Cisco UCS Director Tech Module

Cisco UCS Manager (UCSM)

Version: 1.0

September 2016

Agenda

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

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Architecture & Overview

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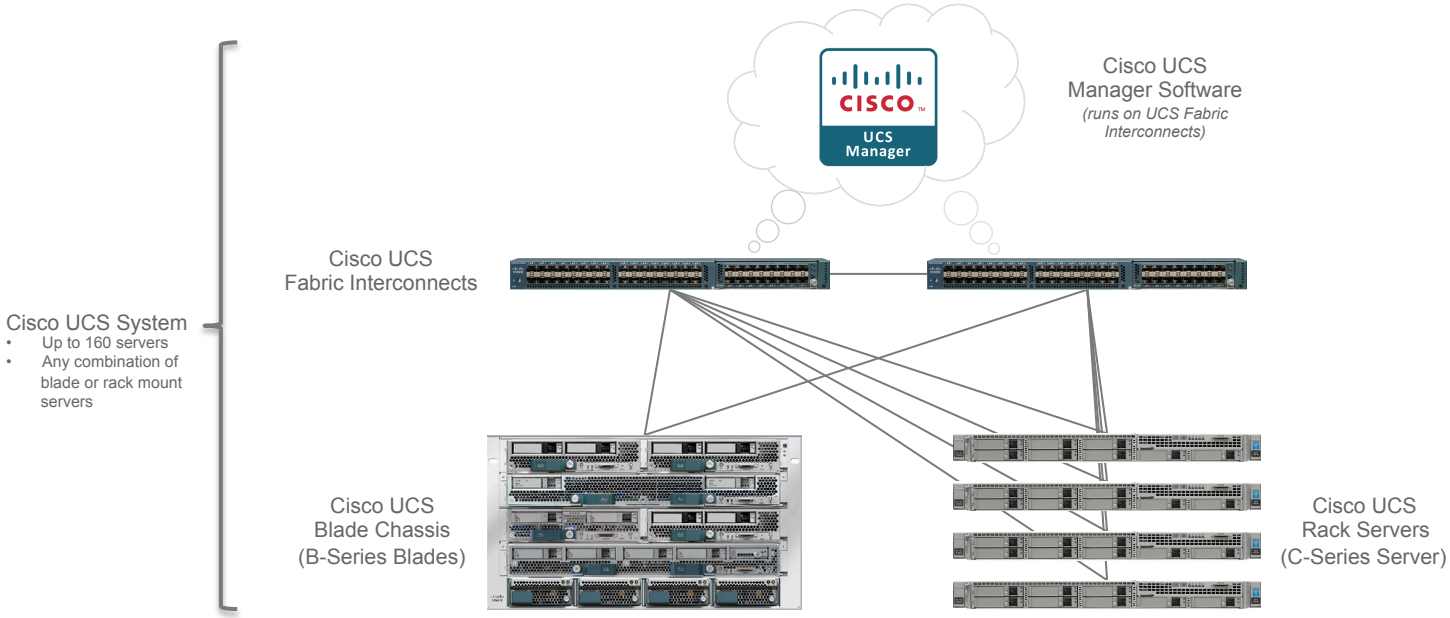
UCS System Architecture



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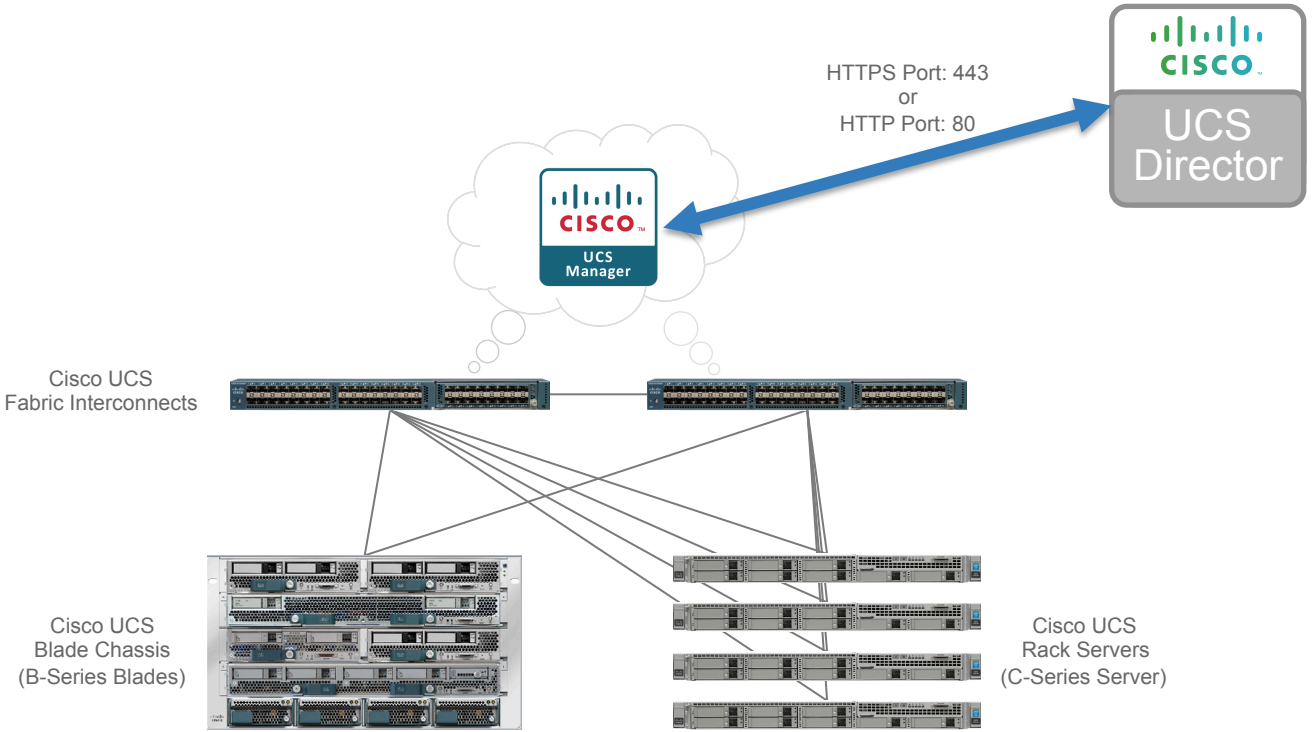
UCS Director and UCS Manager Integration



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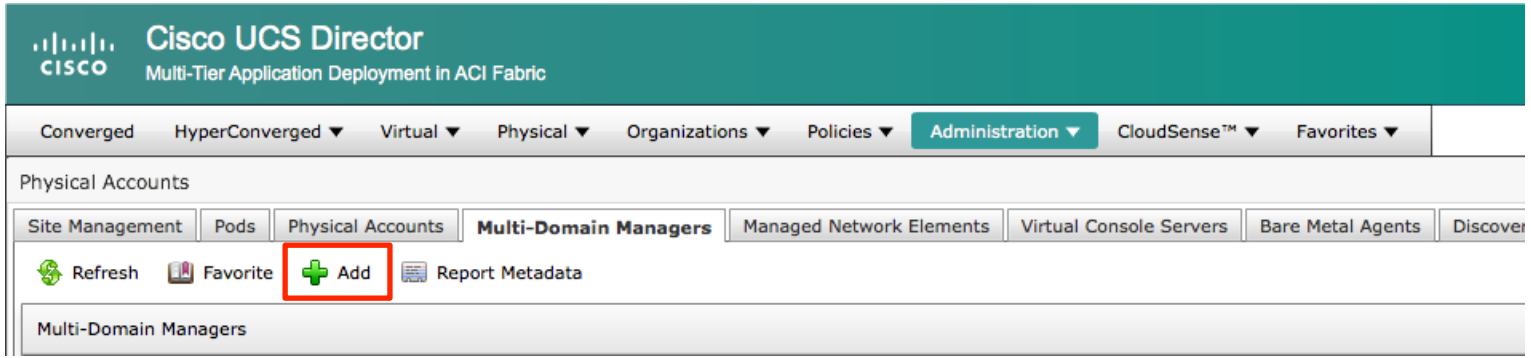
Adding a UCS Manager Account

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



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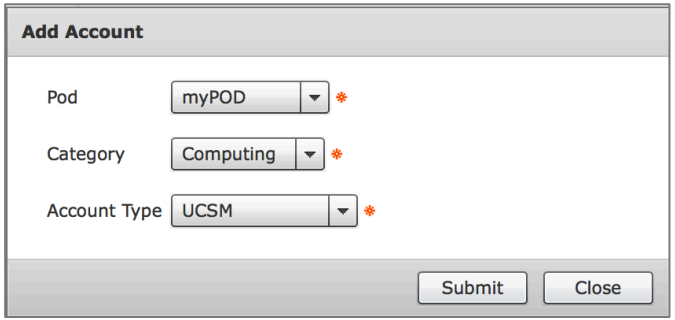
Adding a UCS Manager Account

- Select which **Pod** to add the account to
- Select **Computing** as the **Category**
- Set **Account Type** to **UCSM**



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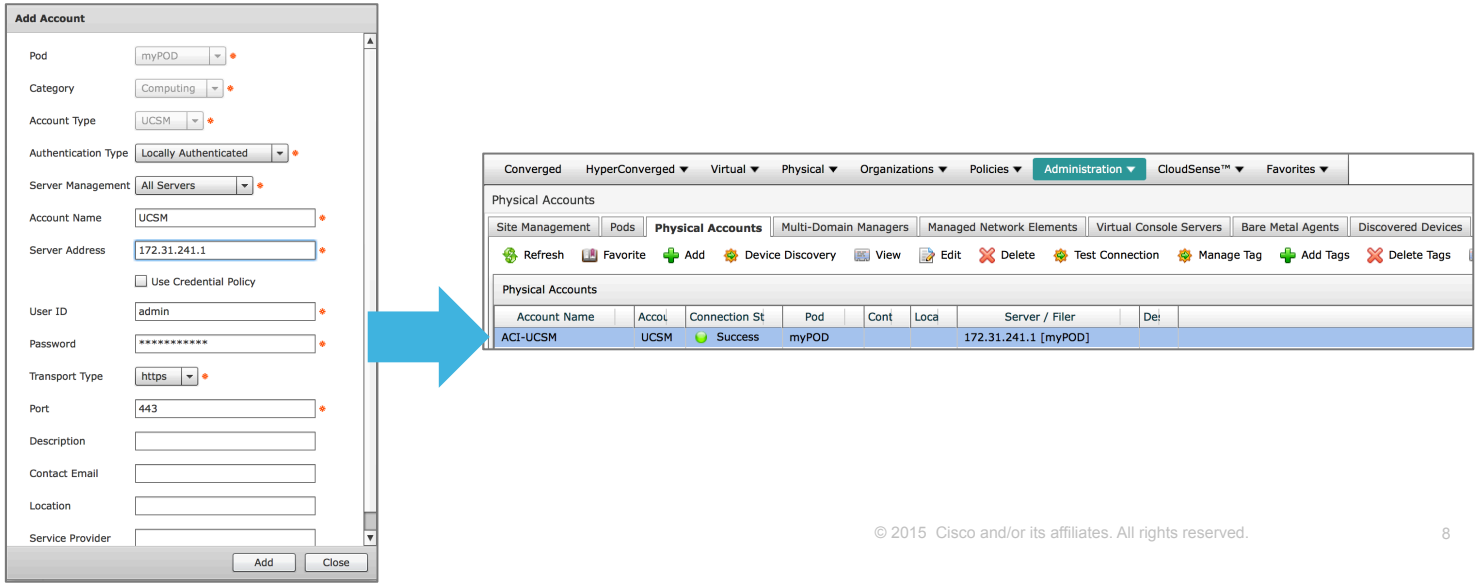
Adding a UCS Manager Account

- Enter the information about the UCS Manager system to add the account



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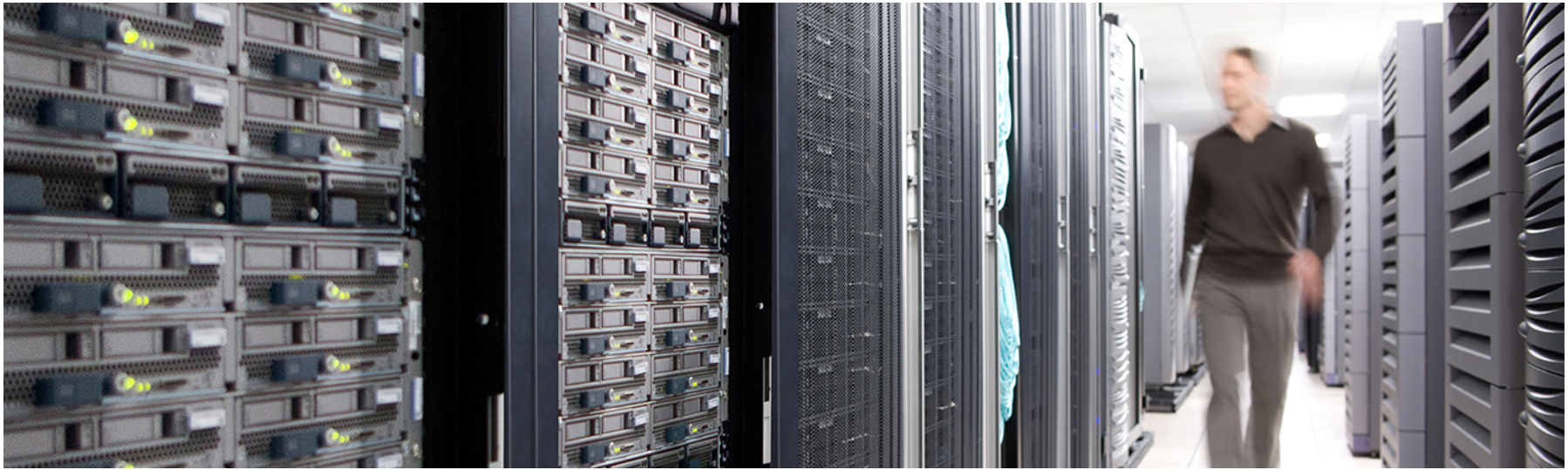

Hardware & Software Compatibility

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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

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UCS Director Cisco UCS Manager Support

(As of UCS Director 6.0)

Supported Cisco UCS Hardware Platforms

- Supports all Cisco UCS hardware compatible with supported UCS software versions
- UCS Hardware and Software Interoperability Matrices: http://www.cisco.com/en/US/products/ps10477/prod_technical_reference_list.html

Supported Cisco UCS Software Versions

- 2.2(1*)
- 2.2(2*)
- 2.2(3*)
- 2.2(4*)
- 2.2(5*)
- 2.2(6*)
- 2.2(7*)
- 2.2(8*)
- 3.1(1*)

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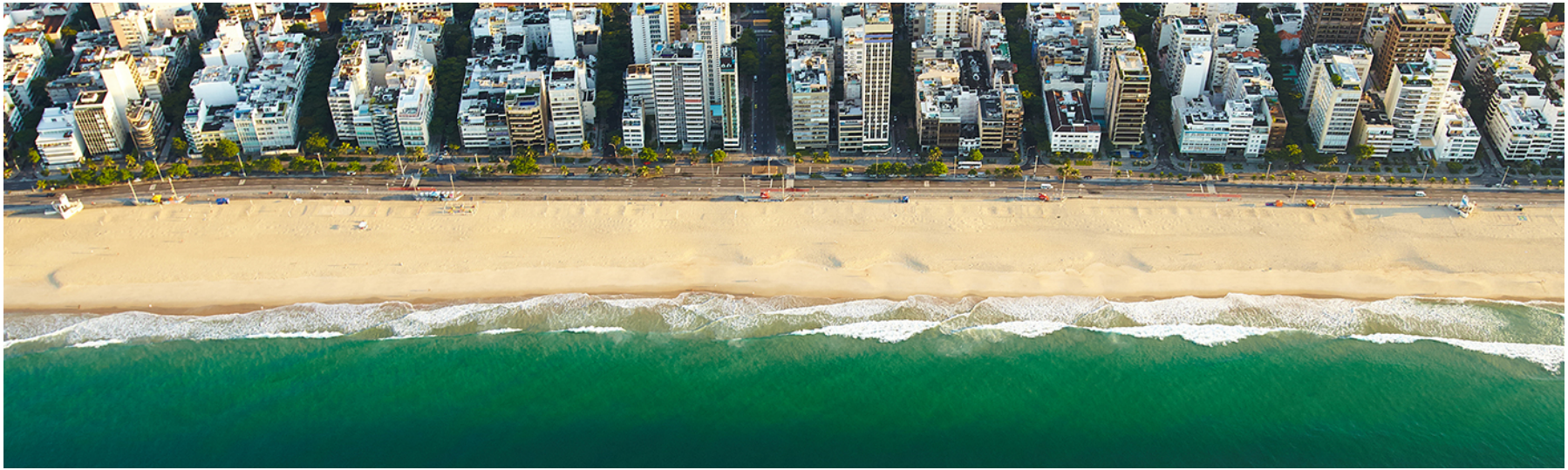

Licensing

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Licensing Information

- UCS Director licensing is purchased solely in the form of physical server licenses
- However, included in each physical server license purchased is a storage device license and a network device license
- In addition to physical server tracking and licensing, UCS Director tracks the number of storage and network devices being managed against the number of licenses available
- If additional storage and/or network device licenses are required, they can be acquired by purchasing additional physical server licenses

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Licensing Information

- Licensing is not dependent on the UCS Manager account itself
- Licensing is tied to the number of physical servers being managed within the UCS Manager account
- Each managed physical server counts as a physical server license in UCS Director

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Licensing Information

- **NOTE!**: You can choose specific servers (a subset) within a UCS Manager account that you want UCS Director to manage

1. Edit the UCSM account, set the **Server Management** option to **Selected Servers**
2. Navigate to **Physical** → **Compute**, then click on the UCS Manager account in the left pane
3. Select the **UCS Discovered Servers** tab in the right pane
4. Select the server(s) to be managed by UCS Director and click the **Manage Servers** action button

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Licensing Examples

Example 1

Qty. to be managed

Total licenses available

X $6_{/50}$

X **$50_{/50}$**

X $8_{/50}$

Total Physical Server Licenses Required: **50**

Example 2

X $0_{/8}$

X $0_{/8}$

X **$8_{/8}$**

Total Physical Server Licenses Required: **8**

Storage Device License Included in Physical Server License

Example 3

X **$10_{/10}$**

X $4_{/10}$

X $2_{/10}$

Total Physical Server Licenses Required: **10**

Network Device License Included in Physical Server License

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Orchestration Capabilities

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Orchestration Capabilities

Service Profiles
- Create UCS Service Profile
- Select UCS Service Profile
- Delete UCS Service Profile
- Disassociate UCS Service Profile
- Associate UCS Service Profile
- Check UCS Service Profile Association Status
- Rename UCS Service Profile
- Clone UCS Service Profile
- Unbind UCS Service Profile from Template
- Bind UCS Service Profile to Template

Service Profile Templates
- Create UCS Service Profile from Template
- Associate UCS Service Profile Template
- Disassociate UCS Service Profile Template
- Clone UCS Service Profile Template
- Delete UCS Service Profile Template

Server Pools
- Create UCS Server Pool
- Delete UCS Server Pool
- Add Servers to UCS Server Pool
- Delete Servers from UCS Server Pool

Organizations
- Create UCS Organization
- Delete UCS Organization

Server Actions
- Power On UCS Server
- Power Off UCS Server
- Reset UCS Server Select UCS Server
- Reacknowledge Server Slot
- Server Maintenance
- Disassociate UCS Server
- Manage UCS Servers
- Unmanage UCS Servers
- Verify UCS Server Management State

Policies
- Modify UCS Service Profile Scrub Policy
- Modify UCS Service Profile Boot Policy
- Create Service Profile iSCSI Boot Policy
- Modify Service Profile Boot Policy to Boot From iSCSI
- Delete UCS Boot Policy
- Create UCS Boot Policy
- Modify UCS Boot Policy LUN ID
- Clone UCS Boot Policy
- Modify UCS Boot Policy WWPN
- Change Maintenance Policy

Storage Profiles
- Delete UCS Storage Profile
- Add UCS Storage Profile

VLANs/VLAN Groups
- Add VLANS to VLAN Group
- Delete VLANS from VLAN Group
- Add VLAN Add VLAN to Service Profile
- Delete VLAN from Service Profile
- Delete UCS VLAN Create VLAN Group
- Delete UCS VLAN Group
- Modify UCS VLAN/VLAN Group Org Permissions
- Add VLAN to Multiple UCS Managers

vNICs/vNIC Templates
- Delete VLAN from Service Profile vNIC
- Add VLAN to vNIC Template
- Delete VLAN from vNIC Template
- Add iSCSI vNIC to Service Profile
- Delete iSCSI vNIC from Service Profile
- Add vNIC to UCS Service Profile
- Delete vNIC from Service Profile
- Delete UCS vNIC Template
- Bind UCS Service Profile vNIC to Template
- Unbind UCS ServiceProfile vNIC from Template
- Add UCS vNIC Template

Time
- Add NTP Server to UCSM
- Delete NTP Server from UCSM
- Set Time Zone to UCSM

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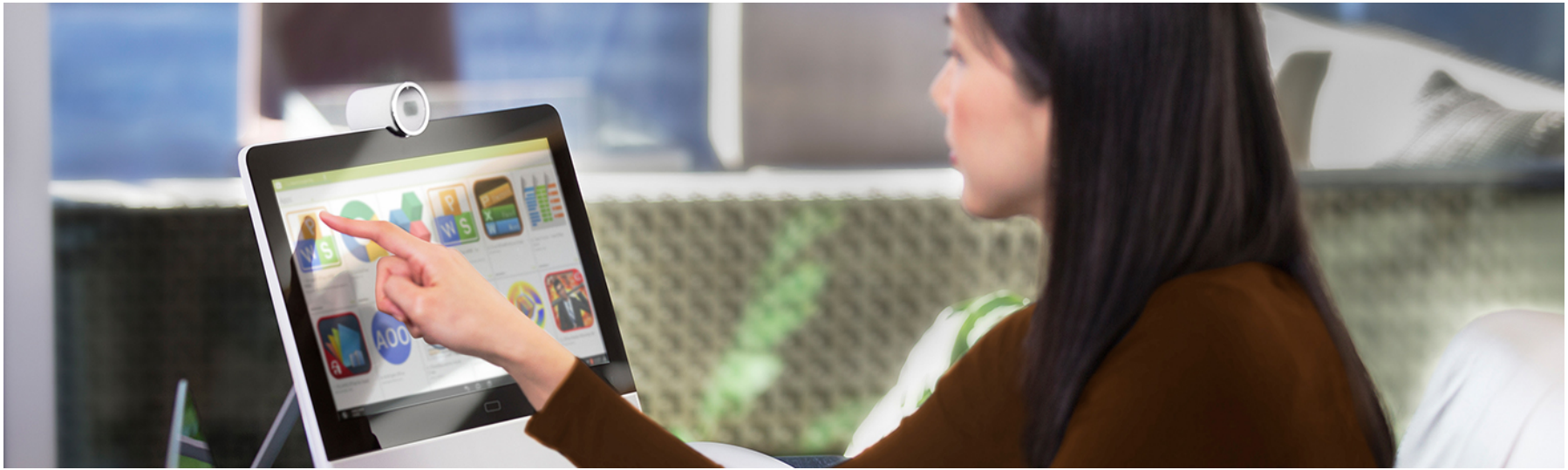

Reports

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Tabular Reports and Information

At UCS Manager (Top) Level

- Fabric Interconnects
- UCS Chassis
- FEX
- Time Zone
- Organizations
- Service Profiles
- Renamed Service Profiles
- Installed Firmware
- Equipment Global Policies
- LAN Global Policies
- iSCSI IP Pool
- UCS Decommissioned Servers
- UCS Servers

- UCS Servers
- UCS Discovered Servers
- System Tasks
- Management IP Pool
- Locales
- VLAN Groups
- VLAN Optimization Sets
- SAN Port Channels
- Storage Profiles
- VLANs
- VSANs
- LAN Port Channels
- QoS System Class
- Flow Control Policies

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Tabular Reports and Information

At Organization Level

- Permitted VLANs
- Boot Policies
- vHBA Templates
- vNIC Templates
- Service Profile Templates
- MAC Pools
- WWNN Pools
- WWPN Pools
- UUID Pools
- DiskGroup Policy
- vMedia Policy
- Network Control Policy
- Server Pools
- FC Adapter Policies
- QoS Policy
- vNIC/vHBA Placement Policies
- Server Pool Policy Qualification
- Server Pool Qualification
- Service Profiles
- IQN Pools
- iSCSI Auth Profiles
- iSCSI Adapter Policies
- LAN Connectivity Policies
- SAN Connectivity Policies
- Storage Connectivity Policies
- Maintenance Policy
- IP Pools
- FC Zones
- Host Firmware Packages
- Faults
- VLAN Groups

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Tabular Reports and Information

At Service Profile Level

- vHBAs
- iSCSI vNICs
- vNICs
- Server Details
- Boot Policies
- FC Zones
- Faults
- Service Request Details

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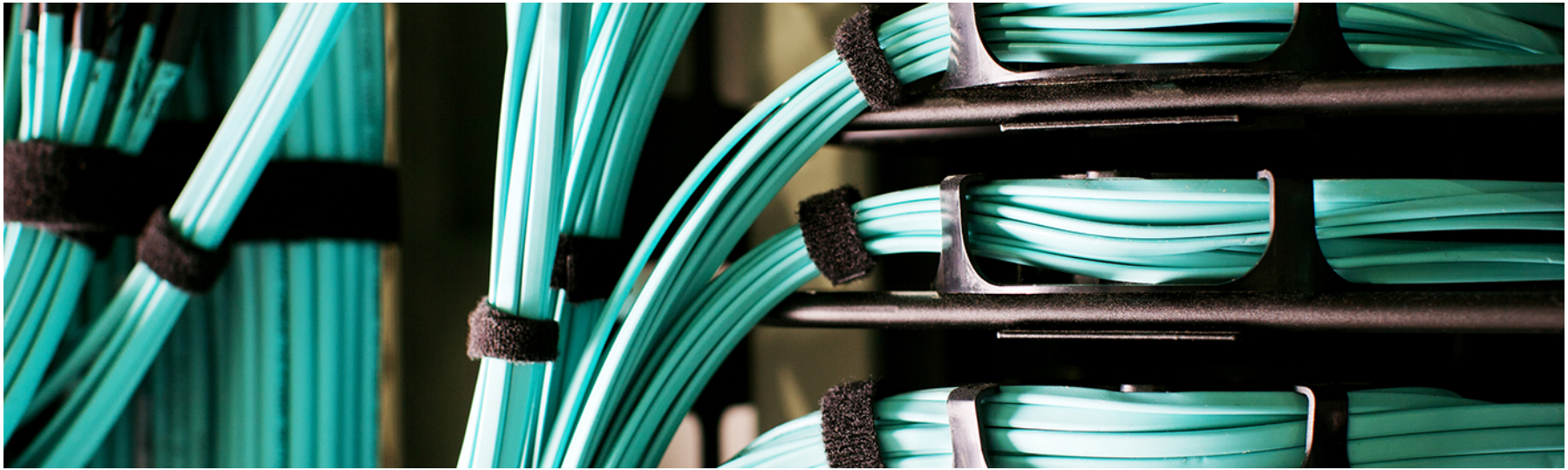

Example Use-Cases

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Example Use-Cases

- Use-Case #1: Deploy Physical Bare Metal Host

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Use Case #1: Deploy Physical Bare Metal Host

- The following use case example highlights how to automate the provisioning and configuration of a new physical bare metal server through UCS Director
- Configuration includes the following related to the physical server…
  - UCS Service Profile
  - Operating System Installation
  - Storage LUN Provisioning
  - SAN Zoning Configuration

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Use Case #1: Deploy Physical Bare Metal Host

Prerequisites that must be in place before running this use-case (workflow)

- UCS Service Profile Template
- UCS Director Bare Metal Agent (BMA) must be installed and added as a Bare Metal Account in UCS Director
- One or more images must be added to the Bare Metal Agent
- Storage controller and SAN must be physically cabled and all components added to UCS Director

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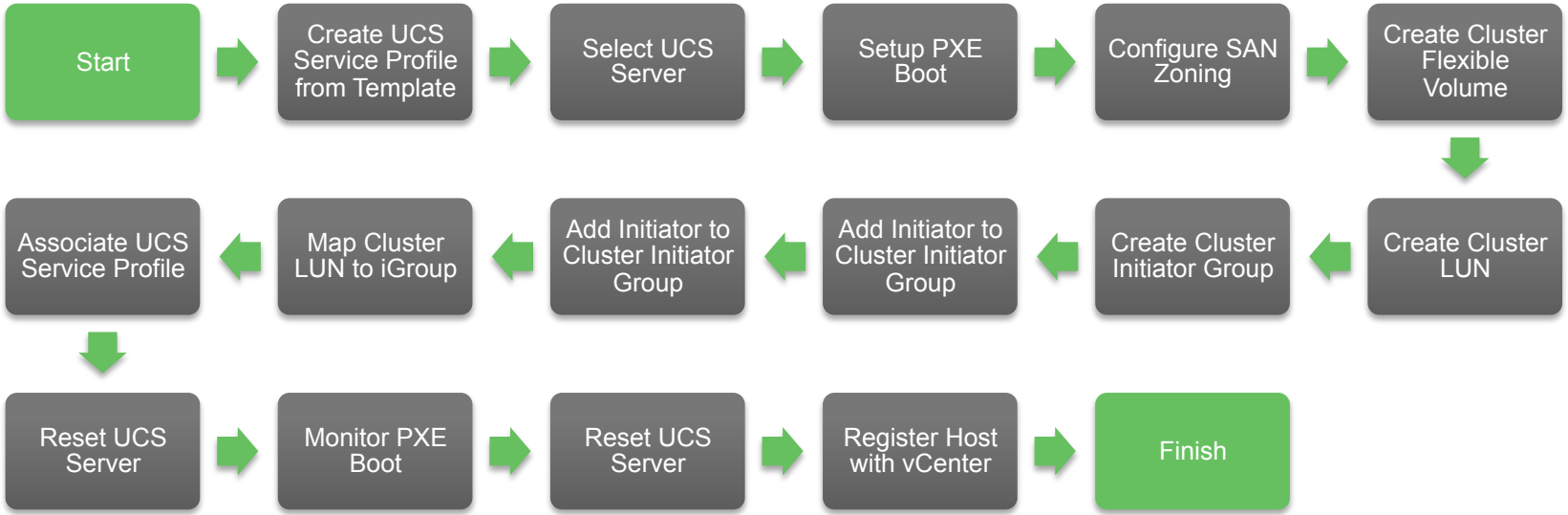
Use Case #1: Deploy Physical Bare Metal Host



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