

# VMware HCX Installation Requirements Checklists

VMware HCX



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# About the HCX Installation Requirements Checklist

The *VMware HCX Service Installation Requirements Checklists* provide a simplified reference document for planning HCX deployments. The document is designed to enable successful installation efforts.

## Intended Audience

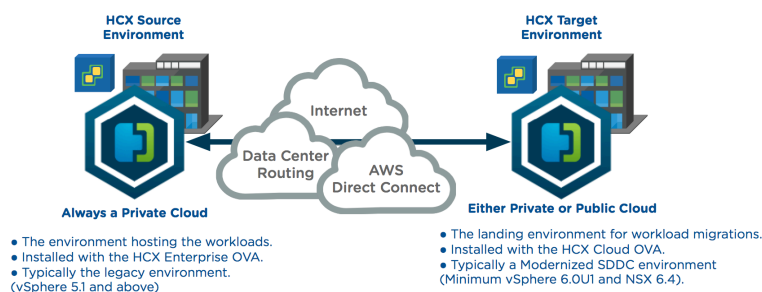
This information is intended for anyone who is designing and planning an installation of VMware HCX services.

## 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 <http://www.vmware.com/support/pubs>.

# VMware HCX Deployment Types

The HCX target environment can be a private vSphere installation or it can be an HCX enabled public cloud. There is a *VMware HCX Service Installation Requirements Checklist* that is specific to each of these environment type. Select a checklist based on the HCX target.



Use [Chapter 2 Checklist 1 - Planning HCX Private to Private Deployments](#) when the HCX target environment is a private vSphere environment.

Use [Chapter 3 Checklist 2 - Planning HCX Private to Public Deployments](#) when the HCX target environment is a VMware Cloud on AWS SDDC.

If the HCX target environment is another HCX enabled public cloud provider, use the cloud provider's implementation documentation.

# Checklist 1 - Planning HCX Private to Private Deployments

# 2

This checklist is used for HCX private cloud deployments that use a private vSphere installation as the HCX target.

**Important** Do not proceed with this document if the target site is a public cloud, use [Chapter 3 Checklist 2 - Planning HCX Private to Public Deployments](#) instead.

## Planned HCX Services and Use Cases

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Which HCX Services Will Be Enabled?

- HCX vMotion (Zero downtime VM state site to site migration).
  - HCX Bulk Migration (Replication-based, parallel and scheduled site to site migrations, Low-Downtime).
  - HCX WAN Optimization (Data Reduction, WAN path conditioning for HCX migration and data protection traffic).
  - HCX Network Extension (Low-complexity network extension, networks auto-mapping, low touch gateway migration and for zero downtime migrations).
  - HCX Disaster Recovery (App-level disaster recovery without Re-IP).
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# Checklist 2 - Planning HCX Private to Public Deployments

# 3

This checklist is used for HCX private to public deployments that use the VMware Cloud on AWS (VMC) as the HCX target.

Do not proceed with this document if the HCX target site is not a VMware Cloud on AWS SDDC. Instead, use Hybrid Cloud Extension (HCX) implementation documentation provided by the HCX enabled cloud services provider.

The checklist below assumes there is an SDDC with HCX enabled. See [HCX in the VMware Cloud on AWS](#) for more information on enabling HCX in VMC.

## Planned HCX Services and Use Cases

### Which HCX Services Will Be Enabled?

- HCX vMotion (Zero downtime VM state site to site migration).
- HCX Bulk Migration (Replication-based, parallel and scheduled site to site migrations, Low-Downtime).
- HCX WAN Optimization (Data Reduction, WAN path conditioning for HCX migration and data protection traffic).
- HCX Network Extension (Low-complexity network extension, networks auto-mapping, low touch gateway migration and for zero downtime migrations).
- HCX Disaster Recovery

## Software Version Validations

Verify existing component at the source site (on premises) meets all software interoperability requirements. See the [Hardware, Interoperability and Activation Requirements](#) topic in the [HCX User Guide](#).

### Software Version Checks

- Verify vCenter Server version meets the minimum requirement for planned features.
- Verify ESXi version meets the minimum requirement for planned features.
- Verify NSX version (if present) meets the minimum requirement for planned features.
- Verify VMware Distributed Switch configuration meets the minimum requirement for planned features.

## HCX Cloud | VMware Cloud on AWS Configurations

### Requirements for HCX in the VMware Cloud on AWS

- HCX must be deployed/enabled on every SDDC that will be registered as an HCX target site. See [Deploying HCX from the VMC Console](#).
- Know the VMC SDDC Cloud Admin credentials.
- Know if the SDDC is backed by NSX for vSphere or by NSX-T.

### Configuration for HCX in the VMware Cloud on AWS

**Note** Collect the information for every SDDC in scope for HCX services.

- SDDC ID.
- HCX Cloud Manager URL: ([https://hcx.sddc.\\*.vmwarevmc.com](https://hcx.sddc.*.vmwarevmc.com)).
- HCX Cloud Manager Elastic IP.
- HCX Elastic IP #1.
- HCX Elastic IP #2.
- HCX Private Subnet:  
(for use with AWS Direct Connect Private Virtual Interface on NSX-T backed SDDCs).

### HCX over AWS Direct Connect

- HCX components are automatically deployed with AWS EIPs. HCX connectivity over AWS Direct Connect with a Public Virtual Interface does not require any additional configuration.  
For more information see: [Using AWS Direct Connect with VMware Cloud on AWS](#).
- HCX connectivity over AWS Direct Connect with a Private Virtual Interface has these additional requirements:
  - The SDDC must be backed by NSX-T. See [Determining Whether Your SDDC Networking is Backed by NSX for vSphere or NSX-T](#).
  - HCX has to be configured to use Private Virtual Interface. See [Configuring HCX for Direct Connect Private Virtual Interfaces](#).

## HCX Enterprise | vSphere Configurations

### Requirements for vSphere Environment On Premises

- vSphere Enterprise Plus Licensing.
- Distributed Port Group exists for the vMotion VMkernel network.
- Distributed Port Group for the vSphere Management Network.

**Caution** It is typical for HCX management interfaces to be connected to the vSphere management network. In this scenario, the vSphere management network should not be extended to the remote site.

- vCenter Server URL: (<https://vcenter-server-ip-or-fqdn>).
- vCenter Server Administrative credentials.



### Requirements for vSphere Environment On Premises

- SSO Type. (Embedded|External PSC).
- SSO URL. (**config.vpxd.sso.admin.uri** in the vCenter Server advanced settings).

## HCX Enterprise | Infrastructure Configurations

### Premises Environment Information

- DNS Server IP.
- NTP Server IP.
- Proxy Server Configuration for Client Servers.
- Complete Domain Name for premises hosts. e.g. \*.domain.name.
- Internal Subnet/Supernet: e.g. 10.x.y.0/20.

## HCX Enterprise | HCX Manager

This component is deployed and integrated with the source vSphere environment.

### HCX Enterprise Deployment

- Obtain the HCX Enterprise OVA from HCX Cloud dashboard tab.  
Navigate to the [https://hcx.sddc.\\*.vmwarevmc.com](https://hcx.sddc.*.vmwarevmc.com) interface. Click **Download HCX Enterprise Client** from the dashboard tab.
- Generate an activation key for the HCX Enterprise installation.  
From the **VMC Add Ons** tab. On the **Add Ons** tab of your SDDC, click **OPEN HYBRID CLOUD EXTENSION** on the **Hybrid Cloud Extension** card. Open the **Activation Keys** tab. Click **Create Activation Key**, and generate a key for HCX Enterprise.

**Attention** The HCX Enterprise Manager is typically placed in management zones, like vCenter Server or NSX Manager.

- HCX Enterprise Hostname:
- HCX Enterprise Manager Cluster:
- HCX Enterprise Manager Datastore:
- HCX Enterprise Manager Port Group: (typically deployed to the management network)
- HCX Enterprise Manager Private IP Address:
- Know the HCX Enterprise Public NAT IP address.

## HCX Enterprise | HCX WAN Interconnect (CGW) and WAN OPT

This service enables HCX migration capabilities.

**Note** The HCX WAN Optimization appliance is service chained and shares deployment parameters with the HCX WAN Interconnect. Select the highest IOPs storage available, and reserved access to CPU and Memory resources for maximum migration and data reduction.

**HCX WAN Interconnect (CGW)**

- HCX WAN Interconnect Hostname:

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- HCX WAN Interconnect Deployment Cluster:

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- HCX WAN Interconnect Deployment Datastore:

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- HCX WAN Interconnect Deployment Port Group:

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- HCX WAN Interconnect Private IP Address:

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- HCX WAN Interconnect vMotion IP Address:

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## HCX Enterprise | HCX Network Extension (L2C)

This service enables HCX network extension capabilities.

This service is configured per workload distributed switch (e.g. if there is a PROD DVS for production VM networks, and a NON-PROD DVS for non-production VM networks, then two Network Extension services appliances should be configured).

Flexible scale deployments - one appliance can service many networks, or can be deployed per network for busy segments with multi-gigabit requirements.

**HCX Network Extension (L2C) - Per Planned Appliance**

- HCX Network Extension Hostname:

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- HCX Network Extension Deployment Cluster:

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- HCX Network Extension Deployment Datastore:

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- HCX Network Extension Deployment Port Group:

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- HCX Network Extension DVS with Networks to Extend:

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- HCX Network Extension Private IP Address:

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Planned Network Extensions:

[Subnet / Gateway IP / VLAN / Port Group to be stretched].

[Subnet / Gateway IP / VLAN / Port Group to be stretched].

**Caution** The HCX Network Extension Deployment Port Group (the port group used during appliance deployment) should never be extended.

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## Connectivity from HCX Enterprise to the HCX Cloud on AWS

A minimum of 100 Mb bandwidth is required for HCX services.

**Connectivity Details**

Is HCX connecting from premises to VMware Cloud on AWS over the Internet?

- Internet | Bandwidth available for migrations.

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| Connectivity Details  |
|---|
| <input type="checkbox"/> Internet   What Public IPs will HCX components NAT translate to?   |
| <input type="checkbox"/> Internet   Is there a proxy server for outbound HTTPS connections? Configured to allow HCX?  |
| Is HCX connecting from premises to VMC over AWS Direct Connect (DX)?  |
| <input type="checkbox"/> AWS DX with Public Virtual Interface is supported and does not require any HCX specific configuration. Once the direct connect public virtual interface is configured, the HCX EIPs will be advertised to the premises router.<br>Note the HCX EIPs. Use these EIPs when configuring the allow rules on the premises perimeter firewall. |
| <input type="checkbox"/> AWS DX with Private Virtual Interface requires NSX-T backed SDDC.  |
| <input type="checkbox"/> AWS DX with Private Virtual Interface allows HCX on VMC to be configured with a private subnet.<br>Note the private subnet that will be used for HCX.  |
| <input type="checkbox"/> Firewall   Are the firewalls on premises configured to allow :<br>Source: HCX IPs Destination: HCX IPs on VMC Service: UDP-500 / UDP-4500  |
| <input type="checkbox"/> Firewall   Are the firewalls on premises configured to allow :<br>Source: HCX IPs Destination: connect.hcx.vmware.com   hybridity-depot.vmware.com Service: TCP-443 (HTTPS)  |
| <input type="checkbox"/> Firewall   Are the firewalls on premises configured to allow :<br>Source: HCX IPs Destination: connect.hcx.vmware.com Service: TCP-443(HTTPS)  |
| <input type="checkbox"/> Firewall   Are the firewalls on premises configured to allow :<br>Source: HCX IPs Destination: HCX Cloud URL ( <a href="https://hcx.sddc.*.vmwarevmc.com">https://hcx.sddc.*.vmwarevmc.com</a> ) Service: TCP-443 (HTTPS)  |