



Cisco HyperFlex HTML Plugin for VMware vCenter

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Cisco HyperFlex vCenter Plugin

Cisco HyperFlex offers the flexibility of monitoring and managing content via Cisco HX Connect, Cisco HyperFlex Plugin, or Storage Controller VM command line. The vCenter plugin is designed to ease the HyperFlex administration tasks without a need to visit to each HyperFlex clusters. This chapter describes the usage of Local vCenter Plugin and Remote vCenter Plugin.



Note VMware local plugin architecture support is limited to vSphere versions 6.5, 6.7, and 7.0. For more information, see the *vSphere Client Local plugins are deprecated (87880)* article on the VMware site.

To get started, use the following table to determine the plugin type for your deployment. Click the link in the Plugin Type column to advance to the full documentation.

vCenter Plugin Version	Cisco HyperFlex Release	vCenter/ESXi version	Plugin Type
3.0.0 and later	4.0(2f) and later	6.7 U3 and later	Cisco HyperFlex Remote Plugin for VMware vCenter ¹
2.0.0, 2.1.0 and 2.2.0	4.0(2e) and earlier	Up to 7.0 U3	Cisco HyperFlex HTML5 Plugin for VMware vCenter

¹ In alignment with the VMware deprecation of local plugins starting with vSphere 8.0, remote plugin is the only supported version for HX 4.0(2f) and later

Cisco HyperFlex HTML5 Plugin for VMware vCenter

The Cisco HyperFlex Local vCenter Plugin is integrated with the vSphere Web Client and supports all of the HX Data Platform post-installation management and monitoring functions. Access the Cisco HyperFlex vCenter Plugin directly through the vSphere Web Client Navigator.

This section describes how to monitor and manage your HyperFlex clusters from the VMware vCenter using the Cisco HyperFlex HTML5 plugin versions 2.0.0, 2.1.0 and 2.2.0.

Cisco HyperFlex HTML5 Plugin Prerequisites

The following hardware and software prerequisites apply to the Cisco HyperFlex HTML5 Plugin:

- **Browser compatibility:** The Cisco HyperFlex HTML plugin works with Chrome, Firefox and IE.
- Administrative Privileges are required for managing users and roles.
- The installation workflow is the same for single and linked mode vCenter instances.
- Beginning with HX Release 5.0(1a) full HTML5 plugin feature functionality requires the license status to be In-compliance.
- HXDP Release 4.5(2a), 5.0(x) and later releases do not support Cisco HyperFlex Flash Plugin (the original plugin).
- Cisco HyperFlex HTML5 plugin for VMware vCenter support was introduced in Cisco HX Release 4.0(2a) and vCenter 6.5U2.
- Cisco HyperFlex HTML5 plug-in 2.2.0 is the minimum version supported. If the running version is 2.1.0 or 1.0.1, upgrade to the latest version.
- HTML Plugin v2.2 supports vCenter Linked Mode.
- **Cisco HyperFlex Release 4.5(x)** - Perform install, uninstall, and upgrade operations by running `install_vc_plugin` on your shell.

Using the Cisco HyperFlex HTML5 Plugin

The following table defines feature support by plugin version:

Table 1: HTML5 Local Plugin Feature Support

Feature	Plugin Version 2.0.0	Plugin Version 2.1.0	Plugin Version 2.2.0
Discover the Registered HX Cluster	✓	✓	✓
Rename Clusters 2	-	✓	✓
View HX Cluster Summary	✓	✓	✓
View Cluster and Datastore Performance Charts	✓	✓	✓

Disks View	✓	✓	✓
Nodes View	✓	✓	✓
HX Datastore Management	✓	✓	✓
VM Summary and Top VM Consumers	✓	✓	✓
Network Management	-	✓	✓
iSCSI Management 3	-	✓	✓
Events and Alarms	✓	✓	✓
Manage Tasks	-	✓	✓
HX Snapshots and clones at the virtual machine level	-	✓	✓
Schedule Snapshot 4	-	✓	✓
Manage users and access to HX clusters	✓	✓	✓
Cross-launch HX Connect for upgrade	✓	✓	✓
Embedded vCenter server actions at the Host and Clusters level	✓	✓	✓
HTML 5 License Status 5	-	-	✓
Linked Mode	-	-	✓

² Requires HXDP Release 4.5(x) or later.

³ Requires HXDP Release 4.5(x) or later.

⁴ Requires HXDP Release 4.5(x) or later.

⁵ Requires HXDP Release 5.0(x) or later.

Install and Register the vCenter HTML5 Plugin

Install the Cisco HyperFlex HTML5 plugin with the VMware vSphere web client. During the plugin installation process, enter the required information that matches your HX release:

HX Release 4.5(1a)	HX Release 4.5(2a) and later
vCenter Server FQDN/IP	HX Storage controller VM admin password
vCenter server Username and Password	vCenter Username & Password
HX Controller VM Password	-
Storage Controller VM root password	-

Storage Controller VM admin password	-
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Table 2: CLI Arguments

Option	Required or Optional	Description
-h, --help	Optional	Shows the help message relative to the listed command and exits.
-u, --unregister	Optional	Unregister Cisco HyperFlex vCenter plugin.
-s, --show	Optional	Displays the HTML5 vCenter plugin details.
-v, --verbose	Optional	Make the operation more verbose.

Before you begin

- Check and confirm the HTTP (port 80) and HTTPS (port 443) connectivity between vCenter and Controller VMs.
- For deployments using Cisco HX Release 4.5 and later, review the [Secure Admin Shell](#) feature.
- HTML-Plugin v2.2 supports vCenter Linked Mode.
- The installation workflow is the same for single and linked mode vCenter instances.

Step 1 Download the Cisco HyperFlex HTML plugin for VMware vCenter from the [Cisco Software Download](#) site.

Step 2 Copy the `HyperFlex-VC-HTML-Plugin-2.2.0.zip` file into a temporary directory in one of the controller VMs and unzip.

a) The file transfer may be completed by using `sftp cli` or any file transfer app such as `winscp` or `filezilla`.

To use `sftp` transfer via a file transfer app copy the file to the `/tmp` folder on SCVM, using HX admin account.

b) SSH to that SCVM and login with admin account.

c) Change to the `/tmp` directory using the command `"cd /tmp"`.

Example:

```
"cd /tmp"
```

d) Unzip the plugin file `HyperFlex-VC-HTML-Plugin-2.2.0.zip` using the command `unzip`.

Example:

```
unzip HyperFlex-VC-HTML-Plugin-2.2.0.zip
```

Step 3 Execute the command `install_vc_plugin` on your shell and enter:

- vCenter FQDN/IP address
- Administrator username and password of vCenter server
- Storage Controller VM admin password

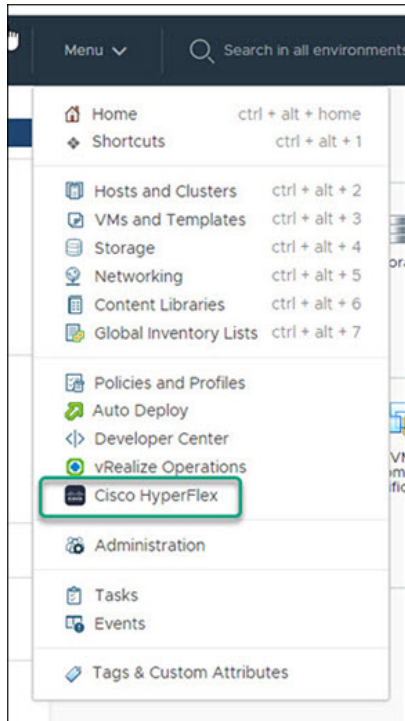
Note Beginning with Cisco HX 4.5(x) with secure shell, the default Storage Controller VM root password is the same as the Storage Controller VM admin password.

If prompted for the Storage Controller VM root password, the default root password is the first password assigned to the Controller VM during setup.

- Storage Controller VM admin password

Step 4 Log on to vCenter and a blue banner message appears to confirm that the new plugin is installed.

Step 5 Log out and log in again to vCenter to see the Cisco HyperFlex menus for HTML5 plugin.



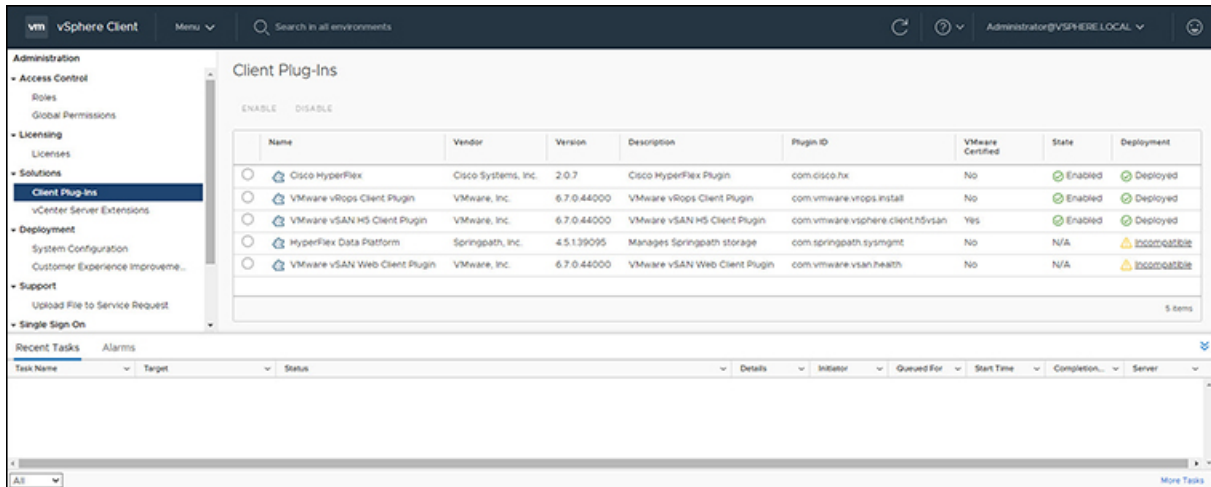
Verifying the Cisco HyperFlex HTML5 Plugin Installation from the vSphere Client

To verify Cisco HyperFlex plugin installation from the vSphere Client UI.

Before you begin

The HTML5 plugin should be installed on vCenter server.

Launch the vSphere client, select **Menu > Administration > Solutions > Client Plug-Ins**



Uninstalling the HyperFlex HTML5 Plugin

To uninstall the HX Data Platform HTML5 Plugin, perform the following steps.

Step 1 Execute the uninstall command `install_vc_plugin -u` on the shell and enter the following credentials:

- vCenter FQDN/IP address
- Administrator username and password for the vCenter server

Step 2 Restart vSphere UI service of vCenter server.

Upgrading the HTML5 Plugin

When you want to upgrade to the latest HTML plugin, download the Cisco HyperFlex HTML plugin for VMware vCenter from the [Cisco Software Download](#) site.

Before you begin

Use this task only if the version of the HTML Plugin installed on the vCenter server is before 2.2.x.

Step 1 Download the Cisco HyperFlex HTML plugin for VMware vCenter from the [Cisco Software Download](#) site.

Step 2 Copy the `HyperFlex-VC-HTML-Plugin-2.2.x.zip` file into a temporary directory in one of the controller VMs and unzip.

a) The file transfer may be completed by using `sftp cli` or any file transfer app such as `winscp` or `filezilla`.

To use `sftp` transfer via a file transfer app copy the file to the `/tmp` folder on SCVM, using HX admin account.

b) SSH to that SCVM and login with admin account.

c) Change to the `/tmp` directory "`cd /tmp`"

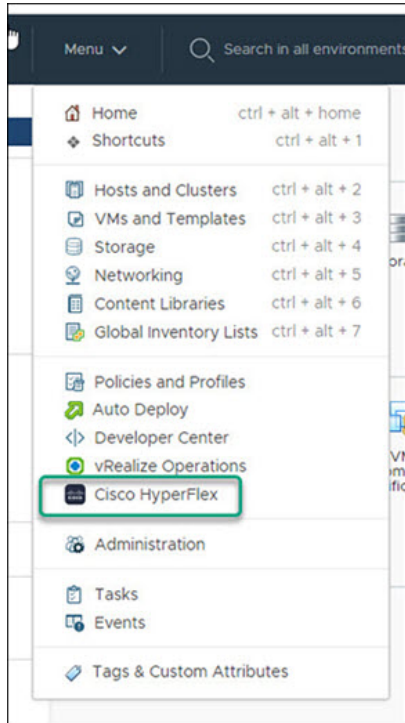
d) Unzip the plugin file `HyperFlex-VC-HTML-Plugin-2.2.x.zip`

Step 3 Execute `install_vc_plugin` command on your shell and enter:

- vCenter FQDN/IP address
- Administrator username and password of vCenter server

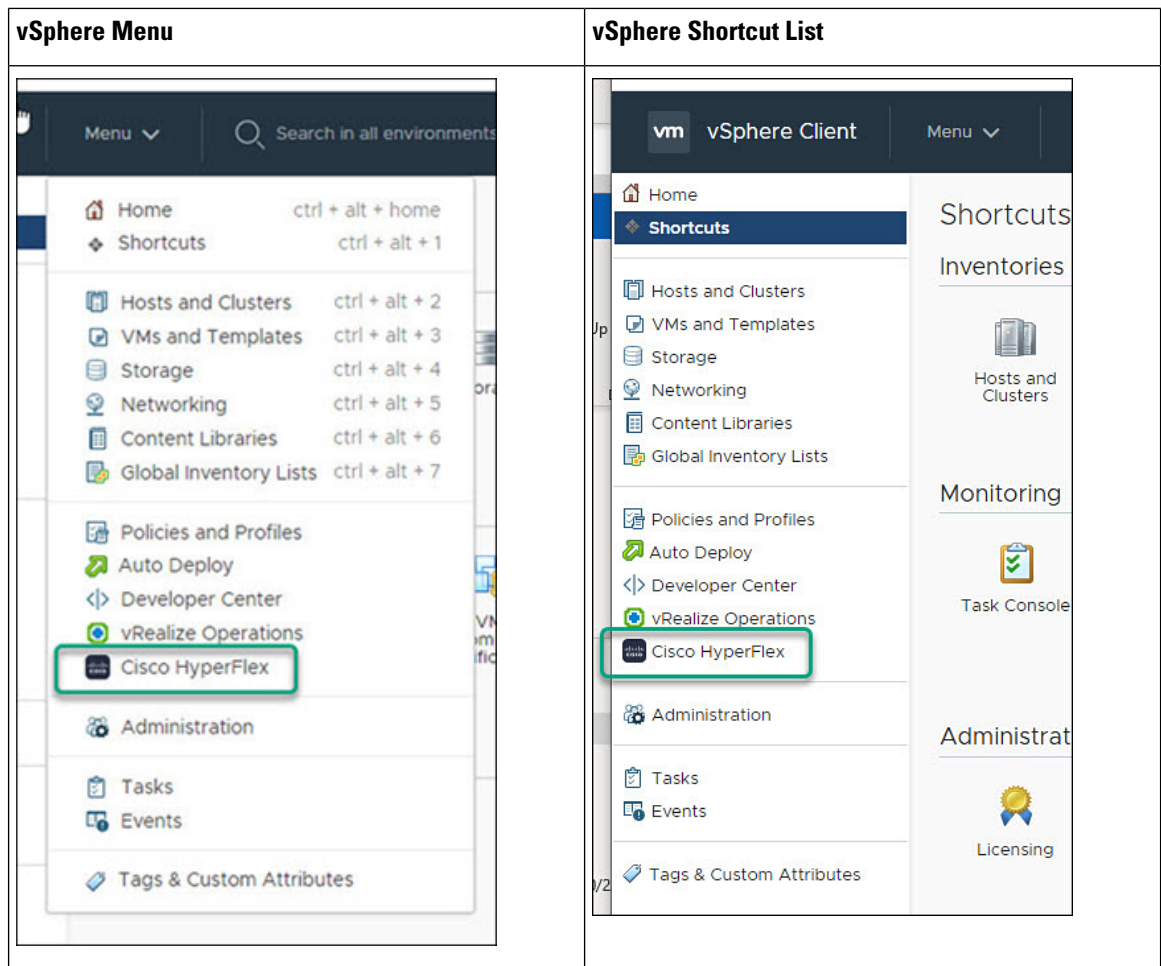
Step 4 Select **Y** to continue the Upgrade process with controller root and admin password.

Step 5 Logout and log in again into vCenter to see Cisco HyperFlex listed in the vCenter menus.








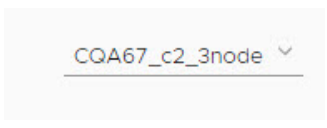

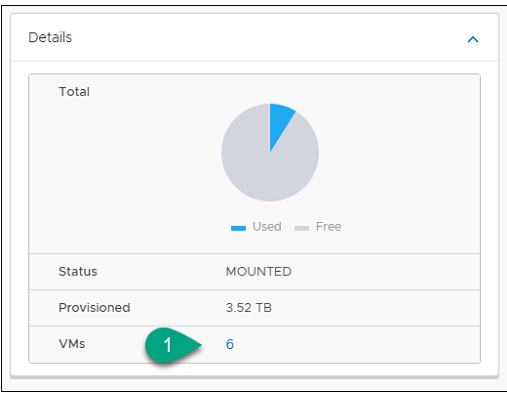
Navigating the HTML5 plugin

Accessing the Cisco HyperFlex HTML5 Plugin is easily accessed from the vSphere Menu or the Shortcuts list.



The Cisco HyperFlex HTML5 Plugin has functionality that is common throughout the plugin. This section describes the icons and their usage.

Icon	Usage
	Cisco HyperFlex Plugin. When installed, this icon is found on the Menu and the Shortcuts list.
	Refresh the view. Note The cluster list uses dynamic function loading, the Scanning Clusters icon indicates when the cluster list is complete.
	Indicates that the cluster table is still populating. The icon disappears when the cluster list is complete.
	Filter the content seen in the browser.

Icon	Usage
	Expand or collapse the contents.
	Navigate between clusters.
	Use the VC Cluster button to jump from the HyperFlex Events or Alarms view to vCenter Events or Alarm Page.
	Clicking on a VM count (number) takes the user directly to the Datastore page which list all VMs for that datastore.

Cluster Management

Managing Users and Access to HX Clusters

The vCenter plugin requires the user to have administrator privileges. You can create a user and assign administrator role to that user from **Permissions** tab on cluster level.

To manage users and access to HX clusters, assign the **No Access** Role to all the clusters for that user.



Note Administrative Privileges are required for managing users and roles.

Discover the Registered HX Cluster

To discover your HX clusters and map the vSphere managed objects in your deployment perform the following steps:

-
- Step 1** Log into the vSphere web client.
 - Step 2** Select **Menu > Cisco HyperFlex**
 - Step 3** Click **Rescan** to refresh the list of HX clusters displayed.
Registered clusters are displayed in HyperFlex Cluster table along with a summary of the cluster details.

- Step 4** If you have added new HX Cluster(s) to the vCenter server and they are not appearing in the cluster list, Click the **Rescan** icon on top of the cluster list grid to reload the cluster list from HyperFlex. The **Scanning Clusters** icon indicates that the cluster table is still populating. The icon disappears when the cluster list is complete.

Rename Cluster

The rename cluster was introduced in HX Release 4.5. To rename a cluster, perform the following steps:



- Step 1** Log into the vSphere web client.
- Step 2** Select **Menu > Cisco HyperFlex**
The HyperFlex Clusters List appears.
- Step 3** Click on the row of the cluster that you want to rename.
The **Rename** button appears for supported clusters.
- Note** The rename cluster feature is supported on HXDP Release 4.5 and later.
- Step 4** Click the **Rename** button.
The Rename Cluster window appears.
- Step 5** Type the new name on the **Cluster Name:** line.
- Step 6** Click **OK** to confirm the name change.

View the HX Cluster Summary

To view a summary of the HX Clusters in your deployment perform the following steps:

- Step 1** Log into the vSphere web client.
- Step 2** Select **Menu > Cisco HyperFlex**
- Step 3** Click the discovered HX cluster name to view its summary.
- Step 4** Click on **Summary** to view details about Total Nodes, Datastores, HyperFlex Release, Model, vCenter Cluster, ESXi Version and Uptime.

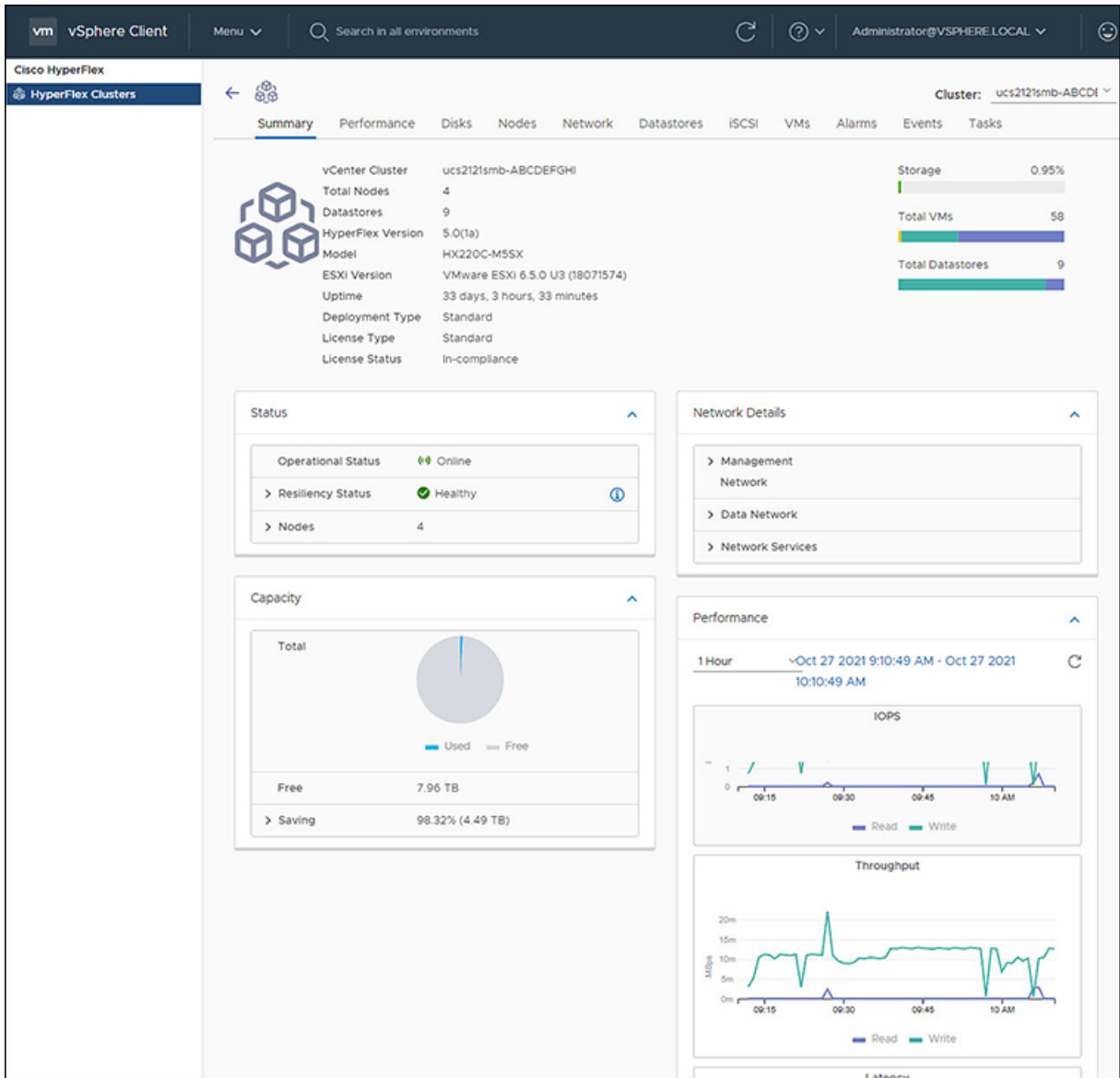


Table 3: Cluster Summary View Details

Field Name	Additional Information
vCenter Cluster	Name of the vCenter cluster
Total Nodes	Total number of nodes
Datastore	Datastore connected to the cluster
HyperFlex Release	Version of HyperFlex on the cluster
Model	Model name
ESXi Version	ESXi Version

Field Name	Additional Information
Uptime	Length of time that the cluster has been up and running
Cluster Type	Type of cluster
Deployment Type	Type of cluster deployment. Valid options are Standard and Edge.
License Type ⁶	Type of License. Valid options include: Evaluation, Standard, and Enterprise. Note New users enjoy a 90-day grace period to register the license. After 90-days a "License is not in compliance" appears and product features are limited.
License Status ⁷	License status. Status include: In-compliance, Out of Compliance, and License expires in <i>x</i> days, Cluster not registered with Cisco Licensing. Cluster not registered with Cisco Licensing.
Storage Capacity Bar	A graphical representation of the percentage of total storage used. Hover over the bar to view the amount of storage used.
Total VMs Bar	A graphical representation of the total number of VMs in the cluster.
Total Datastore Bar	Total number of datastores connected to the cluster. Hover over the bar to view the number of datastores mounted and unmounted.

⁶ Added in HX Release 5.0(x)

⁷ Added in HX Release 5.0(x)

- a) The summary view includes four portlets with additional details about the cluster: Status, Network Details, Capacity and Performance.

Use the arrows to collapse and expand the portlet contents.

Table 4: Status Portlet

Field Name	Additional Information
Operational Status	Online or Offline
Resiliency Status	Warning or Healthy Click the arrow to collapse or expand additional Resiliency Status details: <ul style="list-style-type: none"> • Host(s) failure tolerance - Number of host failures tolerated • Replication Factor- Number of copies • Creation time- Cluster creation time • Persistent Device failures tolerable- Number of device failures tolerated • Caching Device failures tolerable-Number of caching device failures tolerated

Field Name	Additional Information
Nodes	<p>Number of nodes in the cluster.</p> <p>Click the arrow to collapse or expand additional Nodes details:</p> <ul style="list-style-type: none"> • Node Type • Version

Table 5: Capacity Portlet

Field Name	Additional Information
Total	Used and Free Capacity expressed as a percentage
Total Capacity	Amount of usable capacity
Used	Used Capacity
Free	Free Capacity
Saving	<p>Total amount space saved</p> <p>Click the arrow to collapse or expand the details about the saved space with Compression and Deduplication. The data is expressed as a percentage.</p>

Table 6: Network Details Portlet

Field Name	Additional Information
Management Network	<p>Management Network details</p> <p>Click the arrow to view the following Management Network details:</p> <ul style="list-style-type: none"> • Management IP address / FQDN • VLAN • Default Gateway
Data Network	<p>Data network details</p> <p>Click the arrow to view the following Data Network details:</p> <ul style="list-style-type: none"> • Data IP address / FQDN • VLAN • Default Gateway
Network Services	<p>Network Services details</p> <p>Click the arrow to view the following Network Services details:</p> <ul style="list-style-type: none"> • DNS Server(s) • NTP Server(s)

Table 7: Performance Portlet

Field Name	Additional Information
General Usage	<ul style="list-style-type: none"> Performance charts are visible when the License Status is In-compliance⁸. Click on the Time Interval list to select the length of time viewed in the performance chart. Hover over the chart line to display totals for a specific time. Click the refresh arrow to refresh the view. The Scanning Cluster icon indicates that the cluster table is still populating. The icon disappears when the cluster list is complete. To change the timezone, click the current time interval, complete the Time Range pop-up, and click OK. The time seen reflects the browser time.
IOPS	Display IOPS performance chart
Throughput	Display Throughput performance chart
Latency	Display Latency performance chart

⁸ Supported in HX Release 5.0(1a) and later.

Register your license

New users have a 90-day grace period to register their license. During the 90-days you have full access to all feature functionality. To continue using the complete set of features, perform the following steps to register your license using the in-product link.

Before you begin

Beginning with HX Release 5.0(1a) full HTML plugin feature functionality requires the license status to be In-compliance. Verify the your License type and Status on the Summary Page, if you need to register your license, complete this task.

License Compliance Examples

Figure 1: License In-Compliance:

The screenshot shows the Summary tab of a HyperFlex cluster. The license status is 'In-compliance'.

vCenter Cluster	ucs2121smb-ABCDEFGHl
Total Nodes	4
Datastores	9
HyperFlex Version	5.0(1a)
Model	HX220C-M5SX
ESXi Version	VMware ESXi 6.5.0 U3 (18071574)
Uptime	33 days, 12 hours, 28 minutes
Deployment Type	Standard
License Type	Standard
License Status	In-compliance

Figure 2: License Out of Compliance:

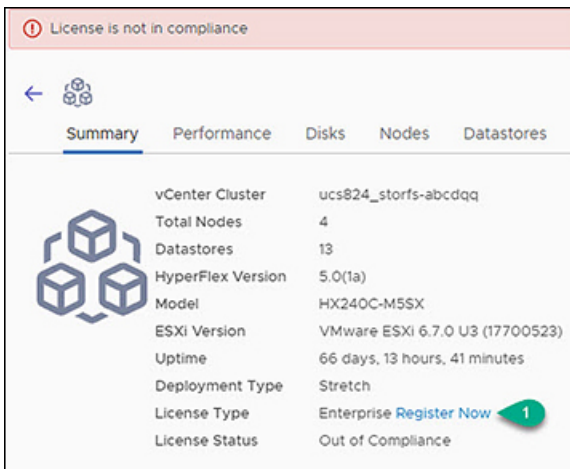
The screenshot shows the Summary tab of a HyperFlex cluster with a red warning banner at the top: "License is not in compliance". The license status is 'Out of Compliance'.

License is not in compliance	
vCenter Cluster	ucs824_storfs-abcdqq
Total Nodes	4
Datastores	13
HyperFlex Version	5.0(1a)
Model	HX240C-M5SX
ESXi Version	VMware ESXi 6.7.0 U3 (17700523)
Uptime	66 days, 13 hours, 41 minutes
Deployment Type	Stretch
License Type	Enterprise Register Now
License Status	Out of Compliance

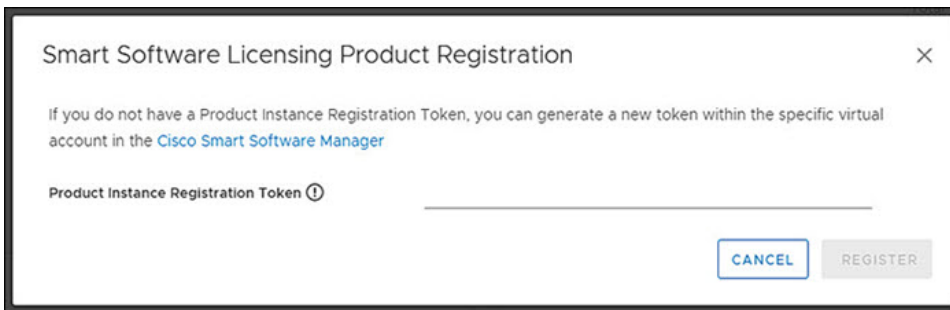
Step 1 Starting on the vSphere web client **Summary** page, click the discovered HX cluster name to view its summary.

Step 2 In the License Type summary, click the **Register Now** link. The "Smart Software Licensing Product Registration window appears.

View Cluster and Datastore Performance Charts



Step 3 Type the Product Instance Registration Token on the field provided

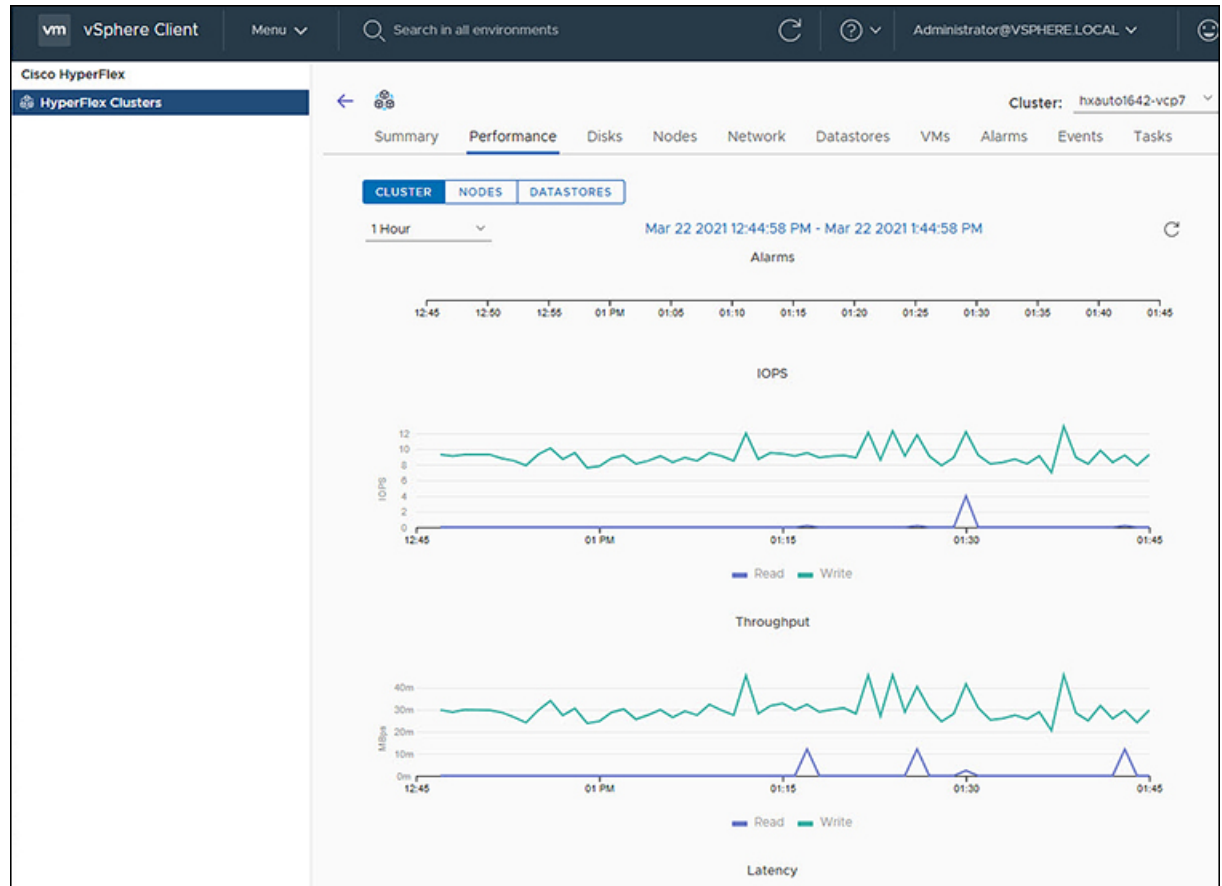


Note If your registration token is not available, generate a new one by clicking on the **Cisco Smart Software Manager** Link and follow the prompts.

Step 4 Click **Register** to complete the action.

View Cluster and Datastore Performance Charts

The **Performance** tab displays performance details for both the cluster and for the datastore for the last hour.



General Usage:

- Click on the Time Interval list to select the length of time viewed in the performance chart.



Note The Alarms chart appears with time interval selections of 1 Month or less.

- Use the drop-down Cluster list on the top right to navigate between the clusters.
- Hover over the chart line to display totals for a specific time.
- Click the refresh arrow to refresh the view.
- To change the timezone, click the current time interval, complete the Time Range pop-up, and click **OK**. The time seen reflects the browser time.

Before you begin

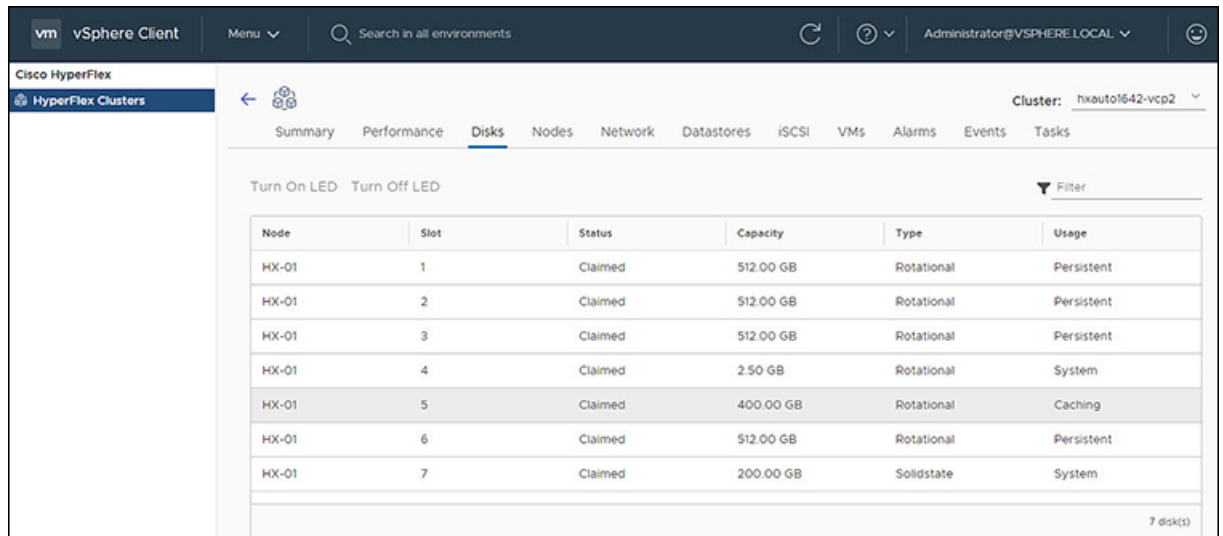
Beginning with HX Release 5.0(1a), Performance charts are only visible when the license status is In-compliance.

Step 1 Log into the vSphere web client.

- Step 2** Select **Menu > Cisco HyperFlex**.
- Step 3** Click on HX Cluster you want to review.
- Step 4** Select the **Performance** tab. The Alarms, IOPS, ThroughPut, and Latency charts appear.
- Step 5** Click on the Time Interval list to select the time-span viewed in the performance chart.

Disks

To view the Disks details page, perform the following steps:



- Step 1** Log into the vSphere client.
- Step 2** Select **Menu > Cisco HyperFlex**
- Step 3** Click the Cluster name that you want to view.
- Step 4** Using the Cluster Summary Tabs, Click **Disks**.
The Disk Detail view appears.

Table 8: Disks Details

Field Name	Additional Information
Node	Node Name
Slot	Slot number
Status	Slot Status. Valid values: Available or Claimed
Capacity	Total capacity of the slot
Type	Type of disk. Valid values include: Rotational, Solid state
Usage	How the disk is being used. Valid values include: Caching, Persistence, System

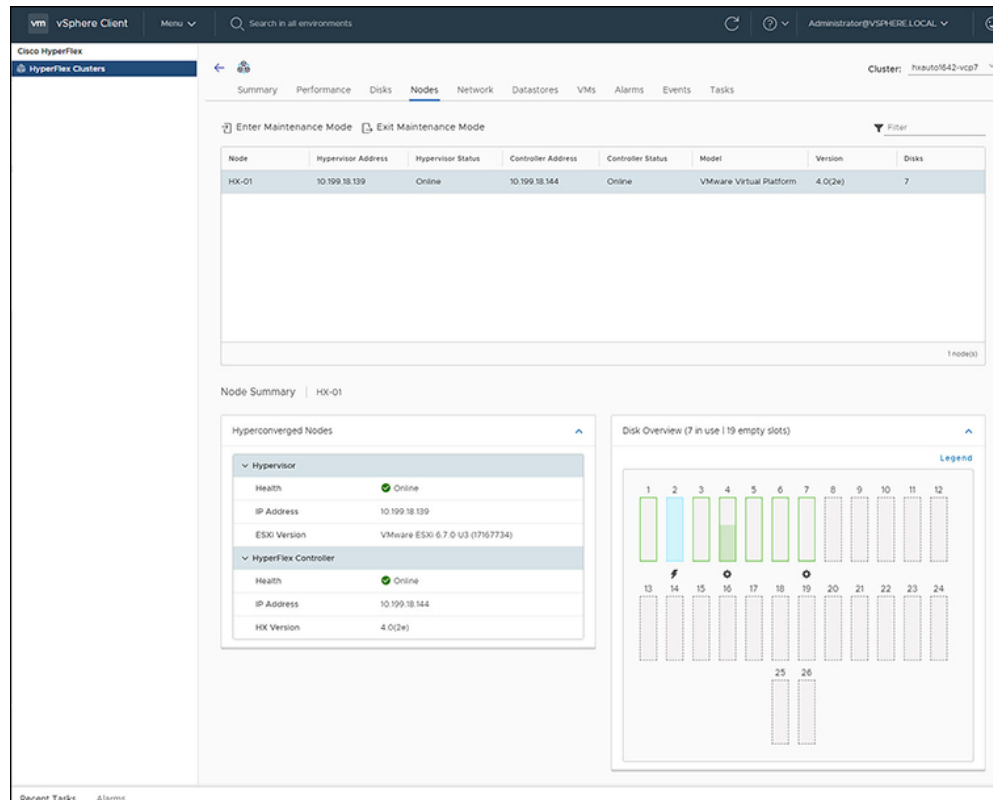
Step 5 (Optional) **Locate a physical server using the Turn On LED button**

Note Beginning with HX Release 5.0(1a), The Turn On/Off LED button functionality requires the license status to be In-compliance.

- Click the **Turn On LED** button to illuminate the LED light on the associated physical server.
- When finished, click the **Turn Off LED** button to turn the LED light off.

Nodes

To view node details specific to the Cluster, Host, and VMs, perform the following steps:



- Step 1** Log into the vSphere client.
- Step 2** Select **Menu > Cisco HyperFlex**
- Step 3** Click the Cluster name that you want to view.
- Step 4** Using the Cluster Summary Tabs, Click **Nodes**. The Nodes list appears.

Table 9: Nodes List Details

Field Name	Additional Information
Node	Node name.

Field Name	Additional Information
Hypervisor Address	IP address of the Hypervisor.
Hypervisor Status	Hypervisor status. Valid values: Online and Offline.
Controller Address	IP address of the Controller.
Controller Status	Controller status. Valid values: Online and Offline.
Model	Type of node.
Version	HXDP version in use.
Disks	Number of disks associated with the node.
Site	Column is displayed only for Edge deployments.

Step 5 Click the Node name that you want to view details. The Node Summary portlet appear below the Nodes list.

- a) The Node Summary view includes two portlets with additional details about the node: Hyperconverged Nodes and Disk Overview.

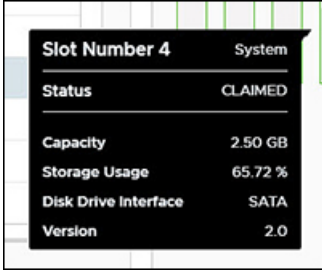
Use the arrows to collapse and expand the portlet contents.

Table 10: Hyperconverged Nodes Portlet

Field Name	Additional Information
Hypervisor	Health - Online or Offline IP Address - IP address of the Hypervisor ESXi Version - Installed ESXi Version
HyperFlex Controller	Health - Online or Offline IP Address - IP address of the HyperFlex Controller HX Version - Installed HyperFlex release

Table 11: Disk Overview Portlet

Field Name	Additional Information
Disk Overview	Notes the number of slots in use and the number that are empty.
Legend	Legend for icons and colors used in the disk graphics.

Field Name	Additional Information
Disk graphic	<p>Hover over a disk to display details for that disk.</p>  <p>Details include:</p> <ul style="list-style-type: none"> • Slot Number and type of usage • Disk Status: Claimed or Unclaimed • Capacity • Storage Usage as a percentage. • Disk Drive Interface • Version

Step 6 (Optional) **Enter or Exit Maintenance Mode**

- a) Click the Node name that you want to put into or take out of Maintenance Mode.
- b) Click **Enter Maintenance Mode** or **Exit Maintenance Mode**.

Note Beginning with HX Release 5.0(x), the Enter and Exit Maintenance Mode button functionality is enabled when the license status is In-compliance.

Note If you have a 3- or 4-node cluster, only one node will go into maintenance mode.

Network

Network: Create New VLAN

The Network page allows users to create a VLAN without going through UCS. To create a VLAN from the vSphere client perform the following steps:

- Step 1** Log into the vSphere client.
- Step 2** Select **Menu > Cisco HyperFlex > Create VLAN**
- Step 3** The Create VLAN window appears.
Complete the fields in the Create VLAN window:

Table 12: Create VLAN

Field Name	Additional Information
VLAN ID	To create one VLAN, enter a single numeric ID. A VLAN ID can: <ul style="list-style-type: none"> • Be between 1 and 3967 • Be between 4049 and 4093
VLAN Name	This name can be between 1 and 32 alphanumeric characters. You cannot use spaces or any special characters, and you cannot change this name after the object has been saved
UCS Manager Host IP or FQDN	UCS Manager FQDN or IP address. For example, 10.193.211.120
UCS Username	<admin> username. For example, sample_user1
UCS Password	<root> password.

Step 4 Click **OK**.
A VLAN is created.

Note Creating VLANs is a one-way operation. You cannot view VLANs in the HTML plugin. To see the newly created VLAN go to UCS, and then verify the newly created vLAN in the ESXi vSwitch.

Network: Configure iSCSI Network

The Network page allows users to configure an iSCSI Network. To create an iSCSI network from the vSphere client perform the following steps:

Before you begin

The iSCSI features are supported in Cisco HyperFlex Release 4.5(x) and later.

Step 1 Log into the vSphere client.

Step 2 Select **Menu > Cisco HyperFlex > Network Configure > Configure**

Step 3 The Create iSCSI Network window appears.
Complete the fields in the Create iSCSI Network window:

Field Name	Additional Information
Subnet	Enter a valid Subnet
Gateway	Enter a valid Gateway
IP Range	Enter a valid IP Range Use the Edit button to change the IP range. All other fields are disabled.

Field Name	Additional Information
iSCSI Storage IP	Enter a valid IP Address for iSCSI Storage
VLAN Configuration	<p>Click in the checkbox to Create a new VLAN (Recommended) or Select an existing VLAN.</p> <p>To Create a new VLAN, you need to specify the following: VLAN ID, VLAN Name, UCS Manager host IP or FQDN, Username (Username for authentication with UCS), Password (Password for authentication with UCS).</p> <p>To Select an existing VLAN, you need to specify the VLAN ID.</p> <p>Note To configure the VLAN manually in UCS-M, use the create VLAN menu option. In the Create VLANs window, leave the checkboxes as is. In the vNIC templates for HX, attach the VLAN to "vNIC Template storage-data-a" and "vNIC Template storage-data-b". This configuration is non-disruptive.</p>
Set Non-Default MTU	<p>Checkbox to enable setting MTU (Message Transport Unit) manually. The MTU defines the maximum size of a network frame that you can send in a single data transmission across the network. The default MTU size is 9000.</p> <p>To disable Jumbo Frames, click the Set non default MTU checkbox, and then use the pull-down to change the value to 1500.</p> <p>Note If any of the initiators are crossing a router, the router will need to allow Jumbo Frames.</p>

Step 4 Click **OK**.
An iSCSI network is created.

Step 5 Review the Tasks page to verify the iSCSI Network was created.

iSCSI

iSCSI: Targets

After the iSCSI network is created, the iSCSI page appears in the list of navigation tabs. The default view is **Targets**, use the **Create**, **Edit**, **Delete**, and **Clone LUN** buttons to manage iSCSI targets.



Note The iSCSI page only appears in navigaton tabs of clusters with a configured iSCSI network.

The screenshot shows the vSphere Client interface for a Cisco HyperFlex cluster. The 'iSCSI' tab is selected, and the 'TARGETS' sub-tab is active. The 'LUNS' sub-tab is also visible. The 'TARGETS' table lists several targets with their respective LUNs, IQNs, and CHAP authentication settings. The 'LUNS' table shows a single linked initiator group with its LUN ID, serial number, size, and availability.

Target Name	Linked Initiators Groups	LUN	IQN	Active Initiators	CHAP Authentication
TARGET-NEW1	0	1	iqn.1987-02.com.cisco.iscsi.TARGET-NEW1	0	Disabled
Target-7vc	0	3	iqn.1987-02.com.cisco.iscsi.Target-7vc	0	Enabled
krupal	0	2	iqn.1987-02.com.cisco.iscsi.krupal	0	Disabled
t1	0	1	iqn.1987-02.com.cisco.iscsi.t1	0	Disabled
t2	0	1	iqn.1987-02.com.cisco.iscsi.t2	0	Disabled

Name	LUN ID	Serial Number	Size	Used	Available
Krupal-test1093==	LUN1	c4c371a3358e45efa4ce7710347960b0	1.00 GB	0 B	1.00 GB

Before you begin

- The iSCSI features are supported in Cisco HyperFlex Release 4.5(x) and later.
- Beginning with HX Release 5.0(1a), the Create and Delete buttons are enabled when the license status is In-compliance.
- Create an iSCSI Network [Network: Configure iSCSI Network, on page 22](#)

- Step 1** Log into the vSphere client.
- Step 2** Select **Menu > Cisco HyperFlex**
The list of clusters appears.
- Step 3** Select a cluster with an iSCSI network configured.
The iSCSI Network page appears with the **Targets**, **Initiator Groups**, and **LUNs** buttons. Use the buttons to navigate between views.
- Step 4** Click the **Targets** button to populate the table with the list of targets, along with the **Create**, **Edit**, **Clone LUN**, and **Delete** buttons.

Table 13: Target List

Field Name	Additional Information
Target Name	Name of the iSCSI storage resource on the iSCSI server.
Linked Initiators Groups	Number of Linked Initiator Groups on the cluster.
LUN	Number of LUNS in the Initiator group.
IQN	Qualified Name (IQN) for the Initiator. The IQN format takes the form <code>iqn.yyyy-mm.naming-authority:unique name</code> .
Active Initiators	Total number of active Initiators.
CHAP Authentication	Authentication scheme that uses a shared secret and a challenge message to validate the identity of remote clients.

Step 5 Select a Target from the list to display all the LUNs associated with the selected target. in the portlet below the Target list. Use the **Create**, **Edit**, **Clone LUN**, and **Delete** buttons to create, edit, clone or delete LUNs in the selected target.

Table 14: LUNs Details Portlet

Field Name	Additional Information
Name	LUN name
LUN ID	Unique ID for the LUN
Serial Number	LUN Serial Number
Size	Total capacity size of the LUN (GB)
Used	Total capacity of the LUN used (GB)
Available	Total capacity of the LUN available (GB)

Related Topics

[iSCSI LUN Page](#)

[Creating an iSCSI LUN](#)

[Editing an iSCSI LUN](#)

[Cloning an iSCSI LUN](#)

[Deleting an iSCSI LUN](#)

[View iSCSI and Datastore Summary from the Configure Tab](#), on page 46

iSCSI: Initiator Groups

Use the **Initiator Groups** button on the iSCSI page to create, edit, and delete Initiator Groups.

The screenshot shows the 'Initiator Groups' configuration page in the Cisco HyperFlex HTML Plugin for VMware vCenter. The page is titled 'SJ-cluster' and has tabs for 'TARGETS', 'INITIATOR GROUPS', and 'LUNS'. The 'INITIATOR GROUPS' tab is active, showing a table with columns 'Initiators Group' and 'Initiator Count'. The table lists four groups: ABINII (1), test (2), testdiksha (1), and testinit (1). The 'testdiksha' group is selected. Below the table are buttons for 'Create', 'Edit', and 'Delete'. At the bottom, there are sections for 'INITIATORS' and 'LINKED TARGETS'.

Initiators Group	Initiator Count
ABINII	1
test	2
testdiksha	1
testinit	1

Before you begin

- The iSCSI features are supported in Cisco HyperFlex Release 4.5(x) and later.
- Beginning with HX Release 5.0(1a), the Create and Delete buttons are enabled when the license status is In-compliance.

Step 1 Log into the vSphere client.

Step 2 Select **Menu > Cisco HyperFlex > iSCSI**

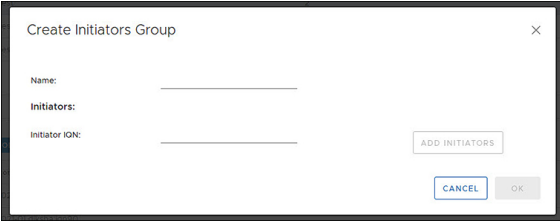

The iSCSI Network page appears with the **Targets**, **Initiator Groups**, and **LUNs** buttons. Use the buttons to navigate between views.

Step 3 Click the **Initiator Groups** button to populate the table with the list of Initiator groups, along with the **Create**, **Edit**, and **Delete** buttons.

Table 15: Initiator Group List

Field Name	Additional Information
Initiators Groups	List of groups that specify which hosts can access specified LUNs on the cluster.
Initiator	Number of initiator in the group.

Table 16: Initiator Group Action Window Examples

Action Window Name	Example
Create Initiators Group	
Edit Initiators Group	

- Step 4** Select an Initiators Group from the list to display the list of Initiators in the details portlet below the list.
- Step 5** Click the **Initiators** button to view the individual Initiators in a group
- Step 6** Click the **Linked Targets** button to view the targets associated with the selected group.
- Step 7** Use the **Link**, and **Unlink** buttons to link and unlink targets to groups.

Related Topics

- [iSCSI Initiator Group](#)
- [Creating an iSCSI Initiator Group](#)
- [Editing an iSCSI Initiator Group](#)
- [Deleting an iSCSI Initiator Group](#)
- [Linking iSCSI Initiator Group with Targets](#)
- [Unlinking an iSCSI Initiator Group](#)
- [View iSCSI and Datastore Summary from the Configure Tab](#), on page 46

iSCSI: LUNs

Use the LUNS Button to Create, Edit, Delete, and Clone LUN buttons to manage LUNs.

The screenshot shows the vSphere client interface for the 'SJ-cluster'. The 'Configure' tab is active, and the 'iSCSI Summary' section is selected in the left-hand navigation pane. The main area displays a table of iSCSI LUNs. The table has columns for Name, Mount Summary, Status, Provisioned, Used, and Free. The 'ds-source' LUN is highlighted. Below the table, there are two sections: 'Details' and 'Trends'. The 'Details' section shows a pie chart for 'Total' capacity, with 'Used' and 'Free' segments. The 'Trends' section shows a line graph for 'IOPS' over time.

Name	Mount Summary	Status	Provisioned	Used	Free
ds	MOUNTED	NORMAL	50.00 GB	4.00 GB	46.00 GB
ds-source	MOUNTED	NORMAL	3.00 TB	82.87 GB	2.92 TB
ds10	MOUNTED	NORMAL	1.00 GB	0 B	1.00 GB
ds11	MOUNTED	NORMAL	1.00 GB	0 B	1.00 GB
ds14	MOUNTED	NORMAL	1.00 GB	0 B	1.00 GB

Before you begin

- The iSCSI features are supported in Cisco HyperFlex Release 4.5(x) and later.
- Beginning with HX Release 5.0(1a), the Create, Delete, and Clone LUN buttons are enabled when the license status is In-compliance.

Step 1 Log into the vSphere client.

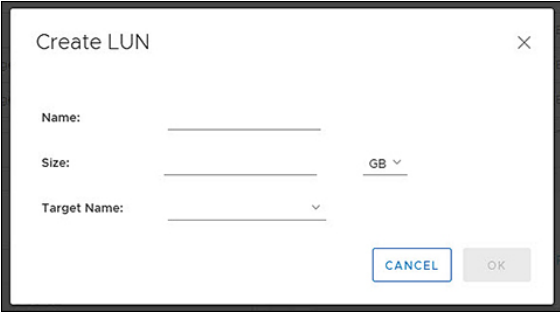


Step 2 Select **Menu > Cisco HyperFlex > iSCSI**

Step 3 Click the **LUNS** button to populate the table with the list of LUNs, along with the **Create**, **Edit**, **Clone LUN**, and **Delete** buttons.

Table 17: LUNs Details Portlet

Field Name	Additional Information
Name	LUN name
LUN ID	Unique ID for the LUN
Serial Number	LUN Serial Number
Size	Total capacity size of the LUN (GB)
Used	Total capacity of the LUN used (GB)
Available	Total capacity of the LUN available (GB)

Table 18: iSCSI LUN Action Window Examples

Action Window Name	Example
Create LUN	
Edit LUN	
Clone LUN	

Step 4 Select a LUN on the list to display the Details Portlet and Performance Charts below the LUN list.

Related Topics

[View iSCSI and Datastore Summary from the Configure Tab](#), on page 46

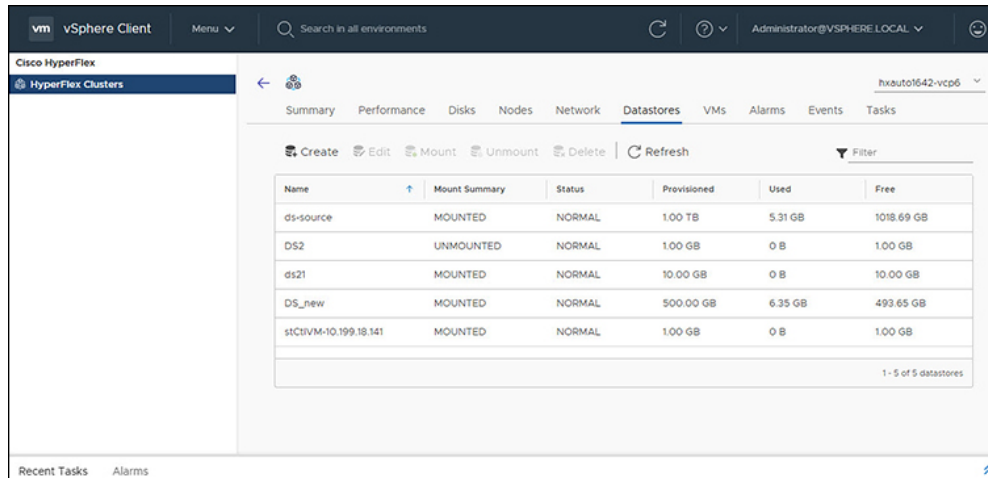
HX Datastore Management

Managing Datastores

The Datastore page allows users to view datastore details, create, edit, mount, unmount or delete datastores on a Cluster.



Note Beginning with HX Release 5.0(1a), the Create and Delete Datastore buttons are enabled when the license status is In-compliance.



Step 1 Log into the vSphere client.

Step 2 Select **Menu > Cisco HyperFlex**

Step 3 Click the cluster that you want.

Step 4 Click **Datastore**.

The Datastore Detail Table appears. Use the arrows to advance to the next or previous page, and first or last page of datastores.

Table 19: Datastore Table Details

Field Name	Additional Information
Name	Datastore name
Mount Summary	Mounted or Unmounted
Status	Status of the Datastore: Valid values include: Normal
Provisioned	Amount of space provisioned
Used	Amount of space used
Free	Amount of space available

Step 5 Click on a Datastore name in the table to view additional details about the Datastore. SUMMARY is auto-selected and the Details and Trends portlets appear below the table.

Table 20: Details Portlet

Field Name	Additional Information
Total	Graph of space provisioned and used
Status	Mounted or Unmounted
Provisioned	Amount of space provisioned

Field Name	Additional Information
VMs	Number of VMs created on the datastore Clicking on a VM count (number) takes the user directly to the Datastore page which list all VMs for that datastore.

Table 21: Trends Portlet

Field Name	Additional Information
General Usage:	<ul style="list-style-type: none"> Click on the Time Interval list to select the length of time viewed in the performance chart. Hover over the chart line to display totals for a specific time. Click the refresh arrow to refresh the view. The Scanning Cluster icon indicates that the cluster table is still populating. The icon disappears when the cluster list is complete. To change the timezone, click the current time interval, complete the Time Range pop-up, and click OK. The time seen reflects the browser time.
IOPS	Display IOPS performance chart
Throughput	Display Throughput performance chart
Latency	Display Latency performance chart

Table 22: Hosts Portlet

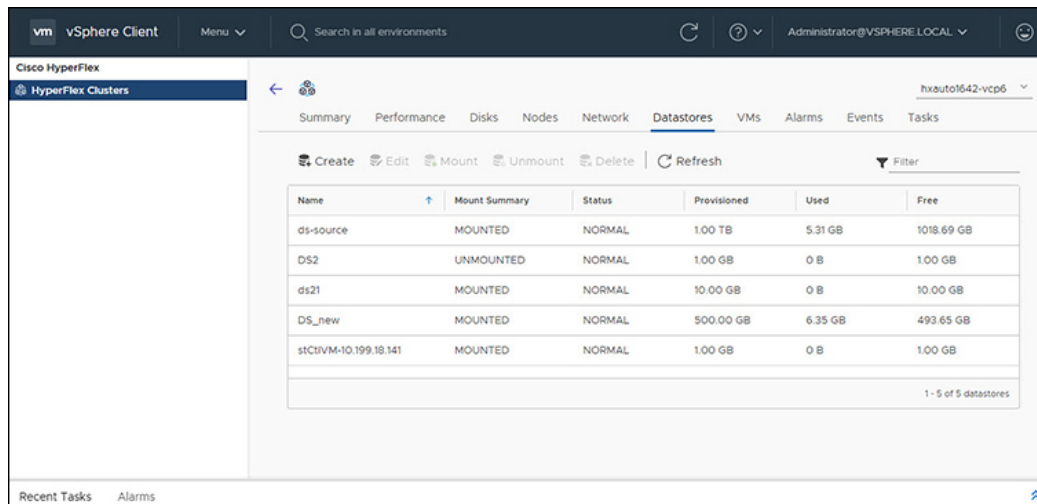
Field Name	Additional Information
Host Name	Displays the IP address of the host for the selected datastore.
Mount Status	Specifies if the Host is Mounted or Unmounted.
Accessible	Specifies if the Host is accessible or not.

Related Topics

[View iSCSI and Datastore Summary from the Configure Tab](#), on page 46

Create New Datastore

To create a new datastore:



Before you begin

- Beginning with HX Release 5.0(1a), the Create Datastore button is enabled when the license status is In-compliance.
- Log into the vSphere client and Select **Menu** > **Cisco HyperFlex**.

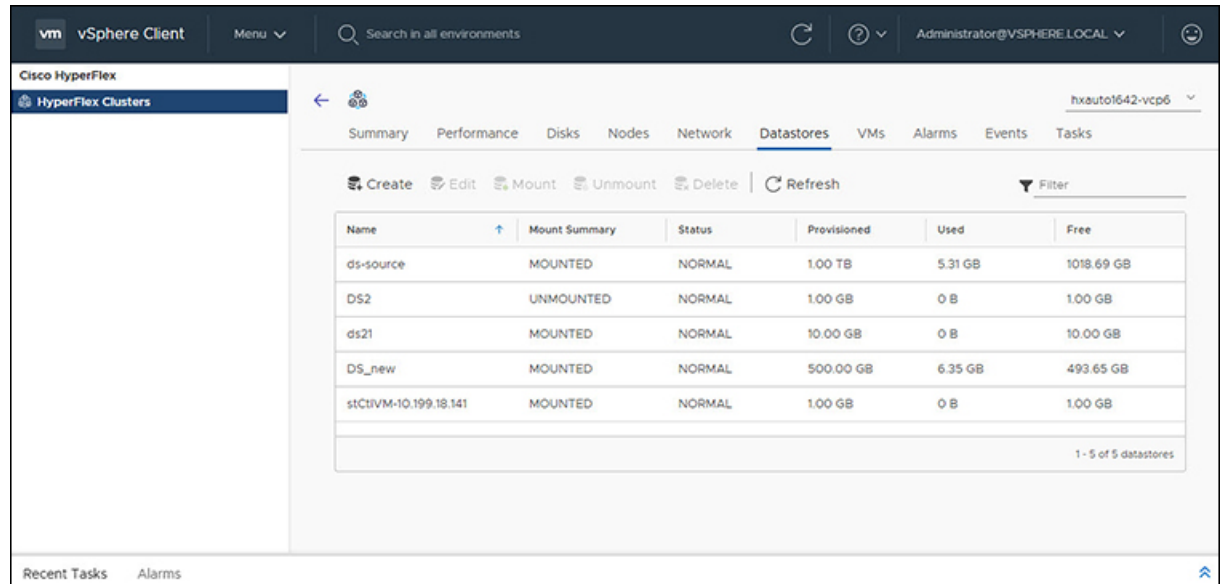
-
- Step 1** Click the cluster that you want.
- Step 2** Click **Datastore**.
- Step 3** Click the **Create** button. The Create New Datastore window appears.
- Enter the Datastore Name.
 - Enter the Size, and select GB or TB.
 - Select the Block Size, Select 4K or 8K.
- Step 4** Click **OK**. A new Datastore is created and added to the Datastore table list.
- Step 5** If the new Datastore does not appear in the list, click the **Refresh** arrow and recheck the list.
-

Edit Datastore

To edit an existing datastore:



Note You can only change the name of a datastore after it has been Unmounted.



Before you begin

Log into the vSphere client and Select **Menu** > **Cisco HyperFlex**.

- Step 1** Click the cluster that you want.
- Step 2** Click **Datastore** and select Datastore for Edit action.
- Step 3** Click the **Edit** button. The Edit Datastore window appears.
- Step 4** Edit the Datastore details.
- Step 5** Click **OK** to save your changes. The Datastore information is updated.

Mount or Unmount Datastore

The Mount and Unmount buttons are active based on the current status of the datastore. A Mounted datastore offers the option to Unmount the datastore, while an Unmounted datastore offers the option to Mount the datastore. To Mount or Unmount a datastore:

Before you begin

- Remove any VMs created or registered to the datastore before starting the Unmount action.
- Log into the vSphere client and Select **Menu** > **Cisco HyperFlex**.

- Step 1** Click the cluster that you want.
- Step 2** Click **Datastore** and select Datastore for Mount (Unmount) action.
- Step 3** Click the **Mount(Unmount)** button.

The Mount (Unmount) Datastore window appears with a confirmation question "Do you want to mount (Unmount) the datastore?"

Step 4 Click **OK** to continue with the Mount (Unmount) action, or click **Cancel** to exit the Mount (or Unmount) Datastore window. The datastore status is changed from Mounted to Unmounted or Unmounted to Mounted.

Delete Datastore

To delete a datastore:

Before you begin

- Beginning with HX Release 5.0(1a), the Delete Datastore button is enabled when the license status is In-compliance.
 - Remove any VMs created or registered to the datastore and unmount the datastore before starting the Delete Datastore action.
 - Log into the vSphere client and Select **Menu > Cisco HyperFlex**.
-

Step 1 Click the cluster that you want.

Step 2 Click **Datastore** and select Datastore for Delete action.

Step 3 Click the **Delete** button.

The Delete Datastore window appears with the confirmation question "Do you want to delete the datastore?"

Step 4 Click **OK** to continue with the delete action, or **Cancel** to exit the Delete Datastore window. The selected Datastore is deleted from the Datastore table list.

VMs

To view VM details specific to the Cluster, Host, and VMs, perform the following steps:

The screenshot shows the vSphere Client interface for a HyperFlex cluster. The 'VMs' tab is selected, displaying a summary of VMs. The 'Summary' portlet shows a 'VMs Summary' section with a circular gauge and 'Total VMs: 4'. Below it, 'VMs Storage' shows 'Storage' at '122.00 GB'. The 'CPU' section shows 'Total vCPU Count' as 7 and 'CPU Usage' as 132 MHz. The 'Alarms / Events' portlet shows 'Alarms View' and 'Events View', both indicating 'Alarm(s) not found' and 'Event(s) not found' respectively. The 'TOP 15 VMs' portlet shows a table of VMs with columns for Name, State, Datastore, CPU, Memory, Network, Disk Latency, Space (Disk Usage), and View Metrics.

Name	State	Datastore	CPU	Memory	Network	Disk Latency	Space (Disk Usage)	View Metrics
test-vm2	Running	ds-tb	66.09 MHz	20.16 KB	0.00 KBps	0.00 KBps	288.50 KB	View
test-vm1	Running	ds-tb	66.00 MHz	20.16 KB	0.00 KBps	0.00 KBps	385.00 KB	View
test-vm3 (1)	Running	ds-tb	65.18 MHz	20.14 KB	0.00 KBps	0.00 KBps	227.00 KB	View
vCLS (18)	Running	nop	15.00 MHz	106.26 KB	0.00 KBps	7.18 KBps	116.84 MB	View

- Step 1** Log into the vSphere client.
- Step 2** Select **Menu > Cisco HyperFlex**
- Step 3** Click the Cluster name that you want to view.
- Step 4** Using the Cluster Summary Tabs, Click **VMs**.
The VM Detail displays three portlets: Summary, Alarms/Events and Top 15 VMs.

Table 23: Summary Portlet

Field Name	Additional Information
VMs Summary	Usage diagram of user VMs in use. Hover over to view the number of VMs running, suspended, and off. Total VMs: The total count of all user VMs. Note Controller VMs are not included in the summary.
VMs Storage	The sum of all user VMs storage. Total storage capacity for all user VMs appears above image. Hover over the graphic to view the current amount of storage being consumed.
VMs Memory	Amount of point-in-time memory. Total memory capacity is listed, hover over the graphic to view the current amount of memory used.

Field Name	Additional Information
CPU	<p>Total vCPU Count - Total CPU count for all VMs in the cluster.</p> <p>CPU Usage - Number of cycles per second a given CPU is using.</p>

Table 24: Alarms/Events Portlet

Field Name	Additional Information
Alarms	<p>Displays Alarms for the VMs during the last week (7days).</p> <p>Click View to navigate to the Alarms Details view.</p> <ul style="list-style-type: none"> • Triggered Time-Date and time the alarm occurred. • Description-Alarm Description.
Events	<p>Displays Events for the VMs during the last week (7days).</p> <p>Click View to navigate to the Events Details view.</p> <ul style="list-style-type: none"> • Date Time - Date and time the event occurred. • Description- Event description.

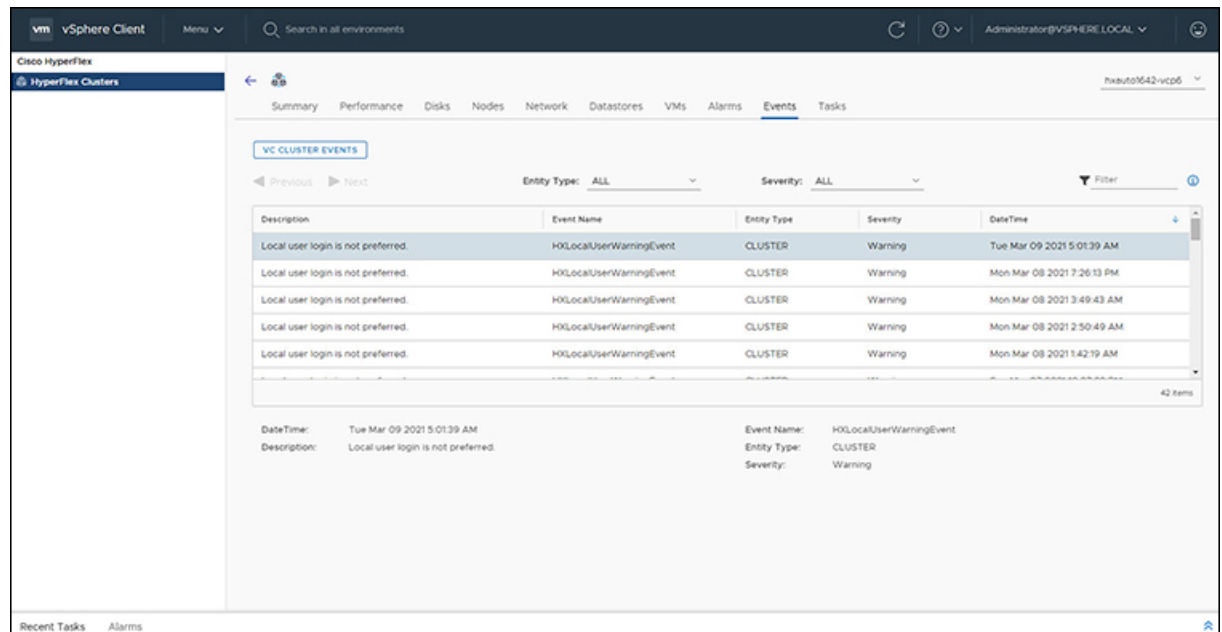
Table 25: Top 15 VMs Portlet

Field Name	Additional Information
Time list	Specify the measurement of time to show the top 15 VMs. List options include: 1 Hour, 1 Day, or 1 Week.
Metrics List	<p>Select the metric type used to populate the table. Options include: CPU, Memory, Disk Latency, Network, and Space.</p> <ul style="list-style-type: none"> • CPU, Memory, Disk Latency, Network - only report metrics for VMs in a running condition. VMs that are switched off are not included. • Space - counts all VMs regardless of their state.
Name	VM Name - Clicking on the VM name redirects users to the graph or monitoring page of VM being viewed in vCenter.
State	Current state of the VM. Valid values are Running, Off and Suspended.
Datastore	Datastore Name
CPU	CPU usage in megahertz used during the interval.
Memory	Amount of host physical memory consumed for backing up guest physical memory pages.
Disk Latency	Highest latency value across all disks used by the host
Network Throughput	Network utilization during the interval (combined transmit and receive rates).

Field Name	Additional Information
Space (Disk Usage)	Amount of disk space the VM is using
View Metrics	<p>Link to view CPU, Memory, Disk Latency, and Network Throughput performance tables for that specified VM. The usage values displayed are for the five-minute average for all.</p> <p>Use the hover feature to display the matrices simultaneously and evaluate any visible spikes in the data.</p>

Events

To view events specific to the Cluster, Node, Host, VM or Disk, perform the following steps:



- Step 1** Log into the vSphere client.
- Step 2** Select **Menu > Cisco HyperFlex**.
- Step 3** Click the Cluster name that you want to view.
- Step 4** Using the Cluster Summary Tabs, Click **Events**.
The Events Detail view appears.

Table 26: Event Details

Field Name	Additional Information
Description	Text description of the event
Event Name	Event name

Field Name	Additional Information
Entity Type	Entity affected. Values include: All, Cluster, Node, Virtual Machine, and Disk
Severity	Event severity level. Valid values include: All, Info, Warning, Error, and Critical
DateTime	Date and time the event occurred

Step 5 (Optional) Use filters to limit the results that appear in the Events Table.

Filter	Filter Options
Entity Type	All, Cluster, Node, Virtual Machine, and Disk
Severity	All, Info, Warning, Error, and Critical
Filter	Type a keyword in the Filter option to filter the table contents seen in the browser

Step 6 In the list of events, Click on the event name that you want more information about. The details appear below the Events table. Details include:

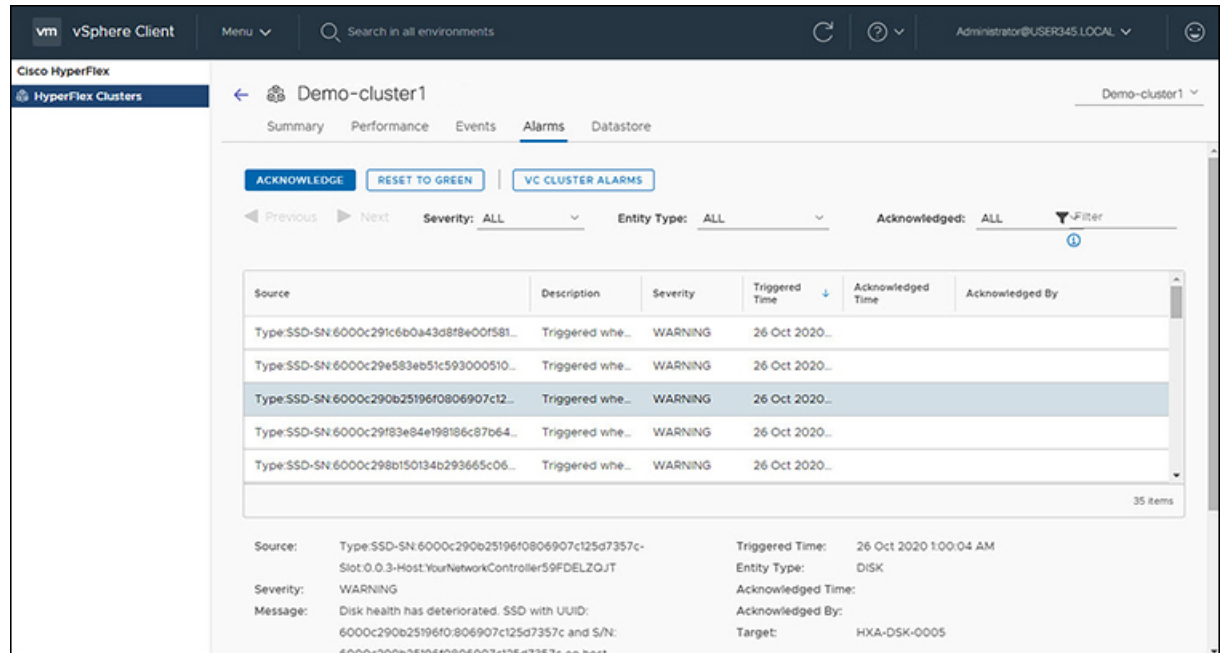
- Description
- Event Name
- Entity Type
- Severity
- DateTime

Alarms

To view alarms specific to the Cluster, Host, and VMs, perform the following steps:



Note Acknowledged alarms on HX Connect or HTML plugin does not acknowledge the equivalent vCenter alarm.



- Step 1** Log into the vSphere client.
- Step 2** Select **Menu > Cisco HyperFlex**
- Step 3** Click the Cluster name that you want to view.
- Step 4** Using the Cluster Summary Tabs, Click **Alarms**.
The Alarms Detail view appears.

Table 27: Alarm Details

Field Name	Additional Information
Source	Text description of the alarm
Description	Alarm name
Severity	Alarm severity level. Valid values include: All, Info, Warning, and Error
Triggered Time	Date and time the alarm occurred Use the arrow to sort and re-sort the table results
Acknowledged Time	Time when the Alarm was acknowledged
Acknowledged by	Auto-enters who acknowledged the alarm

- Step 5** (Optional) Use filters to limit the results that appear in the Alarms Table.

Filter	Filter Options
Severity	All, Info, Warning, and Error
Entity Type	All, Cluster, Node, Virtual Machine, Disk and Datastore

Filter	Filter Options
Acknowledged	All, True, and False
Filter	Type a keyword in the Filter option to filter the table contents seen in the browser

Step 6 Click the **Acknowledged** button to acknowledge that the alarm has been seen. Clicking the **Acknowledged** button auto-enters who acknowledged the alarm in the **Acknowledged by** field.

Step 7 Click the **Reset To Green** button to remove the alarm from the list.

Tasks

View asynchronous tasks that are happening on the platform to validate maintenance, perform the following steps:

The screenshot shows the vSphere Client interface for Cisco HyperFlex. The 'Tasks' tab is selected, displaying a table of tasks. The table has columns for Description, Name, Entity Type, Entity ID, State, and Triggered Time. Below the table, the 'Tasks Details' section shows a list of sub-tasks with their completion status (green checkmarks).

Description	Name	Entity Type	Entity ID	State	Triggered Time
create_iscsi_network	create_iscsi_network	NODE	423b7f06-002c-bb14-8b...	SUCCEEDED	Mon Apr 1...
create_iscsi_network	create_iscsi_network	NODE	423b7f06-002c-bb14-8b...	SUCCEEDED	Thu Apr 15...
Crash Consistent : Create iSCSI Clone Lun Task for the LUN...	iscsiClone	iSCSI	uuid	SUCCEEDED	Thu Apr 15...
Crash Consistent : Create iSCSI Clone Lun Task for the LUN...	iscsiClone	iSCSI	uuid	SUCCEEDED	Thu Apr 15...
Crash Consistent : Create iSCSI Clone Lun Task for the LUN...	iscsiClone	iSCSI	uuid	SUCCEEDED	Thu Apr 15...

41 tasks

Tasks Details

Configuring VLAN On Controller Host for iSCSI	✓	Configuring VLAN On Controller Host for iSCSI
Validate nodes in the cluster	✓	Validate nodes in the cluster
Validating IPs	✓	Validating IPs
Configuring network On Controller VMs for iSCSI	✓	Configuring network On Controller VMs for iSCSI
Configuring iSCSI network settings on node 10.199.18.60	✓	Configuring iSCSI network settings on node 10.199.18.60

Step 1 Log into the vSphere client.

Step 2 Select **Menu > Cisco HyperFlex > Tasks**

Step 3 Click the Task that you want to view. The sub-tasks appear in the table below the list of tasks.

Table 28: Task List

Field Name	Additional Information
Description	Description of the task

Field Name	Additional Information
Name	Task Name
Entity Type	Type of task, Valid values include: NODE, DP_Summary, Virtual Machine, Disk and Datastore.
Entity ID	Device ID number
State	Specifies the success or failure of the task.
Triggered Time	Date and time the task occurred

Table 29: Task Details

Field Name	Additional Information
Sub-task name	Name of the task.
Success indicator	Description of the action and the status of the task when it completed. A check icon preceding the description identifies that the task was successful. Review this list to identify where a task failed.

Step 4 (Optional) Use the **Entity Type** list to filter the table results.

vCenter: HyperFlex Plugin Embedded Actions

vCenter Server Actions at the Host and Cluster Level

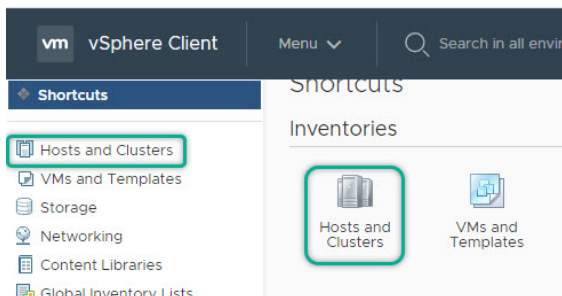
Create New Datastore

To create a new datastore from the Hosts and Clusters level, perform the following steps:

Before you begin

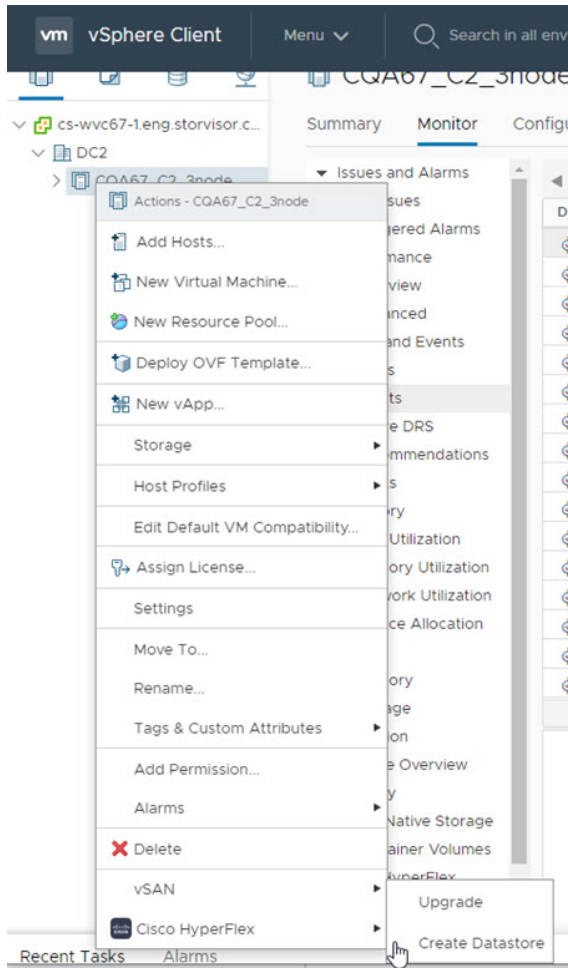
Beginning with HX Release 5.0(1a), this functionality is enabled when the license status is In-compliance.

Step 1 Access the **Hosts & Clusters** either from the vSphere Menu or the Shortcut link.



Step 2 Right click on the cluster and select **Cisco HyperFlex > Upgrade**. **Upgrade** Launches HyperFlex Connect and takes the user directly to the upgrade page to complete the upgrade process.

Step 3 Right click on the cluster and select **Cisco HyperFlex > Create Datastore**.



The Create New Datastore window appears.

Step 4 Complete the fields in the New Datastore Window.

- Enter the Datastore Name
- Enter the Size, and select GB or TB.
- Select the Block Size, Select 4K or 8K.
- Click **OK**.

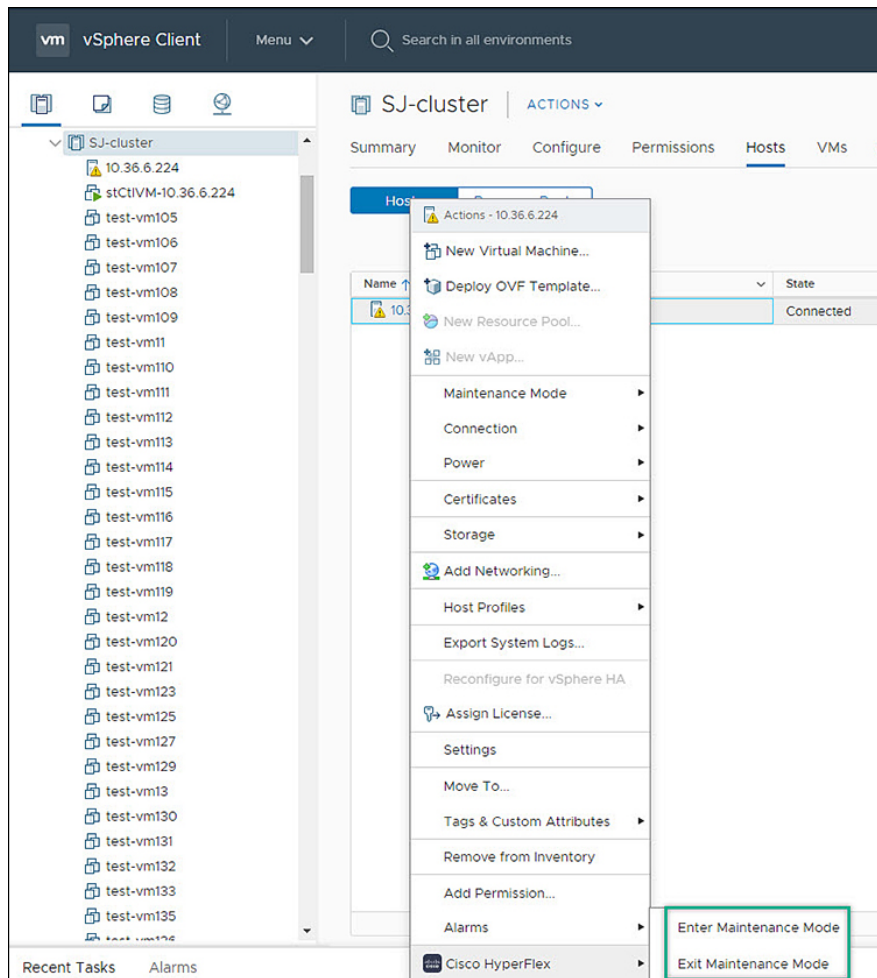
Related Topics

[Create New Datastore](#), on page 31

Enter or Exit Maintenance Mode

To enter or exit Maintenance Mode from the Host level from the vSphere web UI perform the following steps:

View HTML5 Plugin Portlets from the Summary Tab

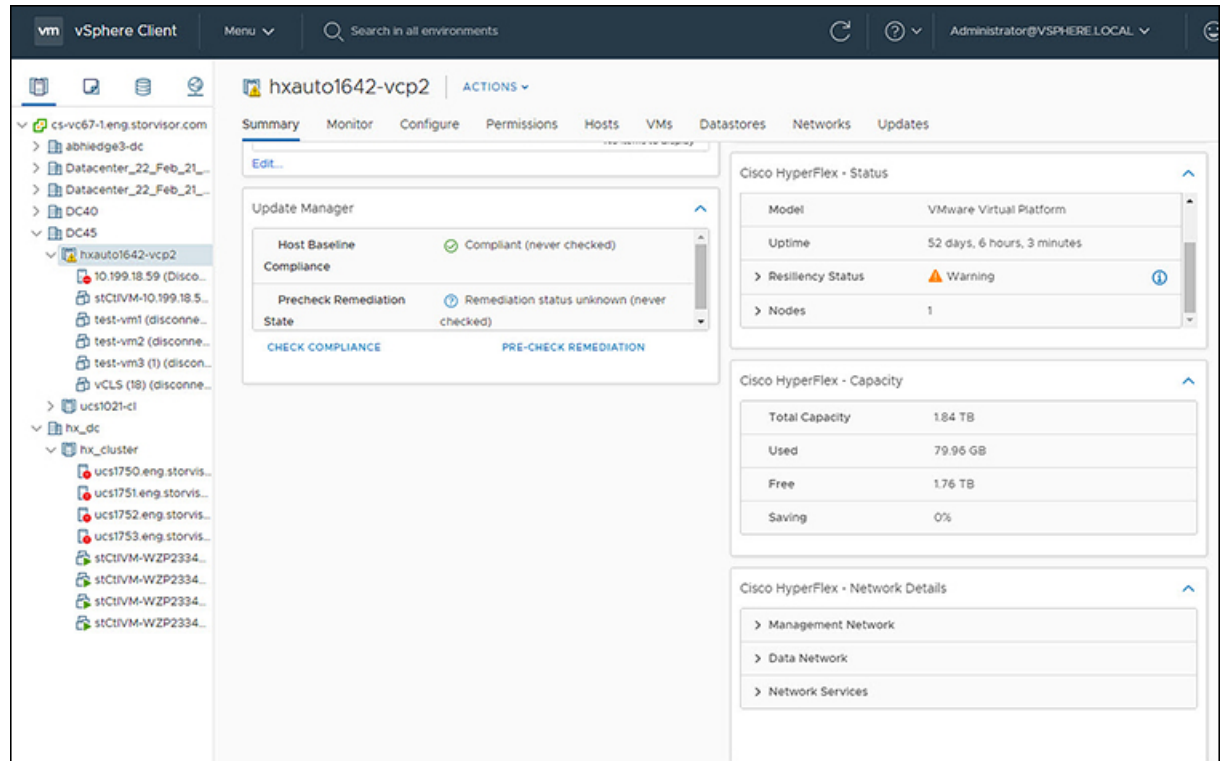
**Before you begin**

Beginning with HX Release 5.0(1a), this functionality is enabled when the license status is In-compliance.

-
- Step 1** Access **Hosts & Clusters** either from the vSphere Menu or the Shortcut link.
 - Step 2** Click on the cluster name and select the **Hosts** tab.
The summary page appears.
 - Step 3** Right click on the host and select **Cisco HyperFlex > > Maintenance Mode > Enter (or Exit) MaintenanceMode** to enter or Exit HyperFlex Maintenance Mode.
-

View HTML5 Plugin Portlets from the Summary Tab

To view Cisco HyperFlex HTML5 Plugin Portlets from the vSphere web UI perform the following steps:



- Step 1** Access **Hosts & Clusters** either from the vSphere Menu or the Shortcut link.
- Step 2** Click on a cluster name and select the **Summary** tab. The summary page appears.
- Step 3** Scroll down and use the arrow in each portlet to show or hide the portlet details.

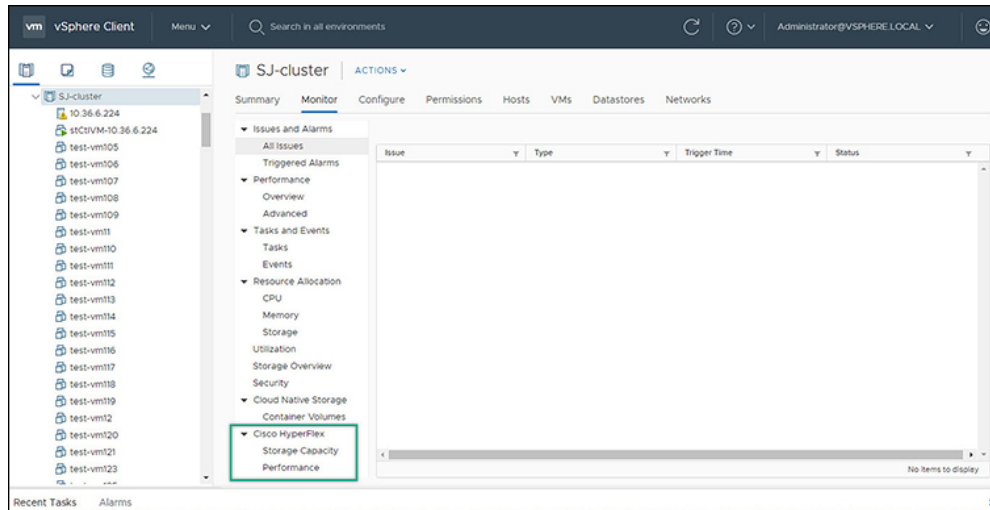
Related Topics

[View the HX Cluster Summary](#), on page 10

View HTML5 Plugin Portlets from the Monitor Tab

To view Cisco HyperFlex HTML5 Plugin Portlets from the vSphere web UI perform the following steps:

View iSCSI and Datastore Summary from the Configure Tab



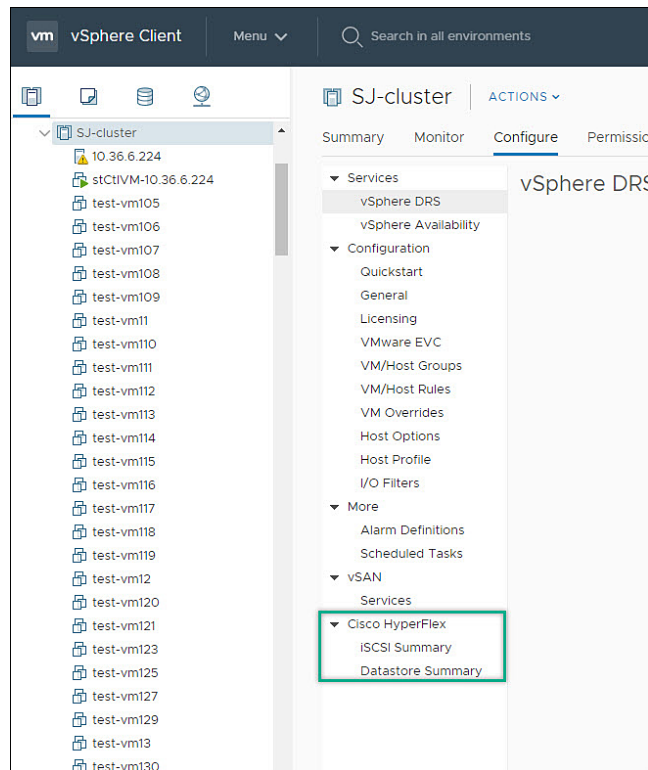
-
- Step 1** Access **Hosts & Clusters** either from the vSphere Menu or the Shortcut link.
- Step 2** Click on a cluster name and select the **Monitor** tab.
- Step 3** Scroll down the Monitor navigation panel and locate **Cisco HyperFlex**.
- Step 4** Click on **Storage Capacity** or **Performance** to display the related Cisco HyperFlex HTML5 Plugin chart.
-

Related Topics

[View Cluster and Datastore Performance Charts](#) , on page 16

View iSCSI and Datastore Summary from the Configure Tab

To view the iSCSI and Datastore Summary Pages from the vSphere web UI perform the following steps:



Before you begin

The iSCSI features are supported in Cisco HyperFlex Release 4.5(x) and later.

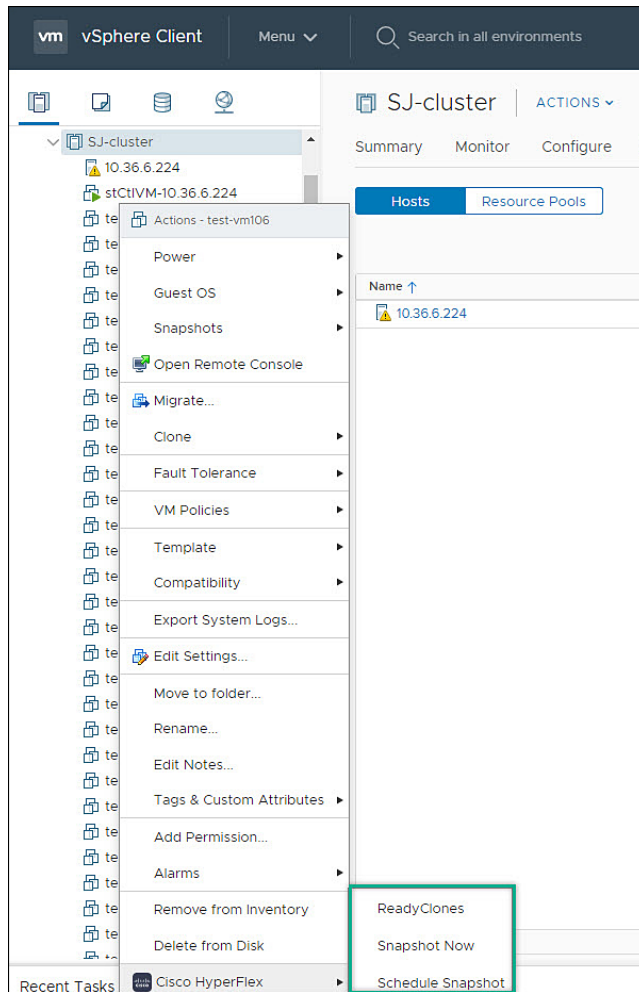
- Step 1** Access **Hosts & Clusters** either from the vSphere Menu or the Shortcut link.
- Step 2** Click on a cluster name and select the **Configure** tab.
- Step 3** Scroll down the Monitor navigation panel and locate **Cisco HyperFlex**.
- Step 4** Click on **iSCSI Summary** or **Datastore Summary** to display the related Cisco HyperFlex HTML5 Plugin page.
- Step 5** Use the buttons to perform all maintenance tasks as defined in the related topics.

Related Topics

- [Managing Datastores](#), on page 29
- [Create New Datastore](#), on page 31
- [Edit Datastore](#), on page 32
- [Mount or Unmount Datastore](#), on page 33
- [Delete Datastore](#), on page 34
- [iSCSI: Targets](#) , on page 23
- [iSCSI: Initiator Groups](#), on page 25
- [iSCSI: LUNs](#), on page 27

vCenter Server Actions at Virtual Machine Level

Snapshot Now



Before you begin

Access the **VMs and Templates** either from the vSphere Menu or the Shortcut link.

Step 1 Right click on the virtual machine. Select **Cisco HyperFlex > Snapshot Now**.

Step 2 The **Take VM Native Snapshot** window appears. Complete the following fields:

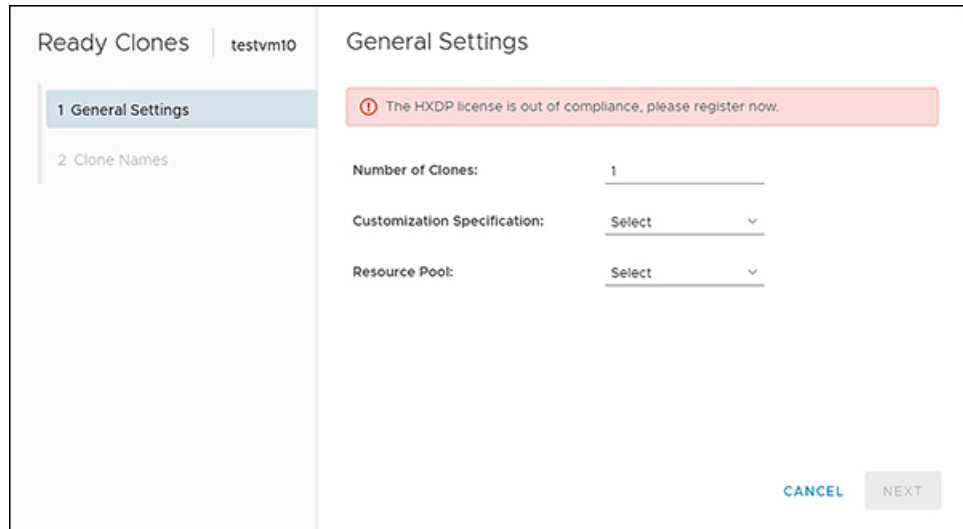
- **Name**- Snapshot name
- **Description** - Description of the snapshot
- **Quiesce guest file system** - Check box.

- Step 3** Click **OK** to create a VM Snapshot. You will see the snapshot task active in the background. After the Snapshot is complete it will be listed in the Snapshot Manager.
-

ReadyClones

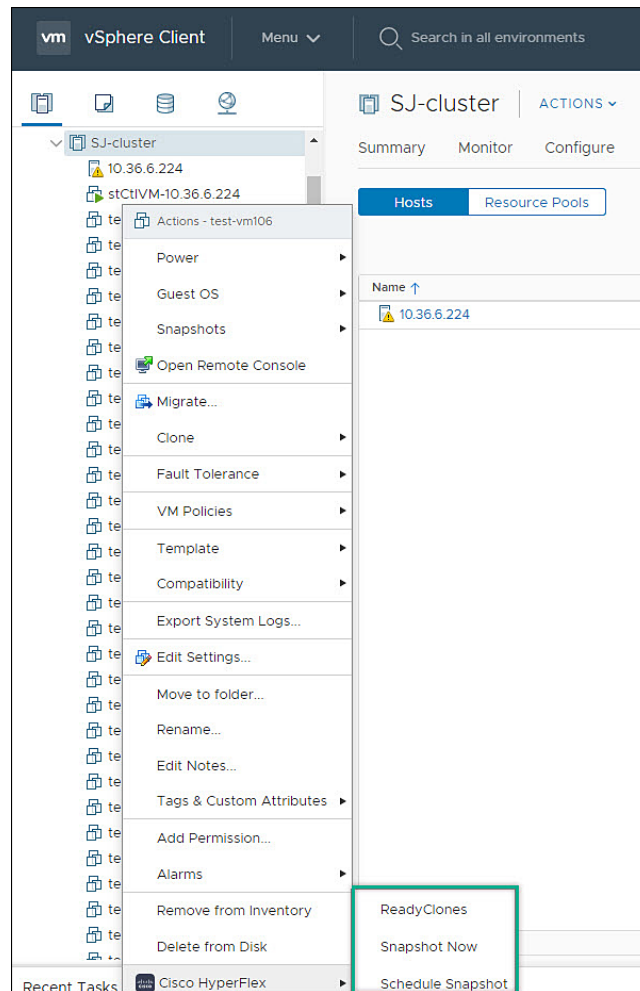
Before you begin

- Beginning with HX Release 5.0(1a), the ReadyClones feature is enabled when the license status is In-compliance.



The screenshot shows the 'Ready Clones' dialog box for a VM named 'testvm10'. The 'General Settings' tab is selected in the left sidebar. The main area displays a red warning message: 'The HXDP license is out of compliance, please register now.' Below the warning, there are three fields: 'Number of Clones' with a value of '1', 'Customization Specification' with a 'Select' dropdown, and 'Resource Pool' with a 'Select' dropdown. At the bottom right, there are 'CANCEL' and 'NEXT' buttons.

- Access the **VMs and Templates** either from the vSphere Menu or the Shortcut link.



Step 1 Right click on the virtual machine. Select **Cisco HyperFlex > ReadyClones**.

Step 2 The **Ready Clones** window appears. Complete the General Settings Fields:

- **Number of Clones**- Valid entry 1-256
- **Customization specifications** - If configured, select from the list
- **Resource Pool** - If configured, select from the list

Step 3 Complete the Clone Name Fields:

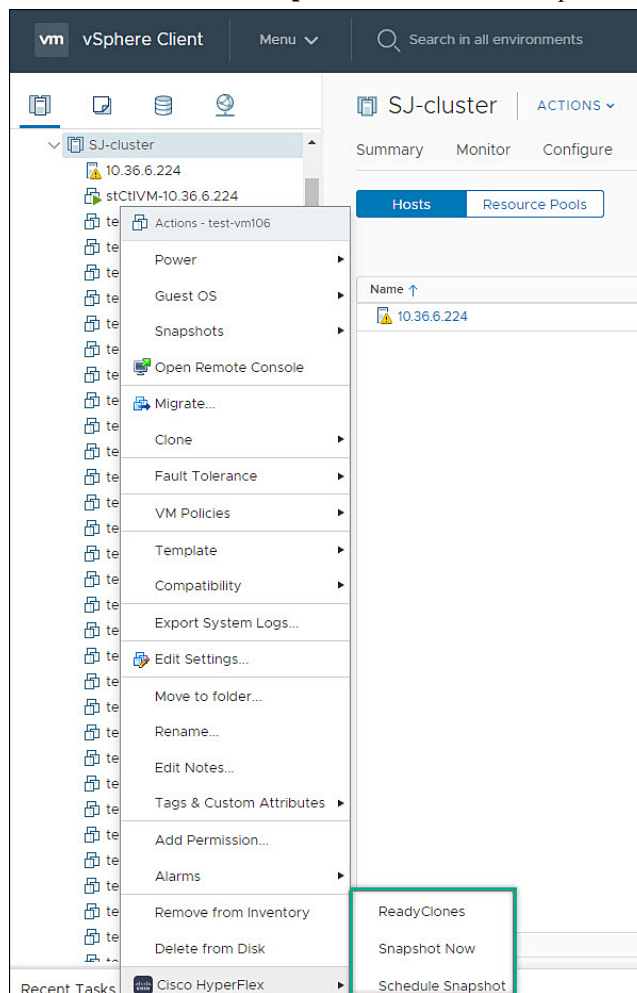
- **Power on VMs after cloning**- Check box
- **Name of VM Prefix** - Type VM prefix
- **Starting clone number**- The default is 1
- **Increment clone number by** - The default is 1

- Use same name for **Guest Name**- Uncheck to provide a guest name

Schedule Snapshot

Before you begin

- The Schedule Snapshot feature is supported in Cisco HyperFlex Release 4.5(x) and later.
- Beginning with HX Release 5.0(1a), the Schedule Snapshot feature is enabled when the license status is In-compliance.
- Schedule Snapshot on VMs in a suspended state is not supported.
- Access the **VMs and Templates** either from the vSphere Menu or the Shortcut link.



- Step 1** Right click on the virtual machine. Select **Cisco HyperFlex > Schedule Snapshot** . The **Schedule Snapshot** window appears.

Schedule Snapshot

Step 2 Use the checkbox to select the snapshot frequency

Schedule Snapshot | test-vm2

Hourly Snapshot

Start At: :

End At: :

On S M T W T F S

Maximum number of hourly snapshots to retain
1

Daily Snapshot

Start At: :

On S M T W T F S

Maximum number of daily snapshots to retain
1

Weekly Snapshot

Start At: :

On S M T W T F S

Maximum number of weekly snapshots to retain
1

Total Number of snapshots to retain 3

Step 3 Complete the fields for the Schedule Snapshot selected:**Table 30: Hourly Snapshot:**

Start At:	Enter valid start time <ul style="list-style-type: none"> • Hour: Valid values 1-24 • Minutes: Valid values 1-60 • AM/PM: Select one from the list.
End At:	Enter valid start time <ul style="list-style-type: none"> • Hour: Valid values 1-24 • Minutes: Valid values 1-60 • AM/PM: Select one from the list.
On	Use the Check boxes to select the day(s) of the week for snapshots are to be taken
Maximum Number of hourly snapshots to retain	Type or select a value between 1-30.

Table 31: Daily Snapshot:

Start At:	Enter valid start time <ul style="list-style-type: none"> • Hour: Valid values 1-24 • Minutes: Valid values 1-60 • AM/PM: Select one from the list.
On	Use the Check boxes to select the day(s) of the week for snapshots are to be taken
Maximum Number of hourly snapshots to retain	Type or select a value between 1-30.

Table 32: Weekly Snapshot:

Start At:	Enter valid start time <ul style="list-style-type: none"> • Hour: Valid values 1-24 • Minutes: Valid values 1-60 • AM/PM: Select one from the list.
On	Use the Check boxes to select the starting day for the weekly snapshot.
Maximum Number of hourly snapshots to retain	Type or select a value between 1-30.

Step 4 Click **OK** to confirm your snapshot schedule.

vCenter Server Actions at the Storage Level

Edit Datastore

From the Datastore level users have the ability to edit existing datastores.

Before you begin

Access the **Datastores** either from the vSphere Menu or the Shortcut link.

- Step 1** Right click on the datastore name.
- Step 2** Select **Cisco HyperFlex > Edit Datastore**.
The Edit Datastore window appears.
- Step 3** Edit the Datastore details.
- Step 4** Click **OK** to save your changes.

Related Topics

[Edit Datastore](#), on page 32

Delete Datastore

From the Datastore level users have the ability to delete existing datastores.

Before you begin

Access the **Datastores** either from the vSphere Menu or the Shortcut link.

-
- Step 1** Right click on the datastore name.
- Step 2** Select **Cisco HyperFlex > Delete Datastore**
The Delete Datastore window appears.
- Step 3** Click the **Delete** button.
The Delete Datastore window appears with the confirmation question "Do you want to delete the datastore?"
- Step 4** Click **OK** to continue with the delete action, or **Cancel** to exit the Delete Datastore window.
-

Related Topics

[Delete Datastore](#), on page 34

Cisco HyperFlex Remote Plugin for VMware vCenter

Starting with vSphere 8.0.0 the only architecture supported in vSphere releases is remote plugin.

The remote plugin runs on its own appliance, independent of the vCenter appliance; This autonomy improves the user experience with increased vCenter performance.

Prerequisites

The following is required for using the Remote Plugin for VMware:

- **Supported Cisco HyperFlex Release:** 5.0(2a) and later (ESXi 6.7 U3 and later).

Using the Cisco HyperFlex Remote Plugin

The following table defines feature support by plugin version:

Table 33: HTML5 Remote Plugin Feature Support

Feature	Plugin Version 3.0.0
Discover the Registered HX Cluster	✓
Rename Clusters 2	✓
View HX Cluster Summary	✓
View Cluster and Datastore Performance Charts	✓
Disks View	✓

Nodes View	✓
HX Datastore Management	✓
VM Summary and Top VM Consumers	✓
Network Management	✓
iSCSI Management 10	✓
Events and Alarms	✓
Manage Tasks	✓
HX Snapshots and clones at the virtual machine level	✓
Schedule Snapshot 11	✓
Manage users and access to HX clusters	✓
Cross-launch HX Connect for upgrade	✓
Embedded vCenter server actions at the Host and Clusters level	✓
HTML 5 License Status 12	✓
Linked Mode	✓

⁹ Requires HXDP Release 4.5(x) or later.

¹⁰ Requires HXDP Release 4.5(x) or later.

¹¹ Requires HXDP Release 4.5(x) or later.

¹² Requires HXDP Release 5.0(x) or later.



Note The configuration and feature functionality for the Remote and Local plugin are identical. For more information on any feature see the [Cisco HyperFlex HTML5 Plugin for VMware vCenter](#), on page 2 section of this guide.

Install, Register and Upgrade the Remote Plugin

Remote Plugin Installation and Registration

To install and register the Remote Plugin, perform the following steps.

Before you begin

Users with an active firewall need to verify that ports 433, 9443 and 22 are open and allow traffic to pass in or out.

Default Appliance Credentials

- **Username:** vcp-admin
- **Password:** C^scohxplugin@1984

-
- Step 1** Download the Cisco HyperFlex HTML plugin OVA for VMware vCenter from the [Cisco Software Download](#) site.
- Step 2** Login to the vCenter and select the host you want to deploy the Remote Plugin appliance.
- Step 3** Right click on the host and click on **Deploy OVF Template**. Deploy the OVA in a vCenter with appropriate static/DHCP IP settings.
- Step 4** Navigate to and select the local OVF downloaded from Cisco Software Download site.

Recommended configuration settings for the Remote plugin appliance:

- RAM: 4G
- Cores:2
- Datastore: 1 with 50 GB of minimum space
- Valid network adapter

- Step 5** Follow the wizard to complete the deployment process.

Note The static/DHCP IP assignment is supported through a script. Perform the following steps:

- Open the appliance VM console and log in to the appliance with the default credentials.
- Type **hx-ip-address-change** and press **Enter** to initiate the script.
- Select whether you want to set **Static IP** configuration or **DHCP IP** settings for the MAC address of the appliance.

Tip The recommendation is to configure a static IP address to the virtual Appliance or use DHCP with MAC bound IP.

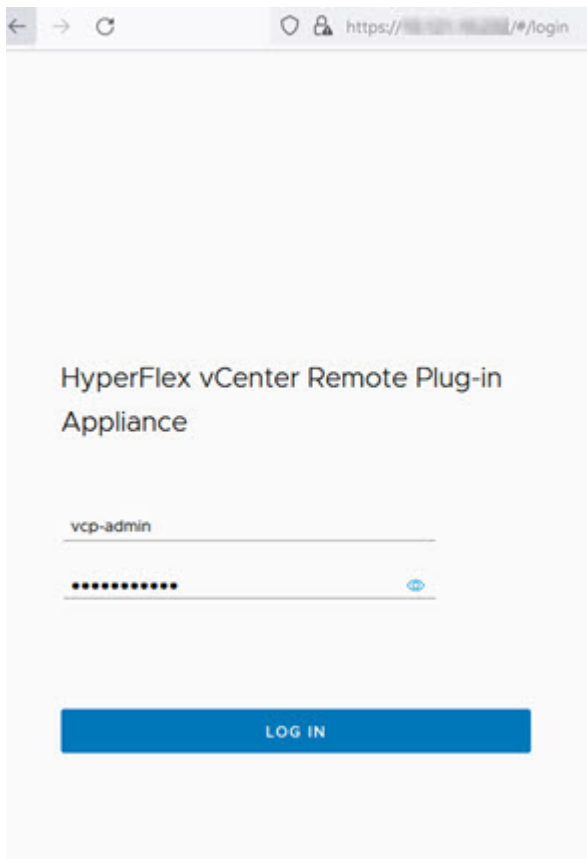
- Type valid values for the following fields: IP address, Subnet mask, Gateway, and DNS when asked if you opt for Static IP assignment. There is no need to provide the DNS details if you select DHCP IP assignment.
- Use the **ifconfig** command to display the Static/DHCP IP. Write these down for future use.

- Step 6** Copy and paste the IP address of the appliance in a browser window.

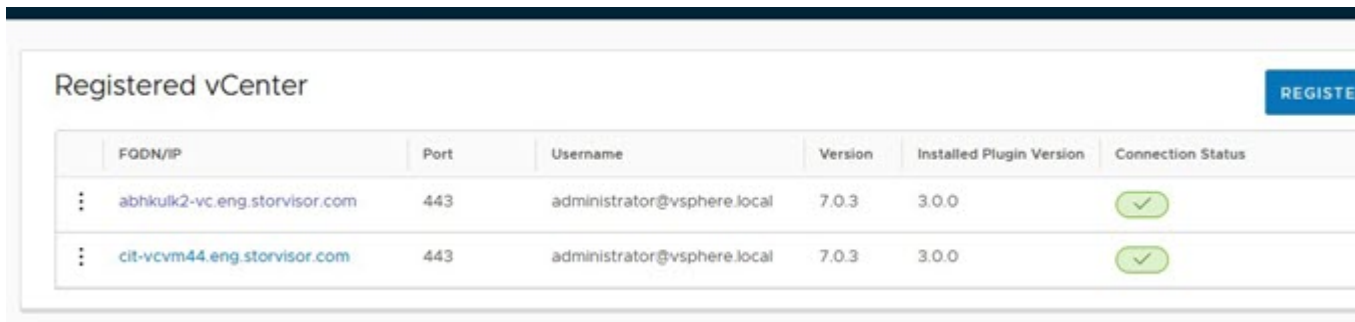
Example:

https://<appliance_ip>
The UI will open.

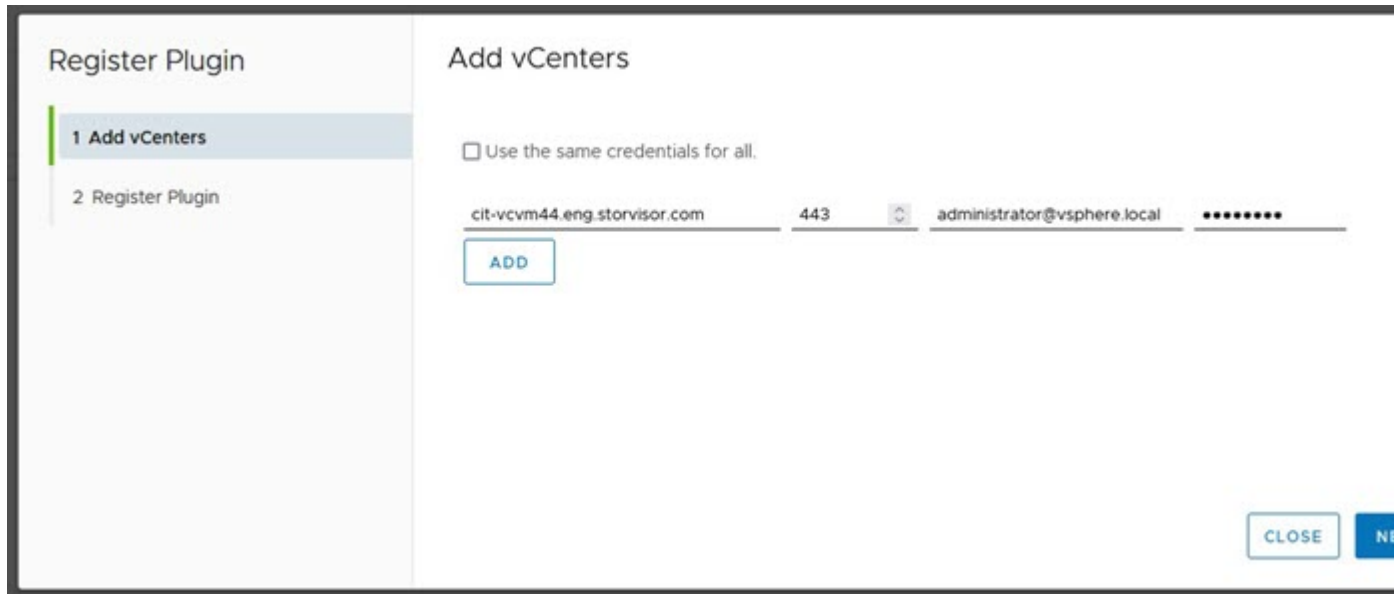
- Step 7** Reset the default user (vcp-admin) password through command line with the following steps:
- Open the appliance VM console and log in to the appliance with the default credentials.
 - Type **passwd vcp-admin** and press **Enter**.
 - Type the old and new password as directed in the UI and complete the password reset process.
- Step 8** Log in to the HX vCenter Remote Plug-in Appliance with the new credentials.



Step 9 To register the remote plugin with a vCenter, click the **Register** button. The **Add vCenters** window appears.



Step 10 In the **Add vCenters** window click the **Add** button and type the vCenter IP/FQDN, Port number, user name and password in the designated fields. Click **Next**.



If the vCenter is reachable and credentials are valid, the UI will advance to the **Register Plugin** page.

- Step 11** Click **Register** and wait for the registration process to complete.
- Step 12** Use the hyperlink provided in the registration UI to log on to vCenter.
- Step 13** To view the Cisco HyperFlex HTML5 plugin options in the vSphere UI, log out and log in again to vCenter.

Uninstalling and Unregistering the HyperFlex Remote Plugin from vCenter

To Uninstall and unregister the HX Remote Plugin from vCenter, perform the following steps.

- Step 1** Navigate to the plugin appliance UI.
- Step 2** Log in with valid credentials.
- Step 3** Select the vCenter from the list that you want to unregister and click on actions buttons present before the vCenter FQDN/IP. Click **Unregister**.
- Step 4** Specify the vCenter credentials and confirm that you want to unregister/uninstall the remote plugin from the vCenter.
- Step 5** Log out from the vCenter, wait a few minutes and Log in again.

Upgrade the Remote Plugin Application

Upgrading the remote plugin is a two-step process, perform the following steps to complete the upgrade.

- Step 1** Download the newer version of the vCenter remote plugin (hyperflex-remote-vcenter-plugin-x.x.x-xxx.tar.gz) upgrade package from the [Cisco Software Download](#) site.
- Step 2** Copy it into /tmp directory on the plugin appliance VM.
- Step 3** Execute the upgrade script by using the **hx-plugin-upgrade <UpgradePackagePath>** command.

- Step 4** Review the messages carefully and select **Y** to continue the upgrade process.
- Step 5** Once the vCenter application upgrade is complete, update the vCenter extension to the latest version on each vCenter registered with the plugin server.
- vCenter Extension Upgrade:** Log in to the plugin appliance UI and select the **vCenter**.
 - Click on **Update** and provide the credentials and click the **Update** button.
-

Encryption Support

Remote Plugin Encryption Support

To enable remote plugin encryption, perform the following steps, For more information on enabling Software Encryption on your cluster, see [Enabling HyperFlex Software Encryption Workflow](#).

- Step 1** Select the cluster you want to encrypt.
- Step 2** Click **Datastore**.
- Step 3** Click the **Create** button. The Create New Datastore window appears.
- Type the Datastore Name.
 - Type the size and select GB or TB.
 - Select the Block Size, Select 4K or 8K.
 - Check the Software Encryption check box.
- Step 4** Click OK. A new Datastore is created and added to the Datastore table list
If the new Datastore does not appear in the list, click the **Refresh** arrow and recheck the list.
-

Generate Support Bundles

Plugin Support Bundle Generation

Currently this feature is available via command line which will help user download support bundle which includes all the required log files from appliance and vCenter.

Steps to generate Support bundle from the vCenter appliance through command line:

Before you begin

To generate support bundle for vCenter, root user credentials are required. If the root credentials are not available, download it from https://<VC_IP/FQDN>:5480 using administrator credentials.

SUMMARY STEPS

- Log in to the vCenter appliance using pre-configured user credentials.
- Enter the **hx-plugin-supportbundle** command. This will prompt you for the vCenter for which you want to generate the support bundle.

3. Provide the root credentials or skip the vCenter logs and continue with support bundle generation of vCenter appliance logs.
4. The default support bundle download location is: `/var/log/plugin_support/`.

DETAILED STEPS

	Command or Action	Purpose
Step 1	Log in to the vCenter appliance using pre-configured user credentials.	
Step 2	Enter the hx-plugin-supportbundle command. This will prompt you for the vCenter for which you want to generate the support bundle.	
Step 3	Provide the root credentials or skip the vCenter logs and continue with support bundle generation of vCenter appliance logs.	
Step 4	The default support bundle download location is: <code>/var/log/plugin_support/</code> .	Specifying a custom directory to download the support bundle is supported.

Help support for the support bundle generation tool is **hx-plugin-supportbundle -help** or **hx-plugin-supportbundle -h**