

VCF 9.0 Troubleshooting

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Outcomes / Key Messages:

- Describe the sequence of steps that occur during the VMware Cloud Foundation Installation process
- Identify key log files to troubleshoot the VMware Cloud Foundation Installation

Abstract:

Deeper technical VCF 9.0 troubleshooting session dedicated to our Implementation teams.

Agenda

01

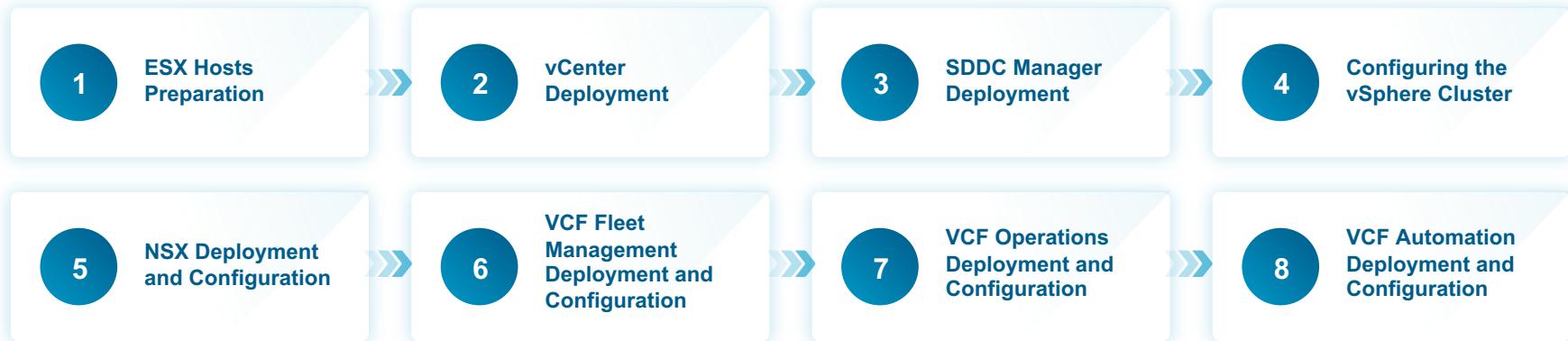
VCF Troubleshooting (60 min)

VMware Cloud Foundation Installation Troubleshooting

Learner Objectives

- Describe the sequence of steps that occur during the VMware Cloud Foundation Installation process
- Identify key log files to troubleshoot the VMware Cloud Foundation Installation

VMware Cloud Foundation Installation Workflow



You can follow the VMware Cloud Foundation installation process from the VMware Cloud Foundation Installer.

About VMware Cloud Foundation Installation Logs (1)

You can troubleshoot the VCF installation by reviewing the following log files depending on the deployment stage.

Stage	Appliance Log Location	Log Location
VCF Installation	VCF Installer	/var/log/vmware/vcf/domainmanager/domainmanager.log
vCenter Deployment	VCF Installer	/var/log/vmware/vcf/domainmanager/domainmanager.log /var/log/vmware/vcf/domainmanager/ci-installer-<id>/workflow_<id>/vcsa-cli-installer.log
SDDC Manager Deployment	VCF Installer	/var/log/vmware/vcf/domainmanager/domainmanager.log /var/log/vmware/vcf/domainmanager/sddc-manager.ovf-tool<id>.log
vSphere Cluster Configuration	SDDC Manager	/var/log/vmware/vcf/domainmanager/domainmanager.log
NSX Deployment	SDDC Manager	/var/log/vmware/vcf/domainmanager/domainmanager.log /var/log/vmware/vcf/domainmanager/nsx-ovf<id>.log

About VMware Cloud Foundation Installation Logs (2)

Stage	Appliance Log Location	Log Location
VCF Fleet Management Deployment	SDDC Manager	/var/log/vmware/vcf/domainmanager/domainmanager.log
VCF Operations Deployment	VCF Fleet Management	/var/log/vrlcm/vmware_vrlcm.log
VCF Automation Deployment	VCF Fleet Management	/var/log/vrlcm/vmware_vrlcm.log /var/log/vrlcm/vmsp_bootstrap_<id>.log

VCF Installer Log Location and File Structure

The log files related to the vCenter and SDDC Manager deployment are located in the /var/log/vmware/vcf/domainmanager folder of the VCF Installer appliance.

```
vcf@cloud-vm [ /var/log/vmware/vcf/domainmanager ]$ pwd  
/var/log/vmware/vcf/domainmanager  
vcf@cloud-vm [ /var/log/vmware/vcf/domainmanager ]$ ls -l  
total 3036  
drwxr-xr-x 2 vcf_domainmanager vcf 4096 Feb 12 18:45 app-crash-logs  
drwxr-xr-x 3 vcf_domainmanager vcf 4096 Mar 10 12:49 ci-installer-10-03-25-12-49-643  
-rw-r--r-- 1 vcf_domainmanager vcf 514209 Mar 10 12:23 domainmanager.2025-02-20.0.log.gz  
-rw-r--r-- 1 vcf_domainmanager vcf 1271187 Mar 11 00:00 domainmanager.2025-03-10.0.log.gz  
-rw-r--r-- 1 vcf_domainmanager vcf 5906 Mar 10 12:25 domainmanager-activity.2025-02-20.0.log.gz  
-rw-r--r-- 1 vcf_domainmanager vcf 161919 Mar 11 00:00 domainmanager-activity.2025-03-10.0.log.gz  
-rw-r--r-- 1 vcf_domainmanager vcf 804676 Mar 11 08:25 domainmanager-activity.log  
-rw-r--r-- 1 vcf_domainmanager vcf 0 Feb 20 14:20 domainmanager.err  
-rw-r--r-- 1 vcf_domainmanager vcf 133789 Mar 11 08:25 domainmanager.log  
-rw-r--r-- 1 vcf_domainmanager vcf 120 Mar 10 12:23 domainmanager.out  
drwxr-xr-x 2 vcf_domainmanager vcf 4096 Feb 20 14:20 metrics  
-rw-r--r-- 1 vcf_domainmanager vcf 172877 Mar 10 13:27 sddc-manager-ovf-tool-2025-03-10T13:22:33.628761465Z.log  
drwxr-xr-x 2 vcf_domainmanager vcf 4096 Feb 12 18:45 upgrades
```

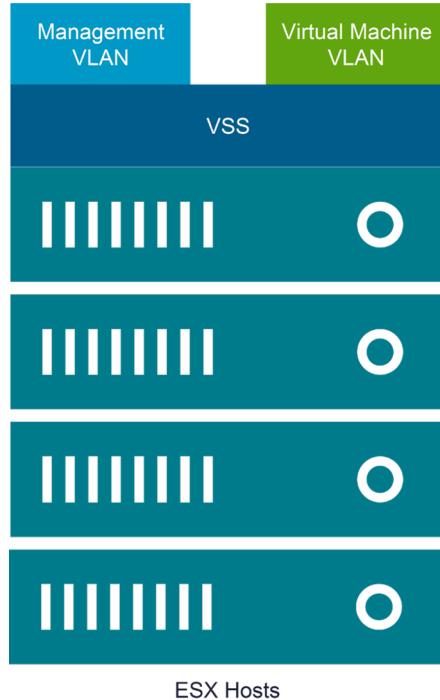
Path to log files

vCenter Deployment Log

VCF Installer Logs

SDDC Manager Deployment Log

ESX Hosts Preparation



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 an interactive ESX 9.0 installation.
- Configure the VLAN ID of the ESX host management network.
- Configure the VLAN ID of the VM network.
- Configure NTP.

Troubleshooting ESX vSAN Preparation and DNS Configuration

From the VCF Installer appliance, navigate to

```
/var/log/vmware/vcf/domainmanager/domainmanager.log
```

ESX vSAN Preparation

Search for: *PrepareEsxiContractAction*

```
DEBUG - Invoking task PrepareESXiContractAction. Description: Prepare ESXi Host, Plugin:  
HostPlugin ParamBuilder null, Input map {...}, Id: ac140ad7-954d-1399-8195-767ad42a005f
```

ESX DNS Configuration

Search for: *ReconfigureHostDnsAction*

```
DEBUG - [c.v.v.c.f.p.a.i.ReconfigureHostDnsAction, dm-exec-2] Verified that DNS server for host  
esx-1.vcf.sddc.local is set to 172.20.10.10
```

```
DEBUG - [c.v.v.c.f.p.a.i.ReconfigureHostDnsAction, dm-exec-2] Verified that hostname and domain  
for host esx-1.vcf.sddc.local are configured as esx-1 and vcf.sddc.local respectively.
```

Troubleshooting ESX VM Network Port Group Creation

From the VCF Installer appliance, navigate to

```
/var/log/vmware/vcf/domainmanager/domainmanager.log
```

ESX VM Network Port Group Creation

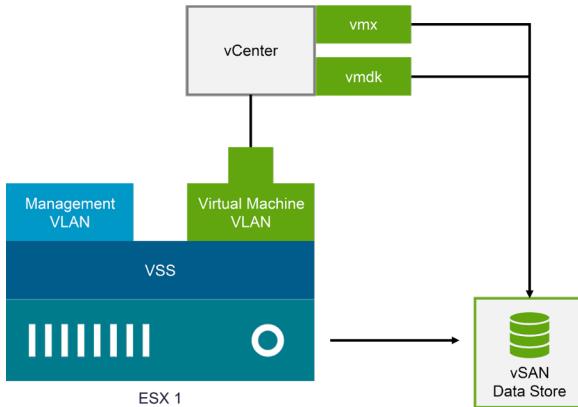
Search for: *CreateVmPortGroupAction*

```
DEBUG - [c.v.v.c.f.p.a.i.CreateVmPortGroupAction, dm-exec-24] Create VM Network portgroup on hosts  
with VLAN 2010
```

```
DEBUG - [c.v.v.c.f.p.a.i.CreateVmPortGroupAction, dm-exec-24] Creating VM Network port group on host  
esx-1.vcf.sddc.local
```

```
DEBUG - [c.v.v.c.f.p.a.i.CreateVmPortGroupAction, dm-exec-24] VM Network port group on host esx-  
1.vcf.sddc.local Created
```

vCenter Deployment



During the vCenter deployment stage, the VMware Cloud Foundation Installer performs the following steps:

- 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 data store is configured on the ESX host to store the vCenter appliance files.
- First boot scripts are run on the vCenter appliance.

Troubleshooting the vCenter Deployment

From the VCF Installer appliance, navigate to

```
/var/log/vmware/vcf/domainmanager/domainmanager.log
```

vCenter Deployment

Search for: *DeployVcAction*

```
DEBUG - [c.v.e.s.o.c.ProcessingTaskSubscriber, dm-exec-4] Invoking task DeployVcAction. Description:  
Deploy vCenter Server Appliance, create and configure vSAN Cluster and vSAN Datastore, Plugin:  
vCPlugin, ParamBuilder nul, Input map: {...}, Id:ac140ad7-954d-1399-8195-767ad431006b
```

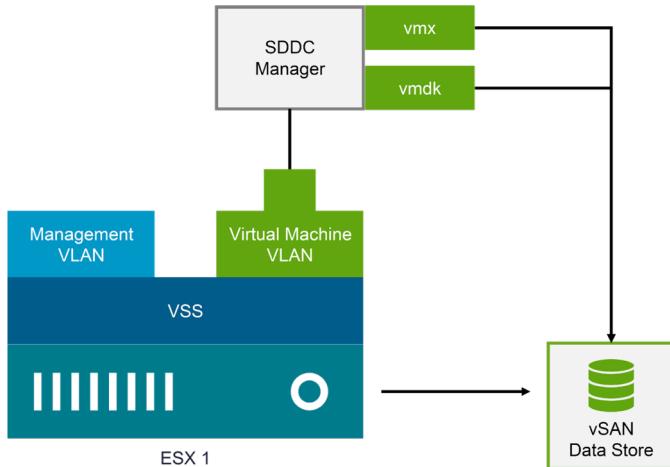
You can also check the

```
/var/log/vmware/vcf/domainmanager/ci-installer-<id>/workflow_<id>/vcsa-cli-installer.log
```

log file for additional details on the vCenter deployment.

SDDC

Manager Deployment



During the SDDC Manager deployment stage, the VMware Cloud Foundation Installer performs the following steps:

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

Troubleshooting the SDDC Manager Deployment

From the VCF Installer appliance, navigate to

```
/var/log/vmware/vcf/domainmanager/domainmanager.log
```

SDDC Manager Deployment

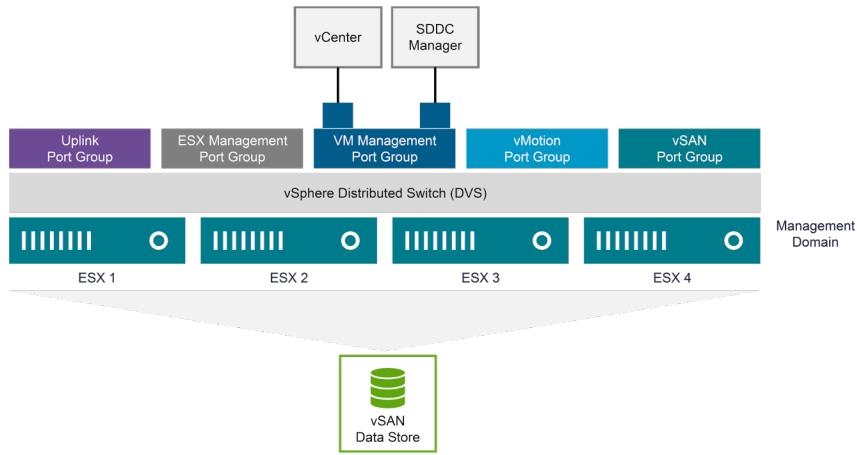
Search for:

DeploySddcManagerAction

```
DEBUG - [c.v.e.s.o.c.ProcessingTaskSubscriber, dm-exec-18] Invoking task DeploySddcManagerAction.  
Description: Deploy SDDC Manager, Plugin: SddcManagerContractPlugin, ParamBuilder null, Input map:  
{...}, Id:ac140ad7-95-80-1376-8195-801874dd0080  
  
DEGUB - [c.v.e.s.s.DeploySddcManager, dm-exec-18] Progress message added: Deploy SDDC Manager sa-  
sddc-01.vcf.local with VM name sa-sddc-01  
  
INFO - [c.v.e.s.s.DeploySddcManager, dm-exec-18] SDDC Manager OVF deployment with status: true on  
cluster EDU-cl01 and deployment endpoint sa-m01-vc01.vcf.sddc.local  
  
INFO - [c.v.e.s.s.DeploySddcManager, dm-exec-7] SddcManager webservice is up. Got valid About API  
response for https://sa-sddc-01.vcf.local/operationsmanager/about
```

vSphere

Cluster Configuration



During the vSphere Cluster configuration stage, the VMware Cloud Foundation Installer performs the following steps:

- 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.

SDDC Manager Log Location and File Structure

The log files related to the vSphere cluster configuration, the NSX Management cluster deployment, and the VCF Fleet Management appliance are located in the /var/log/vmware/vcf/domainmanager folder of the SDDC Manager appliance.

```
/vcf@sa-sddc-01 [ /var/log/vmware/vcf/domainmanager ]$ pwd  
/var/log/vmware/vcf/domainmanager  
vcf@sa-sddc-01 [ /var/log/vmware/vcf/domainmanager ]$ ls -l  
total 41932  
drwxr-xr-x 2 vcf_domainmanager vcf 4096 Feb 12 18:45 app-crash-logs  
-rw-r--r-- 1 vcf_domainmanager vcf 20167541 Mar 11 00:00 domainmanager.2025-03-10.0.log  
-rw-r--r-- 1 vcf_domainmanager vcf 45885 Mar 11 00:00 domainmanager-activity.2025-03-10.0.log.gz  
-rw-r--r-- 1 vcf_domainmanager vcf 857696 Mar 11 13:41 domainmanager-activity.log  
-rw-r--r-- 1 vcf_domainmanager vcf 0 Mar 10 13:27 domainmanager.err  
-rw-r--r-- 1 vcf_domainmanager vcf 21816855 Mar 11 13:41 domainmanager.log  
-rw-r--r-- 1 vcf_domainmanager vcf 120 Mar 10 13:27 domainmanager.out  
drwxr-xr-x 2 vcf_domainmanager vcf 4096 Mar 10 13:27 metrics  
-rw-r--r-- 1 vcf_domainmanager vcf 158 Mar 10 14:00 nsxt-manager-ovf5986346545777644990.log  
-rw-r--r-- 1 vcf_domainmanager vcf 914 Mar 10 13:58 nsxt-manager-ovf5986346545777644990.log.2025-03-10-1741615201.gz  
-rw-r--r-- 1 vcf_domainmanager vcf 158 Mar 10 14:00 nsxt-manager-ovf8798861098632797824.log  
-rw-r--r-- 1 vcf_domainmanager vcf 886 Mar 10 13:57 nsxt-manager-ovf8798861098632797824.log.2025-03-10-1741615201.gz  
drwxr-xr-x 2 vcf_domainmanager vcf 4096 Feb 12 18:45 upgrades  
vcf@sa-sddc-01 [ /var/log/vmware/vcf/domainmanager ]$
```

Path to log files

NSX Deployment Log

Troubleshooting vSphere Cluster Configuration

From the SDDC Manager appliance, navigate to

```
/var/log/vmware/vcf/domainmanager/domainmanager.log
```

Create vSphere Cluster

Search for: *CreateClusterContractAction*

```
INFO - [c.v.v.c.f.p.a.i.CreateClusterContractAction, dm-exec-4] Cluster EDU-cl01 was created successfully
```

Create vSAN Cluster

Search for: *CreateVsanClusterAction*

```
INFO - [c.v.v.c.c.f.a.i.CreateVsanClusterAction, dm-exec-29] Configuring vsan cluster EDU-cl01 in vCenter sa-m01-vc01.vcf.sddc.local
```

Troubleshooting vSphere Cluster Networking Configuration

From the SDDC Manager appliance, navigate to

```
/var/log/vmware/vcf/domainmanager/domainmanager.log
```

Distributed Virtual Switch Creation

Search for: *CreateDvsAction*

```
DEBUG - [c.v.e.s.o.c.ProcessingTaskSubscriber, dm-exec-16] Invoking task CreateDvsAction.  
Description: Create vSphere Distributed Switch, Plugin: DvsDeploymentPlugin, ParamBuilder  
com.vmware.vcf.vimanager.fsm.parambuilders.vsphere.cluster.ViCreateDvsParamBuilder, Input map: null ,  
Id: ac140ad7-9518-14fc-8195-190b9ad6009c
```

Distributed Port Group Creation

Search for: *BaseCreatePortGroupAction*

```
INFO - [c.v.v.c.c.f.a.i.BaseCreatePortGroupAction, dm-exec-6] Created portgroup mgmt-cls-vds-01-pg-  
mgmt, for moid vdportgroup-23  
INFO - [c.v.v.c.c.f.a.i.BaseCreatePortGroupAction, dm-exec-6] Created portgroup mgmt-cls-vds-01-pg-  
vm-mgmt, for moid vdportgroup-24
```

Troubleshooting VM Migration to the Distributed Portgroup

Migrating VMs to the distributed portgroup

Search for: *MigrateVmsToDifferentPortGroup*

```
INFO - [c.v.v.c.c.f.a.i, MigrateVmsToDifferentPortGroup, dm-exec-14] Execute
MigrateVmsToDifferentPortGroup task

DEBUG - [c.v.v.c.c.f.a.i, MigrateVmsToDifferentPortGroup, dm-exec-14] Successfully migrated VMs to
portgroup vdportgroup-24

DEBUG - [c.v.v.c.c.f.a.i, MigrateVmsToDifferentPortGroup, dm-exec-14] Checking VM sa-sddc-01 network
type: DistributedVirtualPort:vdportgroup-24

DEBUG - [c.v.v.c.c.f.a.i, MigrateVmsToDifferentPortGroup, dm-exec-14] Checking VM sa-m01-vc01 network
type: DistributedVirtualPort:vdportgroup-24
```

Troubleshooting DRS and HA vSphere Cluster Configuration

From the SDDC Manager appliance, navigate to

```
/var/log/vmware/vcf/domainmanager/domainmanager.log
```

Enable DRS on the vSphere Cluster

Search for: *EnableClusterDrsAction*

```
DEBUG - [c.v.e.s.o.c.ProcessingTaskSubscriber, dm-exec-11] Invoking task Enable DRS on the vSphere Cluster. Description: Enable DRS on the vSphere Cluster, Plugin: ConfigureClusterPoliciesPlugin, ParamBuilder com.vmware.vcf.vimanager.fsm.parambuilders.vsphere.cluster.ViEnableClusterDrsParamBuilder, Input map: null , Id: ac140ad7-9518-14fc-8195-190b9aee00c7
```

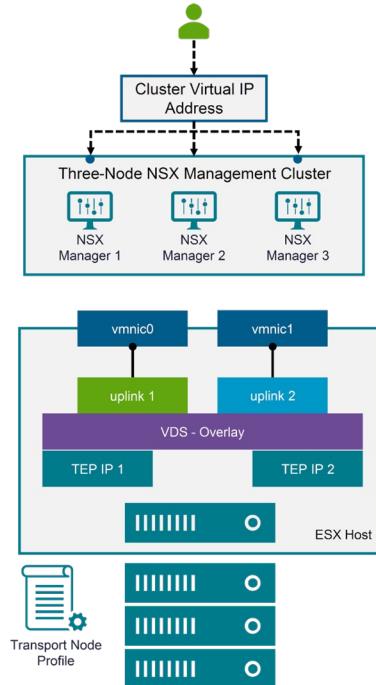
Configure vSphere HA

Search for: *ConfigureClusterHaAction*

```
DEBUG - [c.v.e.s.o.c.ProcessingTaskSubscriber, dm-exec-26] Invoking task ConfigureHaAction. Description: Configure vSphere HA, Plugin: ConfigureClusterPoliciesPlugin, ParamBuilder com.vmware.vcf.vimanager.fsm.parambuilders.vsphere.cluster.ViConfigureClusterHaParamBuilder, Input map: null , Id: ac140ad7-9518-14fc-8195-190b9aef00c9
```

NSX

Deployment and Configuration



During the NSX deployment and configuration stage, the VMware Cloud Foundation Installer performs the following steps:

- 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.

Troubleshooting NSX Deployment

From the SDDC Manager appliance, navigate
to

```
/var/log/vmware/vcf/domainmanager/domainmanager.log
```

NSX Deployment

Search for: *DeployNSxtManagerAction*

```
INFO - [c.v.v.c.f.p.n.a.DeployNsxtManagerAction, dm-exec-15] Deploying NSX manager with formFactor  
medium  
INFO - [c.v.v.c.f.p.n.a.DeployNsxtManagerAction, dm-exec-15] NSX OVA deployment completed with  
status: true
```

Troubleshooting NSX Configuration

From the SDDC Manager appliance, navigate

to `var/log/vmware/vcf/domainmanager/domainmanager.log`

Add vCenter as Compute Manager

Search for:

ConfigureNSXtFabricComputeManagerAction

```
DEBUG - [c.v.v.c.f.p.n.a.ConfigureNSXtFabricComputeManagerAction, dm-exec-20] Add vCenter sa-m01-vc01.vcf.sddc.local as compute manager on sa-m01-nsxt-vip.vcf.sddc.local  
DEBUG - [c.v.v.c.c.CpmputeManagerSettingsDriftCheck, ForkJoinPool.commonPool-worker-15] Compute Manager sa-m01-vc01.vcf.sddc.local is configured with service account for domain: dcf3d480-6d-4105-ad52-a100ed0d1049f
```

Create NSX Transport Zones

Search for:

CreateNsxtMultipleTransportZonesAction

```
INFO - [c.v.v.c.f.p.n.a.CreateNsxtMultipleTransportZonesAction, dm-exec-34] Created transport zone with name: VCF-Created-Overlay-Zone, type: OVERLAY, and isDefault: true.
```

Troubleshooting Transport Node Profile Creation

From the SDDC Manager appliance, navigate
to

```
/var/log/vmware/vcf/domainmanager/domainmanager.log
```

Create and apply a Transport Node Profile

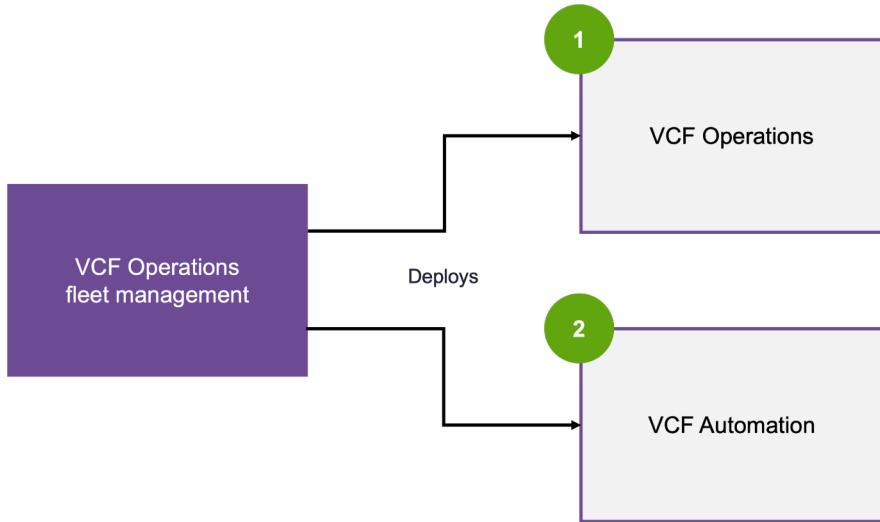
Search for:

CreateTransportNodeCollectionAction

```
DEBUG - [c.v.e.s.o.c.ProcessingTaskSubscriber, dm-exec-24] Invoking task
CreateTransportNodeCollectionAction. Description: Create Transport Node Collection, Plugin:
NSXtPlugin, ParamBuilder null, Input map: {...} , Id: ac140ad8-9580-1df6-8195-804758330151
DEBUG - [c.v.v.c..f.p.n.p.a.CreateTransportNodeCollectionAction, dm-exec-24] Apply Transport Node
profile 0f4bcd7b-40d5-4052-92be-7ee25dfe7368 on cluster 4f44549a-4919-4e5c-ae52-b0b4477a236ca:domain-
c0
```

VCF Operations Fleet Management

Deployment and Configuration



After the NSX configuration is complete, the VMware Cloud Foundation Installer deploys the VCF Operations fleet management appliance.

VCF Operations fleet management is then used to deploy:

- VCF Operations
- VCF Automation

VCF Operations Fleet Management Deployment

From the SDDC Manager appliance, navigate
to

```
/var/log/vmware/vcf/domainmanager/domainmanager.log
```

VCF Operations Fleet Management Deployment

Search for: *VrslcmDeployer*

```
INFO - [c.v.e.s.c.v.v.d.VrslcmDeployerFactoryImpl, dm-exec-35] About to deploy VMware Aria Suite Lifecycle 9.0.0.0.24567162
```

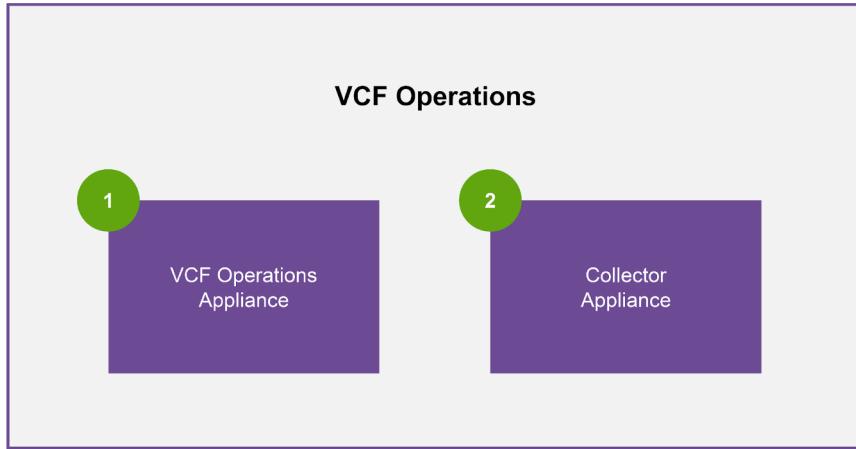
```
INFO - [c.v.e.s.c.v.v.d.VrslcmDeployerFactoryImpl, dm-exec-35] VMware Aria Suite Lifecycle appliance name set as: VCF_OPS_Lifecycle_Manager_Appliance
```

```
INFO - [c.v.e.s.c.v.v.d.BaseVrslcmDeployer, dm-exec-35] Starting VMware Aria Suite Lifecycle deployment. VMware Aria Suite Lifecycle OVA location is /home/vcf/VCF-OPS-Lifecycle-Manager-Appliance-9.0.0.24567162.ova
```

```
INFO - [c.v.e.s.c.v.v.d.BaseVrslcmDeployer, dm-exec-35] VMware Aria Suite Lifecycle VM sa-vcopsfm-01 with IP address 172.20.10.31 and hostname sa-vcopsfm-01.vcf.sddc.local is successfully deployed.
```

VCF Operations

Deployment and Configuration

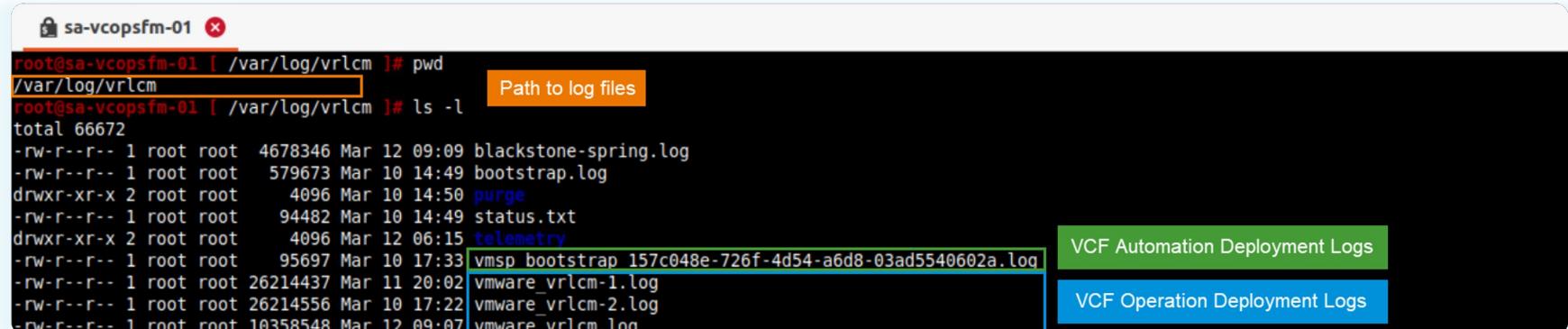


During the VCF Operations deployment, the following appliances are created:

- VCF Operations appliance
- Collector appliance

VCF Operations Fleet Management Log Location and File Structure

The log files related to the VCF Operations and VFC Automation deployment are located in the /var/log/vrlcm/ folder of the VCF Fleet Management appliance.



A terminal window titled 'sa-vcopsfm-01' showing a directory listing in the '/var/log/vrlcm' folder. The terminal prompt is 'root@sa-vcopsfm-01 [/var/log/vrlcm]#'. The user runs 'pwd' to show the current directory, then 'ls -l' to list the files. The output shows several log files including 'blackstone-spring.log', 'bootstrap.log', 'purge', 'status.txt', 'telemetry', and several VMware logs. A yellow box highlights the path '/var/log/vrlcm'. A green box highlights the 'bootstrap' log file, and a blue box highlights the 'vrlcm' log files.

```
root@sa-vcopsfm-01 [ /var/log/vrlcm ]# pwd
/var/log/vrlcm
root@sa-vcopsfm-01 [ /var/log/vrlcm ]# ls -l
total 66672
-rw-r--r-- 1 root root 4678346 Mar 12 09:09 blackstone-spring.log
-rw-r--r-- 1 root root 579673 Mar 10 14:49 bootstrap.log
drwxr-xr-x 2 root root 4096 Mar 10 14:50 purge
-rw-r--r-- 1 root root 94482 Mar 10 14:49 status.txt
drwxr-xr-x 2 root root 4096 Mar 12 06:15 telemetry
-rw-r--r-- 1 root root 95697 Mar 10 17:33 vmsp_bootstrap_157c048e-726f-4d54-a6d8-03ad5540602a.log
-rw-r--r-- 1 root root 26214437 Mar 11 20:02 vmware_vrlcm-1.log
-rw-r--r-- 1 root root 26214556 Mar 10 17:22 vmware_vrlcm-2.log
-rw-r--r-- 1 root root 10358548 Mar 12 09:07 vmware_vrlcm.log
```

Path to log files

VCF Automation Deployment Logs

VCF Operation Deployment Logs

Troubleshooting VCF Operations and Collector Deployment

You use the `/var/log/vrlcm/vmware_vrlcm.log` log file in the VCF Fleet Management appliance to troubleshooting the VCF Operations appliance and the collector deployment.

VCF Operations Appliance Deployment

Search for: *Injecting Edge :: OnInitialized*

```
INFO vrlcm[1244] [...] [c.v.v.l.p.a.s.Task] -- Injecting Edge :: OnInitialized
{
    "componentSpec" : {
        "object" : {
            "component" : {
                "symbolicName" : "masternodeinstall",
                ...
                "hostName" : "sa-vcops-01.vcf.sddc.local",
            }
        }
    }
}
```

Cloud Proxy Deployment and Start Completion [Collector]

Search for: *Done waiting for CP node to start*

```
INFO vrlcm[1244] [...] [c.v.v.l.p.c.v.t.VropsOnPremCpNodeWaitForStartTask] -- Done waiting for CP
node to start
```

Troubleshooting VCF Adapter Configuration and VCF Operations Inventory Synchronization

You use the `/var/log/vrlcm/vmware_vrlcm.log` log file in the VCF Fleet Management appliance to troubleshooting the VCF adapter configuration and the VCF Operations inventory Synchronization

VCF Adapter Configuration

Search for: *Injecting Edge ::*

OnAddResourceIdInSddcMgrTableSuccess

```
INFO vrlcm[1244] [pool-3-thread-3] [c.v.v.l.p.a.s.Task] -- Injecting Edge ::  
OnAddResourceIdInSddcMgrTableSuccess
```

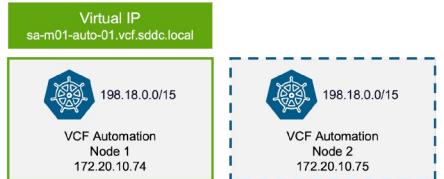
VCF Operations Inventory Synchronization

Search for: *VCF OPS Inventory Sync*

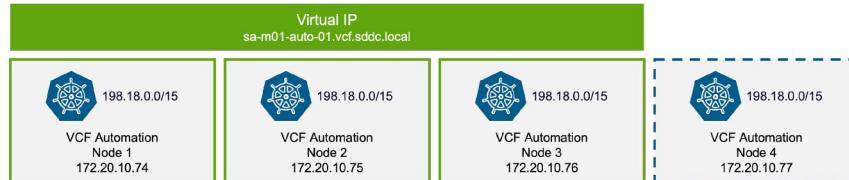
```
INFO vrlcm[1244] [pool-3-thread-13] [c.v.v.l.p.c.v.t.VcfOpsInventorySyncScheduleTask] -- VCF OPS  
Inventory Sync to LCM schedule has been successfully created !!!
```

VCF Automation

Deployment and Configuration



Single - Node Deployment



High - Availability Deployment

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.

Troubleshooting VCF Automation Deployment

You use the `/var/log/vrlcm/vmsp_bootstrap_<id>.log` log file in the VCF Fleet Management appliance to troubleshooting the VCF Automation deployment.

```
INFRA0001 - Deploying VCF services platform cluster nodes
INFRA0002 - Waiting for VCF services platform cluster nodes to become ready
DEPLOY0001 - Preparing VCF services platform cluster
DEPLOY0002 - Deploying core appliance services
DEPLOY0003- Deploy registry on VCF services platform cluster
DEPLOY0004 - Populating VCF services platform cluster registry
DEPLOY0005 - Transferring control of infrastructure to VCF services platform cluster
DEPLOY0006 - Transferring control of packages to VCF services platform cluster
```

Checking the Health Status of VCF Automation Deployment

You use the `/var/log/vrlcm/vmsp_bootstrap_<id>.log` log file in the VCF Fleet Management appliance to check the health status the VCF Automation deployment.

```
HEALTH0001 - Running health checks on VCF services platform cluster
```

```
HEALTH0002 - VCF services platform cluster synthetic checks validation
```

```
All synthetic checks status successful on VCF services platform cluster vcf-mgmt-53dc2b1218
```

```
Cluster provisioning completed. Enjoy your new VCF services platform cluster! Kubeconfig: vcf-mgmt-53dc2b1218.kubeconfig
```

Troubleshooting a vSphere to VCF 9.0 Conversion



SKUs and Components

SKU	Components	Notes
VCF	<p>Core: VC NSX</p> <p>SDDC Manager</p> <p>Management (aka Aria): VCF Operations Fleet Management (vRSLCM)</p> <p>VCF Operations (VCF Ops)</p> <p>VCF Operations Collector</p> <p>VCF Automation</p>	<ul style="list-style-type: none">• VCF Installer deploys VC, SDDC Manager, NSX and VCF Operations Fleet Management• VCF Installer instructs VCF Operations Fleet Management to deploy the Management components• VCF Operations Collector is a dependent component of VCF Ops that is required for each deployment
VVF	<p>Core: VC</p> <p>Management: VCF Operations (VCF Ops)</p> <p>VCF Operations Collector</p>	<ul style="list-style-type: none">• VCF Installer deploys all of the products (VC, VCF Ops, VCF Operations Collector)• There is no VCF Operations Fleet Management (vRSLCM)

Deployment Model

The deployment model has been narrowed down into two options:

- Simple (Single-node)
- High-availability (Three nodes)

Software Bill Of Material (BOM)

VMware Cloud Foundation contains several VMware SDDC products.

Release Bill of Materials (BOM)

VMware Cloud Foundation(VCF)

VCF supports following software components.

Software Component	Version	Build
SDDC Manager	9.0.0.0	24703748
VMware ESX	9.0.0.0	24734766
VMware NSX	9.0.0.0	24733063
VMware vCenter	9.0.0.0	24734770
VMware Cloud Foundation Operations fleet management	9.0.0.0	24695816
VMware Cloud Foundation Operations for logs	9.0.0.0	24695810
VMware Cloud Foundation Operations	9.0.0.0	24695812
VMware Cloud Foundation Operations Collector	9.0.0.0	24695833
VMware Cloud Foundation Automation	9.0.0.0	24701403
VMware Identity Broker	9.0.0.0	24695128
VMware Cloud Foundation Operations for networks	9.0.0.0	24694676

VMware Cloud Foundation Standalone Components

Standalone Components

Components which are supported by selected VCF version but not managed by any LCM engine.

Software Component	Version	Build
VMware Cloud Foundation Download Tool	9.0.0.0	24703747
VMware vSAN OSA Witness	9.0.0.0	24734882
VMware vSAN ESA Witness	9.0.0.0	24734881
VMware Tools Async Release	13.0.0.0	24696475
VMware vSAN File Services	9.0.0.0	24734766
VMware Cloud Foundation Operations HCX	9.0.0.0	24699341
VMware Live Recovery	9.0.3.0	24693627
VMware Private AI	9.0.0.0	24628237
VMware Remote Console	13.0.0.0	24645870
VMware Orchestrator	9.0.0.0	24674408
VMware Kubernetes Backup & Recovery Service	1.8.0+24668882	
VMware Kubernetes Backup & Recovery Service	1.8.0+24668882	
VMware vSphere Kubernetes Service	3.3	1
VMware vSphere Supervisor	9.0.0.0	24686447
VMware Data Services Manager	9.0.0.0	24713720

Environment Pre-requisites - 1

ESX Hosts

4 hosts for Management domain plus additional if needed.

- Images with ESX 9.0.0.0 build 24418879
- 32 vCPUs are required for the hosts in the Management domain.
- RAM: 64GB (on Nimbus 20GB reservation is desired)

Network

Management, VM management, vSAN, vMotion, NSX TEP

Existing vCenter:

Must be non-ELM (Enhanced Linked Mode)

If existing NSX is present:

- Should be connected to the given vCenter
- Should not be federated

Environment Pre-requisites - 2

If existing VCF Ops is present:

Input specification (either through UI or API) should always state vcfCloudProxy → useExistingDeployment → false, meaning that a new Cloud Proxy will be deployed in VCF Ops during the vCenter and VCF Ops upgrade import.

VCF Installer VM:

Either pre-deployed in the existing vCenter OR deployed on infrastructure outside of the existing vCenter, but with network connectivity to the VC/NSX/ESX/VCF Ops products.

Certificates

Existing vCenter server should not have any expired or untrusted certificates before the convert/import operation.

DNS and NTP Configuration

Incorrect DNS and NTP settings can cause failures in resolving hostnames and synchronizing time, leading to issues during the conversion/import.

vSAN File System

Incorrect DNS and NTP settings can cause failures in resolving hostnames and synchronizing time, leading to issues during the conversion/import.

Services for VCF Installer and SDDC Manager

Service	Service	Responsibilities
Common Service	/opt/vmware/vcf/commonsvcs/	Inventory, Credentials, Certificates, Passwords
Domain Manager	/opt/vmware/vcf/domainmanager/	VCF Installer validation & deployment workflows, Day 2 workflows (add/remove VI, Day 2 Management Components deployment)
Operations Manager	/opt/vmware/vcf/operationsmanager/	Security Operations (Certificates, Passwords), Data aggregation (Resource Aggregator), Host Commissioning
LCM	/opt/vmware/vcf/lcm/lcm-app/	Upgrade Planning, Patch, Upgrades, Prechecks, Bundle Management
SoS	/opt/vmware/sddc-support/	Support Logs generation, health
UI	/var/log/vmware/vcf/sddc-manager-ui-app/	UI for VCF Installer/SDDC Manager

Log Location for VCF Installer and SDDC Manager

Log Name	Log Location	Responsibilities
Common Service	/var/log/vmware/vcf/commonsvcs/	Inventory, Credentials, Certificates, Passwords
Domain Manager	/var/log/vmware/vcf/domainmanager/	VCF Installer validation & deployment workflows, Day 2 workflows (add/remove VI, Day 2 Management Components deployment)
Operations Manager	/var/log/vmware/vcf/operationsmanager/	Security Operations (Certificates, Passwords), Data aggregation (Resource Aggregator), Host Commissioning
LCM	/var/log/vmware/vcf/lcm/	Upgrade Planning, Patch, Upgrades, Prechecks, Bundle Management
SoS	/opt/vmware/sddc-support/	Support Logs generation, health
UI	/opt/vmware/vcf/sddc-manager-ui-app/	UI for VCF Installer/SDDC Manager

Other Components Log Location

Product	Log Location	Responsibilities
NSX Manager	/var/log/auth.log	Authorization log
NSX Manager	/var/log/controller	Controller log
NSX Manager	/var/log/manager.log	Manager service log
NSX Manager	/var/log/nsx-audit.log	NSX audit log
NSX Manager	/var/log/syslog	System log
vCenter Server	/var/log/vmware/vpxd	vpxd Log
VCF Operations	/var/log/vmware/vcops/*	VCF Operations logs

Host Commissioning Failure Scenario: NTP Issue

In the example, host commissioning failed because of an NTP configuration issue. To resolve this issue, you must validate the host's NTP settings.

Hosts Added

1 Errors, 1 Info

- ! esx-5.vcf.sddc.local: NTP service is not running on the host.
- i You can remove the validation failed host and proceed with commissioning for the remaining hosts.

REMOVE **CONFIRM FINGERPRINTS** **VALIDATE ALL**

	FQDN	Network Pool	Confirm FingerPrint	Validation Status
<input checked="" type="checkbox"/>	esx-5.vcf.sddc.local	EDU-np01	✓ SHA256:BHumaptH CX1+U+o8a3ZZEJa YamJMxeOfxB8ikJ	! Invalid

Troubleshooting VCF 5.x to VCF 9.0 Upgrade



Learner Objectives

After completing this lesson, you should be able to meet the following objectives:

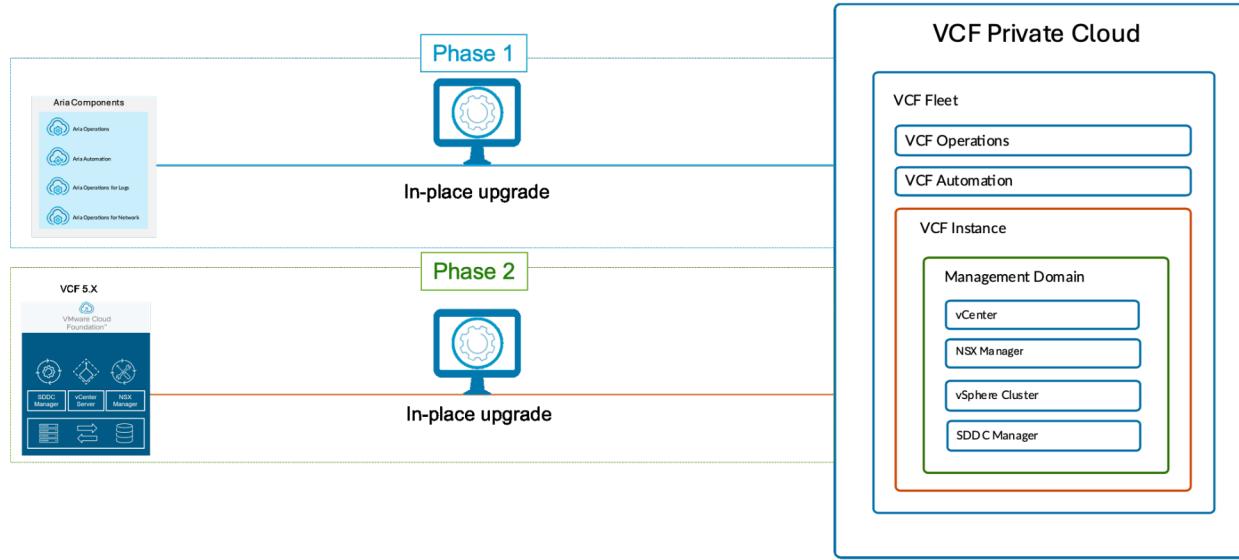
- Identify the common upgrade issues and analyze them
- Explain the troubleshooting methodology to resolve common errors
- Identify and use the correct logs to troubleshoot VMware Cloud Foundation (VCF) upgrade to 9.0

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

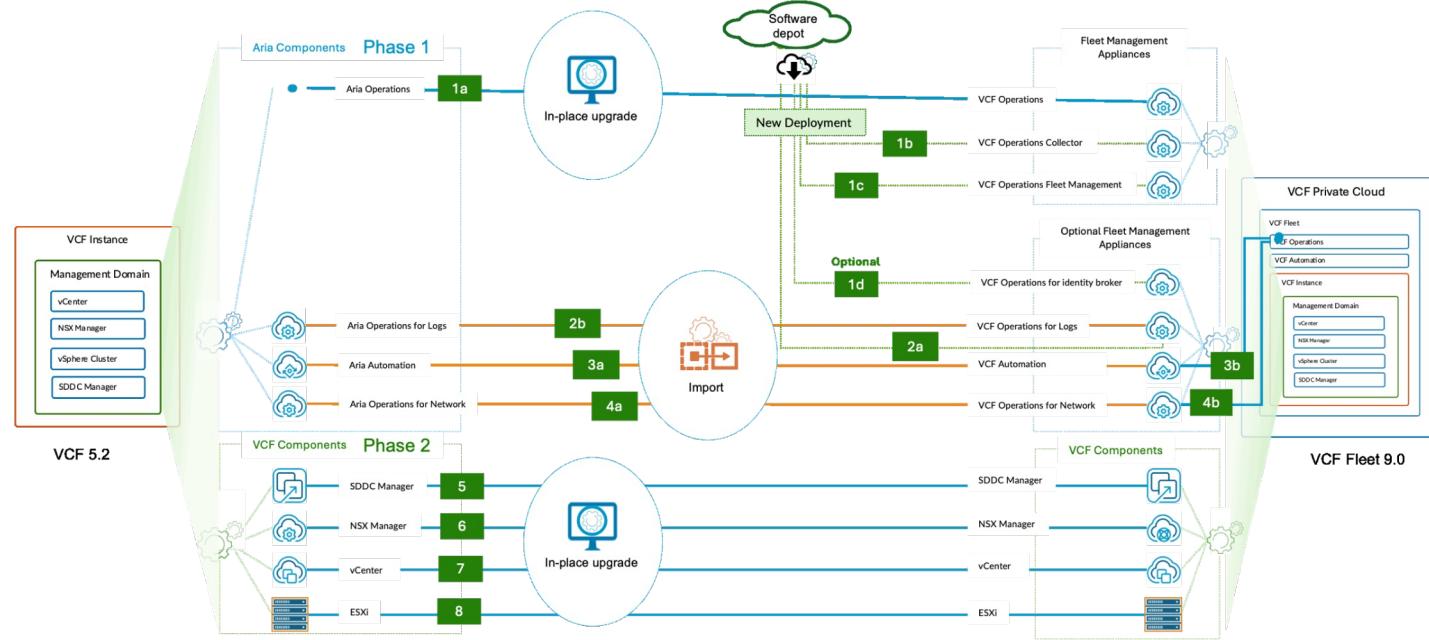


Upgrading VCF from 5.2 to VCF 9.0: Upgrade Phases



You upgrade to the VCF private cloud from VCF 5.2 using an in-place upgrade executed in two phases. First, upgrade the Aria components to the VCF Fleet 9.0 management component, and then upgrade the VCF 5.2 components in a specific sequence.

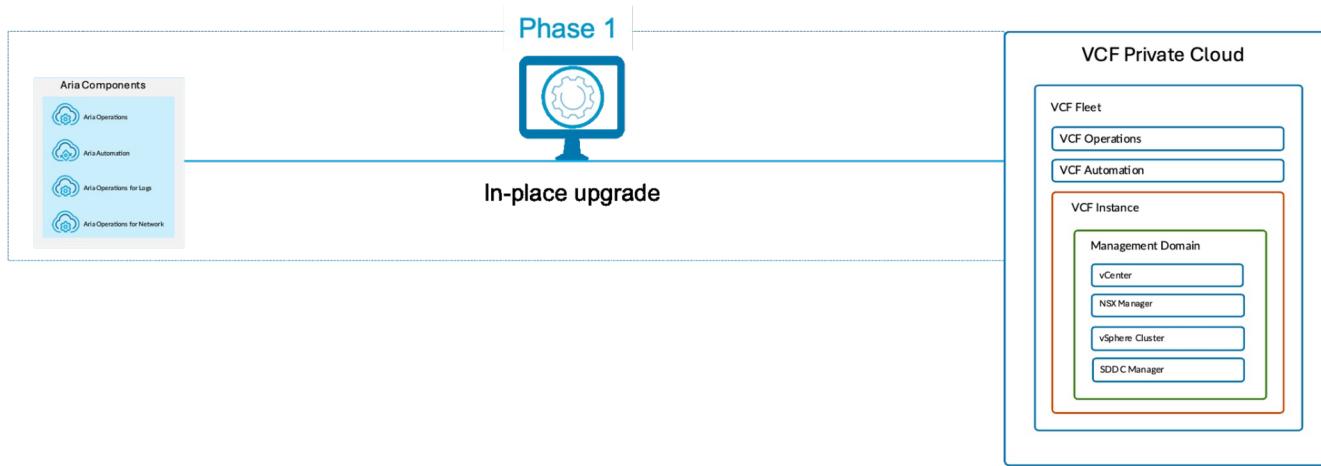
Upgrading VCF from 5.2 to VCF 9.0: sequence



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 specific sequence.

Phase 1: Upgrade Aria Components

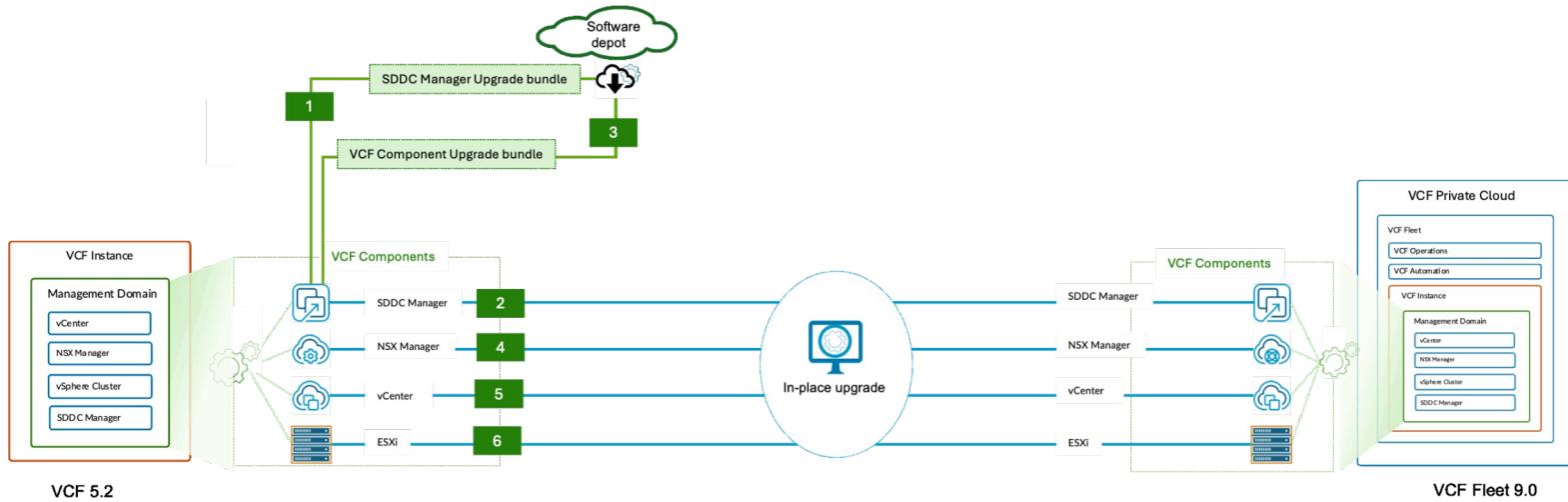
Overview



In phase one, you upgrade Aria components to the respective VCF Fleet 9.0 management

Phase 2: VCF 5.2 Core Component Upgrade

Overview



You upgrade the VCF 5.2 components to version 9.0 in a specific sequence.

Manual Upgrade

The following components are not automatically upgraded by VCF 9.0

VMware Tools

Telegraf Agents

VM Hardware

Distributed Switch

About VMware Cloud Foundation SoS Utility

You can use the Supportability and Serviceability (SoS) utility to collect logs for various software components in your VMware Cloud Foundation system.

If you run the SoS utility from VMware Cloud Foundation SDDC Manager without specifying any component-specific options, the SoS utility collects the following logs:

- SDDC Manager logs
- API logs
- VMware Cloud Foundation summary logs

About VMware Cloud Foundation System Log Files (2)

To collect all logs, use the --collect-all-logs option.

Mentioning the --domain-name option is very important. If you do not, the SoS operation is performed only on the management domain.

SoS log collection might time out after 60 minutes. Timeouts typically occur when too many logs have been collected or with large workload domains.

If the SoS utility times out, collect component-specific logs or limit log collection to specific clusters.

```
vcf@sa-m01-sddc01 [ ~ ]$ sudo /opt/vmware/sddc-support/sos --collect-all-logs --domain-name EDU --log-dir /tmp/new
Welcome to Supportability and Serviceability(SoS) utility!
Performing SoS operation for EDU domain components
Logs : /tmp/new/sos-2025-05-28-06-35-43-2729252
Log file : /tmp/new/sos-2025-05-28-06-35-43-2729252/sos.log
INFO: SoS operation initiated with --collect-all-logs. This will collect logs for all components available - ESX, VC, NSX, SDDC Manager, VCF Management products, API and Summary,Health Reports. WCP and SYSTEM DEBUG LOGS will be excluded.
NOTE : The Health check operation was invoked without --skip-known-host-check, additional identity checks will be included for Connectivity Health, Pass word Health and Certificate Health Checks because of security reasons.

[progress : 90%, Completed tasks : [ESX, VCENTER-SERVER, SDDC-MANAGER, API-LOGS, VMS_SCREENSHOT, HEALTH-CHECK, VCF-SUMMARY]]
```

Collecting Logs

To use the SoS utility to collect the logs for various software components in the system:

1. Using SSH, log in to the SDDC Manager appliance as the vcf user.
2. To collect the logs, run the SoS utility without specifying any component-specific options.

```
sudo /opt/vmware/sddc-support/sos
```

3. Enter the vcf account password when prompted.
4. To collect logs for a specific component, run the utility with the appropriate options.

```
sudo /opt/vmware/sddc-support/sos --option-name
```

By default, before writing the output to the directory, the utility deletes the prior run's output files that might be present. If you want to retain the older output files, specify the `--no-clean-old-logs` option.

The utility writes the output to the `/var/log/vmware/vcf/sddc-support` directory in the SDDC Manager appliance.

Collecting Log: Sample Output

You can use the `--log-dir` option to override the default log writing path in the SDDC Manager appliance to other directories:

```
vcf@sa-m01-sddc01 [ /opt/vmware/sddc-support ]$ sudo ./sos --collect-all-logs --domain-name EDU --  
log-dir /tmp/new  
[sudo] password for vcf  
  
Welcome to Supportability and Serviceability(SoS) utility!  
  
Performing SoS operation for EDU domain components  
Logs : /tmp/new/sos-2025-05-28-11-45-59-2834469  
Log file : /tmp/new/sos-2025-05-28-11-45-59-2834469/sos.log  
  
Log Collection completed successfully for : [HEALTH-CHECK, SDDC-MANAGER, NSX_MANAGER, API-LOGS,ESX,  
VMS_SCREENSHOT, VCENTER-SERVER, VCF-SUMMARY]
```

Collecting Specific Logs

Using the SoS utility, you can also collect the logs of specific components

The following command option collects specific workload domain logs:

```
sudo /opt/vmware/sddc-support/sos --domain-name EDU
```

The following command option collects only the logs of NSX Manager:

```
sudo /opt/vmware/sddc-support/sos --nsx-logs
```

In this case, the NSX logs were collected successfully and stored in a new directory location:

```
vcf@sa-vcf01  
  
[ /var/log/vmware/vcf/sddc-support/sos-2023-08-04-08-28-46-8145/nsx/nsx_edge-sa-m01-nsxt-vip.vcf.sddc.local ]  
  
$ls manifest_20230804_082903.json  
nsx_edge_955ceeda-c16c-442c-ab4c-18b0f9b8d02f_20230804_082909.tgz  
nsx_edge_d50f7a48-6f6a-407e-ac2b-766d585d5dcf_20230804_082909.tgz
```

About Events

All events related to workload domain management are logged in the following file:

```
/var/log/vmware/vcf/domainmanager/domainmanager.log
```

These events include user-initiated tasks, such as the creation and deletion of workload domains.

The domain manager log file contains the following levels of logging:

- INFO
- DEBUG
- VERBOSE
- WARNING
- ERROR

Analyzing Logs

Any event, such as the creation or deletion of a workload domain, can generate log messages for all severity levels.

Detailed logging can be helpful for log analysis. Additionally, filtering the logs and looking for a specific pattern can reduce the time required to identify and troubleshoot a problem.

Use tools such as Notepad++ to filter the logs files for relevant information when troubleshooting.

Tracking Log Generation Background Events

When you run the SoS utility command, the `sos.log` file is generated. This file captures background events of the SoS utility while it is generating the requested logs.

The `sos.log` file tracks and documents for which components the user tried to collect the logs.

The following log shows the SoS utility command executed by the user:

```
2025-05-28T06:35:43.111+0000

INFO [vcf_sos] [log.py::__init__::175::MainThread]
Command line arguments: ['/opt/vmware/sddc-support/sos.pyc', '--collect-all
logs', '--domain-name', 'EDU', '--log-dir', '/tmp/new']

2025-05-28T06:35:48.581+0000

INFO [vcf_sos] [collectlogs.py::collect_esx_logs::783::collect_esx_logsThread0]
Reachable ESX ['sa-m01-vc01.vcf.sddc.local', 'esx-4.vcf.sddc.local', 'esx-1.vcf.sddc.local', 'esx-
2.vcf.sddc.local', 'esx-3.vcf.sddc.local']
```

Generating Log Bundles

You must collect a VMware Cloud Foundation system log bundle for detailed diagnostics and troubleshooting purposes.

To collect the log bundle:

1. Use SSH to log in to the SDDC Manager as the root user.
2. Run the `/opt/vmware/sddc-support/sos` command to generate the diagnostic bundle.

A progress indicator displays the overall progress in addition to which logs have been collected.
On completion, you see the following type of output:

```
Welcome to Supportability and Serviceability(SoS) utility!
Logs : /tmp/new/sos-2025-05-28-11-45-59-2834469
Log file : /tmp/new/sos-2025-05-28-11-45-59-2834469/sos.log
Log Collection completed successfully for : [HEALTH-CHECK, SDDC-MANAGER, NSX_MANAGER, API-LOGS, ESX,
VMS_SCREENSHOT, VCENTER-SERVER, VCF-SUMMARY]
```

3. Verify that a directory containing the exported diagnostic logs is present in the `/var/tmp` path.

Analyzing the Contents of the Log Bundle

After successfully running the `/opt/vmware/sddc-support/sos` command, you see the following type of output inside the `/var/tmp` folder.

```
total 174M

drwxr-x--- 6 vcf_sos vcf    120 May 28 06:35 api-logs
drwxr-x--- 2 vcf_sos vcf    120 May 28 06:35 esx
-rw-r----- 1 vcf_sos vcf   22K May 28 06:47 health-report.log
-rw-r----- 1 vcf_sos vcf   67K May 28 06:47 health-results.json

drwxr-x--- 3 vcf_sos vcf     60 May 28 06:49 nsx
-rw-r----- 1 vcf_sos vcf  349K May 28 06:36 postgres-db-dump.gz
-rw-r----- 1 vcf_sos vcf   2.9K May 28 06:49 report.json

-rw-r----- 1 vcf_sos vcf  947K May 28 06:49 sos.log
drwxr-x--- 2 vcf_sos vcf     60 May 28 06:44 vc
```

About Log Identifiers

VMware Cloud Foundation is a complex technology with several system- and user-initiated events running on SDDC Manager and VCF Operations, and all of them write logs simultaneously.

As a result, the logs get intermingled, and it can become difficult to separate logs of one event from others.

This is where log identifiers play an important role. The logs of a particular event, such as the creation of a workload domain, are assigned a system-generated unique identifier.

In the following example log, the highlighted text is a unique identifier assigned to all the logs generated by this event:

```
2025-05-29T10:57:35.237+0000 INFO  [vcf_om,5ba40a026d4047fd,0ced]  
[c.v.v.f.t.u.ResourceFunctionalitiesApiHelper,http-nio-127.0.0.1-7300-exec-4] Calling resource  
functionalities with resourceType: null, taskType: null, resourceIds: null, isAllowed: false
```

Tracking Log Identifiers

SDDC Manager writes logs into several log files for the same event, the log identifiers are consistent across all the log files

When a user commission a new host, this event generates logs in the `sddcManagerServer.log` and `operationsmanager.log` files containing the same log identifier.

`sddcManagerServer.log`

```
root@sa-m01-sddc01 [ /var/log/vmware/vcf/sddc-manager-ui-app ]# less sddcManagerServer.log | grep esx-5

2025-05-29T10:57:35.148+0000 VERBOSE [5ba40a026d4047fd] [services/util.js, http-post-prechecks, logRequestBody:327] Incoming request /ui/api/v1/hosts/prechecks has body {"body": {"hosts": [{"fqdn": "esx-5.vcf.sddc.local", "networkPoolId": "1086a6bc-bae9-4b77-96c1-0275"}]} [Truncated output]
```

`operationsmanager.log`

```
root@sa-m01-sddc01 [ /var/log/vmware/vcf/operationsmanager ]# less operationsmanager.log | grep 5ba40a026d4047fd

2025-05-29T10:57:35.236+0000 DEBUG [vcf_om,5ba40a026d4047fd,0ced] [c.v.v.f.t.i.FunctionalityToggleApiFilter,http-nio-127.0.0.1-7300-exec-4] Entered the FeatureToggleApiFilter
```

VMware Cloud Foundation Failed Upgrade Logs

1. You can check the log files for failed upgrades to help troubleshoot and resolve issues. SSH in to the VCF Installer (flip) or SDDC Manager appliance with the vcf user name and enter password.
2. To access upgrade logs, navigate to the /var/log/vmware/vcf/lcm
 1. lcm-activity.log
 2. contains information level logging.
 3. lcm-debug.log
 4. log file contains debug level logging information.

VCF Installer and SDDC Manager Common Log Location

Log Name	Log Location	Responsibilities
Common Service	/var/log/vmware/vcf/commonsvcs/	Inventory, Credentials, Certificates, Passwords
Domain Manager	/var/log/vmware/vcf/domainmanager/	VCF Installer validation & deployment workflows, Day 2 workflows (add/remove VI, Day 2 Management Components deployment)
Operations Manager	/var/log/vmware/vcf/operationsmanager/	Security Operations (Certificates, Passwords), Data aggregation (Resource Aggregator), Host Commissioning
LCM	/var/log/vmware/vcf/lcm/	Upgrade Planning, Patch, Upgrades, Prechecks, Bundle Management
SoS	/opt/vmware/sddc-support/	Support Logs generation, health
UI	/opt/vmware/vcf/sddc-manager-ui-app/	UI for VCF Installer/SDDC Manager

Other Components Log Location

Product	Log Location	Responsibilities
NSX Manager	/var/log/auth.log	Authorization log
NSX Manager	/var/log/controller	Controller log
NSX Manager	/var/log/manager.log	Manager service log
NSX Manager	/var/log/nsx-audit.log	NSX audit log
NSX Manager	/var/log/syslog	System log
vCenter Server	/var/log/vmware/vpxd	vpxd Log
VCF Operations	/var/log/vmware/vcops/*	VCF Operations logs

lcm-activity.log

```
2025-05-29T12:16:27.231+0000 INFO [vcf_lcm,5b73e31713934933,7a42] [c.v.v.l.a.l.logger.ActivityLogger,http-nio-127.0.0.1-7400-exec-5] {"username":"administrator@vsphere.local","timestamp":"2025-05-29T12:16:27.230Z","clientIP":"127.0.0.1","userAgent":"axios/1.6.2","api":"/v1/bundles/domains/592319ec-b517-43e8-9073-930a64d8ce22","httpMethod":"GET","httpStatus":200,"operation":"Retrieve a list of bundles to skip upgrade a domain","remoteIP":"127.0.0.1","duration":2}
2025-05-29T12:17:11.459+0000 INFO [vcf_lcm,8689341ada42409c,1778] [c.v.v.l.a.l.logger.ActivityLogger,http-nio-127.0.0.1-7400-exec-3] {"username":"administrator@vsphere.local","timestamp":"2025-05-29T12:17:11.458Z","clientIP":"172.20.10.10","userAgent":"sddc-mgr-ui/5.0.0","api":"/v1/system/check-sets","httpMethod":"GET","httpStatus":200,"operation":"Get information about the last assessment run","remoteIP":"127.0.0.1","duration":660}
2025-05-29T12:17:12.008+0000 INFO [vcf_lcm,5576feaa5b2a475e,e708] [c.v.v.l.a.l.logger.ActivityLogger,http-nio-127.0.0.1-7400-exec-8] {"username":"administrator@vsphere.local","timestamp":"2025-05-29T12:17:12.008Z","clientIP":"172.20.10.10","userAgent":"sddc-mgr-ui/5.0.0","api":"/v1/system/check-sets/c0af5f71-dd03-4da4-9cca-5f13d6d5cb8f","httpMethod":"GET","httpStatus":200,"operation":"Get the result for a given check run","remoteIP":"127.0.0.1","duration":408}
2025-05-29T12:17:12.225+0000 INFO [vcf_lcm,e2fb331d038e4a55,24ff] [c.v.v.l.a.l.logger.ActivityLogger,http-nio-127.0.0.1-7400-exec-1] {"username":"administrator@vsphere.local","timestamp":"2025-05-29T12:17:12.225Z","clientIP":"172.20.10.10","userAgent":"sddc-mgr-ui/5.0.0","api":"/v1/system/check-sets/c0af5f71-dd03-4da4-9cca-5f13d6d5cb8f","httpMethod":"GET","httpStatus":200,"operation":"Get the result for a given check run","remoteIP":"127.0.0.1","duration":625}
2025-05-29T12:17:23.292+0000 INFO [vcf_lcm,4659976966064999,6b56] [c.v.v.l.a.l.logger.ActivityLogger,http-nio-127.0.0.1-7400-exec-5] {"username":"administrator@vsphere.local","timestamp":"2025-05-29T12:17:23.292Z","clientIP":"172.20.10.10","userAgent":"sddc-mgr-ui/5.0.0","api":"/v1/system/check-sets/c0af5f71-dd03-4da4-9cca-5f13d6d5cb8f","httpMethod":"PATCH","httpStatus":202,"operation":"Trigger partial retry of a completed check run","remoteIP":"127.0.0.1","duration":1206}
2025-05-29T12:17:23.444+0000 INFO [vcf_lcm,408c99c892ae4391,ad70] [c.v.v.l.a.l.logger.ActivityLogger,http-nio-127.0.0.1-7400-exec-4] {"username":"administrator@vsphere.local","timestamp":"2025-05-29T12:17:23.444Z","clientIP":"172.20.10.10","userAgent":"sddc-mgr-ui/5.0.0","api":"/v1/system/check-sets/957788f3-826a-423d-b886-7a1b975fd713","httpMethod":"GET","httpStatus":200,"operation":"Get the result for a given check run","remoteIP":"127.0.0.1","duration":109}
2025-05-29T12:17:53.570+0000 INFO [vcf_lcm,5f0b402959c44682,b6cf] [c.v.v.l.a.l.logger.ActivityLogger,http-nio-127.0.0.1-7400-exec-8] {"username":"administrator@vsphere.local","timestamp":"2025-05-29T12:17:53.569Z","clientIP":"172.20.10.10","userAgent":"sddc-mgr-ui/5.0.0","api":"/v1/system/check-sets/957788f3-826a-423d-b886-7a1b975fd713","httpMethod":"GET","httpStatus":200,"operation":"Get the result for a given check run","remoteIP":"127.0.0.1","duration":77}
```

sddcManagerServer.log

```
root@sa-m01-sddc01 [ /var/log/vmware/vcf/sddc-manager-ui-app ]# less sddcManagerServer.log | grep sa-wld01-np01
2025-05-29T11:38:28.641+0000 VERBOSE [28603d9f95884b84] [services/util.js, http-post-, logRequestBody:327] Incoming request /ui/api/v1/network-pools has
body {"body": {"name": "sa-wld01-np01", "networks": [{"gateway": "172.20.9.254", "ipPools": [{"end": "172.20.9.100", "start": "172.20.9.10"}, {"mask": "255.255.255
.0", "mtu": 8900, "subnet": "172.20.9.0"}, {"type": "VSAN", "vlanId": 2009}, {"gateway": "172.20.8.254", "ipPools": [{"end": "172.20.8.100", "start": "172.20.8.10"}, {"ma
sk": "255.255.255.0", "mtu": 8900, "subnet": "172.20.8.0"}, {"type": "VMOTION", "vlanId": 2008}]}], "id": "880c7483-2dc3-4f51-ab06-f9f782227418"}}
root@sa-m01-sddc01 [ /var/log/vmware/vcf/sddc-manager-ui-app ]#
```

domainmanager.log

```
","level":"low","value":25}
2025-05-29T11:55:25.306+0000 DEBUG [vcf_dm,09298509244f4e07,7fa1] [c.v.v.c.c.v1.ClusterDisassembler,http-nio-127.0.0.1-7200-exec-9] nioc {"network":"hb"
","level":"low","value":25}
2025-05-29T11:55:25.306+0000 DEBUG [vcf_dm,09298509244f4e07,7fa1] [c.v.v.c.c.v1.ClusterDisassembler,http-nio-127.0.0.1-7200-exec-9] nioc {"network":"iS
CSI","level":"low","value":25}
2025-05-29T11:55:25.307+0000 DEBUG [vcf_dm,09298509244f4e07,7fa1] [c.v.v.c.c.v1.ClusterDisassembler,http-nio-127.0.0.1-7200-exec-9] nioc {"network":"vi
rtualMachine","level":"high","value":100}
2025-05-29T11:55:25.308+0000 DEBUG [vcf_dm,09298509244f4e07,7fa1] [c.v.v.c.c.v1.ClusterDisassembler,http-nio-127.0.0.1-7200-exec-9] nioc {"network":"ma
nagement","level":"normal","value":50}
2025-05-29T11:55:25.308+0000 DEBUG [vcf_dm,09298509244f4e07,7fa1] [c.v.v.c.c.v1.ClusterDisassembler,http-nio-127.0.0.1-7200-exec-9] nioc {"network":"fa
ultTolerance","level":"low","value":25}
2025-05-29T11:55:25.333+0000 INFO [vcf_dm,68384b2d7e5100c2070408967f4ddf521,4d12] [c.v.v.l.a.a.ActivityLoggingInterceptor,http-nio-127.0.0.1-7200-exec-8
] {"username":null,"timestamp":"2025-05-29T11:55:25.333Z","clientIP":"127.0.0.1","userAgent":"Apache-HttpClient/5.3.1 (Java/17.0.12)","api":"/domainman
ager/about","httpMethod":"GET","httpStatus":200,"operation":"Get Domain Manager Service Info","remoteIP":"127.0.0.1","duration":0}
2025-05-29T11:55:32.732+0000 DEBUG [vcf_dm,68384b3420fc598fb4ddf82d29a51e3,5fbb] [c.v.v.d.s.i.DomainCapabilitiesServiceImpl,vac-scheduler-1] Get domai
n Capabilities domainIds null, capabilities null, fetchCapabilitiesInParallel false
2025-05-29T11:55:32.739+0000 DEBUG [vcf_dm,68384b3420fc598fb4ddf82d29a51e3,5fbb] [c.v.e.s.c.s.a.i.InventoryServiceAdapterImpl,vac-scheduler-1] Fetchin
g vCenters data from inventory
2025-05-29T11:55:32.743+0000 DEBUG [vcf_dm,68384b3420fc598fb4ddf82d29a51e3,5fbb] [c.v.v.c.f.p.n.s.s.CredentialMgmtServiceImpl,vac-scheduler-1] Feature
flag feature.vcf.service.accounts.vcenter.vcf.integration is enabled
2025-05-29T11:55:32.743+0000 DEBUG [vcf_dm,68384b3420fc598fb4ddf82d29a51e3,5fbb] [c.v.v.c.f.p.n.s.s.CredentialMgmtServiceImpl,vac-scheduler-1] Using s
ervice account credentials for vCenter_ID 416b3c16-6a8d-409b-b098-391bf968e1ad
2025-05-29T11:55:32.743+0000 DEBUG [vcf_dm,68384b3420fc598fb4ddf82d29a51e3,5fbb] [c.v.e.s.c.s.s.ServiceCredentialsHelper,vac-scheduler-1] Getting cred
entials for target type VCENTER, entity ID 416b3c16-6a8d-409b-b098-391bf968e1ad and service type SDDC_MANAGER
2025-05-29T11:55:32.753+0000 DEBUG [vcf_dm,68384b3420fc598fb4ddf82d29a51e3,5fbb] [c.v.v.s.c.s.SecurityConfigurationServiceImpl,vac-scheduler-1] Securi
ty config retrieved {"fipsMode":true}
2025-05-29T11:55:33.119+0000 DEBUG [vcf_dm,68384b3420fc598fb4ddf82d29a51e3,5fbb] [c.v.v.d.s.i.DomainCapabilitiesServiceImpl,vac-scheduler-1] Capabilit
y fetched from Vcenter sa-m01-vc01.vcf.sddc.local => {"supportsClusterImageStaging":true,"supportsStandaloneHostImageStaging":true,"supportsStandaloneHo
stImageManagement":true,"supportsClusterConfigManager":true,"supportsStandaloneHostDepotOverrides":true,"supportsClusterConfigVDSCoexistence":true,"supp
ortsFileUploadAuthenticationBySessionTicket":true,"supportsStandaloneHostSeedingDuringTransition":true,"supportsHostSeedingDuringClusterTransition":true
,"supportsHeterogeneousCluster":true,"supportsImageCustomization":true,"supportsVUMOperations":false,"supportsSoftwareRepository":true,"_dynamicStructu
reFields":{"fields":{"supports_hash_modernization":{"value":{"value":true}}}, "name": "com.vmware.esx.settings.capabilities.info"}}
2025-05-29T11:55:33.122+0000 INFO [vcf_dm,68384b3420fc598fb4ddf82d29a51e3,5fbb] [c.v.v.s.https.VapiClientFactory,vac-scheduler-1] Closed session
for user svc-sa-m01-sddc01-sa-m01-vc01-8949@vsphere.local created on 2025-05-29T11:55:32.858707325
2025-05-29T11:55:33.123+0000 DEBUG [vcf_dm,68384b3420fc598fb4ddf82d29a51e3,5fbb] [c.v.e.s.c.s.DomainCapabilitiesServiceImpl,vac-scheduler-1] Refres
hed domainCapabilities cache. Current value [DomainCapabilities(domainId=592319ec-b517-43e8-9073-930a64d8ce22, vcenterId=416b3c16-6a8d-409b-b098-391bf96
e1ad, vcenterFqdn=sa-m01-vc01.vcf.sddc.local, capabilities=[REPOSITORY_IMAGES, HETEROGENEOUS_CLUSTER], error=null)]
```

Possible Issues with Bundle Management - 1

Problem Description

Depot is connected, bundle data is available (and some even downloaded). But new downloads are failing.

When this may occur

If token authentication is used for online depot, the download token could be expired.

When this probably fails

If the download token is expired, the downloads from depot will fail.

Resolution – Update the depot connection with a new, valid download token.

Possible Issues with Bundle Management - 2

Problem Description	When this may occur	When this probably fails
VCF installer cannot connect to the offline depot	When connecting offline depot	If web server of offline depot does not have ssl enabled

Resolution 1 – If server does not support ssl, update lcm config (/opt/vmware/vcf/lcm/lcm-app/conf/application-prod.properties) to disable access with https (run as root):

Resolution 2 – If the certificate is not trusted, add the certificate to VCF Installer's trust store.

Possible Issues with Bundle Management - 2

Update lcm configuration -

```
root@sa-vcfinstaller-01 [ /opt/vmware/vcf/lcm/lcm-app/conf ]# echo 'lcm.depot.adapter.httpsEnabled=false' >> /opt/vmware/vcf/lcm/lcm-app/conf/application.properties
root@sa-vcfinstaller-01 [ /opt/vmware/vcf/lcm/lcm-app/conf ]# systemctl restart lcm.service
root@sa-vcfinstaller-01 [ /opt/vmware/vcf/lcm/lcm-app/conf ]# █
```

Validating the changes in lcm configuration file -

```
#####
# UMDS #####
lcm.umds.default.timeoutInSecs=36000
lcm.umds.sddcm.patch-store.path=/nfs/vmware/vcf/nfs-mount/umds/patch-store
lcm.umds.default.location=/opt/vmware/vmware-umds/bin
lcm.umds.sync.task.history.limit=50

# poll 24 hours
lcm.core.umds.enablePolling=true
lcm.core.umds.poll.interval=86400000
lcm.core.umds.poll.initial.delay=60000

#policy setting for autoapply config drift fixes
lcm.config.drift.autoapply.fixes=true

#lcm serviceId generated during rpm install
lcm.serviceId=69d463d4-86a2-4951-99eb-37e273a52c67
lcm.depot.adapter.httpsEnabled=false
```

Possible Issues with Bundle Management - 3

Problem Description

Depot is connected, but no bundles to download

When this may occur

When connected to online or offline depot

When this probably fails

If lcm configuration is not configured properly to match depot structure.

Resolution – Make sure that the lcm configuration (/opt/vmware/vcf/lcm/lcm-app/conf/application-prod.properties) matches the structure of the depot

Possible Issues with Bundle Management - 3

/opt/vmware/vcf/lcm/lcm-app/conf/application-prod.properties

```
#####
# LCM DEPOT PROPERTIES #####
lcm.depot.adapter.host=dl-pstg.broadcom.com
lcm.depot.adapter.port=443
lcm.depot.adapter.enableSignatureValidation=false
lcm.depot.adapter.remote.v2.rootDir=/PROD
lcm.depot.adapter.remote.repoDir=/COMP/SDDC_MANAGER_VCF/staging/svc.uts.prd-release-test16-pm
lcm.depot.adapter.local.baseDir=/nfs/vmware/vcf/nfs-mount/bundle/depot/local
lcm.depot.adapter.enableBundleSignatureValidation=true
lcm.depot.adapter.certificateCheckEnabled=true
lcm.depot.adapter.remote.index.filename=index.v3
lcm.depot.adapter.softwareCompatibilitySetsFile=softwareCompatibilitySets.json
lcm.depot.credential.file.path=/opt/vmware/vcf/etc/depot.cred
lcm.depot.bundleElement.patchFile.checksumValidation=true
lcm.depot.adapter.lcmManifestFile=lcmManifest.json
lcm.depot.adapter.remote.lcmManifestDir=/COMP/SDDC_MANAGER_VCF/staging/svc.uts.prd-release-test16-pm/lcm/manifest/eb6a62b1-b027-4ed0-9f40-2ac65f1e2all-9
9-1
lcm.depot.adapter.vcfManifestFile=vcfManifest.json
lcm.depot.adapter.remote.vcfMetadataDir=/metadata-ob-24734923
lcm.depot.adapter.remote.vcfManifestDir=/manifest
lcm.depot.adapter.remote.vcfBinariesDir=/COMP

#####
# LCM OFFLINE DEPOT PROPERTIES #####
lcm.offline.depot.adapter.remote.compatibility.dirname=Compatibility
lcm.offline.depot.adapter.remote.vxrailCompatibilityData.filename=VxrailCompatibilityData.json
lcm.offline.depot.adapter.remote.vmwareCompatibilityData.filename=VmwareCompatibilityData.json
```

Key Message & Takeaways

Why does this matter for our customers?

- Knowing where to find deployment and upgrade logs will help customers successfully complete their deployments if an issue occurs
- Being able to quickly identify common pain points in those logs will help customers identify where things went wrong

What's the one thing the field should remember from this session?

- If you know your customer has a pending deployment or upgrade, and you can proactively share these tips with them, it could help the customer to diagnose any potential issues and reduce their time to resolution.

Where can the field go for more information or resources?

- VCF Technical SRC page: <https://sales-resources.broadcom.com/group/vcf/vcf-9>
- Solution Architect Role-based Training: <https://sales-resources.broadcom.com/en/group/vcf/role-based-training>
- VCF 9 Self-Paced / Instructor Led Training
 - i.e. VMware Cloud Foundation: Troubleshooting [V9.0]

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Thank You