

Dell EMC CloudLink

Version 6.0, 6.5, 6.6, 6.7, 6.8, and 6.9

Key Management for VMware vCenter Server Configuration Guide

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This Configuration Guide contains procedures to create a trusted connection between CloudLink and a vCenter Server using Key Management Interoperability Protocol. Topics include:


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Introduction

CloudLink® versions 6.0, 6.5, 6.6, 6.7, 6.8, and 6.9 supports the Key Management Interoperability Protocol (KMIP) to allow applications supporting that protocol to securely store keys and certificates. The applications, or KMIP clients, are given access to a single KMIP partition. A KMIP partition is a container for keys and certificates created by the client.

All objects within a partition are encrypted using a key saved to the partition's keystore and are stored in the CloudLink Center database. The KMIP Server menu is only available in the CloudLink Center Contents pane after a KMIP license is uploaded.

Use the following procedures to create a trusted connection between CloudLink Center and a vCenter Server by adding a KMIP partition and client.

 **Note:** CloudLink 6.0, 6.5, 6.6, 6.7, 6.8, and 6.9 support KMIP 1.1 through 1.3.

Adding a KMIP partition

Add a KMIP partition.

Procedure

1. Log in to CloudLink Center as an administrator with permission to configure KMIP partitions and clients.
2. Ensure that you have a valid KMIP license.
 - a. Select **System > License** in the **Contents** pane.
 - b. Confirm that there is a valid KMIP license assigned.

You must add a new KMIP partition to store keys and certificates separately from other KMIP clients. Adding a KMIP partition involves defining its name, keystore, managing role, and providing an optional description.

3. Select **KMIP Server > Partitions** in the **Contents** pane.
4. Select **Add** in the command bar and provide the following values:

Partition Name

A name for the KMIP partition

Description (optional)

A brief description of the partition

Keystore

The keystore used to store the encryption key that encrypts the KMIP objects

Key Caching

You can choose to cache or not cache the KMIP partition protection key. Key caching stores the protection key locally in CloudLink Center.

Managed By

The names of the roles that administer this KMIP partition

Adding a KMIP client

Add a KMIP client to allow vCenter Server to connect to and authenticate the connection with CloudLink Center.

Procedure

1. Select **KMIP Server > Clients** in the **Contents** pane.
2. Select **Add** in the command bar and provide the following values:

Username

Username for client authentication from the KMIP client.

Partition

The KMIP partition created in [Adding a KMIP partition](#) on page 2.

Credential Type

A username and password.

Password

Password for client authentication from the KMIP client.

Certificate Format

Use the default PEM certificate.

The required keys and certificates are automatically downloaded in a `ZIP` file.

3. Extract the files `ca.pem`, `cert.pem`, and `key.pem` to an accessible location.

Configuring the Key Management Server

Configure CloudLink Center as the Key Management Server in vSphere Web Client.

Procedure

1. Use the vSphere Web Client to log in to the vCenter Server.
2. Select the vCenter Server in the **Object Navigator**.
3. Select **Configure > Key Management Servers** in vSphere Web Client.
4. Select **Add KMS** and provide the following values:

KMS cluster

Select **Create a new cluster**

Cluster name

A user-friendly name for the cluster

Server alias

A user-friendly name for the CloudLink Center instance

Server address

Address of the CloudLink Center instance

Server port

Enter 5696

Proxy Address

Leave it blank

Proxy Port

Leave it blank

User name

Enter the username added in [Adding a KMIP client](#) on page 3

Password

Enter the password added in [Adding a KMIP client](#) on page 3

Uploading the KMS certificate

Upload the KMS certificate to vSphere Web Client.

Procedure

1. In **Key Management Servers**, select the KMS created in [Configuring the Key Management Server](#) on page 3.
2. Select **All Actions > Upload KMS certificate**.
3. Select **Upload file** and select the `ca.pem` file from [Adding a KMIP client](#) on page 3.
4. Click **OK**.

Establishing a trusted connection in vSphere 6.5

Establish a trusted connection between CloudLink Center and vSphere Server.

Procedure

1. Select **Establish trust with KMS in Key Management Servers**.
2. Select **Upload certificate and private key** and click **OK**.
3. Select **Upload file** in the **KMS certificate** section and select the `cert.pem` file from [Adding a KMIP client](#) on page 3.
4. Select **Upload file** in the private key section and select the `key.pem` file from [Adding a KMIP client](#) on page 3 and click **OK**.

The Connection Status changes to **Normal**.

5. If you are using a CloudLink Center cluster, separately add each CloudLink Center server in the cluster to the KMS cluster. Repeat step 4, but select the KMS cluster you have already created.

Establishing a trusted connection in vSphere 6.7

Establish a trusted connection between CloudLink Center and vSphere Server.

Procedure

1. Select **Establish trust** and select **Make KMS trust vCenter**.
2. Select **Upload certificate and private key** and click **OK**.
3. Select **Upload file** in the **KMS certificate** section and select the `cert.pem` file from [Adding a KMIP client](#) on page 3.

4. Select **Upload file** in the private key section and select the `key.pem` file from [Adding a KMIP client](#) on page 3 and click **Establish Trust**.

The Connection Status changes to **Normal**.

5. If you are using a CloudLink Center cluster, separately add each CloudLink Center server in the cluster to the KMS cluster. Repeat step 4, but select the KMS cluster you have already created.

Troubleshooting and getting help

Go to [Dell EMC Online Support](#) and click **MyService360**. You will see several options for contacting Dell EMC Technical Support. To open a service request, you must have a valid support agreement. Contact your Dell EMC sales representative for details about obtaining a valid support agreement or with questions about your account.

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