

VMware Cloud Director Object Storage Extension 2.2

The following information gives insight into the essence of VMware Cloud Director Object Storage Extension and Object Storage Interoperability Service. It also answers questions related to Object Storage Extension (OSE) performance, security, and troubleshooting.

Overview

Q. What is VMware Cloud Director Object Storage Extension (OSE)?

A. It is a plug-in for VMware Cloud Director that connects the latter to S3 storage, which is activated for use per tenant.

Q. What is VMware Object Storage Interoperability Service (OSIS)?

A. It is a service that needs to be developed by providers to connect their custom S3 storage to VMware Cloud Director. It implements a set of mandatory and optional S3 APIs needed for executing the major OSE functions like a user, tenant, and S3 credential creation.

Q. What are the requirements for developing and deploying Object Storage Extension Interoperability Service?

A. It needs to implement a set of S3 APIs to enable the management and data flow between OSE and the S3 storage. There are a few other recommendations for its development, which you can read [here](#).

Compatibility

Q. Which are the supported S3 storage vendors?

A. The supported out-of-the-box S3 storage by VMware Cloud Director Object Storage Extension is Cloudian Hyperstore, Dell EMC ECS, and AWS.

Q. What are the versions of the S3 storage that OSE 2.2 supports?

A. Cloudian Hyperstore version 7.4 and 7.5, Dell EMC ECS version 3.6 and 3.7, and AWS. Note that for multi-region support for Cloudian the version of the latter should be at least 7.4.2.

Q. Can I add a different S3 vendor?

A. Yes, you can. You need to develop the OSIS service, which allows you to connect your S3 storage to Cloud Director and provision it to your tenants.

Q. How can I enable object lock for Cloudian?

A. Object lock in VMware Object Storage Extension with requires a specific Cloudian Hyperstore feature license to allow S3 object retention from Object Storage Extension.

Q. Which are the custom S3 storage vendors compliant with OSE?

A. Ceph is compliant with Object Storage Extension and can be connected to it through OSIS.

Q. What are the Kubernetes clusters that can be backed up and restored with OSE?

A. Tanzu Kubernetes Grid clusters, CSE native clusters, and external Kubernetes clusters.

Q. What topologies does Object Storage Extension 2.2 support?

A. Object Storage Extension 2.2 supports - a single region in a multi-site VMware Cloud Director, multi regions in a multi-site VMware Cloud Director, and multi regions in a single-site VMware Cloud Director.

Customization

Q. Can a tenant be prevented from editing a Cloudian storage policy?

A. Yes, this option is available in OSE 2.2. During the tenant onboarding to a region, the provider administrator can prevent a tenant from editing a specific Cloudian S3 storage policy for a specific region. When that storage policy is locked in for editing, then the tenant cannot customize it.

Q. Can I use the same AWS multi-payer account for the setup of the different OSE instances with multi-site VMware Cloud Director?

A. Yes, you can.

Q. Can I install a virtual Cloudian Hyperstore nodes on vSAN cluster?

A. Yes, you can. Find more details [here](#).

Q. Can I have buckets with the same name across different orgs?

A. No, you can't. None of the supported S3 storage vendors allow it. When creating an S3 bucket, consult with the recommended bucket naming convention of the used S3 storage vendor.

Q. Can I use a load balancer for an OSE cluster?

A. Yes, you can. The load balancer is recommended for an OSE cluster with 2 or more nodes. Learn how to configure it [here](#). Set up the load balancer URL for the OSE UI installation by applying the following command: `ose ui install --ose-url=https://my-lb.fqdn.cc`

Q. Is OSE UI customizable?

A. No, it is not.

Operational

Q. How does a global bucket sync work with Cloudian?

A. The global bucket sync synchronizes all bucket operations made through Cloudian Hyperstore with Object Storage Extension.

Q. What are the new developments in OSE 2.2?

A. In this release we provide cloud providers using Cloudian - multi-region support for multi-site VMware Cloud Director. In this release, you will also find the new bucket replication feature that replicates source bucket content to a destination bucket. In addition, the K8S backup and restore feature is updated to work with Kubernetes with the latest version. With OSE 2.2, cloud providers can also control what Cloudian storage policies are exposed to tenants. And the last enhancement in this release is the support of a short S3 endpoint path.

Performance

Q. What's the OSE performance for small, medium, and large deployments?

A. The OSE performance compared to the pure S3 storage performance can be checked in the [VMware Cloud Director Object Storage Extension Reference Design](#) white paper. By and large, there is not much overhead with the OSE performance compared to the supported out-of-the-box S3 storage vendors.

Security

Q. How to change the encryption of the SSL connection to OSE to use at least 2048-bit long keys?

A. The minimal key length can be set in JRE. Read the following [Set minimum key length requirement for JARs signed with DSA/RSA](#) to learn how to do it. OSE does not bundle Java SDK, so you need to inject JRE arguments to OSE by using the following command: `ose jvmargs -h`. See an example [here](#).

Troubleshooting

Q. I have a problem with the K8S backup and restore in Object Storage Extension. How can I troubleshoot it?

A. You need to install the Velero client on the OSE server to run Velero troubleshooting commands. Learn how to do it [here](#). The Velero troubleshooting commands can be found [here](#).

Q. How can I check if my OSE configuration is correct?

A. Yes, you can use the following command: `ose config validate` to check if all the required steps of the OSE deployment have been successfully executed.

Q. How can I check if my S3 storage settings for OSE tenant onboarding are correct?

A. Check the configuration validation commands for Cloudian Hyperstore, AWS, and Dell ECS [here](#).

Upgrade

Q. What are the upgrade paths for OSE 2.2?

A. VMware Cloud Director Object Storage Extension 2.2 can be upgraded from version 2.0.x and 2.1.x. See the following [information](#) to learn how to do it.

Support

Q. How can I file a support request?

A. Run `ose support` to generate an OSE support bundle and attach it to your customer support request sent to VMware. See the following [KB article](#) to learn how to file a support request with VMware.