

# Storage


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# Storage Arrays

This tab displays information about storage arrays.

The following table describes the fields that appear on **SAN > Storage > Storage Arrays**.

| Field | Description |
|---|---|
| storageName | Specifies the storage name.<br>Click on the **storageName** to view the **Storage Enclosure** details. For more information on the tabs displayed, refer to storageName Enclosure, on page 1. |
| WWN | Specifies the world wide name (WWN) of the storage device.<br>Only storage array PWWN that are discovered via fabric discovery are displayed. However, storage array may have more ports than specified here. |

## storageName Enclosure

Click on the **storageName** item to view the detailed information about each storage array.

The details of a Storage Array depends on the type of array discovered, and the provider's adherence to the SMI-S standards. Click of the array to load the inventory page, starting with a summary tab, and other context specific tabs based on the type of array.

The following tabs provide relevant information:

- **Summary**

  This table provides information about the provider. Storage array **Serial Number**, **Storage type** and **Number of Physical Disks** in the array are also displayed.

- **Components**

This tab lists all the components in the Storage.

Click on the component **Name** to view total storage capacity, usage details, and physical disks details.

- **Pools**

  This tab lists all the pools, their status and Raw capacity. Click on **POOL Name** to view the pool details.

- **LUNs**

  This tab lists all the LUNs in the storage array. It provides **LUN ID**, **WWN**, **Status**, and **Capacity** details for each LUN. Click on **LUN Name** to view further details about each LUN. You can also view the **Host LUN Access** information in the **LUN Detail** view.

  **Host Port PWWN**, **Host Interface**, **Zoning**, and **Storage Interface** values in **Host LUN Access** table is displayed only if the host accessing this LUN is a part of the NDFC discovered fabric.

- **Host**

  This tab lists all the hosts in the selected storage. It provides the **Host name**, **Node WWN**, and **WWN** details for each host in the Storage array. Click on a **Host Name** to view details about the host. You can view the relevant details on the **LUNs** tab and **Ports** tab within the **Host Detail** view.

  **Host Interface**, **Zoning**, and **Storage Interface** values in **LUNs Tab > Host LUN Access** table is displayed only if the host accessing this LUN is part of the NDFC discovered fabric.

  **Fabric** and **Host Interface** values in **Host Ports** table is displayed only if **Host Port WWN** is part of the NDFC discovered fabric.

- **Processors**

  This tab lists all the Processors and their Status. It also shows the number of adapters for each processor. Click on a **Processor Name** to view the details.

- **Ports**

  This tab lists all the Ports within the Storage array. Click on **Port Name** to view details about the port.

  **Host Interface**, **Zoning**, and **Storage Interface** values in the **Host LUN Access** table is displayed only if Host accessing the LUN in **LUN ID** column is part of the NDFC discovered fabric.

# Storage SMI-S Provider

This tab displays the SMI-S provider information.

The following table describes the fields that appear on **SAN > Storage > Storage SMIS Provider**.

| Field | Description |
|---|---|
| Vendor | Specifies the vendor.<br>Cisco NDFC supports the following vendors:<br>• EMC<br>• NetApp<br>• IBM<br>• HDS<br>• PureStorage<br>• HP<br>• Other |
| Provider URL | Specifies SMI-S provider URL. |
| Name Space | Specifies name space. |
| Interop Name Space | Specifies interop name space. |
| Port | Specifies the port. |
| Status | Specifies the status. |
| Secure | Specifies if it is a secure connection. |
| Discovery Status | Specifies the discovery status. |
| Last Updated Time | Specifies the last updated time. |

The following table describes the action items, in the **Actions** menu drop-down list, that appear on **SAN > Storage > Storage SMIS Provider**.

| Action Item | Description |
|---|---|
| Add Provider | Adds an SMI-S provider. For instructions, refer to Adding SMI-S Provider, on page 4. |
| Edit Provider | Select a provider from the table and choose **Edit Provider** to update the provider information. |
| Delete Provider | Select a provider from the table and choose **Delete Provider** to delete the provider. |
| Rediscover Provider | Select a provider from the table and choose **Rediscover Provider** to scan for any changes. This triggers the discovery cycle outside its normal periodic polling. |

| Action Item | Description |
|---|---|
| Purge Provider | Select a provider from the table and choose **Purge Provider** to purge the provider information. This removes elements no longer present from discovery. |

# Adding SMI-S Provider

To add an SMI-S provider from the Cisco Nexus Dashboard Fabric Controller Web UI, perform the following steps:

### Procedure

**Step 1** Choose **SAN > Storage > Storage SMIS Provider**.

The **Storage SMIS Provider** tab is displayed.

**Step 2** Click the **Actions** menu drop-down list and click **Add Provider**.

The **Add SMI-S** window is displayed.

**Step 3** Use the drop-down to select a **Vendor**.

All the supported vendors are available in the drop-down list. More SMI-S storage vendors are discovered through a 'best effort' handler using the **Other** vendor option in the drop-down.

**Note**
A minimum of one valid Nexus Dashboard Fabric Controller license must be provisioned before adding the data sources for SMI-S storage discovery.

**Step 4** Specify the **SMI-S Server IP**, **User Name**, and **Password**.

**Step 5** Specify the **Name Space** and **Interop Name Space**.

**Step 6** By default, the **Port** number is prepopulated.

If you select the **Secure** checkbox, then the default secure port number is populated.

When using the **Secure** mode with EMC, the default setting is mutual authentication. For more information, see the EMC documentation about adding an SSL certificate to their trust store. Also, you can set SSLClientAuthentication value to *None* in the *Security_Settings.xml* configuration file and restart the ECOM service.

**Step 7** Click **Add**.

The credentials are validated and the storage discovery starts if the credentials is valid. If the credentials check fails, you will be prompted to enter valid credentials.