

VMware Cloud Foundation 4.2 on Dell EMC VxRail Release Notes

VMware Cloud Foundation 4.2

You can find the most up-to-date technical documentation on the VMware website at:

<https://docs.vmware.com/>

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What's New

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The VMware Cloud Foundation (VCF) 4.2 on Dell EMC VxRail release includes the following:

- **vSAN HCI Mesh Support:** VMware Cloud Foundation supports HCI Mesh on vSAN clusters. This capability allows you to utilize storage from remote vSAN clusters in a local vSAN cluster.
- **NSX-T Federation Support:** You can leverage NSX-T Federation capabilities to federate and manage multiple NSX-T workload domains with a single pane of glass view using Global Manager. With Global Manager, you can configure consistent security policies across multiple locations and stretched networking objects (tier-0 and tier-1 gateways). For Federation guidance, see [VMware Validated Design 6.2 Release Notes](#).
- **Static IP Pool for NSX-T TEPs:** VMware Cloud Foundation 4.2 introduces additional flexibility to leverage static IP pools for NSX-T Host Overlay (TEP) networks as an alternative to DHCP. This applies to the management domain and VI workload domains with uniform L2 clusters.
- **Improvements to upgrade resiliency:** VMware Cloud Foundation 4.2 includes prechecks for password validation, API performance optimization, and improvements to ESXi error reporting.
- **Enhanced skip upgrade experience:** You can filter available upgrade bundles by the target release you want to skip to using SDDC Manager UI or public APIs.
- **vRealize Automation support for VMware Cloud Foundation cloud account:** You can integrate SDDC Manager and workload domains with VMware Cloud Assembly as VMware Cloud Foundation cloud accounts. A VMware Cloud Foundation cloud account can help you facilitate a comprehensive hybrid cloud management solution.
- **SSO Support for VMware Cloud Foundation on VxRail:** VMware Cloud Foundation on VxRail 4.2 leverages a new generation SSO using the AuthRest V2 method to connect to the Dell repository for downloading VxRail bundles for lifecycle management.
- **Enhanced security for adding hosts and clusters:** You must verify the SSH thumbprints of ESXi hosts and VxRail Managers before adding them to the VMware Cloud Foundation inventory. This applies to the bring-up, add host, and add cluster workflows.
- **BOM Updates:** Updated Bill of Materials with new product versions.

VMware Cloud Foundation over Dell EMC VxRail Bill of Materials (BOM)

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The VMware Cloud Foundation software product is comprised of the following software Bill-of-Materials (BOM). The components in the BOM are interoperable and compatible.

VMware Response to Apache Log4j Remote Code Execution Vulnerability: VMware Cloud Foundation is impacted by CVE-2021-44228, and CVE-2021-45046 as described in [VMSA-2021-0028](#). To remediate these issues, see [Workaround instructions to address CVE-2021-44228 & CVE-2021-45046 in VMware Cloud Foundation \(KB 87095\)](#).

| Software Component | Version | Date | Build Number |
|---|---------------|-------------|--------------|
| Cloud Builder VM | 4.2 | 09 FEB 2021 | 17559673 |
| SDDC Manager | 4.2 | 09 FEB 2021 | 17559673 |
| VxRail Manager | 7.0.131 | 23 FEB 2021 | n/a |
| VMware vCenter Server Appliance | 7.0 Update 1c | 17 DEC 2020 | 17327517 |
| VMware NSX-T Data Center | 3.1.0 | 30 OCT 2020 | 17107167 |
| VMware vRealize Suite Lifecycle Manager | 8.2 Patch 2 | 04 FEB 2021 | 17513665 |
| Workspace ONE Access | 3.3.4 | 04 FEB 2021 | 17498518 |
| vRealize Automation | 8.2 | 06 OCT 2020 | 16980951 |
| vRealize Log Insight | 8.2 | 06 OCT 2020 | 16957702 |
| vRealize Log Insight Content Pack for NSX-T | 3.9.2 | n/a | n/a |
| vRealize Log Insight Content Pack for Linux | 2.1 | n/a | n/a |
| vRealize Log Insight Content Pack for Linux - Systemd | 1.0 | n/a | n/a |
| vRealize Log Insight Content Pack for vRealize Suite Lifecycle Manager 8.0.1+ | 1.0.2 | n/a | n/a |

| Software Component | Version | Date | Build Number |
|---|---------|-------------|--------------|
| vRealize Log Insight Content Pack for VMware Identity Manager | 2.0 | n/a | n/a |
| vRealize Operations Manager | 8.2 | 06 OCT 2020 | 16949153 |
| vRealize Operations Management Pack for VMware Identity Manager | 1.1 | n/a | n/a |

- VMware ESXi and VMware vSAN are part of the VxRail BOM.
- You can use vRealize Suite Lifecycle Manager to deploy vRealize Automation, vRealize Operations Manager, and vRealize Log Insight using the VMware Validated Design 6.2 documentation.
- vRealize Log Insight content packs are installed when you deploy vRealize Log Insight.
- The vRealize Operations Manager management pack is installed when you deploy vRealize Operations Manager.
- VMware Solution Exchange and the vRealize Log Insight in-product marketplace store only the latest versions of the content packs for vRealize Log Insight. The Bill of Materials table contains the latest versions of the packs that were available at the time VMware Cloud Foundation is released. When you deploy the Cloud Foundation components, it is possible that the version of a content pack within the in-product marketplace for vRealize Log Insight is newer than the one used for this release.

Documentation

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The following documentation is available:

- [VMware Cloud Foundation on Dell EMC VxRail Admin Guide](#)
- [VMware Cloud Foundation 4.2 Release Notes](#)
- [Support Matrix of VMware Cloud Foundation on Dell EMC VxRail](#)

Limitations

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The following limitations apply to this release:

- vSphere Lifecycle Manager (vLCM) is not supported on VMware Cloud Foundation on Dell EMC VxRail.
- Customer-supplied vSphere Distributed Switch (vDS) is a new feature supported by VxRail Manager 7.0.010 that allows customers to create their own vDS and provide it as an input to be utilized by the clusters they build using VxRail Manager. VMware Cloud Foundation on Dell EMC VxRail does not support clusters that utilize a customer-supplied vDS.
- VMware Cloud Foundation on Dell EMC VxRail does not support ESXi lockdown mode.
- Skip level upgrade to 4.2 is not supported. Your environment must be at 4.1 or 4.1.0.1 to upgrade to 4.2.

Upgrade Information

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You can upgrade directly to 4.2 if your environment is at 4.1 or 4.1.0.1. If your environment is at a version earlier than 4.1, follow the process below to upgrade to 4.2:

- 1 Use the skip level tool to upgrade to VMware Cloud Foundation 4.1 with VxRail 7.0.100.
- 2 Upgrade environment to VMware Cloud Foundation 4.2 with VxRail 7.0.131.

After upgrading to SDDC Manager 4.2, the authentication mechanism for the Dell EMC depot changes from Basic Auth (V1 Auth) to NGSSO (V2 Auth). The underlying target URL has also changed to <https://ssgosghop.emc.com>. You must disconnect and reconnect to the Dell EMC depot to initialize this update. In the SDDC Manager UI, click **Administration > Repository Settings** and disconnect and then reconnect to the Dell EMC depot using sequential upgrade.

Resolved Issues

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The following issues have been resolved:

- Upgrading VxRail Manager to 7.0.010 fails with message `VxRail component upgrade failed with error Auth Fail`
- Upgrading VxRail Manager to 7.0.010 fails with message `VxRail component upgrade failed with error HostKey has been changed`
- Quick Boot of ESXi hosts is not supported
- Validation fails when you add VxRail hosts to a cluster
- Adding a host to a vSphere cluster fails at the `Create NSX-T Data Center Transport Nodes from Discovered Nodes subtask`
- Adding a host to a cluster may fail with the error `Management NIC does not have subnet mask, UNABLE_TO_RETRIEVE_HOST_ATTRIBUTES`

Known Issues

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For VMware Cloud Foundation 4.2 known issues, see [VMware Cloud Foundation 4.2 Known Issues](#).

VMware Cloud Foundation 4.2 on Dell EMC VxRail known issues and limitations appear below:

- **After upgrading from VMware Cloud Foundation 4.1 with VxRail Manager 7.0.100, the VxRail Manager 7.0.131 bundle is not available**

While upgrading from VMware Cloud Foundation 4.1 with VxRail Manager 7.0.100, you may not be able to download the required VxRail Manager 7.0.131 bundle.

Workaround: See [KB 83029](#).

- **Upgrade to VMware Cloud Foundation on Dell EMC VxRail 4.2 failed for an AVN VxRail environment with a single vSphere Distributed Switch**

When you upgrade an AVN VxRail environment with a single vSphere Distributed Switch, the upgrade fails because AVN specific VLAN port groups are missing from the SDDC Manager inventory.

Workaround:

- a SSH to SDDC Manager VM and run the following CURL command to retrieve existing vDS information:

```
curl 127.0.0.1/inventory/vds | json_pp
```

The command retrieves information on all vDSes available in the inventory and saves it in a JSON file (vds.json).

- b Copy the management cluster vDS information from the JSON file to a new JSON file (for example, vds-updated.json).
- c Prepare information for AVN specific VLAN port groups as shown below.

```
{  
  
  "vlanId": 1008,  
  
  "name": "sfo-m01-cl01-vds01-pg-uplink01",  
  
  "mtu": 0,  
  
  "type": "EARLY_BINDING",
```

```

    "standbyUplinks": [
      "uplink2"
    ],
    "activeUplinks": [
      "uplink1"
    ],
    "transportType": "EXTERNAL"
  },
  {
    "transportType": "EXTERNAL",
    "activeUplinks": [
      "uplink2"
    ],
    "standbyUplinks": [
      "uplink1"
    ],
    "type": "EARLY_BINDING",
    "mtu": 0,
    "name": "sfo-m01-cl01-vds01-pg-uplink02",
    "vlanId": 1009
  }

```

- d Add the AVN specific VLAN port group information to the JSON file saved in step 2 (vds-updated.json).
- e Retrieve the vDS ID from the management cluster vDS information you copied in step 2.
- f Run the following command to populate the inventory with AVN specific VLAN port groups:

```
curl -X PUT -H "Content-Type:application/json" --data @vds-updated.json
127.0.0.1/inventory/vds/VDS_ID
```

For example:

```
curl -X PUT -H "Content-Type:application/json" --data @vds-updated.json
127.0.0.1/inventory/vds/203c9b5b-ad0d-4e69-88d2-1983a6235323
```

■ VxRail upgrade task in SDDC Manager displays incorrect status

The VxRail upgrade task status in SDDC Manager is displayed as running even after the upgrade is complete or failed.

Workaround: Restart the LCM service:

- a Take a snapshot of the SDDC Manager VM from the vSphere Web Client.
- b Using SSH, log in to the SDDC Manager VM with the following credentials:

User name: vcf

Password: use the password specified in the deployment parameter workbook.

- c Enter su to switch to the root user.
- d Run the following command:

```
systemctl restart lcm
```

Task status is synchronized after approximately 10 minutes.

■ **Host with upper case letters in its name fails to be added to SDDC Manager**

Hosts with upper case letters in their names can be added successfully to a VxRail cluster, but cannot be added to SDDC Manager.

Workaround: Rename the host name to contain only lower case letters and then re-try the add host workflow.

■ **vSphere Cluster Services (vCLS) VMs are moved to remote storage after a VxRail cluster with HCI Mesh storage is imported to VMware Cloud Foundation**

When you configure HCI Mesh storage on a VxRail cluster and then import it to VMware Cloud Foundation, vCLS VMs are moved to the remote storage instead of being placed on the cluster's primary storage. This can result in errors when you unmount the remote storage for the cluster.

Workaround:

- a Login to vCenter UI.
- b Retrieve the cluster MorfId.

In the Hosts and Clusters tab, click the Cluster entity and check the URL.

For example:

```
https://dr26avc-1.rainpole.local/ui/app/cluster;nav=h/urn:vmomi:ClusterComputeResource:domain-c10:373acc41-be7e-4f12-855d-094e5f135a67/configure/plugin/com.vmware.vsphere.client.h5vsan/com.vmware.vsan.client.h5vsanui.cluster.configure.vsan.csd
```

The cluster morfId for this URL is 'domain-c10'.

- c Click the vCenter entity.
- d Navigate to Configure -> Advanced Setting.

Be default, vCLS property set to true:

"config.vcls.clusters..enabled"

- e Deactivate vCLS on the cluster.

Click Edit Settings, set the flag to 'false', and click Save.

- f Wait 2 minutes for the vCLS VMs to be deleted.

- g Unmount the remote storage.

- h Repeat steps 3 and 4.

- i Enable vCLS on the cluster.

Click Edit Settings, set the flag to 'true', and click Save.

- j Wait 2-3 minutes for the vCLS VMs to be deployed.

Three vCLS VMs are displayed in the VMs and Templates tab.

■ **vVols is not a supported storage option**

Although VMware Cloud Foundation on Dell EMC VxRail does not support vVols, storage settings options related to vVols appear in the SDDC Manager UI. Do not use **Administration > Storage Settings** to add a VASA provider.

Workaround: See [KB 81321](#) for information about how to remove the Storage Settings from the SDDC Manager UI.

■ **The API does not support adding a host to a cluster with dead hosts or removing dead hosts from a cluster**

The following flags appear in the API Reference Guide and API Explorer, but are not supported with VMware Cloud Foundation on Dell EMC VxRail.

- `forceHostAdditionInPresenceofDeadHosts`: Use to add host to a cluster with dead hosts. Bypasses validation of disconnected hosts and vSAN cluster health.
- `forceByPassingSafeMinSize`: Remove dead hosts from cluster, bypassing validations.

Workaround: None.

■ **Adding a VxRail cluster with hosts spanning multiple racks to a workload domain fails**

If you add hosts that span racks (use different VLANs for management, vSAN, and vMotion) to a VxRail cluster after you perform the VxRail first run, but before you add the VxRail cluster to a workload domain in SDDC Manager, the task fails.

Workaround:

- a Create a VxRail cluster containing hosts from a single rack and perform the VxRail first run.
- b Add the VxRail cluster to a workload domain in SDDC Manager.
- c Add hosts from another rack to the VxRail cluster in the vCenter Server for VxRail.
- d Add the VxRail hosts to the VxRail cluster in SDDC Manager.