

# VMware Cloud on Dell EMC HCX Integration Guide

VMware Cloud on Dell EMC

You can find the most up-to-date technical documentation on the VMware website at:

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

**VMware, Inc.**  
3401 Hillview Ave.  
Palo Alto, CA 94304  
[www.vmware.com](http://www.vmware.com)

Copyright © 2019-2021 VMware, Inc. All rights reserved. [Copyright and trademark information.](#)

# Contents

- 1** Introduction 4
- 2** VMware HCX Overview 5
- 3** Deploying HCX Add-On Service on VMware Cloud on Dell EMC 6
- 4** Deploying HCX Enterprise Manager Appliance On-Premises 8
- 5** Setting Up Connectivity Between VMware Cloud on Dell EMC SDDC and On-Premises SDDC 9
- 6** Uninstalling HCX Enterprise Manager from VMware Cloud on Dell EMC 11

# Introduction

# 1

The VMware HCX Integration Guide provides a brief overview of the tasks involved in configuring the VMware HCX after the VMware Cloud on Dell EMC support team enables the HCX feature.

## Intended Audience

This information is intended for anyone who wants to configure HCX for migration of workloads from the on-premises data center to VMware Cloud on Dell EMC data center.

# VMware HCX Overview

# 2

VMware HCX is an application mobility platform that simplifies application migration, workload rebalancing, and business continuity across data centers and clouds.

HCX allows you to migrate your workloads between on-premises SDDC and VMware Cloud on Dell EMC SDDC. You establish the connection between these sites by deploying HCX Cloud Manager (the HCX add-on) from the VMware Cloud on Dell EMC console, deploying HCX Connector at the on-premises site, and initiating a pairing between them.

## VMware Cloud on Dell EMC-Supported HCX Features

Feature	Details
HCX Virtual Machine Migrations	<p>HCX versions 4.0 and later:</p> <ul style="list-style-type: none"><li>■ HCX vMotion for serial migrations.</li><li>■ HCX Bulk Migration for scheduled, replication-based, parallel migrations.</li><li>■ HCX Cold Migrations for powered-off virtual machines.</li></ul> <p>HCX version 4.2:</p> <ul style="list-style-type: none"><li>■ HCX Replication Assisted vMotion (RAV)</li><li>■ HCX OS Assisted Migration</li></ul>
HCX Network Extension	<p>A maximum of 7 networks can be extended to the SDDC per VMware HCX Network Extension appliance. Therefore, deploy the HCX Network Extension appliances based on the number of networks you want to extend.</p> <p><b>Note</b> Network Extension with Proximity Routing is unavailable.</p> <p>HCX version 4.2:</p> <ul style="list-style-type: none"><li>■ HCX Mobility Optimized Networking (MON)</li><li>■ HCX Mobility Groups</li></ul>
HCX Service Mesh	<p>HCX version 4.2:</p> <ul style="list-style-type: none"><li>■ Application Path Resiliency</li><li>■ TCP Flow Conditioning</li></ul>

**Note** If you upgrade your existing HCX version to 4.2, contact the VMware Site Reliability Engineer to activate the version 4.2-supported features on your VMware Cloud on Dell EMC SDDC.

# Deploying HCX Add-On Service on VMware Cloud on Dell EMC

# 3

VMware HCX is an add-on that you can enable from the VMware Cloud on Dell EMC console. After enabling the add-on from the console, you can access the HCX Cloud Manager and download the HCX Connector OVA.

## Prerequisites

- 1 The SDDC must be configured to use the uplink connection. See [Configure Uplink Connections](#).
- 2 Before deploying and activating HCX, ensure that the VMware Cloud on Dell EMC SDDC can access the Internet through uplink.
- 3 HCX endpoint reachability:
  - You must allow the vCenter Management IP X.X.X.36/32 to reach `connect.hcx.vmware.com` and `hybridty-depot.vmware.com` on the HTTPS port 443. This communication is established directly through your uplink connection and does not go through proxy servers.
  - If you have set up any firewall rules, you must update the rules to allow traffic to the sites, `connect.hcx.vmware.com` and `hybridty-depot.vmware.com`.

---

**Note** `hybridty-depot.vmware.com` is a CDN backend with a dynamic IP and therefore you must configure it appropriately.

---

## Procedure

- 1 Log in to the VMware Cloud Services Console at <https://console.cloud.vmware.com/csp/gateway/discovery>.
- 2 Launch the **VMware Cloud on Dell** service.
- 3 Click the SDDC name or expand your SDDC and click **View Details**.  
If you have multiple SDDCs, you can [Search Your SDDC](#).
- 4 Navigate to the **Add Ons** tab and click **Activate & Deploy** on the **HCX** card.

- 5 Click **Confirm** to confirm the activation and deployment.

After you activate HCX, the following options are available on the **HCX card > Actions** drop-down menu:

- **Create Activation Key:** An activation is required to activate a newly deployed HCX system.
- **View All Activation Keys:** You can view the activation keys created in the past.
- **View FQDN info:** Navigates you to the **Settings** tab. You can view FQDN and access information for vCenter, HCX in vCenter, and HCX Cloud Manager. Your FQDN settings for accessing vCenter are also applicable for accessing **HCX in vCenter**. If you edit the FQDN configuration for vCenter, the FQDN configuration for **HCX in vCenter** updates automatically. For information on configuring the FQDN settings, see [Configure vCenter Settings](#).

- 6 Configure the following firewall rules by clicking **Network > Network & Security > Gateway Firewall**:

- a HCX Inbound: By default, this rule is deactivated. Slide the toggle to activate it.
- b HCX Outbound: By default, this rule is activated.

---

**Note** By default, for the HCX Inbound rule, HTTPS service is configured. However, you can configure additional services based on your requirement.

---

- 7 Click **Open HCX in vCenter** on the **HCX Card**.

The **Default Credentials** pop-up window appears. When you click **Open HCX in vCenter**, you are navigated to the vCenter console. Consider the following scenarios:

- If you have already logged in to vCenter, you are directly navigated to the HCX dashboard.
- If you have not logged in to vCenter, you must enter the default credentials to log in, and then navigate to the HCX dashboard by clicking **Menu > HCX**.

- 8 On the HCX dashboard, navigate to **Administration > System Updates** and download the HCX Connector OVA, which is required for the on-premises HCX installation. See [Downloading the HCX Connector OVA](#).

#### What to do next

Activate and configure HCX Enterprise Manager on-premises.

# Deploying HCX Enterprise Manager Appliance On-Premises

# 4

After installing the HCX Connector OVA, you must activate and configure the HCX Enterprise Manager.

## Procedure

1 Log in to HCX Enterprise Manager.

2 Insert the activation key.

To create an activation key, do the following:

a In the VMware Cloud on Dell EMC console, navigate to the **Add Ons** tab.

b On the HCX card, click **Actions > Create Activation Key**.

3 Connect to the vCenter Server and configure the HCX system.

The activation and configuration of HCX is detailed in [Activating and Configuring HCX](#).

## Results

HCX Service is available as a plugin under **Menu** in the vCenter Server.

## What to do next

Set up connectivity between VMware Cloud on Dell EMC SDDC and on-premises SDDC.



# Setting Up Connectivity Between VMware Cloud on Dell EMC SDDC and On-Premises SDDC

# 5

You can migrate workloads and extend network traffic between your on-premises SDDC and VMware Cloud on Dell EMC SDDC by configuring HCX Interconnect and Site Pairing.

## Procedure

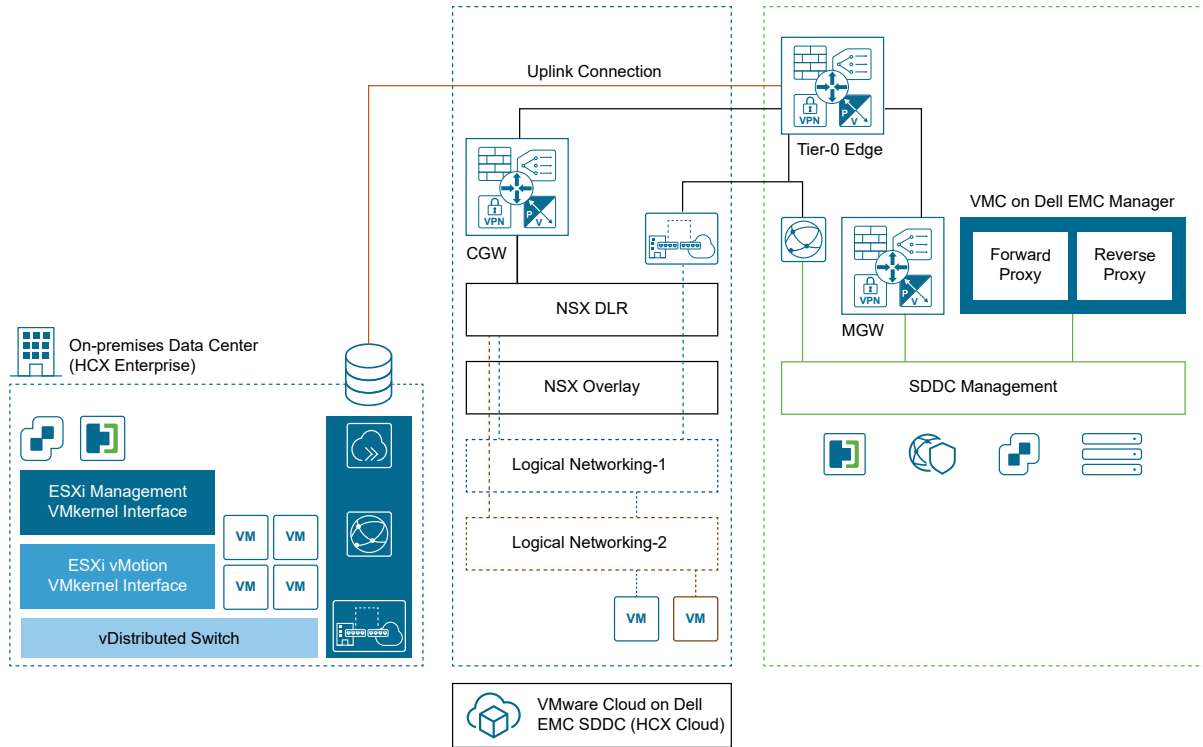
- 1 Log in to the vCenter Server.
- 2 Click **Menu > HCX**.
- 3 Click **Site Pairing** and perform the following tasks to establish a connection for managing and authenticating the HCX service:
  - a Click **Connect to Remote Site**.
  - b Enter the following information in the **Connect to Remote Site** pop-up window:
    - **Remote HCX URL:** Enter the HCX FQDN address.  
Obtain the HCX FQDN address from the VMware Cloud on Dell EMC portal and ensure that this FQDN address is accessible through the uplink connection.
    - **Username:** Enter the user name as `Cloudadmin@vmc.local` or any user with equivalent privileges.  
For more information on the roles and privileges, see [Assign a Role to an Organization Member](#).
    - **Password:** Enter your password.
- 4 Click **Interconnect** and perform the following tasks to configure the HCX Interconnect:
  - a Create a Network Profile to define the network.
  - b Create a Compute Profile to define the services.  
For information on the HCX features that VMware Cloud on Dell EMC currently supports, see [VMware Cloud on Dell EMC-Supported HCX Features](#).
  - c Create a Service Mesh based on your on-premises environment to deploy the services.
- 5 Verify that all the services are successfully installed by ensuring that services are displayed in green.

## Results

You can now use VMware HCX for workload migrations and network extensions.

For detailed information about Site Pairing and configuring HCX Interconnect, see [Configuring and Managing the HCX Interconnect with the Multi-Site Service Mesh](#).

### VMware HCX Over Uplink Connection



# Uninstalling HCX Enterprise Manager from VMware Cloud on Dell EMC

# 6

Uninstalling HCX from VMware Cloud on Dell EMC deployments requires removing the service from both the source and destination site. A graceful uninstall of HCX appliances is always initiated from the source side. The process requires that HCX is fully functional, including site pairings and communication between source and destination site appliances.

## Prerequisites

All migrations and replications, including data recovery operations, are finalized.

## Procedure

- 1 Log in to HCX Enterprise Manager.
- 2 Verify that no migration or protection operations are running.

---

**Note** If any processes are in progress, wait till they are completed or abort the processes before uninstalling HCX.

---

- 3 Remove extended L2 networks, if any.
- 4 Delete all the Service Mesh instances by performing the following steps:
  - a Go to **Interconnect > Multi-Site Service Mesh**.
  - b For each Service Mesh, click **Delete**.
  - c Before proceeding to the next step, check that the Service Mesh no longer appears in the HCX Manager Service UI.

---

**Note** Removing a Multi-Service Mesh from the source site also deletes it from the destination site.

---

- 5 Disconnect all HCX site pairings by performing the following steps:
  - a From the HCX dashboard, navigate to **Site Pairing**.
  - b For each site pair, click **Disconnect**.

After you perform the preceding steps, contact VMware Support for a complete cleanup and removal of HCX Enterprise Manager.