

# vCloud Director Service Provider Admin Portal Guide

VMware Cloud Director 9.1



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# About the vCloud Director Service Provider Admin Portal



The *vCloud Director Service Provider Admin Portal Guide* provides information about how to use the Service Provider Admin Portal. You use the service provider admin portal to manage and monitor cloud resources available to tenants, such as virtual datacenters, external networks, network pools, tenant organizations, and tenant virtual datacenters.

## Intended Audience

This guide is intended for service provider administrators who want to use the capabilities provided in the vCloud Director Service Provider Admin Portal.

## Related Documentation

See the *vCloud Director Administrator's Guide* for information about the features and capabilities available to an administrator using the vCloud Director Web console instead of the vCloud Director service provider admin portal.

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

# Getting Started with vCloud Director Service Provider Admin Portal

# 2

The vCloud Director Service Provider Admin Portal is a dedicated interface for service provider administrators.

This chapter includes the following topics:

- [vCloud Director Service Provider Admin Portal Overview](#)
- [Log in to vCloud Director Service Provider Admin Portal](#)
- [View Tasks](#)

## vCloud Director Service Provider Admin Portal Overview

The vCloud Director Service Provider Admin Portal has two main views: **Cloud Resources** and **Content Libraries**.

Under the **Cloud Resources** view, you can see the organizations that exist in the vCloud Director site and add new organizations. You can also manage catalog sharing and policies, including leases, quotas, and limits, which constrain the ability of organization users to consume storage and processing resources.

The **Content Libraries** view includes the ability to extend the base vCloud Director functionality by associating vCloud Director with vRealize Orchestrator and exposing predefined vRealize Orchestrator workflows as customized services.

## Log in to vCloud Director Service Provider Admin Portal

You can access the vCloud Director Service Provider Admin Portal by using a Web browser.

### Prerequisites

You must have the system administrator rights to access the vCloud Director Service Provider Admin Portal.

### Procedure

- 1 In a browser, type the Service Provider Admin Portal URL of your vCloud Director site and press Enter.

For example, type `https://vcloud.example.com/provider`.

- 2 Log in with the system administrator user name and password.

## View Tasks

From the Service Provider Admin Portal, you can view recent tasks and their status.

The tasks view is a good way to view the status of tasks in your tenant portal at a glance. The view shows when the tasks were executed, and whether they were successful. This tool can be a good first step for troubleshooting any issues in your environment.

The blue and red infotips over the Tasks icon show the number of run and failed tasks, respectively.

### Procedure

- ◆ From the upper-right menu, select the Tasks icon ().

### Results

A lists of recent tasks displays, along with the time the task was executed and the status of the task.

# Managing Services

# 3

The Content Libraries view in the vCloud Director Service Provider Admin Portal provides an interface for the integration with vRealize Orchestrator. The vRealize Orchestrator workflows are available as a catalog of services that service provider administrators can publish to tenants or other service providers and in this way extend the set of functionalities and management capabilities they offer.

This chapter includes the following topics:

- [Integrating vRealize Orchestrator with vCloud Director](#)
- [Create a Service Category](#)
- [Edit a Service Category](#)
- [Import a Service](#)
- [Search for a Service](#)
- [Execute a Service](#)
- [Change a Service Category](#)
- [Unregister a Service](#)
- [Publish a Service](#)

## Integrating vRealize Orchestrator with vCloud Director

You integrate vRealize Orchestrator with vCloud Director through the vCloud Director Service Provider Admin Portal.

Integrating vRealize Orchestrator with vCloud Director extends the base functionality of vCloud Director by allowing service provider administrators to develop complex automation tasks through workflow orchestration and utilization of third-party plug-ins.

Through the vCloud Director Service Provider Admin Portal, service provider administrators are able to view, import, and execute workflows from registered vRealize Orchestrator server instances.

In the vCloud Director Service Provider Admin Portal, vRealize Orchestrator workflows can be published to service providers or tenants, allowing for quick access control and execution of both custom and built-in services.

vRealize Orchestrator has an extensive workflow library that contains pre-built tasks designed to solve specific challenges and perform common administrative tasks. Third-party plug-ins are also available at [VMware Solution Exchange](#).

## Register a vRealize Orchestrator Instance with vCloud Director

To leverage orchestration of workflows and automation of tasks through vRealize Orchestrator in vCloud Director, you register a vRealize Orchestrator instance in the vCloud Director Service Provider Admin Portal.

### Prerequisites

- Deploy and configure a vRealize Orchestrator server instance. For more information, see *Installing and Configuring VMware vRealize Orchestrator* in the vRealize Orchestrator documentation.
- Configure vRealize Orchestrator to use vSphere as an authentication provider.
- Verify that vCloud Director is registered with the lookup service of the same Platform Services Controller as the vCenter Single-Sign On that vRealize Orchestrator uses for authentication.

### Procedure

1 From the main menu (  ), select **Content Libraries**

a From the left panel, select **Service Management**.

A list of registered vRealize Orchestrator server appears.

2 To register a new vRealize Orchestrator server, click the  button.

The **Register vRealize Orchestrator** dialog appears.

3 Enter the following values.

Option	Description
Name	Name for the registered vRealize Orchestrator instance.
Description	Description for the registered vRealize Orchestrator server instance.
Hostname	The fully-qualified domain name and server port of the vRealize Orchestrator server. The default HTTPS port value is 8281.
	<b>Note</b> vCloud Director connects to the API interface of vRealize Orchestrator.
Username	A user account that is member of the vRealize Orchestrator administrators group.
Password	The password for the vRealize Orchestrator administrator account.
Trust Anchor	The vRealize Orchestrator server SSL certificate in a PEM format.
	Click the upload icon (  ) to find and select the .pem file.

4 Click **OK** to complete the registration.

The vRealize Orchestrator server is registered with vCloud Director.

## Create a Service Category

You can organize services in service categories.

### Procedure

- 1 From the main menu (  ), select **Content Libraries**
  - a From the left panel, select **Service Management**.
  - b Navigate to the **Service Categories** tab.

A list of existing server categories appears.
- 2 To create a new service category, click the  button.
- 3 Enter the following values.

Option	Description
Name	Name of the service category.
Icon	Import the displayed icon for the service category.
Description	Short description of the service category.

## Edit a Service Category

You can edit existing service categories.

### Procedure

- 1 From the main menu (  ), select **Content Libraries**
  - a From the left panel, select **Service Management**.
  - b Navigate to the **Service Categories** tab.

A list of existing server categories appears.
- 2 Use the list bar (  ) on the left of a selected service category and click **Edit**.
- 3 Edit the following values.

Option	Description
Name	Name of the service category.
Icon	Import the displayed icon for the service category.
Description	Short description of the service category.

## Import a Service

You can import services from the workflow library of a vRealize Orchestrator instance that is registered with vCloud Director.

### Prerequisites

- Register a vRealize Orchestrator instance. See [Register a vRealize Orchestrator Instance with vCloud Director](#).
- Create a service category. See [Create a Service Category](#).

### Procedure

- 1 From the main menu () , select **Content Libraries**.
  - a From the left panel, select **Service Library**.

Available services display in a card view of twelve items per page, sorted by names in alphabetical order. Each card indicates that the item is a vRealize Orchestrator workflow and shows the name of the service and a tag that corresponds to the service category, in which the workflow is imported.

- 2 To import a new service, click the **Import** button.
- 3 Follow the steps of the **Import** wizard.

Option	Description
Import to target library	Select the service category, to which to import the service.
Select source	Select the vRealize Orchestrator instance, from which to import workflows.
Select workflows	Expand the hierarchical tree view to select one or multiple workflows to import.
Review	Review the details and click <b>Done</b> to complete the import.

The imported workflows appear in the **Service Library** card view.

## Search for a Service

You can search for a service by its name or the service category it belongs to.

### Procedure

- 1 From the main menu () , select **Content Libraries**.
  - a From the left panel, select **Service Library**.

Available services display in a card view of twelve items per page, sorted by names in alphabetical order. Each card indicates that the item is a vRealize Orchestrator workflow and shows the name of the service and a tag that corresponds to the service category, in which the workflow is imported.

- 2 In the **Search** text box on the top of the page, enter a word or a character of the name of the service or the service category you want to find.
  - a Select whether you want to search among the names of the service or among the categories.

The search results display in a card view of twelve items per page, sorted by names in alphabetical order.

## Execute a Service

You can execute vRealize Orchestrator workflows as imported services.

### Procedure

- 1 From the main menu () , select **Content Libraries**.
  - a From the left panel, select **Service Library**.

Available services display in a card view of twelve items per page, sorted by names in alphabetical order. Each card indicates that the item is a vRealize Orchestrator workflow and shows the name of the service and a tag that corresponds to the service category, in which the workflow is imported.
- 2 To execute a service, in the card of the selected service, click **Execute**.
 

The **Execute a service** wizard appears.
- 3 Fill in the required input parameters of the service and click **Finish**.

### Results

You can monitor the status of the execution in the **Recent Tasks** view. For more information, see [View Tasks](#).

**Note** When you start a vRealize Orchestrator workflow as a vCloud Director service, vCloud Director adds a few custom parameters to the workflow execution context.

Custom Property	Description
_vcd_orgName	Name of the organization, to which the user who executes the service belongs.
_vcd_orgId	ID of organization, to which the user who executes the service belongs.
_vcd_userName	Name of the user who executes the service.
_vcd_isAdmin	Has value True if the user who executes the service is an administrator.

## Change a Service Category

You can change the category, to which a service belongs.

**Procedure**

- 1 From the main menu () , select **Content Libraries**.

- a From the left panel, select **Service Library**.

Available services display in a card view of twelve items per page, sorted by names in alphabetical order. Each card indicates that the item is a vRealize Orchestrator workflow and shows the name of the service and a tag that corresponds to the service category, in which the workflow is imported.

- 2 In the card of the selected service, select **Manage > Change Category**.

The **Change Category** dialog opens.

- 3 Select the category in which to place the service and click **Save**.

## Unregister a Service

You can remove access to a service for both service providers and tenants by unregistering the service.

**Procedure**

- 1 From the main menu () , select **Content Libraries**.

- a From the left panel, select **Service Library**.

Available services display in a card view of twelve items per page, sorted by names in alphabetical order. Each card indicates that the item is a vRealize Orchestrator workflow and shows the name of the service and a tag that corresponds to the service category, in which the workflow is imported.

- 2 In the card of the selected service, select **Manage > Unregister Workflow**.

The **Unregister Workflow** dialog opens.

- 3 To remove the service from the service library, click **Delete**.

## Publish a Service

You can control service provider and tenant access to services by publishing a service.

**Procedure**

- 1 From the main menu () , select **Content Libraries**.

- a From the left panel, select **Service Library**.

Available services display in a card view of twelve items per page, sorted by names in alphabetical order. Each card indicates that the item is a vRealize Orchestrator workflow and shows the name of the service and a tag that corresponds to the service category, in which the workflow is imported.

- 2 In the card of the selected service, select **Manage > Publish Workflow**.

The **Publish Workflow** dialog appears.

- 3 To publish to service providers, select **Publish to Service Providers** and click **Save**.
- 4 To publish to a specific tenant organization, select **Publish to Tenants** button.
  - a A list with available tenant organizations appears. Select the tenant organization, to which to publish the workflow and click **Save**.
- 5 To publish to all tenant organizations, select **Publish to All Tenants** and click **Save**.

# Managing Custom Entities

# 4

The custom entity definitions in vCloud Director are object types that are bound to vRealize Orchestrator object types. When a service provider publishes a custom entity definitions to either another service provider, or to one or more tenants, users vCloud Director can own, manage, and change these types according to their needs. By executing services, service provider users and organization users can instantiate the custom entities and apply actions over the instances of the objects.

This chapter includes the following topics:

- [Search for a Custom Entity](#)
- [Edit a Custom Entity Definition](#)
- [Add a Custom Entity Definition](#)
- [Custom Entity Instances](#)
- [Associate an Action to a Custom Entity](#)
- [Dissociate an Action From a Custom Entity](#)
- [Publish a Custom Entity](#)
- [Delete a Custom Entity](#)

## Search for a Custom Entity

You can search for a custom entity by its name.

### Procedure

- 1 From the main menu ()<sup>1</sup>, select **Content Libraries**.
  - a From the left panel, select **Custom Entity Definitions**.

The list of custom entities displays in a card view of twelve items per page, sorted by names in alphabetical order. Each card shows the name of the custom entity, the vRealize Orchestrator type to which the entity is mapped, the type of the entity, and a description, if available.

- 2 In the **Search** text box on the top of the page, enter a word or a character of the name of the entity you want to find.

The search results display in a card view of twelve items per page, sorted by names in alphabetical order.

## Edit a Custom Entity Definition

You can modify the name and the description of a custom entity. You cannot change the type of the entity or the vRealize Orchestrator object type, to which the entity is bound. These are the default properties of the custom entity. If you want to modify any of the default properties, you must delete the custom entity definition and recreate it.

### Procedure

- 1 From the main menu () , select **Content Libraries**.
  - a From the left panel, select **Custom Entity Definitions**.

The list of custom entities displays in a card view of twelve items per page, sorted by names in alphabetical order. Each card shows the name of the custom entity, the vRealize Orchestrator type to which the entity is mapped, the type of the entity, and a description, if available.

- 2 In the card of the selected custom entity, select **Actions > Edit**.
 

A new dialog opens.
- 3 Modify the name or the description of the custom entity definition.
- 4 Click **OK** to confirm the change.

## Add a Custom Entity Definition

You can create a custom entity and map it to an existing vRealize Orchestrator object type.

### Procedure

- 1 From the main menu () , select **Content Libraries**.
  - a From the left panel, select **Custom Entity Definitions**.

The list of custom entities displays in a card view of twelve items per page, sorted by names in alphabetical order. Each card shows the name of the custom entity, the vRealize Orchestrator type to which the entity is mapped, the type of the entity, and a description, if available.

- 2 Click the  icon to add a new custom entity.
 

A new dialog opens.

### 3 Follow the steps of the **Custom Entity Definition** wizard.

Step	
Name and Description	Enter a name and optionally a description for the new entity. Enter a name for the entity type, for example <code>sshHost</code> .
vRO	From the drop-down menu, select the vRealize Orchestrator that you will use to map the custom entity definition.  <b>Note</b> If you have more than one vRealize Orchestrator server, you must create a custom entity definition for each one of them separately.
Type	Click the view list icon (  ) to browse through the available vRealize Orchestrator object types grouped by plug-ins. For example, <b>SSH &gt; Host</b> . If you know the name of the type, you can enter it directly in the text box. For example <code>SSH:Host</code> .
Review	Review the details that you specified and click <b>Done</b> to complete the creation.

#### Results

The new custom entity definition appears in the card view.

## Custom Entity Instances

Running a vRealize Orchestrator workflow with an input parameter being an object type that is already defined as a custom entity definition in vCloud Director shows the output parameter as an instance of a custom entity.

#### Procedure

- 1 From the main menu () , select **Content Libraries**.

- a From the left panel, select **Custom Entity Definitions**.

The list of custom entities displays in a card view of twelve items per page, sorted by names in alphabetical order. Each card shows the name of the custom entity, the vRealize Orchestrator type to which the entity is mapped, the type of the entity, and a description, if available.

- 2 In the card of the selected custom entity, click **Intances**.

The available instances display in a grid view.

- 3 Click the list bar () on the left of each entity to display the associated workflows.

Clicking on a workflow initiates a workflow run which takes the entity instance as an input parameter.

## Associate an Action to a Custom Entity

By associating an action to a custom entity definition, you can execute a set of vRealize Orchestrator workflows on the instances of a particular custom entity.

## Procedure

- 1 From the main menu () , select **Content Libraries**.

- a From the left panel, select **Custom Entity Definitions**.

The list of custom entities displays in a card view of twelve items per page, sorted by names in alphabetical order. Each card shows the name of the custom entity, the vRealize Orchestrator type to which the entity is mapped, the type of the entity, and a description, if available.

- 2 In the card of the selected custom entity, select **Actions > Associate Action**.

A new dialog opens.

- 3 Follow the steps of the **Associate Custom Entity to VRO Workflow** wizard.

Step	Details
Select VRO Workflow	Select one of the listed workflows. These are the workflows that are available in the <b>Service Library</b> page.
Select Workflow Input Parameter	Select an available input parameter from the list. You associate the type of the vRealize Orchestrator workflow with the type of the custom entity definition.
Review Association	Review the details that you specified and click <b>Done</b> to complete the association.

## Example

For example, if you have a custom entity of type SSH:Host, you can associate it with the Add a Root Folder to SSH Host workflow by selecting the sshHost input parameter, which matches the type of the custom entity.

## Dissociate an Action From a Custom Entity

You can remove a vRealize Orchestrator workflow from the list of associated actions.

### Procedure

- 1 From the main menu () , select **Content Libraries**.

- a From the left panel, select **Custom Entity Definitions**.

The list of custom entities displays in a card view of twelve items per page, sorted by names in alphabetical order. Each card shows the name of the custom entity, the vRealize Orchestrator type to which the entity is mapped, the type of the entity, and a description, if available.

- 2 In the card of the selected custom entity, select **Actions > Dissociate Action**.

A new dialog opens.

- 3 Select the workflow you want to remove and click **Dissociate Action**.

The vRealize Orchestrator workflow is no longer associated with the custom entity.

## Publish a Custom Entity

You must publish a custom entity so users from other tenants or service providers can run workflows using the custom entity instances as input parameters.

### Procedure

- 1 From the main menu () , select **Content Libraries**.

- a From the left panel, select **Custom Entity Definitions**.

The list of custom entities displays in a card view of twelve items per page, sorted by names in alphabetical order. Each card shows the name of the custom entity, the vRealize Orchestrator type to which the entity is mapped, the type of the entity, and a description, if available.

- 2 In the card of the selected custom entity, select **Actions > Publish**.

A new dialog opens.

- 3 Choose whether you want to publish the custom entity definition to service providers, all tenants, or only to selected tenants.

- 4 Click **Save** to confirm the change.

The custom entity definition becomes available to the selected parties.

## Delete a Custom Entity

You can delete a custom entity definition if the custom entity is no longer in use, if it was configured incorrectly, or if you want to map the vRealize Orchestrator type to a different custom entity.

### Procedure

- 1 From the main menu () , select **Content Libraries**.

- a From the left panel, select **Custom Entity Definitions**.

The list of custom entities displays in a card view of twelve items per page, sorted by names in alphabetical order. Each card shows the name of the custom entity, the vRealize Orchestrator type to which the entity is mapped, the type of the entity, and a description, if available.

- 2 In the card of the selected custom entity, select **Actions > Delete**.

- 3 Confirm the deletion.

The custom entity is removed from the card view.

# Managing Organizations

# 5

The vCloud Director Service Provider Admin Portal allows you to create, configure, and manage vCloud Director organizations.

Use vCloud Director Service Provider Admin Portal to manage organizations, set policies to determine how users consume resources allocated to an organization, and manage publishing and sharing of catalogs.

This chapter includes the following topics:

- [Create an Organization](#)
- [Configure Catalogs for an Organization](#)
- [Configure Policies for an Organization](#)

## Create an Organization

You can create a new organization from the vCloud Director Service Provider Admin Portal.

### Procedure

- 1 From the main menu (  ), select **Cloud Resources**
  - a From the left panel, select **Organizations**.

The list of existing organizations displays in a grid view.

- 2 To create a new organization, click the **+Add** button.

The **New Organization** dialog opens.

- 3 Enter the following values.

Option	Description
Organization name	The unique identifier that forms the URL for accessing the Tenant Portal of the organization.
Organization full name	Full name of the organization.
Description	An optional description for the organization.

- 4 Click the **Create** button to complete the creation.

## Configure Catalogs for an Organization

You can configure how an organization shares its service catalogs.

### Procedure

- 1 From the main menu (  ), select **Cloud Resources**
  - a From the left panel, select **Organizations**.

The list of existing organizations displays in a grid view.

- 2 Use the list bar (  ) on the left of each item to display the actions you can take for each organization.
- 3 Click **Catalogs**.

The organization's **Catalog Settings** dialog opens.

- 4 Configure the following sharing and publishing options.

Option	Description
Sharing	Allows organization administrators to share this organization's catalogs with other organizations in this instance of vCloud Director. If you do not select this option, organization administrators are still able to share catalogs within the organization.
Allow publishing to external catalogs	Allows organization administrators to publish catalogs to organizations outside of this instance of vCloud Director.
Allow subscribing to external catalogs	Allows organization administrators to subscribe to catalogs outside of this instance of vCloud Director.

## Configure Policies for an Organization

Leases, quotas, and limits constrain the ability of organization users to consume storage and processing resources. You can modify these settings to prevent users from depleting or monopolizing an organization's resources.

### Procedure

- 1 From the main menu (  ), select **Cloud Resources**
  - a From the left panel, select **Organizations**.

The list of existing organizations displays in a grid view.

- 2 Use the list bar (  ) on the left of each item to display the actions you can take for each organization.
- 3 Click **Policies** to edit the leases, quotas, resource limits, and password policies for the organization.

#### 4 Configure vApp leases with the following settings.

Option	Description
Maximum runtime lease	How long vApps can run before they are automatically stopped.
Maximum storage lease	How long stopped vApps are available before being automatically cleaned up.
Storage cleanup	How vApps are processed after being stopped and cleaned up.

#### 5 Configure vApp template leases with the following settings.

Option	Description
Maximum storage lease	How long vApp templates are available before being automatically cleaned up.
Storage cleanup	How expired vApp templates are processed after being cleaned up.

#### 6 Configure quotas with the following settings.

Option	Description
All VMs quota	Total number of available VMs a user can store in this organization.
Running VMs quota	Total number of VMs a user can power on in this organization.

#### 7 Configure limits with the following settings.

Option	Description
Number of resource intensive operations per user	Type the maximum number of simultaneous resource intensive operations per user, or select <b>Inherit System Limit</b> .
Number of resource intensive operations to be queued per user	Type the maximum number of queued resource intensive operations per user, or select <b>Inherit System Limit</b> .
Number of resource intensive operations per organization	Type the maximum number of simultaneous resource intensive operations per organization, or select <b>Inherit System Limit</b> .
Number of resource intensive operations to be queued per organization	Type the maximum number of queued resource intensive operations per organization, or select <b>Inherit System Limit</b> .
Number of simultaneous connections per VM	Type the maximum number of simultaneous console connections per virtual machine, or select <b>Inherit System Limit</b> .
Number of virtual data centers per organization	Type the maximum number of organization virtual data centers per organization, or select <b>Inherit System Quota</b> .

#### 8 Configure password policies with the following settings.

Option	Description
Account lockout enabled	Enable user account lockout after a number of invalid login attempts.
Invalid logins before lockout	Number of invalid login attempts before the user account is locked.
Account lockout interval	Period during which a locked user account cannot log in.