

# **EMC XtremIO**

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### **Overview**

The XtremIO Storage Array is an all-flash system, based on a scale-out architecture. The system uses building blocks, called X-Bricks, which can be clustered together. The system operation, controlled by a stand-alone dedicated Linux-based server, is called the **XtremIO Management Server (XMS)**. Each XtremIO cluster requires an XMS host, which can be either a physical or a virtual server. A single XMS host can manage multiple clusters, so a single cluster may not require its own XMS host. The array continues operating if it is disconnected from the XMS, but cannot be configured or monitored.

XtremIO array architecture is designed to deliver the full performance potential of flash. Linear scaling of all resources, such as CPU, RAM, SSDs, and host ports, is done in a balanced manner. This allows the array to achieve any desired performance level, while maintaining consistency of performance that is critical to predictable application behavior. The XtremIO Storage Array provides a high level of performance that is consistent over time, system conditions, and access patterns. It is designed for high-granularity true random I/O.

Cluster performance level is not affected by capacity utilization level, number of volumes, or aging effects. Moreover, performance is not based on a "shared cache" architecture and is not affected by the data set size or data access pattern. Due to its content-aware storage architecture, XtremIO provides:

- Even distribution of data blocks, inherently leading to maximum performance and minimal flash wear
- Even distribution of metadata

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- · Freedom from hotspots in data or metadata
- Easy setup and no tuning
- Advanced storage functionality, including Inline Data Deduplication and Compression, thin provisioning, advanced data protection (XDP), snapshots, and more

#### **XtremIO Connector in Cisco UCS Director**

The XtremIO connector allows you to monitor and manage the XtremIO volumes, initiator groups, LUN mappings, snapshots, and basic network configurations. It connects through the HTTPS protocol. In order to manage XtremIO in Cisco UCS Director, the XMS Host IP is used when adding a physical account in Cisco UCS Director.

# Orchestration

#### Viewing the Task Library

The Task Library contains Cisco UCS Director tasks related to Cisco EMC XtremIO. You can view the Task Library using the following steps.

- Step 1 Choose Orchestration.
- **Step 2** On the **Orchestration** page, click **Workflows**.
- Step 3 Click Task Library.
- **Step 4** On the **Task Library** screen, click **Submit** to launch the Task Library documentation.
- **Step 5** Scroll down the list to EMC XtremIO tasks.
- **Step 6** Clicking on any of the listed tasks takes you to the specifics of the task.

# **XtremIO Accounts**

#### Adding an EMC XtremIO Account

To manage EMC XtremIO, Cisco UCS Director uses the XMS Host IP.

- **Step 1** Choose Administration > Physical Accounts.
- Step 2 On the Physical Accounts page, click Physical Accounts.
- Step 3 Click Add.
- **Step 4** On the Add Account screen, complete the following fields:
  - a) **Pod**—Choose a pod for the account from the drop-down list.
  - b) Category—Choose Storage.

c) Account Type—Choose EMC XtremIO from the drop-down list.

#### Step 5 Click Submit.

- **Step 6** On the second **Add Account** screen, complete the following fields:
  - a) Account Name—A unique name that you assign to this account.
  - b) Description—A description of this account.
  - c) Management Server Address—This can be an IPv4 or IPv6 address or the host address.
  - d) Use Credential Policy—Check this box if you want to use a credential policy for this account rather than enter the username and password information manually.
  - e) Credential Policy drop-down list—Choose the credential policy that you want to use from this drop-down list.

This field is only displayed if you choose to use a credential policy.

f) Username—The username that this account uses to access the XtremIO storage system. This username must be a valid account in the storage system.

This field is not displayed if you chose to use a credential policy.

g) **Password**—The password associated with the specified XtremIO username.

This field is not displayed if you chose to use a credential policy.

h) Protocol

Both HTTP and HTTPS are supported.

i) **Port**—The port used to access the XtremIO storage system.

Must not be Port 7225. Port number varies depending on implementation.

j) **Discover XtremIO Clusters**—Check this box if you want Cisco UCS Director to discover the available XtremIO clusters now so that you can choose the one you want to manage with this account.

If you check this box, the **Cluster Name** field becomes a drop-down list of the clusters managed by the XMS host. If you do not check this box, you must manually enter the information in the **Cluster Name** field.

k) Cluster Name—A valid name for the XtremIO cluster that you want to discover and manage with this account.

You must enter a valid name for an XtremIO cluster in this field if you did not check Discover XtremIO Clusters.

Connection Timeout (Seconds)—The length of time in seconds that Cisco UCS Director will wait to establish a
connection to the XMS host before timing out.

The default value is 60 seconds The valid values are from 0 to 1800. An empty field or a value of 0 is interpreted as an infinite timeout.

m) Socket Read Timeout (Seconds)—The length of time in seconds that Cisco UCS Director will wait for data from the XMS host before timing out.

The default value is 50 seconds. The valid values are from 0 to 1800. An empty field or a value of 0 is interpreted as an infinite timeout.

n) API Version—Choose the API verson that is supported on the XtremIO storage system.

The default value is API version v2.

- o) **Contact**—The email address that you use to contact the administrator or other person responsible for this account.
- p) Location—The location of the contact.

#### Step 7 Click Submit.

Cisco UCS Director tests the connection to the EMC XtremIO storage system and XMS host. If that test is successful, it adds the XtremIO account and discovers all infrastructure elements in the storage system that are associated with that account. This discovery process and inventory collection cycle takes few minutes to complete.

The polling interval configured on the **System Tasks** tab on the **Administration** > **System** window specifies the frequency of inventory collection. For more information about configuring the polling interval, see the *Cisco UCS Director Network Devices Management Guide*.

#### **Editing an XtremIO Account**

| Step 1 | Choose Administration > Physical Accounts.              |
|--------|---------------------------------------------------------|
| Step 2 | On the Physical Accounts page, click Physical Accounts. |

- **Step 3** Click the XtremIO account that you wish to edit.
- Step 4 Click Edit.
- **Step 5** On the Edit Account screen, you can edit the following fields:
  - a) Description
  - b) Management Server Address
  - c) Use Credential Policy

If checked, the Credential Policy drop-down list is shown.

- d) User Name
- e) Password
- f) Protocol

Both HTTP and HTTPS are supported.

g) Port

Must not be 7225. Port number varies depending on implementation.

h) Discover XtremIO Clusters check box

If checked, a drop-down list of all of the XMS clusters is shown. You can choose the cluster to be managed.

i) Cluster Name

If the **Discover XtremIO Clusters** check box is not checked, enter a valid name of the cluster managed by the XMS host.

- j) Contact
- k) Location
- Step 6 Click Submit.
- **Step 7** On the **Physical Accounts** page, choose the account.
- Step 8 Click Test Connection.

# **XtremIO Volumes**

A Volume is a set of blocks, presented to the operating environment as a range of consecutive logical blocks with disk-like storage and I/O semantics. It is possible to define various percentages of disk space as Volumes in an active cluster.

# **Creating an XtremIO Volume**

| Step 1 Choose | e Physical > | Storage. |
|---------------|--------------|----------|
|---------------|--------------|----------|

- **Step 2** On the **Storage** page, choose the pod.
- **Step 3** On the **Storage** page, click **Storage Accounts**.
- **Step 4** Click the row with the EMC XtremIO account for which you want to create a volume.
- Step 5 Click View Details.
- Step 6 Click Volumes.
- Step 7 Click Create.
- **Step 8** On the **Create Volume** screen, complete the following:
  - a) Enter the volume name.
  - b) Enter the volume size.
  - c) From the Capacity Type drop-down list, choose the type of the device capacity.
  - d) From the Logical Block Size drop-down list, choose the block size of the volume. The size cannot be mofified later.
  - e) From the **Small Input/Output Alerts** drop-down list, choose **Enabled** to send alerts for higher number of small input or output.
  - f) From the **Unaligned Input/Output Alerts** drop-down list, choose **Enabled** to send alerts for higher number of unaligned input or output.
  - g) From the VAAI TP Alerts drop-down list, choose Enabled to send VAAI TP alerts.
- Step 9 Click Submit.

# **Modifying an XtremIO Volume**

- Step 1Choose Physical > Storage.
- **Step 2** On the **Storage** page, choose the pod.
- Step 3 On the Storage page, click Storage Accounts.
- **Step 4** Click the row with the EMC XtremIO account for which you want to modify the volume.
- Step 5 Click View Details.
- Step 6 Click Volumes.
- **Step 7** Click the row with the volume that you wish to modify.
- Step 8 Click Modify.
- **Step 9** On the **Modify Volume** screen, you can modify any or all of the following:

- a) Volume Name
- b) Volume Size
- c) Capacity Type
- d) Enable or disable the small input/output alerts.
- e) Enable or disable the unaligned input/output alerts.
- f) Enable or disable VAAI TP alerts.

Step 10 Click Submit.

# **XtremIO Initiator Groups**

The XtremIO Storage Array uses the term "Initiators" to refer to ports that can access a Volume. Initiators are managed in the XtremIO Storage Array by assigning them to an Initiator Group. The Initiators within an Initiator Group share access to one or more of the cluster's Volumes.

### **Creating an Initiator Group**

| Step 1 | Choose <b>Physical</b> > <b>Storage</b> .                                                                                                                                                                                   |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Step 2 | On the <b>Storage</b> page, choose the pod.                                                                                                                                                                                 |
| Step 3 | On the Storage page, click Storage Accounts.                                                                                                                                                                                |
| Step 4 | Click the row with the EMC XtremIO account for which you want to create an initiator group.                                                                                                                                 |
| Step 5 | Click View Details.                                                                                                                                                                                                         |
| Step 6 | Click Initiator Groups.                                                                                                                                                                                                     |
| Step 7 | On the Initiator Groups page, click Create.                                                                                                                                                                                 |
| Step 8 | On the Create Initiator Group screen, complete the following fields:                                                                                                                                                        |
|        | a) Enter the initiator group name.                                                                                                                                                                                          |
|        | b) Enter the initiator name in the following format: <i><initiator name="">@<port address=""></port></initiator></i> . If there are multiple initiators, enter the comma separated initiator names in the specified format. |
|        |                                                                                                                                                                                                                             |

Step 9 Click Submit.

### **Renaming an Initiator Group**

- Step 1Choose Physical > Storage.
- **Step 2** On the **Storage** page, choose the pod.
- **Step 3** On the **Storage** page, click **Storage Accounts**.
- **Step 4** Click the row with the EMC XtremIO account for which you want to rename the initiator group.
- Step 5 Click View Details.
- Step 6 Click Initiator Groups.

| Step 7  | Click the row with the initiator group that you wish to rename.            |
|---------|----------------------------------------------------------------------------|
| Step 8  | Click Rename.                                                              |
| Step 9  | On the Rename Initiator Group screen, type in a new name for the Initiator |
| Step 10 | Click Submit                                                               |

# **XtremIO Initiators**

Initiators are added to the cluster by defining them in an Initiator Group. You can define Initiators when adding a group, or later define them by using the Edit Initiator Group option. To remove an Initiator, edit the group and delete the Initiator's properties.

### **Creating an Initiator**

| Step 1 | Choose Physical > Storage. |
|--------|----------------------------|
|        |                            |

Step 2 On the Storage page, choose the pod.

- Step 3 On the Storage page, click Storage Accounts.
- Step 4 Click the row with the EMC XtremIO account for which you want to create an initiator.
- Step 5 Click View Details.
- Step 6 Click Initiators.
- Step 7 On the Initiators page, click Create.
- Step 8 On the Create Initiator screen, complete the following fields:
  - a) Expand **Initiator Group Name** field and choose the group name where you wantto create an initiator.
  - b) Enter the initiator name.
  - c) Enter the initiator name in the following format: *<initiator name>@<port address>*. If there are multiple initiators, enter the comma separated intiator names in the specified format.
  - d) From the OS drop-down list, choose one of the following:
    - Other
    - Windows
    - Linux
    - ESX
    - Solaris
    - AIX
    - HP-UX

```
Step 9
           Click Submit.
```

#### **Modifying an Initiator**

| Step 1 | Choose Physical > Storage.                                                             |
|--------|----------------------------------------------------------------------------------------|
| Step 2 | On the <b>Storage</b> page, choose the pod.                                            |
| Step 3 | On the Storage page, click Storage Accounts.                                           |
| Step 4 | Click the row with the EMC XtremIO account for which you want to modify the initiator. |
| Step 5 | Click Initiators.                                                                      |
| Step 6 | Click the row with the initiator that you want to modify.                              |
| Step 7 | Click Modify.                                                                          |
| Step 8 | On the Modify Initiator screen, you can modify any or all of the following:            |
|        | a) Initiator Name                                                                      |
|        | b) Port address                                                                        |
|        | c) From the <b>OS</b> drop-down list, choose one of the following:                     |
|        | • Other                                                                                |
|        | • Windows                                                                              |
|        | • Linux                                                                                |
|        | • ESX                                                                                  |
|        | • Solaris                                                                              |
|        | • AIX                                                                                  |

• HP-UX

Step 9 Click Submit.

# **Volume Mapping**

When you map a volume to an initiator group, a Logical Unit Number (LUN) is assigned to that volume.

You can map multiple volumes to an initiator group. The initiator group's first mapped volume is assigned a LUN of 1. Additional mapped volumes are assigned LUNs in sequential order. You can also manually enter a LUN ID during mapping. These numbers cannot be changed later so any change must be specified during LUN creation.

### **Mapping a Volume**



You cannot change a LUN ID after a volume is mapped to an initiator group.

- Step 1 Choose Physical > Storage.
- Step 2 On the Storage page, choose the pod.
- Step 3 On the Storage page, click Storage Accounts.

- **Step 4** Click the row with the EMC XtremIO account for which you want to map a volume.
- Step 5 Click View Details.
- Step 6 Click Volume Mapping.
- Step 7 Click Map Volume.
- **Step 8** On the **Map Volume** screen, do the following:
  - a) Expand the **Volume** field and choose the volume that you want to map.
  - b) Expand the Initiator Group and choose the initiator group where you want to map the volume.
  - c) In the LUN ID field, do one of the following:
    - Enter a unique LUN ID to specify the LUN ID that you want to assign to the mapped volume.
    - Leave the field empty to have the EMC XtremIO system automatically assign a LUN ID to the mapped volume.
  - d) Click Submit.

#### **Unmapping a Volume**

| 04 4   |                                                                                  |
|--------|----------------------------------------------------------------------------------|
| Step 1 | Choose <b>Physical</b> > <b>Storage</b> .                                        |
| Step 2 | On the <b>Storage</b> page, choose the pod.                                      |
| Step 3 | On the Storage page, click Storage Accounts.                                     |
| Step 4 | Click the row with the EMC XtremIO account for which you want to unmap a volume. |
| Step 5 | Click View Details.                                                              |
| Step 6 | Click Volume Mapping.                                                            |
| Step 7 | Click the row with the volume that you want to unmap.                            |

- Step 8 Click UnMap Volume.
- Step 9 Click Submit.

# **Consistency Groups**

Consistency Groups (CG) are used to create a consistent image of a set of Volumes, usually used by a single application, such as a database. With XtremIO CGs, you can create a Snapshot of all Volumes in a group, using a single command. This ensures that all Volumes are created at the same time. Many operations that are applied on a single Volume can also be applied on a CG.

### **Adding a Consistency Group**

- **Step 1** Choose **Physical** > **Storage**.
- **Step 2** On the **Storage** page, choose the pod.
- Step 3 On the Storage page, click Storage Accounts.

Step 4 Click the row with the EMC XtremIO account to which you want to add a consistency group.

- Step 5 Click View Details.
- Step 6 Click Consistency Group.
- Step 7 Click Create.
- **Step 8** On the Create EMC XtremIO Consistency Group screen, complete the following fields:
  - a) Enter the consistency group name.
  - b) Expand the Volume field and check the volumes that you want to use for the Consistency Group.

Step 9 Click Submit.

#### **Renaming a Consistency Group**

| Step 1  | Choose <b>Physical</b> > <b>Storage</b> .                                                      |
|---------|------------------------------------------------------------------------------------------------|
| Step 2  | On the <b>Storage</b> page, choose the pod.                                                    |
| Step 3  | On the Storage page, click Storage Accounts.                                                   |
| Step 4  | Click the row with the EMC XtremIO account for which you want to rename the consistency group. |
| Step 5  | Click View Details.                                                                            |
| Step 6  | Click Consistency Group.                                                                       |
| Step 7  | Click the row with the consistency group that you want to rename.                              |
| Step 8  | Click Rename.                                                                                  |
| Step 9  | On the Rename Consistency Group screen, enter the consistency group name.                      |
| Step 10 | Click Submit.                                                                                  |

### **Viewing a Consistency Group Report**

- **Step 1** Choose **Physical** > **Storage**.
- **Step 2** On the **Storage** page, choose the pod.
- **Step 3** On the **Storage** page, click **Storage Accounts**.
- Step 4 Click the row with the EMC XtremIO account for which you want to view the consistency group report.
- Step 5 Click View Details.
- Step 6Click Consistency Group.<br/>A list of Consistency Groups available under the EMC XtremIO account is displayed.

#### Adding a Volume to a Consistency Group

Step 1 Choose Physical > Storage.

| Step 2  | On the <b>Storage</b> page, choose the pod.                                                                                    |
|---------|--------------------------------------------------------------------------------------------------------------------------------|
| Step 3  | On the Storage page, click Storage Accounts.                                                                                   |
| Step 4  | Click the row with the EMC XtremIO account.                                                                                    |
| Step 5  | Click View Details.                                                                                                            |
| Step 6  | Click Consistency Group.                                                                                                       |
| Step 7  | Click the row with the consistency group to which you want to add a volume.                                                    |
| Step 8  | Click Add Volume.                                                                                                              |
| Step 9  | On the Add Volume to Consistency Group screen, expand Volume and check a volume that you want to add to the consistency group. |
| Step 10 | Click Submit.                                                                                                                  |

### **Removing a Volume from a Consistency Group**

| Step 1  | Choose Physical > Storage.                                                                                                                                |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Step 2  | On the <b>Storage</b> page, choose the pod.                                                                                                               |
| Step 3  | On the Storage page, click Storage Accounts.                                                                                                              |
| Step 4  | Click the row with the EMC XtremIO account.                                                                                                               |
| Step 5  | Click View Details.                                                                                                                                       |
| Step 6  | Click Consistency Group.                                                                                                                                  |
| Step 7  | Click the row with the consistency group from which you to remove the volume.                                                                             |
| Step 8  | Click Remove Volume.                                                                                                                                      |
| Step 9  | On the <b>Remove Volume from Consistency Group</b> screen, expand <b>Volume</b> and check the volumes that you want to remove from the consistency group. |
| Step 10 | Click Submit.                                                                                                                                             |

# iSCSI

To establish an iSCSI connection for transferring data, first define an iSCSI portal. An iSCSI portal is an IPv4 address and port associated with a Target port. Each iSCSI Target can be associated with multiple portals. If an IP connection requires routing to remote networks, you can define routing rules that apply to the iSCSI Target ports only.

# **Creating an iSCSI Portal**

- **Step 1** Choose **Physical** > **Storage**.
- **Step 2** On the **Storage** page, choose the pod.
- **Step 3** On the **Storage** page, click **Storage Accounts**.

Step 4 Click the row with the EMC XtremIO account for which you want to create an iSCSI portal.

- Step 5 Click View Details.
- Step 6 Click iSCSI Portals.
- Step 7 Click Create.
- Step 8 On the Create iSCSI Portal screen, complete the following fields:
  - a) Enter the IPv4 address with the CIDR notation (XX.XX.XX.XX/XX).
  - b) Enter the VLAN number for the iSCSI portal in the range of 0 to 4094.
  - c) Expand **iSCSI Target** and check the target that you want to use.
- Step 9 Click Submit.

#### **Creating an iSCSI Route**

| Step 1 | Choose <b>Physical</b> > <b>Storage</b> .                                               |
|--------|-----------------------------------------------------------------------------------------|
| Step 2 | On the <b>Storage</b> page, choose the pod.                                             |
| Step 3 | On the Storage page, click Storage Accounts.                                            |
| Step 4 | Click the row with the EMC XtremIO account for which you want to create an iSCSI route. |
| Step 5 | Click View Details.                                                                     |
| Step 6 | Click iSCSI Routes.                                                                     |
| Step 7 | Click Create.                                                                           |
| Step 8 | On the Create iSCSI Routes screen, complete the following fields:                       |
|        | a) Enter the name of the iSCSI route.                                                   |
|        | b) Enter the destination network address of the iSCSI route with the CIDR notation.     |
|        | c) Enter the gateway IP address.                                                        |
| Sten 9 | Click Submit.                                                                           |

# **Snapshots**

Snapshots are instantaneous copy images of Volume data. The state of the data captured is exactly as it appeared at the specific point in time that the Snapshot was created. This enables you to save the Volume data state and then access the specific Volume data whenever needed, including after the source Volume has changed.

A Snapshot can be taken either directly from a source Volume or from other Snapshots within a source Volume's group (Volume Snapshot Group). XtremIO Snapshots are by default read-write, but can be created as read-only to maintain immutability.

The source data remains available without interruption, while the Snapshot can be used to perform other functions on the data. Changes made to the Snapshot's source do not affect the Snapshot data.

XtremIO Snapshots are space-efficient both in terms of metadata consumed and physical capacity. Snapshots are implemented using redirect-on-write methodology. New writes to the source Volume (or Snapshot) are

redirected to new locations, and only metadata is updated to point to the new data location. This method guarantees that there is no performance degradation while Snapshots are created.

#### **Creating a Snapshot Scheduler**

- **Step 1** Choose **Physical** > **Storage**.
- **Step 2** On the **Storage** page, choose the pod.
- **Step 3** On the Storage page, click Storage Accounts.
- **Step 4** Click the row with the EMC XtremIO account for which you want to create a snapshot scheduler.
- Step 5 Click View Details.
- Step 6 Click Schedulers.
- Step 7 Click Create.
- **Step 8** On the Create Snapshot Scheduler screen, complete the following fields:
  - a) From the Scheduler to be created on drop-down list, choose Volumes, Consitency Group, or Snapshot Set and then do one of the following:
    - Expand Volume and check the volume that you want to use.
    - Expand Consitency Group and check the consistency group that you want to use.
    - Expand Snapshot Set and check the snapshot set that you want to use.
  - b) From the Schedule drop-down list, choose either Fixed Interval or Explicit Time and then do one of the following.
    - In the Snapshot Fixed Schedule field, enter the desired time in the following format: hh:mm:ss.
    - Enter the snapshot explicit schedule and choose the snapshot explicit schedule day.
  - c) In the Number of Snapshots to Keep field, enter a number of snapshots to be saved.
  - d) If a suffix is required for the scheduler, enter it in the Suffix field.
  - e) From the Snapshot Type drop-down list, choose Read/Write or Read Only.
- Step 9 Click Submit.

#### **Viewing Snapshot Sets**

A Snapshot Set is a group of Snapshots that were taken using a single command and represents a point in time of a group. A Snapshot Set can be the result of a Snapshot taken on a CG, on another Snapshot Set, or on a set of Volumes that were selected manually. A Snapshot Set maintains a relationship with the ancestor from which it was created.

- Step 1 Choose Physical > Storage.
- **Step 2** On the **Storage** page, choose the pod.
- **Step 3** On the **Storage** page, click **Storage Accounts**.
- **Step 4** Click the row with the EMC XtremIO account.
- Step 5 Click View Details.

#### Step 6 Click Snapshot Sets.

A list of Snapshot Sets is displayed. You can also click **Snapshots** and see more information about the Snapshot Sets.

#### **Creating a Snapshot Set**



- **Note** The **Create Snapshot Set** feature is also available under the **Snapshots** tab. The steps used to create a Snapshot Set are identical.
- **Step 1** Choose **Physical** > **Storage**.
- **Step 2** On the **Storage** page, choose the pod.
- **Step 3** On the **Storage** page, click **Storage Accounts**.
- **Step 4** Click the row with the EMC XtremIO account for which you want to create a snapshot set.
- Step 5 Click View Details.
- Step 6 Click Snapshot Sets.
- Step 7 Click Create.
- **Step 8** On the **Create Snapshot Set** screen, complete the following fields:
  - a) Enter a name in the Snapshot Set Name field.
  - b) (Optional). Enter a suffix for the snapshot name in the Snapshot Suffix field. (Optional)
  - c) From the Type drop-down list, choose Read/Write or Read Only.
  - d) From the **Snapshot Origin Type** drop-down list, choose **Volumes**, **Consitency Group**, or **Snapshot Set** and then do one of the following:
    - Expand Volume and check the volumes that you want to use.
    - Expand Consitency Group and check the consistency group that you want to use.
    - Expand Snapshot Set and check the snapshot set that you want to use.
- Step 9 Click Submit.

# **System Reports**

Cisco UCS Director XtremIO provides the following System Reports:

• Clusters Report

The following reports are displayed as child reports under the Clusters Report.

- Bricks Report
- Storage Controllers Report
- SSDs Report
- Data Protection Report

- X-Env Report
- Targets Report

### **Viewing System Reports**

| Step 1 | Choose Physical > Storage.                                                                                                                    |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Step 2 | On the <b>Storage</b> page, choose the pod.                                                                                                   |
| Step 3 | On the Storage page, click Storage Accounts.                                                                                                  |
| Step 4 | Click the row with the EMC XtremIO account for which you want to view system reports.                                                         |
| Step 5 | Click View Details.                                                                                                                           |
| Step 6 | Click Clusters.                                                                                                                               |
| Step 7 | Click the row with the cluster for which you want to view system reports.                                                                     |
| Step 8 | Click <b>View Details</b> .<br>The child reports are available as separate tabs. Clicking the desired tab displays the details of the report. |

# **Other Configurations**

### **Viewing the Email Notifier**

| Step 1 | Choose <b>Physical &gt; Storage</b> .                                            |
|--------|----------------------------------------------------------------------------------|
| Step 2 | On the <b>Storage</b> page, choose the pod.                                      |
| Step 3 | On the Storage page, click Storage Accounts.                                     |
| Step 4 | Click the row with the EMC XtremIO account.                                      |
| Step 5 | Click View Details.                                                              |
| Step 6 | Click Clusters .                                                                 |
| Step 7 | Click the row with the cluster for which you want to view the email notifier.    |
| Step 8 | Click View Details.                                                              |
| Step 9 | Click <b>Email Notifier</b> .<br>Details about the Email Notifier are displayed. |

# **Viewing the SNMP Notifier**

- **Step 1** Choose **Physical** > **Storage**.
- **Step 2** On the **Storage** page, choose the pod.
- **Step 3** On the **Storage** page, click **Storage Accounts**.

| Step 4 | Click the row with the EMC XtremIO account.                                    |
|--------|--------------------------------------------------------------------------------|
| Step 5 | Click View Details.                                                            |
| Step 6 | Click Clusters .                                                               |
| Step 7 | Click the row with the cluster for which you want to view the SNMP notifier.   |
| Step 8 | Click View Details.                                                            |
| Step 9 | Click <b>SMTP Notifier</b> .<br>Details about the SMTP Notifier are displayed. |

# **Viewing the Syslog Notifier**

- **Step 2** On the **Storage** page, choose the pod.
- **Step 3** On the **Storage** page, click **Storage Accounts**.
- **Step 4** Click the row with the EMC XtremIO account.
- Step 5 Click View Details.
- **Step 6** Click **Clusters** tab.
- **Step 7** Click the row with the cluster for which you want to view the syslog notifier.
- Step 8 Click View Details.
- Step 9Click Syslog Notifier.<br/>Details about the Syslog Notifier are displayed.