



Cisco UCS Director Tech Module

EMC XtremIO

Version: 1.0

October 2016

Agenda

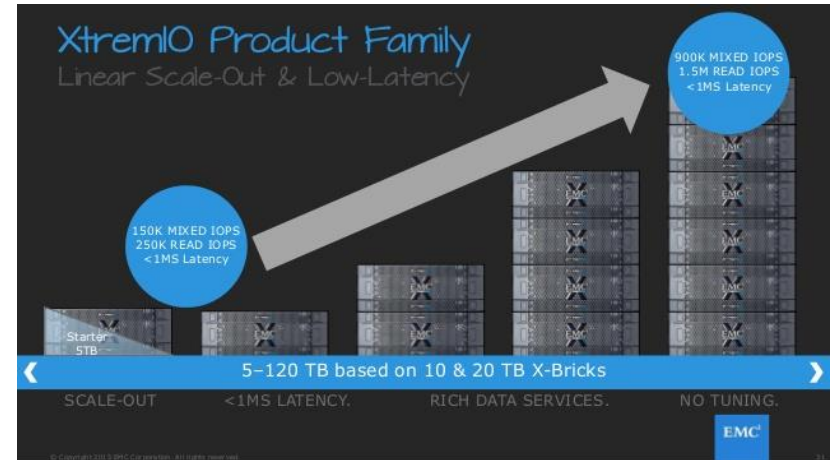
- Overview & Architecture
- Hardware & Software Compatibility
- Licensing
- Orchestration Capabilities
- Reports
- Example Use-Cases



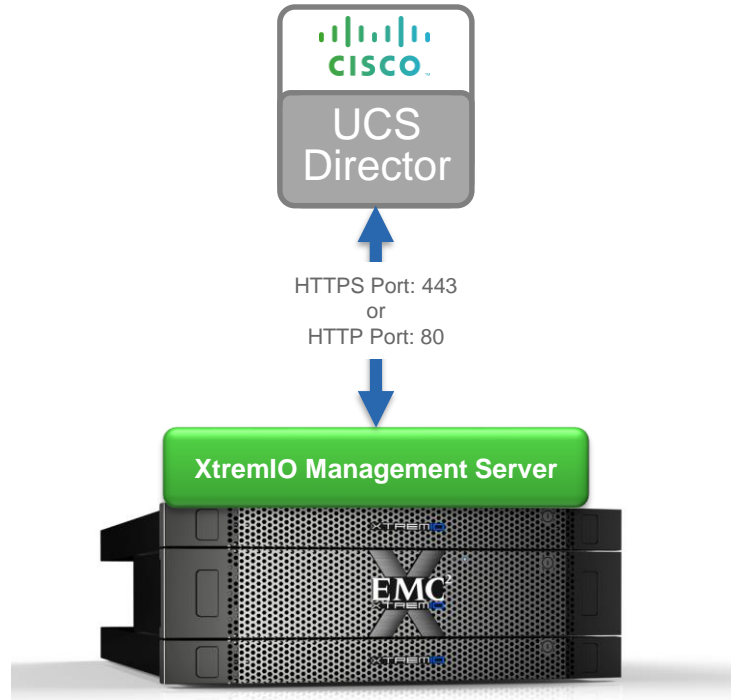
Architecture & Overview

EMC XtremIO Architecture

- EMC XtremIO is an all-flash storage system
- Based on a scale-out architecture using building blocks called “X-Bricks”
- X-Bricks can be clustered together to grow performance and capacity as needed

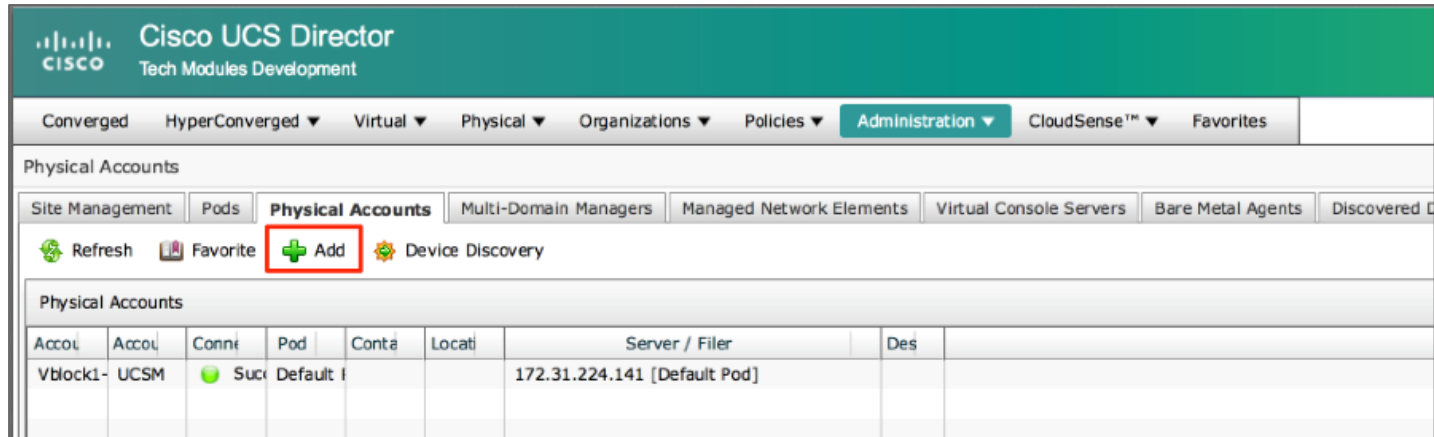


UCS Director and EMC XtremIO Integration



Adding an XtremIO Account

- Navigate to **Administration** → **Physical Accounts**, choose the **Physical Accounts** tab and click **Add**



The screenshot shows the Cisco UCS Director interface. The top navigation bar includes 'Administration' and 'Physical Accounts' tabs. The 'Physical Accounts' tab is active, and the 'Add' button is highlighted with a red box. Below the navigation bar, there is a table of Physical Accounts.

Account	Account	Conn	Pod	Conta	Locati	Server / Filer	Des
Vblock1-	UCSM	Success	Default			172.31.224.141 [Default Pod]	

Adding an XtremIO Account

- Select the appropriate **Pod**, **Storage** as the **Category** and **XtremIO** as the **Account Type**

Add Account

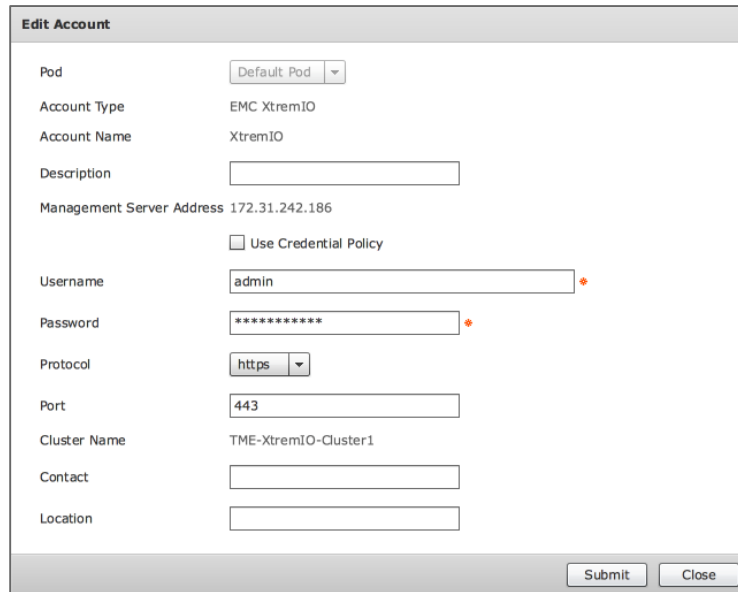
Pod *

Category *

Account Type *

Adding an XtremIO Account

- Add the appropriate information pertaining to the EMC XtremIO system being added to UCS Director



The screenshot shows a web form titled "Edit Account" with the following fields and values:

Field	Value
Pod	Default Pod
Account Type	EMC XtremIO
Account Name	XtremIO
Description	
Management Server Address	172.31.242.186
Use Credential Policy	<input type="checkbox"/>
Username	admin
Password	*****
Protocol	https
Port	443
Cluster Name	TME-XtremIO-Cluster1
Contact	
Location	

At the bottom of the form are "Submit" and "Close" buttons.



Hardware & Software Compatibility

IMPORTANT!!

- The following slide featuring support information may be out of date
- **ALWAYS** check the most up to date version of the UCS Director Compatibility Matrix
- The latest Compatibility Matrix and other supporting UCS Director documentation can be found at the following location:

http://www.cisco.com/c/en/us/td/docs/unified_computing/ucs/ucs-director/doc-roadmap/b_UCSDirectorDocRoadmap.html

UCS Director XtremIO Array Support

(As of UCS Director 6.0)

- Supports XtremIO Arrays running the following versions of Operating Environments
 - 4.0.1
 - 4.0.2-80

Note: For up to date supported versions, please refer [UCS Director Compatibility Matirix](#)

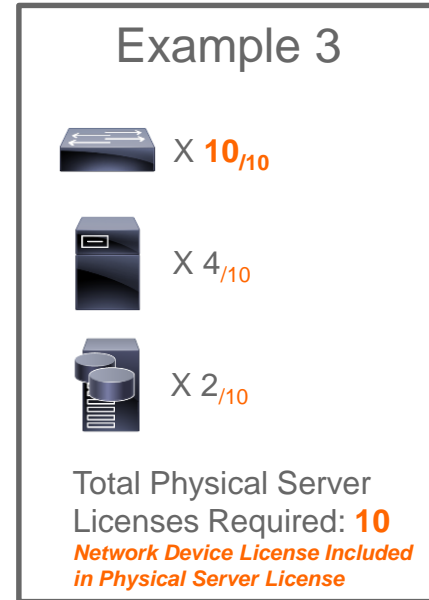
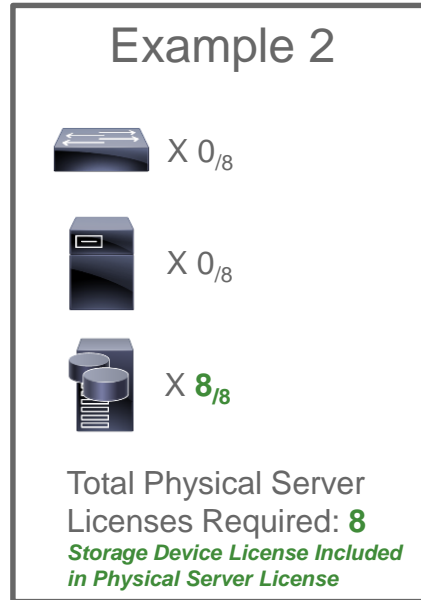
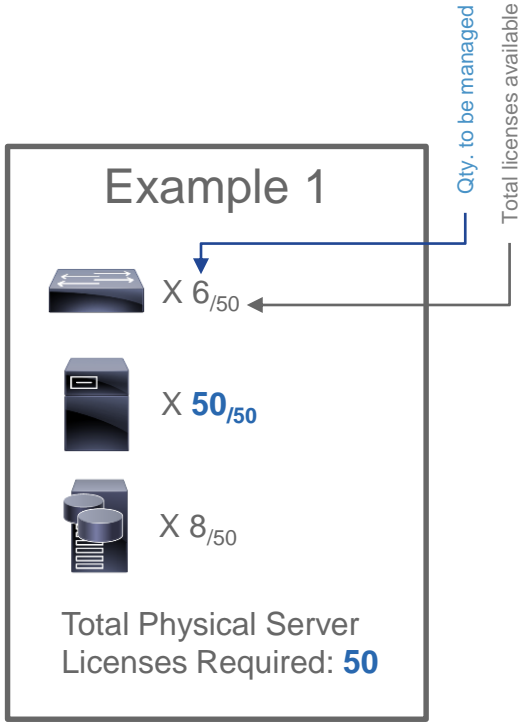


Licensing

Licensing Information

- UCS Director licensing is purchased solely in the form of physical server licenses
- Each physical server license includes a storage device license and a network device license as well.
- UCS Director tracks the number of physical servers, storage and network devices being managed against the number of installed licenses.
- If additional storage and/or network device licenses are required, you can purchase additional physical server licenses
- EMC XtremIO storage array is licensed per storage processor. To manage one XtremIO Brick, you need minimum of two storage licenses.

Licensing Examples





Orchestration Capabilities

Orchestration Capabilities

Volumes

- Create XtremIO Volume
- Delete XtremIO Volume
- Modify XtremIO Volume

Initiators

- Add XtremIO Initiator
- Delete XtremIO Initiator
- Modify XtremIO Initiator

Initiator Groups

- Create XtremIO Initiator Group
- Rename XtremIO Initiator Group
- Delete XtremIO Initiator Group

LUN Mappings

- Map XtremIO LUN
- UnMap XtremIO LUN

Consistency Groups

- Add XtremIO Volume to Consistency Group
- Create XtremIO Consistency Group
- Remove XtremIO Volume from Consistency Group
- Rename XtremIO Consistency Group
- Delete XtremIO Consistency Group

iSCSI Portals

- Create XtremIO iSCSI Portal
- Delete XtremIO iSCSI Portal

iSCSI Routes

- Create XtremIO iSCSI Route
- Delete XtremIO iSCSI Route

Snapshots

- Create XtremIO Snapshot
- Delete XtremIO Snapshot

Snapshot Sets

- Create XtremIO Snapshot Set
- Delete XtremIO Snapshot Set

Snapshot Scheduler

- Create XtremIO Scheduler
- Delete XtremIO Scheduler
- Modify XtremIO Scheduler

vSphere VMFS Datastore Configuration

- Associate XtremIO LUN as Datastore



Reports

EMC XtremIO Storage Array Reports

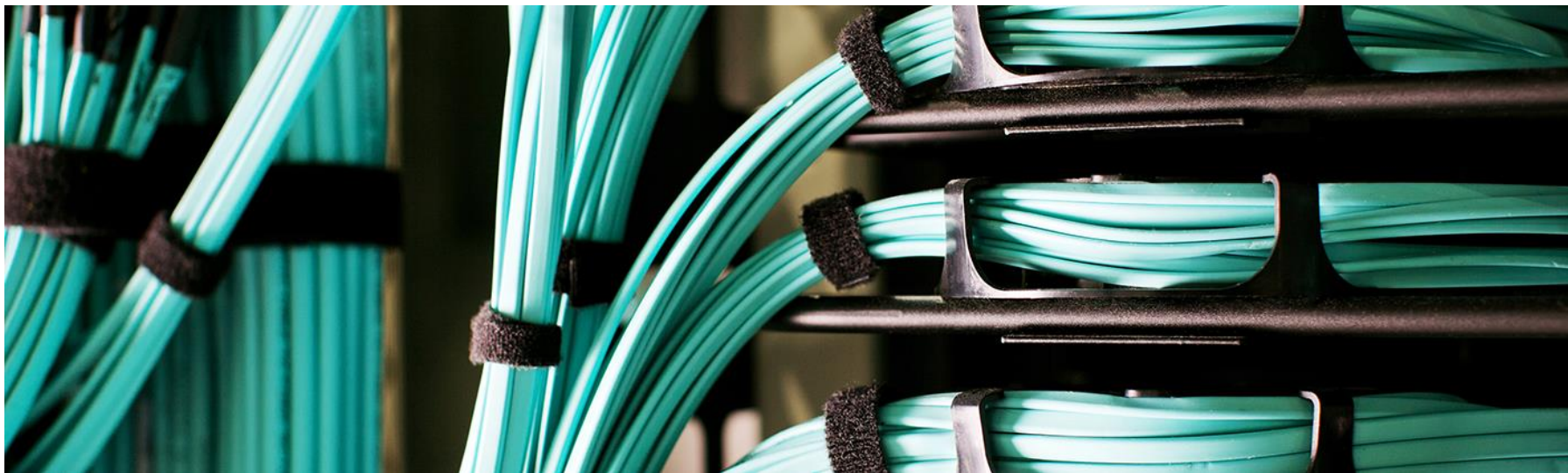
- UCS Director discovers XtremIO Storage Array configuration through an inventory process and provides the below reports

[\[Under XtremIO Storage Account\]](#)

- Clusters
- Volumes
- Initiator Groups
- Initiators
- LUN Mapping
- Consistency Group
- iSCSI Portals
- iSCSI Routes
- Snapshot Sets
- Snapshots
- Schedulers

[\[Under XtremIO Storage Account → EMC XtremIO Clusters → View Details\]](#)

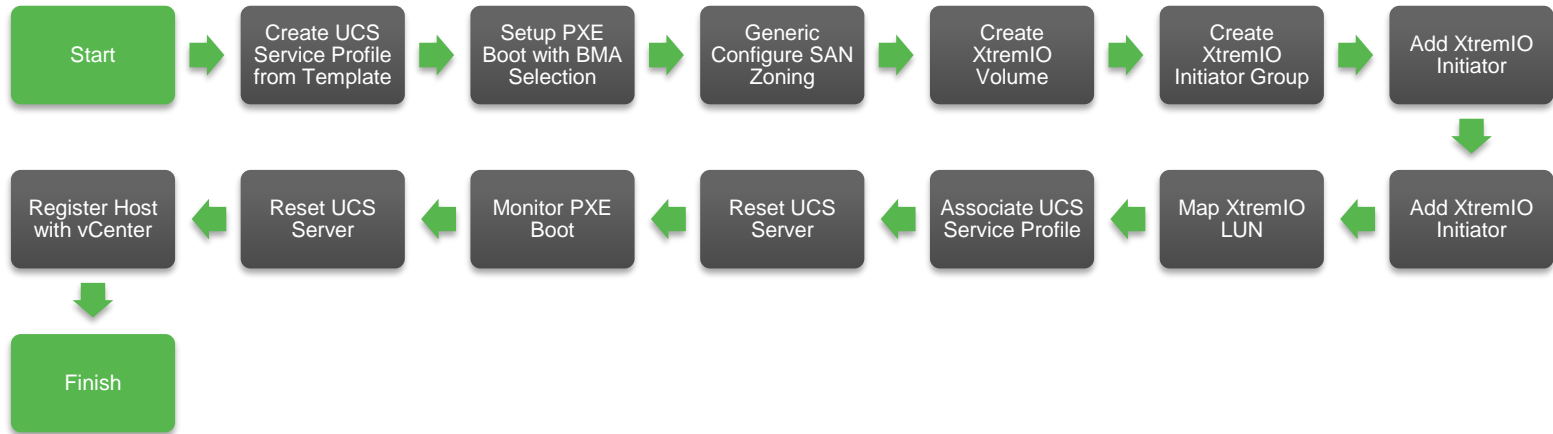
- X-Bricks
- Storage Controllers
- Data Protection Groups
- SSDs
- xEnvs
- Targets
- SNMP Notifier
- Email Notifier
- SysLog Notifier



Example Use-Cases

Use-Case #1: EMC XtremIO ESXi Bare Metal Provisioning

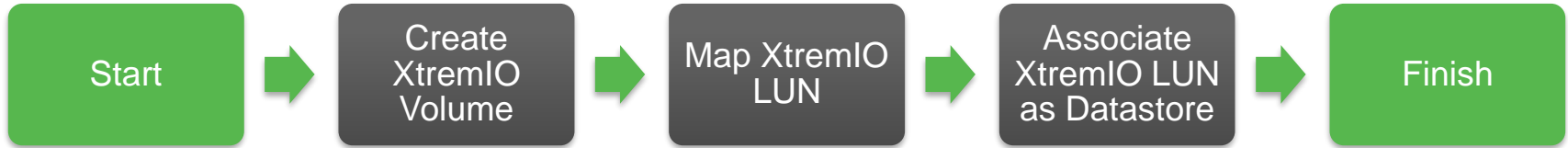
- Workflow to provision OS (ESXi) on bare-metal servers with SAN Boot from XtremIO Storage Array



Note: For a sample workflow, please refer <https://communities.cisco.com/docs/DOC-70064>

Use-Case #2: EMC XtremIO Provision VMFS Datastore

- Workflow to provision VMFS Datastore on VMware ESXi Cluster



Note: For a sample workflow, please refer <https://communities.cisco.com/docs/DOC-70065>



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TOMORROW starts here.