



Automating HyperFlex Provisioning and Management

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Automation with Orchestration Workflows

Cisco UCS Director includes orchestration workflows and tasks that enable you to automate common VM provisioning and HyperFlex management tasks in one or more workflows. You can create a workflow that combines HyperFlex tasks with VMware host tasks and Cisco UCS tasks for Cisco UCS Manager.

Depending on the permissions required to perform a task, you can create workflows to be executed in Cisco UCS Director by an administrator or in the End User Portal by a user. For example, a workflow to provision ReadyClone VMs requires administrator permissions and cannot be executed by an end user.

See the [Cisco UCS Director Orchestration Guide](#) for details about orchestration workflows, tasks, and other orchestration and automation concepts.

Predefined Workflows for HyperFlex

Cisco UCS Director provides a set of simple, predefined workflows for HyperFlex. These workflows are designed to perform a single task, such as creating ReadyClone VMs or creating a datastore.

If you want to automate more complex provisioning or management tasks, you can make a copy of a predefined workflow and add tasks to the copy of that workflow. You can also create your own custom workflows that include HyperFlex tasks.



Note If you want to modify a predefined workflow, we recommend that you create a new version of that workflow before making the changes. If you modify a default predefined workflow, you can impact what happens in Cisco UCS Director when you click an action button. Actions that you take in Cisco UCS Director for a HyperFlex System, such as creating or mounting a datastore, use the default predefined workflows.

For example, when you click the **Mount** button for a datastore, Cisco UCS Director runs the Mount HyperFlex Datastore workflow and creates a service request for the action.

Location of Predefined HyperFlex Workflows

To access all predefined HyperFlex workflows, go to **Orchestration**, click **Workflows**, and then click **HyperFlex**.

List of Predefined HyperFlex Workflows

The predefined HyperFlex workflows include the following:

- Create HyperFlex Datastore—Creates a datastore with the specified name and size in TB, GB, or MB.
- Create HyperFlex ReadyClones—Creates the specified number of ReadyClones from a given VM template.
- Create HyperFlex VM DV Port Group—Creates a VM DV port group.
- Create HyperFlex VM Port Group—Creates a VM Port group on a given host and vSwitch.
- Create HyperFlex VMKernel Port Group—Creates a VMkernel port group on the selected vSwitch.
- Delete HyperFlexDatastore—Deletes the specified datastore.
- Delete HyperFlex VM Port Group—Deletes a VM Port group on a given host and vSwitch.
- Edit HyperFlex Datastore—Changes the size of the specified datastore.
- HyperFlex Esxi Host Action—Sets the host standby, reboot, and shutdown power actions.
- HyperFlex Esxi Host Maintenance Mode—Enters or Exits ESXi maintenance mode.
- Modify HyperFlex Port Group—Modifies a HX port group.
- Modify HyperFlex VM Port Group—Modifies a HX VM port group.
- Modify HyperFlex VMKernel Port Group—Modifies a HX VMkernel port group.
- Mount HyperFlex Datastore—Mounts the specified datastore.
- Unmount HyperFlex Datastore—Unmounts the specified datastore.

Viewing Predefined Workflows in the Workflow Designer

Step 1 Choose **Orchestration**.

Step 2 On the **Orchestration** page, click **Workflows**.

Step 3 Expand the **HyperFlex** folder.

Step 4 Double-click one of the workflows to open it in the Workflow Designer.

Step 5 Double-click a workflow task to view the properties of that task.

You can drag and drop additional tasks into the workflow. You can also execute or validate the workflow.

Predefined Workflow Tasks for HyperFlex

Cisco UCS Director provides a set of predefined workflow tasks that you can use to create workflows to provision VMs and manage datastores. These tasks are configured with a set of inputs and outputs that mirror the settings you must configure if you perform the tasks manually.

The Cisco UCS Director task library provides a list of the available HyperFlex tasks. The task library includes a description of each task's function and its inputs and outputs.

Location of the Predefined HyperFlex Tasks

All predefined HyperFlex tasks are available in the left pane of the Workflow Designer when you have a workflow open. The tasks are in the following location: **Physical Storage Tasks > HyperFlex Tasks**.

List of Predefined HyperFlex Tasks

The predefined HyperFlex tasks include the following:

- Create HyperFlex Datastore—Creates a datastore with the specified name and size in TB, GB, or MB.
- Edit HyperFlex Datastore—Changes the amount of storage allocated to the specified datastore.
- Mount HyperFlex Datastore—Mounts the specified datastore.
- Unmount HyperFlex Datastore—Unmounts the specified datastore.
- Delete HyperFlex Datastore—Deletes the specified datastore.



Note A datastore must be unmounted before it can be deleted.

- Create HyperFlex ReadyClones of a VM—Creates the specified number of ReadyClones from a given VM template.
- HX Esxi Host Maintenance Mode—Puts an ESX server in a storage cluster into HX maintenance mode. This task can perform both entry to and exit from the maintenance mode.
- Validate create port group inputs—Validates the inputs to create a port group.
- Validate modify port group inputs—Validates the inputs to modify a port group.
- Update vNICs—Update vNICs.
- Delete Port Group—Deletes a port group from a vSwitch. After deletion, all the VMs associated with that port group are associated with the default port group and vSwitch of that host.

- Validate create VMKernel port group inputs—Validates the inputs to create a VMKernel port group.
- Validate create DV port group inputs—Validates the inputs to create a Dv port group.

If these tasks do not include the functionality you need, you can customize your tasks with advanced scripting capabilities. You can also create your own custom tasks.

Opening the Task Library

- Step 1** Choose **Orchestration**.
 - Step 2** On the **Orchestration** page, click **Workflows**.
 - Step 3** Click **Task Library**.
 - Step 4** Check **Regenerate Document** to update the task library with any new tasks, including custom and open automation tasks.
 - Step 5** Click **Submit**.
 - Step 6** Scroll down to the **HyperFlex Tasks** section and click one of the hyperlinked tasks to view its details.
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