



Cisco UCS Director Tech Module

Nexus Data Center Switching (Ethernet)

Version: 1.0

September 2016

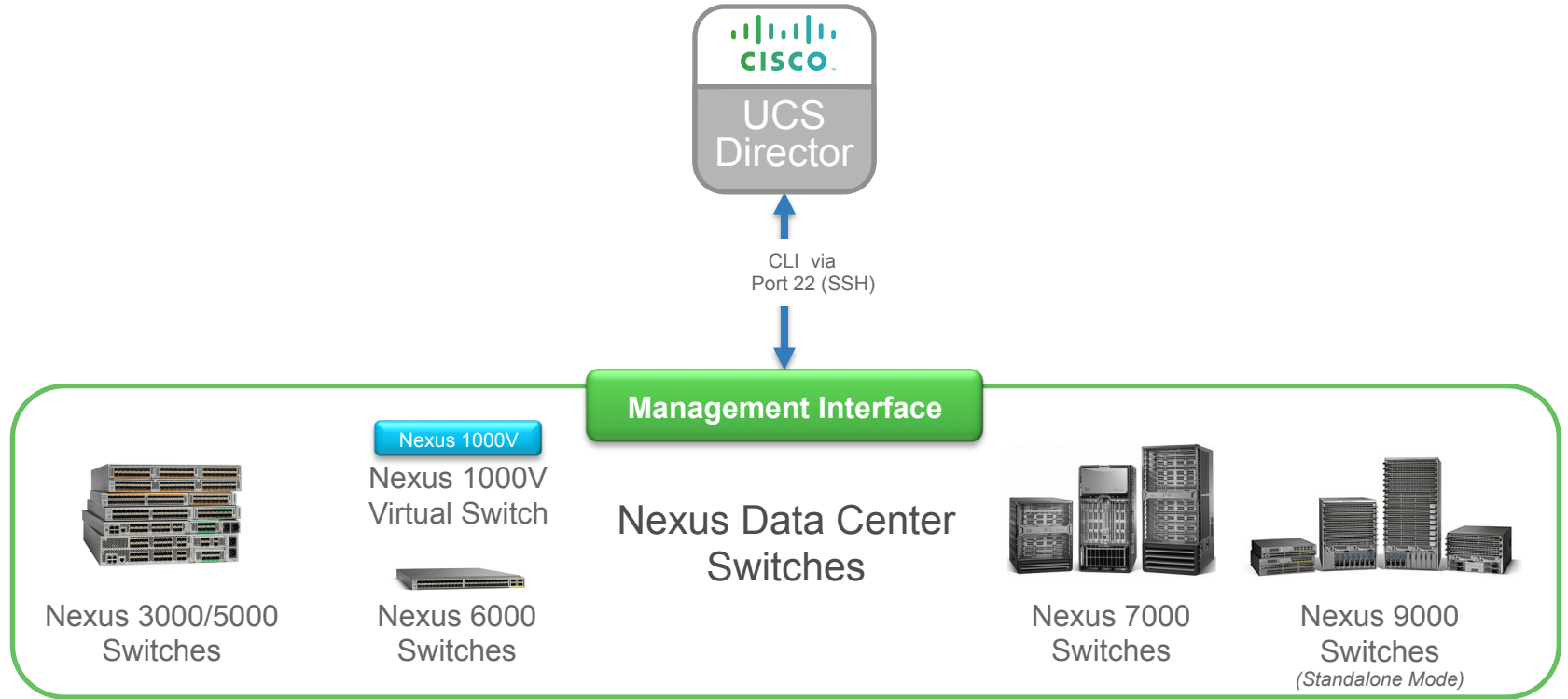
Agenda

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



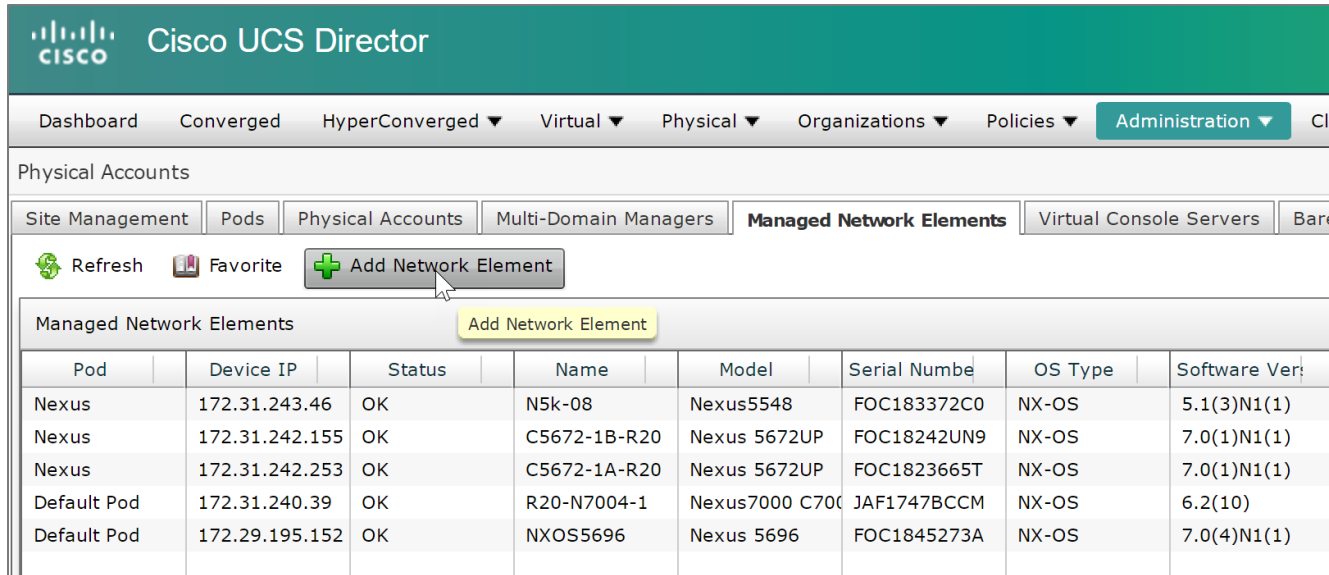
Architecture & Overview

UCS Director and Nexus Switch Integration



Adding a Nexus Data Center Switch

- Navigate to **Administration** → **Physical Accounts**, choose the **Managed Network Elements** tab and click **Add Network Element**



The screenshot shows the Cisco UCS Director interface. The top navigation bar includes 'Administration' and 'Physical Accounts'. The 'Managed Network Elements' tab is selected. A 'Add Network Element' button is highlighted with a yellow box. Below the button is a table of existing network elements.

Pod	Device IP	Status	Name	Model	Serial Number	OS Type	Software Ver.
Nexus	172.31.243.46	OK	N5k-08	Nexus5548	FOC183372C0	NX-OS	5.1(3)N1(1)
Nexus	172.31.242.155	OK	C5672-1B-R20	Nexus 5672UP	FOC18242UN9	NX-OS	7.0(1)N1(1)
Nexus	172.31.242.253	OK	C5672-1A-R20	Nexus 5672UP	FOC1823665T	NX-OS	7.0(1)N1(1)
Default Pod	172.31.240.39	OK	R20-N7004-1	Nexus7000 C7000	JAF1747BCCM	NX-OS	6.2(10)
Default Pod	172.29.195.152	OK	NXOS5696	Nexus 5696	FOC1845273A	NX-OS	7.0(4)N1(1)

Adding a Nexus Data Center Switch

- Select the appropriate **Pod**, **Device Category** and **Protocol**

The screenshot shows a network management interface with a modal dialog titled "Add Network Element". The dialog contains the following fields and values:

- Pod: Nexus
- Device Category: Cisco Nexus OS
- Device IP: 172.31.242.253
- Use Credential Policy:
- Protocol: ssh
- Port: 22
- Login: admin
- Password: *****

Buttons: Submit, Close



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- The following slide featuring support information may be out of date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 Nexus 1000 Distributed Virtual Switch Support

(as of UCS Director 6.0)

with VMware vSphere

Supported Models	Supported Software (NX-OS)
Nexus 1000V for VMware vSphere	4.2(1)SV2(1.1a) 4.2(1)SV2(2.1) 4.2(1)SV2(2.1a) 4.2(1)SV2(2.3) 5.2(1)SV3(1.2) 5.2(1)SV3 (1.3) for VMware vCenter 5.5 5.2(1)SV3(1.4) for VMware vCenter 6.0 5.2(1)SV3(1.6) for VMware vCenter 6.0 5.2(1)SV3(1.10) 5.2(1)SV3(1.15)

UCS Director Nexus 1000 Distributed Virtual Switch Support

(as of UCS Director 6.0)

with Microsoft Hyper-V

Supported Models	Supported Software (NX-OS)
Nexus 1000V for Microsoft Hyper-V	5.2(1)SM1(5.2b) 5.2(1)SM3(1.1) 5.2(1)SM3(1.1a)

UCS Director Nexus 1100 Cloud Services Platform Support (as of UCS Director 6.0)

Supported Models	Supported Software (NX-OS)
Nexus 1110	4.2(1)SP1(5.1a) 5.2(1)SP1(7.2)

UCS Director Nexus 3000 Series Data Center Switch Support (as of UCS Director 6.0)

Supported Models	Supported Software (NX-OS)
Nexus 3016Q Nexus 3064T Nexus 3064X	5.0(3)U5(1e)
Nexus 3048	5.0(3)U5(1e) 6.0(2)U2(1) 6.0(2)U2(2)
Nexus 3172	7.0(3)I2(2a)
Nexus 3548	5.0(3)U5(1c)

UCS Director Nexus 5000 Series Data Center Switch Support

(as of UCS Director 6.0)

Supported Models	Supported Software (NX-OS)
Nexus 5596Q	7.0(7)N1(1)
Nexus 5596UP Nexus 5596T	6.0(2)N2(5)
Nexus 5548UP	5.2(1)N1(4) 6.0(2)N2(5)
Nexus 5548P	5.2(1)N1(4) 5.2(1)N1(7) 5.2(1)N1(8b) 5.2(1)N1(9) 6.0(2)N2(5)
Nexus 5696Q	7.1(1)N1(1) 7.2(1)N1(1)

Supported Models	Supported Software (NX-OS)
Nexus 5672UP	7.0(1) 7.2(1)N1(1)
Nexus C5624Q	7.1(1)N1(1) 7.2(1)N1(1)
Nexus 5648Q	7.1(1)N1(1) 7.1(2)N1(1)
Nexus 56128P	7.1(1)N1(1)

UCS Director Nexus 6000 Series Data Center Switch Support (as of UCS Director 6.0)

Supported Models	Supported Software (NX-OS)
Nexus 6001-64P	6.0(2)N1(2) 7.0(1)N1(1)

UCS Director Nexus 7000 Series Data Center Switch Support (as of UCS Director 6.0)

Supported Models	Supported Software (NX-OS)
Nexus 7702 Nexus 7706 Nexus 7710 Nexus 7718	6.2(8a)
Nexus 7004 Nexus 7009 Nexus 7018	6.2(8a)
Nexus 7010	6.2(8a) 6.2(12) 6.2(14)
Supervisors	6.1(3)

Supported Models	Supported Software (NX-OS)
Supervisor 2E Supervisor 2	6.1(2)
Supervisor 1	6.2(2) 6.2(2a) 6.2(12) 6.2(14)

F-Series I/O Modules	
N7K-F132XP-15 N7K-F248XP-25	N7K-F248XP-25E N7K-F248XT-25E

UCS Director Nexus 9000 Series Data Center Switch Support

(as of UCS Director 6.0)

Supported Models	Supported Software (NX-OS)
Nexus 9136PX	6.1(2)I2(1) 7.0(3)I2(2a)
Nexus 9508	6.1(2)I2(2)
Nexus 9504	7.0(3)I1(2) 7.0(3)I2(2a)
Nexus C9516	7.0(3)I1(1) 7.0(3)I2(2a)
Nexus 9372TX	6.1(2)I3(1)
Nexus 9396TX	6.1(2)I3(1) 7.0(3)I1(2)

Supported Models	Supported Software (NX-OS)
Nexus 9332PQ	7.0(3)I1(1)
Nexus 9372PX	6.1(2)I3(1) 7.0(3)I2(2a)
Nexus 93120	7.0(3)I2(2)
Nexus 93128	7.0(3)I2(1a) 7.0(3)I2(2d)

****All versions pertain to Nexus 9000 switches running in standalone mode only, for ACI mode, see the ACI specific tech module**

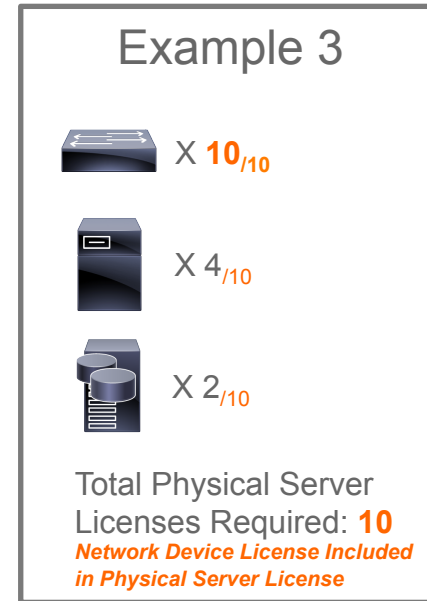
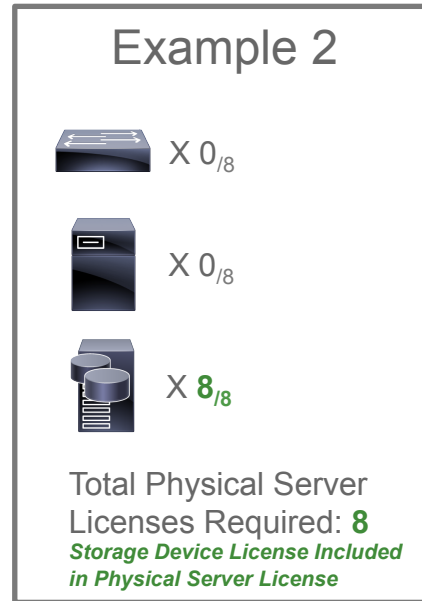
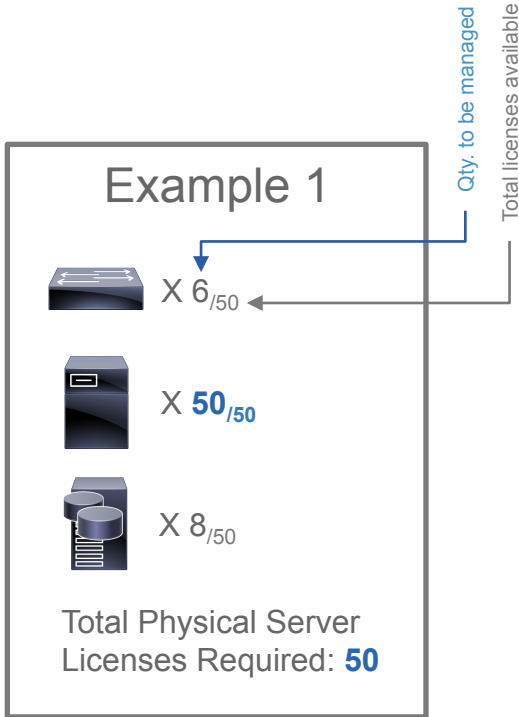


Licensing

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
- Each physical network device (switch) will consume a network device license
- Standalone VSM or VSM HA will require only 1 network device license for UCS Director to manage
- Enabling the VXLAN feature in UCS Director doesn't need any license as base license includes all the features

Licensing Examples





Orchestration Capabilities

Orchestration Capabilities

Spanning-Tree Tasks:

- Configure PVST
- Configure STP PORT
- Configure MST INSTANCE
- Configure MST

VLAN Tasks:

- Create VLAN
- Delete VLAN
- Assign VLAN to Group
- Unassign VLAN from Group

Private VLAN Tasks:

- Create Private VLAN
- Delete Private VLAN
- Associate Private VLAN
- Delete Associate Private VLAN
- Configure Private VLAN Port
- Remove Private VLAN Ports
- Configure Private VLAN Port Profile

VDC Tasks:

- Create N7K VDC
- Remove N7K VDC
- Update N7K VDC
- Allocate Port To VDC
- Remove Port From VDC

VXLAN Tasks:

- Create VXLAN
- Update VXLAN
- Remove VXLAN
- Configure VXLAN Range
- Assign VXLAN to PortProfile
- UnAssign VXLAN PortProfile
- Encapsulate VXLAN PortProfile
- Encapsulate VXLAN Port Profile with Segment
- Create VXLAN Encapsulate segment
- Delete VXLAN Encapsulate segment

SVI Tasks:

- Create SVI
- Remove SVI

Trunk Tasks:

- Configure Trunk
- Configure VTP
- Configure Access
- Update Trunk

QoS Tasks:

- Configure QOS on Nexus 5K
- Configure QOS on Nexus 9K
- Delete N9K QOS Profile
- Configure QOS on Nexus 1K

HSRP Tasks

- Create HSRP
- Update HSRP
- Remove HSRP

Port Profile Tasks:

- Create Port-Profile
- Delete Port-Profile
- Update Port-Profile
- Inherit Port Profile
- Delete Inherit Port Profile

Port Profile Tasks:

- Create Port-Profile
- Delete Port-Profile
- Update Port-Profile
- Inherit Port Profile
- Delete Inherit Port Profile

HSRP Tasks:

- Create HSRP
- Update HSRP
- Remove HSRP

Access-Lists Tasks:

- Create ACL Entry
- Delete ACL Entry
- Add IP ACL Rule
- Delete IP ACL Rule
- Delete MAC ACL Rule
- Add MAC ACL Rule

Port Channel Tasks:

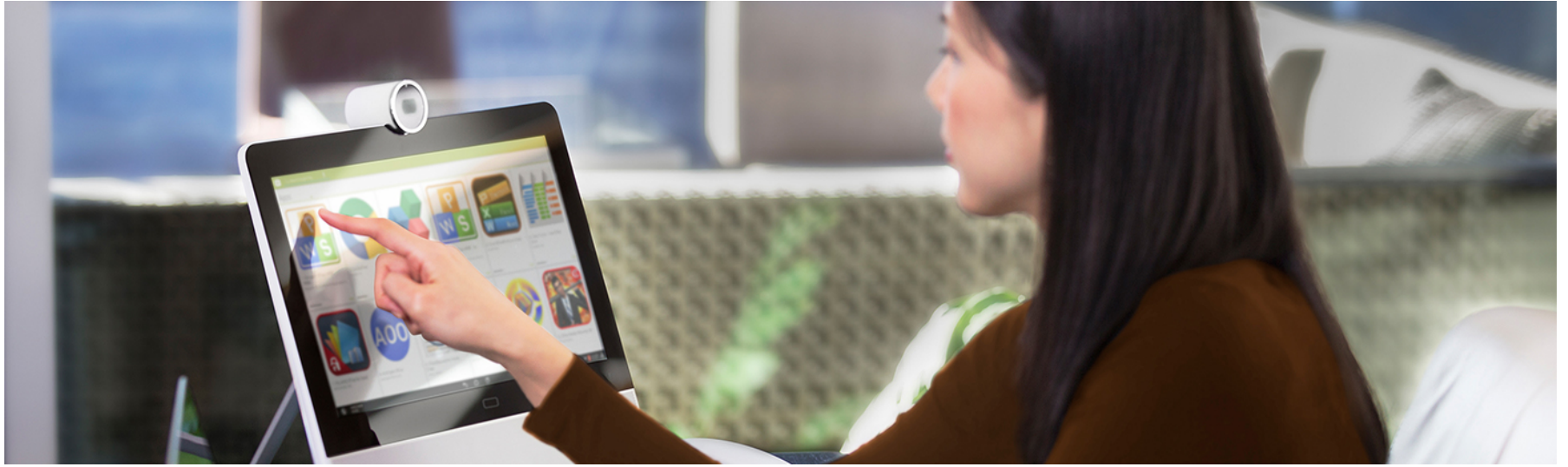
- Create Port-Channel
- Delete Port-Channel
- Update Port-Channel
- Assign Port to Port Channel

MAC Address Tasks:

- Create Static MACAddress
- Remove Static MACAddress
- Assign Static MACAddress
- UnAssign MACAddress Port
- Configure MACAddress Table

Miscellaneous Tasks:

- Configure Port
- Configure VPC Domain
- Configure Feature



Reports

Tabular Reports and Information

- UCS Director discovers Nexus switches configuration through an inventory process and provides the below reports
- Depending upon the capability of Nexus platform, UCSD will show specific parameters. For example: Nexus 7000 – UCSD will show VDC information; Nexus 5000 – UCSD will show storage information

- Licensing
- Modules
- Features
- VLANs
- L2 neighbors
- Interfaces
- Private VLANs
- MAC Address Table
- Quality of Service (QoS)

The screenshot displays the Cisco UCS Director web interface. The top navigation bar includes 'Dashboard', 'Converged', 'HyperConverged', 'Virtual', 'Physical', 'Organizations', 'Policies', 'Administration', 'CloudSense™', and 'Favorites'. The main content area is titled 'Network for C5672-1B-R20' and features a left-hand navigation tree with categories like 'Vegas DataCenter', 'Networking', and 'Unassigned Pods'. The 'C5672-1A-R20' device is selected. The right-hand pane shows a 'Summary' tab with various configuration options and a table with two columns: 'Overview' and 'High Availability'. The 'Overview' table lists details such as Pod, Device IP, Device ID, Status, Last Inventory Time, Model, OS Type, and Software Version. The 'High Availability' table lists Administrative Role and Operational Role.

Overview		High Availability	
Pod	Nexus	Administrative Role	
Device IP	172.31.242.155	Operational Role	
Device ID	2	Administrative Mode	
Status	OK	Operational Mode	
Last Inventory Time	08/03/2016 12:13:00 GMT-0		
Model	Nexus 5672UP		
OS Type	NX-OS		
Software Version	7.0(1)N1(1)		

Tabular Reports and Information

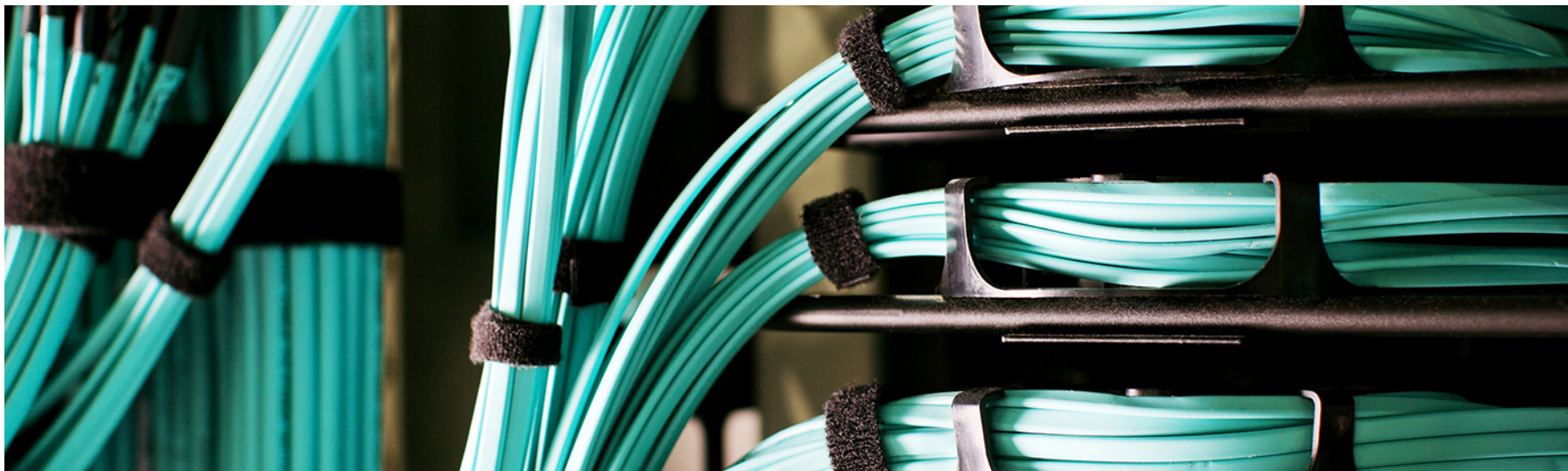
Nexus 5000

- Summary
- Licenses
- Configurations
- Modules
- L2 Neighbors
- Interfaces
- Port Capabilities
- VLANs
- Private VLANs
- Port Profiles
- SXP Connection Peers
- HSRP
- VPC Info
- VTP Status
- Features
- MAC Address Table
- MAC Address Table Configuration
- SAN Zones
- SAN Zonesets
- FCNS Database
- Fabric Login
- Device Alias
- FCAlias
- VSANs
- QOS Class Maps
- QOS Policy Maps
- Service Request Details

Tabular Reports and Information

Nexus 7000

- Summary
- Licenses
- Configurations
- Modules
- L2 Neighbors
- Interfaces
- Port Capabilities
- VLANs
- Private VLANs
- Port Profiles
- VDC
- VDC Detail
- VDC Interfaces
- VPC Info
- VTP Status
- Features
- MAC Address Table
- MAC Address Table Configuration
- QOS Class Maps
- QOS Policy Maps
- Service Request Details



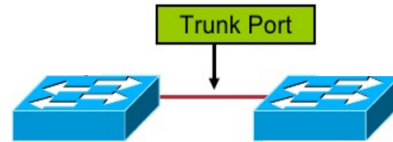
Example Use-Cases

Example Use-Cases

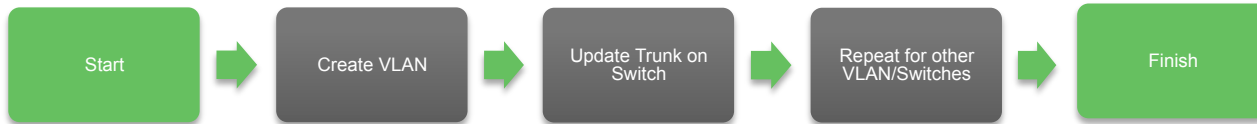
- Use-Case #1: Create VLAN and allow on Trunk Port
- Use-Case #2: Create Port-Channel, VPC Domain and VPC Peer-Link
- Use-Case #3: Configure any NXOS commands unsupported by UCSD
- Use-Case #4: Configure VxLAN on Nexus 1000v

Use Case # 1

- Most common task on L2 Switches is to create new VLANs and allow them on trunk ports/port-channels



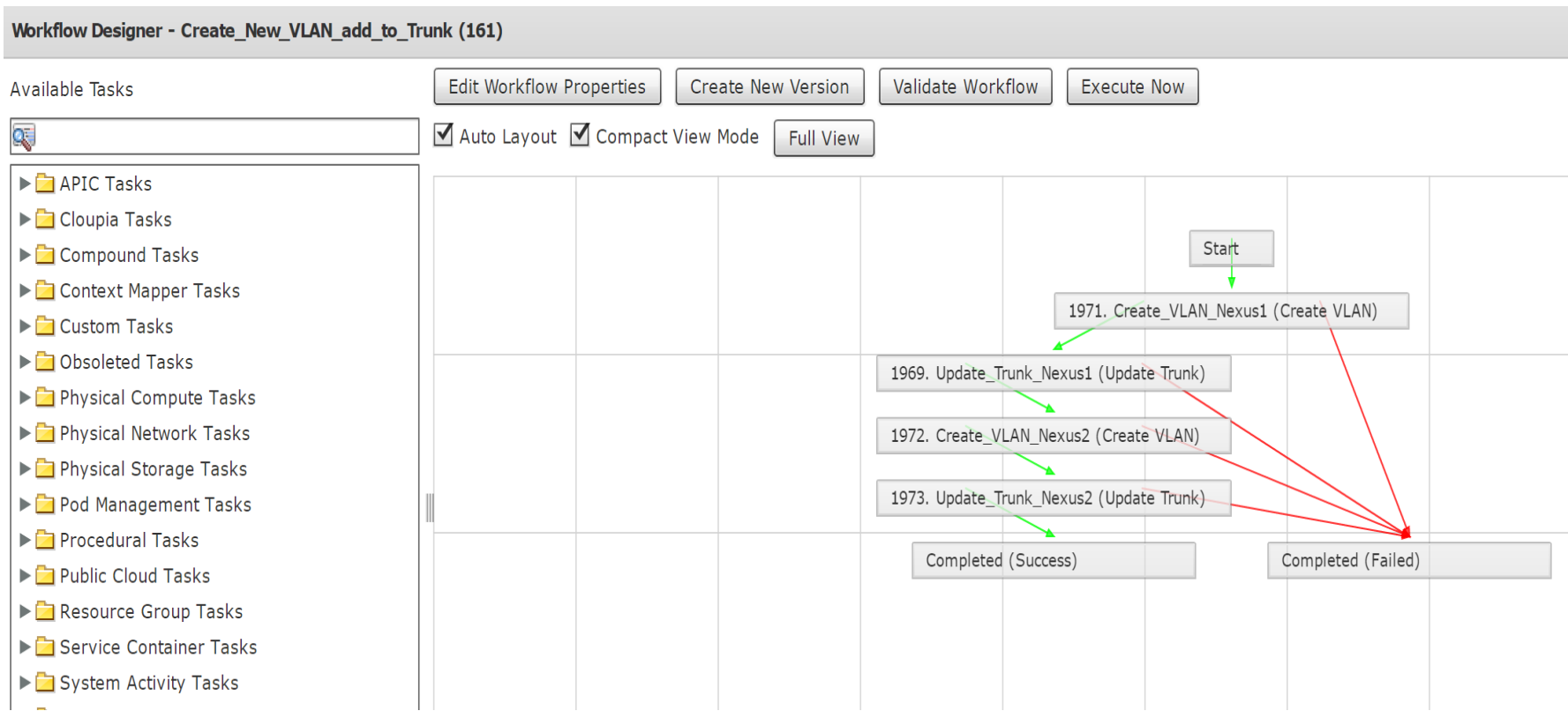
- Flowchart to provision VLANs on Nexus switches and add those VLANs to existing allowed VLAN list on the specific trunk ports is as shown below



- Workflow can be downloaded from the UCS Director community site <https://communities.cisco.com/docs/DOC-69361>

Use Case # 1

The actual workflow for this use case is as shown below:



Use Case # 1

Execute the workflow and provide the requested user inputs...

Executing Workflow: Create_New_VLAN_add_to_Trunk

Workflow Version:
0 (default version) *

Create new VLAN on Nexus switches and add the VLAN to allowed list on trunk port

VLAN NAME *

VLAN ID *

NEXUS Switch1 *

NEXUS1 TrunkPort *

NEXUS Switch2 *

NEXUS2 TrunkPort *

Provide VLAN Name

Provide VLAN ID

Select Nexus 1 Switch

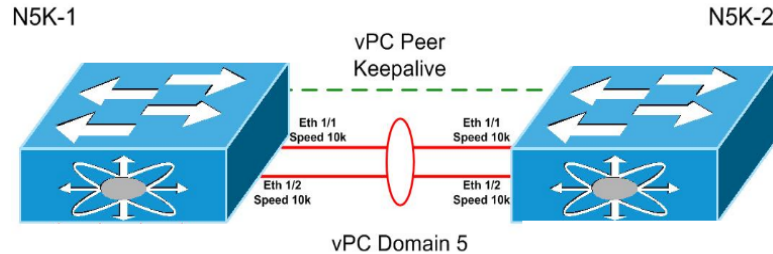
Select Nexus 1 Port

Select Nexus 2 Switch

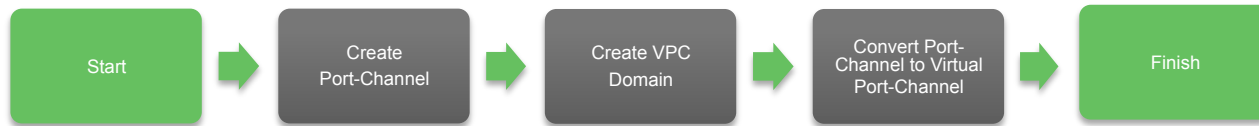
Select Nexus 2 Port

Use Case # 2

- One of prime features of Nexus switches is VPC peering.



- UCSD can configure vPC Domain across pair of Nexus Switches
- UCSD has all the tasks needed to configure Port-Channel and VPC Domain as shown below:

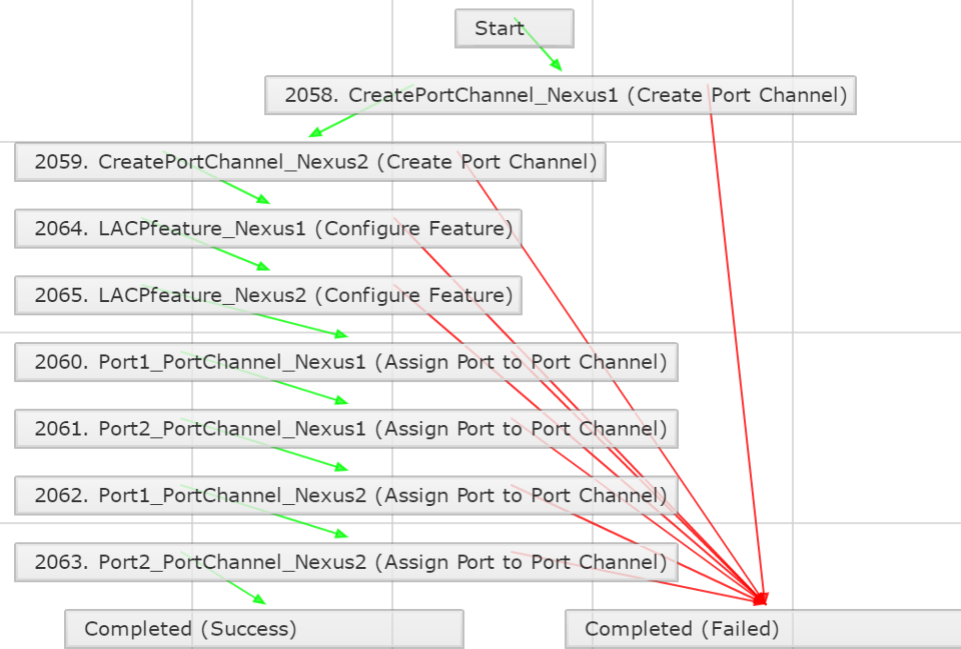


- Workflow can be downloaded from the UCS Director community site <https://communities.cisco.com/docs/DOC-69362>

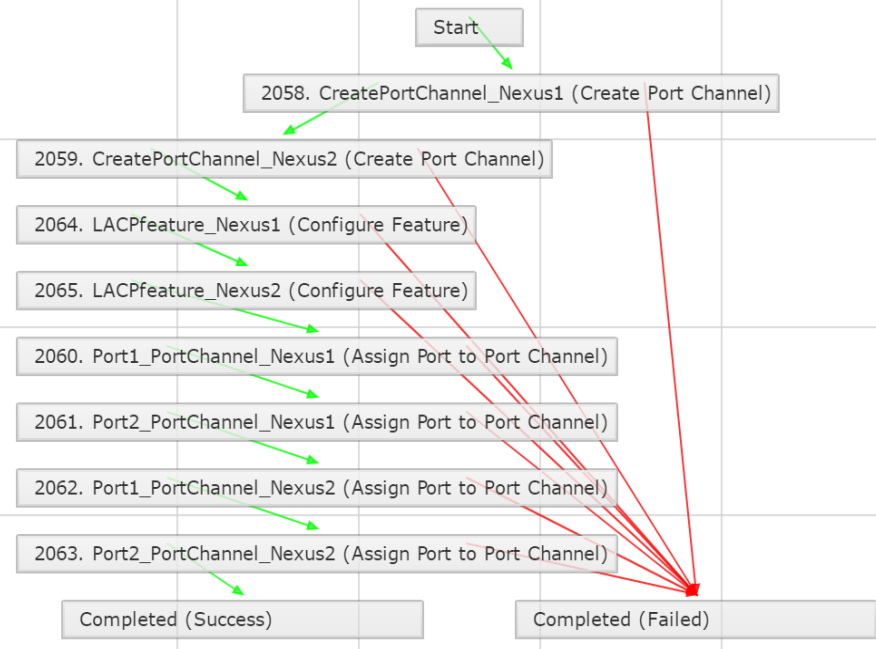
Use Case # 2

The actual workflows for this use case is as shown below:

Port-Channel Workflow



VPC Domain Workflow



Use Case # 2

Execute first Port-Channel workflow and then VPC workflow; provide the requested user inputs...

Executing Workflow: Create_PortChannel

Workflow Version: 0 (default version) *

Nexus1	Select...	172.31.242.253 *
PortChannel Number	31	*
Nexus2	Select...	172.31.242.155 *
Port1 Nexus1	Select...	Ethernet1/1 *
Port2 Nexus1	Select...	Ethernet1/2 *
Port1 Nexus2	Select...	Ethernet1/1 *
Port2 Nexus2	Select...	Ethernet1/2 *
LACP_Nexus1	Select...	lacp *
LACP_Nexus2	Select...	lacp *

Submit Close

Select Nexus 1 Switch

Enter Port-Channel No.

Select Nexus 2 Switch

Add Port 1 to Port-Channel

Add Port 2 to Port-Channel

Add Port 1 to Port-Channel

Add Port 2 to Port-Channel

Enable LACP Feature

Enable LACP Feature



Executing Workflow: Create_VPC

Workflow Version: 0 (default version) *

Nexus1	Select...	172.31.242.253 *
VPC ID	29	*
Nexus1 mgmt0 IP	172.31.242.254	*
Nexus2 mgmt0 IP	172.31.242.155	*
Nexus2	Select...	172.31.242.155 *
VPC Feature Nexus1	Select...	vpc *
VPC Feature Nexus2	Select...	vpc *
Port-Channel_Nexus1	Select...	port-channel31 *
Port-Channel_Nexus2	Select...	port-channel31 *

Submit Close

Select Nexus 1 Switch

Enter VPC ID

Nexus 1 Peer IP

Nexus 2 Peer IP

Select Nexus 2 Switch

Enable VPC Feature

Enable VPC Feature

Peer-Link Port-Channel

Peer-Link Port-Channel

Use Case # 2

Service Request completion & Nexus Verification

172.31.242.253 - PuTTY

```
C5672-1A-R20#
C5672-1A-R20# show vpc brief
Legend:
      (*) - local vPC is down, forwarding via vPC peer-link

vPC domain id           : 78
Peer status             : peer adjacency formed ok
vPC keep-alive status   : peer is alive
Configuration consistency status : success
Per-vlan consistency status : success
Type-2 consistency status : success
vPC role                : primary
Number of vPCs configured : 0
Peer Gateway            : Disabled
Dual-active excluded VLANs : -
Graceful Consistency Check : Enabled
Auto-recovery status    : Enabled (timeout = 240 seconds)

vPC Peer-link status
-----
id  Port  Status Active vlans
--  ---  -
1   Po31  up     1
C5672-1A-R20#
```

Workflow Status Log Objects Created and Modified Input/Output

Service Request

Status Refresh

Current status for the service request.

Step	Action	Timestamp
1	Initiated by admin	08/03/2016 12:58:39
2	Configure Feature	08/03/2016 12:58:58
3	Configure Feature	08/03/2016 12:59:16
4	Configure VPC Domain	08/03/2016 12:59:36
5	Configure VPC Domain	08/03/2016 12:59:57
6	Configure VPC PortChannel	08/03/2016 13:00:19
7	Configure VPC PortChannel Completed action	08/03/2016 13:00:37
8	Complete Completed successfully.	08/03/2016 13:00:39

▼ Overview

Request ID	195
Request Type	Admin Workflow
Workflow Name	Create_VPC
Workflow Version Label	0
Request Time	08/03/2016 12:58:38 GMT-0700
Request Status	Complete
Comments	

▼ Ownership

Initiating User	admin
-----------------	-------

Workflow Status Log Objects Created and Modified Input/Output

Service Request

Status Refresh

Current status for the service request.

Step	Action	Timestamp
1	Initiated by admin	08/03/2016 12:52:14
2	Create Port Channel	08/03/2016 12:52:25
3	Create Port Channel	08/03/2016 12:52:34
4	Configure Feature	08/03/2016 12:52:52
5	Configure Feature	08/03/2016 12:53:10
6	Assign Port to Port Channel	08/03/2016 12:53:18
7	Assign Port to Port Channel	08/03/2016 12:53:39
8	Assign Port to Port Channel	08/03/2016 12:53:51
9	Assign Port to Port Channel Completed action	08/03/2016 12:54:14
10	Complete Completed successfully.	08/03/2016 12:54:14

▼ Overview

Request ID	194
Request Type	Admin Workflow
Workflow Name	Create_PortChannel
Workflow Version Label	0
Request Time	08/03/2016 12:52:12 GMT-0700
Request Status	Complete
Comments	

▼ Ownership

Initiating User	admin
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Use Case # 3

- Leverage 'Execute Network Device CLI' task to configure specific command/feature which is currently not supported by UCSD (this task is executed on existing accounts and so you don't have to provide IP and credentials).
- Below workflow will configure OSPF commands on Nexus. As mentioned earlier, currently UCSD doesn't support Layer 3 / Routing configuration but using task 'Execute Network Device CLI', UCSD can SSH into Nexus device and configure any NXOS-supported commands



- Workflow can be downloaded from the UCS Director community site <https://communities.cisco.com/docs/DOC-69363>

Use Case # 3

The actual workflow for this use case is as shown below:

Workflow Designer - Unsupported_Configuration (178)

Available Tasks:

Auto Layout Compact View Mode

- ▶ APIC Tasks
- ▶ Cloupia Tasks
- ▶ Compound Tasks
- ▶ Context Mapper Tasks
- ▶ Custom Tasks
- ▶ Obsoleted Tasks
- ▶ Physical Compute Tasks
- ▶ Physical Network Tasks
- ▶ Physical Storage Tasks
- ▶ Pod Management Tasks
- ▶ Procedural Tasks
- ▶ Public Cloud Tasks
- ▶ Resource Group Tasks
- ▶ Service Container Tasks
- ▶ System Activity Tasks
- ▶ Virtualization Tasks

```
graph TD; Start[Start] --> Task[Execute_NXOS_CLI  
2045. Execute Network Device CLI]; Task --> Success[Completed  
(Success)]; Task --> Failed[Completed  
(Failed)];
```

The workflow diagram illustrates a process starting with a 'Start' node (blue box) that leads to a task node 'Execute_NXOS_CLI' (white box with a close button). The task node contains the text '2045. Execute Network Device CLI'. From the task node, two arrows branch out: a green arrow pointing to a 'Completed (Success)' node (green box) and a red arrow pointing to a 'Completed (Failed)' node (red box).

Use Case # 3

The workflow has pre-defined user inputs. These variables are called using `{variable}` format in CLI Commands task

Note: 'Execute Network Device CLI' task has input for rollback commands which should be listed as shown for UCSD to rollback this task

The screenshot displays the 'Edit Task (Execute Network Device CLI)' configuration window. On the left, a smaller window titled 'Executing Workflow: Unsupported_Configuration' shows the task's input fields: 'Workflow Version' (0), 'Select Nexus' (172.31.242.253), 'OSPF ID' (0), and 'Router ID' (1.2.3.4). Blue callout boxes point to these fields with the instructions: 'Select Nexus Switch', 'Enter OSPF ID', and 'Enter Router ID'. The main configuration window has a sidebar with 'Task Inputs' selected. The 'CLI Commands' section contains a list of commands: 'configure terminal', 'feature ospf', 'router ospf \${OSPF_ID}', 'router-id \${Router_ID}', 'area 10 nssa', and 'copy r s'. A blue arrow points to the 'router ospf' line with the label 'Variable Reference'. Below this, the 'Undo CLI Commands' section shows the corresponding rollback commands: 'no router ospf \${OSPF_ID}', 'no feature ospf', and 'copy r s'. A blue callout box labeled 'Rollback Steps' points to this section. The interface also includes a 'Revalidate' button, a 'Copy Running configuration to Startup configuration' checkbox, and 'Back', 'Next', and 'Close' buttons at the bottom.

Use Case # 3

Service Request completion and Nexus Verification

Workflow Status | Log | Objects Created and Modified | Input/Output

Service Request

Status Refresh

▼ Overview Current status for the service request.

Request ID	202	1	Initiated by admin	08/03/2016 13:33:01
Request Type	Admin Workflow	2	Execute Network Device CLI	08/03/2016 13:33:33
Workflow Name	Unsupported_Configuration	3	Complete	08/03/2016 13:33:37
Workflow Version Label	0		Completed successfully.	
Request Time	08/03/2016 13:32:57 GMT-0700			
Request Status	Complete			
Comments				
▼ Ownership				
Initiating User	admin			

Close

```
172.31.242.253 - PuTTY
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Lesser General Public License (LGPL) Version 2.1. A copy of each
such license is available at
http://www.opensource.org/licenses/gpl-2.0.php and
http://www.opensource.org/licenses/lgpl-2.1.php
C5672-1A-R20#
C5672-1A-R20# show run ospf

!Command: show running-config ospf
!Time: Sun Jan 26 09:54:56 2003

version 7.0(1)N1(1)
feature ospf

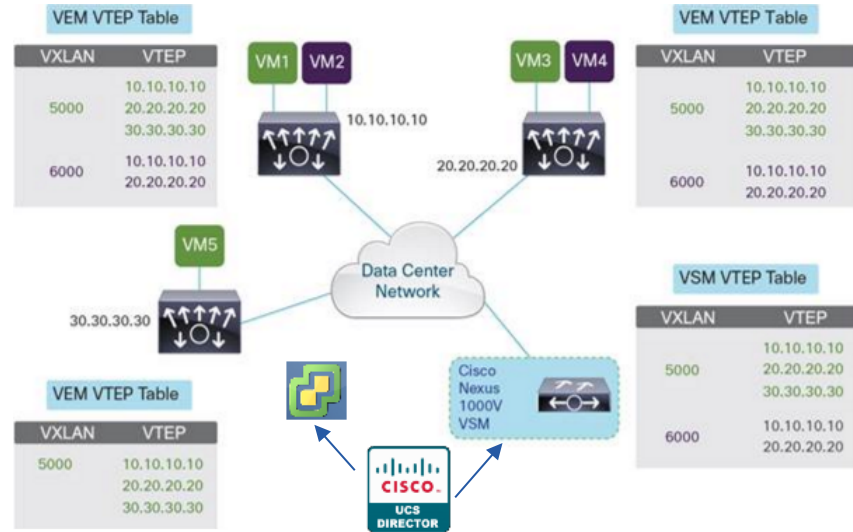
router ospf 0
  router-id 1.2.3.4
  area 0.0.0.10 nssa

C5672-1A-R20#
```

Use Case # 4

Nexus 1000v was first virtual switch in the industry to have VxLAN overlay in Virtual Domain. UCS-D supports VxLAN deployment on Nexus 1000v with following tasks:

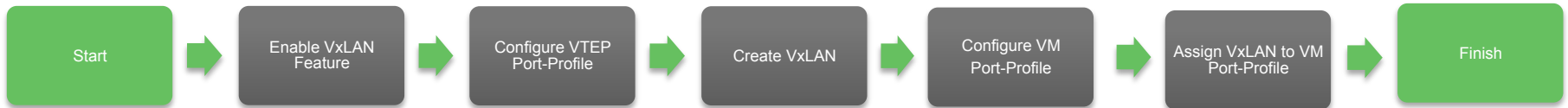
- Create VXLAN
- Update VXLAN
- Remove VXLAN
- Assign VXLAN to PortProfile
- UnAssign VXLAN PortProfile
- Encapsulate VXLAN PortProfile
- Encapsulate VXLAN Port Profile with Segment
- Create VXLAN Encapsulate segment
- Delete VXLAN Encapsulate segment



- Workflow can be downloaded from the UCS Director community site <https://communities.cisco.com/docs/DOC-69364>

Use Case # 4

- Most common tasks to configure VxLAN on Nexus 1000v are demonstrated in this workflow.
- On Nexus 1000v, segmentation feature needs to be enabled, followed by configuring VTEP Port-Profile, VTEP VMKernel Interfaces, Bridge Domain and VXLAN Port-Profile for VMs
- For complete Nexus 1000v VxLAN configuration refer link:
http://www.cisco.com/c/en/us/products/collateral/switches/nexus-1000v-switch-vmware-vsphere/guide_c07-702975.html#_Toc320841522



Use Case # 4

Execute the workflow and provide the requested user inputs...

The screenshot shows a configuration window titled "Executing Workflow: VSM_VXLAN". The window contains a "Workflow Version" dropdown set to "0 (default version)". Below this are several input fields, each with a red asterisk indicating a required field. Blue callout boxes on the left and right point to these fields with labels: "Select Nexus 1000v" points to the "Select Nexus 1000v" field (value: 10.29.174.169); "VTEP Port-Profile Name" points to the "VTEP Port-Profile Name" field (value: UCSD_VTEP); "VTEP VLAN" points to the "VTEP VLAN" field (value: 999); "Bridge Domain" points to the "Bridge Domain" field (value: UCSD); "VxLAN ID" points to the "VxLAN ID" field (value: 9999); "VM Port-Profile Name" points to the "VM Port-Profile Name" field (value: UCSD_VM); "VM VLAN" points to the "VM VLAN" field (value: 909). On the right side, "Enable VxLAN feature" points to the "Feature" field (value: segmentation), and "Multicast IP" points to the "Multicast Address" field (value: 239.99.99.99). At the bottom right are "Submit" and "Close" buttons.

Field Label	Value
Workflow Version	0 (default version)
Select Nexus 1000v	10.29.174.169
Feature	segmentation
VTEP Port-Profile Name	UCSD_VTEP
VTEP VLAN	999
Bridge Domain	UCSD
VxLAN ID	9999
Multicast Address	239.99.99.99
VM Port-Profile Name	UCSD_VM
VM VLAN	909

Use Case # 4

The actual workflow for this use case is as shown below:

Workflow Designer - VSM_VXLAN (186)

Available Tasks:

Auto Layout Compact View Mode

- APIC Tasks
- Cloupia Tasks
- Compound Tasks
- Context Mapper Tasks
- Custom Tasks
- Obsoleted Tasks
- Physical Compute Tasks
- Physical Network Tasks
- Physical Storage Tasks
- Pod Management Tasks
- Procedural Tasks
- Public Cloud Tasks
- Resource Group Tasks
- Service Container Tasks
- System Activity Tasks
- Virtualization Tasks

To add a new task, drag and drop a task item to the design area.

```
graph TD; Start[Start] --> 2087[2087. ConfigureFeature_Segmentation (Configure Feature)]; 2087 --> 2088[2088. CreatePortProfile_VTEP (Create Port Profile)]; 2087 --> 2092[2092. AssignVXLANPortProfile_VM (Assign VXLAN to PortProfile)]; 2088 --> 2089[2089. CreateVXLAN (Create VXLAN)]; 2089 --> 2091[2091. CreatePortProfile_VM (Create Port Profile)]; 2091 --> 2092; 2092 --> 2093[Completed (Success)]; 2087 --> 2094[Completed (Failed)];
```

Use Case # 4

Service Request completion and Nexus Verification

Workflow Status | Log | Objects Created and Modified | Input/Output

Service Request

Status Refresh

▼ Overview

Request ID	205	1	Initiated by admin	08/04/2016 11:31:58
Request Type	Admin Workflow	2	Configure Feature	08/04/2016 11:32:08
Workflow Name	VSM_VXLAN	3	Create Port Profile	08/04/2016 11:32:18
Workflow Version Label	0	4	Create VXLAN	08/04/2016 11:32:30
Request Time	08/04/2016 11:31:57 GMT-0700	5	Create Port Profile	08/04/2016 11:32:39
Request Status	Complete	6	Assign VXLAN PortProfile Completed action	08/04/2016 11:32:47
Comments		7	Complete Completed successfully.	08/04/2016 11:32:49

▼ Ownership

Initiating User	admin
-----------------	-------

Close

```
10.29.174.169 - PuTTY
login as: admin
Nexus 1000v Switch
Using keyboard-interactive authentication.
Password:
Cisco Nexus Operating System (NX-OS) Software
TAC support: http://www.cisco.com/tac
Copyright (c) 2002-2015, Cisco Systems, Inc. All rights reserved.
The copyrights to certain works contained in this software are
owned by other third parties and used and distributed under
license. Certain components of this software are licensed under
the GNU General Public License (GPL) version 2.0 or the GNU
Lesser General Public License (LGPL) Version 2.1. A copy of each
such license is available at
http://www.opensource.org/licenses/gpl-2.0.php and
http://www.opensource.org/licenses/lgpl-2.1.php
VACS-VSM#
VACS-VSM# show bridge-domain UCSD

Bridge-domain UCSD (0 ports in all)
Segment ID: 9999 (Manual/Active)
Mode: Unicast-only (override)
MAC Distribution: Enable (override)
BGP control mode: Enable
Group IP: NULL
Encap Mode: VXLAN*
State: UP
Mac learning: Enabled
VACS-VSM#
```



CISCO

TOMORROW starts here.