Managing Hosts

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Hosts

Hosts connect to the storage system either through a fibre channel interface or an IP network. The system does not automatically present volumes to the attached hosts. You must map each volume to a particular host object to enable the volume to be accessed through the worldwide port names (WWPNs) or iSCSI names that are associated with the host object. A host object is a logical object that represents a list of WWPNs and a list of iSCSI names, which means that the host object can have both WWPNs and iSCSI names. These WWPNs and iSCSI names identify the interfaces that the hosts use to communicate with the storage system. iSCSI names can be either iSCSI qualified names (IQNs) or extended unique identifiers (EUIs).

- iSCSI hosts—An iSCSI-attached host is a system that is connected to the storage through an IP network. When you configure a host on the storage system, you can create a host object that is identified by iSCSI names that are used to communicate with the system.

- Fibre Channel hosts—A fibre channel host is an application server that is connected to the system through the fibre channel network. Before the host can access the volumes, you must create a fibre channel host object on the system. You can configure the host object with the WWPN of the host machine and specify which volumes the host machine can access.

Creating Hosts

Step 1 Choose **Physical** > **Storage**.

Step 2 In the left pane, navigate to the pod in which the storage account is added.

Step 3 Choose the storage account type.

Step 4 Click **Hosts**.

Step 5 Click **Create**.

Step 6 On the **Create Host** screen, complete the following fields:

Name	Description
Host Type drop-down list	Choose the type of host that you want to connect to the storage system.
Host Name field	The host name.
Fibre Channel Port Definitions field	Enter the world wide port name (WWPN) that identifies the host to the system. A WWPN consists of 16 (hexadecimal) digits. In case of multiple ports, separate port numbers by a comma. See Fibre Channel Port Definitions in the **FC Ports** tab.
iSCSI Port Definitions field	Enter the iSCSI name that can be either in the iSCSI qualified names (IQNs) or in the extended unique identifiers (EUIs) format. In case of multiple ports, separate port numbers by a comma.
Use CHAP Authentication (all ports) check box	Check this check box for CHAP authentication for iSCSI-attached hosts.
Use CHAP Authentication Name field	Enter a name for the shared secret for CHAP authentication.
I/O Group	Choose one or more I/O groups for the host to access volumes from the selected I/O group(s).

Name	Description
Host Type drop-down list	Choose one of the following host types: • Generic—Choose this type for most supported host systems. • HP/UX—Choose this type for HP host systems. • OpenVMS—Choose this type for OpenVMS host systems.. • TPGS (Target Port Group Support) —Choose this type for Solaris or Apple host systems that require a load balancing.

Step 7 Click **Submit**.

Deleting Hosts

Step 1 Choose **Physical** > **Storage**.
Step 2 In the left pane, navigate to the pod in which the storage account is added.
Step 3 Choose the storage account type.
Step 4 Click **Hosts**.
Step 5 Choose the host that you want to delete.
Step 6 Click **Delete**.
Step 7 Check the **Delete hosts even it has volumes are mapped to them. These volumes will no longer be accessible to hosts** check box.
Step 8 Click **Submit**.

Renaming Hosts

Step 1 Choose **Physical** > **Storage**.
Step 2 In the left pane, navigate to the pod in which the storage account is added.
Step 3 Choose the storage account type.
Step 4 Click **Hosts**.
Step 5 Choose the host for which you want to change the name of the host.
Step 6 Click **Rename**.
Step 7 On the **Rename Host** screen, enter a new host name.
Step 8 Click **Submit**.

Unmapping All Volumes

Step 1 Choose **Physical** > **Storage**.
Step 2 In the left pane, navigate to the pod in which the storage account is added.
Step 3 Choose the storage account type.
Step 4 Click **Hosts**.
Step 5 Choose the host from which you want to unmap all volumes that are mapped to the host.
Step 6 Click **Unmap All Volumes**.
Step 7 Click **Submit**.

Importing Mappings

Step 1 Choose **Physical** > **Storage**.
Step 2 In the left pane, navigate to the pod in which the storage account is added.
Step 3 Choose the storage account type.
Step 4 Click **Hosts**.
Step 5 Choose the target host from which you want to import the host mappings.
Step 6 Click **Import Mappings**.
Step 7 On the **Import Mappings** screen, click **Select**.
Step 8 Check the check box to chose the source host to which you want to import the host mappings from the target host.
Step 9 Click **Select**.
Step 10 Click **Submit**.

Duplicating Mappings

Step 1 Choose **Physical** > **Storage**.
Step 2 In the left pane, navigate to the pod in which the storage account is added.
Step 3 Choose the storage account type.
Step 4 Click **Hosts**.
Step 5 Choose the source host from which you want to duplicate the host mappings to one or more targets.
Step 6 Click **Duplicate Mappings**.
Step 7 On the **Duplicate Mappings** screen, click **Select**.
Step 8 Check the check box to choose one or more target hosts in which you want to duplicate host mappings from the source.
Step 9 Click **Select**.
Step 10 Click **Submit**.

Deploying an ESXi Fibre Channel and Fibre Channel over Ethernet Host on IBM Storwize System

Step 1 Choose **Orchestration**.

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

Step 3 In the **Orchestration** pane, **Workflows** page is displayed by default.

Step 4 In the left pane, choose the **IBM Storwize** folder and click the arrow next to the folder to show all the workflows.

Step 5 Double-click the **Deploy ESXi FC host on IBM Storwize V7000** or **Deploy ESXi FCoE host on IBM Storwize V7000** workflow that opens in the **Workflow Designer**.

Tasks	Description
Create UCS Service Profile	This task allows to create a new UCS Service Profile.
Select UCS Server	This task allows selects UCS Server from the Server Pool or the list of servers according to the conditions specified.
Associate UCS Server Profile	This task allows you to select the UCS Service Profile and associate it with the selected UCS Server.
Set up PXE Boot	This task allows you to specify PXE Boot parameters required.
Create IBM Storwize Volume	This task allows you to create a new volume on the host. The volumes are built from extents in the storage pools, and hence the size can be increased or decreased.
Create IBM Storwize Host (FC or FCoE)	This task allows you to create the host.
Map IBM Storwize Volume To Host	This task allows you to create a new mapping between the volume and the host, which makes the volume to be accessible for input/output operations to the specified host.
Generic Configure SAN Zoning	This task allows you to create SAN zones.
Power On UCS Server	This task lets you to power on the UCS Server and this task uses the UCS Service Profile to turn the power on for the UCS Server. (This task can be used only when there is a UCS Service Profile associated with the UCS Server).
Monitor PXE Boot	This task monitors the PXE Boot that specifies the maximum amount of time to wait for PXE Boot.

Tasks	Description
Modify UCS Service Profile Boot Policy	This task allows you to specify the new boot policy for the selected UCS Service Profile (modify the UCS Service Profile with the new boot policy that allows to modify the boot order for the UCS Service Profile.)
Wait for Specified Duration	This is a generic task that you can use it in the workflow to wait for a specified duration.
Reset UCS Server	This task allows you to perform a hard reset on the UCS Server irrespective of the UCS Service Profile associated with the server.
Wait for Specified Duration	This is a generic task that you can use it in the workflow to wait for a specified duration.
Register Host with VCenter	This task allows you to register a new host within the selected cloud (vCenter) and also place the host exactly where you want to it be on the cluster/datacenter.
IBM Storwize Thin Provision Volume Datastore	This task allows you to mount a thin-provision volume datastore on the ESXi host.

Step 6 Click **Execute Now**.

Deploying an ESXi iSCSI Host on IBM Storwize System

Step 1 Choose **Orchestration**.

Step 2 In the **Orchestration** pane, the **Workflows** tab is displayed by default.

Step 3 In the left pane, choose the **IBM Storwize** folder and click the arrow next to the folder to show all the workflows.

Step 4 Double-click the **Deploy ESXi iSCSI Host on IBM Storwize V7000** workflow that opens in the **Workflow Designer**.

Tasks	Description
Create UCS Service Profile	This task allows to create a new UCS Service Profile.
Add vNic to UCS Service Profile	This task allows you to add vNIC to the UCS Service Profile.
Add iSCSI vNIC to UCS Service Profile	This task allows you to add iSCSI vNIC to the UCS Service Profile.

Tasks	Description
IBM Storwize iSCSI Boot Target	This task allows you to configure iSCSI boot targets.
Create Service Profile iSCSI Boot Policy	This task allows you to configure the iSCSI Boot Policy for the existing UCSM Service Profile. You can set the iSCSI Boot Parameters and create iSCSI Static Targets.
Associate UCS Server Profile	This task allows you to select the UCS Service Profile and associate it with the selected UCS Server.
Create IBM Storwize Volume	This task allows you to create a new volume on the host. The volumes are built from extents in the storage pools, and hence the size can be increased or decreased. You can Create volumes of type Generic, Thin-Provision, Mirrored and Compressed volumes.
Create IBM Storwize Host (iSCSI)	This task allows you to create a host entry by using a WWPN/WWNN number of the remote server and associate one or more HBA WWPNs or iSCSI names with a logical host object.
Map IBM Storwize Volume To Host	This task allows you to create a new mapping between the volume and the host, which makes the volume to be accessible for input/output operations to the specified host.
Set up PXE Boot	This task allows you to specify PXE Boot parameters required like OS type for the Host, Host Name, Server IP Address Range, MAC Address, NetMask, Gateway, Name Server, Password and Time Zone.
Power On UCS Server	This task lets you to power on the UCS Server and this task uses the UCS Service Profile to turn the power on for the UCS Server. (This task can be used only when there is a UCS Service Profile associated with the UCS Server)
Monitor PXE Boot	This task monitors the PXE Boot that specifies the maximum amount of time to wait for PXE Boot.
Modify UCS Service Profile Boot Policy	This task allows you to specify the new boot policy for the selected UCS Service Profile (modify the UCS Service Profile with the new boot policy that allows to modify the boot order for the UCS Service Profile.)
Wait for Specified Duration	This is a generic task that you can use it in the workflow to wait for a specified duration.
Restet UCS Server	This task allows you to perform a hard reset on the UCS Server irrespective of the UCS Service Profile associated with the server.

Tasks	Description
Wait for Specified Duration	This is a generic task that you can use it in the workflow to wait for a specified duration.
Register Host with vCenter	This task allows you to register a new host within the selected cloud (vCenter) and also place the host exactly where you want to it be on the cluster/datacenter.

Step 5 Click **Execute Now**.

Creating and Adding Block Volume Datastore on the ESXi Host

Step 1 Choose **Orchestration**.

Step 2 In the **Orchestration** pane, the **Workflows** tab is displayed by default.

Step 3 In the left pane, choose the **IBM Storwize** folder and click the arrow next to the folder to show all the workflows.

Step 4 Double-click the **Create_and_Add_IBM_LUN_as_VMFS_Datastore** workflow that opens in the **Workflow Designer**.

Tasks	Description
Create IBM Storwize Volume	This task allows you to create a new volume on the host. The volumes are built from extents in the storage pools, and hence the size can be increased or decreased.
IBM Storwize Block Volume Datastore	This task allows you to mount a block volume datastore on the ESXi host

Step 5 Click **Execute Now**.

Adding Block Datastore over ESXi on IBM Storwize System

Step 1 Choose **Orchestration**.

Step 2 In the **Orchestration** pane, the **Workflows** tab is displayed by default.

Step 3 In the left pane, choose the **IBM Storwize** folder and click the arrow next to the folder to show all the workflows.

Step 4 Double-click the **Add new block datastore to ESXI on V7000** workflow that opens in the **Workflow Designer**.

Tasks	Description
Generic Configure SAN Zoning	This task allows you to create SAN zones.
IBM Storwize Block Volume Datastore	This task allows you to mount a block volume datastore on the ESXi host.

Step 5 Click **Execute Now**.

Adding Compressed Datastore over ESXi on IBM Storwize System

Step 1 Choose **Orchestration**.

Step 2 In the **Orchestration** pane, the **Workflows** tab is displayed by default.

Step 3 In the left pane, choose the **IBM Storwize** folder and click the arrow next to the folder to show all the workflows.

Step 4 Double-click the **Add new Compressed datastore to ESXI on V7000** workflow that opens in the **Workflow Designer**.

Tasks	Description
Generic Configure SAN Zoning	This task allows you to create SAN zones.
IBM Storwize Compressed Block Volume Datastore	This task allows you to mount a compressed block volume datastore on the ESXi host.

Step 5 Click **Execute Now**.