



VMware Cloud Director 10.2.1 Release Notes

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Check for additions and updates to these release notes.

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What's New

VMware Cloud Director version 10.2.1 includes the following:

- **Improved Accessibility Support.** VMware Cloud Director is now compliant with [WCAG 2.1 AA](#) criteria. Accessibility enhancements include improved color contrast ratio for UI components, clear and unambiguous UI labels and instructions, improved name, role and value information for UI components, improved keyboard focus and accessibility, and improved focus order implementation.
- **VMware Cloud Director Virtual Appliance Enhancements:** During VMware Cloud Director appliance deployment, when you select primary-large or standby-large deployment size, the appliance deploys with 8 vCPUs (up from 4 vCPUs). The Cloud Director cell application now deploys with 4 vCPUs (up from 2 vCPUs).
- **Kubernetes Container Clusters Plug-in Update.** The Kubernetes Container Clusters plug-in was updated to version 2.1.0, which includes bug fixes. For more information, see the [Resolved Issues](#) section.
- **NVM Express (NVMe) disk controllers support.** NVMe is a standardized protocol designed specifically for high-performance multi-queue communication with NVM devices. In vSphere 7.0 NVMe disk controllers are the default supported disk controllers for guest operating systems such as Windows Server 2016 and 2019. This release introduces support for managing VMs with NVMe disk controllers.
- **VMware Cloud Director API Object Metadata** System administrators can configure the size of the Metadata for an object and the MetadataEntry limit. By default, the Metadata size for an object in the GENERAL and SYSTEM domains is set to 128 KB.
- **NSX-T Data Center Edge Gateway Firewall Rules UI Change.** The Direction parameter is removed from the NSX-T edge gateway firewall rule creation wizard in the UI VMware Cloud Director 10.2.1 and later versions. Use the Source and Destination firewall

rules parameters to control traffic to and from an edge gateway.

System Requirements and Installation

For information about system requirements and installation instructions, see [VMware Cloud Director 10.2 Release Notes](#).

For information on appliance configuration and sizing, see the guidelines in [VMware Cloud Provider Pod Designer - VMware Validated Designs for Cloud Providers](#).

Deploying the VMware Cloud Director Appliance

In some cases, the `vami_firstboot` file is not automatically deleted after the deployment of the VMware Cloud Director appliance. Because of this, during the next appliance power cycle or restart, the appliance is reinitialized. To avoid this issue, run the following steps on each appliance in the server group after its deployment.

1. Determine if the file `/opt/vmware/etc/vami/flags/vami_firstboot` exists on the VMware Cloud Director appliance.
2. If the file exists, run the following command to delete it.

```
rm /opt/vmware/etc/vami/flags/vami_firstboot
```

Documentation

To access the full set of product documentation, go to [VMware Cloud Director Documentation](#).

Previous Releases of VMware Cloud Director 10.2.x

[VMware Cloud Director 10.2 Release Notes](#)

Resolved Issues

- **You are unable to edit the NIC settings of a standalone virtual machine**
You are unable to update the NIC settings of a standalone virtual machine. When you click Edit to open the NIC settings of the virtual machine, the settings page opens but becomes unresponsive.
- **Attempting to create a native Kubernetes cluster fails if the organization VDC in which you are deploying the cluster is connected to a data center group network**
In the Tenant Portal, when you attempt to create a native Kubernetes cluster by using the Kubernetes Container Clusters plug-in, the cluster creation wizard might fail to load networks information. This happens when the organization VDC in which you are deploying the cluster is connected to a data center group network.
- **When you attempt to configure an isolated organization VCD network, this results in an edge gateway being deployed in the system resource pool of vSphere, even though the system administrator assigned an edge cluster to your organization VDC**
When you configure an isolated organization VDC network, an edge gateway is deployed

with it to provide network services. Even if your system administrator has created and assigned an edge cluster to provide resources for the edge gateways in your organization VDC, the edge gateway of the isolated network is not deployed in the edge cluster, but in the system resource pool of vSphere.

- **If a storage pod or a cluster backs a storage policy, you cannot enable VMware Cloud Director IOPS limiting on that storage policy**
In the Service Provider Admin Portal, when one or more storage pods or clusters back a storage policy, even if you turn off the **Impact placement** flag, you cannot enable VMware Cloud Director IOPS limiting on that storage policy.
- **Changing the owner of an empty vApp results in an error message**
In a vApp that does not contain any VM, if you attempt to change the owner of the vApp, the process results in an error message.
Unable to perform this action. Contact your cloud administrator.
- **Relaunching a VM web console after closing the VM console tab fails**
In the Tenant Portal, when you launch a VM web console and then you close the web console tab before the console loads, attempting to launch the same console again fails.
- **Using the VMware Cloud Director API to sort or to search through VDC compute policy descriptions, quota policy IDs, quota policy organization IDs, quota pool descriptions, and quota pool definitions does not result in an error message**
When you use the VMware Cloud Director API to sort or to search through VDC compute policy descriptions, quota policy IDs, quota policy organization IDs, quota pool descriptions, and quota pool definitions, this does not result in an error message, despite these parameters not being allowed.
- **In the Service Provider Admin Portal, there is no option to delete or disable an existing LDAP server configuration**
In the Service Provider Admin Portal, there is no option to delete or disable an existing LDAP server configuration.
- **When you attempt to filter virtual machines or vApps by badges in a language other than English, no results are displayed**
In the Tenant Portal, when you attempt to use advanced filtering to filter virtual machines or vApps by badges in a language that is different from English, no results are displayed. Even if there are virtual machines and vApps that are tagged with the badges that you selected as filters, you see the following message: No Virtual Machines/vApps are found .
- **Creating a new VM from a VM template fails with an error message**
If a VM template does not have a NIC with index number zero, creating a new VM from the VM template fails with an error message.
Primary network interface index does not match a network interface in vm
- **The grid list view of virtual machines does not display the info icon under the Primary Networks column**
When you view the list of virtual machines in a grid view, if a network name is longer than the width of the **Primary Networks** column, the info icon next to the network name is not displayed.

- Attempting to view the details for a virtual machine might fail**

In the Tenant Portal, when you attempt to view the details for a virtual machine, the VM details screen becomes unavailable. This happens when the hardware version of the VM is not supported by the provider VDC that backs your organization.
- You cannot specify a static IP address for a virtual machine when you copy it from one vApp to another**

In the Tenant Portal, when you copy a VM from one vApp to another and you configure NIC settings, you are unable to enter a static IP address for the VM.
- Attempting to import several virtual machines from vCenter Server as vApps might fail**

In the Tenant Portal, when you attempt to import more than one VM from vCenter Server as a vApp, if the first VM that you select for import is not on the first page of the list of VMs, the import of the next VM fails. This occurs even if you closed the wizard without finishing the import process for the first VM.
- The New VM wizard does not display all preconfigured VM sizing policies**

If you created a VM sizing policy that does not comply with the VMware Cloud Director system requirements for disk space, memory, and CPU, the **New VM wizard** does not display the respective VM sizing policy and you cannot assign to the new VM.
- You cannot sort vApps and VMs by state**

In the VMware Cloud Director tenant portal, the option to sort vApps or VMs by state is missing from the **Sort By** drop-down menu.
- Importing a vCenter Server VM into an existing vApp relocates the VM to a different datastore**

When a VM resides on a storage pod in vCenter Server configured with more than one datastores and you try to import the VM into an existing vApp in VMware Cloud Director, the storage DRS might determine another datastore in the storage pod as a better fit and relocate the VM to a different datastore.
- In a VMware Cloud Director multisite environment, the organization URL redirection between sites does not happen**

In a VMware Cloud Director multisite environment, if an organization, residing on Site1, contains an uppercase character in its name, and you attempt to access the organization's web page by using the Site2 URL, the redirection from Site2 URL to Site1 URL does not happen.
- Adding a VM to a new or existing vApp fails with an error message if the I/O operations per second (IOPS) setting is enabled on the provider VDC storage policy**

If you enable the IOPS setting for a storage policy and you configure the IOPS capacity to be greater than zero, adding a VM instantiated from a VM template to a new or existing vApp fails with an error message.

Requested disk iops 0 for virtual machine exceeds maximum allowed iops
- You cannot access a dedicated vCenter Server instance in the VMware Cloud Director tenant portal**

If the proxy target host name for a dedicated vCenter Server instance contains upper case characters, when you click on the card of the dedicated vCenter Server instance in the VMware Cloud Director tenant portal nothing happens and you cannot open the endpoint.

- **After an upgrade to VMware Cloud Director 10.2, opening the properties of an organization VDC results in an error message**

If you upgrade to VMware Cloud Director 10.2 from an earlier version in which the compute policies were not introduced, opening the properties of an organization VDC fails with an error message.

not-null property references a null or transient value:

```
com.vmware.vcloud.common.model.vdc.VdcComputePolicyModel.policyType
```

- **In the VMware Cloud Director tenant portal, you cannot change the default storage policy for an organization VDC**

When you attempt to change the default storage policy for an organization VDC, after clicking on **Set as Default**, nothing happens and you cannot change the default storage policy.

- **The Add Storage Policies wizard does not display the full list of available storage policies in the source provider virtual data center**

The **Add Storage Policies** wizard displays only the first page with available storage policies in the source provider virtual data center. When you navigate to the next page, the wizard displays an empty data grid and you cannot see the full list of available storage policies.

- **Instead of disabling a storage policy on an organization VDC, you disable the provider VDC**

In the list of available storage policies, if you scroll down to select a policy you want to disable, mistakenly you disable the provider VDC. This happens because when you scroll down, the storage policy action bar disappears and by mistake you select **Disable** from the provider VDC action bar remains.

Known Issues

- **New VMs become non-compliant after converting a reservation pool VDC into a flex organization VDC**

In an organization VDC with a reservation pool allocation model, if some of the VMs have nonzero reservation for CPU and Memory, non-unlimited configuration for CPU and Memory, or both, after converting into a flex organization VDC, these VMs become non-compliant. If you attempt to make the VMs compliant again, the system applies an incorrect policy for the reservation and limit and sets the CPU and Memory reservations to zero and the limits to **Unlimited**.

Workaround:

1. A system administrator must create a VM sizing policy with the correct configuration.
2. A system administrator must publish the new VM sizing policy to the converted flex organization VDC.
3. The tenants can use the VMware Cloud Director API or the VMware Cloud Director

Tenant Portal to assign the VM sizing policy to the existing virtual machines in the flex organization VDC.

- **New The Customer Experience Improvement Program (CEIP) status is Enabled even after deactivating it during the installation of VMware Cloud Director**

During the installation of VMware Cloud Director, if you deactivate the option to join the CEIP, after the installation completes, the CEIP status is active.

Workaround: Deactivate the CEIP by following the steps in the [Join or Leave the VMware Customer Experience Improvement Program](#) procedure.

- **New VMware Cloud Director API calls to retrieve vCenter Server information return a URL instead of a UUID**

When registering a vCenter Server instance, if the registration fails, and you make API calls to retrieve the vCenter Server information, the VMware Cloud Director API incorrectly returns a URL instead of the expected UUID. The issue occurs also with vCenter Server instances that failed the initial registration with VMware Cloud Director version 10.2 and earlier.

Workaround: None.

- **New After upgrading to vCenter Server 7.0 Update 2a or Update 2b, you cannot create Tanzu Kubernetes Grid clusters**

If the underlying vCenter Server version is 7.0 Update 2a or Update 2b, when you try to create a Tanzu Kubernetes Grid cluster by using the Kubernetes Container Clusters plug-in, the task fails.

Workaround: None.

- **Creation of Tanzu Kubernetes cluster by using the Kubernetes Container Clusters plug-in fails**

When you create a Tanzu Kubernetes cluster by using the Kubernetes Container Clusters plug-in, you must select a Kubernetes version. Some of the versions in the drop-down menu are not compatible with the backing vSphere infrastructure. When you select an incompatible version, the cluster creation fails.

Workaround: Delete the failed cluster record and retry with a compatible Tanzu Kubernetes version. For information on the incompatibilities between Tanzu Kubernetes and vSphere, see [Updating the vSphere with Tanzu Environment](#).

- **When you open the Virtual Machines list in a vApp and you enable the Multiselect option, the Actions menu becomes unavailable**

When you open the Virtual Machines list in a vApp and you enable the Multiselect option, the Actions menu becomes unavailable. You can select multiple virtual machines, but you cannot perform any action on them simultaneously.

Workaround: None.

- **After you update the Publish Settings of a subscribed catalog from the Tenant Portal UI, synchronizing this catalog fails with a 401 Unauthorized error**

After you update the **Publish Settings** of a subscribed catalog from the Tenant Portal UI, synchronizing this catalog fails with a 401 Unauthorized error. This happens because updating

the catalog settings causes the existing password to be deleted and set to null.

Workaround: Update the **Publish Settings** of the catalog and set the password again from the Tenant Portal UI.

- **Upgrade of VMware Cloud Director to version 10.2 from version 10.1.2 incorrectly reports an error**

During the upgrade of VMware Cloud Director to version 10.2 from version 10.1.2, the following inaccurate error message is displayed:

ERROR: The RPM for another version of VMware Cloud Director is already installed, but that version is not recognized and upgrading from that release is not supported. This upgrade is not expected to succeed, but you may proceed anyway at your own risk.

Upgrading VMware Cloud Director to version 10.2 from version 10.1.2 is supported and you must ignore the error message.

Workaround: Ignore the error.

- **When you reboot the VMware Cloud Director appliance, the services API or the appliance management UI might report that the vmware-vcd service is in a failed state**

When you reboot the VMware Cloud Director appliance, the services API or the appliance management UI might mistakenly report that the `vmware-vcd` service is in a failed state. This happens when the `vmware-vcd` service attempts to start before the OS networking stack becomes available. As a result, the service enters a failed state and you see an error message which reads that the service failed to bind to one or more ports. Subsequently, the `vcd-watchdog` starts the `vmware-vcd` service successfully, but the `systemd` service status does not reflect that.

Workaround:

1. Run `systemctl reset-failed vmware-vcd.service`.
2. Run `systemctl start vmware-vcd.service`.

- **If you have any subscribed catalogs in your organization, when you upgrade VMware Cloud Director, the catalog synchronization fails**

After upgrade, if you have subscribed catalogs in your organization, VMware Cloud Director does not trust the published endpoint certificates automatically. Without trusting the certificates, the content library fails to synchronize.

Workaround: Manually trust the certificates for each catalog subscription. When you edit the catalog subscription settings, a trust on first use (TOFU) dialog prompts you to trust the remote catalog certificate.

If you do not have the necessary rights to trust the certificate, contact your organization administrator.

- **After upgrading VMware Cloud Director and enabling the Tanzu Kubernetes cluster creation, no automatically generated policy is available and you cannot create or publish a policy**

When you upgrade VMware Cloud Director to version 10.2 and vCenter Server to

version 7.0.0d, and you create a provider VDC backed by a Supervisor Cluster, VMware Cloud Director displays a Kubernetes icon next to the VDC. However, there is no automatically generated Kubernetes policy in the new provider VDC. When you try to create or publish a Kubernetes policy to an organization VDC, no machine classes are available.

Workaround: Manually trust the Kubernetes endpoint certificate. For detailed steps, see <https://kb.vmware.com/s/article/80996>.

- **The Setup DRaaS and Migration plug-in appears twice in the VMware Cloud Director UI top navigation bar**

The issue occurs because of the rebranding of vCloud Availability 4.0.0 to VMware Cloud Director Availability 4.0.0 after which two plug-ins exist. VMware Cloud Director does not disable the vCloud Availability 4.0.0 plug-in automatically. The old and new versions appear as the Setup DRaaS and Migration plug-in in the top navigation bar under **More**.

Workaround: Disable the vCloud Availability 4.0.0 plug-in. For information on how to disable a plug-in, see [Enable or Disable a Plug-in](#).

- **Cannot publish a provider VDC Kubernetes policy to a VDC if the Supervisor Cluster it points to is not the primary cluster in the provider VDC**

If you have a provider VDC with multiple Supervisor Clusters, publishing a provider VDC Kubernetes policy that points to a non-primary Supervisor Cluster fails with an `LMException` error.

Workaround: Ensure that the provider VDC is backed by only one Supervisor Cluster and that cluster is the primary cluster. A provider VDC can be backed by host clusters and a Supervisor Cluster but the Supervisor Cluster must be the primary.

- **Entering a Kubernetes cluster name with non-Latin characters disables the Next button in the Create New Cluster wizard**

The Kubernetes Container Clusters plug-in supports only Latin characters. If you enter non-Latin characters, the following error appears. Name must start with a letter and only contain alphanumeric or hyphen (-) characters. (Max 128 characters).

Workaround: None.

- **In the Kubernetes Container Clusters plug-in, data grids might appear empty while loading**

In the Kubernetes Container Clusters plug-in, some data grids appear empty while loading because the loading spinner does not appear.

Workaround: None.

- **After resizing a TKGI cluster, some values in the data grid appear as blank or not applicable**

When you resize a VMware Tanzu Kubernetes Grid Integrated Edition (TKGI) cluster, the cluster values for the organization and VDC in the data grid view appear to be blank or N/A.

Workaround: None.

- **When filtering a multi-selection grid, navigating to another page causes the filtered items to disappear**

In multi-selection grids, if you filter the results and more than one page is available, the next pages of filtered results appear empty. The issue occurs in dialog boxes where you can select multiple items from a list and filter them, for example, adding storage policies to an organization VDC or sharing a vApp or VM to users or groups.

Workaround: Resize any of the columns of the grid.

- **Filtering of advisories by priority results in an internal server error**

When you use the VMware Cloud Director API, applying a priority filter to an advisory fails with an error.

```
"minorErrorCode": "INTERNAL_SERVER_ERROR" "message": "[ d0ec01b3-019f-4ed2-a012-1f7f5e33cb7f ]  
java.lang.String cannot be cast to java.lang.Integer"
```

Workaround: Obtain all advisories and filter them manually. For information, see the [VMware Cloud Director OpenAPI](#) documentation.

- **The API documentation provides an incorrect description of the Advisory priority sort order**

The Advisory model object contains a priority field to specify the urgency of each advisory that you create. The Advisory API documentation incorrectly states that the priorities are listed in descending sort order. The VMware Cloud Director API documentation lists the priorities for an advisory in ascending sort order.

Workaround: None.

- **When a vApp User attempts to create a vApp from a template, this might result in "Operation is denied" message**

If your assigned user role is vApp User, when you attempt to create a vApp from a template and you customize the VM sizing policies for the virtual machines in the vApp, this results in "Operation is denied" message. This happens because the vApp User role allows you to instantiate vApps from templates, but it does not include rights that allow you to customize a virtual machine's memory, CPU or hard disk. By changing the sizing policy, you could be changing the virtual machine memory or CPU.

Workaround: None.

- **NFS downtime can cause VMware Cloud Director appliance cluster functionalities to malfunction**

If the NFS is unavailable due to the NFS share being full, becoming read only, and so on, can cause appliance cluster functionalities to malfunction. HTML5 UI is unresponsive while the NFS is down or cannot be reached. Other functionalities that might be affected are the fencing out of a failed primary cell, switchover, promoting a standby cell, and so on. For more information about setting up correctly the NFS shared storage, see [Preparing the Transfer Server Storage for the VMware Cloud Director Appliance](#).

Workaround:

- Fix the NFS state so that it is notread-only.

- Clean up the NFS share if it is full.
- **Trusting an endpoint while adding vCenter Server and NSX Resources in a multisite environment does not add the endpoint to the centralized certificate storage area**
In a multisite environment, while using the HTML5 UI, if you are logged in to a vCloud Director 10.0 site or trying to register a vCenter Server instance to a vCloud Director 10.0 site, VMware Cloud Director will not add the endpoint to the centralized certificate storage area.

Workaround:

- Import the certificate into the VMware Cloud Director 10.1 site by using the API.
- To trigger the certificate management functionality, navigate to the SP Admin Portal of the VMware Cloud Director 10.1 site, go to the **Edit** dialog of the service, and click **Save**.
- **Trying to encrypt named disks in vCenter Server version 6.5 or earlier fails with an error**
For vCenter Server instances version 6.5 or earlier, if you try to associate new or existing named disks with an encryption enabled policy, the operation fails with a Named disk encryption is not supported in this version of vCenter Server. error.

Workaround: None.

- **When using the VMware Cloud Director Service Provider Admin Portal with Firefox, you cannot load the tenant networking screens**
If you are using the VMware Cloud Director Service Provider Admin Portal with Firefox, the tenant networking screens, for example, the **Manage Firewall** screen for an organization virtual data center, might fail to load. This issue happens if your Firefox browser is configured to block Third-Party cookies.

Workaround: Configure your Firefox browser to allow third-party cookies. For information, go to <https://support.mozilla.org/en-US/> and see the **Websites say cookies are blocked - Unblock them** KB.

- **A fast-provisioned virtual machine created on a VMware vSphere Storage APIs Array Integration (VAAI) enabled NFS array, or vSphere Virtual Volumes (VVols) cannot be consolidated**
In-place consolidation of a fast provisioned virtual machine is not supported when a native snapshot is used. Native snapshots are always used by VAAI-enabled datastores, as well as by VVols. When a fast-provisioned virtual machine is deployed to one of these storage containers, that virtual machine cannot be consolidated .

Workaround: Do not enable fast provisioning for an organization VDC that uses VAAI-enabled NFS or VVols. To consolidate a virtual machine with a snapshot on a VAAI or a VVol datastore, relocate the virtual machine to a different storage container.

- **When you use the VMware Cloud Director API to create a VM from a template and you don't specify a default storage policy, if there is no default storage policy set for the template, the newly created VM attempts to use the storage policy of the source template itself**
When you use the VMware Cloud Director API to create a VM from a template and you

don't specify a default storage policy, if there is no default storage policy set for the template, the newly created VM attempts to use the storage policy of the source template itself instead of using the storage policy of the organization VDC in which you are deploying it.

Workaround: None.

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