

# Using VMware Cloud Director Object Storage Extension as a Service Provider

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VMware Cloud Director Object Storage Extension 1.5



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# Working with VMware Cloud Director Object Storage Extension as a Service Provider

1

Service providers with the VMware Cloud Director **System Administrator** user role can manage VMware Cloud Director Object Storage Extension.

By using the VMware Cloud Director Object Storage Extension admin portal, you can enable or disable VMware Cloud Director Object Storage Extension for a tenant organization.

By using the `ose` command-line utility, you can manage and reconfigure VMware Cloud Director Object Storage Extension. For example, you can change the logging level or change the public network port.

To manage and monitor the underlying storage, use the storage management console of your storage vendor.

# Access VMware Cloud Director Object Storage Extension

## 2


You access the VMware Cloud Director Object Storage Extension admin portal from VMware Cloud Director service provider admin portal.

During the configuration of VMware Cloud Director Object Storage Extension, the user interface of VMware Cloud Director Object Storage Extension registers as a plug-in to VMware Cloud Director.

### Prerequisites

- Verify that VMware Cloud Director Object Storage Extension is configured properly.
- Verify that your user profile in VMware Cloud Director has a **System Administrator** role assigned.

### Procedure

- 1 In a browser, go to the VMware Cloud Director service provider admin portal URL.  
For example, <https://vcloud.example.com/provider>.
- 2 Log in with the **System Administrator** user name and password.
- 3 From the main menu () , select **Object Storage**.


# Access the ECS Management Console

## 3

If you configured VMware Cloud Director Object Storage Extension with the ECS storage platform, you can manage and monitor the ECS components and services by using the ECS Management Console.

### Procedure

1 Log in to the VMware Cloud Director service provider admin portal.

2 From the main menu () , select **Object Storage**.

3 On the **Platform** tab, click the pop-out icon () .

The ECS Management Console opens in a new tab of your Web browser.

4 Enter your credentials and log in.



# Access the Clodian Management Console

## 4

If you configured VMware Cloud Director Object Storage Extension with the Clodian storage platform, you can manage and monitor the Clodian components and service by using the Clodian Management Console.

For information about using the Clodian Management Console, see the [Clodian HyperStore Administration Guide](#).

### Procedure

- 1 Log in to the VMware Cloud Director service provider admin portal.
- 2 From the main menu () , select **Object Storage**.
- 3 On the **Platform** tab, click the pop-out icon ().

### Results

The Clodian Management Console opens in a new tab of your Web browser.

# Managing Tenant Organizations

# 5

To enable or disable VMware Cloud Director Object Storage Extension for a VMware Cloud Director organization, use the VMware Cloud Director Object Storage Extension admin portal.

To manage storage quotas, rating plans, and other storage platform features for a tenant organization, use the storage management console provided by your storage vendor, that is the Cloudian Management Console or the ECS Management Console.

This chapter includes the following topics:

- [Enabling and Disabling VMware Cloud Director Object Storage Extension for a Tenant Organization](#)
- [Edit Tenant Mapping Configuration](#)
- [Manage a Storage Tenant Organization](#)

## Enabling and Disabling VMware Cloud Director Object Storage Extension for a Tenant Organization

By enabling or disabling VMware Cloud Director Object Storage Extension for a tenant organization, you control the access of organization users to VMware Cloud Director Object Storage Extension.

When you enable VMware Cloud Director Object Storage Extension for a VMware Cloud Director organization for the first time, an equivalent group is created in the underlying storage platform. The group in the storage platform is the equivalent of a VMware Cloud Director organization. Initially, the group does not contain any users. When an organization user of VMware Cloud Director creates a bucket and uploads an object to VMware Cloud Director Object Storage Extension for the first time, a storage user is created in the corresponding group in the storage platform.

When you disable VMware Cloud Director Object Storage Extension for a VMware Cloud Director organization, the organization users cannot access VMware Cloud Director Object Storage Extension, but the buckets and objects that the users created are retained.

If you disable and delete an organization user from VMware Cloud Director, the storage user remains active and the object storage data is retained in the storage platform. When you delete an organization user from VMware Cloud Director, you can transfer only the VMware Cloud Director resources to another organization user. To clean up the object storage data of a deleted organization user, use the storage management console.




To restore the access to the resources for the organization users, enable VMware Cloud Director Object Storage Extension.

## Enable VMware Cloud Director Object Storage Extension for a Tenant Organization

By enabling VMware Cloud Director Object Storage Extension for a tenant organization, you provide the users in the organization with access to VMware Cloud Director Object Storage Extension.


### Procedure

- 1 Log in to the VMware Cloud Director service provider admin portal.
- 2 From the main menu () , select **Object Storage**.
- 3 On the **Tenants** tab, click the name of the tenant organization for which you want to enable VMware Cloud Director Object Storage Extension.
- 4 Turn the toggle on for the selected tenant organization.
- 5 To create mapping between the tenant organization and a storage tenant, select a storage tenant ID from the drop-down menu.
- 6 Click **Enable**.

## Disable VMware Cloud Director Object Storage Extension for a Tenant Organization

By disabling VMware Cloud Director Object Storage Extension for a tenant organization, you restrict the access to object storage resources for the users in the organization.

### Procedure

- 1 Log in to the VMware Cloud Director service provider admin portal.
- 2 From the main menu () , select **Object Storage**.
- 3 On the **Tenants** tab, click the name of the tenant organization for which you want to disable VMware Cloud Director Object Storage Extension.
- 4 Turn the toggle off for the selected tenant organization.
- 5 To confirm the operation, click **Disable**.

## Edit Tenant Mapping Configuration

Starting with VMware Cloud Director Object Storage Extension 1.5, you can edit the mapping between the VMware Cloud Director and the storage platform tenant entities.

When you first enable VMware Cloud Director Object Storage Extension for a tenant organization, VMware Cloud Director Object Storage Extension creates an equivalent group in the underlying storage platform. When the storage tenant is created, VMware Cloud Director Object Storage Extension maps it to the VMware Cloud Director tenant organization. Starting with VMware Cloud Director Object Storage Extension 1.5, you can change the mapping configuration.

If you have vendor-specific object storage data (buckets and objects) in your data center, before you start using VMware Cloud Director Object Storage Extension, you can introduce the existing data to VMware Cloud Director Object Storage Extension by editing the tenant mapping.

By configuring the tenant mapping, you can also use one storage tenant for multiple VMware Cloud Director tenant organizations.

You can map multiple VMware Cloud Director tenant organization to the same storage group, for example, to share the storage for tenant organizations within a multisite VMware Cloud Director environment. A best practice is to create a standalone storage group in your storage platform and then map tenant organizations to it. It is not a best practice to map one tenant organization to the default storage group of another tenant organization.



When you edit the default tenant mapping configuration, consider the following constraints:

- For example, by default *tenant1* is mapped to *storage1*. If you edit the mapping for *tenant1* and map it to *storage2*, you cannot map another tenant to *storage1*.
- For example, by default *tenant1* is mapped to *storage1*. If you map *tenant2* to *storage1*, you cannot map *tenant1* to another storage.

### Prerequisites

Verify that you disabled VMware Cloud Director Object Storage Extension for the tenant organization for which you want to edit the mapping configuration. See [Disable VMware Cloud Director Object Storage Extension for a Tenant Organization](#).

### Procedure

- 1 Log in to the VMware Cloud Director service provider admin portal.
- 2 From the main menu () , select **Object Storage**.
- 3 On the **Tenants** tab, click the name of the tenant organization for which you want to edit the mapping configuration.
- 4 In the storage platform card, click the note icon () next to the storage tenant ID.
- 5 Enter the storage tenant ID that you want to map to the tenant organization, or select it from the drop-down menu, and click **Save**.

### What to do next



Enable VMware Cloud Director Object Storage Extension for the tenant organization. See [Enable VMware Cloud Director Object Storage Extension for a Tenant Organization](#) .

## Manage a Storage Tenant Organization

You can manage the storage tenant organizations by using the management console of the storage vendor that you use. To ease your navigation in the management console of your vendor, you can use the VMware Cloud Director Object Storage Extension tenant portal and access a specific tenant organization directly in the management console of the vendor.

Within the storage management console, you can manage storage quotas, rating plans, and other storage platform features at the tenant organization level.

### Procedure

- 1 Log in to the VMware Cloud Director service provider admin portal.
- 2 From the main menu () , select **Object Storage**.
- 3 On the **Tenants** tab, click the name of the tenant organization that you want to manage.
- 4 Click the pop-out icon () in the upper right corner of the storage platform card and confirm the operation.

### Results

You are redirected to the management console of the storage platform.

# VMware Cloud Director Object Storage Extension Administration

# 6

You can use the `ose` command-line utility to change the configuration of VMware Cloud Director Object Storage Extension and to troubleshoot problems.

Reconfiguring VMware Cloud Director Object Storage Extension requires you to stop the VMware Cloud Director Object Storage Extension service, perform the operation that you want, and start the service again.

This chapter includes the following topics:

- [Edit Global Cross-Origin Resource Sharing Configuration](#)
- [Change the Root Logging Level of VMware Cloud Director Object Storage Extension](#)
- [Change the Public Network Port](#)
- [Disable the SSL Certificate Validation for the S3 Service](#)


## Edit Global Cross-Origin Resource Sharing Configuration

Cross-origin resource sharing (CORS) is a mechanism for client web applications loaded in one domain to interact with resources in a different domain.

By using the VMware Cloud Director Object Storage Extension user interface, you can edit the global CORS settings at the system level. Tenant users can set individual CORS rules at the bucket level.

By default, global CORS settings do not allow cross-origin S3 API requests. To manage CORS rules at the bucket level, disable the global settings or set an allowlist, then configure CORS rules by using the VMware Cloud Director Object Storage Extension tenant portal. See [Working with Cross-Origin Resource Sharing Rules](#).

### Procedure

- 1 Log in to the VMware Cloud Director service provider admin portal.
- 2 From the main menu () , select **Object Storage**.
- 3 In the **Settings** tab, click **Edit**.

- 4 Select a CORS configuration and click **Save**.

There are three CORS configuration options.

Option	Description
Disable Global CORS	Cross-origin access to buckets depends on the CORS rules of the individual bucket.
Enable Global CORS with any Origin	Cross-origin access to buckets is allowed for all requests.
Enable Global CORS with Custom Origin Allowlist	Cross-origin access to buckets is allowed for requests from the origins that you specify. Access requests from other origins depend on the CORS rules of the individual bucket.

## Change the Root Logging Level of VMware Cloud Director Object Storage Extension

To collect more troubleshooting information, you can change the root logging level of VMware Cloud Director Object Storage Extension to debug.

**Important** Setting the root logging level to debug causes the log capacity to fill faster.

### Procedure

- 1 Open an SSH connection to the VMware Cloud Director Object Storage Extension machine.
- 2 Change the logging level to debug.

```
ose service restart --debug
```

## Change the Public Network Port

By default, VMware Cloud Director Object Storage Extension is configured to use port 443 for external communication. You can change the public port by using the ose command-line utility.

### Procedure

- 1 Open an SSH connection to the VMware Cloud Director Object Storage Extension machine.
- 2 Change the public network port to 8443.

```
ose args set --k=server.port --v=8443
```

- 3 Restart the VMware Cloud Director Object Storage Extension service.

```
ose service restart
```

## Disable the SSL Certificate Validation for the S3 Service

For testing and development purposes, you can disable the SSL certificate validation that the VMware Cloud Director Object Storage Extension API performs.

The VMware Cloud Director tenant portal requires an SSL certificate validation. When the SSL certificate validation is disabled, you cannot access VMware Cloud Director Object Storage Extension by using the VMware Cloud Director tenant portal.

### Procedure

- 1 Open an SSH connection to the VMware Cloud Director Object Storage Extension machine.
- 2 Restart the VMware Cloud Director Object Storage Extension service and disable the SSL certificate validation.

```
ose service restart --noss1
```