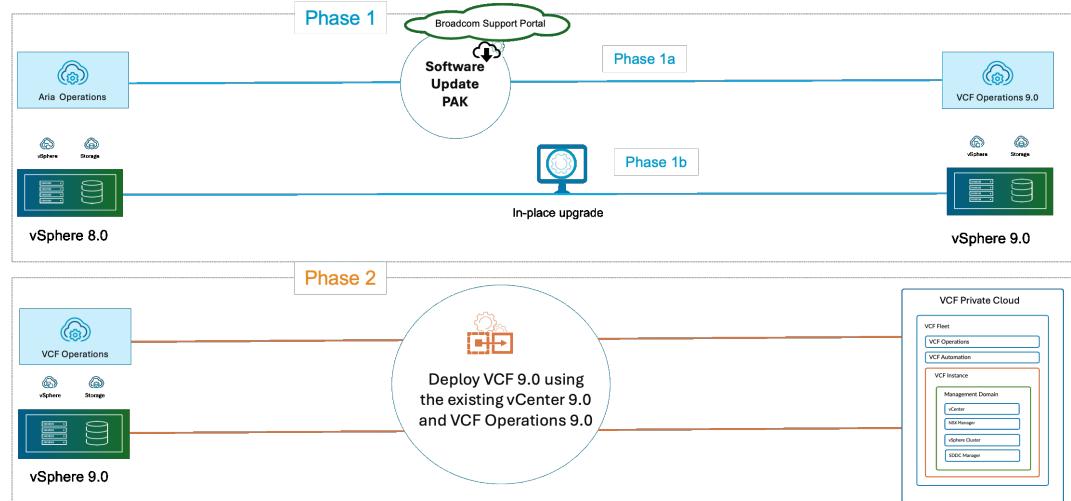
Before upgrading, you must understand how VMware Cloud Foundation 9.0 differs from earlier versions.

VCF 9.0 Management Component	Deployment Option	Before 9.0 VCF Management Component	Deployment Option
VCF Operations	Required	Aria Operations	Optional
VCF Operations fleet management	Required	Aria Suite Lifecycle	Optional
VCF Operations collector	Required	Not deployed	Not Deployed
VCF Automation	Optional	Aria Automation	Optional
VCF Operations for networks	Optional	VMware Aria Operations for Networks	Optional
VCF Operations for logs	Optional	VMware Aria Operations for Logs	Optional

Upgrade Phases from vSphere 8.x with Aria Operations to VCF 9.0

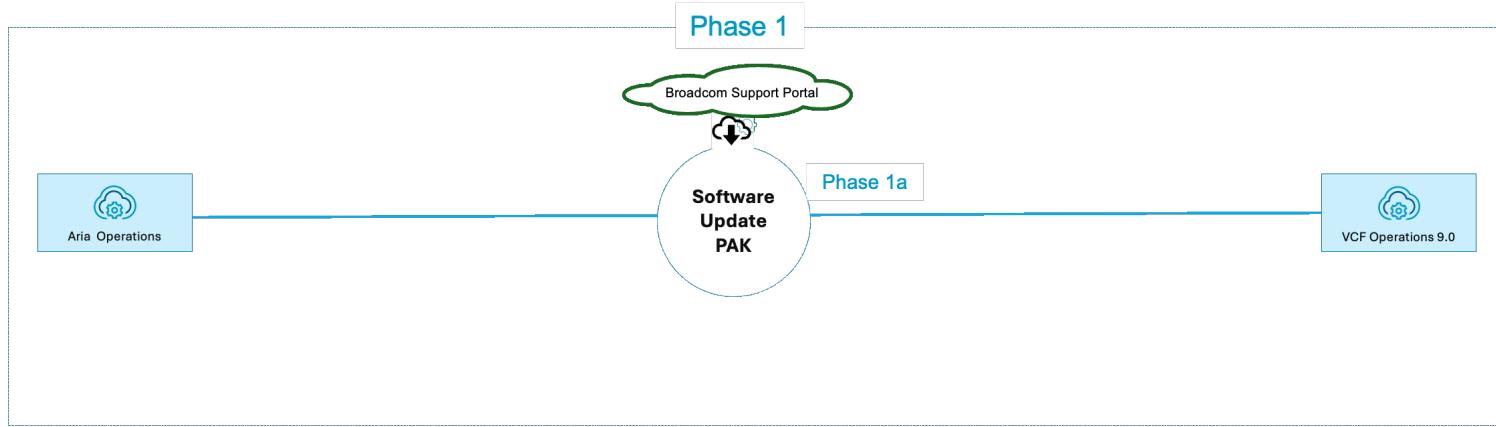
You upgrade to VCF 9.0 in the following phases:

1. Upgrade Aria Operations to VCF Operations 9.0 and existing vSphere to 9.0.
2. Deploy VCF 9.0 using the existing vCenter 9.0 and VCF Operations 9.0.



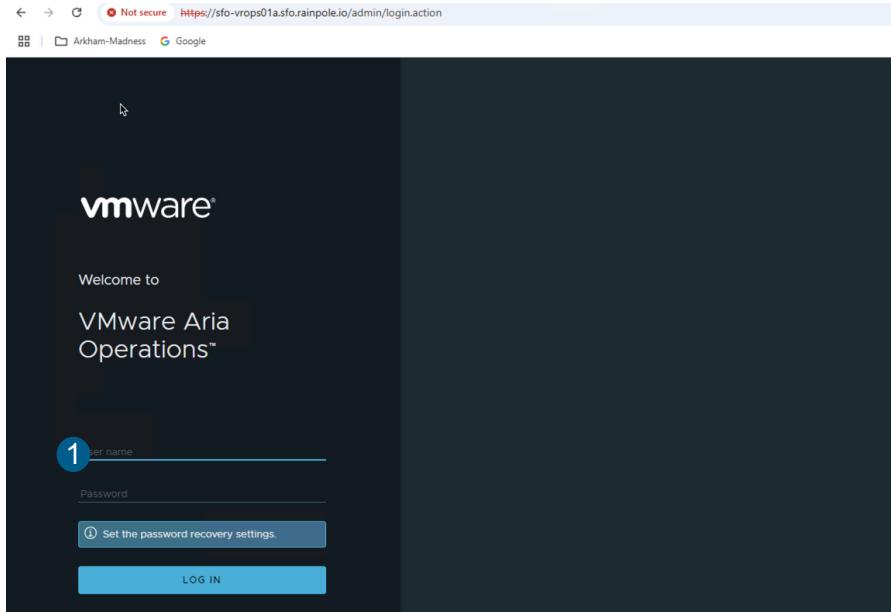
Overview of Phase 1a: Upgrade Aria Operations to VCF Operations

In phase 1a, you upgrade Aria Operations to VCF Operations.



Phase 1a: Upgrade Aria Operations to VCF Operations 9.0

Upgrade Aria Operations to VCF Operations from the Aria Operations Admin Console.



The screenshot shows the 'System Status' page of the VMware Aria Operations Admin Console. The title bar says 'VMware Aria Operations Administration'. On the left, there's a sidebar with links: 'System Status' (marked with a circled '2'), 'Cloud Proxies', 'Software Update', 'Support', and 'Administrator Settings'. The main content area is titled 'Cluster Status' and shows 'Online' with a green arrow icon. At the bottom right of the content area is a red button labeled 'TAKE CLUSTER OFFLINE'.

Phase 1a: Upgrade Aria Operations to VCF Operations 9.0

Select Upgrade, Upload, Install

Software Update

1

INSTALL A SOFTWARE UPDATE...

The following software update has been installed:

Name VMware Infrastructure Health
Description Proactively monitors the health of VMware cloud management plane applications such as vCenter, NSX, VMware Aria etc.
Version 8.18.0.24025174
Last update time 1/29/25 8:03 PM

2

Add Software Update

- 1 Select Software Update
- 2 End User License Agreement
- 3 Update information
- 4 Install Software Update

Select a Software Update to Install

Browse your file system to select a PAK file for the software update you want to install.

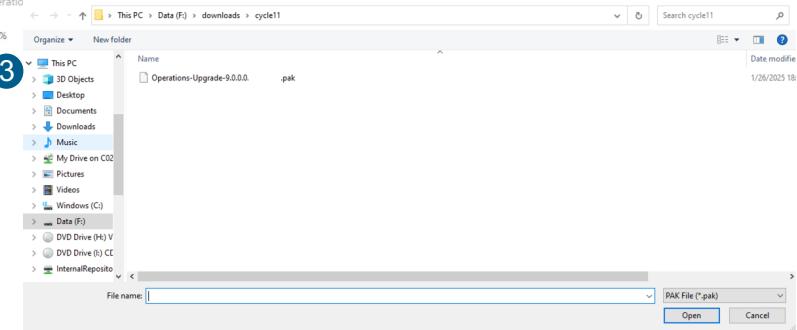
Select a PAK file to import.

BROWSE...

Install the PAK file even if it is already installed

Ignore PAK file signature (does not apply to VMware Aria Operations)

3



Phase 1a: Upgrade Aria Operations to VCF Operations 9.0

Select Upgrade, Upload, Install

Screenshot 1: Select Software Update

Add Software Update

1 Select Software Update (highlighted)

2 End User License Agreement

3 Update Information

4 Install Software Update

Select a Software Update to Install

Browse your file system to select a PAK file for the software update you want to install.

Operations-Upgrade-9.0.0.0.pak (selected)

BROWSE...

The selected file is ready to upload and install. Click Upload to continue.

Install the PAK file even if it is already installed

Ignore PAK file signature (does not apply to VMware Aria Operations PAK file)

UPLOAD (button) 0%

Screenshot 2: Add Software Update

Add Software Update

1 Select Software Update (highlighted)

2 End User License Agreement

3 Update Information

4 Install Software Update

Select a Software Update to Install

Browse your file system to select a PAK file for the software update you want to install.

Select a PAK file to import (BROWSE... button)

Install the PAK file even if it is already installed

Ignore PAK file signature (does not apply to VMware Aria Operations PAK file)

UPLOAD (button) 100%

The PAK file has been uploaded and is ready to install. This file contains:

PAK file details

PAK filename	Operations-Upgrade-9.0.0.0.pak
Name	VMware Cloud Foundation Operations
Description	Upgrade VMware Cloud Foundation Operations
Version	9.0.0
Estimated Install Time	Not Available

The PAK file signature is valid.

The update will restart the cluster for the entirety of the update.

CANCEL NEXT

Phase 1a: Upgrade Aria Operations to VCF Operations 9.0

Select Upgrade, Upload, Install

The screenshot shows a software update wizard with two main steps:

Step 1: End User License Agreement

Sub-steps: 1 Select Software Update, 2 End User License Agreement (highlighted), 3 Update Information, 4 Install Software Update.

Content: "Read and agree to the End User License Agreement to continue." A large text box displays the "Foundation Agreement" which includes sections like INTRODUCTION, DEFINITIONS, and OFFERING. At the bottom, there is a checkbox labeled "I accept the terms of this agreement".

Step 2: Add Software Update

Sub-steps: 1 Select Software Update, 2 End User License Agreement, 3 Update Information (highlighted), 4 Install Software Update.

Content: "Important Update and Release Information". It includes a section for "Release Information: VMware Cloud Foundation Operations 9.0.0.0" and a link to "https://docs.vmware.com/en/VMware-Aria-Operations/9.0/rn/vmware-aria-operations-90-release-notes/index.html". It also lists "Software Update Best Practices" with three numbered steps: 1. Take a snapshot of your deployed VMware Cloud Foundation Operations clusters or back them up before you begin the software update. See the release notes for details on how to snapshot correctly. 2. Run the pre-upgrade assessment tool before the upgrade. This is imperative and will provide you with a list of impacted content caused by the removal of numerous metrics from the product. Ignoring this step may potentially lead to broken content. 3. Remove your snapshots after the software update completes or you may experience performance degradation.

Phase 1a: Upgrade Aria Operations to VCF Operations 9.0

Select Upgrade, Upload, Install

Add Software Update

1 Select Software Update

2 End User License Agreement

3 Update Information

4 Install Software Update

Install Software Update

To start the update, click Install.

ⓘ The installer will restart the cluster before copying files. Once the cluster has restarted the Software Update page will display the update status.

CANCEL BACK INSTALL

Overview of Phase 1b: Upgrade vSphere 8.x to vSphere 9.0

In phase 1, you upgrade the existing vSphere 8.0 to 9.0 using the in-place upgrade method.

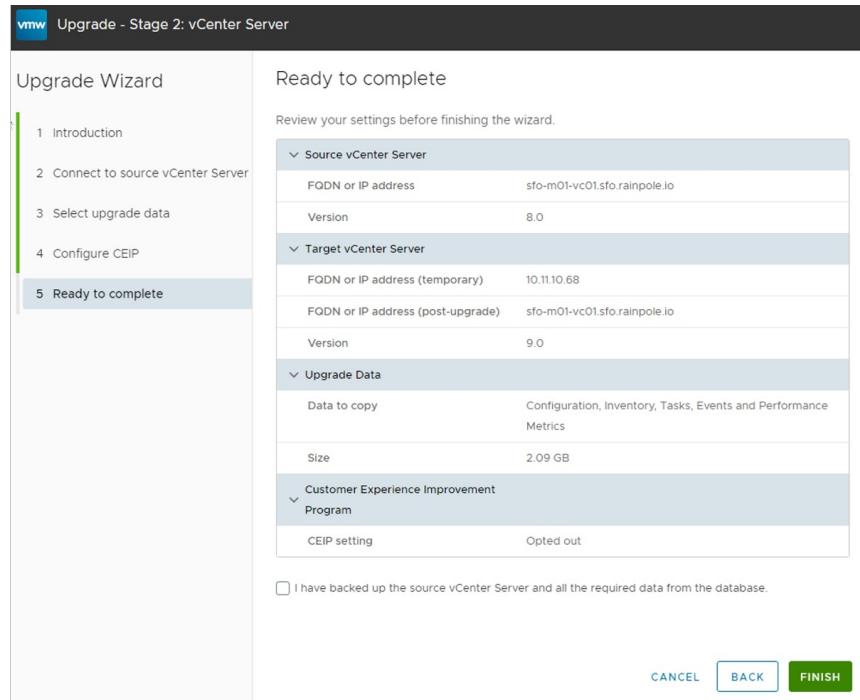


Phase 1b: Upgrade vCenter 8.0 to vCenter 9.0

You upgrade the existing vCenter to serve as the future management domain in VCF 9.0.

Before upgrade:

- Check vCenter infrastructure compatibility with vCenter 9.0.
- Back up your vCenter Server and all essential data in your vSphere environment.
- Take snapshots of the vCenter VM.
- Remove vCenter HA



Phase 1b: Upgrade ESX - Using the vSphere Lifecycle Manager image

Starting with VMware Cloud Foundation 9.0, only vSphere Lifecycle Manager image clusters are supported.

The screenshot shows the vSphere Lifecycle Manager interface for the cluster 'sfo-m01-cl01'. The 'Image' tab is selected. The 'Image' section displays details for the default image 'esxi 8.0u2', including its version (8.0 U2 - 22380479), vendor add-ons (None), and firmware/drivers add-ons (None). A note indicates that device compatibility must be verified manually. The 'Image Compliance' section shows that 4 hosts are unknown. A detailed view of one host, 'sfo01-m01-r01-esx01.sfo.rainpole.io', is expanded, showing its status as unknown and a warning message about a changed image or new host addition.

Phase 1b: Upgrade ESX - Import the ESX upgrade ZIP file

You import the ESX upgrade ZIP file for ESX 9.0 to create an image.

The screenshot shows the vSphere Client interface with the 'Lifecycle Manager' tab selected. In the 'Image Depot' section, there are tabs for 'Updates', 'Imported ISOs', and 'Baselines'. Below these tabs are three buttons: 'ESXi VERSIONS', 'VENDOR ADDONS', and 'COMPONENTS'. The 'ESXi VERSIONS' button is highlighted with a blue border. On the right side, there is a vertical 'ACTIONS' menu with options: 'Updates' (which has 'Sync Updates' and 'Import Updates' listed), 'Hardware Compatibility List' (with 'Sync HCL' listed), and 'Components' (which has 'Sync Components' listed). A red arrow points from the 'Import Updates' option in the 'Updates' menu to the 'Import Updates' dialog box. The 'Import Updates' dialog box is titled 'Import Updates' and contains the text: 'You can import by selecting a .zip file or a URL. Contents will be imported to Image Depot and Updates.' It has a 'Update' section with a 'Filename or URL' input field, a 'BROWSE' button, and two buttons at the bottom: 'CANCEL' and 'IMPORT'.

Phase 1b: Upgrade ESX - Assigning image

Select the cluster to upgrade, ASSIGN IMAGE

sfo-m01-cl01 | ACTIONS

Summary Monitor Configure Permissions Hosts VMs Datastores Networks Updates

Hosts ▾

Image

Hosts in this cluster are managed collectively. This image below will be applied to all hosts in this cluster.

Image Name esxi 9.0

Default Image

ESXi Version 9.0.0.0.24518876

Vendor Addon ⓘ None

Firmware and Drivers Addon ⓘ None

Components ⓘ No additional components [SHOW DETAILS](#) ▾

⚠ Device compatibility must be verified manually. [See details](#)

Image Compliance

Last checked on 01/30/2025, 11:44:45 PM (0 days ago)

⚠ 4 hosts not compliant

[RUN PRE-CHECK \(ALL\)](#) [STAGE \(ALL\)](#) [REMEDIATE \(ALL\)](#)

Hosts

CHECK COMPLIANCE ⋮

Phase 1b: Upgrade ESX - Remediating

You review the remediation impact and initiate the remediation to complete the upgrade of ESX.

Review Remediation Impact

Impact summary

Applicable remediation settings

Foundation Agreement

Impact to specific hosts

- sfo01-m01-r01-esx01.sfo.rainpole.io
- sfo01-m01-r01-esx02.sfo.rainpole.io
- sfo01-m01-r01-esx03.sfo.rainpole.io
- sfo01-m01-r01-esx04.sfo.rainpole.io

Notes

VM states honor remediation settings
VMs may be powered off, suspended or migrated to other hosts based on the applicable remediation settings.

Pre-check will be run again as a part of the remediation
Pre-check will be run again as a part of the remediation process. This is to ensure that no new issues have arisen on the cluster or hosts since the last pre-check (if any) that prevent remediation.

Hosts are remediated one at a time
Hosts will be remediated one at a time, so hosts will not reboot/go into maintenance mode simultaneously.

Order of host remediation is determined at runtime
Hosts will be remediated in an order determined at runtime. Hence that order may not correspond to the order in which they appear here.

Quick Boot
Quick Boot optimizes the reboot path to avoid the hardware full power cycle, saving considerable time from the upgrade process.

I accept the [Foundation Agreement](#)

[EXPORT IMPACT DETAILS](#)

[CLOSE](#) [START REMEDIATION](#)

Phase 1b: Upgrade vSAN On-Disk Format Versions - Prerequisites

Before you start, make sure.

- ESX and vCenter Upgrades are completed
- The disks are healthy. Navigate to the Disk Management to verify the status.
- ESX hosts are not in maintenance mode.
- In the vSAN cluster, there are currently no component rebuilding tasks in progress.
- The upgrade may lead to temporary resynchronization traffic and may require additional space by moving data or rebuilding object components to a new data structure.

Phase 1b: Upgrade vSAN On-Disk Format Versions - Upgrading

Upgrade the vSAN on-disk format version to take advantage of features that are only available in later versions.

vSphere Client Search in all environments Administrator@VSPHERE.LOCAL

sfo-m01-cl01 ACTIONS

Summary Monitor Configure Permissions Hosts VMs Datastores Networks Updates

Host Options Host Profile Licensing Alarm Definitions

Services

All 12 disks on version 19.0. Some services may not provide the complete feature set.

Ready to upgrade - pre-check completed successfully on --.

SHUTDOWN CLUSTER TURN OFF VSAE UPGRADE PRE-CHECK UPGRADE

Phase 1b: Upgrade vSphere Distributed Switch Versions

You must upgrade ESX and vCenter before upgrading the vSphere Distributed Switch to use features from later versions.

sfo-m01-cl01-vds01 -
Upgrade Distributed
Switch

1 Configure upgrade

2 Check compatibility

3 Ready to complete

Ready to complete

Review your selections before finishing the wizard

Configure upgrade

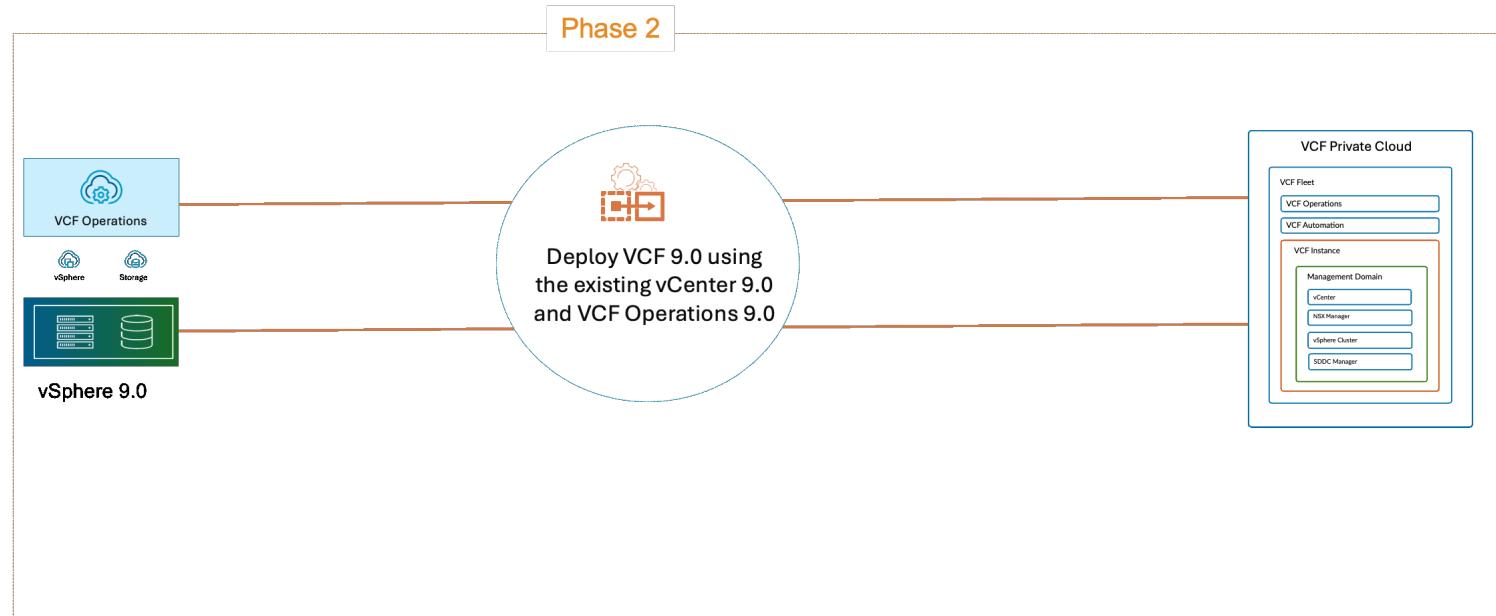
Once upgraded the distributed switch cannot be downgraded to a previous distributed switch version. You will not be able to add older VMware ESX Server members that are not compatible with the new distributed switch.

Distributed switch	sfo-m01-cl01-vds01
Current version	8.0.0
Upgrade version	9.0.0

CANCEL BACK FINISH

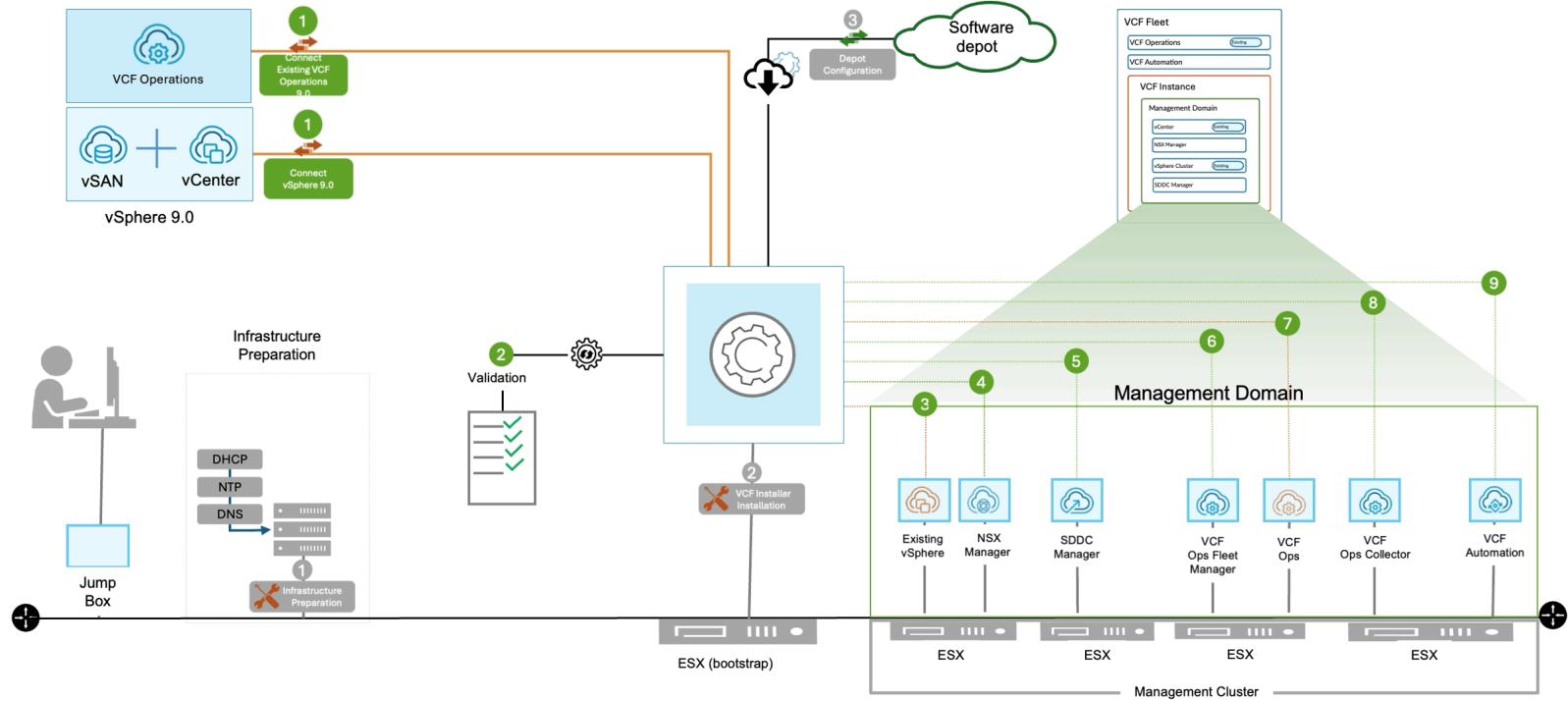
Phase 2: Deploy VCF 9.0 Using the Existing vCenter 9.0 and VCF Operations 9.0

In phase 2, you deploy VCF 9.0 using the existing vCenter 9.0 and VCF Operations 9.0.



Deploying VCF 9.0 Using the Existing vCenter 9.0 and VCF Operations 9.0: Sequence

After upgrading your existing vSphere to version 9.0 and Aria Operations to VCF Operations 9.0, you deploy VCF 9.0 with the existing vSphere 9.0 and VCF Operations using the VCF Installer in a sequence of steps:

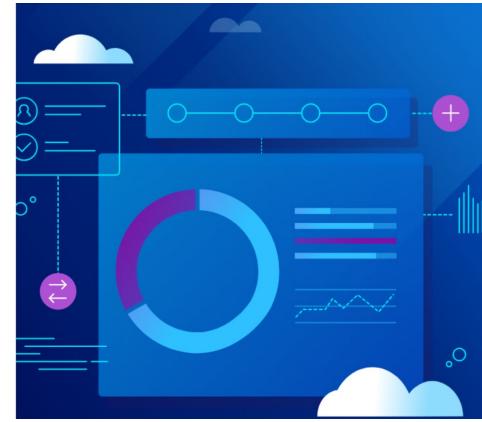


Phase 2: Converge vCenter / VCF Operations - Deploying the VCF Installer

As part of the initial VMware Cloud Foundation installation or converge process, you deploy a VMware Cloud Foundation Installer virtual appliance, which automates the deployment of the entire VCF fleet.

1. Login to support.broadcom.com
2. Go to downloads ->VMware Cloud Foundation->9.0 and download the VCF Installer
3. Deploy the VCF Installer file (OVA) based on the design option chosen above.
4. To access the VMware Cloud Foundation Installer, use the FQDN specified during the deployment of the appliance, and the configured password for the admin@local user.

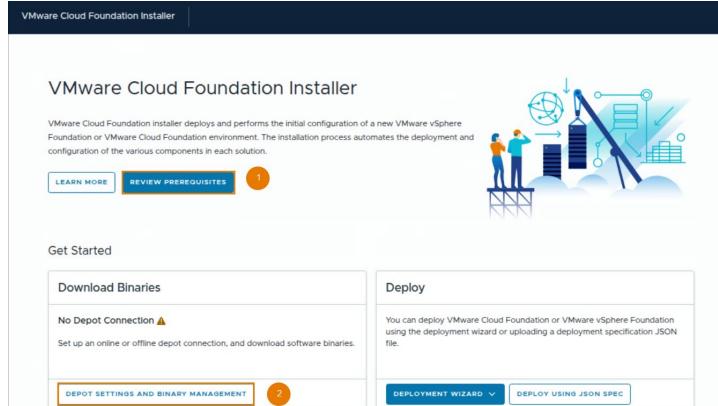
The screenshot shows the VMware Cloud Foundation® Installer login interface. It features a logo for 'vmware by Broadcom' at the top left. The main title 'VMware Cloud Foundation® Installer' is centered above a form field. The form includes fields for 'E-mail / Username' (with 'admin@local' entered) and 'Password' (with a redacted password). Below the password field is a checkbox for 'Remember me'. At the bottom of the form is a large blue 'LOG IN' button. At the very bottom of the page, there is a copyright notice: 'Copyright © 2005-2025 Broadcom. All Rights Reserved. The term "Broadcom" refers to Broadcom Inc. and/or its subsidiaries.' followed by links for 'Terms of Use' and 'Privacy'.



Phase 2: Converge vCenter / VCF Operations - Reviewing the Prerequisites

Before you proceed with the VMware Cloud Foundation installation, you must take the following steps:

1. Verify that all required prerequisites are satisfied by clicking **Review Prerequisites**.
2. Download the VMware Cloud Foundation binary files from an online or offline depot.
You configure the depot settings by clicking **Depot Settings and Binary Management**.



Phase 2: Converge vCenter / VCF Operations - Configuring the Depot Settings

To reduce the footprint of the VMware Cloud Foundation Installer, the VMware Cloud Foundation product binaries are not included as part of the appliance.

You must configure the depot and download the binaries either from an online or an offline depot.

[RETURN HOME](#)

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.

(i) 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

(i) Proxy settings are not configured

Username : user@broadcom.net

[EDIT DEPOT CONNECTION](#)

[DISCONNECT](#)

Offline Depot ✗

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

[CONFIGURE](#)

Phase 2: Converge vCenter / VCF Operations - Reviewing the VCF 9.0 binaries

You can review the version, size, and status of the binaries for all VMware Cloud Foundation components in the **Binary Management** page of the installer interface.

The screenshot shows the 'Binary Management' page of the VMware Cloud Foundation Installer. At the top, there's a navigation bar with 'VMware Cloud Foundation Installer' and a user session 'Hello, admin@local'. Below the header, the title 'Binary Management' is displayed. A dropdown menu 'Download Summary' is open, showing 'Version 9.0.0.0' selected. Underneath, two download links are shown: 'VMware vSphere Foundation' (Downloaded) and 'VMware Cloud Foundation' (Downloaded). A note below says 'Filter the list by product and version and download the required component binaries. For additional guidance, refer to the [Product Interoperability Matrix](#)'. There are filters for 'Product' (set to 'VMware Cloud Foundation') and 'Version' (set to '9.0.0.0'). Below these are 'DOWNLOAD' and 'DELETE' buttons. The main table lists eight components:

	Component	Version	Size	Download Status
<input type="checkbox"/>	VMware Cloud Foundation Automation	9.0.0.0.24458060	23.71 GB	Success
<input type="checkbox"/>	VMware NSX	9.0.0.0.24466999	10.40 GB	Success
<input type="checkbox"/>	VMware Cloud Foundation Operations fleet management	9.0.0.0.24466766	1.80 GB	Success
<input type="checkbox"/>	VMware Cloud Foundation Operations	9.0.0.0.24466769	2.72 GB	Success
<input type="checkbox"/>	VMware vCenter	9.0.0.0.24469172	10.75 GB	Success
<input type="checkbox"/>	VMware Cloud Foundation Operations Collector	9.0.0.0.24466770	2.49 GB	Success
<input type="checkbox"/>	SDDC Manager	9.0.0.0.24466701	2.01 GB	Success

Phase 2: Converge vCenter / VCF Operations - Launching the VCF Installer Deployment Wizard

After downloading the VMware Cloud Foundation component binaries, you can initiate the deployment wizard by selecting VMware Cloud Foundation from the Deployment Wizard dropdown.

The screenshot shows the VMware Cloud Foundation Installer interface. At the top, there's a dark header bar with the text "VMware Cloud Foundation Installer". Below it is a main content area with the title "VMware Cloud Foundation Installer". A descriptive text states: "VMware Cloud Foundation installer deploys and performs the initial configuration of a new VMware vSphere Foundation or VMware Cloud Foundation environment. The installation process automates the deployment and configuration of the various components in each solution." Below this text are two buttons: "LEARN MORE" and "REVIEW PREREQUISITES". To the right of the text is a colorful illustration depicting two people interacting with a server rack, network equipment, and a globe, symbolizing cloud infrastructure management. The main content area is divided into two main sections: "Get Started" and "Deploy".

Get Started
This section contains a "Download Binaries" panel and a "Deploy" panel.

Download Binaries
This panel shows the status of depot connections and lists downloaded binary files:

- Online depot connection active ✓
- You can edit your depot connection and/or downloaded additional software binaries
- VMware vSphere Foundation 9.0.0.0 Downloaded
- VMware Cloud Foundation 9.0.0.0 Downloaded

[DEPOT SETTINGS AND BINARY MANAGEMENT](#)

Deploy
This panel provides options for deployment:

You can deploy VMware Cloud Foundation or VMware vSphere Foundation using the deployment wizard or uploading a deployment specification JSON file.

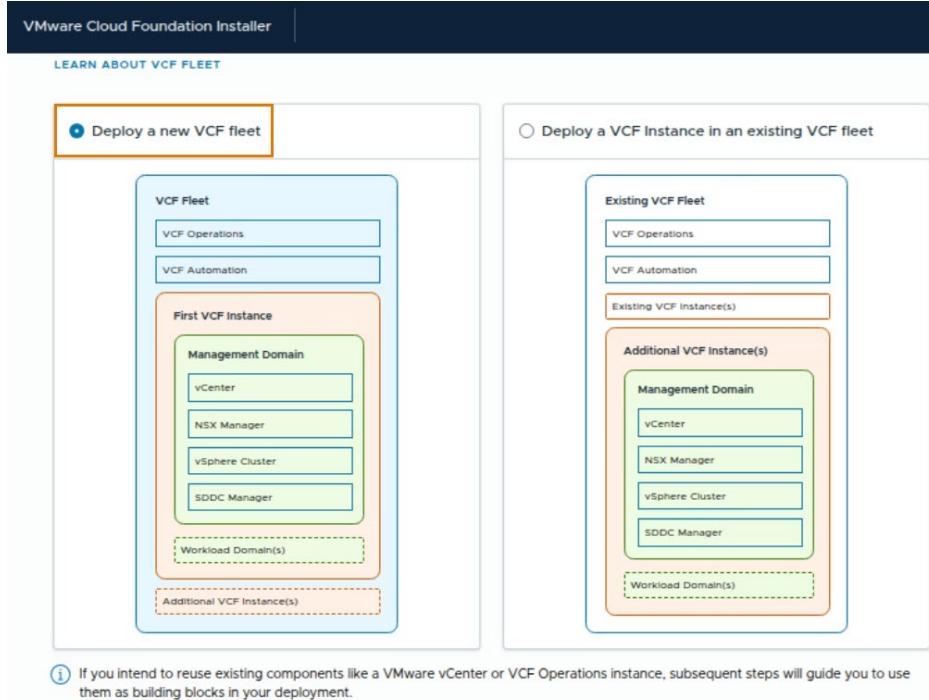
[DEPLOYMENT WIZARD](#) [DEPLOY USING JSON SPEC](#)

Below these buttons is a dropdown menu:

- VMware Cloud Foundation Selected
- VMware vSphere Foundation

Phase 2: Converge vCenter / VCF Operations - Deploying a New VCF Fleet

The VMware Cloud Foundation Installer can deploy the first VCF fleet or add a new instance to an existing one. You choose to deploy a new VCF fleet.



Phase 2: Converge vCenter / VCF Operations - Selecting the Existing vCenter / VCF Operations

You select VMware vCenter and VCF Operations under Existing Components to convert the existing vCenter instance into a vCenter instance for your new management domain, as well as using the newly upgrade VCF Operations

VMware Cloud Foundation Installer

Hello, admin@local

Deploy VCF Fleet

1 Existing Components

2 General Information

3 VCF Operations

4 VCF Automation

5 vCenter

6 NSX Manager

7 SDDC Manager

8 Review

9 Validate & Deploy

Existing Components

Select the existing components you want to reuse in this VCF fleet. You will be asked to provide details about the existing components later in the deployment wizard.

- VCF Installer validates the selected components to ensure that they are compatible.
- If you select a VCF Operations instance that is connected to a fleet management appliance or a VCF Automation instance, these components will also be added to this VCF fleet.
- It is recommended you select the VMware vCenter where the selected VCF Operations is currently deployed to be used as the vCenter for the first VCF instance.
- If a VMware NSX Manager is connected to the vCenter instance you intend to use, select the option to use existing NSX Manager.

VCF Operations
Use an existing VCF Operations instance as the management component in the VCF fleet.

VMware vCenter
Use an existing vCenter as the management domain vCenter.

Existing VMware NSX
Use the NSX Manager connected to this vCenter as the management domain NSX Manager.

VCF Fleet

- VCF Operations
- VCF Automation

VCF Instance

Management Domain

- vCenter (Existing)
- NSX Manager
- vSphere Cluster (Existing)
- SDDC Manager

Phase 2: Converge vCenter / VCF Operations - Providing General Information About VCF

When deploying a new VCF instance using an existing vCenter, the deployment wizard prompts you to provide details such as the VCF instance name, management domain names, and deployment model settings.

The screenshot shows the 'Deploy VCF Fleet' wizard interface. On the left, a vertical navigation bar lists steps 1 through 9. Step 2, 'General Information', is highlighted with a light blue background. The main panel is titled 'General Information' and contains the following fields:

- Version:** A dropdown menu set to '9.0.0'. Below it, a note states: 'The latest downloaded version of each component will be used'.
- VCF Instance Name:** A text input field containing 'vc90'. Below it, a note states: 'Descriptive name for the VCF instance'.
- Management domain name:** A text input field containing 'vc9-mgmt'. Below it, a note states: 'This name will also be used to generate names for objects in the management domain, like the vCenter, distributed switches etc.'
- Deployment model:** A note stating: 'This selection only applies to newly deployed appliances. Existing VCF Operations, VCF Automation, or NSX Manager appliances that you plan to use in your VCF fleet will not be modified.' followed by a link 'Learn more'. Below this, two radio button options are shown: 'Simple (Single-node)' (unchecked) and 'High Availability (Three-node)' (checked).
- Password creation:** A checkbox labeled 'Auto-generate passwords for newly installed appliances' (unchecked).
- Other:** A checkbox labeled 'Enable Customer Experience Improvement Program (CEIP)' (unchecked).

Phase 2: Converge vCenter / VCF Operations

As part of the VCF Operations configuration, you provide details for the following components:

- VCF Operations Fleet Management appliance
- VCF Operations Collector appliance

Deploy VCF Fleet

1 Existing Components
2 General Information
3 VCF Operations
4 VCF Automation
5 vCenter
6 SDDC Manager
7 Review
8 Validate & Deploy

VCF Operations

Enter the configuration details for the VCF Operations appliances. All fields marked with a * are required.

Details of Existing VCF Operations Instance

You indicated that you want to use your existing VCF Operations instance. Enter the details for the existing VCF Operations instance you want to use to discover additional components connected to it.

Successfully detected VCF Operations sto-vrops01a.sto.rainpole.io. [Use other VCF Operations](#)

Fleet Management Appliance

The VCF Operations instance has a connected fleet management appliance. Provide its password for configuring it for the VCF fleet.

Appliance FQDN * sto-fm01.sto.rainpole.io

Administrator password * [Reset](#)

Operations Collector Appliance

Provide details for deploying a new operations collector appliance for this VCF instance.

Appliance FQDN * sto-vropsco2.sto.rainpole.io

Administrator Password * [Reset](#)

Confirm Administrator Password * [Reset](#)

VCF Fleet

VCF Instance

Management Domain

- vCenter (Existing)
- NSX Manager (Existing)
- vSphere Cluster (Existing)
- SDDC Manager

Phase 2: Converge vCenter / VCF Operations - Configuring VCF Automation

As part of the VCF Automation configuration, you provide the appliance FQDN, user name, and password.

You also specify the following information:

- IP address for the active or primary node
- Additional IP address for deploying a secondary node if the primary node fails
- CIDR for internal communication between the VCF Automation containers

VCF Automation

Enter the configuration details for VCF Automation appliance. All fields marked with a * are required.

I want to connect a VCF Automation instance later
Choose this option if you wish to use an existing Aria Automation Instance that is not currently connected to the VCF Operations instance you specified in the previous step. By doing so, you agree to use VCF Operations to import your Aria Automation instance once the installer is complete.

Appliance FQDN * sa-m01-auto-01.vcf.sddc.local

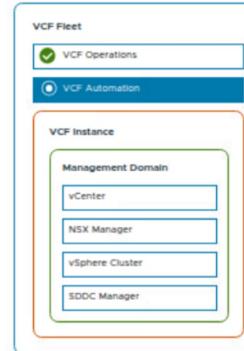
Administrator Password *

Confirm Administrator Password *

Node IP 1 * 172.20.10.74

Node IP 2 * 172.20.10.75

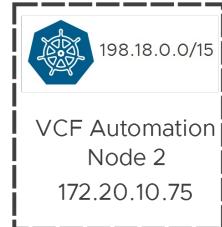
Internal Cluster CIDR * 198.18.0.0/15



Virtual IP
sa-m01-auto-01.vcf.sddc.local



198.18.0.0/15
VCF Automation
Node 1
172.20.10.74



Single Node Deployment

Phase 2: Converge vCenter / VCF Operations - Provide the details for the existing vCenter

As part of the vCenter conversion, you provide the details of the existing vCenter that you want to use as the management domain vCenter.

VMware Cloud Foundation Installer | Hello, admin@local ▾

Deploy VCF Fleet

1 Existing Components
2 General Information
3 VCF Operations
4 VCF Automation
5 vCenter
6 NSX Manager
7 SDDC Manager
8 Review
9 Validate & Deploy

vCenter

Enter the credentials of the VMware vCenter you want to convert. All fields marked with a * are required.

Existing VMware vCenter
You indicated that you want to use your existing VMware vCenter instance. Enter the details for the existing vCenter instance that you want to use as the management domain vCenter.

vCenter * sa-vcsa-01.vcf.sddc.local

Root Password *
SSO user name * administrator@vsphere.local

SSO password *

VCF Fleet

<input checked="" type="checkbox"/> VCF Operations	Skipped
VCF Automation	

VCF Instance

Management Domain

<input checked="" type="radio"/> vCenter	Existing
NSX Manager	
<input checked="" type="radio"/> vSphere Cluster	Existing
SDDC Manager	

Phase 2: Converge vCenter / VCF Operations - Configuring NSX Manager

On the NSX Manager configuration page, you provide the appliance size and FQDN. You also create passwords for the admin, root, and audit users.

VMware Cloud Foundation Installer

Hello, admin@local

Deploy VCF Fleet

NSX Manager

Enter configuration details for the NSX Manager to be deployed. All fields marked with a * are required.

Appliance Size *

Medium
6 vCPU, 24GB RAM, 300GB Storage

Cluster FQDN *

sa-m01-nsxt-vip.vcf.sddc.local

Appliance FQDN *

sa-m01-nsxt01.vcf.sddc.local

NSX Overlay using ESX Management VMkernel Networking

NSX 9.0 introduces the capability to configure overlay using ESX Management VMkernel Networking. The imported vCenter Server clusters will be configured for NSX VLAN transport zone and overlay over VMKO. It will not require VLAN-backed configuration, thus negating the need for you to allocate dedicated IP addresses.

Configure overlay using ESX Management VMkernel Networking

If this option is unchecked, NSX will be configured in VLAN transport zone mode.

Administrator Password *

VMware123!VMware123!

Confirm Administrator Password *

.....

Root Password

.....

Confirm Root Password

.....

Audit Password

.....

Confirm Audit Password

.....

VCF Fleet

- VCF Operations (Skipped)
- VCF Automation

VCF Instance

Management Domain

- vCenter (Existing)
- NSX Manager
- vSphere Cluster (Existing)
- SDDC Manager

Phase 2: Converge vCenter / VCF Operations - Configuring SDDC Manager (1)

You provide the details for the SDDC Manager appliance if the VCF Installer is not deployed on the vCenter being upgraded.

The screenshot shows the VMware Cloud Foundation Installer interface. The top navigation bar includes 'Hello, admin@local' and a dropdown menu. On the left, a sidebar lists steps from 1 to 9: Existing Components, General Information, VCF Operations, VCF Automation, vCenter, NSX Manager, SDDC Manager (which is selected), Review, and Validate & Deploy. The main panel is titled 'SDDC Manager' and contains a note: 'Enter the configuration details for the SDDC Manager appliance. All fields marked with a * are required.' A callout box highlights a note: 'The VMware Cloud Foundation installer appliance is not deployed on one of the hosts in the management domain. During the deployment process, a new SDDC Manager appliance will be deployed.' Below the note are fields for 'Appliance FQDN *' (sa-sddc-01.vcf.sddc.local), 'Root Password *' (VMware123!VMware123!), 'Confirm Root Password *', 'VCF Password *', 'Confirm VCF Password *', 'Administrator Password *', and 'Confirm Administrator Password *'. To the right, a large orange box highlights the 'VCF Instance' section, which shows the 'Management Domain' containing 'vCenter (Existing)', 'NSX Manager', 'vSphere Cluster (Existing)', and 'SDDC Manager' (which is currently being configured). Other sections like 'VCF Fleet' and 'VCF Automation' are shown with status indicators.

Phase 2: Converge vCenter / VCF Operations - Configuring SDDC Manager (2)

If the VCF Installer is deployed on the vCenter and is being upgraded, provide the details for the VCF Installer to become the SDDC Manager.

The screenshot shows the 'Deploy VCF Fleet' wizard with the 'SDDC Manager' step selected. The left sidebar lists steps 1 through 8, with '7 SDDC Manager' highlighted. The main panel is titled 'SDDC Manager' and contains fields for 'Appliance FQDN *' (set to 'sfo-vi01.sfo.rainpole.io') and 'Administrator Password *'. A note at the top states: 'Enter the configuration details for the SDDC Manager appliance. All fields marked with a * are required.' A tooltip below the note says: 'The VMware Cloud Foundation installer appliance is deployed on one of the hosts in the management domain. During the deployment process, the installer appliance will be converted into the SDDC Manager appliance. Provide the installer appliance password.' To the right, a 'VCF Fleet' summary box shows 'VCF Operations' and 'VCF Automation' as completed, while 'VCF Instance' shows 'Management Domain' with 'vCenter' as existing, and 'SDDC Manager' as the current selection.

Phase 2: Converge vCenter / VCF Operations - Reviewing the Deployment Configuration

You can review the VMware Cloud Foundation configuration and make any required changes before proceeding with the installation.

The screenshot shows the 'Review' step of the VMware Cloud Foundation Installer. On the left, a sidebar lists steps from 1 to 9: Existing Components, General Information, VCF Operations, VCF Automation, vCenter, NSX Manager, SDDC Manager, **Review**, Validate & Deploy. Step 8 is highlighted. The main area is titled 'Review' and contains configuration details for the VCF Fleet:

VCF Operations	
Operations Appliance Size	Small
Operation primary FQDN	sa-vcops-01.vcf.sddc.local
Administrator Password	*****
Fleet Management Appliance	
Appliance FQDN	sa-vcopsfrm-01.vcf.sddc.local
Use same password as VCF Operations	Yes
Operations Collector Appliance	
Appliance FQDN	sa-vcopsoc-01.vcf.sddc.local
Use same password as VCF Operations	Yes
VCF Automation	
I want to connect a VCF Automation instance later	Yes
Existing Infrastructure	
vCenter	
FQDN	sa-vcsa-01.vcf.sddc.local
Thumbprint	C9:43:8B:DE:9D:D7:3F:88:53:78:52:11:D7:FF:30:75:D6:AC:9A:13:1D:6B:48:1D:4E:07:B4:26:C1:56:3D:7D
Root Password	*****
SSO user name	administrator@vsphere.local

Phase 2: Converge vCenter / VCF Operations - Validating and Deploying VCF 9.0

Before proceeding with the deployment, the VMware Cloud Foundation Installer validates the parameters provided during the deployment wizard. If validation errors occur, you must navigate to the relevant pages in the deployment wizard to make updates and rerun the validations. You can acknowledge warnings that appear after the validation process.

The screenshot shows the VMware Cloud Foundation Installer interface. On the left, a sidebar lists the deployment steps: Deploy VCF Fleet, Validate & Deploy, and other steps 1 through 8. Step 9, Validate & Deploy, is currently selected and highlighted in blue. The main pane is titled "Validate & Deploy" and contains a message: "JSON specification file, make the necessary changes, and then upload the modified JSON file from the VCF installer homepage." Below this is a note: "In case there are changes in your infrastructure, you can re-run validations before proceed further." There are two buttons: "ACKNOWLEDGE ALL WARNINGS" and "RE-RUN VALIDATIONS". A "DOWNLOAD JSON SPEC" link is also present. The validation results table has columns for "Status" and "Validation Details". It shows several entries under "Deployment Specification", all marked as "Succeeded". Under "Versions and Bundles", there are three warning entries related to compatibility between VRSLCM and VROPS components. Under "Existing SDDC Manager Configuration", "Password Policies", and "Network Configuration", all entries are marked as "Succeeded". Under "Existing Components", there are two warning entries: one about an upgrade policy mismatch and another about a NextCluster configuration. Both have "Remediation" sections and "Acknowledged" status indicators.

VCF Installer: Monitoring the Deployment Process

You can follow the VMware Cloud Foundation installation process from the VCF Installer. For more details, you can check the entries in the **Tasks** section.

The screenshot shows the VMware Cloud Foundation Installer interface. At the top, there are two buttons: "DOWNLOAD JSON SPEC" and "REVIEW PASSWORDS". On the right, a user profile is shown with the text "Hello, admin@local". Below these are two sections: "Next Steps" and "VCF Operations Login". The "Next Steps" section contains two items: "1. Log in to the VCF Operations UI." and "2. Navigate to License Management, and apply your VCF license keys within the 60-day evaluation period.". The "VCF Operations Login" section shows the URL "sa-m01-vcons01.vcf.sddc.local", the Username "admin", and the Password "*****". A blue button labeled "OPEN VCF OPERATIONS UI" is present. On the left, a vertical list of tasks is displayed, each with a green checkmark and a progress bar:

- Deploy vCenter (100% completed)
- Deploy SDDC Manager
- Configure the vSphere cluster
- Deploy and configure NSX
- Deploy and configure the fleet management appliance
- Deploy and configure the operations appliance
- Deploy and configure the automation appliance

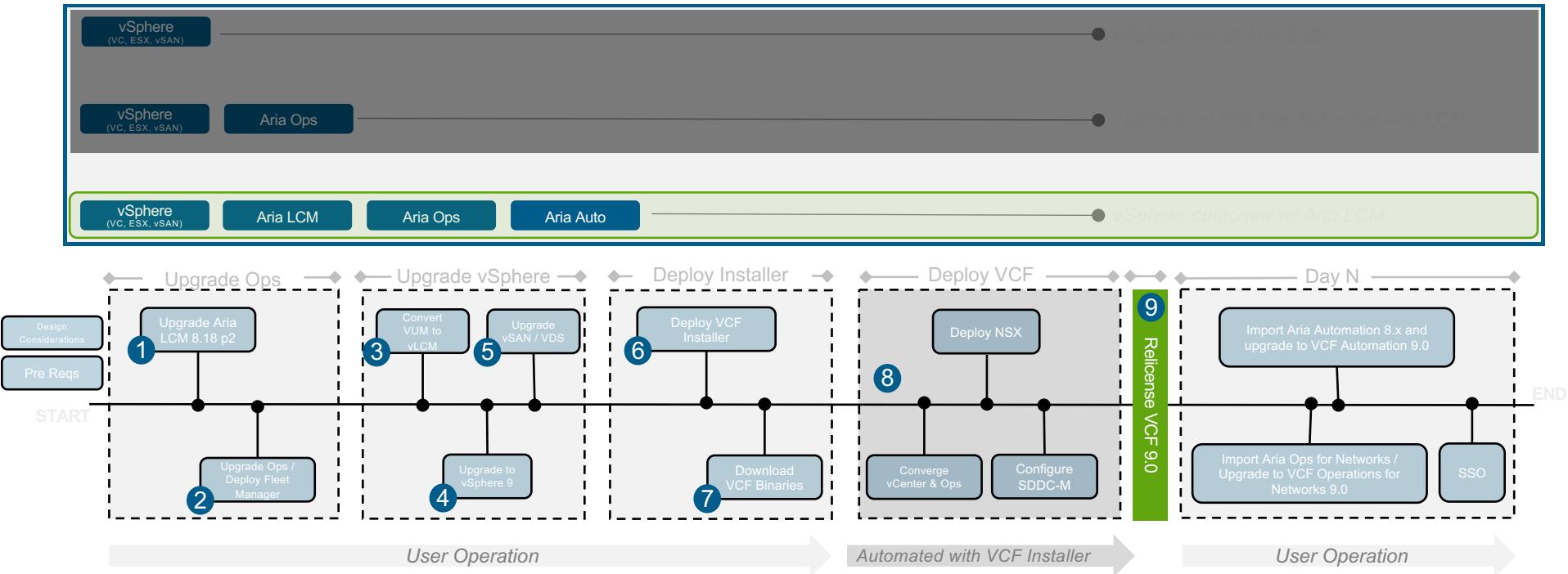
A red box highlights the first seven items in this list. At the bottom left, a red box surrounds the "Tasks" tab, which is currently selected. The bottom right corner features a watermark for "Activate Windows Go to Settings to activate Windows".

Upgrade Scenario: vSphere with Multiple Aria Components to VCF 9.0



Paths to VCF 9

vSphere with Aria Lifecycle Manager + Operations to VCF 9



Upgrade Considerations

Before upgrading, you must understand how VMware Cloud Foundation 9.0 differs from earlier versions.

VCF 9.0 Management Component	Deployment Option	Before 9.0 VCF Management Component	Deployment Option
VCF Operations	Required	Aria Operations	Optional
VCF Operations fleet management	Required	Aria Suite Lifecycle	Optional
VCF Operations collector	Required	Not deployed	Not Deployed
VCF Automation	Optional	Aria Automation	Optional
VCF Operations for networks	Optional	VMware Aria Operations for Networks	Optional
VCF Operations for logs	Optional	VMware Aria Operations for Logs	Optional

Completing the Prerequisites for the Upgrade (1)

You must complete all the prerequisites to upgrade from vSphere with vSAN to VCF 9.0.

Attribute	Description
Licensing (Entitlement)	Ensure that the customer has a valid subscription for VCF 9.0.
vSphere version	The vSphere version must be 8.0 update 1 or later to perform the upgrade to VCF 9.0.
Scale	VCF 9.0 might require additional resources for storage, CPU, and memory compared to the existing environment.

Completing the Prerequisites for the Upgrade (2)

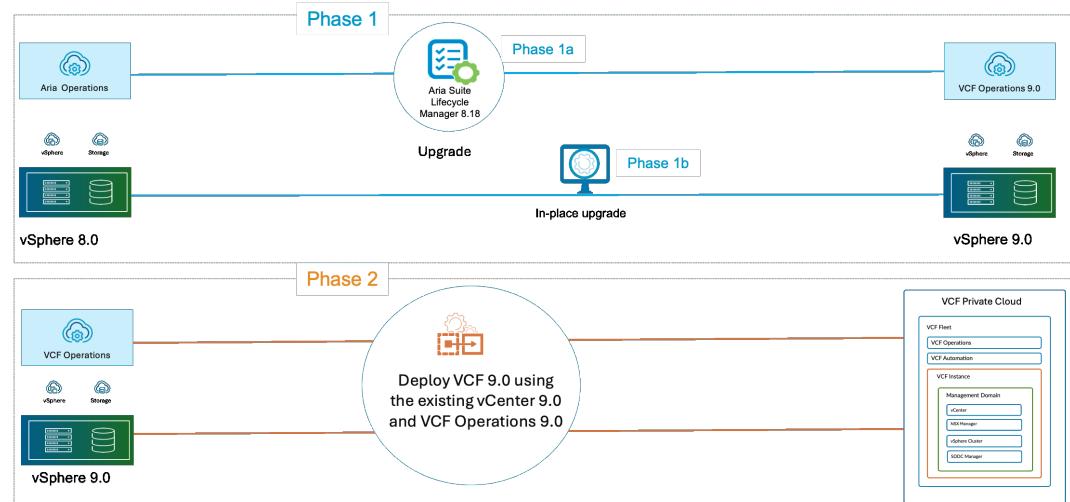
You must complete all the prerequisites to upgrade from vSphere with vSAN to VCF 9.0.

Attribute	Description
Networking	<p>Ensure that the vSphere Distributed Switch (VDS) is on version 8.0 or later. A temporary IP address is required to upgrade the vCenter to a Management vCenter.</p> <p>IP addresses and DNS records are required for all additional VCF components being deployed:</p> <ul style="list-style-type: none">-SDDC Manager-NSX-VCF Operations-VCF Automation
vSphere Cluster	All clusters that require an upgrade as part of the new management vCenter must be on vSphere Lifecycle Management (vLCM).
Enhanced Link Mode (ELM)	The ELM configuration must be removed from the vCenter instance before upgrading to VCF 9.0.

Upgrade Phases from vSphere 8.x with Aria Operations to VCF 9.0

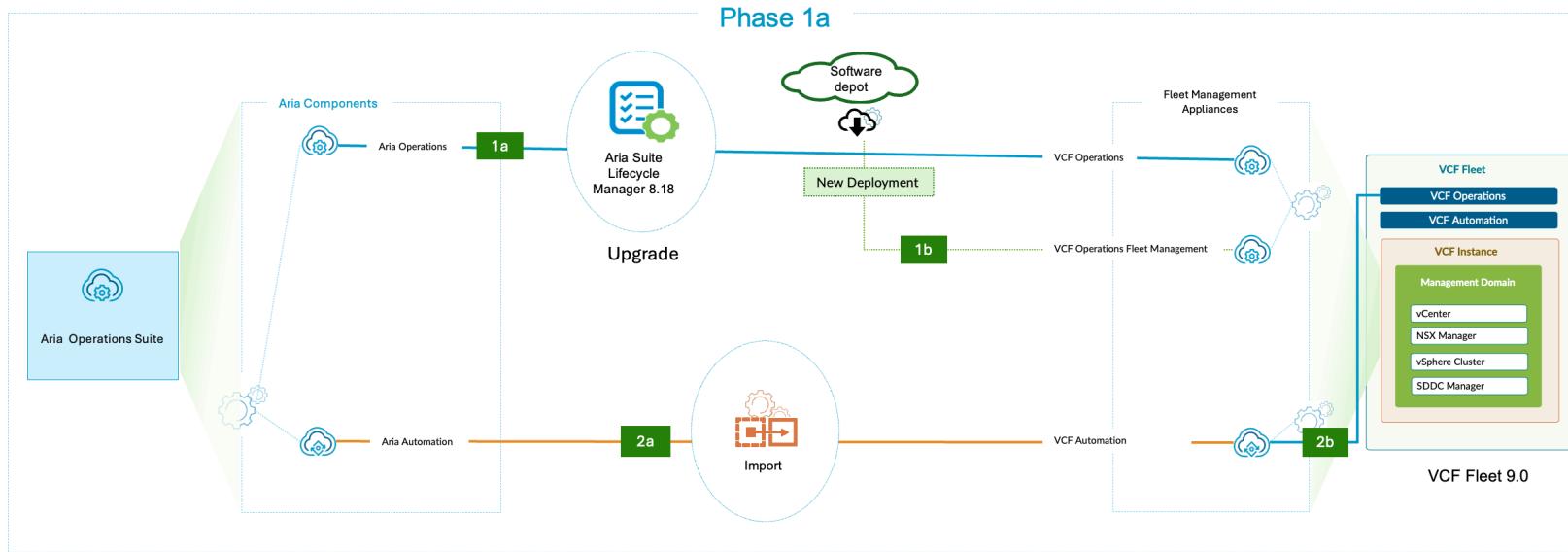
Upgrade to VCF 9.0 in the following phases:

1. Upgrade Aria Suite Lifecycle and Aria Operations to VCF Operations 9.0 and existing vSphere to 9.0.
2. Deploy VCF 9.0 using the existing vCenter 9.0 and VCF Operations 9.0.
3. Import Aria Automation 8.x and upgrade to VCF Automation 9.0



Phase 1a: Upgrade Aria Components - Sequence

In phase 1, you upgrade Aria components to the respective VCF Fleet 9.0 management component in the specific sequence.



iSIM #2

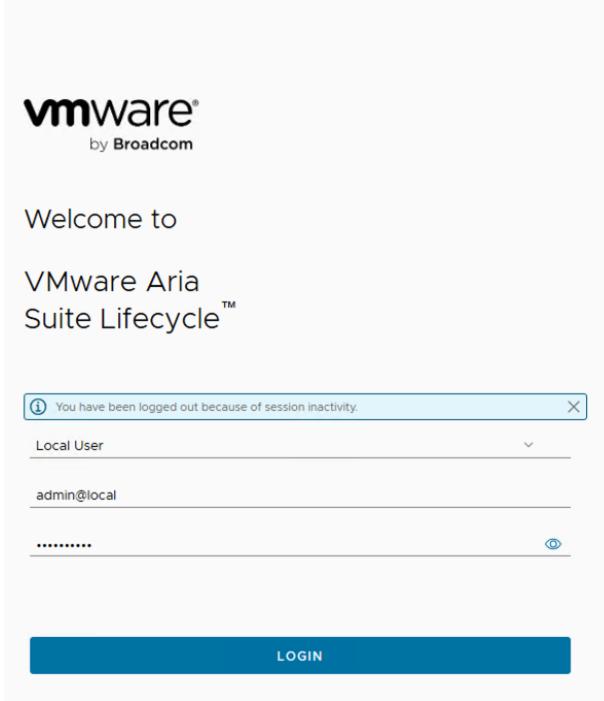
"vSphere 8.x to VCF 9.0 Upgrade iSIM"

iSIM #2

"vSphere 8.x to VCF 9.0 Upgrade iSIM" (Screenshots and Walkthrough)

Phase 1a: Upgrade Aria Suite LCM - Sequence

In phase 1a, you upgrade Aria LCM to 8.18 p2 – Start by logging in to the management appliance.



Phase 1a: Upgrade Aria Suite LCM - Sequence

Map the Binaries

1

Home > Settings > Binary Mapping

Binary Mapping

Product Binaries Patch Binaries Patched Product Binaries

Patch binary can be added to VMware Aria Suite Lifecycle by uploading manually. You can download patches from [here](#).

Make sure you have enough free disk storage available to download patch. To extend the storage, [Click here](#) and update inside Extend storage section.

ADD PATCH BINARY

Name	Version	Description
------	---------	-------------

2 Add Patch Product Binary

Required fields are marked with *

Source Location * /data/temp/

DISCOVER

Name
vrIcm-8.18.0-PATCH2.patch

1 - 1 of 1 Binaries | < | 1 | / 1 | > |

CANCEL ADD

Phase 1a: Upgrade Aria Suite LCM - Sequence

Submit the Request

Home > Requests > cfa78390-d43f-403a-b526-b19fff9e8d42

Request Details

Successful	388ms
Stage 1	388ms

offline patch setting
(388ms)

Stage 1

The screenshot shows a 'Request Details' page from a web interface. At the top, there's a breadcrumb navigation: 'Home' (highlighted in a red box), '> Requests', '> cfa78390-d43f-403a-b526-b19fff9e8d42'. Below it is a section titled 'Request Details' with a 'Request ID' field containing 'cfa78390-d43f-403a-b526-b19fff9e8d42'. The main content area displays a table with two rows. The first row has two columns: 'Successful' (in green) and '388ms'. The second row has two columns: a green checkmark icon followed by 'Stage 1' and '388ms'. To the right of this table, the text 'offline patch setting (388ms)' is displayed above a sequence diagram consisting of three green circular nodes connected by a horizontal line. The word 'Stage 1' is written vertically next to the sequence diagram.

Phase 1a: Upgrade Aria Suite LCM - Sequence

In phase 1a, you upgrade Aria LCM to 8.18 p2

The screenshot shows the VMware Aria Suite Lifecycle Operations interface. The top navigation bar includes the VMware Aria Suite Lifecycle logo and the text "Lifecycle Operations". The left sidebar contains links for Dashboard, Create Environment, Datacenters, Environments, Requests, and Settings, with "Settings" being the active tab. The main content area is titled "Settings" and includes sections for "System Administration" and "Servers & Accounts". Under System Administration, there are three cards: "System Details" (document icon), "Logs" (log file icon), and "System Patches" (key icon). Under Servers & Accounts, there are three cards: "NTP Servers" (clock icon), "SNMP" (network icon), and "DNS" (globe icon).

Phase 1a: Upgrade Aria Suite LCM - Sequence

Create the Snapshot -1



Phase 1a: Upgrade Aria Suite LCM - Sequence

Create the Snapshot - 2

Create Snapshot X

⚠ Ensure that the appliances are in a consistent state before triggering snapshots

Provide vCenter Server details where VMware Aria Suite Lifecycle is installed. You can [click here](#) to add new password(credential).

Required fields are marked with *

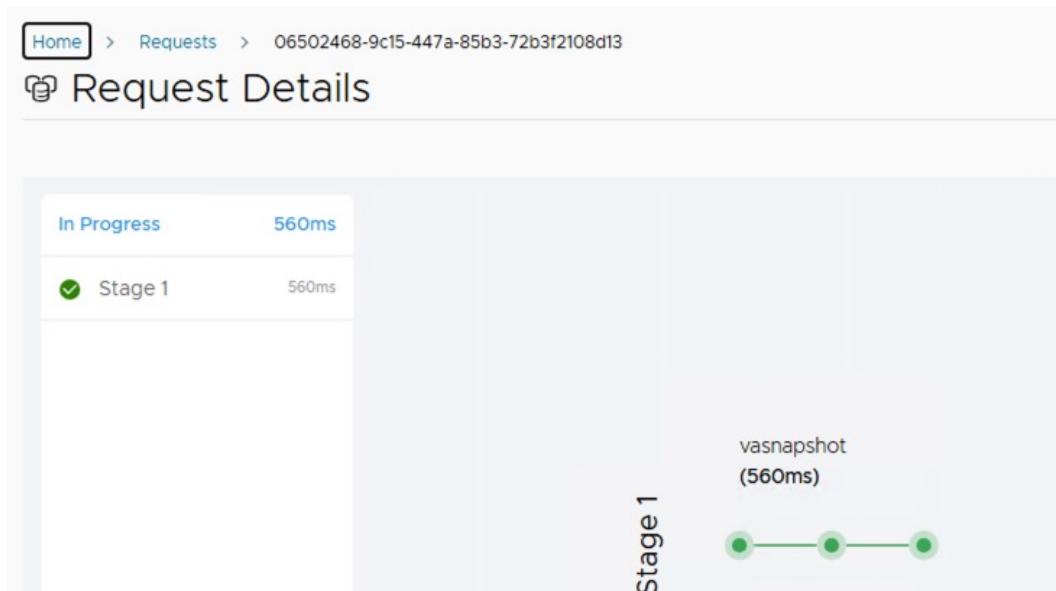
vCenter Hostname *

vCenter Credential * ⓘ vcenter ✖

CANCEL SUBMIT

Phase 1a: Upgrade Aria Suite LCM - Sequence

Create the Snapshot - 3



Phase 1a: Upgrade Aria Suite LCM - Sequence

New Patch



Phase 1a: Upgrade Aria Suite LCM - Sequence

Install Patch

The image shows a two-step process for upgrading Aria Suite Lifecycle Manager:

- Step 1: Select Patch**

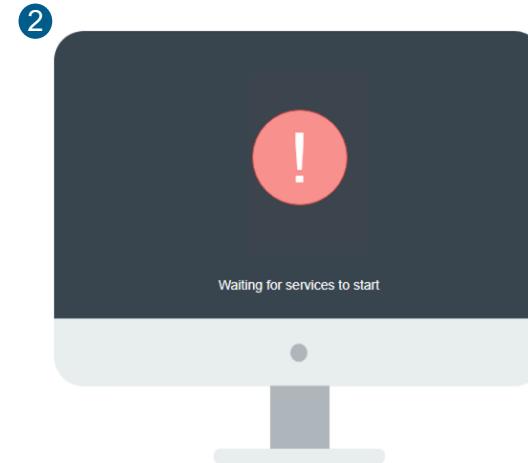
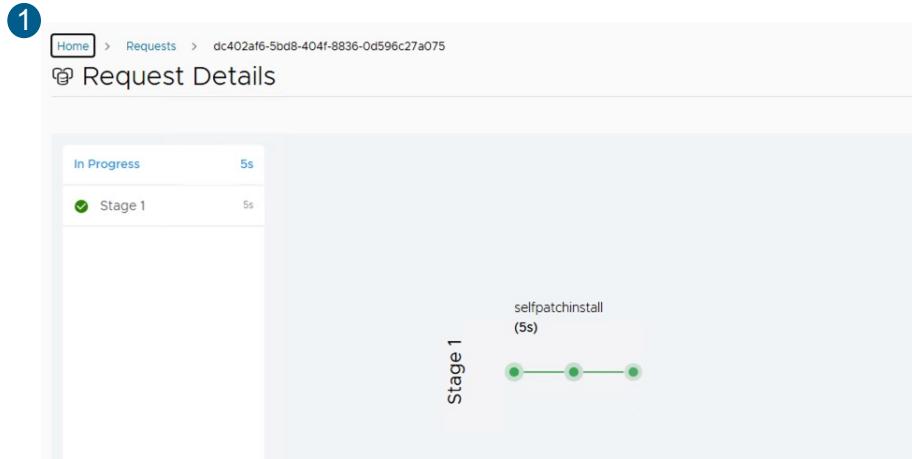
This step allows you to choose a patch from a list. A message at the top indicates that selecting this patch may restart services, which could cause tasks in progress to fail. Below this, a note says you can manage product patches from the [Patch Binaries page](#). A table lists available patches for version 8.18.0, with one patch selected: **PATCH2**. The patch details are: Release Date: Monday, December 2, 2024 at 6:57:57 AM GMT+00:00, Category: bugfix, Summary: Cumulative patch bundle for VMware Aria Suite Lifecycle, and Status: Available.
- Step 2: Review and Install**

This step provides a review of the selected patch. It includes a message advising to take product snapshots in case of irrecoverable errors. Below this, it displays the patch details again, including its name, version, description, release date, category, severity, and a link to more information: <https://docs.vmware.com/en/VMware-vRealize-Suite-Lifecycle-Manager/8.18.0/m/VMware-vRealize-Suite-Lifecycle-Manager-818-Patch-2.html>.

Both steps include standard navigation buttons: CANCEL, BACK, and INSTALL (in Step 2).

Phase 1a: Upgrade Aria Suite LCM - Sequence

Install Patch



Phase 1b: Upgrade Aria Operations - Sequence

In phase 1b, you upgrade Aria Operations 8.18 to VCF Operations 9.0 – Obtaining the upgrade PAK and uploading it to the Aria Operations appliance.

Name	Size	Name	Size	Changed	Right
..		..		1/31/2025 20:27:25	rwxr--r--
Operations-Upgrade-9.0.0.0.pak	5,122,02...	Operations-Upgrade-9.0.0.0.pak	5,122,02...	1/31/2025 16:58:37	rw-r--r--
VCF-OPS-Lifecycle-Manager-Appliance-9.0.0.0.ova	1,852,20...	VCF-OPS-Lifecycle-Manager-Appliance-9.0....	1,852,20...	1/31/2025 16:59:17	rw-r--r--

Phase 1b: Upgrade Aria Operations - Sequence

Binary Mapping

The screenshot shows the 'Binary Mapping' section of the VMware Aria Operations interface. At the top, there is a breadcrumb navigation: Home > Settings > Binary Mapping. Below the breadcrumb, the title 'Binary Mapping' is displayed with a folder icon. There are three tabs at the top: 'Product Binaries' (which is underlined, indicating it is selected), 'Patch Binaries', and 'Patched Product Binaries'. A callout box with an information icon provides instructions: 'Download VMware Aria product binaries from the [Broadcom Support Portal](#). After do...'. Below this, a sub-instruction reads: 'Add and map product binaries in VMware Aria Suite Lifecycle to us...'. Two buttons are present: 'ADD BINARIES' and 'DELETE UNSUPPORTED BINARIES'. A table header is shown with columns: 'Product Name', 'Product Version', and 'Product Binary Type'. The table body is currently empty.

Phase 1b: Upgrade Aria Operations - Sequence

Binary Mapping

Add Product Binary X

Required fields are marked with *

Location Type * Local NFS

Required fields are marked with *

Base Location *

DISCOVER

Click [here](#) to view supported product versions for install.

<input checked="" type="checkbox"/>	Name	Type
<input checked="" type="checkbox"/>	Operations-Upgrade-9.0.0.0.pak	upgrade
<input checked="" type="checkbox"/>	VCF-OPS-Lifecycle-Manager-Appliance-9.0.0.0.ova	install

1 - 2 of 2 Binaries 1 / 1

Selected product binaries are automatically mapped to product versions.

CANCEL **ADD**

Phase 1b: Upgrade Aria Operations - Sequence

Submit Request and wait for completion

Home > Requests > 3db7fb0f-8247-44be-ac77-f5877a3767ae

Request Details

Successful	575ms
<input checked="" type="checkbox"/> Stage 1	575ms

sourcemapping
(575ms)

Stage 1

```
graph LR; N1(( )) --- N2(( )); N2 --- N3(( ));
```

Phase 1b: Upgrade Aria Operations - Sequence

View the Environment

The screenshot shows the VMware Aria Suite Lifecycle interface. The top navigation bar includes the VMware Aria Suite Lifecycle logo and the 'Lifecycle Operations' tab. Below the navigation is a breadcrumb trail: Home > Environments. The main content area is titled 'Environments' and displays a summary of completed, in-progress, and failed environments. A note at the top right states: "'VMware Aria' is the new brand name for vRealize Products." The left sidebar contains links for Dashboard, Create Environment, Datacenters, Environments (which is selected), Requests, and Settings.

Category	Status	Count
Completed	IN PROGRESS (0)	4
In Progress	FAILED (0)	0

"VMware Aria" is the new brand name for vRealize Products.

Aria Operations

- Datacenter
 - sfo-dc
- Health
 - Information not available
- Products
 - VMware Aria Operations

[VIEW DETAILS](#)

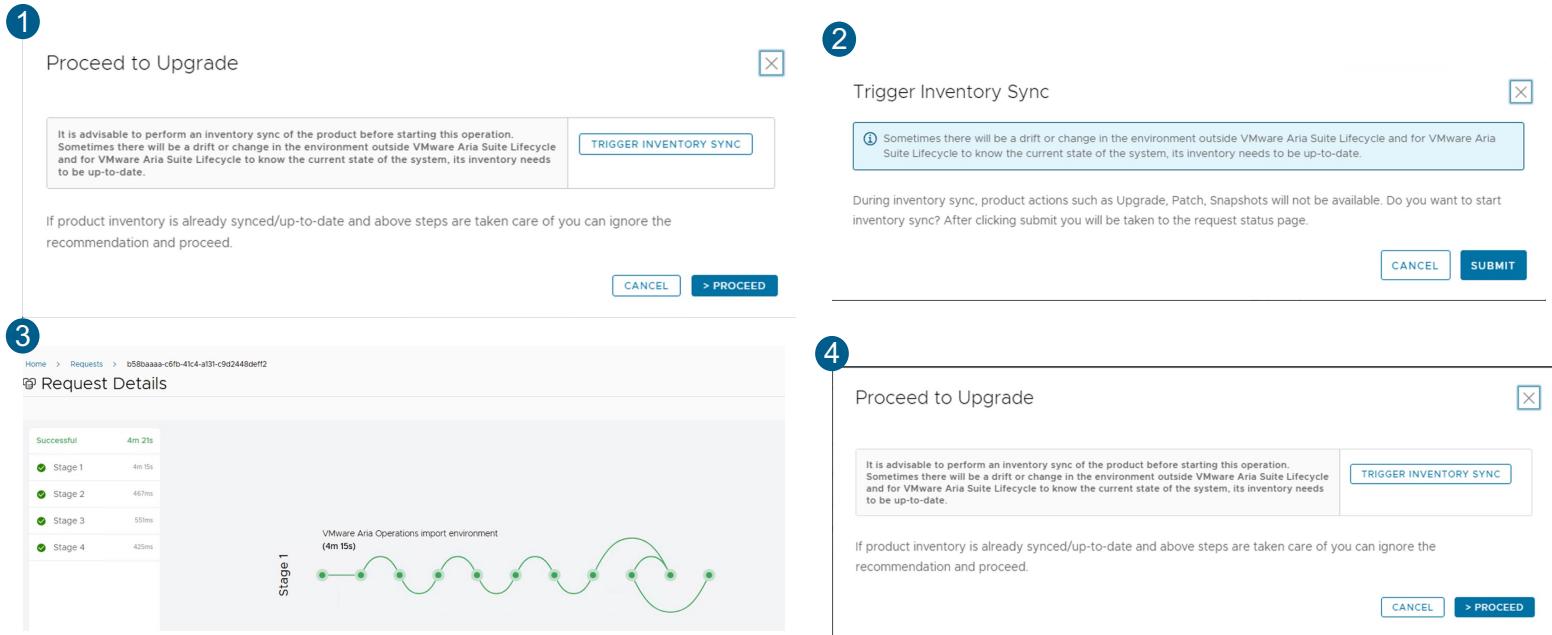
Phase 1b: Upgrade Aria Operations - Sequence

Upgrade

The screenshot shows the VMware Aria Operations interface. At the top, there is a breadcrumb navigation: Home > Environments > Aria Operations. Below the breadcrumb, the title "Aria Operations" is displayed next to a cloud icon. Underneath the title, there is a section titled "Operations" with a circular icon containing a gear and plus sign. A blue horizontal bar contains an information icon and the text: "'VMware Aria' is the new brand name for vRealize Products. Refer [here](#) for more information." At the bottom of the interface, there is a header bar with the text "VMware Aria Operations 8.18.0" followed by three buttons: "+ ADD COMPONENTS", "UPGRADE", and "...".

Phase 1b: Upgrade Aria Operations - Sequence

Upgrade workflow



Phase 1b: Upgrade Aria Operations - Sequence

Upgrade workflow

1

The screenshot shows the 'Select Version' step of the upgrade process. The navigation bar at the top includes 'Home', 'Environment', 'Aria Operations', and 'Upgrade VMware Aria Operations'. The main area has a title 'Upgrade VMware Aria Operations' with a help icon. Below it is a 'Select Version' section with a progress bar showing 'APUAT' as the current step. The 'Select Version' tab is active. A note says 'click here to view supported product versions for Upgrade.' and 'Required fields are marked with *'. A dropdown menu for 'Product Version' is set to '9.0.0'. A 'Repository URL' field contains 'http://dfo-lcm02.sfo.rainpole.io/repo/productBinariesRepo/vrops/9.0.0/upgrade/Operations-Upgrade-9.0.0.0.pak'. A 'VIEW COMPATIBILITY MATRIX' button is at the bottom.

2

The screenshot shows the 'Choose License' step of the upgrade process. The navigation bar is identical to the previous screen. The main area has a title 'Upgrade VMware Aria Operations' with a help icon. Below it is a 'Choose License' section with a progress bar showing 'APUAT' as the current step. The 'Choose License' tab is active. A 'Choose license' dropdown menu is selected to 'VCF'. An unselected option 'VVF' is shown with a note: 'Management Lifecycle won't be deployed for VVF license'. A 'Choose license *' label is also present.

3

The screenshot shows the 'APUAT' step of the upgrade process. The navigation bar is identical. The main area has a title 'Upgrade VMware Aria Operations' with a help icon. Below it is an 'APUAT' section with a progress bar showing 'APUAT' as the current step. The 'APUAT' tab is active. A green message box says 'Assessment completed. Check report for more information.' Below it are buttons for 'RE-RUN ASSESSMENT', 'VIEW REPORT', and 'DOWNLOAD REPORT'. At the bottom, a checkbox is checked with the text 'I have viewed the report and agree to proceed.'

4

The screenshot shows the 'Snapshot' step of the upgrade process. The navigation bar is identical. The main area has a title 'Upgrade VMware Aria Operations' with a help icon. Below it is a 'Snapshot' section with a progress bar showing 'Snapshot' as the current step. The 'Snapshot' tab is active. A note says 'We recommend you follow product best practices of taking Snapshot prior to initiating an Upgrade.' Below it are two checkboxes: 'Take product snapshot' (checked) and 'Retain product snapshot taken' (unchecked).

Phase 1b: Upgrade Aria Operations - Sequence

Upgrade workflow

Home > Environment > Aria Operations > Upgrade VMware Aria Operations

① Upgrade VMware Aria Operations

Progress: Select Version (Green checkmark) > Choose License (Green checkmark) > APUAT (Green checkmark) > Snapshot (Grey)

Infrastructure

Provide deployment details for the management node. Management node is a new appliance required to manage VCF components. Management lifecycle will replace vRSLCM for 9.0.

When VMware Aria Operations is upgraded to VCF Operations 9.0 under VCF entitlement, it introduces a new feature called Fleet Management.

Fleet Management offers lifecycle management capabilities for management and core components, along with features like Unified Certificate and Password Management, Tags, and Configuration Drift management.

Select vCenter Server *: sfo-m01-vc01.sfo.rainpole.io

Select Cluster *: sfo-m01-dc01#sfo-m01-cl01

Select Folder: SELECT FOLDER...

Select Resource Pool: SELECT RESOURCE POOL...

Select Network *: sfo-m01-cl01-vds01-pg-vm

Select Datastore *: sfo-m01-cl01-ds01 (7.76TB Free)

Select Disk Mode *: Thin

VM Name *: sfo-fm01

FQDN *: sfo-fm01.sfo.rainpole.io

IP Address *: 10.11.10.99

Admin Password *: VCF Operations Fleet Manager

Root Password *: VCF Operations Fleet Manager

Phase 1b: Upgrade Aria Operations - Sequence

Upgrade workflow

① Upgrade VMware Aria Operations

✓ Select Version ✓ Choose License ✓ APUAT ✓ Snapshot ✓ Infrastructure

Network

Provide network details for the management node. Management node is a new appliance required to manage VCF components. Management lifecycle will replace vRSLO.

When VMware Aria Operations is upgraded to VCF Operations 9.0 under VCF entitlement, it introduces a new feature called Fleet Management.

Fleet Management offers lifecycle management capabilities for management and core components, along with features like Unified Certificate and Password Management.

Domain Name *

Domain Search Path *

[ADD NEW SERVER](#) [EDIT SERVER SELECTION](#)

Priority	Server	IP Address
1	DNS-1	
2	DNS-2	

Time Sync Mode Use NTP Server Use Host Time

[ADD NEW SERVER](#) [EDIT SERVER SELECTION](#)

NTP Servers *

Priority	Server	FQDN/IP Address
1	NTP-1	ntp0.sfo.rainpole.io
2	NTP-2	ntp1.sfo.rainpole.io

IPv4 Details

Default IPv4 Gateway *

IPv4 Netmask *

Phase 1b: Upgrade Aria Operations - Sequence

Upgrade workflow

Precheck

All validations passed for this environment.

- Click on **RE-RUN PRECHECK** button to execute data validations.
- If errors or warnings appear, follow the instructions from the recommended actions. Run again to verify fixes.

[RE-RUN PRECHECK](#)[DOWNLOAD REPORT](#)

▼ VMware Aria Operations Validations

▼ Fleet Management Node Validations

▼ Fleet Management Node Infra Validations

Phase 1b: Upgrade Aria Operations - Sequence

Upgrade workflow

Upgrading VMware Aria Operations

Precheck

All validations passed for this environment.

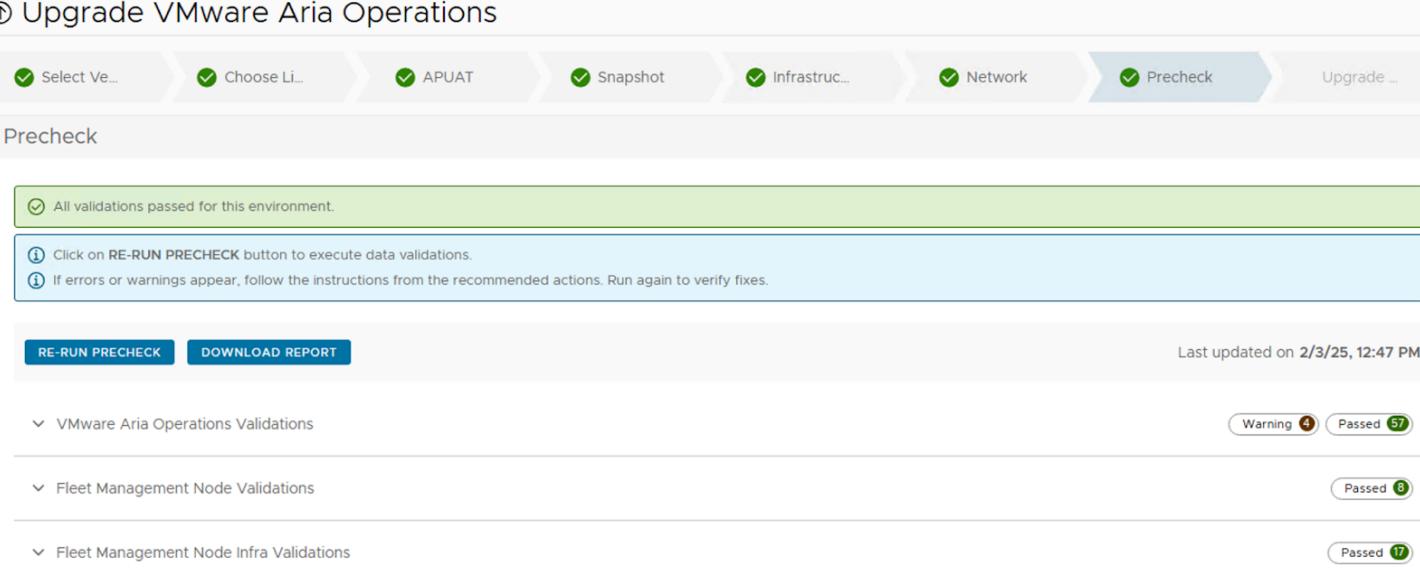
Click on RE-RUN PRECHECK button to execute data validations.
If errors or warnings appear, follow the instructions from the recommended actions. Run again to verify fixes.

RE-RUN PRECHECK DOWNLOAD REPORT Last updated on 2/3/25, 12:47 PM

VMware Aria Operations Validations Warning 4 Passed 57

Fleet Management Node Validations Passed 6

Fleet Management Node Infra Validations Passed 17



Phase 1b: Upgrade Aria Operations - Sequence

Submit Request

1

⊕ Upgrade VMware Aria Operations

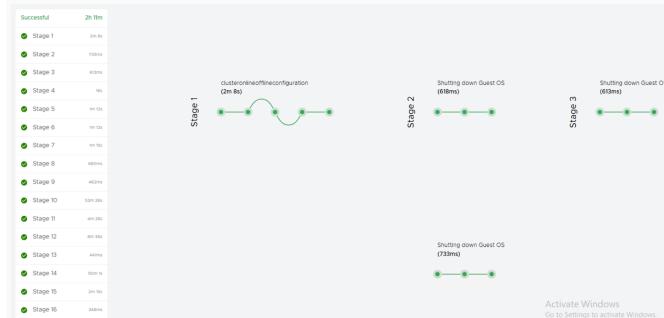
The screenshot shows the 'Upgrade Details' page for an upgrade request. The top navigation bar includes tabs for 'Select Version', 'Choose License', 'APUAT', 'Snapshot', 'Infrastructure', 'Network', 'Precheck', and 'Upgrade Summary'. The 'Upgrade Summary' tab is active. The main content area displays the following details:

- Version:** 9.0.0
- Repository Type:** VMware Aria Suite Lifecycle Repository
- Repository URL:** <http://vfo-kcm.sfo.rainpole.io/repo/productfinariesRepo/vrops/9.0.0/upgrade/Operations-upgrade-9.0.0.0.24566539.pak>
- Take Product Snapshot:** true
- Auto revert:** false
- Retain Product Snapshot:** false
- properties:** [object object]

2

Home > Requests > cc03e2f30d4ace9e4fc36a70d4fa2c

⊕ Request Details



Phase 1b: vSphere 8.x to vSphere 9.0 Upgrade - Overview

In phase 1b, you upgrade the existing vSphere 8.0 to 9.0 using the in-place upgrade method.

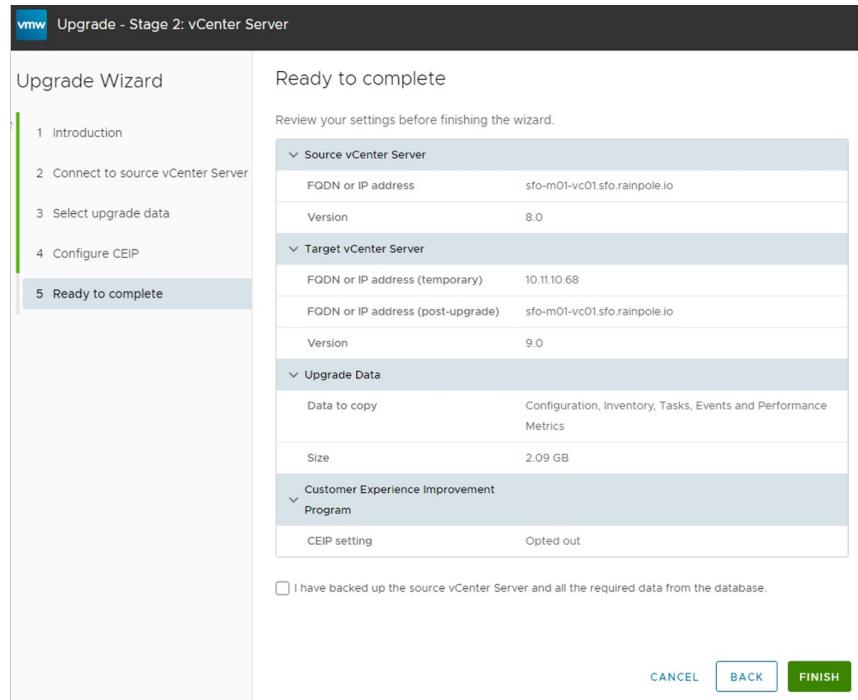


Phase 1b: Upgrade vCenter 8.0 to vCenter 9.0

You upgrade the existing vCenter to serve as the future management domain in VCF 9.0.

Before upgrade:

- Check vCenter infrastructure compatibility with vCenter 9.0.
- Back up your vCenter Server and all essential data in your vSphere environment.
- Take snapshots of the vCenter VM.
- Remove vCenter HA



Phase 1b: Upgrade ESX - Using the vSphere Lifecycle Manager image

Starting with VMware Cloud Foundation 9.0, only vSphere Lifecycle Manager image clusters are supported.

The screenshot shows the vSphere Lifecycle Manager interface for the cluster 'sfo-m01-cl01'. The 'Image' tab is selected. A summary table provides details about the current image: 'Image Name' is 'esxi 8.0u2', 'Default Image' is selected, 'ESXi Version' is '8.0 U2 - 22380479', 'Vendor Addon' is 'None', 'Firmware and Drivers Addon' is 'None', and 'Components' show 'No additional components' with a 'SHOW DETAILS' link. A note at the bottom states '⚠ Device compatibility must be verified manually. See details'. On the right, there are 'EDIT', 'ASSIGN IMAGE', and '...' buttons. Below this, the 'Image Compliance' section shows a table of hosts. The first host, 'sfo01-m01-r01-esx01.sfo.rainpole.io', has a status of 'Host status is unknown'. A yellow warning box indicates that the image for this host has changed or was added after the last check, with a 'Rerun compliance check for "sfo-m01-cl01"' button. The table includes columns for 'RUN PRE-CHECK (ALL)', 'STAGE (ALL)', and 'REMEDIATE (ALL)'. The host list shows four hosts: 'sfo01-m01-r01-esx01.sfo.rainpole.io' (status unknown), 'sfo01-m01-r01-esx02.sfo.rainpole.io' (status unknown), 'sfo01-m01-r01-esx03.sfo.rainpole.io' (status unknown), and 'sfo01-m01-r01-esx04.sfo.rainpole.io' (status unknown). The bottom of the table shows page navigation with '14 / 4' and arrows.

Phase 1b: Upgrade ESX - Import the ESX upgrade ZIP file

You import the ESX upgrade ZIP file for ESX 9.0 to create an image.

The screenshot shows the vSphere Client interface with the 'Lifecycle Manager' tab selected. In the 'Image Depot' section, there are tabs for 'Updates', 'Imported ISOs', and 'Baselines'. Below these tabs are three buttons: 'ESXi VERSIONS', 'VENDOR ADDONS', and 'COMPONENTS'. The 'ESXi VERSIONS' button is currently active. A dropdown menu under the 'ACTIONS' button contains several options: 'Sync Updates', 'Import Updates' (which is highlighted with a red box and has a red arrow pointing to the corresponding option in the 'Import Updates' dialog), 'Hardware Compatibility List', and 'Sync HCL'. To the right of this menu is a modal dialog titled 'Import Updates'. The dialog contains the text: 'You can import by selecting a .zip file or a URL. Contents will be imported to Image Depot and Updates.' It has a 'Update' section with a 'Filename or URL' input field, a 'BROWSE' button, and two buttons at the bottom: 'CANCEL' and 'IMPORT'.

Phase 1b: Upgrade ESX - Assigning image

Select the cluster to upgrade, ASSIGN IMAGE

sfo-m01-cl01 | ACTIONS

Summary Monitor Configure Permissions Hosts VMs Datastores Networks Updates

Hosts ▾

Image

Hosts in this cluster are managed collectively. This image below will be applied to all hosts in this cluster.

Image Name esxi 9.0

Default Image

ESXi Version 9.0.0.0.24518876

Vendor Addon ⓘ None

Firmware and Drivers Addon ⓘ None

Components ⓘ No additional components [SHOW DETAILS](#) ▾

⚠ Device compatibility must be verified manually. [See details](#)

Image Compliance

Last checked on 01/30/2025, 11:44:45 PM (0 days ago)

⚠ 4 hosts not compliant

[RUN PRE-CHECK \(ALL\)](#) [STAGE \(ALL\)](#) [REMEDIATE \(ALL\)](#)

Hosts

CHECK COMPLIANCE ⋮

Phase 1b: Upgrade ESX - Remediating

You review the remediation impact and initiate the remediation to complete the upgrade of ESX.

Review Remediation Impact

Impact summary

Applicable remediation settings

Foundation Agreement

Impact to specific hosts

- sfo01-m01-r01-esx01.sfo.rainpole.io
- sfo01-m01-r01-esx02.sfo.rainpole.io
- sfo01-m01-r01-esx03.sfo.rainpole.io
- sfo01-m01-r01-esx04.sfo.rainpole.io

Impact summary

- 4 host(s) are non-compliant with the image.
- 4 host(s) will be rebooted.

Notes

VM states honor remediation settings

VMs may be powered off, suspended or migrated to other hosts based on the applicable remediation settings.

Pre-check will be run again as a part of the remediation

Pre-check will be run again as a part of the remediation process. This is to ensure that no new issues have arisen on the cluster or hosts since the last pre-check (if any) that prevent remediation.

Hosts are remediated one at a time

Hosts will be remediated one at a time, so hosts will not reboot/go into maintenance mode simultaneously.

Order of host remediation is determined at runtime

Hosts will be remediated in an order determined at runtime. Hence that order may not correspond to the order in which they appear here.

Quick Boot

Quick Boot optimizes the reboot path to avoid the hardware full power cycle, saving considerable time from the upgrade process.

I accept the [Foundation Agreement](#)

[EXPORT IMPACT DETAILS](#)

[CLOSE](#) [START REMEDIATION](#)

Phase 1b: Upgrade vSAN On-Disk Format Versions - Prerequisites

Before you start, make sure.

- ESX and vCenter Upgrades are completed
- The disks are healthy. Navigate to the Disk Management to verify the status.
- ESX hosts are not in maintenance mode.
- In the vSAN cluster, there are currently no component rebuilding tasks in progress.
- The upgrade may lead to temporary resynchronization traffic and may require additional space by moving data or rebuilding object components to a new data structure.

Phase 1b: Upgrade vSAN On-Disk Format Versions - Upgrading

Upgrade the vSAN on-disk format version to take advantage of features that are only available in later versions.

vSphere Client Search in all environments Administrator@VSPHERE.LOCAL

sfo-m01-cl01 ACTIONS

Summary Monitor Configure Permissions Hosts VMs Datastores Networks Updates

SHUTDOWN CLUSTER TURN OFF VSAE

Host Options Host Profile Licensing Alarm Definitions

All 12 disks on version 19.0. Some services may not provide the complete feature set.

Ready to upgrade - pre-check completed successfully on --.

UPGRADE PRE-CHECK UPGRADE

Phase 1b: Upgrade vSphere Distributed Switch Versions

You must upgrade ESX and vCenter before upgrading the vSphere Distributed Switch to use features from later versions.

sfo-m01-cl01-vds01 - Upgrade Distributed Switch

1 Configure upgrade

2 Check compatibility

3 Ready to complete

Ready to complete

Review your selections before finishing the wizard

Configure upgrade

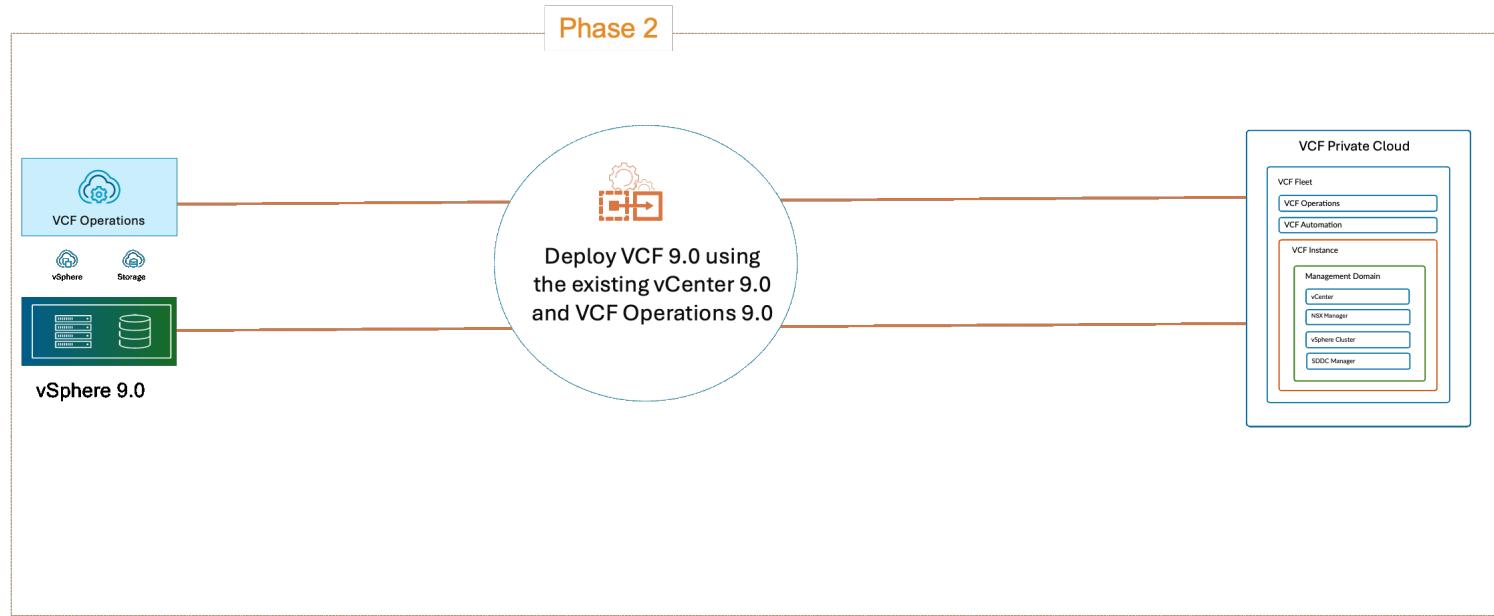
Once upgraded the distributed switch cannot be downgraded to a previous distributed switch version. You will not be able to add older VMware ESX Server members that are not compatible with the new distributed switch.

Distributed switch	sfo-m01-cl01-vds01
Current version	8.0.0
Upgrade version	9.0.0

CANCEL BACK FINISH

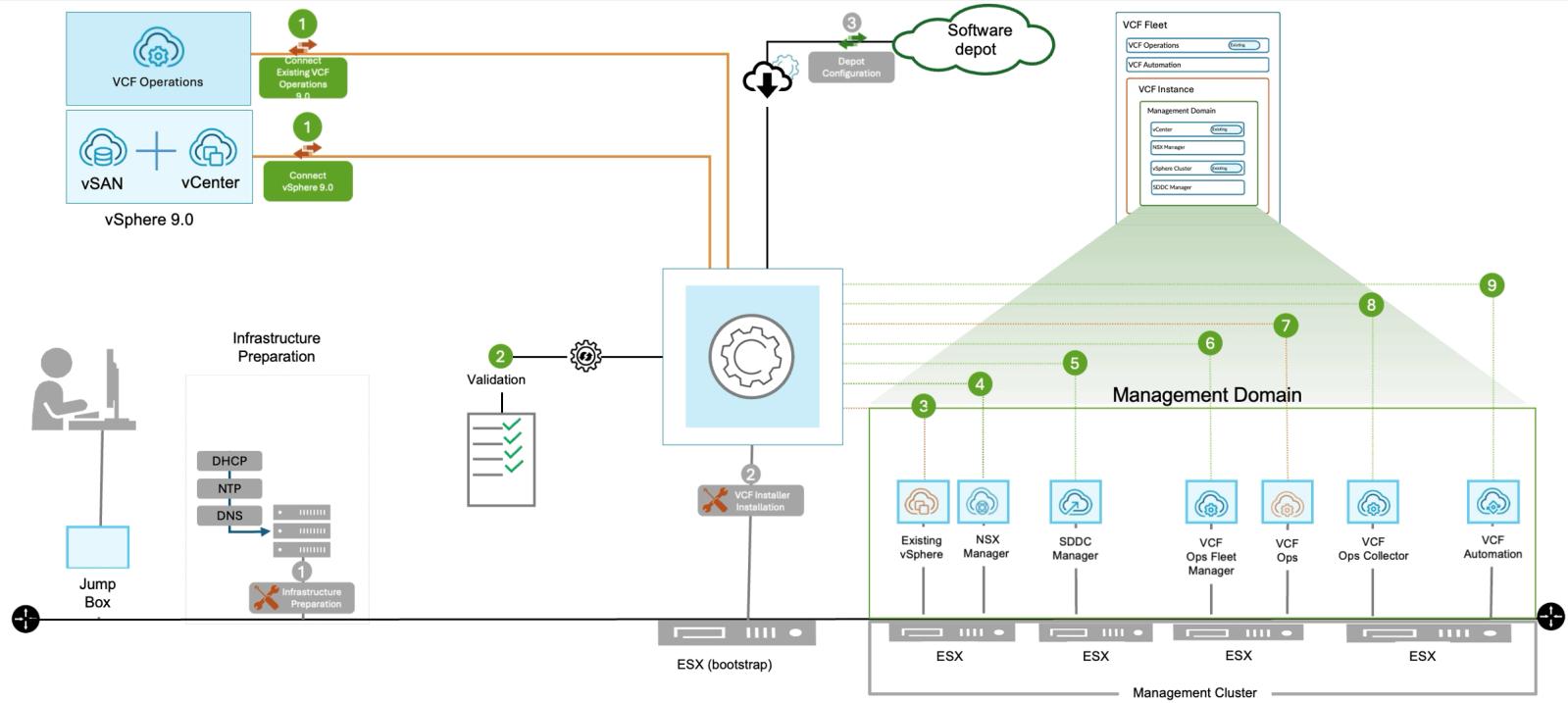
Phase 2: Deploy VCF 9.0 Using the Existing vCenter 9.0 and VCF Operations 9.0

In phase 2, you deploy VCF 9.0 using the existing vCenter 9.0 and VCF Operations 9.0.



Deploying VCF 9.0 Using the Existing vCenter 9.0 and VCF Operations 9.0: Sequence

After upgrading your existing vSphere to version 9.0 and Aria Operations to VCF Operations 9.0, you deploy VCF 9.0 with the existing vSphere 9.0 and VCF Operations using the VCF



Phase 2: Converge vCenter / VCF Operations - Deploying the VCF Installer

As part of the initial VMware Cloud Foundation installation or converge process, you deploy a VMware Cloud Foundation Installer virtual appliance, which automates the deployment of the entire VCF fleet.

1. Login to support.broadcom.com
2. Go to downloads ->VMware Cloud Foundation->9.0 and download the VCF Installer
3. Deploy the VCF Installer file (OVA) based on the design option chosen above.
4. To access the VMware Cloud Foundation Installer, use the FQDN specified during the deployment of the appliance, and the configured password for the admin@local user.

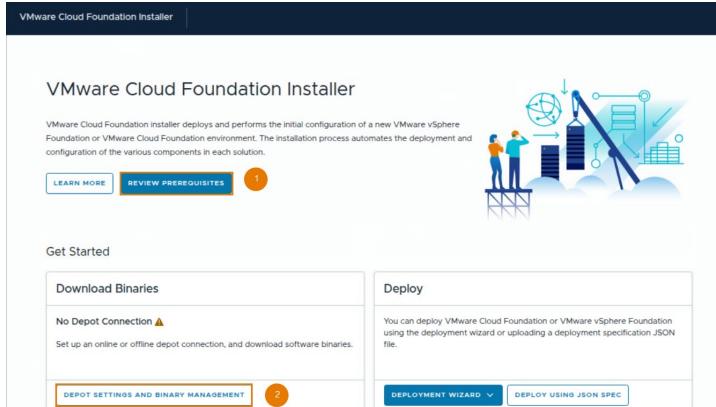
The screenshot shows the VMware Cloud Foundation® Installer login interface. It features a header with the 'vmware' logo and 'by Broadcom'. Below the header, the title 'VMware Cloud Foundation® Installer' is displayed. The main area contains fields for 'E-mail / Username' (with 'admin@local' entered) and 'Password' (with a masked password). There is also a 'Remember me' checkbox and a 'LOG IN' button. At the bottom of the page, there is a copyright notice: 'Copyright © 2005-2025 Broadcom. All Rights Reserved. The term "Broadcom" refers to Broadcom Inc. and/or its subsidiaries.' followed by links to 'Terms of Use' and 'Privacy'.



Phase 2: Converge vCenter / VCF Operations - Reviewing the Prerequisites

Before you proceed with the VMware Cloud Foundation installation, you must take the following steps:

1. Verify that all required prerequisites are satisfied by clicking **Review Prerequisites**.
2. Download the VMware Cloud Foundation binary files from an online or offline depot.
You configure the depot settings by clicking **Depot Settings and Binary Management**.



Phase 2: Converge vCenter / VCF Operations - Configuring the Depot Settings

To reduce the footprint of the VMware Cloud Foundation Installer, the VMware Cloud Foundation product binaries are not included as part of the appliance.

You must configure the depot and download the binaries either from an online or an offline depot.

[RETURN HOME](#)

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.

(i) 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

(i) Proxy settings are not configured

Username : user@broadcom.net

[EDIT DEPOT CONNECTION](#)

[DISCONNECT](#)

Offline Depot ✗

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

[CONFIGURE](#)

Phase 2: Converge vCenter / VCF Operations - Reviewing the VCF 9.0 binaries

You can review the version, size, and status of the binaries for all VMware Cloud Foundation components in the **Binary Management** page of the installer interface.

The screenshot shows the 'Binary Management' page of the VMware Cloud Foundation Installer. At the top, there's a navigation bar with 'VMware Cloud Foundation Installer' and a user session 'Hello, admin@local'. Below the header, the title 'Binary Management' is displayed. A dropdown menu 'Download Summary' is open, showing 'Version 9.0.0.0'. Underneath, there are two download links: 'VMware vSphere Foundation' (Downloaded) and 'VMware Cloud Foundation' (Downloaded). A note below says 'Filter the list by product and version and download the required component binaries. For additional guidance, refer to the [Product Interoperability Matrix](#)'. There are filters for 'Product' (set to 'VMware Cloud Foundation') and 'Version' (set to '9.0.0.0'). Below these are 'DOWNLOAD' and 'DELETE' buttons. The main table lists components with their details:

<input type="checkbox"/>	Component	Version	Size	Download Status
<input type="checkbox"/>	VMware Cloud Foundation Automation	9.0.0.0.24458060	23.71 GB	Success
<input type="checkbox"/>	VMware NSX	9.0.0.0.24466999	10.40 GB	Success
<input type="checkbox"/>	VMware Cloud Foundation Operations fleet management	9.0.0.0.24466766	1.80 GB	Success
<input type="checkbox"/>	VMware Cloud Foundation Operations	9.0.0.0.24466769	2.72 GB	Success
<input type="checkbox"/>	VMware vCenter	9.0.0.0.24469172	10.75 GB	Success
<input type="checkbox"/>	VMware Cloud Foundation Operations Collector	9.0.0.0.24466770	2.49 GB	Success
<input type="checkbox"/>	SDDC Manager	9.0.0.0.24466701	2.01 GB	Success

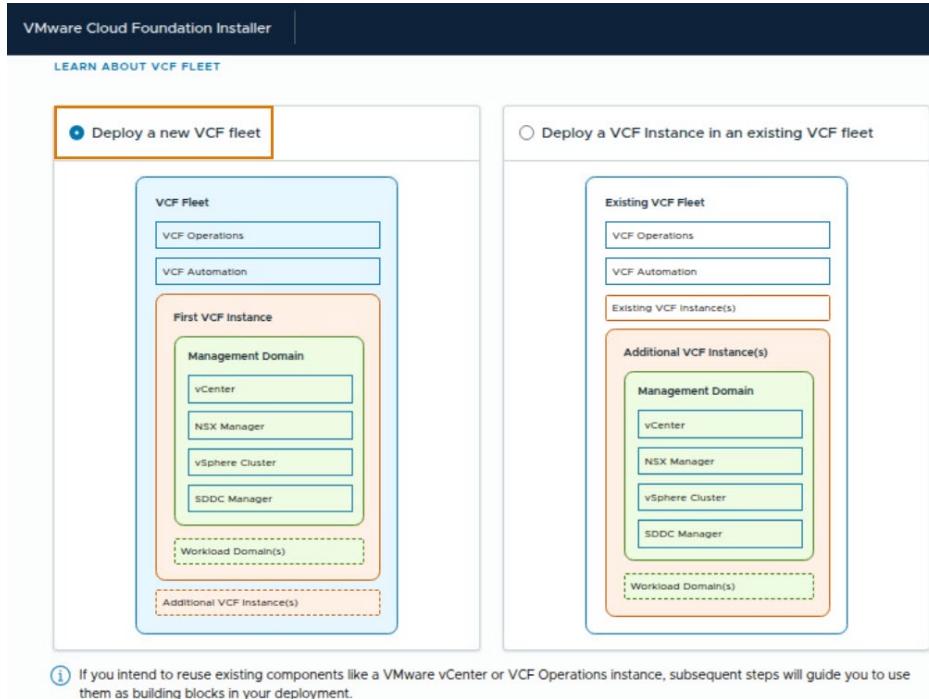
Phase 2: Converge vCenter / VCF Operations - Launching the VCF Installer Deployment Wizard

After downloading the VMware Cloud Foundation component binaries, you can initiate the deployment wizard by selecting VMware Cloud Foundation from the Deployment Wizard dropdown.

The screenshot shows the VMware Cloud Foundation Installer interface. At the top, there's a dark header bar with the text "VMware Cloud Foundation Installer". Below it is a main content area with the title "VMware Cloud Foundation Installer". A descriptive text states: "VMware Cloud Foundation installer deploys and performs the initial configuration of a new VMware vSphere Foundation or VMware Cloud Foundation environment. The installation process automates the deployment and configuration of the various components in each solution." Below this are two buttons: "LEARN MORE" and "REVIEW PREREQUISITES". To the right of the text is a blue-toned illustration of two people looking at a large server rack with network and storage components. In the bottom half of the screen, there are two main sections: "Get Started", "Download Binaries", and "Deploy". The "Download Binaries" section shows that an "Online depot connection active" (indicated by a green checkmark) and lists two items: "VMware vSphere Foundation 9.0.0.0 Downloaded" and "VMware Cloud Foundation 9.0.0.0 Downloaded". It also has a "DEPOT SETTINGS AND BINARY MANAGEMENT" button. The "Deploy" section contains the text: "You can deploy VMware Cloud Foundation or VMware vSphere Foundation using the deployment wizard or uploading a deployment specification JSON file." It features two buttons: "DEPLOYMENT WIZARD" and "DEPLOY USING JSON SPEC". Underneath these buttons is a dropdown menu with "VMware Cloud Foundation" selected (indicated by an orange border), and "VMware vSphere Foundation" is also listed.

Phase 2: Converge vCenter / VCF Operations - Deploying a New VCF Fleet

The VMware Cloud Foundation Installer can deploy the first VCF fleet or add a new instance to an existing one. You choose to deploy a new VCF fleet.



Phase 2: Converge vCenter / VCF Operations - Selecting the Existing vCenter / VCF Operations

You select VMware vCenter and VCF Operations under Existing Components to convert the existing vCenter instance into a vCenter instance for your new management domain, as well as using the newly upgrade VCF Operations

VMware Cloud Foundation Installer | Hello, admin@local ▾

Deploy VCF Fleet

1 Existing Components

2 General Information

3 VCF Operations

4 VCF Automation

5 vCenter

6 NSX Manager

7 SDDC Manager

8 Review

9 Validate & Deploy

Existing Components

Select the existing components you want to reuse in this VCF fleet. You will be asked to provide details about the existing components later in the deployment wizard.

- VCF Installer validates the selected components to ensure that they are compatible.
- If you select a VCF Operations instance that is connected to a fleet management appliance or a VCF Automation instance, these components will also be added to this VCF fleet.
- It is recommended you select the VMware vCenter where the selected VCF Operations is currently deployed to be used as the vCenter for the first VCF instance.
- If a VMware NSX Manager is connected to the vCenter instance you intend to use, select the option to use existing NSX Manager.

VCF Operations
Use an existing VCF Operations instance as the management component in the VCF fleet.

VMware vCenter
Use an existing vCenter as the management domain vCenter.

Existing VMware NSX
Use the NSX Manager connected to this vCenter as the management domain NSX Manager.

VCF Fleet

VCF Operations

VCF Automation

VCF Instance

Management Domain

vCenter (Existing)

NSX Manager

vSphere Cluster (Existing)

SDDC Manager

Phase 2: Converge vCenter / VCF Operations - Providing General Information About VCF

When deploying a new VCF instance using an existing vCenter, the deployment wizard prompts you to provide details such as the VCF instance name, management domain names, and deployment model settings.

The screenshot shows the 'Deploy VCF Fleet' wizard interface. On the left, a vertical navigation bar lists steps 1 through 9. Step 2, 'General Information', is highlighted with a blue background. The main panel is titled 'General Information' and contains the following fields:

- Version:** A dropdown menu set to '9.0.0'. A tooltip indicates 'The latest downloaded version of each component will be used'.
- VCF Instance Name:** A text input field containing 'vc90'.
- Management domain name:** A text input field containing 'vc9-mgmt'.
- Deployment model:** A note stating 'This selection only applies to newly deployed appliances. Existing VCF Operations, VCF Automation, or NSX Manager appliances that you plan to use in your VCF fleet will not be modified.' followed by a link 'Learn more'. Below this, two radio buttons are shown: 'Simple (Single-node)' (unchecked) and 'High Availability (Three-node)' (checked).
- Password creation:** A checkbox labeled 'Auto-generate passwords for newly installed appliances' (unchecked).
- Other:** A checkbox labeled 'Enable Customer Experience Improvement Program (CEIP)' (unchecked).

Phase 2: Converge vCenter / VCF Operations

As part of the VCF Operations configuration, you provide details for the following components:

- VCF Operations Fleet Management appliance
- VCF Operations Collector appliance

Deploy VCF Fleet

1 Existing Components
2 General Information
3 VCF Operations
4 VCF Automation
5 vCenter
6 SDDC Manager
7 Review
8 Validate & Deploy

VCF Operations

Enter the configuration details for the VCF Operations appliances. All fields marked with a * are required.

Details of Existing VCF Operations Instance

You indicated that you want to use your existing VCF Operations instance. Enter the details for the existing VCF Operations instance you want to use to discover additional components connected to it.

Successfully detected VCF Operations sto-vrops01a.sto.rainpole.io. [Use other VCF Operations](#)

Fleet Management Appliance

The VCF Operations instance has a connected fleet management appliance. Provide its password for configuring it for the VCF fleet.

Appliance FQDN * sto-fm01.sto.rainpole.io

Administrator password *

Operations Collector Appliance

Provide details for deploying a new operations collector appliance for this VCF instance.

Appliance FQDN * sto-vrops02.sto.rainpole.io

Administrator Password *

Confirm Administrator Password *



Phase 2: Converge vCenter / VCF Operations – Connect Later

As part of this sequence we click “Connect Later”

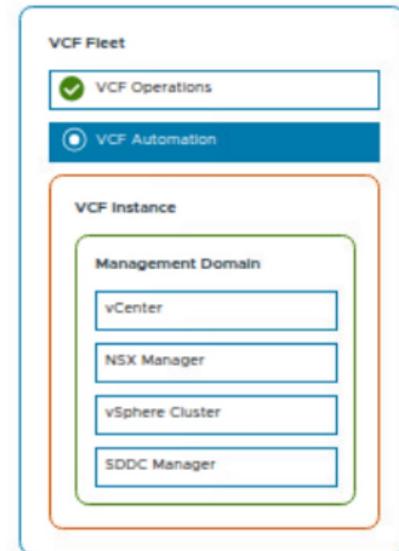
VCF Automation

Enter the configuration details for VCF Automation appliance. All fields marked with a * are required.

I want to connect a VCF Automation instance later

Choose this option if you wish to use an existing Aria Automation Instance that is not currently connected to the VCF Operations Instance you specified in the previous step. By doing so, you agree to use VCF Operations to import your Aria Automation Instance once the installer is complete.

Appliance FQDN *	sa-m01-auto-01.vcf.sddc.local
Administrator Password *	*****
Confirm Administrator Password *	*****
Node IP 1 *	172.20.10.74
Node IP 2 *	172.20.10.75
Internal Cluster CIDR *	198.18.0.0/15



Phase 2: Converge vCenter / VCF Operations - Provide the details for the existing vCenter

As part of the vCenter conversion, you provide the details of the existing vCenter that you want to use as the management domain vCenter.

VMware Cloud Foundation Installer | Hello, admin@local ▾

Deploy VCF Fleet

1 Existing Components
2 General Information
3 VCF Operations
4 VCF Automation
5 vCenter
6 NSX Manager
7 SDDC Manager
8 Review
9 Validate & Deploy

vCenter

Enter the credentials of the VMware vCenter you want to convert. All fields marked with a * are required.

Existing VMware vCenter
You indicated that you want to use your existing VMware vCenter instance. Enter the details for the existing vCenter instance that you want to use as the management domain vCenter.

vCenter * sa-vcsa-01.vcf.sddc.local
Root Password *
SSO user name * administrator@vsphere.local
SSO password *

VCF Fleet

<input checked="" type="checkbox"/> VCF Operations	Skipped
VCF Automation	

VCF Instance

Management Domain	
<input checked="" type="radio"/> vCenter	Existing
NSX Manager	
<input checked="" type="radio"/> vSphere Cluster	Existing
SDDC Manager	

Phase 2: Converge vCenter / VCF Operations - Configuring NSX Manager

On the NSX Manager configuration page, you provide the appliance size and FQDN. You also create passwords for the admin, root, and audit users.

VMware Cloud Foundation Installer

Hello, admin@local

Deploy VCF Fleet

1 Existing Components
2 General Information
3 VCF Operations
4 VCF Automation
5 vCenter
6 NSX Manager
7 SDDC Manager
8 Review
9 Validate & Deploy

NSX Manager

Enter configuration details for the NSX Manager to be deployed. All fields marked with a * are required.

Appliance Size * Medium
6 vCPU, 24GB RAM, 300GB Storage

Cluster FQDN * sa-m01-nsxt-vip.vcf.sddc.local

Appliance FQDN * sa-m01-nsxt01.vcf.sddc.local

NSX Overlay using ESX Management VMkernel Networking

NSX 9.0 introduces the capability to configure overlay using ESX Management VMkernel Networking. The imported vCenter Server clusters will be configured for NSX VLAN transport zone and overlay over VMKO. It will not require VLAN-backed configuration, thus negating the need for you to allocate dedicated IP addresses.

Configure overlay using ESX Management VMkernel Networking

If this option is unchecked, NSX will be configured in VLAN transport zone mode.

Administrator Password * VMware123!VMware123!

Confirm Administrator Password *

Root Password

Confirm Root Password

Audit Password

Confirm Audit Password



Phase 2: Converge vCenter / VCF Operations - Configuring SDDC Manager (1)

You provide the details for the SDDC Manager appliance if the VCF Installer is not deployed on the vCenter being upgraded.

VMware Cloud Foundation Installer

Hello, admin@local ▾

Deploy VCF Fleet

1 Existing Components
2 General Information
3 VCF Operations
4 VCF Automation
5 vCenter
6 NSX Manager
7 SDDC Manager
8 Review
9 Validate & Deploy

SDDC Manager

Enter the configuration details for the SDDC Manager appliance. All fields marked with a * are required.

(i) The VMware Cloud Foundation installer appliance is not deployed on one of the hosts in the management domain. During the deployment process, a new SDDC Manager appliance will be deployed.

Appliance FQDN * sa-sddc-01.vcf.sddc.local
Only a Fully Qualified Domain name is allowed, e.g. host.vsphere.local
VMware123!VMware123!

Root Password *
Confirm Root Password *

VCF Password *
Confirm VCF Password *

Administrator Password *
Confirm Administrator Password *

VCF Fleet

- VCF Operations
- VCF Automation Skipped

VCF Instance

Management Domain

- vCenter Existing
- NSX Manager
- vSphere Cluster Existing
- SDDC Manager

Phase 2: Converge vCenter / VCF Operations - Configuring SDDC Manager (2)

If the VCF Installer is deployed on the vCenter and is being upgraded, provide the details for the VCF Installer to become the SDDC Manager.

The screenshot shows the 'Deploy VCF Fleet' wizard with the 'SDDC Manager' step selected. The left sidebar lists steps 1 through 8, with '7 SDDC Manager' highlighted. The main panel is titled 'SDDC Manager' and contains fields for 'Appliance FQDN *' (set to 'sfo-vi01.sfo.rainpole.io') and 'Administrator Password *'. A note at the top states: 'Enter the configuration details for the SDDC Manager appliance. All fields marked with * are required.' Below the note is a tooltip: 'The VMware Cloud Foundation installer appliance is deployed on one of the hosts in the management domain. During the deployment process, the installer appliance will be converted into the SDDC Manager appliance. Provide the installer appliance password.' To the right, a 'VCF Fleet' summary box shows 'VCF Operations' and 'VCF Automation' as completed, while 'VCF Instance' is shown with 'Management Domain' (vCenter Existing), 'NSX Manager', 'vSphere Cluster Existing', and 'SDDC Manager' (selected).

Phase 2: Converge vCenter / VCF Operations - Reviewing the Deployment Configuration

You can review the VMware Cloud Foundation configuration and make any required changes before proceeding with the installation.

The screenshot shows the 'Review' step of the VMware Cloud Foundation Installer. On the left, a sidebar lists the steps: Deploy VCF Fleet, Existing Components, General Information, VCF Operations, VCF Automation, vCenter, NSX Manager, SDDC Manager, and Review (which is selected). Below that is a 'Validate & Deploy' button. The main area is titled 'Review' and contains a summary of the deployment configuration. It includes sections for VCF Operations (Operations Appliance Size: Small, Operation primary FQDN: sa-vcops-01.vcf.sddc.local, Administrator Password: masked), Fleet Management Appliance (Appliance FQDN: sa-vcopsfrm-01.vcf.sddc.local, Use same password as VCF Operations: Yes), Operations Collector Appliance (Appliance FQDN: sa-vcopsoc-01.vcf.sddc.local, Use same password as VCF Operations: Yes), and VCF Automation (I want to connect a VCF Automation instance later: Yes). It also lists existing infrastructure for vCenter (FQDN: sa-vcsa-01.vcf.sddc.local, Thumbprint: C9:43:8B:DE:9D:D7:3F:8B:53:78:52:11:D7:FF:30:75:D6:AC:9A:13:1D:6B:48:1D:4E:07:B4:26:C1:56:3D:7D, Root Password: masked, SSO user name: administrator@vsphere.local).

Phase 2: Converge vCenter / VCF Operations - Validating and Deploying VCF 9.0

Before proceeding with the deployment, the VMware Cloud Foundation Installer validates the parameters provided during the deployment wizard.

If validation errors occur, you must navigate to the relevant pages in the deployment wizard to make updates and rerun the validations.

You can acknowledge warnings that appear after the validation process.

The screenshot shows the VMware Cloud Foundation Installer interface. On the left, a sidebar lists the deployment steps: Deploy VCF Fleet, Validate & Deploy, and other steps 1 through 8. Step 9, Validate & Deploy, is currently selected and highlighted in blue. The main pane displays the 'Validate & Deploy' section. It includes a note about re-running validations if infrastructure changes occur. Below this is a table of validation results:

Validations	Status
Deployment Specification	Succeeded
DNS Resolution	Succeeded
Security Configuration	Succeeded
Versions and Bundles	Succeeded ✓Acknowledged
Existing SDDC Manager Configuration	Succeeded
Password Policies	Succeeded
Network Configuration	Succeeded
Existing Components	Succeeded ✓Acknowledged

Under the 'Versions and Bundles' section, there are three warning icons with descriptions:

- Cannot check compatibility of VROPS 9.0.0.0.24566540, because no compatibility data is available for the following components: VRSLCM 9.0.0.0, VCF_OPS_CLOUD_PROXY 9.0.0.0, VROPS 9.0.0.0
- Cannot check compatibility of VRSLCM 9.0.0.0.24567162, because no compatibility data is available for the following components: VRSLCM 9.0.0.0, VCF_OPS_CLOUD_PROXY 9.0.0.0, VROPS 9.0.0.0
- Cannot check compatibility of VCF_OPS_CLOUD_PROXY 9.0.0.0.24566542, because no compatibility data is available for the following components: VRSLCM 9.0.0.0, VCF_OPS_CLOUD_PROXY 9.0.0.0, VROPS 9.0.0.0

Under the 'Existing Components' section, there are two warning icons with descriptions:

- Cluster vsphere Cluster: Evacuate Offline VMs upgrade policy configured for cluster vsphere Cluster on vCenter does not match default SDDC Manager upgrade policy. It has value false in vCenter, and default value true in SDDC Manager.
Remediation: Review and apply the desired upgrade policy options from the "Upgrade Options" page during "ESX Configure Update".
- NxstCluster sa-m01-nxst-vip.vcf.sddc.local: For vCenter version < 9.0.0.0, 3-node NSX is required. For vCenter versions ≥ 9.0.0.0, 1-node NSX Cluster is allowed, but 3-node NSX cluster is recommended.
Remediation: Please ensure that specification contains 3-node NSX Cluster

VCF Installer: Monitoring the Deployment Process

You can follow the VMware Cloud Foundation installation process from the VCF Installer. For more details, you can check the entries in the **Tasks** section.

The screenshot shows the VMware Cloud Foundation Installer interface. At the top, there are two buttons: "DOWNLOAD JSON SPEC" and "REVIEW PASSWORDS". Below these buttons, a vertical timeline lists seven tasks, each with a green checkmark indicating completion:

- Deploy vCenter
- Deploy SDDC Manager
- Configure the vSphere cluster
- Deploy and configure NSX
- Deploy and configure the fleet management appliance
- Deploy and configure the operations appliance
- Deploy and configure the automation appliance

A red box highlights the first five tasks on the timeline. To the right of the timeline, under the heading "Next Steps", are two numbered instructions:

- Log in to the VCF Operations UI.
- Navigate to License Management, and apply your VCF license keys within the 60-day evaluation period.

Below these instructions is a "VCF Operations Login" section with fields for "Username" (set to "admin") and "Password" (represented by a series of asterisks). A "OPEN VCF OPERATIONS UI" button is located below the login fields. At the bottom left of the screen, there is a "Tasks" tab, which is highlighted with a red border. At the bottom right, there is a message about activating Windows.

Phase 3a: Configure Licensing

Once the Deployment completes you can log in to VCF Operations and configure licensing.

The screenshot shows the VCF Operations interface. On the left is a navigation sidebar with the following items:

- Home
- Inventory
- Infrastructure Operations
- Workload Operations
- Fleet Management
- Capacity
- Security
- License Management** (selected)
- Registration
- Licenses
- Usage Analytics
- Administration
- Developer Center

The main content area has a heading "VCF Operations is not registered" with a warning icon. It includes a link "LEARN MORE ABOUT REGISTRATION".

The interface is divided into two sections: "Connected" and "Disconnected".

Connected: Describes Connected mode as simplifying registration and license updates, and automates usage reporting. It includes steps 1 and 2:

- Step 1: Log in to the VCF Business Services console to obtain an activation code for VCF Operations. (START REGISTRATION button)
- Step 2: Finish your registration by entering the activation code here. (ENTER ACTIVATION CODE input field)

Disconnected: Describes Disconnected mode as requiring manual file transfer for registration, updates of licenses, and usage reporting. Internet connection is not required. It includes steps 1, 2, and 3:

- Step 1: Download the registration file. (DOWNLOAD REGISTRATION FILE button)
- Step 2: Upload the registration file to the [VCF Business Services console](#). (IMPORT LICENSE FILE button)
- Step 3: Import the license file that you downloaded from the VCF Business Services console. (IMPORT LICENSE FILE button)

Phase 3a: Configure Licensing

Once the Deployment completes you can log in to VCF Operations and configure licensing.

The screenshot displays the VCF Operations interface with two main sections: **Licenses** and **vCenter Systems**.

Licenses: This section shows the current licensing status. It includes a header bar with tabs for "Version 9+" (selected) and "Pre-Version 9". Below the header, it displays "Licenses Updated: Mar 21, 2025" and "Next Usage Report Due: Sep 17, 2025". A search bar labeled "Type here to apply filters" is also present. The main table lists two items:

Name	Product	Used Capacity	Allocated Capacity	vCenter	Issues
» vsan	VMware vSAN (TiB)	0 TiB	40 TiB	-	0 issues
» -vsphere	VMware Cloud Foundation (cores)	0 cores	512 cores	-	0 issues

Buttons for "Manage Columns" and "1 - 2 of 2 Objects" are located at the bottom of the table.

vCenter Systems: This section shows the configuration of vCenter systems. It includes a header bar with buttons for "ASSIGN PRIMARY LICENSE" and "ASSIGN ADD-ON LICENSE". Below the header, it displays "vCenter Systems Updated: Mar 21, 2025" and "Next Usage Report Due: Sep 17, 2025". A search bar labeled "Type here to apply filters" is also present. The main table lists one item:

vCenter	Managed by VCF Instance	Primary License Name	Primary License Product	Primary License Used Capacity	Add-on License Name	Fully Licensed
sfo-m01-vc01.sfo.rainpole.io	sfo-vcf01	--	--	0 cores	-	No

Buttons for "Manage Columns" and "1 - 1 of 1 Items" are located at the bottom of the table.

Phase 3a: Configure Licensing

Once the Deployment completes you can log in to VCF Operations and configure licensing.

vCenter Systems i

<input checked="" type="checkbox"/>	vCenter	Managed by VCF Instance	Primary License Name	Primary License Product	Primary License Used Capacity	Add-on License Name	Fully Licensed
<input checked="" type="checkbox"/>	» sto-m01-vc01.sfo.rainpole.io	VCF Instance unknown	-vsphere	VMware Cloud Foundation (cores)	256 cores	5-vsan	<input checked="" type="checkbox"/> Yes

Phase 3b: Import Aria Automation

Prerequisites for Aria Automation Import

VCF Automation	<ul style="list-style-type: none">•VCF Automation requires root password to be equal to or longer than 15 characters for import to VCF Operations Fleet Manager•Download VCF Automation upgrade Bundle from Depot•VCF Automation will deploy new appliances, for a Standard (Simple) deployment the requirement is 2 new ip addresses required, Clustered (High Availability) 4 new ip addresses are required
VCF Operations Fleet Manager	Set up DNS and NTP servers for Fleet Manager before performing upgrade of VCF Automation if not done already

Phase 3b: Import Aria Automation

We start by logging into the VCF Operations Console

VMware Cloud Foundation Operations™

Login Method *

Local Account

Username *

admin

Password *

.....

LOG IN

Phase 3b: Import Aria Automation

Add Automation from Fleet Manager

VCF Management

Overview Components Tasks Binary Management Depot Configuration Settings

VCF Capabilities

- operations** New Deployment
Version: 9.0.0.0
[MANAGE](#) [LEARN MORE](#)
- operations-networks**
Not enabled
Get a holistic view of your VCF network's health, issues, and operations in one place
[ADD](#) [LEARN MORE](#)
- operations-logs**
Not enabled
Discover Audit Log Trends for your VCF Environment
[ADD](#) [LEARN MORE](#)
- automation**
Not enabled
Enable IaaS consumption for application teams governed by robust policies
[ADD](#) [LEARN MORE](#)
- identity broker**
Not enabled
Configure Single Sign-On identity sources for a seamless login experience
[ADD](#) [LEARN MORE](#)

Phase 3b: Import Aria Automation

Import from Legacy Fleet Management

The screenshot shows the VCF Management interface under the Lifecycle tab. The left sidebar has 'VCF Management' selected. The main content area is titled 'VCF Management' and shows a 'Deployment' section. A hand cursor is hovering over the 'Deployment' link. The deployment section contains a note about required fields and three radio button options for Installation Type: 'New Install', 'Import', and 'Import from legacy Fleet Management', with the last one being selected.

Lifecycle <<

VCF Management

VCF Instances

[RETURN TO COMPONENTS](#)

VCF Management

Overview Components Tasks Binary Management Depot Configuration Settings

automation

Deployment

Required fields are marked with *

Installation Type *

New Install Import Import from legacy Fleet Management

Phase 3b: Import Aria Automation

Import Workflow



The progress bar consists of three grey arrows pointing right, representing the workflow steps: Fleet Management Configuration, Select VCF Automation Instance, and Review.

VCF Operations Fleet Management Appliance Configuration

Please provide FQDN for your old VCF Operations Fleet Management Appliance environment to explore components for importing.

Required fields are marked with *

VCF Operations Fleet Management Appliance FQDN *	sfo-lcm01.sfo.rainpole.io
Username *	admin@local
Admin Password *	*****
Root Password *	*****

Phase 3b: Import Aria Automation

Import Workflow



VCF Management

Overview

Components

Tasks

Binary Management

Depot Configuration

Settings

Fleet Management Configuration

Select Aria Automation Instance

Select Component

Selected component: sfo-vra01a.sfo.rainpole.io

	Component
<input checked="" type="radio"/>	Aria Automation (sfo-vra01a.sfo.rainpole.io)

Phase 3b: Import Aria Automation

Import Workflow

The screenshot shows the 'VCF Management' interface with the 'Import Workflow' step selected. The top navigation bar includes 'Overview', 'Components', 'Tasks', 'Binary Management', 'Depot Configuration', and 'Settings'. Below the navigation, two checkboxes are checked: 'Fleet Management Configuration' and 'Select Aria Automation Instance'. A 'Review' button is also present. The main area is titled 'Review' and contains the message: 'Review the component which would be imported into Operations.' Below this, a table lists the imported components:

from VCF Operations Fleet Management Appliance	sfo-lcm01.sfo.rainpole.io
component VMware Aria Automation	sfo-vra01a.sfo.rainpole.io

A yellow warning box contains the following text:

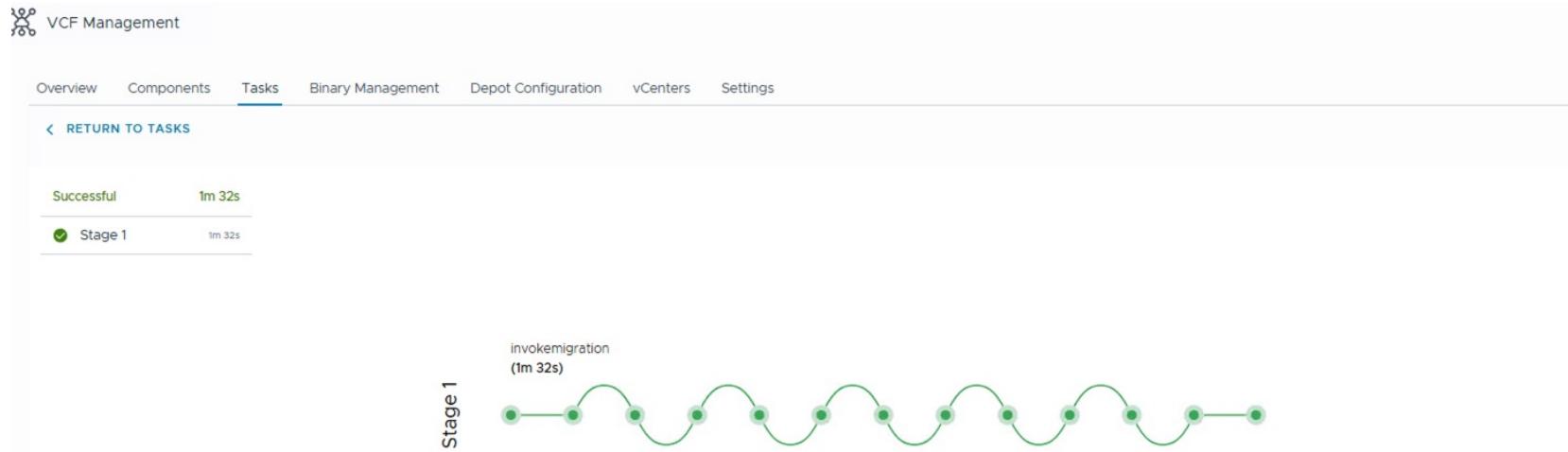
⚠

- You can import multiple VMware Aria Automation instances from a given Fleet Management (VMware Aria Suite Lifecycle) or multiple Fleet Management instances, but only the first Aria Automation instance being imported will be marked as Integrated. All other Aria Automation instances will be marked as non-integrated.
- Once a component is marked as Integrated, this action cannot be undone.
- Identity Manager is not imported into VCF Operations 9.x. It will be managed by VMware Aria Suite Lifecycle 8.x. Automation imported into VCF Operations will function without any disruptions.
- The imported Aria Automation 8.x will have restricted Day-2 operations till upgrade is performed to version 9.0.
- Non-integrated automation components will not have fleet management capabilities such as certificate and password management. These must be executed manually using fleet management APIs.
- If an upgrade fails on an imported automation component marked as integrated, remove the component from fleet management. Power on the Aria Automation appliances, ensure they are healthy, re-import the component into fleet management, and re-trigger the upgrade. Click here to learn more about the entire process.

At the bottom, there is a checkbox: I understand that integration is irreversible action and want to proceed with importing VMWare Aria Automation.

Phase 3b: Import Aria Automation

Import Workflow



Phase 3b: Import Aria Automation

Upgrade Workflow

[ADD COMPONENT](#) ▾

Set version: VCF 9.0 [PLAN UPGRADE](#)

Integrated Components

	Component	FQDN/IP	VCF Instance	Current Version	Target Version	Status	Action
⋮	automation	sfo-vra01a.sfo.rainpole.io		8.18.0		New Deployment	MANAGE
⋮	operations	sfo-vrops01a.sfo.rainpole.io		9.0.0.0		New Deployment	MANAGE

1 - 2 of 2 Components | < < / 1 > >

Phase 3b: Upgrade Aria Automation

Upgrade Workflow

Proceed to Upgrade

X

- ⚠ In the latest version, a few features you are currently using will no longer be available. Please ensure you are aware of these changes and confirm your acceptance before proceeding.
- Shared infrastructure multi-tenancy capabilities of VMware Aria Automation, such as Virtual Private Zone and provider image management. [Click here](#) to check more details.
 - The ability to add VMware Cloud Director as a cloud account in VMware Aria Automation. [Click here](#) to check more details.
 - Cloud Consumption Interface (CCI) [Click here](#) and [here](#) to check more details.
 - Kubernetes integration capabilities, including TKG and TMC integration. [Click here](#) to check more details.
- If you are using any of these features, we recommend removing any relevant configurations before proceeding with the upgrade to avoid unplanned disruptions. For more information, please review the release notes or contact your Broadcom Support.

ⓘ IMPORTANT: Before you proceed with your upgrade, check that you are entitled to version 9.x.

After you upgrade VCF to version 9.x, you must assign version 9.x licenses to your environment. After the upgrade, VCF components are in evaluation mode for up to 90 days. You must assign the new licenses before the evaluation period expires.

For more information on how to license version 9.x, view the documentation.



I understand that some features will no longer be available in the latest version, and I am okay with proceeding with the upgrade.

It is mandatory to perform an inventory sync before performing this operation. Sometimes there will be a drift or change in the environments outside VCF Operations Fleet Management Appliance and for VCF Operations Fleet Management Appliance to know the current state of the system, its inventory needs to be up-to-date.

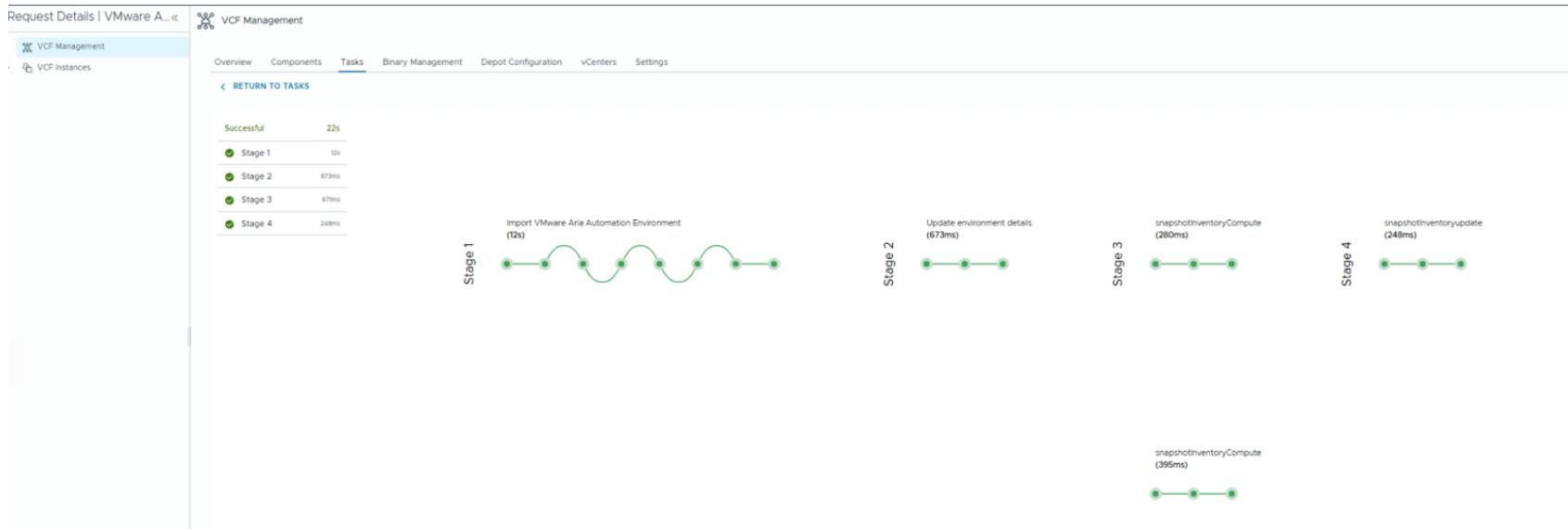
TRIGGER INVENTORY SYNC

CANCEL

PROCEED

Phase 3b: Upgrade Aria Automation

Upgrade Workflow



Phase 3b: Upgrade Aria Automation

Upgrade Workflow

Proceed to Upgrade

X

⚠ In the latest version, a few features you are currently using will no longer be available. Please ensure you are aware of these changes and confirm your acceptance before proceeding.

- Shared infrastructure multi-tenancy capabilities of VMware Aria Automation, such as Virtual Private Zone and provider image management. [Click here](#) to check more details.
 - The ability to add VMware Cloud Director as a cloud account in VMware Aria Automation. [Click here](#) to check more details.
 - Cloud Consumption Interface (CCI) [Click here](#) and [here](#) to check more details.
 - Kubernetes integration capabilities, including TKG and TMC integration. [Click here](#) to check more details.
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For more information on how to license version 9.x, view the documentation.

I understand that some features will no longer be available in the latest version, and I am okay with proceeding with the upgrade.

It is mandatory to perform an inventory sync before performing this operation. Sometimes there will be a drift or change in the environments outside VCF Operations Fleet Management Appliance and for VCF Operations Fleet Management Appliance to know the current state of the system, its inventory needs to be up-to-date.

TRIGGER INVENTORY SYNC

Inventory Sync is complete.

CANCEL

PROCEED

Phase 3b: Upgrade Aria Automation

Upgrade Workflow

automation

Infrastructure Network Components Precheck Summary

Infrastructure

If the desired vCenter is not available then:
1. Go to VCF Operations → Administration → Integrations → Accounts and add the vCenter/VMware Cloud Foundation
2. Navigate to VCF Operations → Lifecycle → VCF Management → Settings → Deployment Targets. Add and validate the required Deployment Target
3. Once completed, return to the "Create Component" wizard and select the Deployment Target to continue

Primary Cluster

Required fields are marked with *

Select vCenter Server * sfo-m01-vc01.sfo.rainpole.io

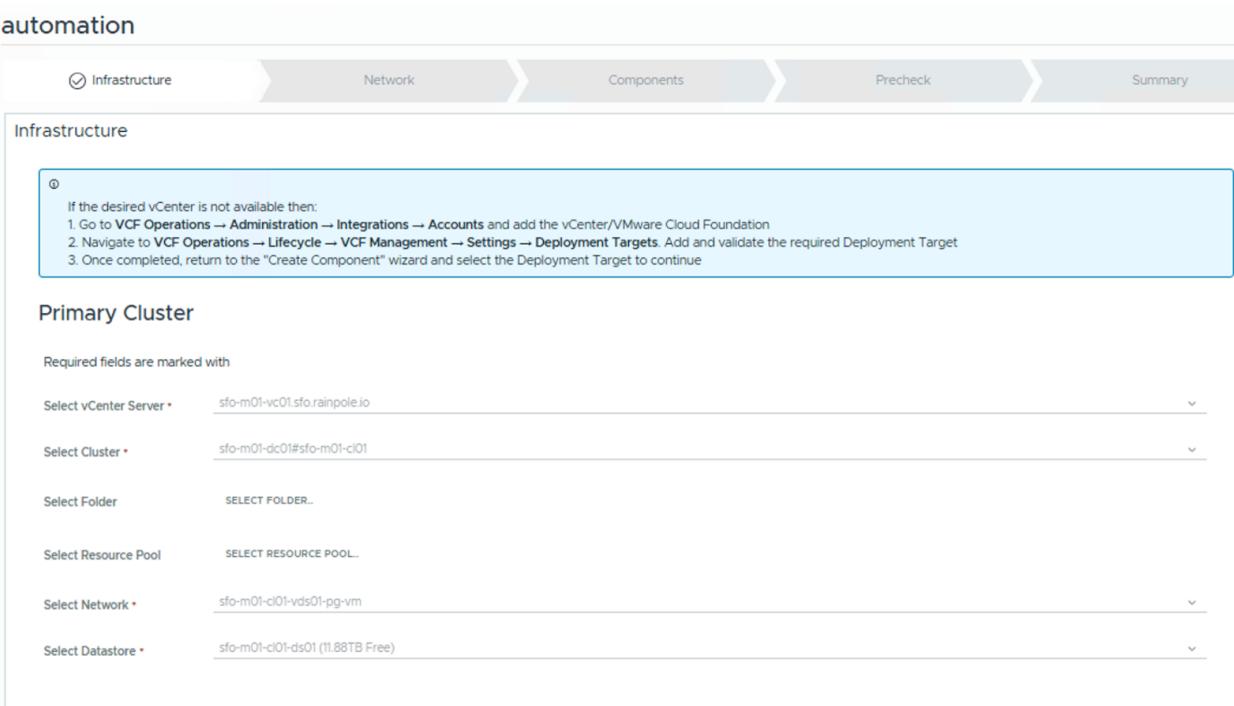
Select Cluster * sfo-m01-dc01#sfo-m01-cl01

Select Folder SELECT FOLDER...

Select Resource Pool SELECT RESOURCE POOL...

Select Network * sfo-m01-cl01-vds01-pg-vm

Select Datastore * sfo-m01-cl01-ds01 (11.88TB Free)



Phase 3b: Upgrade Aria Automation

Upgrade Workflow

automation

Infrastructure Network Components Precheck Summary

Network

Required fields are marked with *

Primary Cluster

Domain Name * sfo.rainpole.io

Domain Search Path * sfo.rainpole.io

[ADD NEW SERVER](#) [EDIT SERVER SELECTION](#)

Priority	Server	IP Address
1	DNS1	
2	DNS2	

Time Sync Mode Use NTP Server Use Host Time

[ADD NEW SERVER](#) [EDIT SERVER SELECTION](#)

NTP Servers *

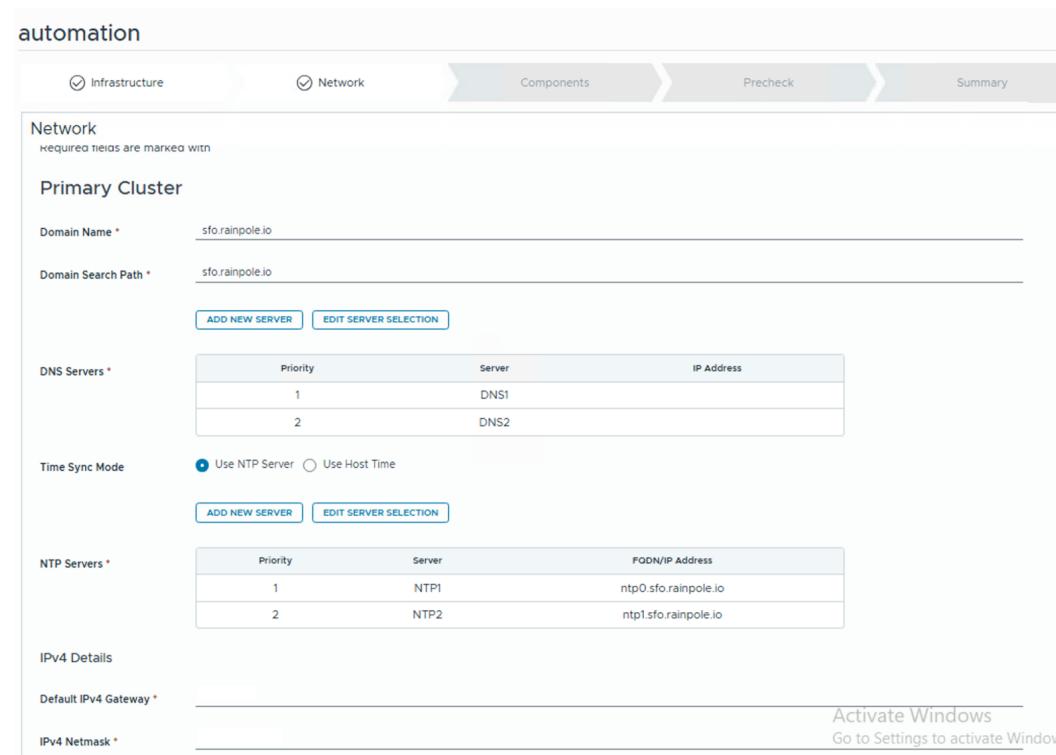
Priority	Server	FQDN/IP Address
1	NTP1	ntp0.sfo.rainpole.io
2	NTP2	ntp1.sfo.rainpole.io

IPv4 Details

Default IPv4 Gateway *

IPv4 Netmask *

Activate Windows
Go to Settings to activate Windows.



Phase 3b: Upgrade Aria Automation

Upgrade Workflow

The screenshot shows the Aria Automation upgrade workflow interface. The top navigation bar includes links for Overview, Components, Tasks, Binary Management, Depot Configuration, and Settings. Below the navigation is a breadcrumb trail: < RETURN TO COMPONENTS. The main title is "automation". The workflow steps are: Infrastructure, Network, Components (highlighted in blue), Precheck, and Summary. The Components step displays configuration details for a VCF Automation Primary node. Required fields are marked with asterisks (*). The configuration includes:

- vcfa**
 - FQDN ***: sfo-vra01a.sfo.rainpole.io
 - Controller Type ***: Internal Load Balancer
- Components** (with a note: **Fill all the nodes with proper details**)
 - VCF Automation Primary** (selected node)
 - Node Prefix ***: vcfa-mgmt
 - Primary VIP ***: 100.64.0.0/15
 - Internal Cluster CIDR ***: 100.64.0.0/15
 - Additional VIPs**: ADD ADDITIONAL VIP POOL
 - Action** table: No IP selected
- Cluster Node IP Pool**: ADD CLUSTER NODE IP POOL
- Action** table: No IP selected

On the right side of the interface, there are "Activate Windows" and "Go to Settings to activate Windows" buttons.

Phase 3b: Upgrade Aria Automation

Upgrade Workflow

The screenshot shows the Aria Automation component details page. At the top, there is a navigation bar with links for Overview, Components, Tasks, Binary Management, Depot Configuration, and Settings. Below the navigation bar, a link to 'RETURN TO COMPONENTS' is present. The main title is 'automation'. There are tabs for Infrastructure, Network, Components, Precheck, and Summary. The 'Details' tab is selected. The component name is 'automation' with version '9.0.0'. The 'Component Properties' section is expanded, showing:

- Certificate**: Aria Automation_IMPORTED_AUTO_GENERATED_4413472a-44a5-4698-b31c-78a8558be571
- Component Password**: Aria Automation-15 characters_IMPORTED_AUTO_GENERATED_a9027fb5-8810-40ce-b7e5-7661a12117cf
- FQDN**: sfo-vra01a.sfo.rainpole.io
- Deployment Type**: small

The 'Cluster VIP' section shows 'sfo-vra01a' with a status of 'VCF Automation Primary'. There is a '+ EXPAND ALL' button next to it. Below this, sections for Infrastructure, Network, and Other are collapsed.

Phase 3b: Upgrade Aria Automation

Upgrade Workflow

The screenshot shows the Aria Automation interface with the 'Components' tab selected. The 'Integrated Components' section displays two entries:

Component	FQDN/IP	VCF Instance	Current Version	Target Version	Status	Action
automation	sfo-vra01a.sfo.rainpole.io		9.0.0.0	9.0.0.0	In Compliance	MANAGE
operations	sfo-vrops01a.sfo.rainpole.io		9.0.0.0	9.0.0.0	In Compliance	MANAGE

At the top right, there is a note: "Set version: VCP 9.0 PLAN UPGRADE". At the bottom right, it says "1 of 2 Components" with navigation icons.

Phase 4: Day N Activities and Beyond

The new VCF Fleet and deployment is stood up.

VCF Management

Overview Components Tasks Binary Management Depot Configuration Settings

VCF Capabilities

operations [New Deployment](#)

Version: 9.0.0.0

[MANAGE](#) [LEARN MORE](#)

operations-networks

Not enabled

Get a holistic view of your VCF network's health, issues, and operations in one place

[ADD](#) [LEARN MORE](#)

Key Takeaways



- The upgrade path will depend on the starting state.
- Most of the Paths are similar – the order of operations will change between the various paths, and the VCF Installer will deploy the necessary objects
- Prerequisites are important, especially around capacity and licensing.

Upgrade Path #3

Upgrade VCF 5.x to VCF 9.0



By the end of this training
you will be able to

01

Understand the design considerations and prerequisites for upgrading a VCF 5.x environment to VCF 9.0

02

Design and Implement an Upgrade from VCF 5.x with or without the Aria Suite to VCF 9.0

03

Effectively troubleshoot the upgrade process from VCF 5.x to VCF 9.0

Importance

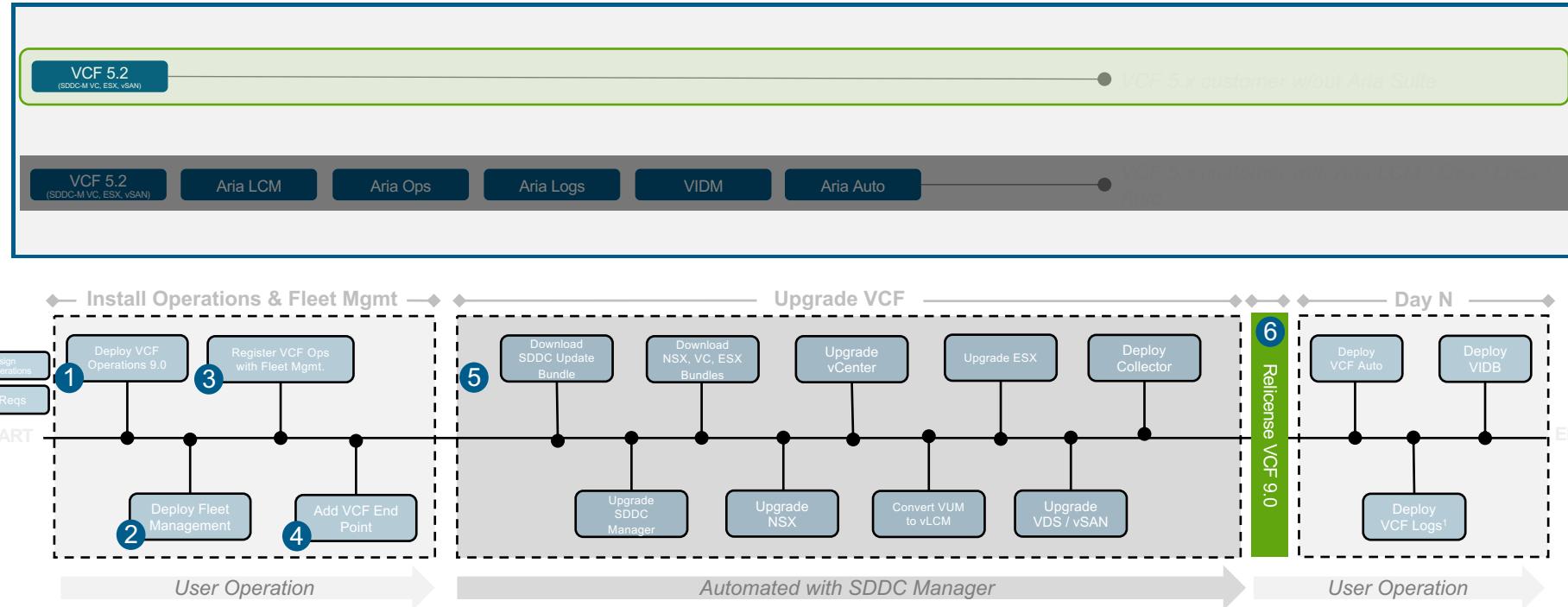
As an architect and implementer, you must understand the supported upgrade paths, key prerequisites, design considerations, and step-by-step processes. This knowledge equips you to plan and execute upgrades from various existing infrastructures, while addressing compatibility, risk, and operational requirements to ensure a smooth upgrade to a modern, scalable private cloud.

Preparing for the Upgrade to VCF 9.0



Paths to VCF 9

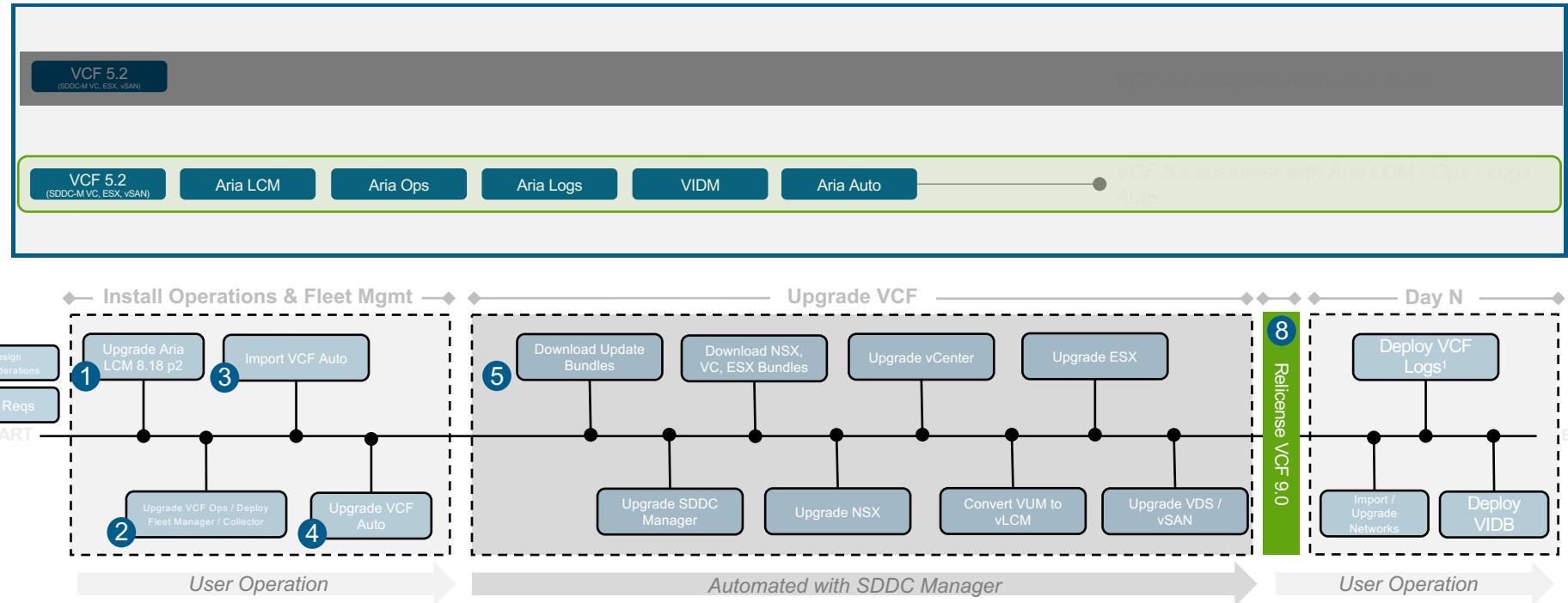
VCF 5.2 w/out Aria to VCF 9.0



¹ There is no upgrade path from VCF Logs 8.x to 9.x. Deploy a new VCF Logs 9 instance after VCF deployment. Import/upgrade other components (e.g., Ops for Networks, HCX) after upgrade to VCF 9.

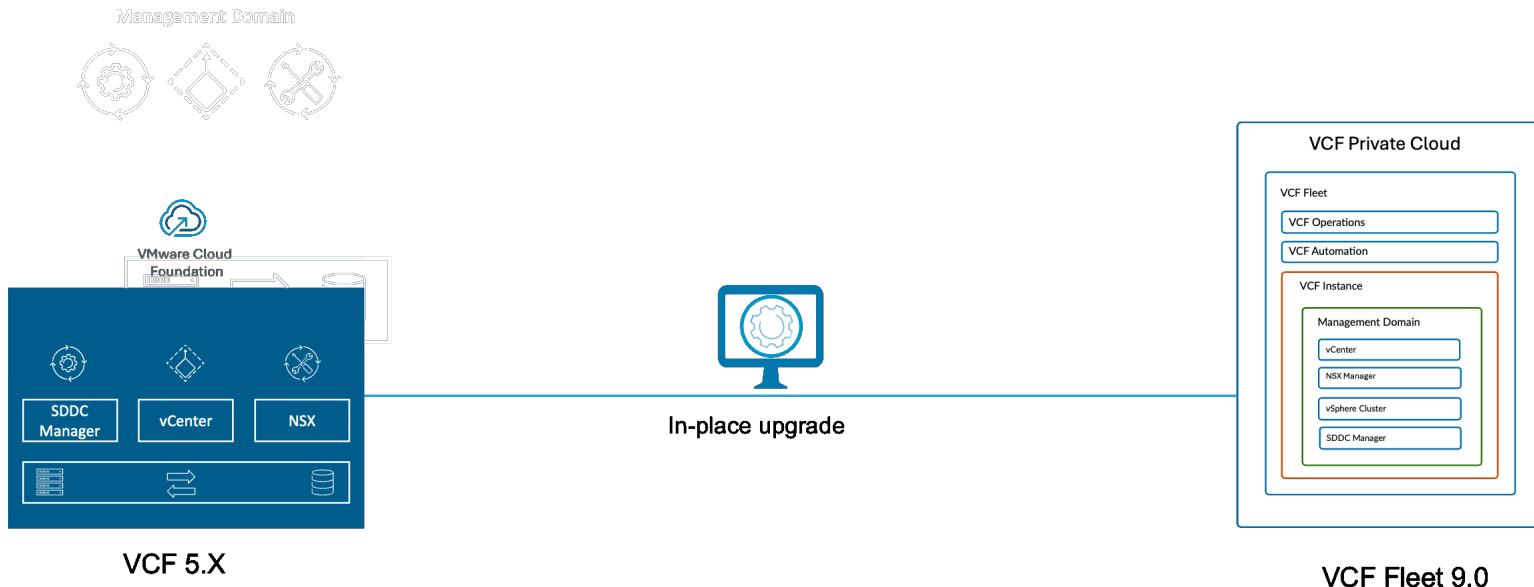
Paths to VCF 9

VCF 5.2 w/ Aria Suite to VCF 9.0



Upgrading VCF from 5.2 to VCF 9.0: Overview

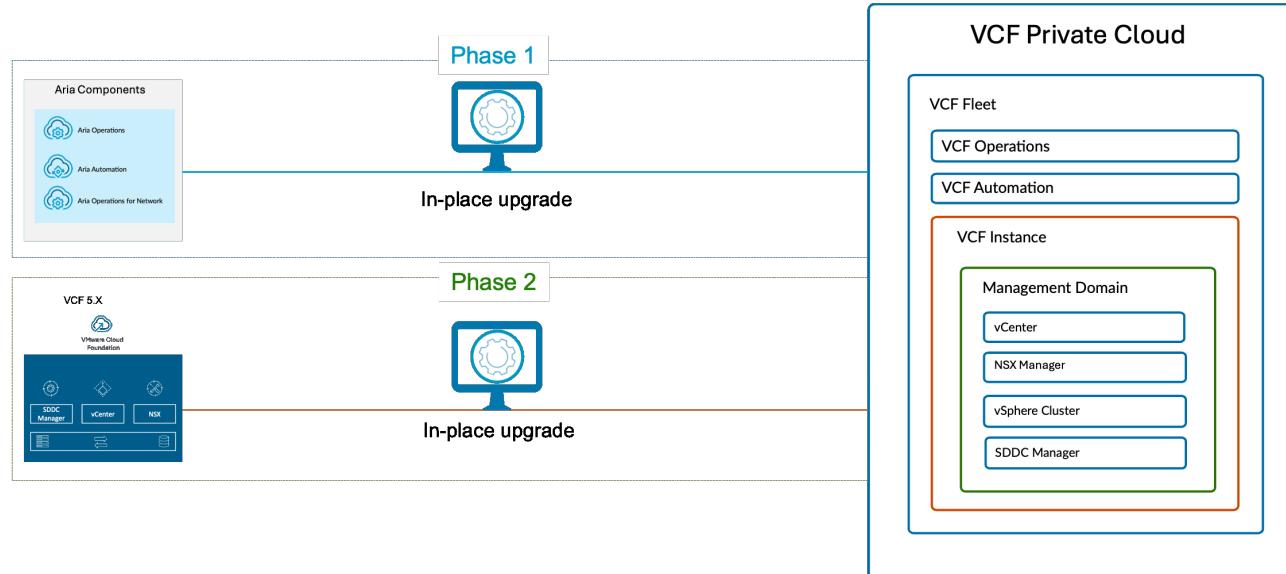
You can build your VCF private cloud by upgrading existing VCF 5.x to VCF 9.0.



Upgrading VCF from 5.2 to VCF 9.0: Upgrade Phases

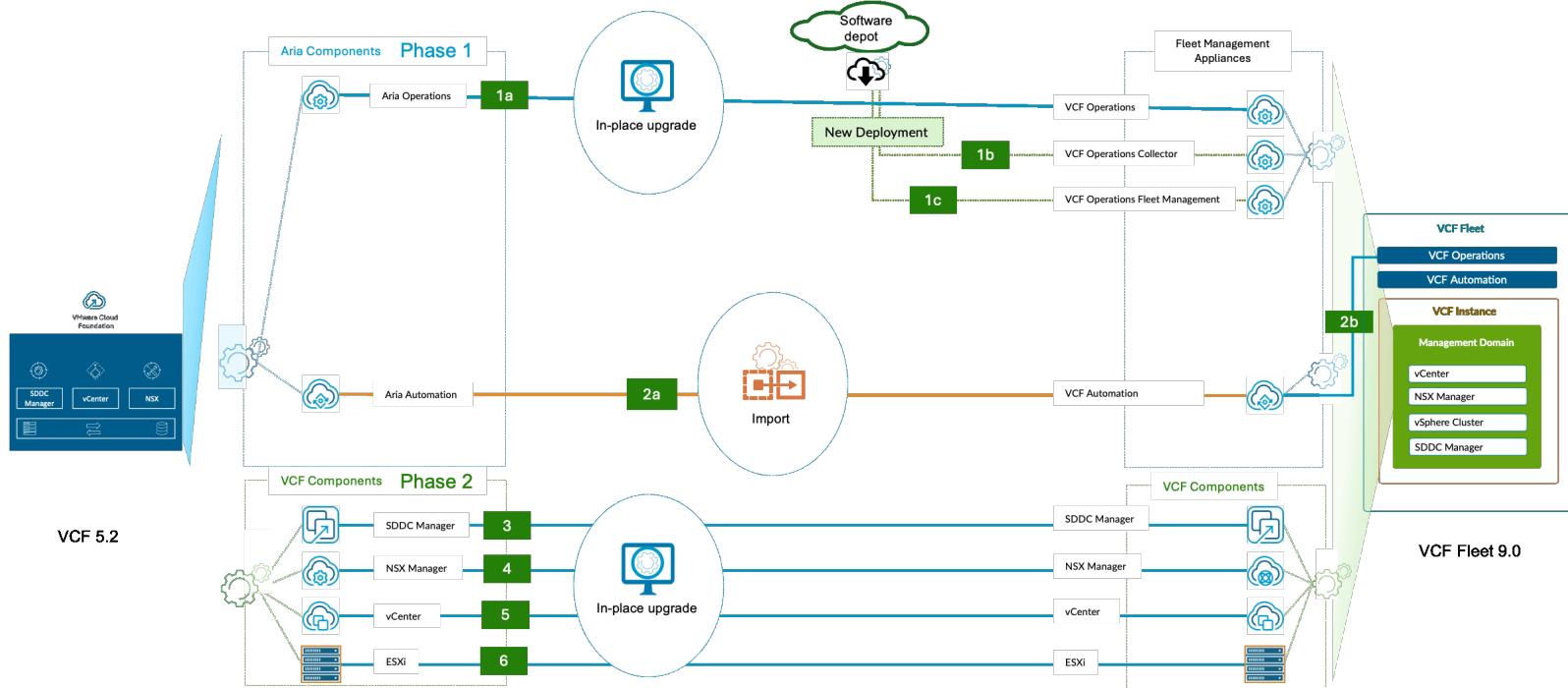
You upgrade to the VCF private cloud from VCF 5.2 using an in-place upgrade executed in the following phases:

1. Upgrade the Aria components to the VCF Fleet 9.0 management component.
2. Upgrade the VCF 5.2 components in a specific sequence.



Upgrading VCF from Version 5.2 to VCF 9.0: Sequence

You first upgrade Aria components to the respective VCF Fleet 9.0 management component and then upgrade the VCF 5.2 components to version 9.0 in a specific sequence.



Phase 1: Upgrade considerations

Before upgrading, you must understand how VMware Cloud Foundation 9.0 differs from earlier versions.

VCF 9.0 Management Component	Deployment Option	Before 9.0 VCF Management Component	Deployment Option
VCF Operations	Required	Aria Operations	Optional
VCF Operations fleet management	Required	Aria Suite Lifecycle	Optional
VCF Operations collector	Required	Not deployed	Not Deployed
VCF Automation	Optional	Aria Automation	Optional
VCF Operations for networks	Optional	VMware Aria Operations for Networks	Optional
VCF Operations for logs	Optional	VMware Aria Operations for Logs	Optional

Phase 1: Upgrade Scenarios (1)

You use the VMware Aria Suite Lifecycle 8.18 appliance and the VCF Operations fleet management appliance to upgrade the Aria Component from version 8 to 9.

Aria component deployed	Supported versions for upgrade	Upgrade path
VMware Aria Operations only	<ul style="list-style-type: none">- VMware Aria Operations 8.14 or later if managed by LCM- VMware Aria Operations 8.18 or later if managed by vCenter	<ol style="list-style-type: none">1. Download and apply the VMware Aria Suite Lifecycle 8.18 Patch 2 to VMware Aria Suite Lifecycle.2. Use VMware Aria Suite Lifecycle to upgrade to VCF Operations and install the fleet management appliance.

Phase 1: Upgrade Scenarios (2)

You use the VMware Aria Suite Lifecycle 8.18 appliance and the VCF Operations fleet management appliance to upgrade the Aria Component from version 8 to 9.

Aria component deployed	Supported versions for upgrade	Upgrade path
VMware Aria Automation only	- VMware Aria Automation 8.18 or later	<ol style="list-style-type: none">1. Install VMware Aria Operations 8.18.2. Download and apply the VMware Aria Suite Lifecycle 8.18 Patch 2 to the VMware Aria Suite Lifecycle.3. Use the VMware Aria Suite Lifecycle to upgrade to VCF Operations and install the fleet management appliance.4. Use the fleet management appliance to upgrade VCF Automation.

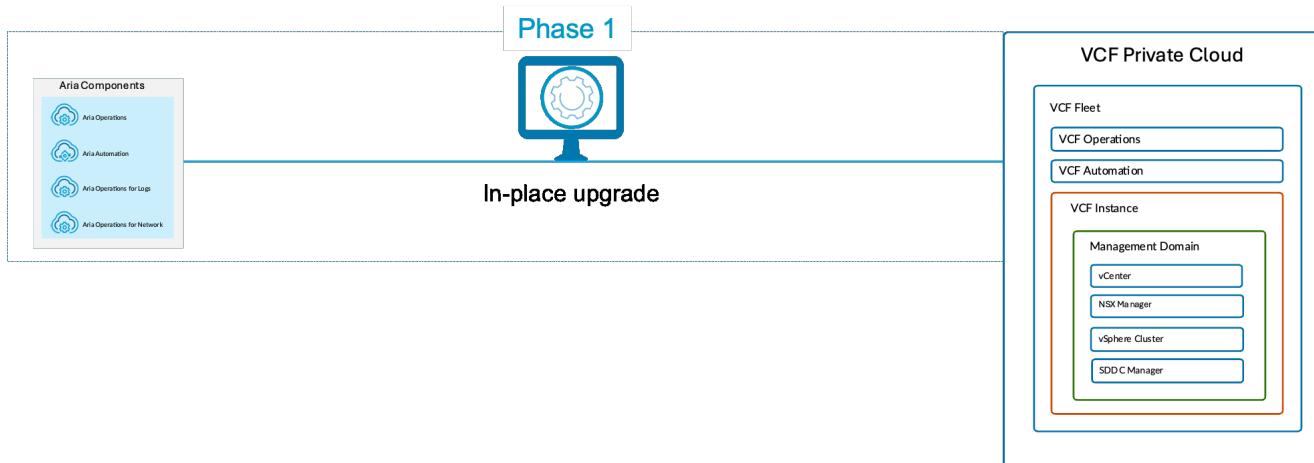
Phase 1: Upgrade Scenarios (3)

You use the VMware Aria Suite Lifecycle 8.18 appliance and the VCF Operations fleet management appliance to upgrade the Aria Component from version 8 to 9.

Aria component deployed	Supported versions for upgrade	Upgrade path
VMware Aria Operations, VMware Aria Automation, and VMware Aria Operations for Networks.	<ul style="list-style-type: none">- VMware Aria Operations 8.14 or later if managed by LCM- VMware Aria Operations 8.18 or later if managed by vCenter- VMware Aria Automation 8.18 or later- VMware Aria Operations for Networks 6.13 or later	<ol style="list-style-type: none">1. Install VMware Aria Operations 8.18.2. Download and apply the VMware Aria Suite Lifecycle 8.18 Patch 2 to the VMware Aria Suite Lifecycle.3. Use the VMware Aria Suite Lifecycle to upgrade to VCF Operations and install the fleet management appliance.4. Use the fleet management appliance to upgrade VCF Automation and VCF Operations for networks.

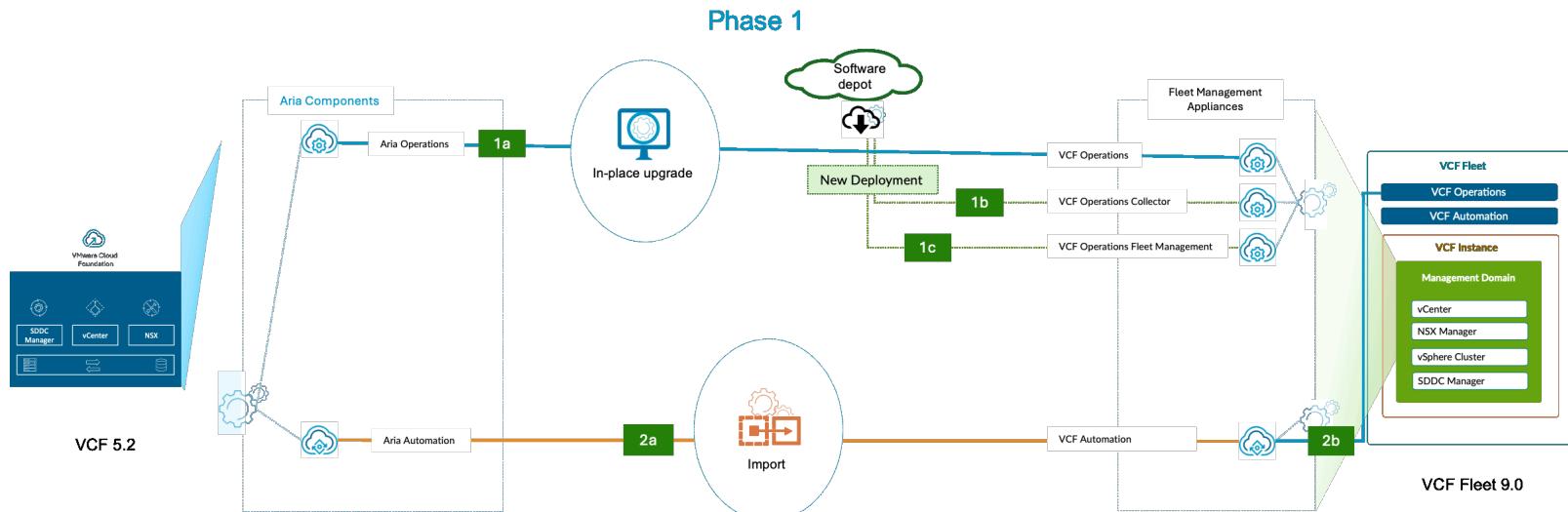
Phase 1: Upgrade Aria Components - Overview

In phase one, you upgrade Aria components to the respective VCF Fleet 9.0 management



Phase 1: Upgrade Aria Components - Sequence

In phase 1, you upgrade Aria components to the respective VCF Fleet 9.0 management component in a specific sequence.



-Design and Implement-

Upgrade from VCF 5.x with
Aria to VCF 9.0

iSIM #2

"Upgrade VCF 5.2 with Aria Suite
to VCF 9.0 iSIM"

iSIM #2

"Upgrade VCF 5.2 with Aria Suite
to VCF 9.0 iSIM"
(Screenshots and Walkthrough)

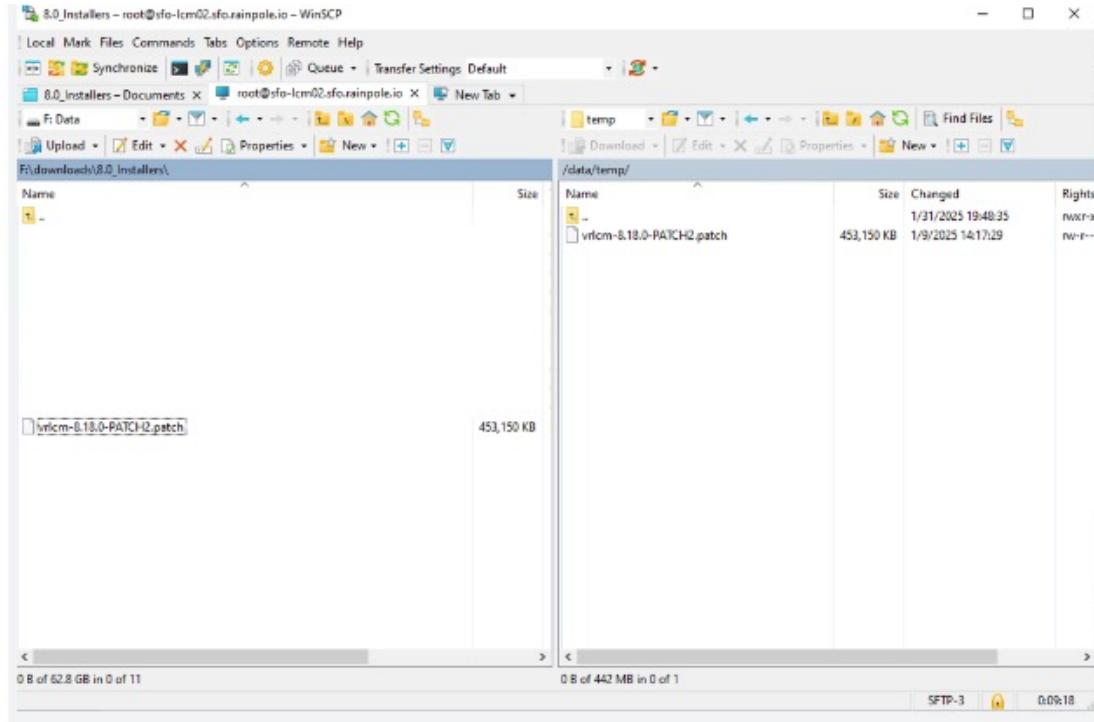
Upgrade the Aria Suite Lifecycle Manager: Login

Enter your credentials to log in to the Aria Suite Lifecycle Manager.

The screenshot shows the login interface for the VMware Aria Suite Lifecycle Manager. At the top, the VMware logo is displayed with the text "by Broadcom". Below it, the text "Welcome to" is followed by "VMware Aria Suite Lifecycle™". A message bar at the top indicates "You have been logged out because of session inactivity". The login form has a dropdown menu set to "Local User" and two input fields: one for the username "admin@local" and one for the password, which is obscured by dots. A "LOGIN" button is located at the bottom of the form.

Phase 1: Upgrade the Aria Suite Lifecycle Manager - Uploading Patch

Upload vrlcm-8.18.0-PATCH2.patch to Aria Suite Lifecycle Manager with SCP or WINSCP



Phase 1: Upgrade the Aria Suite Lifecycle Manager - Mapping Binary

You map the patch binary in Aria Suite Lifecycle Manager.

The screenshot shows the 'Binary Mapping' page in the VMware Aria Suite Lifecycle Manager. The left sidebar has links for Dashboard, Create Environment, Datacenters, Environments, Requests, and Settings, with 'Settings' being the active tab. The main header shows 'Home > Settings > Binary Mapping'. Below the header, there are three tabs: 'Product Binaries', 'Patch Binaries' (which is selected and highlighted in blue), and 'Patched Product Binaries'. There are two informational boxes: one with a blue background stating 'Patch binary can be added to VMware Aria Suite Lifecycle by uploading manually. You can download patches from [here](#)' and another with a yellow background warning 'Make sure you have enough free disk storage available to download patch. To extend the storage, [Click here](#) and update inside Extend storage section.' At the bottom, there is a button labeled 'ADD PATCH BINARY' and a table header with columns for Name, Version, and Description.

Phase 1: Upgrade the Aria Suite Lifecycle Manager - Adding Patch Binary

Enter the patch directory, click DISCOVER, and select the patch to add.

Add Patch Product Binary X

Required fields are marked with *

Source Location *

DISCOVER

Name
<input checked="" type="radio"/> vrlcm-8.1B.0-PATCH2.patch

1 - 1 of 1 Binaries 1 / 1

CANCEL **ADD**



Phase 1: Upgrade the Aria Suite Lifecycle Manager - Request for Patch Details

Your request is submitted, and you await its completion.

Home > Requests > cfa78390-d43f-403a-b526-b19fff9e8d42

Request Details

Successful	388ms
Stage 1	388ms

offline patch setting
(388ms)

Stage 1

The screenshot shows a 'Request Details' page from a web application. At the top, there's a breadcrumb navigation: 'Home' > 'Requests' > 'cfa78390-d43f-403a-b526-b19fff9e8d42'. Below it is a section titled 'Request Details' with a 'Request ID' field containing 'cfa78390-d43f-403a-b526-b19fff9e8d42'. The main content area displays a table with one row. The first column is labeled 'Successful' with a green checkmark icon, and the second column shows the time '388ms'. Below this table, under the heading 'offline patch setting (388ms)', is a vertical text 'Stage 1'. To the right of this text is a horizontal timeline consisting of three green circular dots connected by thin lines, indicating the sequence of steps or stages.

Phase 1: Upgrade the Aria Suite Lifecycle Manager - Navigating to System Patch

After adding the patch to the Aria Suite Lifecycle Manager, navigate to Settings > System Patches and create a snapshot.

The screenshot shows the VMware Aria Suite Lifecycle Manager interface. The top navigation bar includes the VMware Aria Suite Lifecycle logo and the text "Lifecycle Operations". The left sidebar contains links: Dashboard, Create Environment, Datacenters, Environments, Requests, and Settings. The main content area is titled "Settings" and "System Administration". It features three cards: "System Details" (with a server icon), "Logs" (with a document icon), and "System Patches" (with a key icon). Below this, under "Servers & Accounts", are three cards: "NTP Servers" (with a clock icon), "SNMP" (with a network icon), and "DNS" (with a circular arrow icon). At the bottom, a detailed view of the "System Patches" section is shown, with a sub-menu titled "System Patches". This sub-menu includes a "Patch Details" table with one row: "Current Patch" and "Not applied". There are also "CREATE SNAPSHOT" and "NEW PATCH" buttons. The bottom right corner of the main window has a "Logout" link.

Phase 1: Upgrade the Aria Suite Lifecycle Manager - Navigating to System Patch

Create the Snapshot



Phase 1: Upgrade the Aria Suite Lifecycle Manager - Creating Snapshot

Once the dialog box appears, fill in the required information to create a snapshot.

Create Snapshot

X



Ensure that the appliances are in a consistent state before triggering snapshots

Provide vCenter Server details where VMware Aria Suite Lifecycle is installed. You can [click here](#) to add new password(credential).

Required fields are marked with *

vCenter Hostname *

sfo-m01-vc01.sfo.rainpole.io

vCenter Credential *  

vcenter 

CANCEL

SUBMIT

Phase 1: Upgrade the Aria Suite Lifecycle Manager - Requesting Snapshot Details

Your request is submitted, and you await its completion.

The screenshot shows the 'Request Details' page of the Aria Suite Lifecycle Manager. The top navigation bar includes 'Home' (highlighted with a red box), 'Requests', and a request ID '06502468-9c15-447a-85b3-72b3f2108d13'. The main title is 'Request Details' with a document icon. Below it, a large box displays the status 'In Progress' with a duration of '560ms'. This box contains a single stage: 'Stage 1' with a green checkmark and a duration of '560ms'. To the right, the text 'Stage 1' is repeated vertically, followed by the label 'vasnapshot (560ms)' above a horizontal green line with three circular markers.

In Progress 560ms

✓ Stage 1 560ms

Stage 1

vasnapshot
(560ms)

Phase 1: Upgrade the Aria Suite Lifecycle Manager - Navigating to System Patch

After creating the snapshot, navigate to Settings > System Patches and select NEW PATCH.

The screenshot shows the VMware Aria Suite Lifecycle Manager interface. The top navigation bar includes the VMware Aria Suite Lifecycle logo and the text "Lifecycle Operations". Below the navigation bar, the left sidebar contains links: Home, Dashboard, Create Environment, Datacenters, Environments, Requests, and Settings. The "Settings" link is currently selected, highlighted in blue. The main content area is titled "Settings" and "System Administration". It features three cards: "System Details" (with a server icon), "Logs" (with a document icon), and "System Patches" (with a wrench icon). Below this, under "Servers & Accounts", are three cards: "NTP Servers" (with a clock icon), "SNMP" (with a network icon), and "DNS" (with a circular arrow icon). At the bottom of the main content area, there is a sub-navigation bar with the path "Home > Settings > System Patches" and a "System Patches" title. This sub-bar includes "Patch Details" sections for "Current Patch" (Not applied) and "Future Patch" (Not applied), along with "CREATE SNAPSHOT" and "NEW PATCH" buttons. A small watermark for "Broadcom Proprietary and Confidential" is visible in the bottom right corner of the main content area.

Phase 1: Upgrade the Aria Suite Lifecycle Manager - Navigating to System Patch

New Patch



Phase 1: Upgrade the Aria Suite Lifecycle Manager - Selecting Patch

You choose the Patch2 to install.

The screenshot shows the 'Install Patch' interface. On the left, a sidebar has 'Select Patch' selected. The main area is titled 'Select Patch' and contains a warning message: 'This action may restart VMware Aria Suite Lifecycle services which may cause tasks in progress to fail.' Below this, it says 'You can manage product patches from [Patch Binaries](#) page.' A table lists 'Patches available for VMware Aria Suite Lifecycle 8.18.0.' There is one entry: 'PATCH2' (selected), released on 'Monday, December 2, 2024 at 6:57:57 AM GMT+00:00' under the category 'bugfix'. The summary is 'Cumulative patch bundle for VMware Aria Suite Lifecycle' and the status is 'Available'. At the bottom, it shows '1-1 of 1 Patches' and a page number '1 / 1'. Buttons at the bottom right are 'CANCEL' and 'NEXT'.

Version/Level	Release Date	Category	Summary	Patch Status
PATCH2	Monday, December 2, 2024 at 6:57:57 AM GMT+00:00	bugfix	Cumulative patch bundle for VMware Aria Suite Lifecycle	Available

Phase 1: Upgrade the Aria Suite Lifecycle Manager - Installing The Patch

You review and install Patch2.

The screenshot shows a software interface titled 'Install Patch' with a sidebar on the left containing 'Select Patch' and 'Review and Install' buttons. The main area is titled 'Review and Install' and contains a message about taking product snapshots. Below this, a table displays details of the selected patch:

Name	VMware Aria Suite Lifecycle, version 8.18.0 Patch 2
Version/Level	PATCH2
Description	This cumulative patch bundle provides fixes to issues observed with various VMware Aria Suite Lifecycle components. Refer to the associated docURL for more details.
Release Date	Monday, December 2, 2024 at 6:57:57 AM GMT+00:00
Category	bugfix
Severity	critical
To know more visit	https://docs.vmware.com/en/VMware-vRealize-Suite-Lifecycle-Manager/8.18.0/rn/VMware-vRealize-Suite-Lifecycle-Manager-818-Patch-2.html

At the bottom right, there are 'CANCEL', 'BACK', and 'INSTALL' buttons.

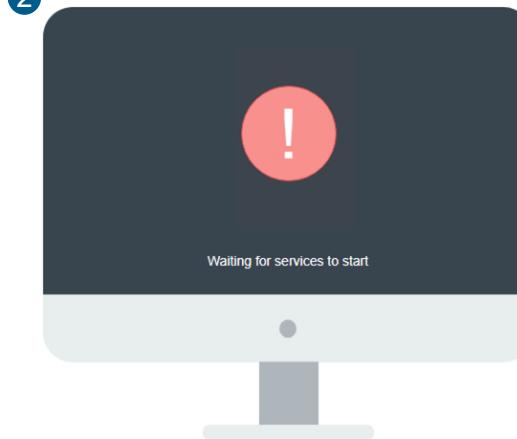
Phase 1: Upgrade the Aria Suite Lifecycle Manager - Installing The Patch

Install Patch

1



2



Phase 1: Upgrade Aria Operations - Uploading Upgrade Pack

Upload Operations -Upgrade pak and VCF-OPs -Lifecycle-Manager -Appliance ova to Aria Suite Lifecycle Manager with SCP or WINSSCP

Name	Size	Name	Size	Changed	Right
..		..		1/31/2025 20:27:25	rwxr--r--
Operations-Upgrade-9.0.0.0.pak	5,122,02...	Operations-Upgrade-9.0.0.0.pak	5,122,02...	1/31/2025 16:58:37	rw-r--r--
VCF-OPS-Lifecycle-Manager-Appliance-9.0.0.0.ova	1,852,20...	VCF-OPS-Lifecycle-Manager-Appliance-9.0....	1,852,20...	1/31/2025 16:59:17	rw-r--r--

Phase 1: Upgrade Aria Operations - Mapping Binary

After uploading the patch to Aria Suite Lifecycle Manager local storage, go to Settings, Binary Mapping, Product Binaries, and ADD BINARIES.

Home > Settings > Binary Mapping

Binary Mapping

Product Binaries Patch Binaries Patched Product Binaries

(i) Download VMware Aria product binaries from the [Broadcom Support Portal](#). After do

Add and map product binaries in VMware Aria Suite Lifecycle to us

ADD BINARIES **DELETE UNSUPPORTED BINARIES**

Product Name	Product Version	Product Binary Type

Phase 1: Upgrade Aria Operations - Add Product Binary

On the Add Product Binary page, click DISCOVER and select Binaries to ADD.

Add Product Binary X

Required fields are marked with *

Location Type * Local NFS

Required fields are marked with *

Base Location *

DISCOVER

Click here to view supported product versions for Install.

<input checked="" type="checkbox"/>	Name	Type
<input checked="" type="checkbox"/>	Operations-Upgrade-9.0.0.0.pak	upgrade
<input checked="" type="checkbox"/>	VCF-OPS-Lifecycle-Manager-Appliance-9.0.0.0.ova	install
<input checked="" type="checkbox"/>	2	

1 - 2 of 2 Binaries |< < 1 / 1 > >|

Selected product binaries are automatically mapped to product versions.

CANCEL **ADD**

Phase 1: Upgrade Aria Operations - Request Details

Your request is submitted, and you await its completion.

The screenshot shows a "Request Details" page with the following information:

- Path: Home > Requests > 3db7fb0f-8247-44be-ac77-f5877a3767ae
- Title: Request Details
- Status: Successful
- Duration: 575ms
- Stages:
 - Stage 1: sourcemapping (575ms)

Phase 1: Upgrade Aria Operations - Viewing Details

On the Lifecycle Operations console, go to Environments, select Operations Environment, and click on View Details.

The screenshot shows the VMware Aria Suite Lifecycle Operations interface. The left sidebar has a dark blue background with white text and icons. It includes links for Dashboard, Create Environment, Datacenters, Environments (which is highlighted in blue), Requests, and Settings. The main content area has a light gray background. At the top, it says "Home > Environments". Below that is a summary bar with "COMPLETED (4)", "IN PROGRESS (0)", and "FAILED (0)". A note says "'VMware Aria' is the new brand name for vRealize Product". The main section is titled "Aria Operations" and contains a "Datacenter" entry for "sfo-dc" with a yellow warning icon and the message "Information not available". Under "Products", there is an entry for "VMware Aria Operations" with its own icon. At the bottom of this section is a "VIEW DETAILS" button.

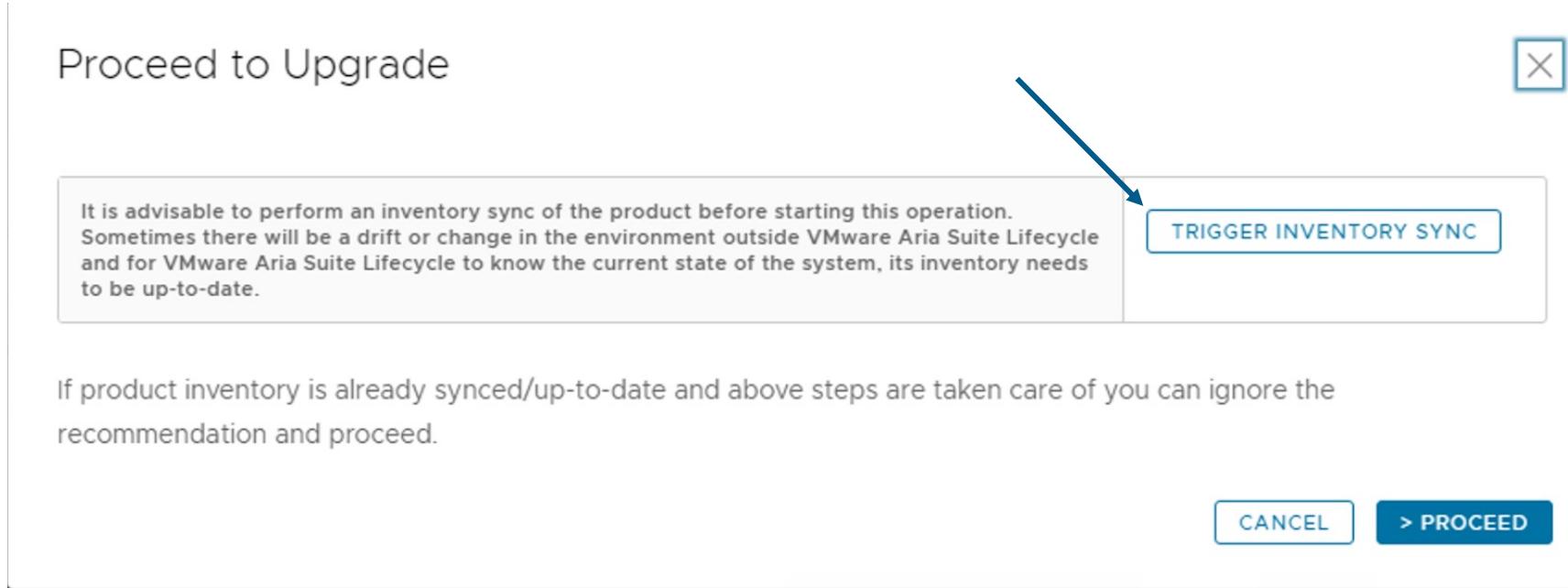
Phase 1: Upgrade Aria Operations - Selecting UPGRADE

click UPGRADE

The screenshot shows the VMware Aria Operations interface. At the top, there is a navigation bar with 'Home' (highlighted with a red box), 'Environments', and 'Aria Operations'. Below the navigation is a section titled 'Aria Operations' with a cloud icon. Underneath this, there is a sub-section titled 'Operations' with a gear icon. A horizontal bar contains an information icon and the text: "'VMware Aria' is the new brand name for vRealize Products. Refer [here](#) for more information." At the bottom of the interface, there is a header with the text 'VMware Aria Operations 8.18.0', a '+ ADD COMPONENTS' button, an 'UPGRADE' button (highlighted with a red box), and a '...' button.

Phase 1: Upgrade Aria Operations - Syncing Inventory

Click Trigger inventory sync, and then click Proceed



Phase 1: Upgrade Aria Operations - Syncing Inventory

Click Trigger inventory sync, and then click Proceed

Trigger Inventory Sync X

- ⓘ Sometimes there will be a drift or change in the environment outside VMware Aria Suite Lifecycle and for VMware Aria Suite Lifecycle to know the current state of the system, its inventory needs to be up-to-date.

During inventory sync, product actions such as Upgrade, Patch, Snapshots will not be available. Do you want to start inventory sync? After clicking submit you will be taken to the request status page.

CANCEL

SUBMIT



Phase 1: Upgrade Aria Operations - Syncing Inventory

Click Trigger inventory sync, and then click Proceed

Proceed to Upgrade



It is advisable to perform an inventory sync of the product before starting this operation. Sometimes there will be a drift or change in the environment outside VMware Aria Suite Lifecycle and for VMware Aria Suite Lifecycle to know the current state of the system, its inventory needs to be up-to-date.

TRIGGER INVENTORY SYNC

If product inventory is already synced/up-to-date and above steps are taken care of you can ignore the recommendation and proceed.

CANCEL

> PROCEED



Phase 1: Upgrade Aria Operations - Proceeding to Upgrade

Once the sync is completed, click Upgrade again and then click PROCEED.

The screenshot shows the VMware Aria Operations interface. At the top, there is a navigation bar with 'Home' (highlighted in blue), 'Environments', and 'Aria Operations'. Below the navigation bar, the title 'Aria Operations' is displayed next to a cloud icon. Underneath the title, there is a sub-navigation bar with 'Operations' (highlighted in blue) and 'Cloud'. A tooltip message "VMware Aria" is the new brand name for vRealize Products. Refer [here](#) for more information." is shown. At the bottom of the interface, there is a header with the text 'VMware Aria Operations 8.18.0' and three buttons: '+ ADD COMPONENTS', 'UPGRADE', and '...'. The 'UPGRADE' button is highlighted in blue.

Phase 1: Upgrade Aria Operations - Selecting Version

Select product version 9.0

The screenshot shows the 'Upgrade VMware Aria Operations' wizard. The current step is 'Select Version', which is highlighted with a green checkmark icon. The steps are represented by arrows: 'Select Version' (green), 'APUAT' (light gray), 'Snapshot' (light gray), 'Precheck' (light gray), and 'Upgrade Summary' (light gray). The title bar reads 'Home > Environment > Aria Operations > Upgrade VMware Aria Operations'. The main content area is titled 'Select Version' and contains the following information:

- A circular icon with a blue 'C' and a green '+' symbol, labeled 'Operations'.
- A link to view supported product versions for upgrade: [click here](#).
- A note that required fields are marked with *.
- A 'Product Version' field set to '9.0.0'.
- A 'Repository URL' field containing the value: `http://sfo-lcm02.sfo.rainpole.io/repo/productBinariesRepo/vrops/9.0.0/upgrade/Operations-Upgrade-9.0.0.0.pak`.
- A 'VIEW COMPATIBILITY MATRIX' button at the bottom left.

Phase 1: Upgrade Aria Operations - Choosing License

Select license as VCF

The screenshot shows the 'Upgrade VMware Aria Operations' wizard. The current step is 'Choose License'. The navigation bar at the top includes 'Home > Environment > Aria Operations > Upgrade VMware Aria Operations' and a title 'Upgrade VMware Aria Operations'. Below the title is a progress bar with six steps: 'Select Version' (green checkmark), 'Choose License' (green checkmark), 'APUAT' (gray), 'Snapshot' (gray), 'Precheck' (gray), and 'Upgrade Summary' (gray). The 'Choose License' step is highlighted with a gray background. On the left, there's a sidebar with the heading 'Choose License'. The main content area shows a 'Choose license *' field with two options: 'VCF' (selected, indicated by a blue circle with a white dot) and 'VVF' (unselected, indicated by an empty circle). A note below says 'Management Lifecycle won't be deployed for VVF license'.

Phase 1: Upgrade Aria Operations - Running APAUT

Run Assessment or APAUT

The screenshot shows a progress bar with five steps: 'Select Ve...', 'Choose Li...', 'APAUT' (which is highlighted in light blue), 'Snapshot', and 'Infrastruc...'. Below the bar, the word 'APAUT' is displayed. A green message box contains the text: 'Assessment completed. Check report for more information.' At the bottom, there are three buttons: 'RE-RUN ASSESSMENT' (blue), 'VIEW REPORT' (white), and 'DOWNLOAD REPORT' (white). A checkbox at the bottom left is checked, with the text: 'I have viewed the report and agree to proceed.'

Home > Environment > Aria Operations > Upgrade VMware Aria Operations

① Upgrade VMware Aria Operations

APAUT

Assessment completed. Check report for more information.

RE-RUN ASSESSMENT VIEW REPORT DOWNLOAD REPORT

I have viewed the report and agree to proceed.

Phase 1: Upgrade Aria Operations - Taking Product Snapshot

Take the current Product Snapshot

The screenshot shows a step-by-step upgrade wizard for VMware Aria Operations. The top navigation bar includes links to Home, Environment, Aria Operations, and Upgrade VMware Aria Operations. The main title is "Upgrade VMware Aria Operations". Below the title, a progress bar shows four steps: "Select Ve...", "Choose Li...", "APUAT", and "Snapshot", with the last step being the current active step. The "Snapshot" section contains a message: "We recommend you follow product best practices of taking Snapshot prior to initiating an Upgrade." Two checkboxes are present: "Take product snapshot" (which is checked) and "Retain product snapshot taken" (which is unchecked).

Home > Environment > Aria Operations > Upgrade VMware Aria Operations

⊕ Upgrade VMware Aria Operations

✓ Select Ve... ✓ Choose Li... ✓ APUAT ✓ Snapshot

Snapshot

ⓘ We recommend you follow product best practices of taking Snapshot prior to initiating an Upgrade.

Take product snapshot
 Retain product snapshot taken

Phase 1: Upgrade Aria Operations - Configuring infrastructure

Fill in the required infrastructure information

The screenshot shows the "Upgrade VMware Aria Operations" wizard in progress, specifically the "Infrastructure" step. The top navigation bar includes links for Home, Environment, Aria Operations, and Upgrade VMware Aria Operations. Below the navigation is a progress bar with four steps: Select Version (green checkmark), Choose License (green checkmark), API/JAT (green checkmark), and Snapshot (green checkmark). The main area is titled "Infrastructure" and contains the following configuration fields:

- Select vCenter Server: stfo-m01-vc01.stfo.rainpole.io
- Select Cluster: stfo-m01-dc01#stfo-m01-dc01
- Select Folder: SELECT FOLDER
- Select Resource Pool: SELECT RESOURCE POOL
- Select Network: stfo-m01<107>vds01-phys-vm
- Select Datastore: stfo-m01<105>ds01 (7.78TB Free)
- Select Disk Mode: Thin
- VM Name: stfo-fm01
- FQDN: stfo-fm01.stfo.rainpole.io
- IP Address: (empty field)
- Admin Password: VCF Operations Fleet Manager (with a password strength icon)
- Root Password: VCF Operations Fleet Manager (with a password strength icon)

A note at the top of the configuration section states: "Provide deployment details for the management node. Management node is a new appliance required to manage VCF components. Management Lifecycle will replace vRSLCM for 9.0. When VMware Aria Operations is upgraded to VCF Operations 9.0 under VCF entitlement, it introduces a new feature called Fleet Management. Fleet Management offers lifecycle management capabilities for management and core components, along with features like Unified Certificate and Password Management, Tags, and Configuration Drift management."

Phase 1: Upgrade Aria Operations - Configuring Network

Fill in the required network information

④ Upgrade VMware Aria Operations

Select Version Choose License APUAT Snapshot Infrastructure

Network

Provide network details for the management node. Management node is a new appliance required to manage VCF components. Management lifecycle will replace vRSLC.
When VMware Aria Operations is upgraded to VCF Operations 9.0 under VCF entitlement, it introduces a new feature called Fleet Management.
Fleet Management offers lifecycle management capabilities for management and core components, along with features like Unified Certificate and Password Management.

Domain Name * sfo.rainpole.io

Domain Search Path * sfo.rainpole.io

ADD NEW SERVER **EDIT SERVER SELECTION**

Priority	Server	IP Address
1	DNS-1	
2	DNS-2	

DNS Servers *

Time Sync Mode Use NTP Server Use Host Time

ADD NEW SERVER **EDIT SERVER SELECTION**

Priority	Server	FQDN/IP Address
1	NTP-1	ntp0.sfo.rainpole.io
2	NTP-2	ntp1.sfo.rainpole.io

IPv4 Details

Default IPv4 Gateway *

IPv4 Netmask *

Phase 1: Upgrade VMware Aria Operations - Running PreChecks

You run the precheck to execute the data validation.

The screenshot shows two views of the "Upgrade VMware Aria Operations" interface. The top view is a summary step titled "Precheck" with a "RUN PRECHECK" button. The bottom view is the detailed "Precheck" report page, which displays validation status for various components: All validations passed for the environment, VMware Aria Operations Validations (Warning), Fleet Management Node Validations (Passed), and Fleet Management Node Infra Validations (Passed). The report was last updated on 2/3/25, 12:47 PM.

① Upgrade VMware Aria Operations

Select Ve... Choose Li... APUAT Snapshot Infrastructure Network Precheck Upgrade...

Precheck

Click on RUN PRECHECK button to execute data validations.
If errors or warnings appear, follow the instructions from the recommended actions. Run again if needed.

RUN PRECHECK

② Upgrade VMware Aria Operations

Select Ve... Choose Li... APUAT Snapshot Infrastructure Network Precheck Upgrade...

Precheck

All validations passed for this environment.

Click on RE-RUN PRECHECK button to execute data validations.
If errors or warnings appear, follow the instructions from the recommended actions. Run again to verify fixes.

RE-RUN PRECHECK DOWNLOAD REPORT Last updated on 2/3/25, 12:47 PM

VMware Aria Operations Validations (Warning)

Fleet Management Node Validations (Passed)

Fleet Management Node Infra Validations (Passed)

Phase 1: Upgrade Aria Operations - Running Upgrade

You click Submit to start the upgrade.

① Upgrade VMware Aria Operations

✓ Select Version ✓ Choose License ✓ APUAT ✓ Snapshot ✓ Infrastructure ✓ Network ✓ Precheck ✓ Upgrade Summary

Upgrade Summary

 Operations

▲ Upgrade Details

Version	9.0.0
Repository Type	VMware Aria Suite Lifecycle Repository
Repository URL	http://sfo-lcm01.sfo.rainpole.io/repo/productBinariesRepo/vrops/9.0.0/upgrade/Operations-Upgrade-9.0.0.pak
Take Product Snapshot	true
Auto revert	false
Retain Product Snapshot	false
properties	{object Object}

Phase 1: Upgrade Aria Operations - Running Upgrade

Submit Request

1



Upgrade VMware Aria Operations

The screenshot shows the 'Upgrade Details' page for an upgrade to version 9.0.0. The page includes fields for Version (9.0.0), Repository Type (VMware Aria Suite Lifecycle Repository), Repository URL (<http://vfc-kcm.sfo.rainpole.io/repo/productfinariesRepo/vrops/9.0.0/upgrade/Operations-upgrade-9.0.0.0.24566536.pak>), Take Product Snapshot (true), Auto revert (false), Retain Product Snapshot (false), and properties [object object].

2



Request Details



Phase 1: Import Aria Automation - Log in to VCF Operations Console

Aria Automation will transition from Aria Suite Lifecycle Manager to VCF Operations Fleet Manager, now known as VCF Automation, while Aria Suite Lifecycle will replace VCF Operations Fleet Manager.

If you have multiple Aria Automation instances, select the one that is to be integrated with VCF Operations; the other instances can be non-integrated.

- Log in to VCF Operations Console

VMware Cloud Foundation
Operations™

Login Method *

Local Account

Username *

Enter Username

Password *

Enter Password



LOG IN

Phase 1: Import Aria Automation - Adding Automation

To import Aria automation from the VCF Ops UI, you add automation by navigating to Fleet Management > Lifecycle > VCF Management. Overview

The screenshot shows the VMware Cloud Foundation Operations interface. The left sidebar is titled "Lifecycle" and includes sections for Home, Inventory, Infrastructure Operations, Workload Operations, Fleet Management (which is expanded to show Identity & Access, Certificates, Passwords, Tags, and Configuration Drifts), Capacity, Security, License Management, Administration, and Developer Center. The main content area is titled "VCF Management" and has tabs for Overview, Components, Tasks, Binary Management, Depot Configuration, and Settings. The "Overview" tab is selected. Below it, there's a section titled "Product Components" containing four items: "VCF Operations" (with "operations" listed under "New Deployment"), "operations-logs" (status: "Not added"), "Discover Audit Log Trends for your VCF Environment", and "MANAGE" and "LEARN MORE" buttons; "operations-networks" (status: "Not added"), which is described as "Get a holistic view of your VCF network's health, issues, and operations in one place", and "ADD" and "LEARN MORE" buttons; "automation" (status: "Not added"), which is described as "Enable IaaS consumption for application teams governed by robust policies", and "ADD" and "LEARN MORE" buttons; and "identity broker" (status: "Not added"), which is described as "Configure Single Sign-On identity sources for a seamless login experience", and "ADD" and "LEARN MORE" buttons. The "automation" component is highlighted with an orange border.

Phase 1: Import Aria Automation - Importing from Legacy Fleet Management

Select Import from Legacy Fleet Management (Aria Suite Lifecycle Manager)

The screenshot shows the VCF Management interface with the following details:

- Header:** VCF Management
- Navigation:** Overview, Components, Tasks, Binary Management, Depot Configuration, Settings
- Backlink:** < RETURN TO COMPONENTS
- Component Name:** automation
- Deployment Status:** Deployment (indicated by a checked checkbox icon)
- Deployment Section:** Deployment
- Required Fields Note:** Required fields are marked with *
- Installation Type:** Installation Type *
 New Install Import Import from legacy Fleet Management

Phase 1: Import Aria Automation - Fleet Management Configuration

Input the details for the legacy fleet management appliance. (Aria LCM)

The screenshot shows a progress bar at the top with three steps: 'Fleet Management Configuration' (highlighted in blue), 'Select VCF Automation Instance' (grey), and 'Review' (grey). Below the progress bar is a section titled 'VCF Operations Fleet Management Appliance Configuration'. It contains a note: 'Please provide FQDN for your old VCF Operations Fleet Management Appliance environment to explore components for importing.' A note also states: 'Required fields are marked with *'. There are four input fields: 'VCF Operations Fleet Management Appliance FQDN *' containing 'sfo-lcm01.sfo.rainpole.io', 'Username *' containing 'admin@local', 'Admin Password *' containing '*****', and 'Root Password *' containing '*****'. Each password field has a 'copy' icon to its right.

VCF Operations Fleet Management Appliance Configuration

Please provide FQDN for your old VCF Operations Fleet Management Appliance environment to explore components for importing.

Required fields are marked with *

VCF Operations Fleet Management Appliance FQDN *

admin@local

Phase 1: Import Aria Automation - Selecting the Aria Automation instance

Select the Aria Automation instance. If you have multiple Aria Automation instances, choose the one to be integrated with VCF Operations.

The screenshot shows the VCF Management interface with the following details:

- Header:** VCF Management
- Navigation Bar:** Overview, Components, Tasks, Binary Management, Depot Configuration, Settings
- Current View:** Fleet Management Configuration
- Action Bar:** Select Aria Automation Instance
- Section:** Select Component
- Text:** Selected component: sfo-vra01a.sfo.rainpole.io
- Table:** A list of components, with one item selected.

Component
Aria Automation (sfo-vra01a.sfo.rainpole.io)

Phase 1: Import Aria Automation – Submit

Select the Aria Automation instance. If you have multiple Aria Automation instances, choose the one to be integrated with VCF Operations.

The screenshot shows the VCF Management interface with the 'Review' tab selected. At the top, there are two checked checkboxes: 'Fleet Management Configuration' and 'Select Aria Automation Instance'. To the right of these is a 'Review' button. Below the checkboxes, the 'Review' section header is visible, followed by the instruction 'Review the component which would be imported into Operations.' A table lists the components being imported:

from VCF Operations Fleet Management Appliance	sfo-lcm01.sfo.rainpole.io
component VMware Aria Automation	sfo-vra01a.sfo.rainpole.io

A yellow warning box contains the following text:

- You can import multiple VMware Aria Automation instances from a given Fleet Management (VMware Aria Suite Lifecycle) or multiple Fleet Management instances, but only the first Aria Automation instance being imported will be marked as Integrated. All other Aria Automation instances will be marked as non-integrated.
- Once a component is marked as Integrated, this action cannot be undone.
- Identity Manager is not imported into VCF Operations 9.x. It will be managed by VMware Aria Suite Lifecycle 8.x. Automation imported into VCF Operations will function without any disruptions.
- The imported Aria Automation 8.x will have restricted Day-2 operations till upgrade is performed to version 9.0.
- Non-integrated automation components will not have fleet management capabilities such as certificate and password management. These must be executed manually using fleet management APIs.
- If an upgrade fails on an imported automation component marked as integrated, remove the component from fleet management. Power on the Aria Automation appliances, ensure they are healthy, re-import the component into fleet management, and re-trigger the upgrade. Click here to learn more about the entire process.

At the bottom, there is an unchecked checkbox labeled 'I understand that integration is irreversible action and want to proceed with importing VMWare Aria Automation'.

Phase 1: Import Aria Automation – Workflow

The workflow will go and should go quickly

VCF Management

Overview Components Tasks Binary Management Depot Configuration vCenters Settings

[RETURN TO TASKS](#)

Successful 1m 32s

Stage 1 1m 32s

invokemigration (1m 32s)

Stage 1

The screenshot shows the VCF Management interface with a successful task named "Stage 1" completed in 1m 32s. The task details show it involved "invokemigration". Below the task list is a visual timeline for Stage 1, represented by a series of green dots connected by a wavy line, indicating the progression of the migration process.

Phase 1: Upgrade Aria Automation - Overview

Aria Automation 8 will be upgraded through the VCF Operations Fleet Manager as VCF Automation 9.0.

ADD COMPONENT ▾ Set version: VCF 9.0 PLAN UPGRADE

Integrated Components

Component	FQDN/IP	VCF Instance	Current Version	Target Version	Status	Action
automation	sfo-vra01a.sfo.rainpole.io		8.18.0		New Deployment	MANAGE
operations	sfo-vrops01a.sfo.rainpole.io		9.0.0.0		New Deployment	MANAGE

1 - 2 of 2 Components 1 / 1

Phase 1: Upgrade Aria Automation - Planning Upgrade

After completing the import, create an upgrade plan by navigating to Components and clicking Plan Upgrade.

Plan Upgrade

X

VCF Version: 9.0

Component	FQDN/IP	VCF Instance	Current Version	Target Version	Target Build
automation	sfo-vra01a.sfo.rainpole.io		8.18.0	<u>9.0.0.0</u>	
operations	sfo-vrops01a.sfo.rainpole.io		9.0.0.0	<u>9.0.0.0</u>	

1 - 2 of 2 Components |< < 1 / 1 > >|

CANCEL **CREATE PLAN**

Phase 1: Upgrade Aria Automation - Create an Upgrade Plan

After completing the import, create an upgrade plan by navigating to Components and clicking Plan Upgrade.

Integrated Components

Component	FQDN/IP	VCF Instance	Current Version	Target Version	Status	Action
automation	sfo-vra01a.sfo.rainpole.io		8.18.0	9.0.0.0	Pending Upgrade	UPGRADE
operations	sfo-vrops01a.sfo.rainpole.io		9.0.0.0	9.0.0.0	In Compliance	MANAGE

1 - 2 of 2 Components | < < 1 / 1 > >|

Phase 1: Upgrade Aria Automation - Starting Upgrade

After creating the plan, VCF Automation will display a pending upgrade status next to it. Click UPGRADE to start the upgrade process.

Integrated Components

Component	FQDN/IP	VCF Instance	Current Version	Target Version	Status	Action
automation	sfo-vra01a.sfo.rainpole.io		8.18.0	9.0.0.0	Pending Upgrade	UPGRADE
operations	sfo-vrops01a.sfo.rainpole.io		9.0.0.0	9.0.0.0	In Compliance	MANAGE

1 - 2 of 2 Components | < < 1 / 1 > >|

Phase 1: Upgrade Aria Automation - Syncing Inventory

Before beginning the upgrade operation, you must sync the inventory.

Proceed to Upgrade X

⚠️ In the latest version, a few features you are currently using will no longer be available. Please ensure you are aware of these changes and confirm your acceptance before proceeding.

- Shared infrastructure multi-tenancy capabilities of VMware Aria Automation, such as Virtual Private Zone and provider image management. [Click here](#) to check more details.
- The ability to add VMware Cloud Director as a cloud account in VMware Aria Automation. [Click here](#) to check more details.
- Cloud Consumption Interface (CCI) [Click here](#) and [here](#) to check more details.
- Kubernetes integration capabilities, including TKG and TMC integration. [Click here](#) to check more details.

If you are using any of these features, we recommend removing any relevant configurations before proceeding with the upgrade to avoid unplanned disruptions. For more information, please review the release notes or contact your Broadcom Support.

ⓘ IMPORTANT: Before you proceed with your upgrade, check that you are entitled to version 9.x.

After you upgrade VCF to version 9.x, you must assign version 9.x licenses to your environment. After the upgrade, VCF components are in evaluation mode for up to 90 days. You must assign the new licenses before the evaluation period expires.

For more information on how to license version 9.x, view the documentation.

I understand that some features will no longer be available in the latest version, and I am okay with proceeding with the upgrade.

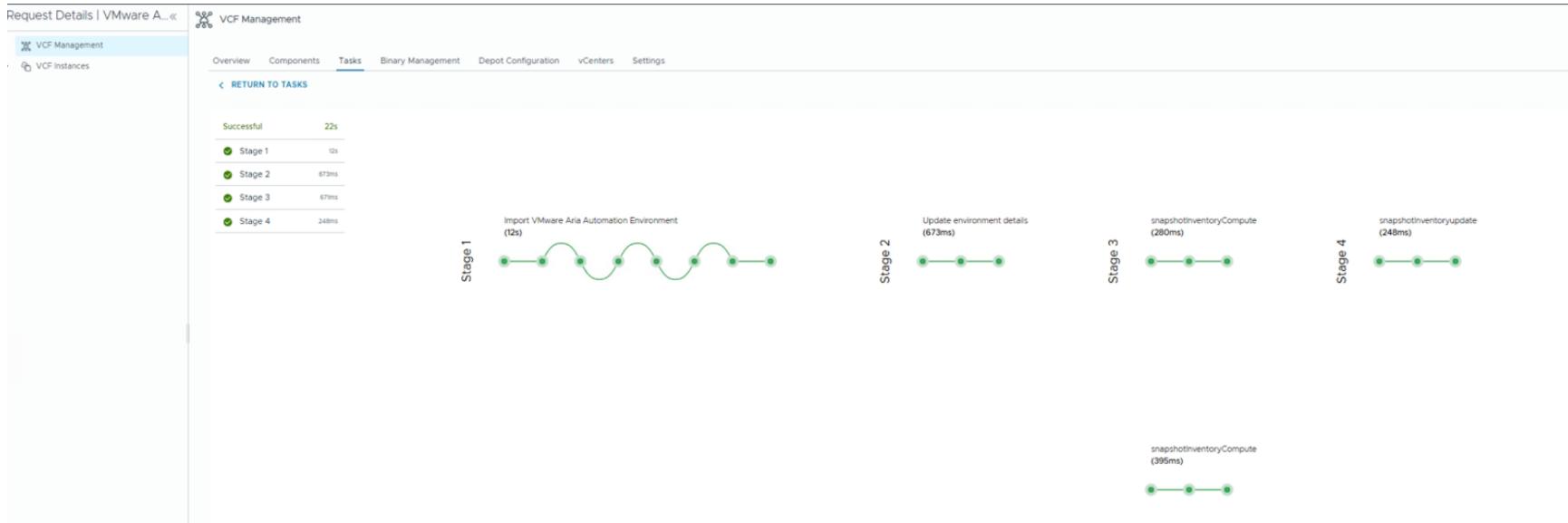
It is mandatory to perform an inventory sync before performing this operation. Sometimes there will be a drift or change in the environments outside VCF Operations Fleet Management Appliance and for VCF Operations Fleet Management Appliance to know the current state of the system, its inventory needs to be up-to-date.

TRIGGER INVENTORY SYNC

CANCEL **PROCEED**

Phase 1: Upgrade Aria Automation - Syncing Inventory

Before beginning the upgrade operation, you must sync the inventory.



Phase 1: Upgrade Aria Automation - Proceeding to Upgrade

After the inventory sync is completed, click PROCEED to continue the upgrade process.

Proceed to Upgrade X

⚠ In the latest version, a few features you are currently using will no longer be available. Please ensure you are aware of these changes and confirm your acceptance before proceeding.

- Shared infrastructure multi-tenancy capabilities of VMware Aria Automation, such as Virtual Private Zone and provider image management. [Click here](#) to check more details.
- The ability to add VMware Cloud Director as a cloud account in VMware Aria Automation. [Click here](#) to check more details.
- Cloud Consumption Interface (CCI) [Click here](#) and [here](#) to check more details.
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For more information on how to license version 9.x, view the documentation.

I understand that some features will no longer be available in the latest version, and I am okay with proceeding with the upgrade.

It is mandatory to perform an inventory sync before performing this operation. Sometimes there will be a drift or change in the environments outside VCF Operations Fleet Management Appliance and for VCF Operations Fleet Management Appliance to know the current state of the system, its inventory needs to be up-to-date.	TRIGGER INVENTORY SYNC
---	--

Inventory Sync is complete.

[CANCEL](#) [PROCEED](#)

Phase 1: Upgrade Aria Automation - Selecting Infrastructure

Select the appropriate infrastructure from the infrastructure page

The screenshot shows the 'Create Component' wizard with the 'Infrastructure' step selected. The wizard has five steps: Infrastructure, Network, Components, Precheck, and Summary. The 'Infrastructure' step contains a note about vCenter availability and a list of three steps to resolve it. Below the note, there are fields for selecting a Primary Cluster, including vCenter Server, Cluster, Folder, Resource Pool, Network, and Datastore.

automation

Infrastructure

① If the desired vCenter is not available then:
1. Go to VCF Operations → Administration → Integrations → Accounts and add the vCenter/VMware Cloud Foundation
2. Navigate to VCF Operations → Lifecycle → VCF Management → Settings → Deployment Targets. Add and validate the required Deployment Target
3. Once completed, return to the "Create Component" wizard and select the Deployment Target to continue

Primary Cluster

Required fields are marked with *

Select vCenter Server * sfo-m01-vc01.sfo.rainpole.io

Select Cluster * sfo-m01-cl01#sfo-m01-cl01

Select Folder SELECT FOLDER..

Select Resource Pool SELECT RESOURCE POOL..

Select Network * sfo-m01-cl01-vds01-pg-vm

Select Datastore * sfo-m01-cl01-ds01 (11.88TB Free)

Phase 1: Upgrade Aria Automation - Validating Network Information

Validate the Network information on the NETWORK page

automation

Infrastructure Network Components Precheck Summary

Network
required fields are marked with *

Primary Cluster

Domain Name * sfo.rainpole.io

Domain Search Path * sfo.rainpole.io

ADD NEW SERVER **EDIT SERVER SELECTION**

Priority	Server	IP Address
1	DNS1	
2	DNS2	

Time Sync Mode Use NTP Server Use Host Time

ADD NEW SERVER **EDIT SERVER SELECTION**

NTP Servers *

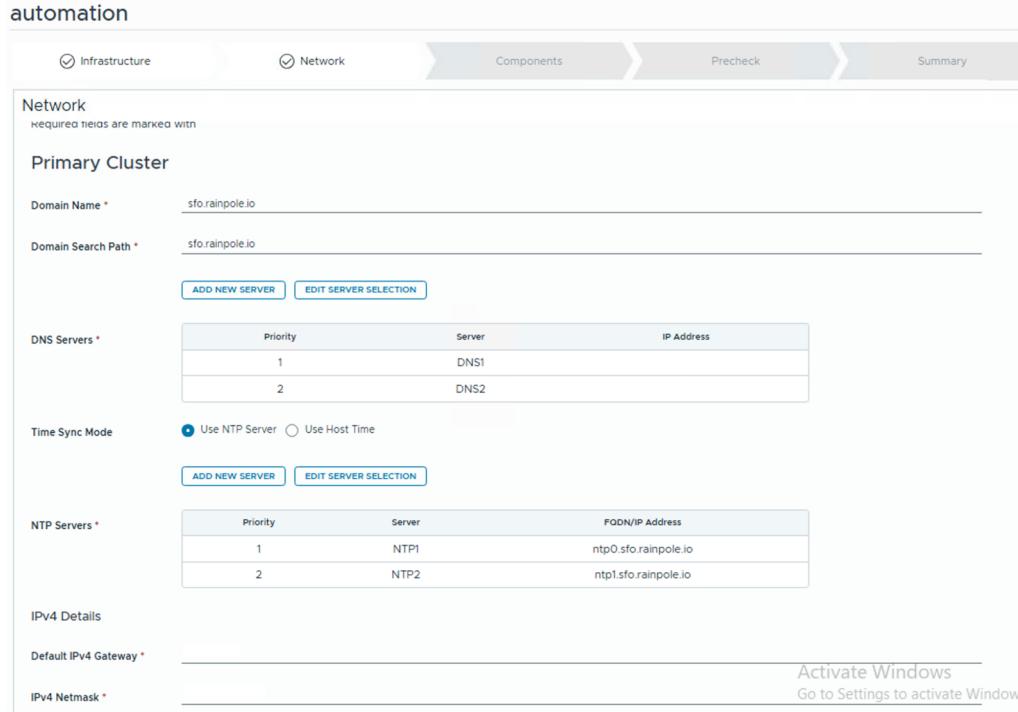
Priority	Server	FQDN/IP Address
1	NTP1	ntp0.sfo.rainpole.io
2	NTP2	ntp1.sfo.rainpole.io

IPv4 Details

Default IPv4 Gateway * _____

IPv4 Netmask * _____

Activate Windows
Go to Settings to activate Windows.



Phase 1: Upgrade Aria Automation - Configuring the Component

On the Component page, you add the certificate, password, and cluster virtual IP.

The screenshot shows the Aria Automation interface with the 'Components' tab selected. A single component named 'vcfa' is listed under the 'Components' section. The configuration details for 'vcfa' include:

- PODN:** sfo-vra0la.sfo.rainpole.io
- Controller Type:** Internal Load Balancer

Below the main component configuration, there is a section for 'Componentz' (with a note to 'Fill all the nodes with proper details'). This section includes:

- Node Prefix:** vcf-a-mgmt
- Primary VIP:** 100.64.0.0/15
- Internal Cluster CIDR:** 100.64.0.0/15
- Additional VIPs:** A button labeled 'ADD ADDITIONAL VIP POOL'.

At the bottom of the page, there is a note: 'Activate Windows. Go to Settings to activate Windows.'

Phase 1: Upgrade Aria Automation - Running the Upgrade Process

Review and run the upgrade process.

The screenshot shows the VCF Management interface under the Lifecycle tab. The left sidebar has 'VCF Management' selected. The main area shows a 'Precheck' section with four tabs: Infrastructure, Network, Components, and Precheck. Below these tabs is a 'Precheck' button. A callout box highlights the 'RUN PRECHECK' button with the following instructions:

- Click on RUN PRECHECK button to execute data validations.
- If errors or warnings appear, follow the instructions from the recommended actions. Run again to verify fixes.

Phase 1: Upgrade Aria Automation - Running Precheck

Run Precheck to validate the provided information

The screenshot shows the Aria Automation component details page. At the top, there are tabs for Overview, Components, Tasks, Binary Management, Depot Configuration, and Settings. Below these is a 'RETURN TO COMPONENTS' link. The main title is 'automation'. Underneath are five filter tabs: Infrastructure, Network, Components, Precheck (which is selected), and Summary. The 'Details' tab is currently active, while 'Topology' is shown as a link. The main content area displays the 'Component Properties' for the 'automation' component. It includes fields for Certificate (Aria Automation_IMPORTED_AUTO_GENERATED_4413472a-44a5-4698-b31c-78a8558be571), Component Password (Aria Automation-15 characters_IMPORTED_AUTO_GENERATED_a9027fb5-8810-40ce-b7e5-7661a12117cf), FQDN (sfo-vra01a.sfo.rainpole.io), and Deployment Type (small). Below this, the 'Cluster VIP' section shows 'sfo-vra01a' (VCF Automation Primary) with an 'EXPAND ALL' button. Underneath are sections for Infrastructure, Network, and Other.

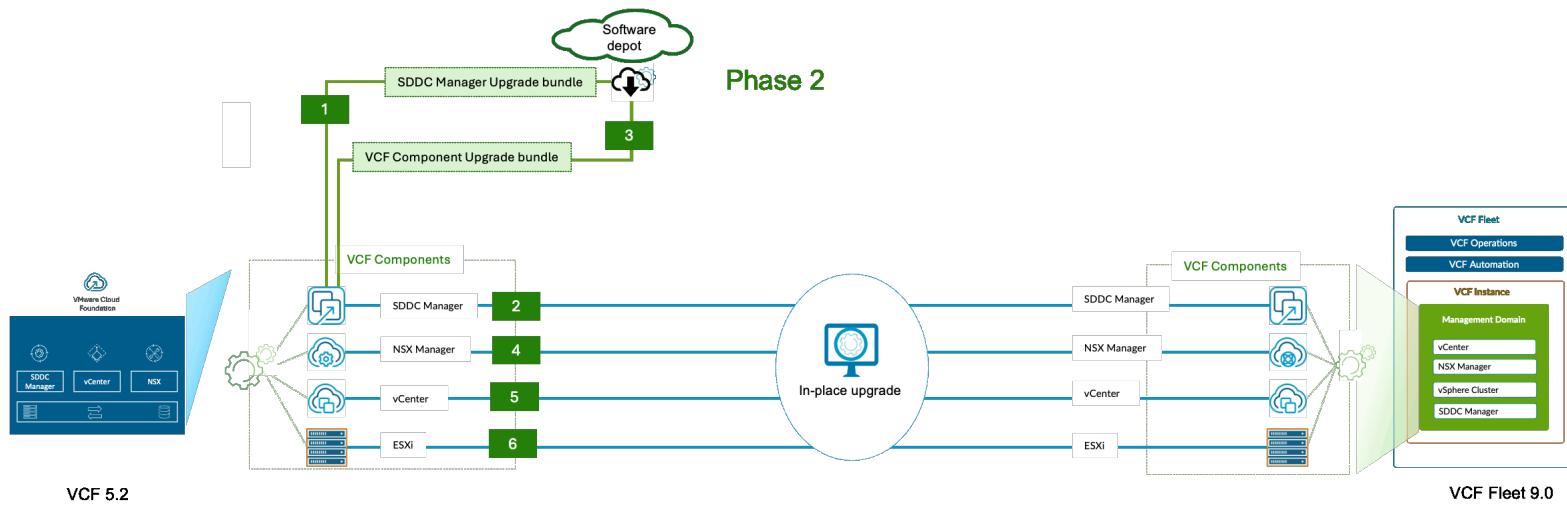
Phase 1: Upgrade Aria Automation - Upgrade

Upgrade Complete

Component	FQDN/IP	VCF Instance	Current Version	Target Version	Status	Action
automation	sfo-vra0ta.sfo.rainpole.io		9.0.0.0	9.0.0.0	In Compliance	MANAGE
operations	sfo-vrops0ta.sfo.rainpole.io		9.0.0.0	9.0.0.0	In Compliance	MANAGE

Phase 2: VCF 5.2 Core Component Upgrade - Overview

You upgrade the VCF 5.2 components to version 9.0 in a specific sequence.



Phase 2: VCF 5.2 Core Component Upgrade - Consideration

You must consider the following task and its relevance.

Task	Applies When	Comment
Run the precheck and apply the VMware Cloud Foundation Upgrade Bundle.	The initial VMware Cloud Foundation version is 5.x.	If the current version of VMware Cloud Foundation is 4.5.x, upgrade SDDC Manager to 5.x.
Apply the VCF configuration updates.	Once the SDDC Manager is upgraded to 9.0, you can apply the configuration updates collectively.	
Update the compatibility data using the Bundle Transfer Utility.		Required when using offline bundle download.

Phase 2: VCF 5.2 Core Component Upgrade - Upgrade Prechecks

To ensure a successful upgrade, follow these essential steps:

- Download the upgrade bundle for VMware Cloud Foundation to match your target release.
- Confirm recent successful backup of SDDC Manager on an external SFTP server
- Take a snapshot of your SDDC Manager appliance
- Ensure recent successful backups exist for all components managed by SDDC Manager
- Perform a pre-check in SDDC Manager and resolve any identified issues.



Phase 2: VCF 5.2 Core Component Upgrade - Prerequisites

Before upgrading, ensure that the following prerequisites are met.

Prerequisite	Additional Information
Allocate a temporary IP address for each vCenter upgrade.	Must be allocated from the management subnet
The password is not expired or expiring.	Review the password management dashboard in SDDC Manager.
The ESX host has the latest 2.0 firmware for the TPM module used.	If not in use they must be disabled in the BIOS
ESX hardware is compatible with the target version	See ESX Requirements and Broadcom Compatibility Guide.
Manually update the vSAN HCL database to ensure that it is up-to-date.	See KB 2145116
Back up the SDDC Manager and all vCenter and NSX Manager instances	Take file-based backups or image-based backups of SDDC Manager and all vCenter and NSX Manager instances. Take a cold snapshot of SDDC Manager

Phase 2: VCF 5.2 Core Component Upgrade - Prerequisites

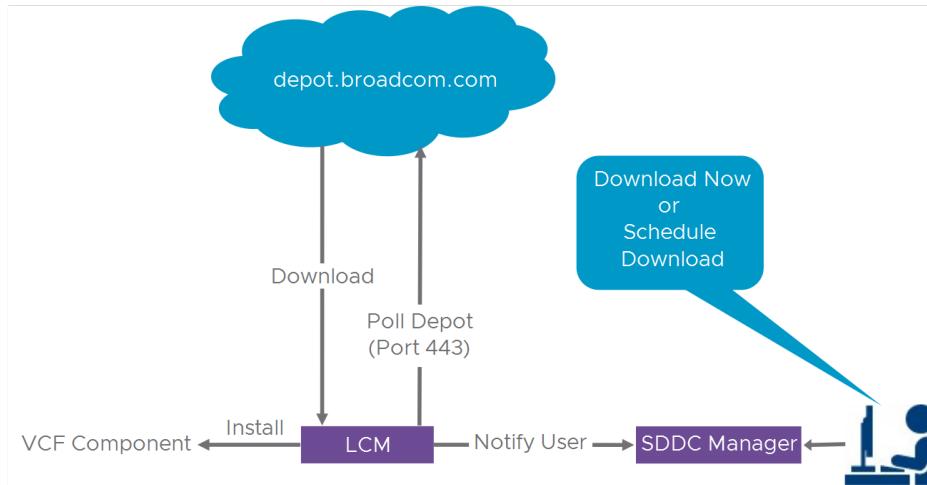
Before upgrading, ensure that the following prerequisites are met.

Prerequisite	Additional Information
Ensure there are no failed workflows and that VCF resources are not in the activating or error state.	If any of these conditions are true, contact Broadcom Support before starting the upgrade.
In the vSphere Client, ensure there are no active alarms on hosts or vSphere clusters	
Review the release notes for known issues related to upgrades.	
Perform a pre-check in SDDC Manager and resolve any identified issues.	

Phase 2: VCF 5.2 Core Component Upgrade - Online Bundle Download Overview

You can download VMware Cloud Foundation bundles directly from the SDDC Manager UI when SDDC Manager has Internet access.

VMware Cloud Foundation LCM requires your Broadcom support credentials to access the online depot to download software bundles.



Phase 2: SDDC Manager Upgrade - Configuring Online Depot Settings

Before SDDC Manager can connect to the online depot to download bundles, you must authorize SDDC Manager to log in to your Broadcom Support (formerly VMware Customer Connect) account.

You set up access to the online depot by navigating to **Administration > Depot Settings** and authenticating using your Broadcom Support credentials.

The screenshot shows the VMware Cloud Foundation web interface. On the left, a sidebar menu includes options like Dashboard, Solutions, Inventory, Workload Domains, Hosts, Lifecycle Management (with SDDC Manager highlighted), Administration (with Network Settings, Storage Settings, Licensing, Single Sign On, and Proxy Settings listed), and Depot Settings (which is selected and highlighted with an orange border). The main content area has a header 'Set up VMware Depot' with a 'BACK TO DEPOT SETTINGS' link. It prompts the user to enter Customer Connect credentials: 'Username' (username@broadcom.net) and 'Password' (redacted). Below these fields are 'AUTHENTICATE' and 'CANCEL' buttons. To the right, a 'Depot Settings' section titled 'Depot Settings' contains a note about connecting to software depots. It shows a table for 'Online Depots' with one entry for 'VMware Depot'. This entry shows 'Depot Connection Active' (checked), 'Username' (username@broadcom.net), and two buttons: 'EDIT' and 'DISCONNECT'.

Phase 2: SDDC Manager Upgrade - About Upgrade Bundle

The upgrade bundle upgrades the SDDC Manager and VMware Cloud Foundation services. You can view the SDDC 9.0.0 bundle under Lifecycle Management > SDDC Manager (NEW)

The screenshot shows the VMware Cloud Foundation UI with the following details:

- Header:** Upgrading to the next version of VMware Cloud Foundation? Read the critical information on upgrading. OPEN DOCUMENTATION.
- Left Sidebar:** vmw Cloud Foundation, Home, Dashboard, Solutions, Inventory, Workload Domains, Hosts, Lifecycle Management (SDDC Manager NEW, Release Versions), Bundle Management.
- Current View:** Bundle Management, Download History tab selected.
- Bundles:**
 - VMware Cloud Foundation Update 9.0.0.0 (Released Mar 1, 2025, 20 KB) - Configuration drift bundle for VMware Cloud Foundation 9.0.0.0. [View Details](#)
 - VMware Cloud Foundation Update 9.0.0.0 (Released Mar 1, 2025, 2 GB) - VCF Update Bundle - SDDC Manager patch bundle. [View Details](#)
- Available Updates:** Available Updates 1
 - All Cloud Foundation bundles listed must be downloaded. Upgrading to the latest Cloud Foundation bundle will install all dependent bundles.
- Target Version:** 9.0.0.0
- Progress:** 0 of 1 steps done
- ACTIONS:** VIEW DETAILS, SCHEDULE DOWNLOAD, DOWNLOAD NOW
- Bottom Content:** VMware Cloud Foundation Update 9.0.0.0 (Released Mar 1, 2025 2 GB) - VCF Update Bundle - SDDC Manager patch bundle. [View Details](#), [SCHEDULE DOWNLOAD](#), [DOWNLOAD NOW](#).

Phase 2: SDDC Manager Upgrade - Planning the Upgrade (1)

Plan the upgrade in SDCC

The screenshot shows the 'Plan Upgrade' interface in the VMware Cloud Foundation web UI. The left sidebar lists various management options like Dashboard, Solutions, Inventory, Workload Domains, Hosts, Lifecycle Management, Administration, Network Settings, Storage Settings, Licensing, Single Sign On, Proxy Settings, Depot Settings, VMware Aria Suite, Backup, and VMware CEIP. The 'Workload Domains' option is currently selected. The main panel is titled 'Plan Upgrade' and shows a progress bar with two steps: 'Select Target Version' (which is completed, indicated by a blue dot) and 'Change Summary' (which is in progress, indicated by an empty circle). Below the progress bar, the 'Target Version' section is displayed, which says 'Select a version of VMware Cloud Foundation to upgrade this workload domain.' It includes a note: 'To activate or deactivate compatibility checks on the target version, see KB [90074](#)'. A dropdown menu shows 'Target Version: VMware Cloud Foundation 9.0.0.0'. At the bottom are 'NEXT' and 'CANCEL' buttons.

Phase 2: SDDC Manager Upgrade - Planning the Upgrade (1)

Plan the upgrade in SDCC

The screenshot shows the 'Plan Upgrade' process in the VMware Cloud Foundation interface. The left sidebar navigation includes 'Dashboard', 'Solutions', 'Inventory' (selected), 'Workload Domains', 'Hosts', 'Lifecycle Management', 'Administration' (selected), 'Network Settings', 'Storage Settings', 'Licensing', 'Single Sign On', 'Proxy Settings', 'Depot Settings', 'VMware Aria Suite', and 'Backup'. The main content area is titled 'Plan Upgrade' and shows two steps: 'Select Target Version' (completed) and 'Change Summary' (in progress). The 'Change Summary' section displays a table of product upgrades:

Software Component	Current Version	Current Build	Target Version	Target Build
SDDC Manager	5.2.1.0	24307856	9.0.0.0	24703748
VMware ESXi	8.0.3	24280767	9.0.0	24755229
VMware NSX	4.21.0.0	24304122	9.0.0.0.0	24733063
VMware vCenter Server Appliance	8.0.3.00300	24305161	9.0.0.0	24755230
vRealize Suite Lifecycle Manager	8.18.0	24029603	None	None

At the bottom are 'CONFIRM', 'BACK', and 'CANCEL' buttons.

Phase 2: SDDC Manager Upgrade - Planning the Upgrade (2)

Review the upgrade sequence and click DONE to complete the planning.

The screenshot shows the 'Plan Upgrade' screen in the VMware Cloud Foundation SDDC Manager. The left sidebar lists various management categories like Dashboard, Solutions, Inventory, Workload Domains, Hosts, Lifecycle Management, Administration, Security, and Developer Center. The 'Workload Domains' section is currently selected. The main content area displays a green success message: 'Upgrade plan confirmed. See your upgrade summary below.' Below this, a box shows the 'Selected Target VMware Cloud Foundation version' as '9.0.0'. Another box shows the 'Update sequence preview' with 'Step 1' labeled 'SDDC Manager Bundle 9.0.0.0'. At the bottom, there are 'DONE' and 'BACK AND EDIT UPGRADE PLAN' buttons.

Phase 2: SDDC Manager Upgrade - Starting the Upgrade

You initiate the SDDC Manager Upgrade by clicking on the UPDATE NOW button under Lifecycle Management > SDDC Manager.

The screenshot shows the VMware Cloud Foundation interface. The left sidebar has a 'Lifecycle Management' section expanded, with 'SDDC Manager' selected. A red box highlights this selection. The main content area is titled 'SDDC Manager' and shows the 'Current SDDC Manager version' as '5.2.1.1 - 24397777'. Below this, under 'Available Updates', a new update for '9.0.0.0' is listed, released on '1/22/25'. A warning message states: 'This version has compatibility warnings. To view a full list of warnings, [CLICK HERE](#)'. The update details mention: 'The upgrade bundle for VMware Cloud Foundation 9.0.0 contains features, critical bugs and security fixes. For more information, see <https://docs.vmware.com/en/VMware-Cloud-Foundation/9.0.0/m/vmware-cloud-foundation-90-notes/index.html>. For VCF on VxRail, see <https://docs.vmware.com/en/VMware-Cloud-Foundation/9.0.0/m/vmware-cloud-foundation-900-on-dell-vxrail-release-notes/index.html>. For VMware Cloud Foundation Skip Upgrade Details, refer to <https://kb.vmware.com/s/article/92227>'. The 'Bundle ID' is listed as 'eb55cde-7340-4fb9-99e2-329e10e7a90'. At the bottom, there are two buttons: 'UPDATE NOW' and 'RUN PRECHECK'. A note at the bottom indicates: 'Download completed and Validated on 3/5/25, 106 PM.'

Phase 2: SDDC Manager Upgrade - Finishing Upgrade

Review and finish the SDDC upgrade process.

The screenshot shows the VMware Cloud Foundation Update Status page. At the top, it displays the update details: "VMware Cloud Foundation Update 9.0.0.0", "Released Mar 1, 2025 2 GB", and "VCF Update Bundle - SDDC Manager patch bundle". A large green progress bar indicates the update was applied at "Mar 5, 2025, 9:06:50 PM" with an "Elapsed Time : 25 minutes 58 seconds". A "FINISH" button is visible. Below the progress bar, there's a "VIEW UPDATE ACTIVITY" link. The main content area shows the "SDDC MANAGER - VMware Cloud Foundation Update 9.0.0.0" section, which includes a summary table of upgrade steps:

SDDC MANAGER UPGRADE	9.0.0.0-24576967
Setup Common Appliance Platform	✓ Updated 1
Validate Services Before Upgrade	✓
Remove Packages Pre Upgrade	✓
Update Necessary RPMs For Photon4 Upgrade	✓
VMware Cloud Foundation Services and Platform Upgrades	✓
Authenticate Common Appliance Platform	✓
Update VCF Service and Platform rpms	✓
Reboot SDDC Manager	✓
Refresh Custom Certificates	✓
I Initiate SDDC Manager Appliance Version	✓

Phase 2: SDDC Manager Upgrade - Finishing Upgrade

Review and finish the SDDC upgrade process.

The screenshot shows the VMware Cloud Foundation Operations interface. The left sidebar is titled "Lifecycle" and includes sections for Home, Inventory, Infrastructure Operations, Workload Operations, Fleet Management, Identity & Access, Certificates, Passwords, Tags, Configuration Drifts, Capacity, Security, License Management, and Administration. The "Lifecycle" section is currently selected. The main content area is titled "Lifecycle" and shows "sfo-m01". It has tabs for "SDDC Manager Updates" (which is selected), Binary Management, Image Management, Depot Settings, and Proxy Settings. Below these tabs, there is a section titled "SDDC Manager" with a "KNOW MORE" link. A box displays the "Current SDDC Manager version" as "9.0.0.0.24703748". Another tab, "Available Updates", is shown below. At the bottom, a green checkmark icon indicates that the SDDC Manager is on the latest version of VMware Cloud Foundation, with a note stating: "The SDDC Manager is on the latest version of VMware Cloud Foundation. Once a new version is released, you will see it in this space."

Phase 2: VCF 5.2 Core Component Upgrade - About Binary Management

After you upgrade SDDC Manager to version 9.0, Bundle Management is renamed to Binary Management.

The screenshot shows the VMware Cloud Foundation Binary Management interface. The left sidebar highlights the **Lifecycle Management** section, specifically the **Binary Management** item under the **2 Binary Management** heading. The main content area displays a table of binary components:

Component	Version	Release Date	Size	Download Status
SDDC Manager	9.0.0	Feb 20, 2025	2.05 GB	Downloaded
VMware ESX	9.0.0	Feb 20, 2025	645.23 MB	Downloaded
VMware NSX	9.1.0	Feb 20, 2025	8.00 GB	Downloaded
VMware vCenter	9.0.0	Feb 20, 2025	28.66 GB	Downloaded

Key UI elements labeled in the screenshot:

- 1** Dashboard
- 2** Binary Management
- 3** VCF Version: 9.0
- 4** UPGRADE BINARIES button

Phase 2: VCF 5.2 Core Component Upgrade - Running Update Precheck

You must perform a precheck before upgrading to ensure readiness for the upgrade.

The screenshot shows the VMware Cloud Foundation Operations interface. The left sidebar includes sections like Home, Inventory, Infrastructure Operations (selected), Workload Operations, Fleet Management, Capacity, Security, License Management, Administration, and Developer Center. The main content area is titled 'Lifecycle' and shows a tree view under 'VCF Instances' for 'sfo-m01'. A sub-node 'sfo-m01' is selected. The right side has a search bar and navigation icons. The 'Precheck' section is expanded, showing a message 'No recent precheck available' with a 'RUN PRECHECK' button. Below it, a note says 'It is recommended that you precheck your workload domain prior to upgrade. You can select which components in the workload domain you want to precheck.' Other sections like 'In-Progress Updates' and 'Scheduled Updates' show no activity. The 'Available Updates' section shows a target version of '9.0.0.0' and progress '1 of 4 steps done'. At the bottom, there's a link to 'VMware Software Update 9.0.0.0' and a 'CONFIGURE UPDATE' button.

VMware Cloud Foundation Operations

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

Lifecycle

sfo-m01

No recent precheck available

RUN PRECHECK

It is recommended that you precheck your workload domain prior to upgrade. You can select which components in the workload domain you want to precheck.

In-Progress Updates

No updates in progress.

Scheduled Updates

No updates scheduled.

Available Updates 3

Target Version
9.0.0.0

Progress
1 of 4 steps done

VIEW DETAILS

ACTIONS

VMware Software Update 9.0.0.0

Released Jun 17, 2025 8 GB

<https://techdocs.broadcom.com/us/en/vmware-cis/vcf-9-0-and-later/9-0/release-notes.html>

Activate Windows
CONFIGURE UPDATE

Phase 2: VCF 5.2 Core Component Upgrade - Running Update Precheck

You must perform a precheck upgrading to ensure readiness for the upgrade.

The screenshot shows the VCF Management interface with the following details:

- Left Sidebar:** Home, Inventory, Infrastructure Operations, Workload Operations, Fleet Management (Identity & Access, Certificates, Passwords, Tags, Configuration Drifts), Lifecycle (Tasks, Capacity, Security, License Management, Administration, Developer Center).
- Top Header:** VCF Management, ACTIVE, Version : 5.2.1.0.
- Current View:** Updates tab selected, showing the sfo-m01 instance.
- Precheck Section:** Target Version is set to 9.0.0.0, and the Precheck Scope is set to "All components in version - 9.0.0.0".
- Data Grid:** Lists the components that are going to be prechecked, including:

Component	Description	Target Version
sfo-m01-nsx01.sfo.rainpole.io	NSX	9.0.0.0-24733063
sfo-sddc01.sfo.rainpole.io	SDDC_MANAGER	9.0.0.0-24703748
sfo-m01-vc01.sfo.rainpole.io	VCENTER	9.0.0.0-24755230
sfo-m01-cluster-001	CLUSTER	9.0.0.0-24755229

4 objects
- Buttons:** RUN PRECHECK and CANCEL.

Phase 2: VCF 5.2 Core Component Upgrade - Analyzing Precheck Results

You review the precheck result. If a precheck task reports an ERROR, resolve the error and retry the precheck task.

Precheck

Results Completed on Dec 21, 2022, 10:04:47 AM

174 Passed 7 Errors 3 Warnings 0 Silenced

[RETRY ALL FAILED RESOURCES](#)

Report

ALL ERRORS WARNINGS SILENCED

Version: General Upgrade Readiness (4 component(s))

- > SDDC Manager sddc-manager.vrack.vsphere.local
- > NSX vip-nsx-mgmt.vrack.vsphere.local
- > ESXi Host Cluster SDDC-Cluster1
- > vCenter vcenter-1.vrack.vsphere.local

Resource Name	Description	Health Status	Error Description	Impact	Remediation

 Precheck entry not selected

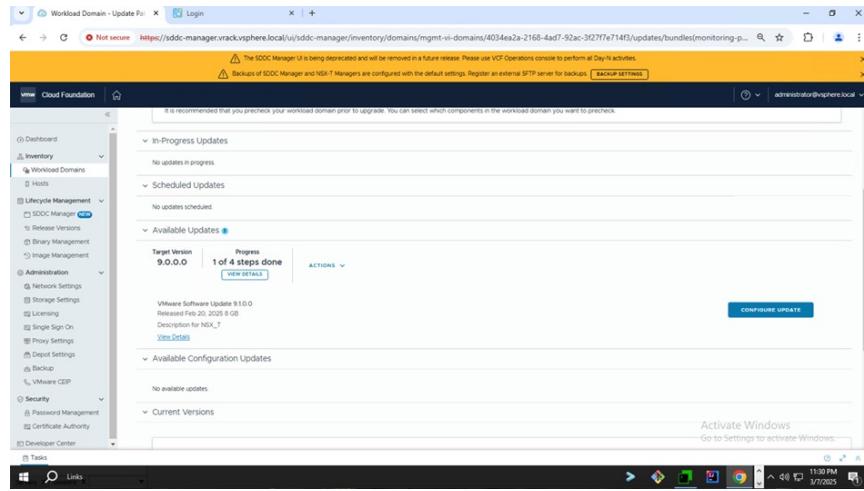
Phase 2: NSX Upgrade - Overview

You upgrade NSX using the SDDC Lifecycle Manager. To initiate the NSX upgrade, you configure the update in the Available Updates section.

NSX Upgrade involves the following components:

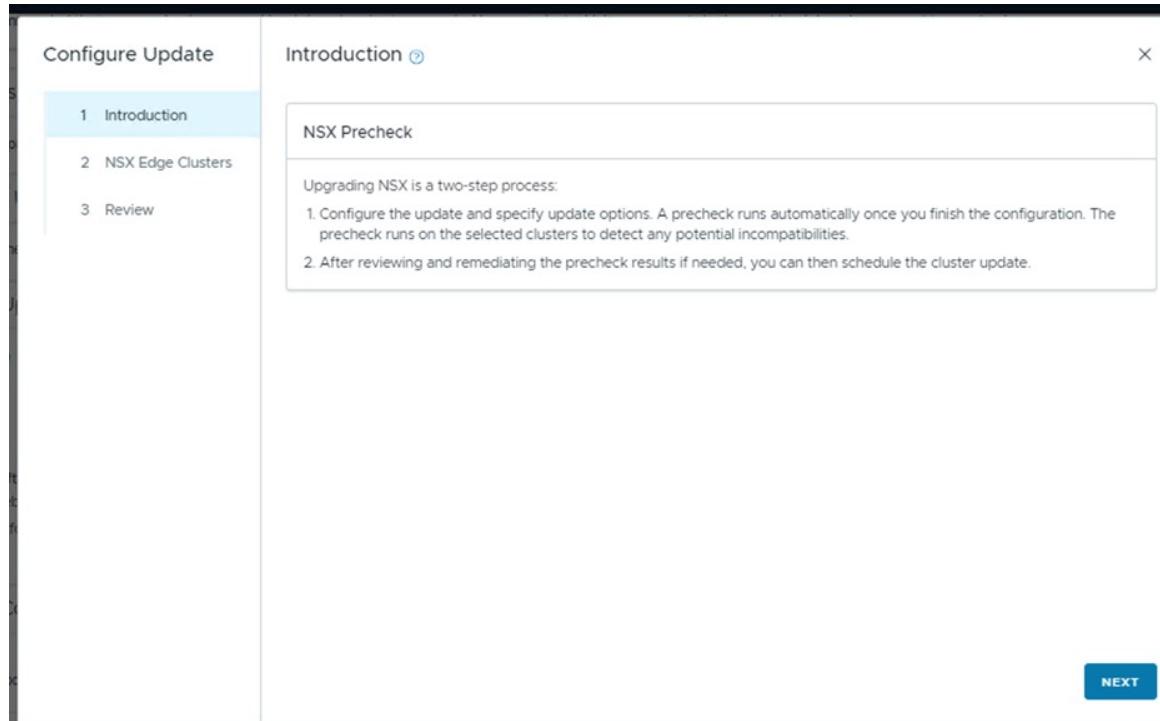
- Upgrade Coordinator
- NSX Edges/Clusters (if deployed)
- NSX Manager cluster

When you upgrade NSX components for a selected workload domain, those components are upgraded for all workload domains sharing the NSX Manager cluster.



Phase 2: NSX Upgrade - NSX Precheck Introduction

Review the Introduction and click Next



Phase 2: NSX Upgrade - Selecting NSX Edge (1)

By default, all NSX Edge clusters are upgraded. You select Enable NSX Edge Cluster selection to upgrade specific clusters.

The screenshot shows a software interface for upgrading NSX Edge clusters. On the left, a vertical navigation bar titled 'Configure Update' lists four steps: 1. Introduction (marked with a checkmark), 2. NSX Edge Clusters (selected, indicated by a blue background), 3. Upgrade Options, and 4. Review. To the right of the navigation bar is a main content area with a title 'NSX Edge Clusters' and a help icon. Below the title is a descriptive text: 'Select NSX Edge clusters to be upgraded. You can upgrade all NSX Edge clusters at once, or select specific NSX Edge clusters to be upgraded.' A note below this text states: 'NSX Upgrade Coordinator and NSX Manager will be updated before updating NSX Edge Clusters. NSX Host clusters will be updated together with the ESXi hosts.' At the bottom of the content area is a toggle switch labeled 'Enable NSX Edge cluster selection' with a help icon. At the bottom right of the interface are two buttons: 'BACK' and 'NEXT'. The 'NEXT' button is highlighted with a blue background and white text.

Phase 2: NSX Upgrade - Selecting NSX Edge (2)

You choose the specific NSX Edge Cluster.

Configure Update

- 1 Introduction
- 2 NSX Edge Clusters
- 3 Upgrade Options
- 4 Review

NSX Edge Clusters [?](#) X

Select NSX Edge clusters to be upgraded. You can upgrade all NSX Edge clusters at once, or select specific NSX Edge clusters to be upgraded.

ⓘ NSX Upgrade Coordinator and NSX Manager will be updated before updating NSX Edge Clusters. NSX Host clusters will be updated together with the ESXi hosts. X

Enable NSX Edge cluster selection ⓘ

NSX Edge Cluster	Upgrade Status	Health Status
sfo-m01-ec01	Available	Active

Cluster per page: 10 | 1 - 1 of 1 cluster

[BACK](#) [NEXT](#)

Phase 2: NSX Upgrade - Choosing NSX Edge Upgrade Options

You can enable the sequential upgrade of NSX Edge clusters as an option in the upgrade process.

The screenshot shows a software interface for upgrading NSX Edge clusters. On the left, a vertical navigation bar lists five steps: 1. Introduction, 2. NSX Edge Clusters, 3. Upgrade Options (which is selected and highlighted in blue), and 4. Review. To the right of the navigation bar is a main content area titled "Upgrade Options". It contains a sub-instruction "Select options to optimize your upgrade experience." followed by a single checkbox labeled "Enable sequential upgrade of NSX Edge clusters". At the bottom right of the content area are two buttons: "BACK" and "NEXT".

Phase 2: NSX Upgrade - Reviewing and Running Prechecks

On the Review page, you check your settings and run Precheck. You resolve any issues until the precheck is successful.

The screenshot shows the 'Review' step of the NSX Upgrade process. On the left, a sidebar lists steps 1 through 4: Introduction, NSX Edge Clusters, Upgrade Options, and Review. Step 4 is highlighted. The main area is titled 'Review' and contains a note about the precheck process. Below the note, configuration details are listed under 'NSX Edge Clusters' and 'Upgrade Options'. At the bottom right are 'BACK' and 'RUN PRECHECK' buttons.

Configure Update

Review [?](#) X

① During the precheck, to be able to run detailed prechecks of the NSX upgrade, the NSX Upgrade Coordinator will be upgraded to the target version. After the prechecks are completed, it will be rolled back to restore the original state of the system. X

NSX Edge Clusters

NSX Edge Clusters	sfo-m01-ec01
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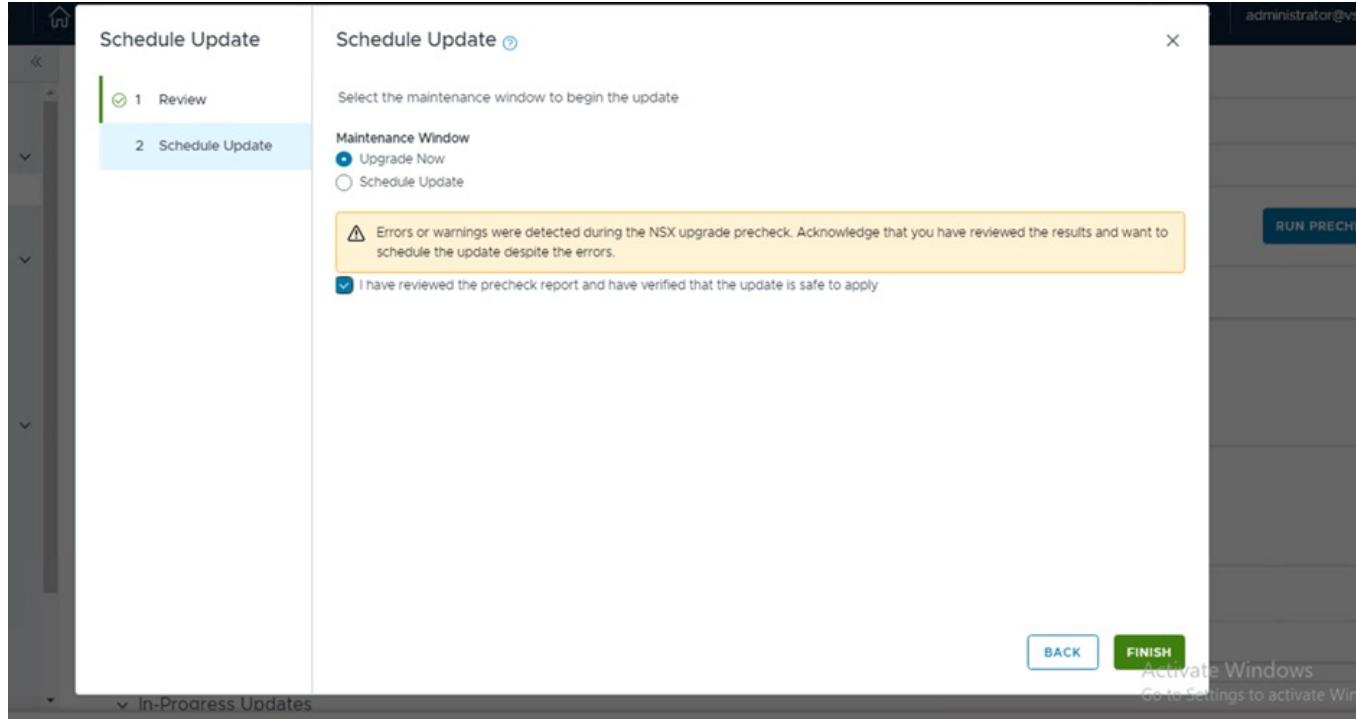
Upgrade Options

NSX Edge Cluster Sequential Upgrade	Disabled
-------------------------------------	----------

BACK RUN PRECHECK

Phase 2: NSX Upgrade - Schedule Update

After the precheck is successful, click Schedule Update and select an option.



Phase 2: NSX Upgrade - Monitor the upgrade progress

If a component upgrade fails, the failure appears in all associated workload domains. Resolve the issue and retry the task.

The screenshot shows the VMware Cloud Foundation interface with the title "Updating NSX Upgrade Coordinator". The left sidebar includes options like Dashboard, Inventory, Workload Domains (selected), Hosts, Lifecycle Management (SDDC Manager NEW), Release Versions, Binary Management, Image Management, Administration (Network Settings, Storage Settings, Licensing, Single Sign On, Proxy Settings, Depot Settings, Backup, VMware CEIP), and Tasks. The main content area displays a tree view of upgrade tasks under "NSX" and "1 NSX Management Cluster". Under "NSX", tasks include: NSX Upgrade Coordinator (In Progress), NSX UPGRADE STAGE CLUSTER PRECHECK (Green checkmark), NSX PERFORM BACKUP (Green checkmark), NSX UPGRADE STAGE SET UPGRADE PAYLOAD (Green checkmark), NSX UPGRADE ACCEPT UPGRADE EULA (Green checkmark), and NSX UPGRADE STAGE UPDATE UC (Yellow circle with question mark). Under "1 NSX Management Cluster", tasks include: NSX UPGRADE STAGE MANAGER PRECHECK (Queued), NSX UPGRADE STAGE UPGRADE MANAGER (Queued), NSX UPGRADE STAGE MANAGER POSTCHECK (Queued), and NSX UPGRADE STAGE FINALIZE UPGRADE (Queued). A status bar at the bottom right says "Activate Windows" and "Go to Settings to activate Windows".

Phase 2: NSX Upgrade - Monitor the upgrade progress

When all NSX components are upgraded, a green message with a check mark is displayed.

The screenshot shows the SDDC Manager UI for a workload domain named 'sddcld-1001'. The 'Updates' tab is selected, displaying the following information:

- VMware Software Update 9.1.0.0**
Released Feb 20, 2025 8 GB
Description for NSX_T
- Update applied at Mar 8, 2025, 148:56 AM - Elapsed Time : 1 hour 41 minutes 8 seconds**
- NSX Upgrade Progress:**
 - NSX Upgrade Coordinator: NSX UPGRADE STAGE CLUSTER PRECHECK (Updated)
 - NSX PERFORM BACKUP (Updated)
 - NSX UPGRADE STAGE SET UPGRADE PAYLOAD (Updated)
 - NSX UPGRADE ACCEPT UPGRADE EULA (Updated)
 - NSX UPGRADE STAGE UPDATE UC (Updated)
 - 1NSX Management Cluster:
 - vip-nsx-mgmt.vrak.vsphere.local: NSX UPGRADE STAGE MANAGER PRECHECK (Updated)
 - NSX UPGRADE STAGE UPGRADE MANAGER (Updated)

A green status bar at the bottom indicates "Activate Windows Go to Settings to activate Windows." The taskbar at the bottom shows various application icons.

Phase 2: vCenter - Configuring the Update

To start the vCenter upgrade, click on CONFIGURE UPDATE in the Available Updates section.

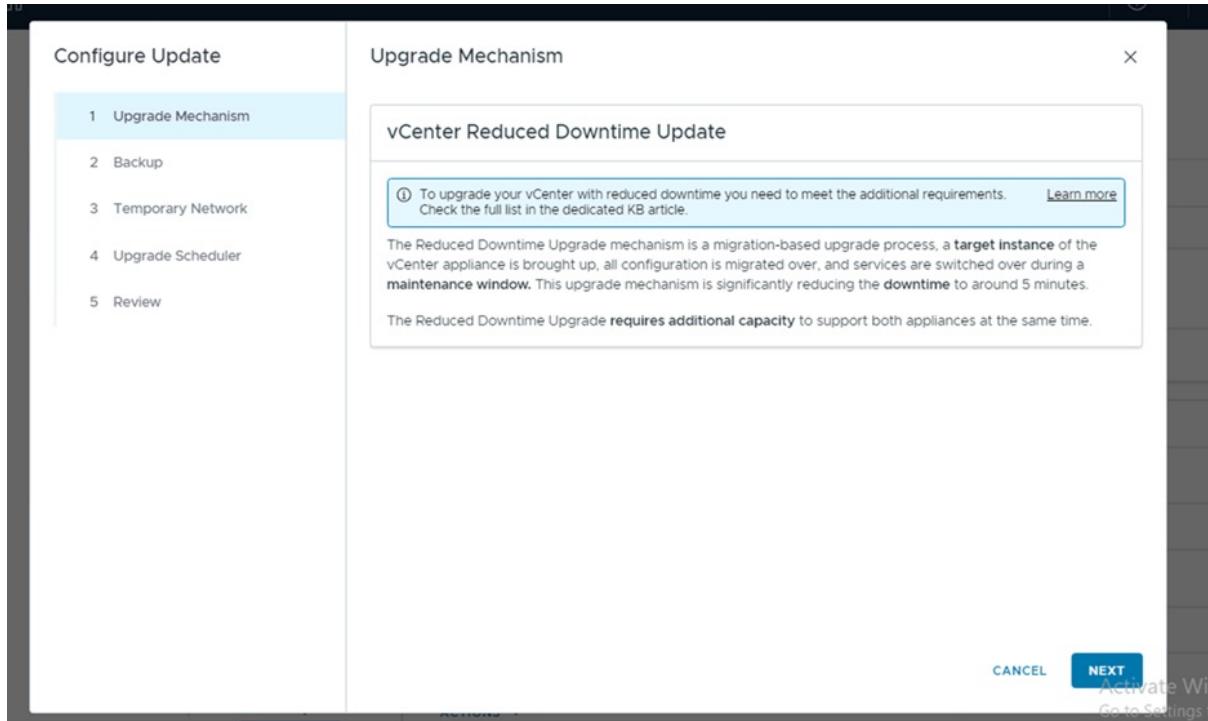
The screenshot shows the vSphere Cloud Foundation interface for managing workload domains. The left sidebar navigation includes Cloud Foundation, Dashboard, Inventory (Workload Domains, Hosts), Lifecycle Management (Administration, Network Settings, Storage Settings, Licensing, Single Sign On, Proxy Settings, Depot Settings, Backup, VMware CEP), Security (Password Management, Certificate Authority), Developer Center, Tasks, and Links. The main content area is titled 'sddcld-1001' and shows the following sections:

- MANAGEMENT**: ACTIVE, Version: 5.2.10
- Updates**: 2 of 4 steps done
- Precheck**: No recent precheck available, with a 'RUN PRECHECK' button.
- In-Progress Updates**: No updates in progress.
- Scheduled Updates**: No updates scheduled.
- Available Updates**: A list of updates:
 - VMware Software Update 9.0.0.0: Released Feb 20, 2025 29 GB, VMware vCenter Server Appliance, View Details

A large blue 'CONFIGURE UPDATE' button is prominently displayed at the bottom right of the update section. The status bar at the bottom shows the date as 3/8/2025 and the time as 2:17 AM.

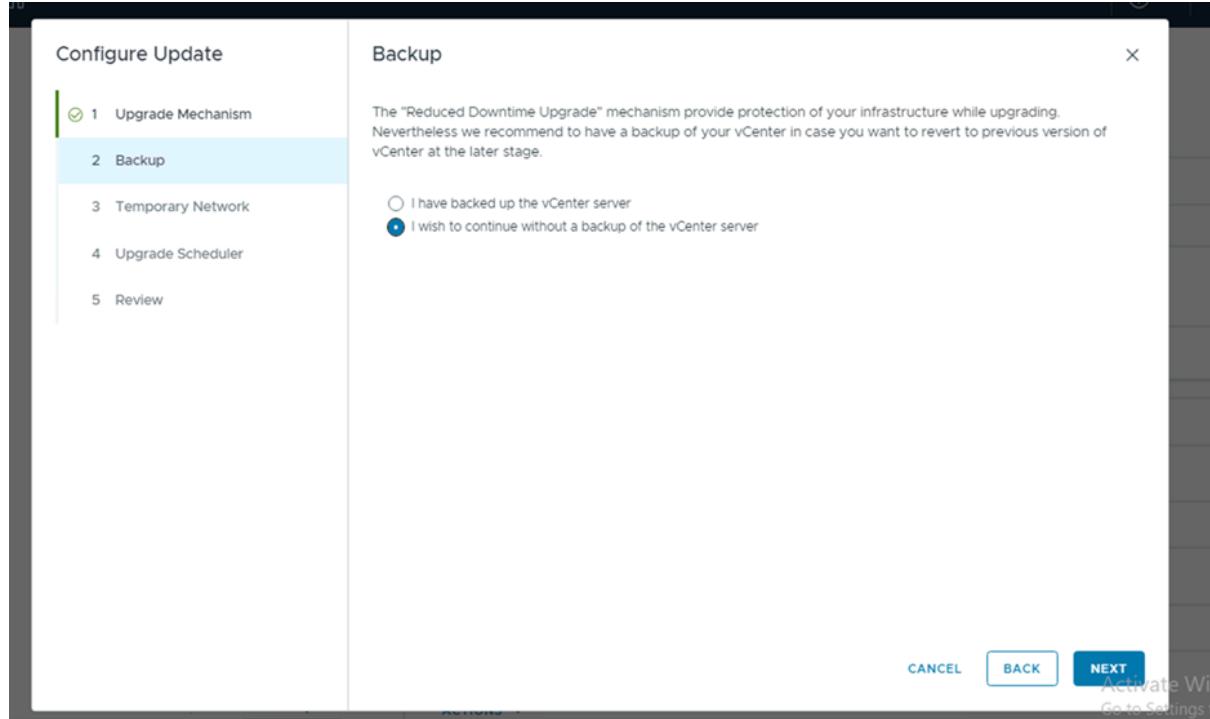
Phase 2: vCenter - Reviewing the Upgrade Mechanism

Review the upgrade mechanism information



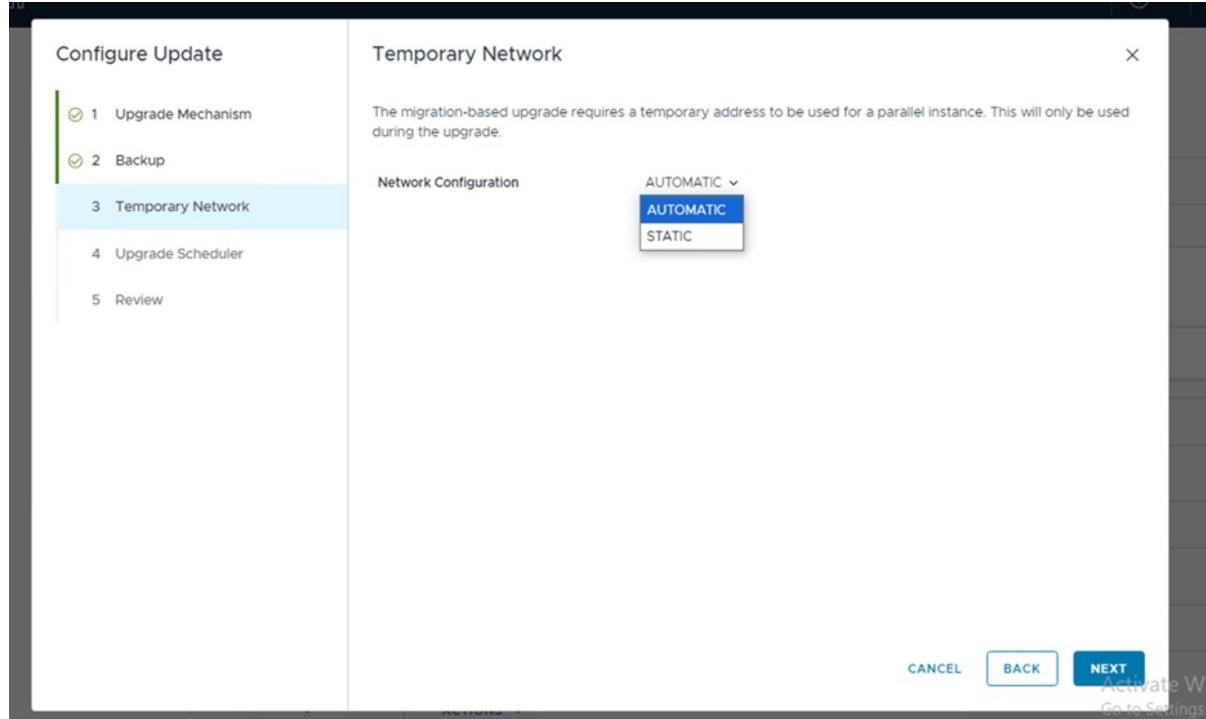
Phase 2: vCenter - Selecting Backup Option

Select a backup option



Phase 2: vCenter - Choosing Network Configuration

Select the network configuration for the temporary address used during the upgrade.



Phase 2: vCenter - Configuring the Temporary Network

Configure the IP address, subnet mask, and gateway. The IP address must reside within the management subnet.

Configure Update

- 1 Upgrade Mechanism
- 2 Backup
- 3 Temporary Network**
- 4 Upgrade Scheduler
- 5 Review

Temporary Network

The migration-based upgrade requires a temporary address to be used for a parallel instance. This will only be used during the upgrade.

Network Configuration **STATIC**

IP Address	10.0.0.98
Subnet Mask	255.255.255.0
Gateway	10.0.0.250

CANCEL **BACK** **NEXT** **Activate** **Go to Setup**

Phase 2: vCenter - Scheduling Upgrade

Select scheduling options for the preparation and switchover phases of the upgrade

Configure Update

- 1 Upgrade Mechanism
- 2 Backup
- 3 Temporary Network
- 4 Upgrade Scheduler
- 5 Review

Upgrade Scheduler

With the migration based upgrade process you can schedule the preparation of the target vCenter appliance and the services can be switched over to the new appliance during scheduled maintenance window.

Select scheduling prepare update options

Select option ⓘ Immediate

Select scheduling switchover options

Select option ⓘ Select switchover Window

Select switchover Window

- Automatic
- Schedule

CANCEL BACK NEXT

Phase 2: vCenter - Reviewing and Starting Upgrade Process

Review the upgrade settings and click Finish.

The screenshot shows the 'Configure Update' and 'Review' sections of the upgrade process. The left sidebar lists steps 1 through 5: Upgrade Mechanism, Backup, Temporary Network, Upgrade Scheduler, and Review. Step 5 is currently selected. The right panel displays detailed configuration options:

Review	
Upgraded Mechanism	
Mechanism	Reduced Downtime Upgrade
Backup	
Backup Confirmation	I wish to continue without a backup of the vCenter server
Temporary Network	
Network Configuration	STATIC
IP Address	10.0.0.98
Subnet Mask	255.255.255.0
Gateway	10.0.0.250
Upgrade Scheduler	
Maintenance Window	Upgrade Now
Upgrade Scope	Preparation and services switchover
Switchover Schedule	Automatic

At the bottom right are buttons: CANCEL, BACK, FINISH, and Activate Go to Setup.

Phase 2: vCenter - Monitoring the upgrade progress

Monitor the upgrade progress. If you cancel the upgrade, the configuration reverts to the source vCenter instance.

The screenshot shows the VMware Cloud Foundation interface. The left sidebar navigation includes: Dashboard, Inventory, Workload Domains (Hosts), Lifecycle Management (SDDC Manager, Release Versions, Binary Management, Image Management), Administration (Network Settings, Storage Settings, Licensing, Single Sign On, Proxy Settings, Depot Settings, Backup, VMware CEIP). The main content area displays the "VMware Software Update 9.0.0.0" page, which was released on Feb 20, 2025, and is a 29 GB VMware vCenter Server Appliance. A progress bar indicates "0 / 1 Resources Updated" and a "CANCEL" button. Below this, under "Updating vCenter Server", there is a "VIEW UPDATE ACTIVITY" link. A detailed list of upgrade tasks for the host "vcneter-1.vcenter.vsphere.local" is shown, all of which are currently in progress:

Task	Status	Progress (%)
VCENTER UPGRADE PRE VALIDATION	In Progress	100%
VCENTER UPGRADE MOUNT ISO	In Progress	100%
VCENTER UPGRADE PRECHECK	In Progress	100%
VCENTER UPGRADE PREPARATION	In Progress	100%
VCENTER UPGRADE SWITCHOVER	In Progress	100%
VCENTER UPGRADE POST UPGRADE TASKS	In Progress	100%
VCENTER UPGRADE POST UPGRADE CONFIGURATION	In Progress	100%
VCENTER UPGRADE POST VALIDATION	In Progress	100%
VCENTER UPGRADE UNMOUNT ISO	In Progress	100%
VCENTER UPGRADE SUCCESS	In Progress	100%

Phase 2: vCenter - Completing the Upgrade Process

After the upgrade is complete, remove the old vCenter appliance.

The screenshot shows the VMware Cloud Foundation interface. The left sidebar includes options like Dashboard, Inventory, Workload Domains (Hosts), Lifecycle Management (SDDC Manager, Release Versions, Binary Management, Image Management), Administration (Network Settings, Storage Settings, Licensing, Single Sign On, Proxy Settings, Depot Settings, Backup, VMware CEIP), and a VMware logo at the bottom. The main content area displays "VMware Software Update 9.0.0.0" released on Feb 20, 2025, with a 29 GB file size. It's described as a "VMware vCenter Server Appliance". A progress bar indicates "0 / 1 Resources Updated" and a "CANCEL" button. Below this, a section titled "Updating vCenter Server" shows a list of tasks for "vcneter-1.vcenter.local":

Task	Status	Progress
VCENTER UPGRADE PRE VALIDATION	In Progress	9.0.0.0.24579106
VCENTER UPGRADE MOUNT ISO		
VCENTER UPGRADE PRECHECK		
VCENTER UPGRADE PREPARATION		
VCENTER UPGRADE SWITCHOVER		
VCENTER UPGRADE POST UPGRADE TASKS		
VCENTER UPGRADE POST UPGRADE CONFIGURATION		
VCENTER UPGRADE POST VALIDATION		
VCENTER UPGRADE UNMOUNT ISO		
VCENTER UPGRADE SUCCESS		

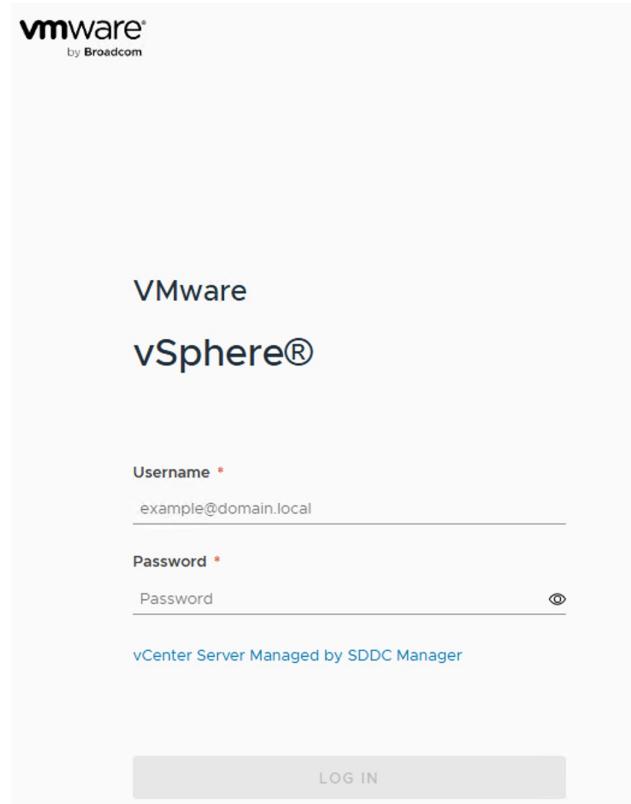
At the bottom right, there are links to "Activate Windows" and "Go to Settings to activate Windows".

Phase 2: ESX Upgrade - Overview

You upgrade ESX using the SDDC Lifecycle Manager. To initiate the ESX upgrade, you configure the update in the Available Updates section.

First we will need to take the following actions

- Convert from VUM to vLCM
- Import the Image from vCenter
- Pre-checks



Phase 2: ESX Upgrade - Importing Image

Import a vSphere Lifecycle Manager image into SDDC Manager

To import from a vCenter:

- You select the vCenter where you created the image from the drop-down menu.

To import from a file:

- Enter a name for the image, then click Select File to import each of the required files.
- Select the JSON, ZIP, and ISO files from your local computer.

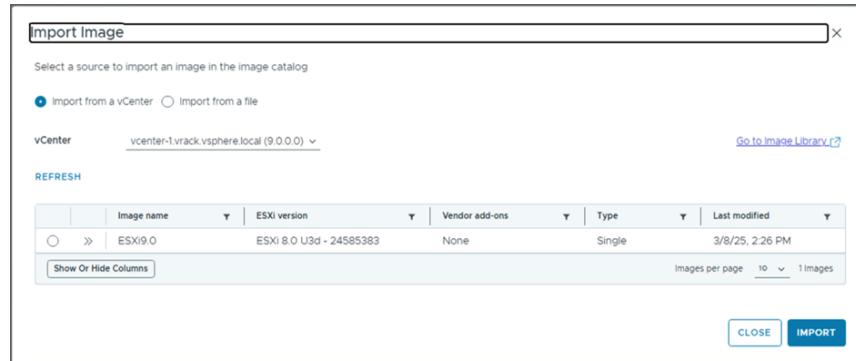


	Image name	ESXi version	Vendor add-ons	Associated cluster(s)	Associated standalone host(s)
:	» esxi 9.0	ESXi 9.0.0.0			

Phase 2: ESX Upgrade - Configuring Update

Configure Update for ESX.

The screenshot shows the VMware vSphere Web Client interface. On the left, a sidebar navigation menu includes: Dashboard, Inventory (Workload Domains, Hosts), Lifecycle Management (SDDC Manager, Release Versions, Binary Management, Image Management), Administration (Network Settings, Storage Settings, Single Sign On, Proxy Settings, Depot Settings, Backup, VMware CEP), Security (Password Management, Certificate Authority), and Developer Center. The main content area is titled 'sddcl-1001' (Management, Active, Version: 5.21.0). It shows '2 Errors' and tabs for Summary, Services, Updates (selected), Update History, Hosts, Clusters, Edge Clusters, and Certificates. Under 'Updates', there are sections for Precheck (No recent precheck available, RUN PRECHECK button), In-Progress Updates (No updates in progress), Scheduled Updates (No updates scheduled), and Available Updates (Target Version: 9.0.0.0, Progress: 3 of 4 steps done, VIEW DETAILS button). A note at the bottom of the Available Updates section says 'It is recommended to run prechecks before configuring ESXi Upgrade.' A large blue 'CONFIGURE UPDATE' button is located at the bottom right. At the very bottom, a message says 'Activate Windows Go to Settings to activate Windows.'

Phase 2: ESX Upgrade - Reviewing the Cluster Precheck

Review the introductory information

The screenshot shows a software interface for upgrading ESX clusters. On the left, a vertical navigation bar lists five steps: 1. Introduction (selected), 2. Select Clusters with Images, 3. Assign Images, 4. Upgrade Options, and 5. Review. The main content area is titled 'Introduction' with a 'Cluster Precheck' section. The precheck section contains the following text:

Upgrading clusters with images is a two step process:
1. Configure the update and specify update options. A precheck will be run automatically once you finish the configuration. The precheck will run on the selected clusters to detect any potential incompatibilities with the assigned cluster images.
2. After reviewing and remediating the precheck results if needed, you can then schedule the cluster update.

At the bottom right of the content area are 'CANCEL' and 'NEXT' buttons.

Phase 2: ESX Upgrade - Selecting Cluster

Configure Update

1 Introduction

2 Select Clusters with Images

3 Assign Images

4 Upgrade Options

5 Review

Select Clusters with Images [?](#)

X

All clusters in the workload domain are upgraded by default. You can choose to select the clusters to be updated. Any cluster already updated won't be displayed.

You can select which stretched clusters to upgrade. If the stretched cluster is eligible, its witness host will also be upgraded.

All Clusters Custom Selection

<input type="checkbox"/>	Cluster Name	Stretched	Total Hosts	Status
<input checked="" type="checkbox"/>	sfo-m01-cluster-001		4	Available

Clusters per page: 10 | 1 - 1 of 1 clusters

CANCEL

BACK

NEXT

Phase 2: ESX Upgrade - Assigning Images

Select an imported image to assign to the selected clusters.

Configure Update

- 1 Introduction
- 2 Select Clusters with Images
- 3 Assign Images
- 4 Upgrade Options
- 5 Review

Assign Images [?](#)

These are all the clusters with images you have selected on the previous step. Assign the same or different images to each one of them.

[ASSIGN IMAGE](#)

<input checked="" type="checkbox"/>	Cluster Name	Target ESXi Version	Target Vendor Addon	Target Hardware Support Package	Target Image
<input checked="" type="checkbox"/>	SDDC-Cluster1	None	None	None	None

1 Clusters per page 10 1-1 of 1 clusters

[CANCEL](#) [BACK](#) [NEXT](#)

Phase 2: ESX Upgrade - Choosing Upgrade Options

Configure Update

- 1 Introduction
- 2 Select Clusters with Images
- 3 Assign Images
- 4 Upgrade Options
- 5 Review

Upgrade Options ? X

Select options to optimize your upgrade experience.

ⓘ By default, clusters will be upgraded in parallel to optimize upgrade time. ...

General Options

Enable sequential cluster upgrade ⓘ

Enable Quick Boot ⓘ

Migrate powered off and suspended VMs to other hosts in the cluster, if a host must enter maintenance mode ⓘ

Options for Image Clusters

Enforce Live Patch ⓘ

CANCEL BACK NEXT

Phase 2: ESX Upgrade - Running the Precheck

Review the settings, run the precheck

The screenshot shows the 'Configure Update' dialog in the VMware vSphere Client. The left pane, titled 'Configure Update', lists five steps: 1. Introduction, 2. Select Clusters with Images, 3. Assign Images, 4. Upgrade Options, and 5. Review. Step 5 is highlighted with a blue background. The right pane, titled 'Review', displays the 'Clusters with Images' section. It shows a table with one row for 'SDDC-Cluster1'. The table columns are: Cluster Name, Target ESXi Version, Target Vendor Addon, Target Hardware Support Package, and Target Image. The values are: SDDC-Cluster1, 9.0.0.0.24579044, None, None, and ESXi9.0. Below the table, there are sections for 'Upgrade Options' (Enable Quick Boot set to ENABLED) and 'Migrate powered off and suspended VMs'. At the bottom right are 'CANCEL', 'BACK', and 'RUN PRECHECK' buttons.

Cluster Name	Target ESXi Version	Target Vendor Addon	Target Hardware Support Package	Target Image
SDDC-Cluster1	9.0.0.0.24579044	None	None	ESXi9.0

Clusters per page: 10 | 1 - 1 of 1 clusters

Upcoming Options

Enable Quick Boot: ENABLED

Migrate powered off and suspended VMs

CANCEL BACK RUN PRECHECK

Phase 2: ESX Upgrade - Reviewing Precheck Result

Review the precheck report and resolve any issues before proceeding with the upgrade.

The screenshot shows the vSphere Lifecycle Manager interface for cluster **sddcid-1001**. The left sidebar includes sections for Dashboard, Inventory, Workload Domains, Hosts, Lifecycle Management (SDDC Manager, Release Versions, Binary Management, Image Management), Administration (Network Settings, Storage Settings, Single Sign On, Proxy Settings, Depot Settings, Backup, VMware CEIP), Security (Password Management, Certificate Authority), and Developer Center. The main content area displays a summary of errors:

- 2 Errors
- License check: Product type VCENTER, for domain sddcid-1001, is in Evaluation mode.
- License check: Product type VSAN, for domain sddcid-1001, cluster SDDC-Cluster1, is in Evaluation mode.

Below the errors, there is a section titled "Cluster Image Hardware Compatibility and Compliance Check Results" with a "PRECHECK" button. The results for cluster **sddcid-1001** show 0 errors and 0 warnings across various checks, including vSphere Lifecycle Manager image cluster health check, hardware device validation, and standalone host transport node checks for hosts esxi-4.vrak.vsphere.local, esxi-5.vrak.vsphere.local, esxi-3.vrak.vsphere.local, esxi-2.vrak.vsphere.local, and esxi-1.vrak.vsphere.local.

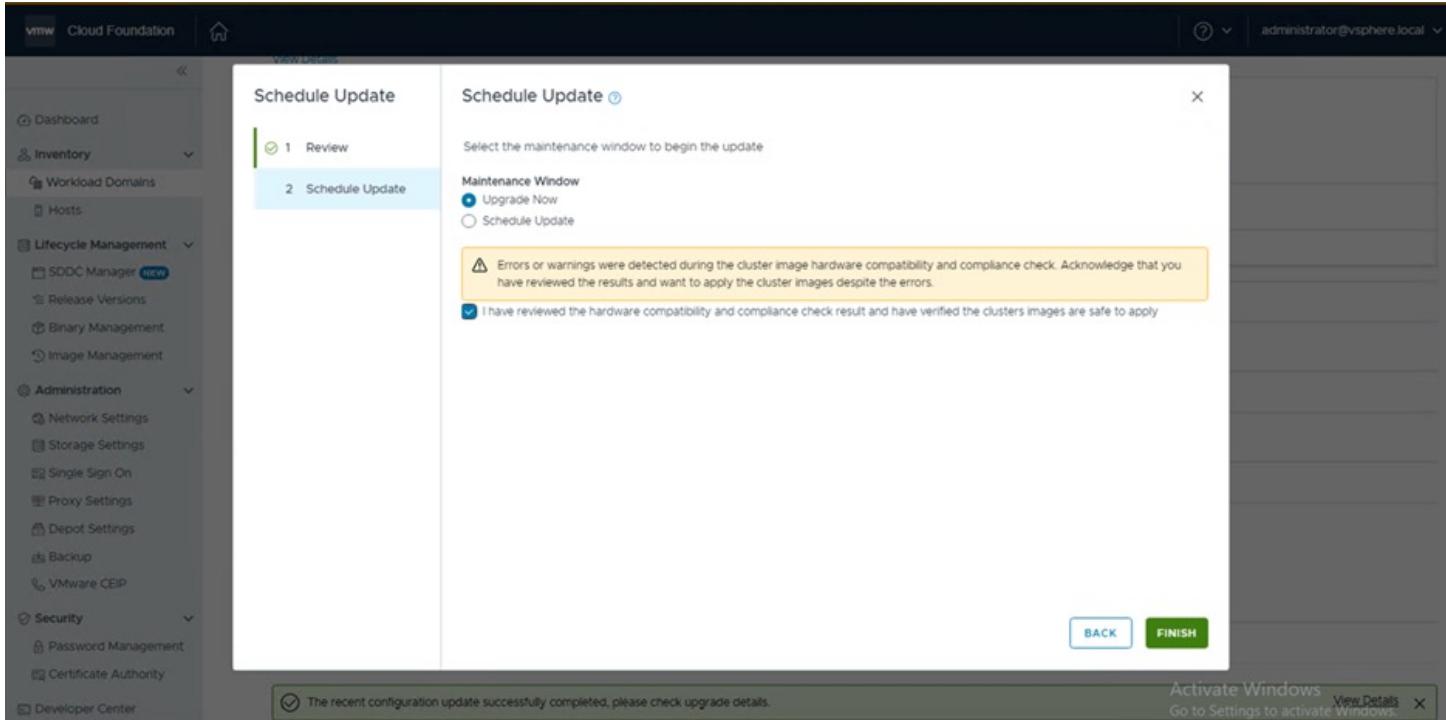
Phase 2: ESX Upgrade - Scheduling Update

After the precheck is successful, you schedule the update using the scheduling option.

The screenshot shows the VMware Cloud Foundation interface. On the left, there's a navigation sidebar with categories like Dashboard, Inventory, Workload Domains, Hosts, Lifecycle Management (with SDDC Manager), Administration, Security, and Developer Center. The main area is titled "Schedule Update" and is currently on step 2, "Schedule Update". It says "Select the maintenance window to begin the update" and offers two options: "Upgrade Now" (selected) and "Schedule Update". A warning message states: "Errors or warnings were detected during the cluster image hardware compatibility and compliance check. Acknowledge that you have reviewed the results and want to apply the cluster images despite the errors." Below it is a checkbox: "I have reviewed the hardware compatibility and compliance check result and have verified the clusters images are safe to apply". At the bottom right are "BACK" and "FINISH" buttons. A status message at the bottom says: "The recent configuration update successfully completed, please check upgrade details." There's also an "Activate Windows" bar with a "View Details" link.

Phase 2: ESX Upgrade - Monitoring the upgrade progress

Monitor the upgrade process. If you are upgrading multiple clusters in parallel and one or more of the cluster upgrades fail, the upgrade continues, on the remaining clusters.



Phase 2: ESX Upgrade - Reviewing the Upgrade

Review and verify that the ESX hypervisors are upgraded to 9.0.

The screenshot shows the VMware Cloud Foundation interface. On the left, there's a navigation sidebar with categories like Dashboard, Inventory, Workload Domains, Hosts, Lifecycle Management (with SDDC Manager), Administration (with Network, Storage, Single Sign On, Proxy, Backup, and VMware CEIP), Security, and Developer Center. The main area has a title 'Schedule Update' with two steps: 'Review' (done) and 'Schedule Update' (in progress). A message box says 'Select the maintenance window to begin the update' and offers 'Upgrade Now' or 'Schedule Update'. It also contains a warning about hardware compatibility and a checked checkbox for acknowledging it. At the bottom, there's a message about a successful configuration update and buttons for 'BACK' and 'FINISH'.

Phase 2: Upgrade vSAN On-Disk Format Versions - Prerequisites

Before you start, make sure.

- ESX and vCenter Upgrades are completed
- The disks are healthy. Navigate to the Disk Management to verify the status.
- ESX hosts are not in maintenance mode.
- In the vSAN cluster, there are currently no component rebuilding tasks in progress.
- The upgrade may lead to temporary resynchronization traffic and may require additional space by moving data or rebuilding object components to a new data structure.

Phase 2: Upgrade vSAN On-Disk Format Versions - Upgrading

Upgrade the vSAN on-disk format version to take advantage of features that are only available in later versions.

vSphere Client Search in all environments Administrator@VSPHERE.LOCAL

sfo-m01-cl01 ACTIONS

Summary Monitor Configure Permissions Hosts VMs Datastores Networks Updates

Host Options Host Profile Licensing Alarm Definitions

Services

All 12 disks on version 19.0. Some services may not provide the complete feature set.

Ready to upgrade - pre-check completed successfully on --.

SHUTDOWN CLUSTER TURN OFF VSAE UPGRADE PRE-CHECK UPGRADE

Phase 2: Upgrade vSphere Distributed Switch Versions

You must upgrade ESX and vCenter before upgrading the vSphere Distributed Switch to use features from later versions.

The screenshot shows a wizard interface for upgrading a vSphere Distributed Switch. On the left, a vertical navigation bar lists three steps: 'Configure upgrade', 'Check compatibility', and 'Ready to complete'. The third step is highlighted with a dark background and white text. The main panel is titled 'Ready to complete' and contains the following information:

Review your selections before finishing the wizard

Configure upgrade

Once upgraded the distributed switch cannot be downgraded to a previous distributed switch version. You will not be able to add older VMware ESX Server members that are not compatible with the new distributed switch.

Distributed switch	Value
Current version	8.0.0
Upgrade version	9.0.0

At the bottom right of the main panel are three buttons: 'CANCEL' (light blue), 'BACK' (light blue), and 'FINISH' (green).

Phase 3: Configure Licensing

Once the Upgrades completes you can log in to VCF Operations and configure licensing.

The screenshot shows the VCF Operations interface. On the left is a navigation sidebar with the following items:

- Home
- Inventory
- Infrastructure Operations
- Workload Operations
- Fleet Management
- Capacity
- Security
- License Management** (selected)
- Registration
- Licenses
- Usage Analytics
- Administration
- Developer Center

The main content area has two sections: "Connected" and "Disconnected".

Connected: Shows a yellow warning icon with a key and a cloud. Text: "VCF Operations is not registered. To access your licenses, register VCF Operations with the VCF Business Services console." A blue button labeled "START REGISTRATION". Below it: "Step 1: Log in to the VCF Business Services console to obtain an activation code for VCF Operations." and "Step 2: Finish your registration by entering the activation code here." An input field labeled "ENTER ACTIVATION CODE".

Disconnected: Shows a blue cloud icon. Text: "Disconnected mode requires you to manually transfer files for registration, updates of licenses, and usage reporting. Internet connection is not required." A blue button labeled "DOWNLOAD REGISTRATION FILE". Below it: "Step 1: Download the registration file." and "Step 2: Upload the registration file to the [VCF Business Services console](#).
Step 3: Import the license file that you downloaded from the VCF Business Services console." An input field labeled "IMPORT LICENSE FILE".

Phase 3: Configure Licensing

Once the Deployment completes you can log in to VCF Operations and configure licensing.

The screenshot shows two pages from the VCF Operations interface:

Licensing Page:

- Header:** Shows "Version 9+" and "Pre-Version 9".
- Section:** "Licenses".
- Information:** "Licenses Updated: Mar 21, 2025 | Next Usage Report Due: Sep 17, 2025".
- Table:** Displays two license entries:

Name	Product	Used Capacity	Allocated Capacity	vCenter	Issues
» vsan	VMware vSAN (TiB)	0 TiB	40 TiB	-	0 issues
» -vsphere	VMware Cloud Foundation (cores)	0 cores	512 cores	-	0 issues
- Buttons:** "Manage Columns" and "1 - 2 of 2 Objects".

vCenter Systems Page:

- Header:** Shows "ASSIGN PRIMARY LICENSE" and "ASSIGN ADD-ON LICENSE".
- Section:** "vCenter Systems".
- Table:** Displays one vCenter system entry:

vCenter	Managed by VCF Instance	Primary License Name	Primary License Product	Primary License Used Capacity	Add-on License Name	Fully Licensed
sfo-m01-vc01.sfo.rainpole.io	sfo-vcf01	--	--	0 cores	-	No
- Buttons:** "Manage Columns" and "1 - 1 of 1 Items".

Phase 3: Configure Licensing

Once the Deployment completes you can log in to VCF Operations and configure licensing.

vCenter Systems i

<input checked="" type="checkbox"/>	vCenter	Managed by VCF Instance	Primary License Name	Primary License Product	Primary License Used Capacity	Add-on License Name	Fully Licensed
<input type="checkbox"/>	»	sto-m01-vc01.sfo.rainpole.io	VCF Instance unknown	 -vsphere	VMware Cloud Foundation (cores)	256 cores	 5-vsan <input checked="" type="checkbox"/> Yes

Phase 4: Day N Activities and Beyond

The new VCF Fleet and deployment is stood up.

VCF Management

Overview Components Tasks Binary Management Depot Configuration Settings

VCF Capabilities

operations [New Deployment](#)

Version: 9.0.0.0

[MANAGE](#) [LEARN MORE](#)

operations-networks

Not enabled

Get a holistic view of your VCF network's health, issues, and operations in one place

[ADD](#) [LEARN MORE](#)

Key Takeaways



- The upgrade path will depend on the starting state.
- This is the only path that doesn't interact with VCF Installer – as SDDC Manager is already installed.
- Prerequisites are important, Pre-checks are important

Thank you!