Installing VMware vCloud Connector for VMware vCloud Air

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Contents

Installing vCloud Connector for VMware vCloud Air 5

1 About vCloud Connector 7

2 System Requirements 9

3 Installing vCloud Connector 11
   About Installing vCloud Connector 11
   Download the vCloud Connector Virtual Appliances 12
   Install vCloud Connector Server and Node On Premise 12
   Configure On-Premise Nodes 13
   Configure vCloud Connector Server 14

4 Access vCloud Connector User Interface and Add Clouds 21

5 Prepare to Copy 23
   Increase Staging Area of On-Premise Node 23
   Add a Catalog in vCloud Air Virtual Data Center 24

Index 25
Installing vCloud Connector for VMware vCloud Air

Installing vCloud Connector for VMware vCloud Air provides information about installing VMware vCloud Connector® to connect your on-premise environment with VMware vCloud® Air™. vCloud Connector enables you to view, manage, and transfer virtual machines, vApps, and templates across clouds.

This guide is intended to be a Quick Start Guide for installing vCloud Connector for use with vCloud Air. For information about configuring vCloud Connector and using its features, see the vCloud Connector Documentation Center.

This guide assumes a simple configuration that connects one or more on-premise vSphere instances with vCloud Air. You can also use vCloud Director-based clouds, both private and public, with vCloud Connector. For information on using vCloud Director, see Installing and Configuring vCloud Connector.

Intended Audience

This information is intended for anyone who wants to install vCloud Connector for vCloud Air. The information is written for experienced Windows or Linux system administrators who are familiar with VMware vSphere® and vCloud Air.

VMware Technical Publications Glossary

VMware Technical Publications provides a glossary of terms that might be unfamiliar to you. For definitions of terms as they are used in VMware technical documentation, go to http://www.vmware.com/support/pubs.
About vCloud Connector

vCloud Connector enables you to connect your on-premise environment with vCloud Air and migrate virtual machines, vApps, and templates between them. It provides a single user interface for viewing and managing your on-premise vSphere instances as well as your vCloud Air virtual data centers.

Using vCloud Connector, you can:

- View and manage your inventory of virtual machines, vApps, and templates
- Deploy new virtual machines from templates
- Copy virtual machines, vApps, and templates between your on-premise environment and vCloud Air (network copy)
- Transfer large amounts of data from your on-premise environment to vCloud Air using the Offline Data Transfer Service (via a physical storage device)
- Set up a Content Library to distribute and synchronize templates across clouds
- Extend your on-premise network to vCloud Air using Data Center Extension

vCloud Connector Components

vCloud Connector consists of three distinct components:

- A vCloud Connector server

  The vCloud Connector server is a virtual appliance that manages the vCloud Connector nodes and user interface. Install a vCloud Connector server in a vSphere instance on premise. You only need one server. You do not need to install a vCloud Connector server in vCloud Air.

- vCloud Connector nodes

  vCloud Connector nodes are virtual appliances that handle the transfer of data. You must install a vCloud Connector node in every on-premise vSphere instance that you want to use with vCloud Connector. You do not need to install a node in vCloud Air. VMware installs a node by default and provides you the information required to use it.

  This guide refers to three types of vCloud Connector nodes:

  - vCloud Connector node: Refers to the on-premise nodes that you install in your vSphere instances.
  - vCloud Air vCC node: Refers to the node installed by VMware by default in your vCloud Air cloud instance. You receive the node URL from VMware and register the node with your on-premise vCloud Connector server.
- Offline Data Transfer node (ODT node): Refers to the Offline Data Transfer node that is installed by VMware in vCloud Air to enable Offline Data Transfer. This is different from the vCloud Air vCC node. An ODT node will be installed only if you initiate an Offline Data Transfer request. See the Offline Data Transfer documentation for more information.

- vCloud Connector user interface

  The vCloud Connector user interface appears as a plug-in in vSphere Client. The vCloud Connector icon appears in the vSphere Client Home page, under Solutions and Applications.

  **NOTE**  The vCloud Connector user interface cannot be used with the vSphere Web Client.

**Figure 1-1.** Connecting On-Premise Environment with vCloud Air
System Requirements

To install vCloud Connector for vCloud Air, you need to meet the requirements listed here.

**Note** This guide assumes a simple configuration that connects one or more on-premise vSphere instances with vCloud Air. You can also use vCloud Director clouds, on premise or public, with vCloud Connector. For a list of complete system requirements, see System Requirements in Installing and Configuring vCloud Connector. Also note that some features, such as Stretch Deploy (Data Center Extension), have different system requirements.

### System Requirements

- vSphere 4.0 update 3, 4.1, 5.0, 5.1, or 5.5.x
- A Web browser, one of the following:
  - Internet Explorer 8, 9, 10, 11
  - Chrome 22, 23
- A Windows machine with Internet Explorer

The vCloud Connector user interface appears as a plug-in in vSphere Client. To use the vSphere Client, you need a Windows machine with Internet Explorer.

### Account Requirements

<table>
<thead>
<tr>
<th>Table 2-1. Accounts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Account Type</strong></td>
</tr>
<tr>
<td>A My VMware account</td>
</tr>
<tr>
<td>A vCenter Server administrator account for each on-premise vCenter Server you want to connect to vCloud Connector</td>
</tr>
<tr>
<td>A vCenter Server administrator account or any account that includes Extension privileges for the vCenter Server in which you want to display the vCloud Connector user interface, if different from above</td>
</tr>
<tr>
<td>A vCloud Air account with an Account Administrator user role</td>
</tr>
</tbody>
</table>
Networking Considerations

- Proxy server

If your on-premise vCloud Connector server or node needs to go through a proxy server to reach vCloud Air, you need to specify proxy server settings during installation. You need the HTTP proxy server name and port number, and, if the proxy server requires authentication, a user name and password.

**Note** The user name can only contain lower-case, alpha-numeric characters and cannot exceed 50 characters. Do not use email addresses or domain names (for example, user@company.com or xyz\user) or names that contain a period as special characters are not supported for this field.

**Note** UDT-based data transfer in vCloud Connector is only compatible with SOCKS5-compliant proxy servers, as these proxy servers support the UDP protocol. You cannot use UDT-based data transfer with any other type of proxy server.

- Ports

vCloud Connector uses the following ports to communicate between its components: server, nodes, and the server and node Admin Web consoles.

**Table 2-2. Ports**

<table>
<thead>
<tr>
<th>Port Number</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>443</td>
<td>Used when SSL is enabled. This port is used for communication between the vCloud Connector server and vCloud Connector nodes and between nodes. By default, SSL is enabled on nodes.</td>
</tr>
<tr>
<td>80</td>
<td>Used when SSL is disabled. This port is used for communication between the vCloud Connector server and vCloud Connector nodes and between nodes.</td>
</tr>
<tr>
<td>8190</td>
<td>Required on the destination node for UDT-based data transfer. <strong>Note</strong> When you copy data between your on-premise environment and a public cloud, port 8190 needs to be open on the public cloud.</td>
</tr>
<tr>
<td>5480</td>
<td>This port is used to access the vCloud connector server and node Admin Web consoles using a browser.</td>
</tr>
</tbody>
</table>

For each cloud (on-premise vSphere or vCloud Director instance, or vCloud Air) that you add to vCloud Connector, the vCloud Connector server must be able to reach the following:

- The vCloud Connector node associated with the cloud
- The cloud
  The vCloud Connector server accesses the cloud directly to get its inventory and for tasks such as powering on or powering off virtual machines. It accesses the cloud through its public REST API endpoint.
- If there is a load balancer between a vCloud Connector node and the cloud with which it is associated, the load balancer should have session persistence enabled.
Installing vCloud Connector

Installing vCloud Connector is a multi-step process.

This chapter includes the following topics:

- “About Installing vCloud Connector,” on page 11
- “Download the vCloud Connector Virtual Appliances,” on page 12
- “Install vCloud Connector Server and Node On Premise,” on page 12
- “Configure On-Premise Nodes,” on page 13
- “Configure vCloud Connector Server,” on page 14

About Installing vCloud Connector

Installing vCloud Connector is a multi-step process that includes the following tasks.

1. Install vCloud Connector components on premise.
   a. Install a vCloud Connector server in a vSphere instance.
   b. Install a vCloud Connector node for every vSphere instance you want to connect to vCloud Connector.

2. Configure on-premise nodes.

3. Configure the vCloud Connector server.
   a. Register on-premise nodes with the server.
   b. Register the vCloud Air vCC node, which is already installed by VMware, with your on-premise vCloud Connector server.
   c. Register the vCloud Connector user interface with vSphere Client.

   **NOTE** You cannot use the vCloud Connector user interface with vSphere Web Client.

4. Access the vCloud Connector user interface in vSphere Client and add clouds to the user interface to see their inventory.

All the vSphere and vCloud Air cloud instances whose nodes you registered with the vCloud Connector server appear in the list of clouds.
Download the vCloud Connector Virtual Appliances

The vCloud Connector server and vCloud Connector node are packaged as virtual appliances. You download the virtual appliances from the vCloud Connector Download page.

**Prerequisites**

A My VMware account.

**Procedure**

2. Click **Download Now**.
3. Scroll down to the **Product Downloads** section and download both the **vCCServer** and **vCCNode** zip files.
   a. Click **Download**.
   b. Log in with your My VMware™ account information.
   c. Read and accept the End User License Agreement.
   
   A dialog box appears that prompts you to open or save the zip file.
   d. Save the zip file to your desktop.
4. In separate directories, unzip the vCloud Connector server and vCloud Connector node virtual appliance zip files.

Install vCloud Connector Server and Node On Premise

Install a vCloud Connector server and node in a vSphere instance on premise. If you want to connect multiple vSphere instances to vCloud Connector, install a node in each.

To install a vCloud Connector server or node, you deploy its OVF template.

**Prerequisites**

An administrator account for the vCenter Server.

**Procedure**

1. Log in to vSphere Client.
2. Select **File > Deploy OVF template**.
3. Click **Browse**, navigate to the OVF directory of the server or node zip file you downloaded, and select the **vCCServer-n_OVF10.ovf** file or the **vCCNode_n_OVF10.ovf** file.
4. Click **Next**.
5. Proceed through the wizard.

   You can either use the Networking Properties step in the wizard to set basic network properties or you can wait and set those properties when you configure your server and node.

   **NOTE** If you are going to use a static IP address, assign it here.

6. In vSphere Client, select **Inventory > VMs and Templates** to see the vCloud Connector server or node virtual machine.
7. Right-click the virtual machine and select **Power > Power on** to power it on.
Click the Summary tab and find the vCloud Connector server or node IP address in the General section. The IP address field (not the Host field) displays the IP address. Make a note of the IP address.

You can also see the URL for accessing the node Admin Web console in the Console tab.

Configure On-Premise Nodes

After you install a vCloud Connector node on premise, you need to configure it. Some settings are required, while others depend upon your specific installation.

The following tasks are required.

- After you install a node for a vSphere instance, you must register it with that instance.
- If the node needs to go through a proxy server to access vCloud Air, specify proxy settings. In typical environments, this is required.

You will need the HTTP proxy server IP address, port, and a user name and password if the proxy server requires authentication.

Prerequisites

- The node is powered on and you have its IP address or FQDN.
- Your proxy server name, port, and user name and password, if required.

Procedure

1. Go to the vCloud Connector node Admin Web console at https://vCCNodeIPaddress:5480. If you get a certificate error, accept the certificate.

   **Note**: Use Internet Explorer or Chrome. Do not use Firefox as some tabs display blank pages on Firefox.

2. Log in with the user name admin and the default password vmware.

3. Register the node with the vSphere instance that it manages.
   
   a. Click the Node tab, then the Cloud tab.
   
   b. In the Cloud Type field, select vSphere.
   
   c. In the Cloud URL field, specify the URL of the vSphere instance. You can specify either the IP address or the fully qualified domain name (FQDN). Use the following format:

      - `https://IP`
        
        For example: `https://10.10.10.10`
      
      - `https://FQDN`
        
        For example: `https://cloud1.company.com`
   
   d. Select Ignore SSL Certificate if the vSphere instance does not have a valid SSL certificate or if you do not want to use the certificate.

   **Note**: If the vSphere instance has a valid certificate and you deselect this option, you must import the root certificate of the Certificate Authority that issued the certificate into the trusted keystore of the vCloud Connector node. See Add CA Root Certificate to Trusted Keystore for information on importing the certificate.
e. Select **Use Proxy** if there is a proxy server between the vCloud Connector node and the vSphere instance (the managed cloud).

**NOTE** If you select this option, you must also specify proxy settings in the **Network - Proxy** tab.

f. Click **Update Configuration**.

4. Specify proxy settings if the node needs to go through a proxy server to reach vCloud Air.
   a. Click the **Network** tab, then the **Proxy** tab.
   b. Specify the HTTP proxy server IP address and port. If the proxy server requires authentication, also specify the user name and password.

**NOTE** The user name can only contain lower-case, alpha-numeric characters and cannot exceed 50 characters. Do not use email addresses or domain names (for example, user@company.com or xyz\user) or names that contain a period as special characters are not supported for this field.

5. (Optional) If you want to use the UDT protocol instead of HTTP(s) for data transfer, do the following.
   a. Click the **Node** tab, then the **General** tab.
   b. Under **UDT**, click **Enable UDT**.

**NOTE** If you enable UDT, you must also ask VMware to enable UDT on the vCloud Air vCC node. UDT is used only if it is enabled on both source and destination nodes. Also request that encryption is enabled.

For more information about UDT, see **Selecting Copy Options** in *Installing and Configuring vCloud Connector*.

6. (Optional) Configure other node settings by clicking on the remaining tabs in the Admin Web console. You can configure the following:
   - Time zone
   - Network settings
   - **admin** user password
   - Node log level
   - Maximum number of concurrent tasks allowed for the node
   - Data transfer protocol (HTTP(S) is used by default)
   - SSL

For information about these settings, see *Installing and Configuring vCloud Connector*.

### Configure vCloud Connector Server

You need to configure your vCloud Connector server using its Admin Web console at https://vCCServerIPaddress:5480. Some tasks are required, while others depend on your specific installation.

The following tasks are required.

- Register your on-premise vCloud Connector nodes with the vCloud Connector server.
- Register the vCloud Air vCC node with the vCloud Connector server.
- Register the vSphere Client to use for the user interface.
- If the vCloud Connector server needs to go through a proxy server to access vCloud Air, specify proxy settings. In typical environments, this is required.
Register On-Premise Node with vCloud Connector Server

After you install and configure your on-premise vCloud Connector node, register it with the vCloud Connector server.

Prerequisites

- The vCloud Connector server is powered on and you have its IP address or FQDN.
- The vCloud Connector node is powered on and you have its IP address or FQDN.
- Your proxy server name, port, and credentials, if required.

Procedure


   If you receive a certificate error, accept the certificate.

   **Note** Use Internet Explorer or Chrome. Do not use Firefox as some tabs appear blank on Firefox.

2. Log in with the user name **admin** and the default password **vmware**.

3. Click the **Nodes** tab, then click **Register Node**.

4. Specify node information.

<table>
<thead>
<tr>
<th>Node Details</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Display Name</strong></td>
<td>The name by which you want the vSphere instance to appear in the vCloud Connector user interface.</td>
</tr>
<tr>
<td><strong>Node URL</strong></td>
<td>The URL of the node. You can specify either the IP address of the node or its FQDN.</td>
</tr>
<tr>
<td></td>
<td>- <strong><a href="https://vCCNodeIPaddress">https://vCCNodeIPaddress</a></strong></td>
</tr>
<tr>
<td></td>
<td>For example: <strong><a href="https://10.10.100.10">https://10.10.100.10</a></strong></td>
</tr>
<tr>
<td></td>
<td>- <strong><a href="https://FQDN">https://FQDN</a></strong></td>
</tr>
<tr>
<td></td>
<td>For example: <strong><a href="https://node1.company.com">https://node1.company.com</a></strong></td>
</tr>
<tr>
<td><strong>Public</strong></td>
<td>Do not select this option while registering an on-premise node.</td>
</tr>
<tr>
<td><strong>Use Proxy</strong></td>
<td>Select this option if your vCloud Connector server needs to go through a proxy to reach the node that you are registering.</td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong> If you select this option, ensure that you also specify proxy settings in the <strong>Network &gt; Proxy</strong> tab.</td>
</tr>
<tr>
<td><strong>Ignore SSL Certificate</strong></td>
<td>You must select this option if you did not install a valid certificate on the node and if SSL is enabled on the node. SSL is enabled on all nodes by default.</td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong> If this option is not selected and if you did not install valid certificates, copy will fail.</td>
</tr>
</tbody>
</table>

5. Specify cloud information, that is, information about the vSphere instance with which the node is associated.

<table>
<thead>
<tr>
<th>Cloud Credentials</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cloud Type</strong></td>
<td>Type of cloud with which the node is associated. Select <strong>vSphere</strong>.</td>
</tr>
<tr>
<td><strong>VCD Org Name</strong></td>
<td>You do not need to use this field for nodes on vSphere.</td>
</tr>
<tr>
<td><strong>Username</strong></td>
<td>User name for the vSphere instance.</td>
</tr>
<tr>
<td><strong>Password</strong></td>
<td>Password for the vSphere instance.</td>
</tr>
</tbody>
</table>
6 Click Register.
   The node appears in the Manage Nodes list.

7 If you have installed multiple nodes, repeat these steps for each node.

Register vCloud Air vCC Node with vCloud Connector Server

To connect your vCloud Air cloud instance to vCloud Connector, you use the vCloud Air vCC node installed by VMware. You register the node with your on-premise vCloud Connector server, using your vCloud Air cloud credentials and the node URL sent to you by VMware.

Note that a Dedicated Cloud instance does not appear in vCloud Connector as a single cloud. Each virtual data center appears as a separate cloud.

For Dedicated Cloud instances, you need to register each virtual data center that you want to add to vCloud Connector with the vCloud Connector server individually. You do this by registering the vCloud Air vCC node with your vCloud Connector server multiple times, once for each virtual data center.

Prerequisites

- The URL of the vCloud Air vCC node associated with your vCloud Air cloud instance. VMware provides this URL.
- Your vCloud Air Account Administrator credentials.
- Your proxy server IP, port, and credentials, if required.

Procedure

1 Go to the vCloud Connector server Admin Web console at https://vCCServerIPaddress:5480. If you receive a certificate error, accept the certificate.
2 Log in with the user name admin and the default password vmware.
3 Click the Nodes tab, then click Register Node.
4 Specify the node information.

<table>
<thead>
<tr>
<th>Node Details</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>The name by which you want the vCloud Air virtual data center to appear in the vCloud Connector user interface.</td>
</tr>
<tr>
<td>URL</td>
<td>The URL of the vCloud Air vCC node, obtained from VMware. The URL will have either the IP address of the node or its fully qualified domain name (FQDN). You must specify port 8443 as part of the URL.</td>
</tr>
<tr>
<td></td>
<td>- <a href="https://vCCNodeIPaddress:8443">https://vCCNodeIPaddress:8443</a></td>
</tr>
<tr>
<td></td>
<td>For example: <a href="https://10.10.100.10:8443">https://10.10.100.10:8443</a></td>
</tr>
<tr>
<td></td>
<td>- <a href="https://vCCNodeFQDN:8443">https://vCCNodeFQDN:8443</a></td>
</tr>
<tr>
<td></td>
<td>For example: <a href="https://node1.company.com:8443">https://node1.company.com:8443</a></td>
</tr>
<tr>
<td>Public</td>
<td>Select this option.</td>
</tr>
</tbody>
</table>
5 Specify the cloud information.

<table>
<thead>
<tr>
<th>Cloud Credentials</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cloud Type</td>
<td>Select vCloud Director.</td>
</tr>
<tr>
<td>VCD Org Name</td>
<td>Specify the name of your vCloud Air virtual data center. (This is also the Organization name in the underlying vCloud Director instance.) You must use a valid name. vCloud Connector validates the name that you provide.</td>
</tr>
<tr>
<td>Username</td>
<td>Your vCloud Air virtual data center user name.</td>
</tr>
<tr>
<td>Password</td>
<td>Your vCloud Air virtual data center password.</td>
</tr>
</tbody>
</table>

6 Click Register.

The Register Node with Server window closes and the node appears in the Manage Nodes list.

7 Repeat steps 3 to 6 for each virtual data center that you want to add to vCloud Connector.

Register the vCloud Connector User Interface with vSphere Client

The vCloud Connector user interface appears as a plug-in in vSphere Client. Note that it cannot be used with vSphere Web Client.

You can register the vCloud Connector user interface with only one vSphere Client at a time. To register with another vSphere Client, you must first unregister and then register with the new vSphere Client.

Also, a vSphere Client can have only one vCloud Connector instance as a plug-in. To replace it, select the Overwrite existing registration option while registering.

Note If you are overwriting a registration, or have unregistered and are registering again, clear your Internet Explorer cache before you register. Ensure that the Preserve Favorites Website data option is deselected in the Delete Browsing History dialog box when you clear the cache.

Note Because the vSphere Client interface uses the Internet Explorer rendering engine, it also uses the Internet Explorer security and privacy settings. Set your settings at Medium High or below. This setting allows cookies and Javascript, both of which are necessary for the plug-in to work.

Prerequisites

- The IP address or fully qualified domain name (FQDN) of the vCenter Server that you want to use for the vCloud Connector user interface.
- An administrator account, or any user role that includes Extension privileges, for the vCenter Server.
**Procedure**

1. In the vCloud Connector server Admin Web Console at https://vCCserverIPAddress:5480, click the **Server** tab, then the **vSphere Client** tab.

2. The vCloud Connector server URL field is automatically filled.

3. Type the vCenter Server IP address or fully qualified domain name. For example, 10.10.10.10.

   **NOTE** If your vCenter Server is running on a port other than the default, specify the port number with the IP address. For example, 10.10.10.10:54.

4. Type the user name and password for the vCenter Server.

5. If the vCenter Server has a vCloud Connector server already registered with it that you want to replace, select **Overwrite existing registration**.

6. If the vCloud Connector server needs to go through a proxy server to reach the vCenter Server, select **Use Proxy**.

   **NOTE** If you select **Use Proxy**, ensure that you also specify proxy settings in the **Network** tab. See “Configure Proxy Server and Other Settings,” on page 18.

7. Click **Register**.

   When the registration is completed, a confirmation message appears at the top of the page. To verify that the registration was successful, log in to the vSphere Client and check that the vCloud Connector icon appears under **Solutions and Applications** in the **Home** page.

**Configure Proxy Server and Other Settings**

If the vCloud Connector server needs to go through a proxy server to access vCloud Air, or any of the vCloud Connector nodes or the vSphere instances they manage, specify proxy settings for the server. Also complete other configuration tasks that might apply to your specific installation.

**Procedure**

1. (Optional) To specify proxy server settings for the vCloud Connector server, do the following.
   a. In the vCloud Connector server Admin Web console at https://vCCServerIPAddress:5480, click the **Network** tab, then click the **Proxy** tab.
   b. Select **Use a proxy server** and enter the proxy server information.

      **NOTE** The user name can only contain lower-case, alpha-numeric characters and cannot exceed 50 characters. Do not use email addresses or domain names (for example, user@company.com or xyz\user) or names that contain a period as special characters are not supported for this field.

   c. Click **Save Changes**.

2. (Optional) Configure other server settings by clicking on the remaining tabs in the Admin Web console. You can configure the following settings.
   - Time zone
   - Network settings
   - Server administrator password
   - Server log level
SSL

For information about these settings, see Installing and Configuring vCloud Connector.
Access vCloud Connector User Interface and Add Clouds

After you install vCloud Connector, you can access its user interface and add clouds to it. All vSphere or vCloud Air cloud instances whose nodes you registered with the vCloud Connector server are available in the cloud list.

When you add a cloud, you enter a user name and password for the cloud. Note that the privileges and rights that are associated with the type of account that you use to add the cloud determine the operations you can perform with vCloud Connector. For access to complete functionality, use an administrator account or an equivalent role to add vSphere instances. Use an Account Administrator user role to add vCloud Air cloud instances.

Procedure

1. Log in to the vSphere Client to which you registered the vCloud Connector user interface.
2. Go to the Home page of the vSphere Client.
4. In the Browser panel on the left, click Clouds.
5. Select the cloud to add from the Name drop-down menu.

Note For vCloud Air Dedicated Cloud instances, each virtual data center that you registered with the vCloud Connector server appears as a separate cloud. Add all the virtual data centers to the user interface.

6. Type the user name and password for an administrator account for the cloud.
7. Click Add.

The cloud appears in the Clouds tree in the Browser panel. Click on the cloud to view its inventory of templates, vApps, and virtual machines.
Prepare to Copy

Before you use vCloud Connector to copy objects between your on-premise environment and vCloud Air, configure your environment with these settings.

- Increase the node staging area of the on-premise node.

  The node staging area is used during copy. The default size of the staging area is 40 GB. Increasing the staging area to the size of the object you are copying is recommended.

- Add a catalog in your vCloud Air virtual data center, if you do not have any user catalogs.

For other settings that you can configure for copy, see Selecting Copy Options in Installing and Configuring vCloud Connector. For information about the Copy command, see Copying Virtual Machines, vApps, and Templates Between Clouds in Using vCloud Connector.

This chapter includes the following topics:

- “Increase Staging Area of On-Premise Node,” on page 23
- “Add a Catalog in vCloud Air Virtual Data Center,” on page 24

Increase Staging Area of On-Premise Node

The default size of the node staging area is 40 GB. If you want to copy a larger object or if you plan to copy multiple objects concurrently, increase the staging area size.

Prerequisites

- You have vSphere administrator privileges.
- Backing up the virtual appliance is recommended.

**Note**  Do not take a snapshot as hard disks of appliances that have snapshots cannot be resized. Use another backup method such as creating a clone.

Procedure

1. Log in to the vSphere Client and, in the Home page, select VMs and Templates.
2. In the left pane, select the vCloud Connector node.
3. Right-click and select Edit Settings.

   The Virtual Machine Properties window opens to the Hardware tab.
4. Select Hard disk 2 in the Hardware column.
5. Modify the size, and click OK.
6 Click the **Console** tab and log in to the node console with the user name `admin`. The default password is `vmware`.

7 Run the following command to resize the disk.
   ```bash
   sudo /opt/vmware/hcagent/scripts/resize_disk.sh
   ``
   You will be prompted for the root password. The default password is `vmware`.

8 Log out of the console.

### Add a Catalog in vCloud Air Virtual Data Center

To copy virtual machines, vApps, or templates to vCloud Air, you must first add a catalog in your vCloud Air virtual data center. vCloud Air virtual data centers do not have user catalogs by default.

You must add a catalog to each virtual data center that you connect to vCloud Connector and to or from which you want to copy data.

**Prerequisites**

You have Account Administrator privileges for vCloud Air.

**Procedure**

1 Log in to the vCloud Air portal with Account Administrator user credentials.
2 Click the virtual data center to which you want to add a catalog.
3 Click **Manage Catalogs in vCloud Director**.
4 Click the **Add** icon to add a catalog.
5 Type a name for the catalog and click **Next**.
6 Select a storage type and click **Next**.
7 In the Share this Catalog page, click **Add Members** to add users to the catalog.
8 Select **Specific users and groups**, make your selections, and click **Add**.
9 In the **Access level** drop-down list, select **Read/Write**, and click **OK**.
10 Click **Next**, and click **Finish**.
# Index

<table>
<thead>
<tr>
<th>Letter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>access user interface 21</td>
</tr>
</tbody>
</table>
| C      | configure server 14, 18  
configure node 13  
copy 23 |
| D      | download server and node 12 |
| I      | install  
vCloud Connector server 12  
vCloud Connector node 12  
installing, overview 11 |
| N      | node staging area 23 |
| O      | overview 7 |
| R      | registering  
node with server 15  
user interface 17  
vCloud Air vCC node with vCloud Connector server 16 |
| S      | staging area 23  
system requirements 9 |
| V      | vCloud Air 5, 24 |