

通过DCNM部署EVPN VXLAN，多站点11.2(1)

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简介

本文描述如何部署两个各自的EVPN VXLAN结构以及如何合并这两个结构到EVPN多站点结构部署使用Cisco数据中心管理者(DCNM) 11.2(1)。

多站点域(MSD)，介绍在DCNM 11.0(1)版本，是创建管理多个成员结构的一个multifabric容器。它是单点的覆盖网络和虚拟路由和转发(VRF)定义的控制成员结构间共享。

Note: 本文不描述详细信息关于每选项卡功能/属性在DCNM内的。请参阅参考在包括详细说明的末端。

先决条件

要求

Cisco 建议您了解以下主题：

- 部署DCNM虚拟机的vCenter/UCS
- 与NX-OS和连结9000s的熟悉
- 连结9000s突岩，EoRs在分支/脊椎方式连接

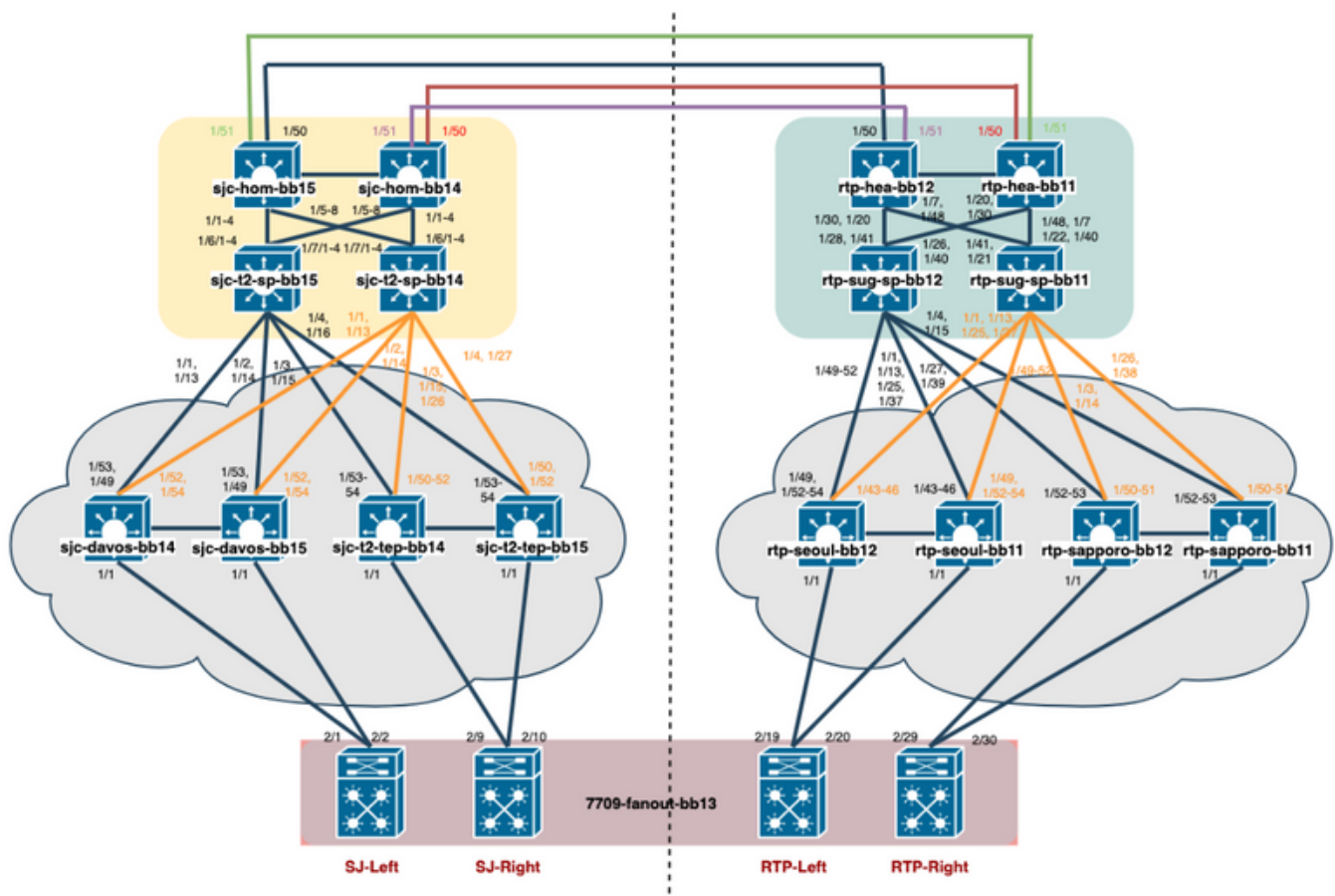
使用的组件

本文档中的信息根据以下软件和硬件：

- DCNM 11.2(1)
- NX-OS 7.0(3)I7(7)和NX-OS 9.2(3)
- 脊椎：N9K-C9508/N9K-X97160YC-EX & N9K-C9508/N9K-X9636PQ
- 分支：N9K-C9372TX，N9K-C93180YC-EX，N9K-C9372TX-E，N9K-C92160YC-X
- 边界网关：N9K-C93240YC-FX2 & N9K-C93180YC-FX
- 7K“主机”：N77-C7709

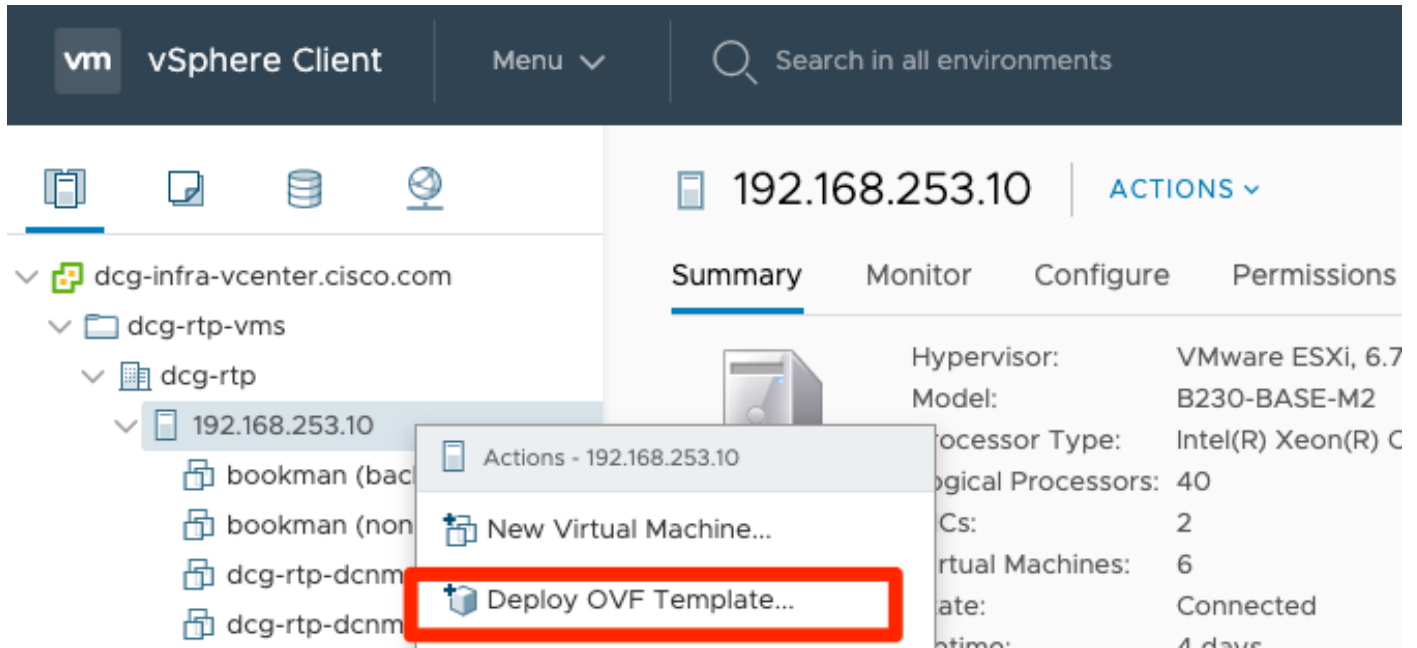
本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原始（默认）配置。如果您的网络处于活动状态，请确保您了解所有命令的潜在影响。

被构建的物理拓扑



部署在vCenter的OVA/OVF

第 1 步：在vCenter下，请部署在您的选择服务器/host的开放虚拟化格式(OVF)如镜像所显示，模板。



1. 如镜像所显示，有OVA/OVF等等文件本地并且选择通过**选择文件**，：

Deploy OVF Template

1 Select an OVF template

2 Select a name and folder

3 Select a compute resource

4 Review details

5 Select storage

6 Ready to complete

Select an OVF template

Select an OVF template from remote URL or local file system

Enter a URL to download and install the OVF package from the Internet, or browse to a location accessible from your computer, such as a local hard drive, a network share, or a CD/DVD drive.

URL

http | <https://remoteserver-address/filetoinstall.ovf> | .ova

Local file

dcnm-va.11.2.1.ova

2. 按照其余提示符(VM命名，主机，网络设置，如镜像所显示)并且点击**芬通社**。

Deploy OVF Template

- ✓ 1 Select an OVF template
- ✓ 2 Select a name and folder
- ✓ 3 Select a compute resource
- ✓ 4 Review details
- ✓ 5 License agreements
- ✓ 6 Configuration
- ✓ 7 Select storage
- 8 Select networks**
- 9 Customize template
- 10 Ready to complete

Select networks

Select a destination network for each source network.

Source Network	Destination Network
dcnm-mgmt	DCG-INFRA-1
enhanced-fabric-mgmt	EVPN-NAT-1
enhanced-fabric-inband	EVPN-NAT-1

3 items

IP Allocation Settings

IP allocation: Static - Manual
IP protocol: IPv4

Deploy OVF Template

- ✓ 1 Select an OVF template
- ✓ 2 Select a name and folder
- ✓ 3 Select a compute resource
- ✓ 4 Review details
- ✓ 5 License agreements
- ✓ 6 Configuration
- ✓ 7 Select storage
- ✓ 8 Select networks
- 9 Customize template**
- 10 Ready to complete

Customize template

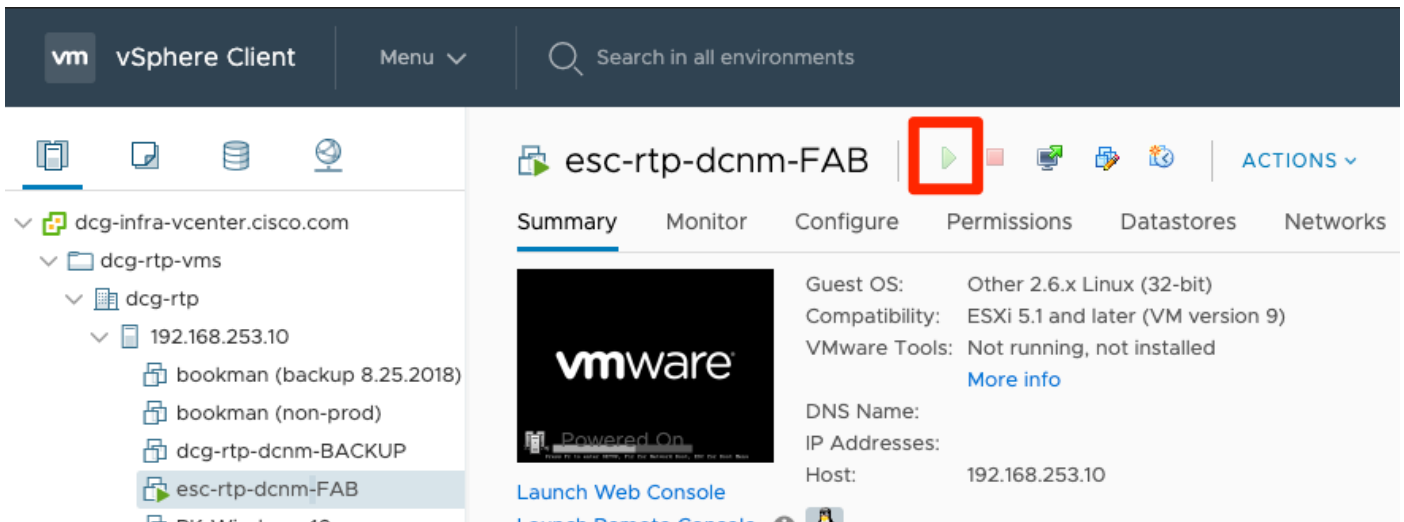
Customize the deployment properties of this software solution.

✓ All properties have valid values

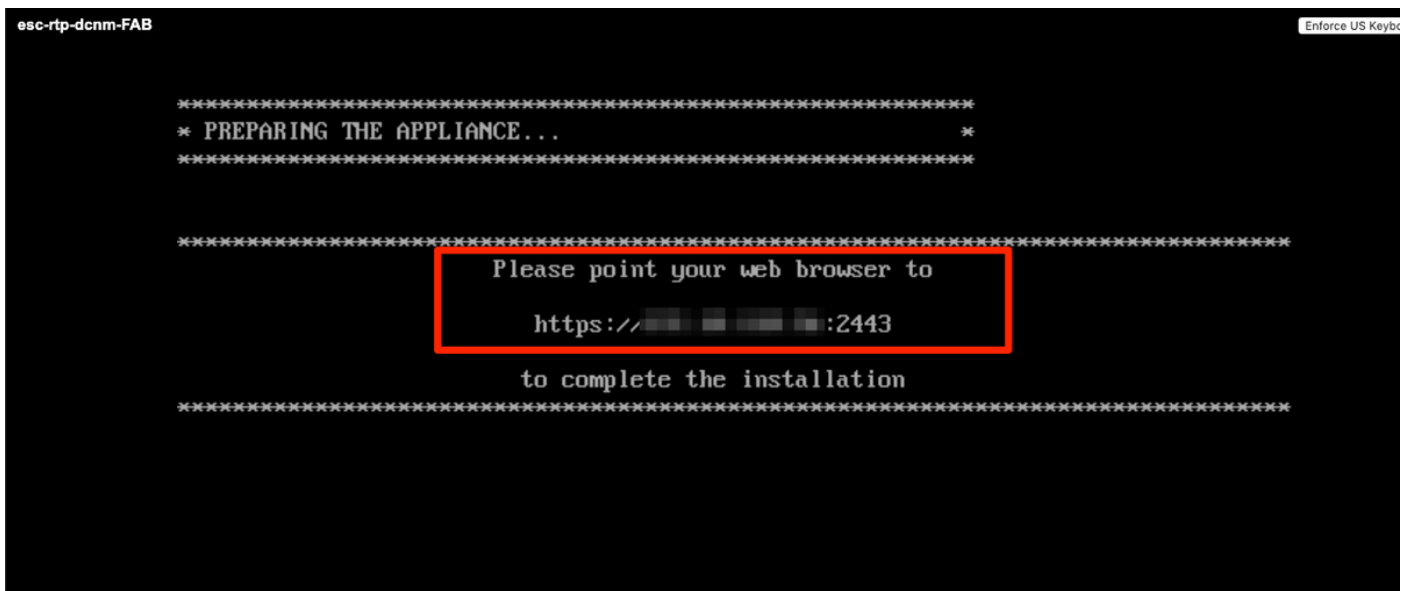
Management Properties	3 settings
1.IP Address	
2.Subnet Mask	255.255.255.0
3.Default Gateway	

第二步：一旦完成，请开始您的DCNM VM，如显示此处。

Task Name	Target	Status	Initiator	Queued For	Start Time	Completion Time	Server
Power On virtual machine	esc-ntp-dcnm-FAB	Completed	DCG.LOCAL\Administrator	3 ms	06/17/2019, 3:19:21 PM	06/17/2019, 3:19:21 PM	dcg-infra-vcenter.cisco.com
Initialize powering On	dcg-ntp	Completed	DCG.LOCAL\Administrator	4 ms	06/17/2019, 3:19:21 PM	06/17/2019, 3:19:21 PM	dcg-infra-vcenter.cisco.com
Deploy OVF template	esc-ntp-dcnm-FAB	Completed	DCG.LOCAL\vpdx-extension-440bec49-45...	7 ms	06/17/2019, 3:01:45 PM	06/17/2019, 3:13:07 PM	dcg-infra-vcenter.cisco.com



步骤3.在控制台启动Web控制台，一次，您应该看到这些提示符(IP有所不同，因为这是特定对您的环境和您的配置)：



步骤4.对[https:// <your IP>:2443](https://<your IP>:2443)的题头(这是您配置前在卵部署期间)的IP和点击**Get Started**。在本例中，新安装报道。

Cisco DCNM Installer

Please select how you want to setup this instance of Cisco Data Center Network Manager:

- Fresh installation - Standalone
- Fresh installation - HA Primary
- Fresh installation - HA Secondary
- Fresh installation with backup file for restore

[Continue](#)

第 5 步：一旦配置管理员密码，您必须选择您希望安装结构的种类。选择在LAN或FAB之间，因为每个类型有一个不同的目的，因此请务必正确地了解和选择。对于此示例，使用LAN结构，它是为多数VXLAN-EVPN部署。

Please choose the installation mode

LAN Fabric

LAN Fabric is for most VXLAN-EVPN deployments.

第六步：按照安装程序的提示符与您的网络的DNS、网络时间协议(NTP)服务器、DCNM主机名等等。

Please enter the following system settings

Fully Qualified Host Name *

Fully Qualified Host Name as per RFC1123, section 2.1, for example:
myhost.mydomain.com

dcg-rtp-dcnm-fab.cisco.com

DNS Server Address *

DNS Server Address can be an IPv4 address or an IPv6 address

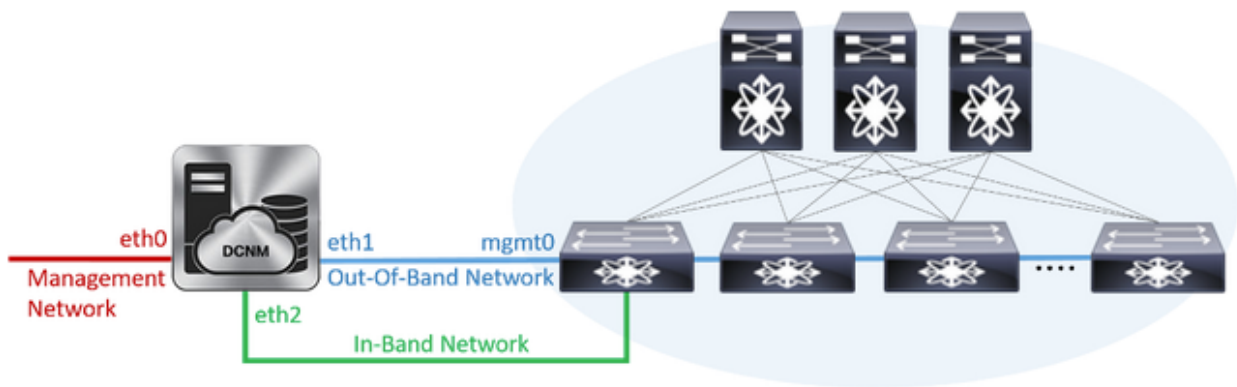
64.102.6.247

NTP Server *

RFC1123-compliant name or address (IPv4 or IPv6)

172.18.108.15

步骤7.配置管理IP和管理网关。管理网络提供连接(SSH, SCP, HTTP, HTTPS)给DCNM服务器。这也是您使用到达GUI的IP。应该从您预先配置IP地址从以前进行的卵安装。



Management Network

The Management Network is the main network connection used for reaching the DCNM web user interface. When High Availability is enabled, 3 IP addresses are required on this network.

Management IPv4 Address *

Enter a valid IPv4 address along with prefix, for example: 10.10.10.2/24

Management Network Default IPv4 Gateway *

Out-of-Band Network

The Out-of-Band Network provides connectivity to the device management ports (typically mgmt0). When High Availability is enabled, 3 IP addresses are required on this network.

IPv4 Address *

Enter a valid IPv4 address along with prefix, for example: 1.0.0.2/8

Gateway IPv4 Address

Gateway for the Out-of-Band Network

IPv6 Address

Enter a valid IPv6 address along with prefix, for example: 2001:db8:abcd:0012::0/96

DNS Server Address

If no value is provided, it will be set to Out-of-Band IPv4 address.

Only IPv4 addresses are accepted.

步骤8.配置在波段之内网络。在波段之内网络使用应用程序例如要求前面板端口连通性对在结构的9Ks工作的终端定位器，当边界网关协议(BGP)会话被设立在DCNM和9K之间。

In-Band Network

The In-Band Network provides reachability to the devices via the front-panel ports. When High Availability is enabled, 3 IP addresses are required on this network.

IPv4 Address

Enter a valid IPv4 address along with prefix, for example: 2.0.0.2/8

Gateway IPv4 Address

Gateway for the In-Band Network

步骤9.配置内部应用服务网络--

从DCNM 11.0版本开始，DCNM技术支持应用框架(AFW)与DCNM LAN OVA/ISO安装。此框架使

用码头工人谱写音乐应用程序作为microservices在两集群和认识到的缩放体系结构unclustered环境。

装备DCNM默认情况下的其他应用程序是终端定位器、观察塔、插件虚拟机的管理器，设置法规遵从性等AFW照料这些应用程序的生命周期管理包括提供网络，存储设备，验证，安全等等AFW也管理部署，并且网络洞察应用程序即NIR的生命周期和NIA此子网是为码头工人服务，当您安排NIA/NIR启用时。

如何安装NIA/NIR被覆盖在天2操作部分下。

Internal Application Services Network

The Internal Application Services Network is used internally.

IPv4 Subnet *

Enter a valid IPv4 subnet with prefix, for example: 172.17.0.0/20.

Prefix length must be 20 to 22.

Note: 此子网不应该与网络交迭分配到eth0/eth1/eth2接口分配到DCNM和估计节点。另外，此子网不应该与分配到交换机或其它设备由DCNM管理的IP交迭。选定的子网应该依然是一致，当安装DCNM主要的和附属节点时(在一本地HA部署的情况下)。

步骤10.查看并且确认所有配置细节并且开始安装。

Please review the configuration details

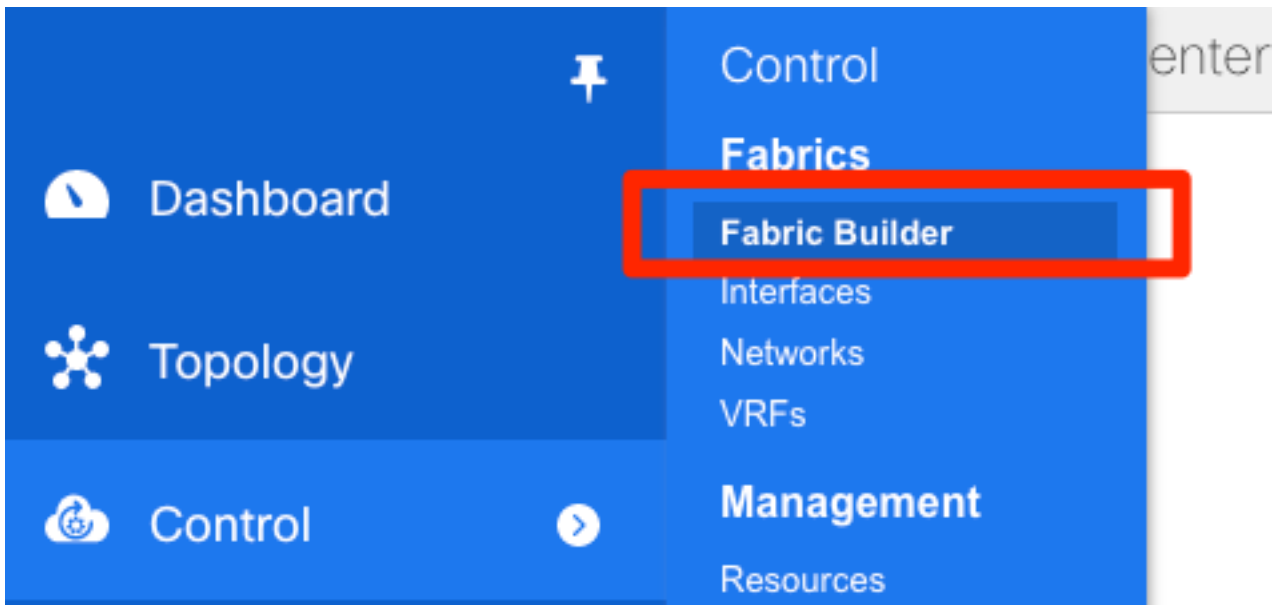
Installation mode	LAN Fabric
Fully Qualified Host Name	dcg-rtp-dcnm-fab.cisco.com
DNS Server Address	64.102.6.247
NTP Server Name	172.18.108.15
Management Network IP Address	172.18.118.56/24
Management Network Default Gateway	172.18.118.1
Management Network IPv6 Address	
Management Network Default IPv6 Gateway	
Out-of-Band Network IP Address	192.168.128.56/24
Out-of-Band Network IPv6 Address	
Out-of-Band Network DNS Server Address	192.168.128.56
Out-of-Band Gateway IP Address	192.168.128.1
In-Band Network IP Address	192.168.128.57/24
In-Band Gateway IP Address	192.168.128.1
Internal App Services IP Subnet	172.17.0.0/20
Administration Password	*****

[Start installation](#)

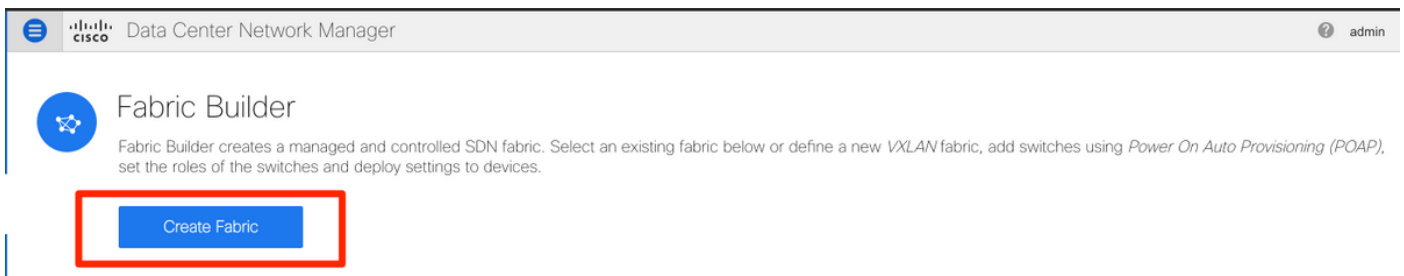
步骤 11—一旦DCNM充分地安装，请登陆对GUI (您以前配置)的IP地址或主机名。

部署第一个结构--RTP结构

第 1 步：一旦在DCNM GUI，请导航对**结构建造者**。控制>结构>结构建造者为了创建您的第一个结构。



步骤2. 点击**Create**结构并且填好表格当必要时为您的网络—容易结构是本地EVPN VXLAN部署的正确模板：



步骤3. 填好结构的衬底、重叠、vPC、复制、资源等等需求。

此部分包括通过DCNM要求的所有衬底、重叠、vPC、复制等等设置。这取决于网络编址方案、需求等等。对于此示例，多数字段被离开作为默认。L2VNI和L3VNI更改这样L2VNI从2开始，并且L3VNI从3开始方便的能排除故障以后。双向转发检测(BFD)与其它特性一起也启用。

Add Fabric

* Fabric Name :

* Fabric Template :

General	Replication	vPC	Advanced	Resources	Manageability	Bootstrap	Configuration Backup
* BGP ASN	<input type="text" value="65534"/>	<input type="text" value="1-4294967295 1-65535[,0-65535]"/>					
* Fabric Interface Numbering	<input type="text" value="p2p"/>	<input type="text" value="Numbered(Point-to-Point) or Unnumbered"/>					
* Underlay Subnet IP Mask	<input type="text" value="30"/>	<input type="text" value="Mask for Underlay Subnet IP Range"/>					
* Link-State Routing Protocol	<input type="text" value="ospf"/>	<input type="text" value="Supported routing protocols (OSPF/IS-IS)"/>					
* Route-Reflectors	<input type="text" value="2"/>	<input type="text" value="Number of spines acting as Route-Reflectors"/>					
* Anycast Gateway MAC	<input type="text" value="1010.0000.00aa"/>	<input type="text" value="Shared MAC address for all leafs (xxxx.xxxx.xxxx)"/>					
NX-OS Software Image Version	<input type="text"/>	<input type="text" value="If Set, Image Version Check Enforced On All Switches. Images Can Be Uploaded From Control:Image Upload"/>					

Add Fabric

* Fabric Name :

* Fabric Template :

- General
- Replication
- vPC
- Advanced
- Resources
- Manageability
- Bootstrap
- Configuration Backup

Manual Underlay IP Address Allocation [?](#) Checking this will disable Dynamic Underlay IP Address Allocations

- * Underlay Routing Loopback IP Range [?](#) Typically Loopback0 IP Address Range
- * Underlay VTEP Loopback IP Range [?](#) Typically Loopback1 IP Address Range
- * Underlay RP Loopback IP Range [?](#) Anycast or Phantom RP IP Address Range
- * Underlay Subnet IP Range [?](#) Address range to assign Numbered and Peer Link SVI IPs
- * Layer 2 VXLAN VNI Range [?](#) Overlay Network Identifier Range (Min:1, Max:16777214)
- * Layer 3 VXLAN VNI Range [?](#) Overlay VRF Identifier Range (Min:1, Max:16777214)
- * Network VLAN Range [?](#) Per Switch Overlay Network VLAN Range (Min:2, Max:3967)
- * VRF VLAN Range [?](#) Per Switch Overlay VRF VLAN Range (Min:2, Max:3967)
- * Subinterface Dot1q Range [?](#) Per Border Dot1q Range For VRF Lite Connectivity (Min:2, Max:511)
- * VRF Lite Deployment [?](#) VRF Lite Inter-Fabric Connection Deployment Options
- * VRF Lite Subnet IP Range [?](#) Address range to assign P2P DCI Links
- * VRF Lite Subnet Mask [?](#) Mask for Subnet Range (Min:8, Max:31)

Add Fabric

* Fabric Name :

* Fabric Template :

- General
- Replication
- vPC
- Advanced
- Resources
- Manageability
- Bootstrap
- Configuration Backup

- * vPC Peer Link VLAN [?](#) VLAN for vPC Peer Link SVI (Min:2, Max:3967)
- * vPC Peer Keep Alive option [?](#) Use vPC Peer Keep Alive with Loopback or Management
- * vPC Auto Recovery Time [?](#) Auto Recovery Time In Seconds (Min:240, Max:3600)
- * vPC Delay Restore Time [?](#) vPC Delay Restore Time For vPC links in seconds (Min:1, Max:3600)
- vPC Peer Link Port Channel Number [?](#) Port Channel ID for vPC Peer Link (Min:1, Max:4096)
- vPC IPv6 ND Synchronize [?](#) Enable IPv6 ND synchronization between vPC peers
- vPC advertise-pip [?](#) For Primary VTEP IP Advertisement As Next-Hop Of Prefix Routes

Add Fabric



* Fabric Name :

* Fabric Template :

General | Replication | vPC | **Advanced** | Resources | Manageability | Bootstrap | Configuration Backup

* VRF Template ? Default Overlay VRF Template For Leafs

* Network Template ? Default Overlay Network Template For Leafs

* VRF Extension Template ? Default Overlay VRF Template For Borders

* Network Extension Template ? Default Overlay Network Template For Borders

Site Id ? For EVPN Multi-Site Support (Min:1, Max: 281474976710655). Defaults to Fabric ASN

* Underlay Routing Loopback Id ? 0-512

* Underlay VTEP Loopback Id ? 0-512

* Link-State Routing Protocol Tag ? Routing Process Tag (Max Size 20)

* OSPF Area Id ? OSPF Area Id in IP address format

Enable OSPF Authentication ?

OSPF Authentication Key ID ? 0-255

OSPF Authentication Key ? 3DES Encrypted

Enable IS-IS Authentication ?

IS-IS Authentication Keychain Name ?

IS-IS Authentication Key ID ? 0-65535

IS-IS Authentication Key ? Cisco Type 7 Encrypted

* Power Supply Mode ? Default Power Supply Mode For The Fabric

* CoPP Profile ? Fabric Wide CoPP Policy. Customized CoPP policy should be provided when 'manual' is selected

Enable VXLAN OAM ? For Operations, Administration, and Management Of VXLAN Fabrics

Enable Tenant DHCP ?

Enable BFD ?

* Greenfield Cleanup Option ? Switch Cleanup Without Reload When PreserveConfig=no

第 4 步：在启动配置下，请配置范围您希望DCNM实施到在结构内的交换机在POAP进程中的 DHCP地址。配置适当的(存在的)默认网关。请点击“Save”，一旦执行，并且能当前搬入向添加交换机结构。

Edit Fabric



* Fabric Name :

* Fabric Template :

General | Replication | vPC | Advanced | Resources | Manageability | **Bootstrap** | Configuration Backup

Enable Bootstrap ? Automatic IP Assignment For POAP

Enable Local DHCP Server ? Automatic IP Assignment For POAP From Local DHCP Server

* DHCP Scope Start Address ? Start Address For Switch Out-of-Band POAP

* DHCP Scope End Address ? End Address For Switch Out-of-Band POAP

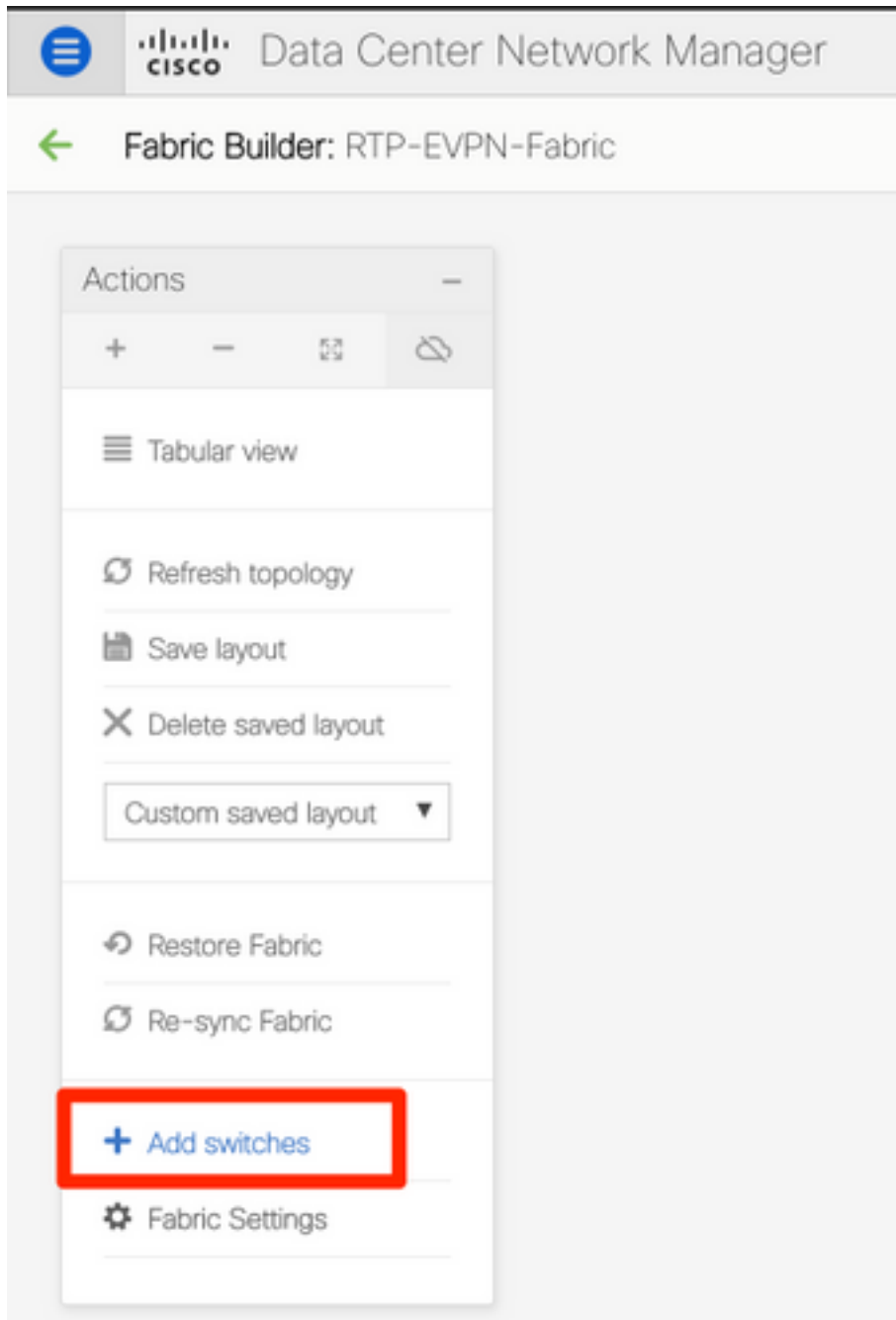
* Switch Management Default Gate... ? Default Gateway For Mgmt VRF On The Switch

* Switch Management Subnet Prefix ? Prefix For Mgmt0 Interface On The Switch (Min:8, Max:30)

Save Cancel

添加交换机到结构

步骤1. 导航控制>结构>结构建造者然后选择您的结构。如镜像所显示，在左边镶板，请点击Add交换机。



您能通过**或者使用种子IP**发现交换机(含义每交换机mgmt0 IP必须手工配置)或您能通过**POAP**发现交换机和安排DCNM配置所有mgmt0 IP地址、VRF管理等等您的。对于此示例，我们使用POAP。

第二步：一旦看到交换机您的利益，如镜像所显示，请输入您希望DCNM使用，输入Admin PW的所需的IP地址和主机名，然后点击**启动**。

Discover Existing Switches

PowerOn Auto Provisioning (POAP)

ⓘ Please note that POAP can take anywhere between 5 and 15 minutes to complete!

Bootstrap

<input type="checkbox"/>	Serial Number	Model	Version	IP Address	Hostname	Gateway
<input type="checkbox"/>	FDO213001M0	N9K-C9372TX	7.0(3)I4(7)			192.168.128.1/24
<input checked="" type="checkbox"/>	FDO21331SLK	N9K-93180YC-EX	7.0(3)I7(6)	192.168.128.102	rtp-seoul-bb11	192.168.128.1/24

如镜像所显示此处从交换机的控制台，一本成功的引导日志应该查找。

```

2019 Jun 19 14:58:51 switch %$ VDC-1 %$ %POAP-2-POAP_DHCP_DISCOVER_START: [FDO21331SLK-70:7D:B9:4A:72:21] - POAP DHCP Discover
phase started
2019 Jun 19 14:59:12 switch %$ VDC-1 %$ %POAP-2-POAP_INFO: [FDO21331SLK-70:7D:B9:4A:72:21] - Start DHCP v4 session
2019 Jun 19 14:59:12 switch %$ VDC-1 %$ %POAP-2-POAP_DHCP_DISCOVER_START: [FDO21331SLK-70:7D:B9:4A:72:21] - POAP DHCP Discover
phase started
2019 Jun 19 14:59:37 switch %$ VDC-1 %$ %POAP-2-POAP_INFO: [FDO21331SLK-70:7D:B9:4A:72:21] - Using DHCP, information received over
mgmt0 from 192.168.128.57
2019 Jun 19 14:59:37 switch %$ VDC-1 %$ %POAP-2-POAP_INFO: [FDO21331SLK-70:7D:B9:4A:72:21] - Assigned IP address: 192.168.128.102
2019 Jun 19 14:59:37 switch %$ VDC-1 %$ %POAP-2-POAP_INFO: [FDO21331SLK-70:7D:B9:4A:72:21] - Netmask: 255.255.255.0
2019 Jun 19 14:59:37 switch %$ VDC-1 %$ %POAP-2-POAP_INFO: [FDO21331SLK-70:7D:B9:4A:72:21] - DNS Server: 64.102.6.247
2019 Jun 19 14:59:37 switch %$ VDC-1 %$ %POAP-2-POAP_INFO: [FDO21331SLK-70:7D:B9:4A:72:21] - Default Gateway: 192.168.128.1
2019 Jun 19 14:59:37 switch %$ VDC-1 %$ %POAP-2-POAP_INFO: [FDO21331SLK-70:7D:B9:4A:72:21] - Script Server: 192.168.128.56
2019 Jun 19 14:59:37 switch %$ VDC-1 %$ %POAP-2-POAP_INFO: [FDO21331SLK-70:7D:B9:4A:72:21] - Script Name: poap_dcnm.py
2019 Jun 19 14:59:38 switch %$ VDC-1 %$ %POAP-2-POAP_INFO: [FDO21331SLK-70:7D:B9:4A:72:21] - Using DHCP, information received over
mgmt0 from 192.168.128.56
2019 Jun 19 14:59:38 switch %$ VDC-1 %$ %POAP-2-POAP_INFO: [FDO21331SLK-70:7D:B9:4A:72:21] - Assigned IP address: 192.168.128.102
2019 Jun 19 14:59:38 switch %$ VDC-1 %$ %POAP-2-POAP_INFO: [FDO21331SLK-70:7D:B9:4A:72:21] - Netmask: 255.255.255.0
2019 Jun 19 14:59:38 switch %$ VDC-1 %$ %POAP-2-POAP_INFO: [FDO21331SLK-70:7D:B9:4A:72:21] - DNS Server: 64.102.6.247
2019 Jun 19 14:59:38 switch %$ VDC-1 %$ %POAP-2-POAP_INFO: [FDO21331SLK-70:7D:B9:4A:72:21] - Default Gateway: 192.168.128.1
2019 Jun 19 14:59:38 switch %$ VDC-1 %$ %POAP-2-POAP_INFO: [FDO21331SLK-70:7D:B9:4A:72:21] - Script Server: 192.168.128.56
2019 Jun 19 14:59:38 switch %$ VDC-1 %$ %POAP-2-POAP_INFO: [FDO21331SLK-70:7D:B9:4A:72:21] - Script Name: poap_dcnm.py
2019 Jun 19 14:59:48 switch %$ VDC-1 %$ %POAP-2-POAP_INFO: [FDO21331SLK-70:7D:B9:4A:72:21] - The POAP Script download has started
2019 Jun 19 14:59:48 switch %$ VDC-1 %$ %POAP-2-POAP_INFO: [FDO21331SLK-70:7D:B9:4A:72:21] - The POAP Script is being downloaded
from [copy tftp://192.168.128.56/poap_dcnm.py bootflash:scripts/script.sh vrf management ]
2019 Jun 19 14:59:49 switch %$ VDC-1 %$ %POAP-2-POAP_SCRIPT_DOWNLOADED: [FDO21331SLK-70:7D:B9:4A:72:21] - Successfully downloaded
POAP script file
2019 Jun 19 14:59:49 switch %$ VDC-1 %$ %POAP-2-POAP_INFO: [FDO21331SLK-70:7D:B9:4A:72:21] - Script file size 100623, MD5 checksum
d44d85cd6433a6efb6467faa17396933
2019 Jun 19 14:59:49 switch %$ VDC-1 %$ %POAP-2-POAP_INFO: [FDO21331SLK-70:7D:B9:4A:72:21] - MD5 checksum received from the script
file is d44d85cd6433a6efb6467faa17396933
2019 Jun 19 14:59:49 switch %$ VDC-1 %$ %POAP-2-POAP_SCRIPT_STARTED_MD5_VALIDATED: [FDO21331SLK-70:7D:B9:4A:72:21] - POAP script
execution started(MD5 validated)
2019 Jun 19 14:59:56 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: - CLI : show license host-id - script.sh
2019 Jun 19 14:59:56 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: - INFO: Get serial number: FDO21331SLK - script.sh
2019 Jun 19 14:59:56 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FDO21331SLK] - INFO:device type is n9k - script.sh

2019 Jun 19 14:59:56 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FDO21331SLK] - INFO:device type is n9k - script.sh
2019 Jun 19 14:59:56 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FDO21331SLK] - INFO:device os version is - script.sh
2019 Jun 19 14:59:56 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FDO21331SLK] - INFO: check free space - script.sh
2019 Jun 19 14:59:57 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FDO21331SLK] - INFO: free space is 34643592 kB - script.sh
2019 Jun 19 14:59:57 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FDO21331SLK] - Get and set interface default - script.sh
2019 Jun 19 14:59:57 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FDO21331SLK] - CLI : show run | inc breakout - script.sh
2019 Jun 19 14:59:58 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FDO21331SLK] - CLI : show run int | inc Ethernet - script.sh
2019 Jun 19 14:59:59 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FDO21331SLK] - INFO: Ready to copy protocol scp, host
192.168.128.56, source /var/lib/dcnm/dcnm-server-list.cfg vrf management user poap password ***** - script.sh
2019 Jun 19 14:59:59 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FDO21331SLK] - CLI : terminal dont-ask ; terminal password ***** ;
copy scp://poap@192.168.128.56/var/lib/dcnm/dcnm-server-list.cfg dcnm-server-list.cfg vrf management - script.sh
2019 Jun 19 15:00:00 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FDO21331SLK] - INFO: Get Device Image Config File - script.sh

```

```

2019 Jun 19 15:00:01 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - INFO: create_image_conf - script.sh
2019 Jun 19 15:00:01 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - INFO: Ready to copy protocol scp, host
192.168.128.56, source /var/lib/dcnm/licenses/device-license.idx vrf management user poap password ***** - script.sh
2019 Jun 19 15:00:01 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - CLI : terminal dont-ask ; terminal password ***** ;
copy scp://poap@192.168.128.56/var/lib/dcnm/licenses/device-license.idx device-license.idx vrf management - script.sh
2019 Jun 19 15:00:02 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - INFO: device license index does not exist, no
device licenses will be downloaded - script.sh
2019 Jun 19 15:00:02 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - INFO: Ready to copy protocol scp, host
192.168.128.56, source /var/lib/dcnm/FD021331SLK/device-config vrf management user poap password ***** - script.sh
2019 Jun 19 15:00:02 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - CLI : terminal dont-ask ; terminal password ***** ;
copy scp://poap@192.168.128.56/var/lib/dcnm/FD021331SLK/device-config device-config vrf management - script.sh

2019 Jun 19 15:00:01 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - INFO: Get Device Recipe - script.sh
2019 Jun 19 15:00:01 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - INFO: removing tmp file /bootflash/device-
recipe.cfg - script.sh
2019 Jun 19 15:00:01 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - INFO: create_image_conf - script.sh
2019 Jun 19 15:00:01 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - INFO: Ready to copy protocol scp, host
192.168.128.56, source /var/lib/dcnm/licenses/device-license.idx vrf management user poap password ***** - script.sh
2019 Jun 19 15:00:01 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - CLI : terminal dont-ask ; terminal password ***** ;
copy scp://poap@192.168.128.56/var/lib/dcnm/licenses/device-license.idx device-license.idx vrf management - script.sh
2019 Jun 19 15:00:02 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - INFO: device license index does not exist, no
device licenses will be downloaded - script.sh
2019 Jun 19 15:00:02 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - INFO: Ready to copy protocol scp, host
192.168.128.56, source /var/lib/dcnm/FD021331SLK/device-config vrf management user poap password ***** - script.sh
2019 Jun 19 15:00:02 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - CLI : terminal dont-ask ; terminal password ***** ;
copy scp://poap@192.168.128.56/var/lib/dcnm/FD021331SLK/device-config device-config vrf management - script.sh
2019 Jun 19 15:00:04 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - INFO: Completed Copy of Config File - script.sh
2019 Jun 19 15:00:04 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - INFO: Split config invoked... - script.sh
2019 Jun 19 15:00:04 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - Found an interface line in config:interface mgmt0
- script.sh
2019 Jun 19 15:00:04 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - Adding interface defaults - no shut on all
interfaces - script.sh
2019 Jun 19 15:00:04 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - INFO: Split config is complete - script.sh
2019 Jun 19 15:00:04 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - INFO: Setting the boot variables - script.sh
2019 Jun 19 15:00:04 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - CLI : copy running-config startup-config -
script.sh
2019 Jun 19 15:00:08 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - CLI : copy poap_2.cfg scheduled-config - script.sh
2019 Jun 19 15:00:08 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - INFO: Copying the scheduled cfg done - script.sh
2019 Jun 19 15:00:08 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - INFO: Configuration successful - script.sh

2019 Jun 19 15:00:08 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - FINISH: Clean up files. - script.sh
2019 Jun 19 15:00:08 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - CLI : delete device-config - script.sh
2019 Jun 19 15:00:09 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - CLI : delete poap_1.cfg - script.sh
2019 Jun 19 15:00:09 switch %$ VDC-1 %$ %USER-1-SYSTEM_MSG: S/N[FD021331SLK] - CLI : delete poap_2.cfg - script.sh
2019 Jun 19 15:00:12 switch %$ VDC-1 %$ %POAP-2-POAP_SCRIPT_EXEC_SUCCESS: [FD021331SLK-70:7D:B9:4A:72:21] - POAP script execution
success
2019 Jun 19 15:00:13 switch %$ VDC-1 %$ %POAP-2-POAP_RELOAD_DEVICE: [FD021331SLK-70:7D:B9:4A:72:21] - Reload device
2019 Jun 19 15:00:15 switch %$ VDC-1 %$ %PLATFORM-2-PFM_SYSTEM_RESET: Manual system restart from Command Line Interface
<switch boot sequence here_omitting for brevity>
2019 Jun 19 15:04:05 rtp-seoul-bb11 %$ VDC-1 %$ %ASCII-CFG-2-CONF_CONTROL: System ready
[#####] 100%
Copy complete, now saving to disk (please wait)...
Copy complete.
Auto provisioning

User Access Verification
rtp-seoul-bb11 login:

```

第 3 步：在您部署整个结构的前配置，请保证您以前配置与设备证明的DCNM。当您登陆，弹出式在GUI应该出现。在不的事件，您能通过Administration >凭证Management> LAN凭证总是访问此

。

Note: 如果设备证明未命中，DCNM不能推送配置到交换机。



When changing the device configuration DCNM uses the device credentials provided by the user. You have not provided the LAN switch credentials yet. Do you want to set the LAN switch credentials now?

Do not show this message again.

Yes

No

Administration / Credentials Management / LAN Credentials

Default Credentials

Default credentials will be used when changing device configuration. You can override the default credentials by specifying credentials for each of the devices in the Switch Table below.

DCNM uses individual switch credentials in the Switch Table. If the Username or Password column is empty in the Switch Table, the default credentials will be used.

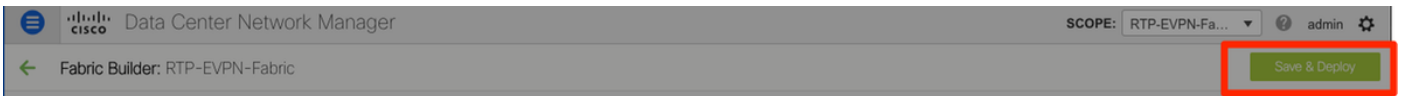
* User Name
* Password
* Confirm Password

Save

Clear

部署结构的配置

第 1 步：使用同样步骤，一旦发现给的结构的所有交换机，请导航控制>结构>结构建造者><your选择的Fabric>。您应该与所有他们的链路一起看到您的交换机此处。点击“Save” &部署。



第二步：在设置部署窗口，您看到配置多少条线路每交换机的DCNM推送。如果需要您能预览配置和前后比较：

Config Deployment



Step 1. Configuration Preview >

Step 2. Configuration Deployment Status >

Switch Name	IP Address	Switch Serial	Preview Config	Status	Re-sync	Progress
rtp-seoul-bb12	192.168.128.106	FDO21332CS5	481 lines	Out-of-sync		100%
rtp-seoul-bb11	192.168.128.102	FDO21331SLK	469 lines	Out-of-sync		100%
rtp-sapporo-bb12	192.168.128.105	FDO21302J5Z	464 lines	Out-of-sync		100%
rtp-sug-sp-bb12	192.168.128.104	FGE21332GQ9	314 lines	Out-of-sync		100%
rtp-sapporo-bb11	192.168.128.101	FDO213001M0	464 lines	Out-of-sync		100%
rtp-sug-sp-bb11	192.168.128.100	FGE21332H1D	313 lines	Out-of-sync		100%

请保证所有交换机状态完成和100%不出任何错误—，如果有任何错误，请务必寻址他们一次一个 (请参阅在此部署部分时遇到的问题关于示例)

Config Deployment



Step 1. Configuration Preview

Step 2. Configuration Deployment Status

Switch Name	IP Address	Status	Status Description	Progress
rtp-seoul-bb12	192.168.128.106	COMPLETED	No Commands to execute.	100%
rtp-seoul-bb11	192.168.128.102	COMPLETED	No Commands to execute.	100%
rtp-sug-sp-bb12	192.168.128.104	COMPLETED	No Commands to execute.	100%
rtp-sapporo-bb11	192.168.128.101	COMPLETED	Deployed successfully	100%
rtp-sug-sp-bb11	192.168.128.100	COMPLETED	Deployed successfully	100%
rtp-sapporo-bb12	192.168.128.105	COMPLETED	Deployed successfully	100%

步骤3. (可选)您能这时登陆到设备和发出所有**show run** CLIs验证配置由DCNM顺利地推送。

示例：

```
rtp-sug-sp-bb11# show run bgp
```

```
!Command: show running-config bgp  
!Time: Wed Jun 19 17:28:37 2019
```

```
version 7.0(3)I7(5) Bios:version 08.34  
feature bgp
```

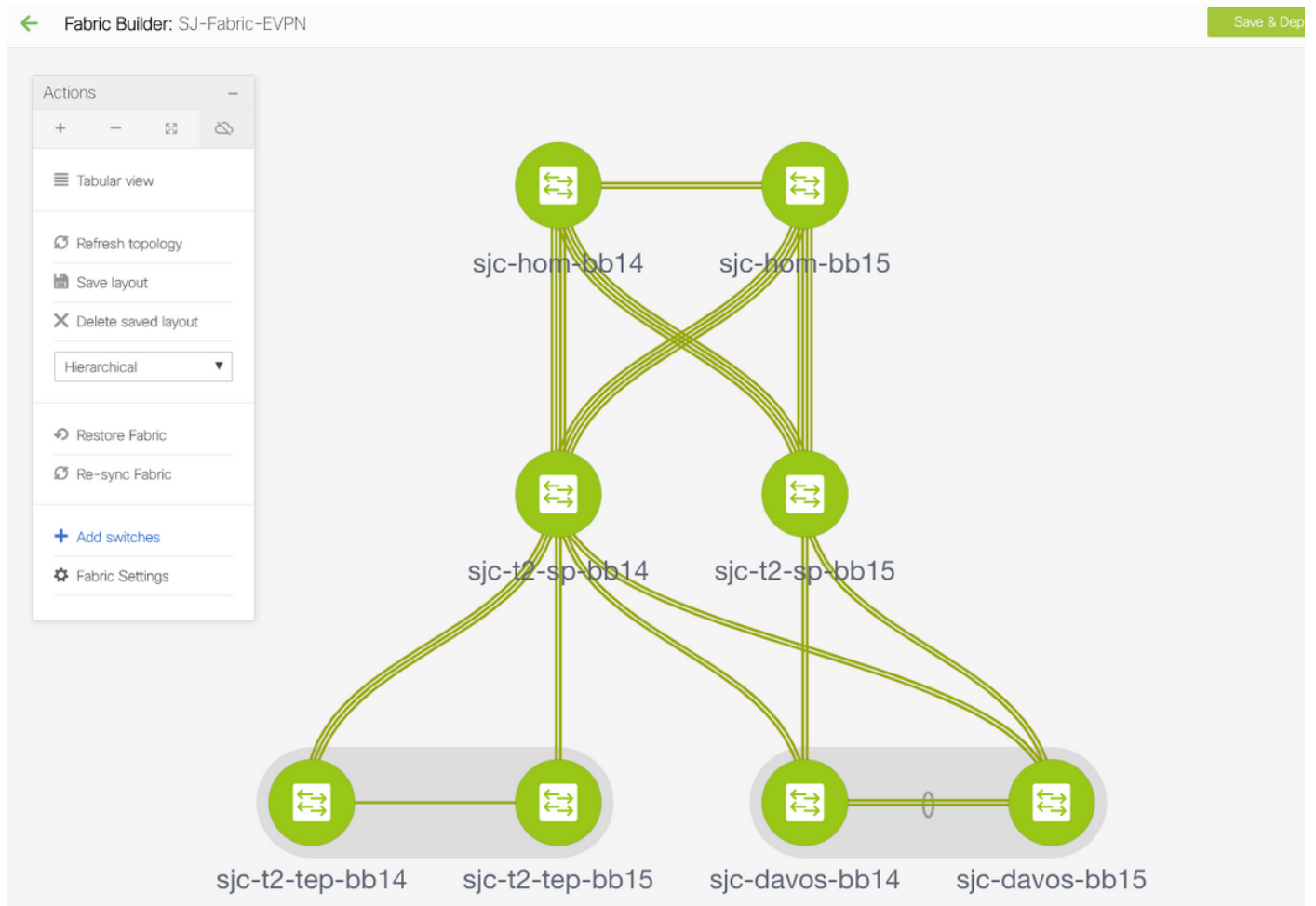
```
router bgp 65534  
router-id 10.1.0.11  
neighbor 10.1.0.7  
remote-as 65534  
update-source loopback0  
address-family l2vpn evpn  
send-community  
send-community extended  
route-reflector-client  
neighbor 10.1.0.8  
remote-as 65534  
update-source loopback0  
address-family l2vpn evpn  
send-community  
send-community extended  
route-reflector-client  
neighbor 10.1.0.9  
remote-as 65534  
update-source loopback0  
address-family l2vpn evpn  
send-community  
send-community extended  
route-reflector-client  
neighbor 10.1.0.10  
remote-as 65534  
update-source loopback0  
address-family l2vpn evpn  
send-community  
send-community extended  
route-reflector-client
```

部署第二个结构--SJ

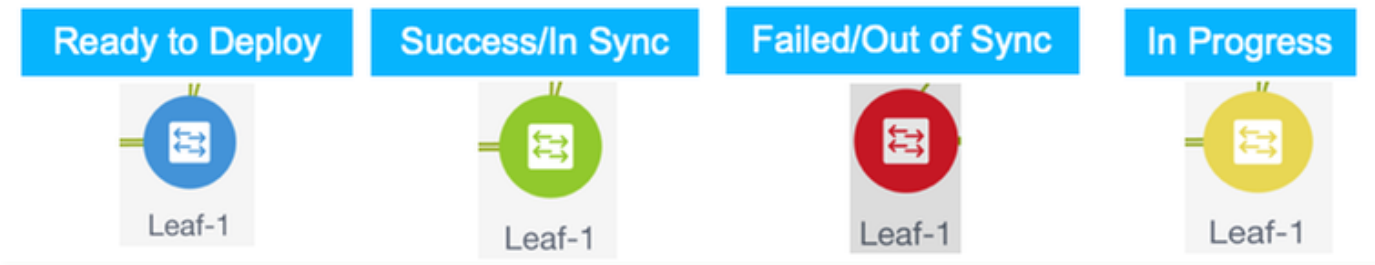
Step 1. Configuration Preview > Step 2. Configuration Deployment Status >

Switch Name	IP Address	Status	Status Description	Progress
sjc-hom-bb15	192.168.254.103	COMPLETED	No Commands to execute.	100%
sjc-davos-bb14	192.168.254.106	COMPLETED	No Commands to execute.	100%
sjc-hom-bb14	192.168.254.107	COMPLETED	No Commands to execute.	100%
sjc-davos-bb15	192.168.254.102	COMPLETED	No Commands to execute.	100%
sjc-t2-tep-bb14	192.168.254.105	COMPLETED	No Commands to execute.	100%
sjc-t2-tep-bb15	192.168.254.101	COMPLETED	No Commands to execute.	100%
sjc-t2-sp-bb15	192.168.254.100	COMPLETED	Deployed successfully	100%
sjc-t2-sp-bb14	192.168.254.104	COMPLETED	Deployed successfully	100%

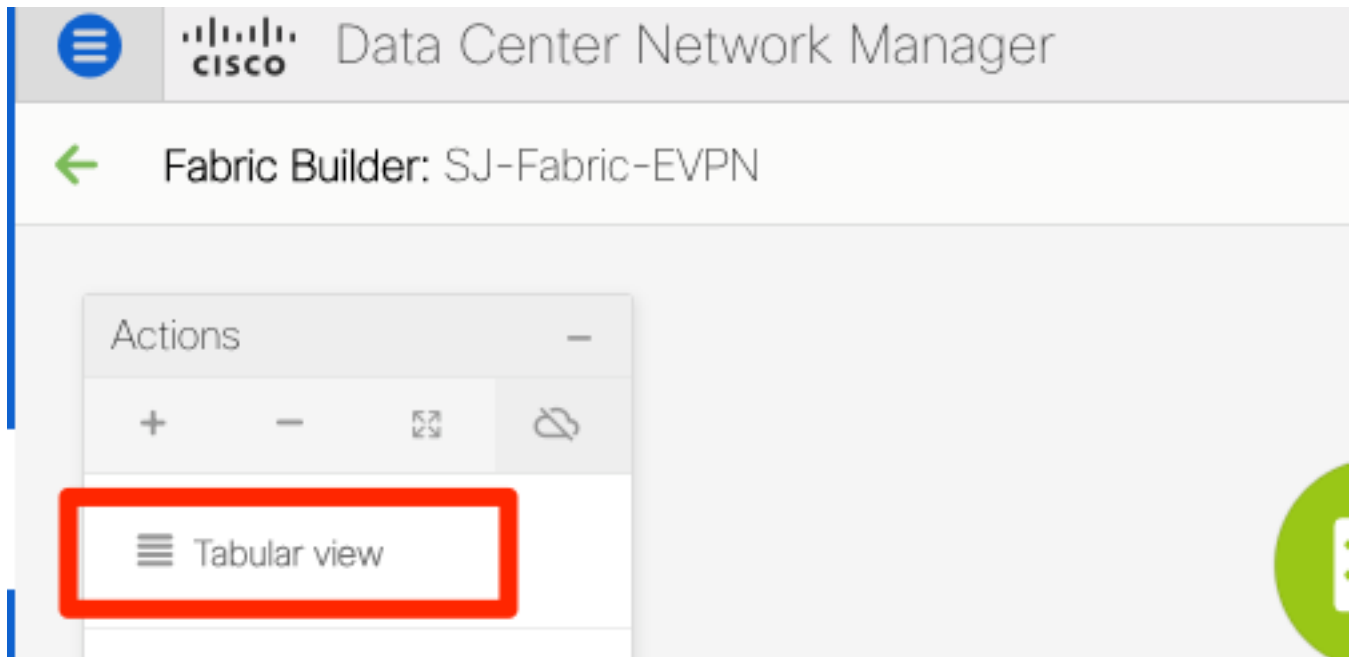
拓扑从结构在末端的建造者的方面。



理论上讲，所有交换机在格林应该出现与他们的链路一起。此镜像显示在DCNM的不同的状态颜色含义。



第 3 步：一旦两个结构配置并且部署，请保证保存设置& TCAM的重新加载更改生效。如镜像所显示，去控制>结构>结构建造者> <your Fabric>，导航对表格视图。



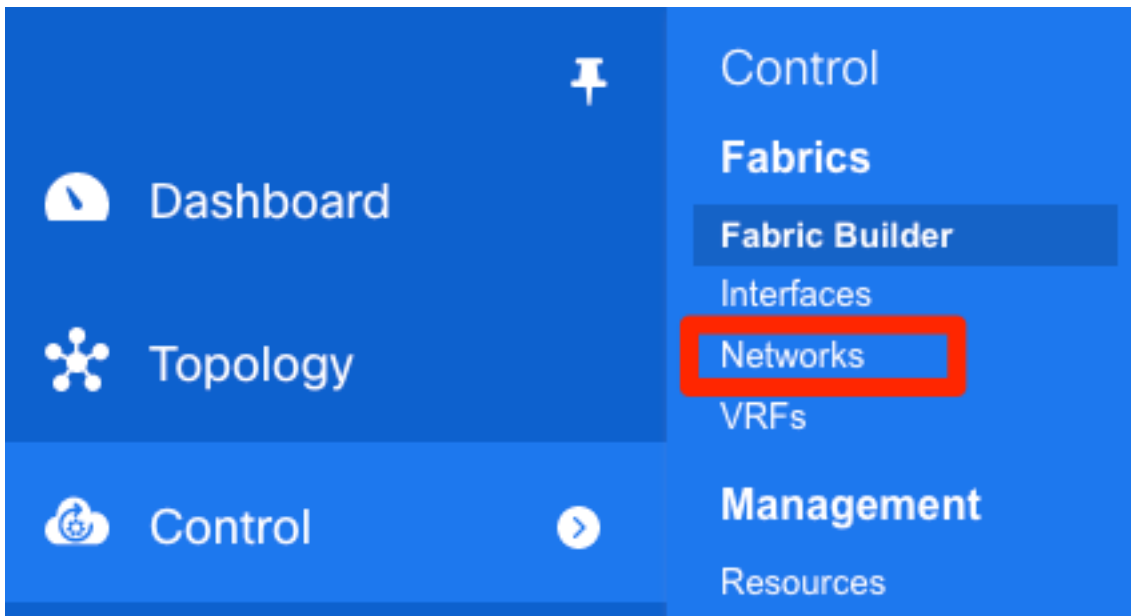
第 4 步：然后请单击电源按钮(这同时重新加载所有您的交换机)：

Switches Links

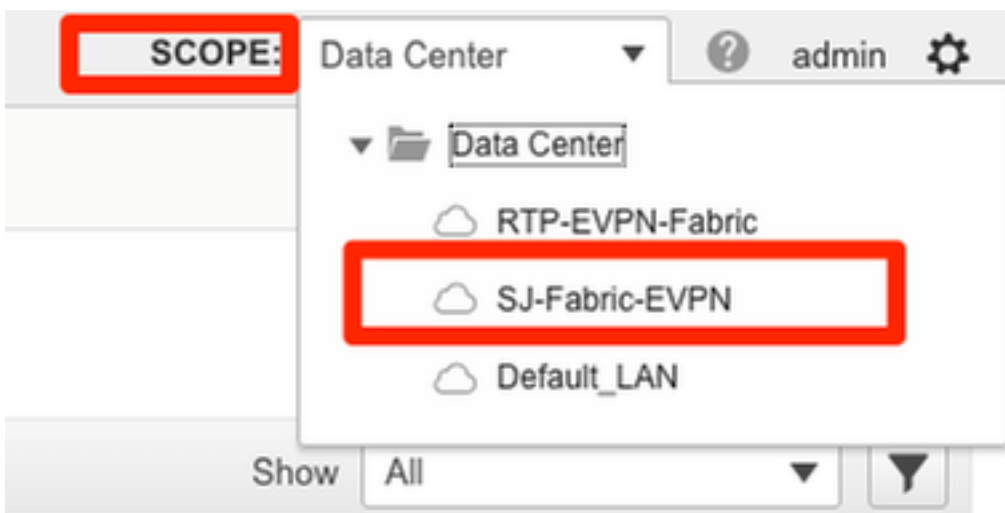
	<input checked="" type="checkbox"/>	Name	IP
1	<input checked="" type="checkbox"/>	sjc-hom-bb15	19
2	<input checked="" type="checkbox"/>	sjc-davos-bb14	19
3	<input checked="" type="checkbox"/>	sjc-t2-sp-bb15	19
4	<input checked="" type="checkbox"/>	sjc-t2-sp-bb14	19
5	<input checked="" type="checkbox"/>	sjc-hom-bb14	19
6	<input checked="" type="checkbox"/>	sjc-davos-bb15	19
7	<input checked="" type="checkbox"/>	sjc-t2-tep-bb14	19
8	<input checked="" type="checkbox"/>	sjc-t2-tep-bb15	19

创建网络(VLAN/L2VNI)和VRF (L3VNIs)

步骤1.如镜像所显示，导航控制>结构>网络。



步骤2.如镜像所显示，请选择更改的范围。即结构的此配置需要应用？



步骤3.如镜像所显示，点击+符号。



步骤4. DCNM通过创建Switch Virtual Interface (SVI) (或纯L2的进程走您VLAN)。如果VRF在此阶段没有创建，请点击+按钮再，并且这临时地把您带对VRF走过在移动向前前与SVI设置。

Create Network



Network Information

* Network ID

* Network Name

* VRF Name +

Layer 2 Only

* Network Template

* Network Extension Template

VLAN ID Propose VLAN ?

Create VRF



VRF Information

* VRF ID

* VRF Name

* VRF Template

* VRF Extension Template

VRF Profile

General

Advanced

VRF Vlan Name ?

VRF Intf Description ?

VRF Description ?

Create VRF

Network Profile

Generate Multicast IP

Please click only to generate a New Multicast Group Address and override the default value!

General

Advanced

IPv4 Gateway/NetMask ? example 192.0.2.1/24

IPv6 Gateway/Prefix ? example 2001:db8::1/64

Vlan Name ? if > 32 chars enable:system vlan long-name

Interface Description ?

MTU for L3 interface ? 68-9216

IPv4 Secondary GW1 ? example 192.0.2.1/24

IPv4 Secondary GW2 ? example 192.0.2.1/24

这些功能可以配置在高级选项卡。下：

- ARP抑制
- 入口复制
- 组播组
- DHCP
- 路由标记
- TRM
- L2 VNI Route-target
- 在边界的Enable (event) L3网关

步骤5.点击**Continue**部署Network/VRF配置。

The screenshot shows the Cisco Data Center Network Manager interface. The top navigation bar includes the Cisco logo, 'Data Center Network Manager', and 'SCOPE: SJ-Fabric-EVPN'. Below the navigation bar, there are two buttons: 'VRF View' and 'Continue'. The 'Continue' button is highlighted with a red rectangle. Below the buttons, the text 'Fabric Selected: SJ-Fabric-EVPN' is displayed. The main area shows a table of networks with the following columns: Network Name, Network ID, VRF Name, IPv4 Gateway/Subnet, IPv6 Gateway/Prefix, Status, and VLAN ID. The table contains one entry: 'Andrea_TestNetwork_20001' with Network ID '20001', VRF Name 'Andrea_VRF_RED', IPv4 Gateway/Subnet '10.212.20.1/24', IPv6 Gateway/Prefix '2001:db8::1/64', Status 'NA', and VLAN ID '2300'.

步骤6.双击一个设备(或设备)在结构视图(DCNM自动地采取您此处)，为可适用的配置选择他们。如镜像所显示，点击“Save”。

Network Attachment - Attach networks for given switch(es)



Fabric Name: SJ-Fabric-EVPN

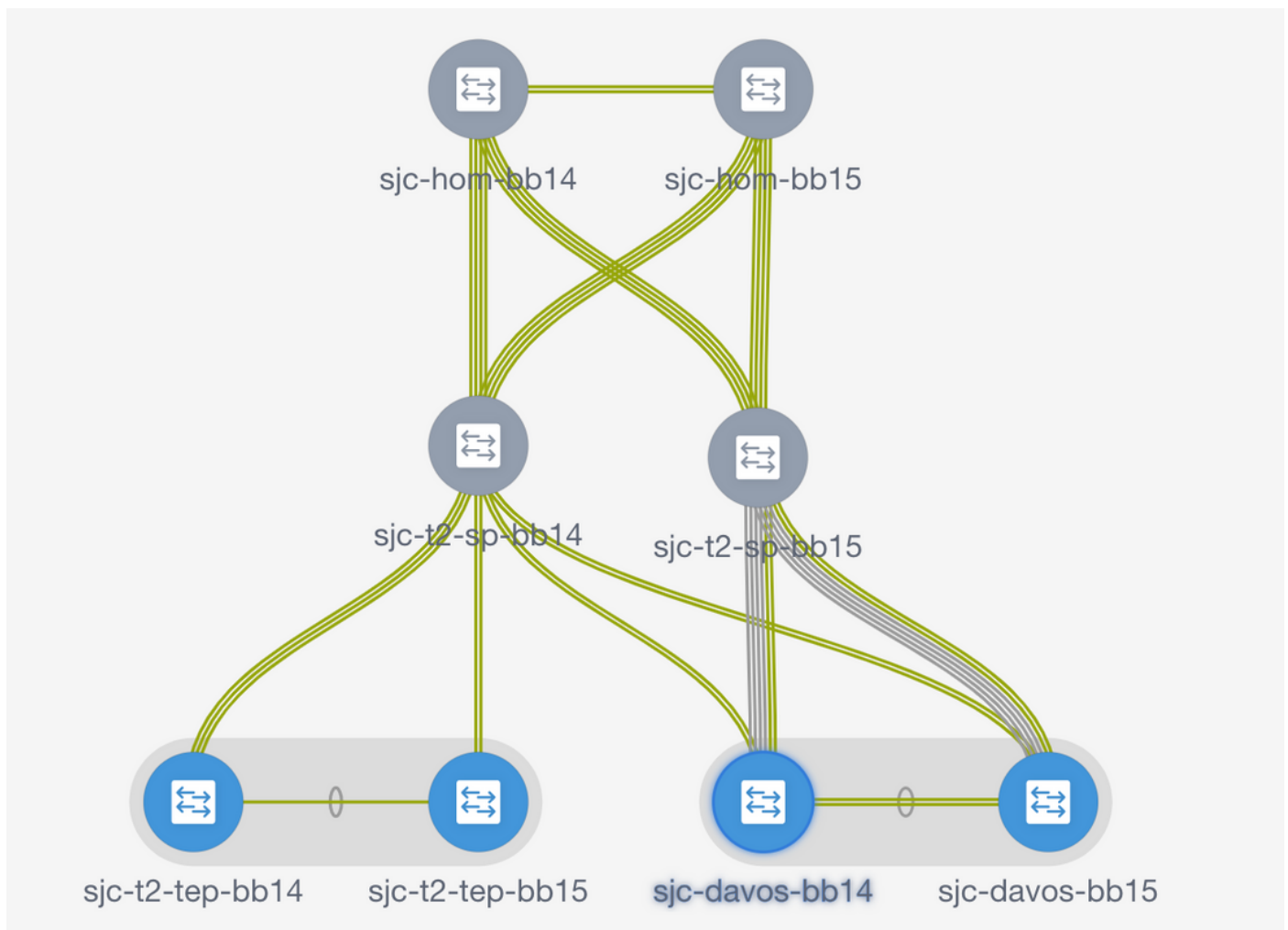
Deployment Options

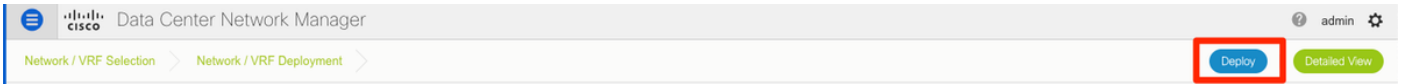
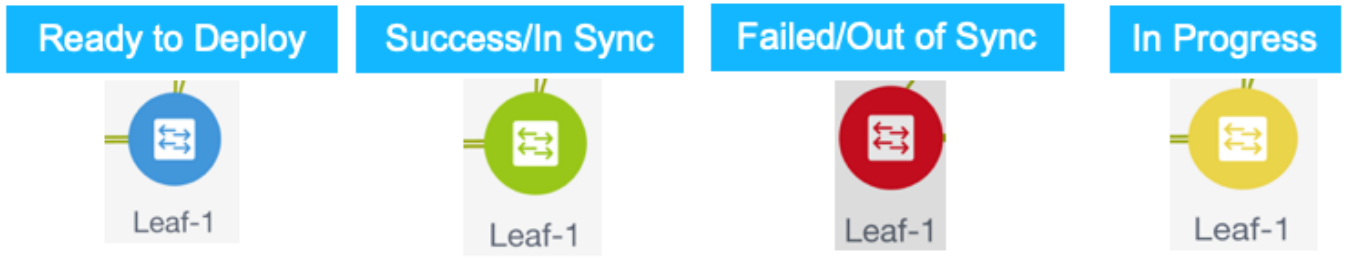
Select the row and click on the cell to edit and save changes

Andrea_TestNetwork_20001						
<input checked="" type="checkbox"/>	Switch	VLAN	Interfaces	CLI Freeform	Status	
<input checked="" type="checkbox"/>	sjc-t2-tep-bb14	2300	...	Freeform config	NA	
<input checked="" type="checkbox"/>	sjc-t2-tep-bb15	2300	...	Freeform config	NA	

Save

第 7 步：一旦选择，交换机应该指望蓝色(请准备部署)，如此镜像所显示。





Note: 如果要在部署之前验证CLI的配置，您能点击**详细信息**而不是**部署**并且点击在Next屏幕的**预览**。

交换机启用黄色，当一次完成的配置应用和回到格林时。

步骤8. (可选)您能登陆CLI验证配置，如果如此需要(请切记使用展开端口配置文件选项)：

```

sjc-davos-bb14# show nve peers
Interface Peer-IP      State LearnType Uptime  Router-Mac
-----
nve1      10.2.0.16             Up     CP         00:00:34 00f6.638e.4fd5

sjc-davos-bb14# show nve vni
Codes: CP - Control Plane      DP - Data Plane
       UC - Unconfigured       SA - Suppress ARP
       SU - Suppress Unknown Unicast
       Xconn - Crossconnect
       MS-IR - Multisite Ingress Replication
Interface VNI      Multicast-group  State Mode Type [BD/VRF]  Flags
-----
nve1      20001            239.2.2.0        Up   CP   L2 [2300]
nve1      30000            n/a              Up   CP   L3 [andrea_vrf_red]

sjc-davos-bb14# show nve vrf andrea_vrf_red
VRF-Name  VNI      Interface Gateway-MAC
-----
andrea_vrf_red 30000    nve1      707d.b987.11a3

sjc-davos-bb14# show run int vlan 2300 expand-port-profile

!Command: show running-config interface Vlan2300 expand-port-profile
!Running configuration last done at: Mon Jun 24 15:07:05 2019
!Time: Mon Jun 24 15:08:13 2019

version 9.2(3) Bios:version 07.61

interface Vlan2300
  description SVI 2300
  no shutdown
  mtu 9216
  vrf member andrea_vrf_red
  no ip redirects
  ip address 10.212.20.1/24 tag 12345
  ipv6 address 2001:db8::1/64 tag 12345
  no ipv6 redirects
  fabric forwarding mode anycast-gateway

sjc-davos-bb14# show nve interface nve 1 detail
Interface: nve1, State: Up, encapsulation: VXLAN
VPC Capability: VPC-VIP-Only [notified]
Local Router MAC: 707d.b987.11a3
Host Learning Mode: Control-Plane
Source-Interface: loopback1 (primary: 10.2.0.14, secondary: 10.2.0.15)
Source Interface State: Up
Virtual RMAC Advertisement: No
NVE Flags:
Interface Handle: 0x49000001
Source Interface hold-down-time: 180
Source Interface hold-up-time: 30
Remaining hold-down time: 0 seconds
Virtual Router MAC: 0200.0a02.000f
Interface state: nve-intf-add-complete

```

多站点配置

对于此全新部署，MSD结构通过在边界网关(BGWs)之间的直接对等体部署。替代方案在本文使用集中化路由服务器，没被覆盖。

步骤1.如镜像所显示，导航控制>结构建造者>创建结构。



Fabric Builder

Fabric Builder creates a managed and controlled SDN fabric. Select an existing fabric below or define a new VXLAN fabric (POAP), set the roles of the switches and deploy settings to devices.

Create Fabric

步骤2. 给予您的多站点结构名称并且为**结构模板**选择在丢弃的MSD_Fabric_11_1下来。

第3步：在常规下，请保证您的L2和L3 VNI范围匹配什么您各自的结构使用。另外，任播网关MAC在两个结构(在本例中的RTP/SJ必须配比)。DCNM给您错误，如果网关MAC不匹配，并且需要在移动被更正向前之前与MSD部署。

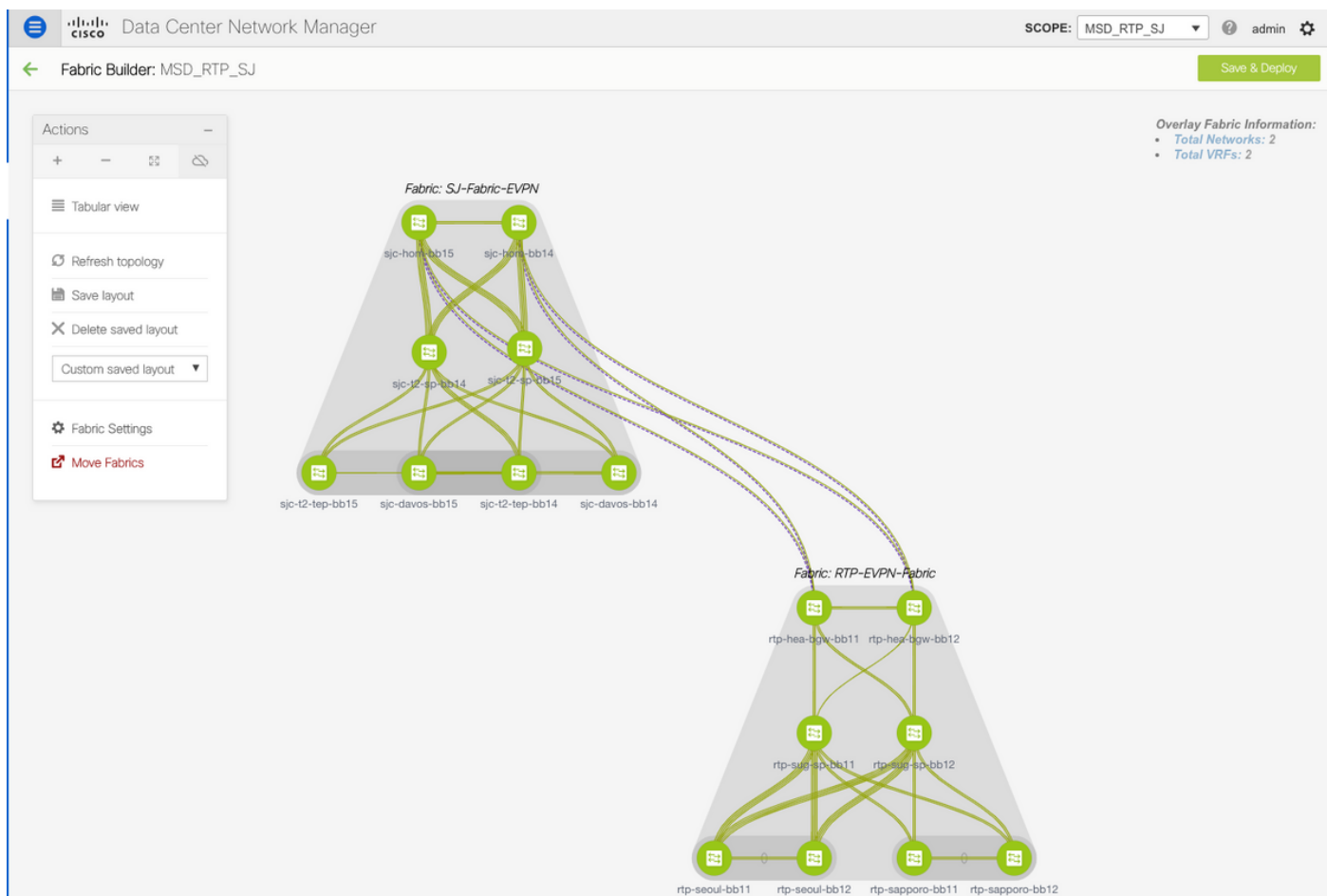
General	DCI	Resources
* Layer 2 VXLAN VNI Range	<input type="text" value="20000-29000"/>	? Overlay Network Identifier Range (Min:1, Max:16777214)
* Layer 3 VXLAN VNI Range	<input type="text" value="30000-39000"/>	? Overlay VRF Identifier Range (Min:1, Max:16777214)
* VRF Template	<input type="text" value="Default_VRF_Universal"/>	? Default Overlay VRF Template For Leafs
* Network Template	<input type="text" value="Default_Network_Universal"/>	? Default Overlay Network Template For Leafs
* VRF Extension Template	<input type="text" value="Default_VRF_Extension_Universal"/>	? Default Overlay VRF Template For Borders
* Network Extension Template	<input type="text" value="Default_Network_Extension_Universal"/>	? Default Overlay Network Template For Borders
Anycast-Gateway-MAC	<input type="text" value="1010.0000.00aa"/>	? Shared MAC address for all leaves
* Multisite Routing Loopback Id	<input type="text" value="100"/>	? 0-512

General	DCI	Resources
DCI Subnet IP Range	<input type="text" value="10.10.1.0/24"/>	? Address range to assign P2P DCI Links
Subnet Target Mask	<input type="text" value="30"/>	? Target Mask for Subnet Range (Min:8, Max:31)
* Multi-Site Overlay IFC Deployment Method	<input type="text" value="Direct_To_BGWS"/>	? Manual, Auto Overlay EVPN Peering to Route Servers, Auto Overlay EVPN Direct Peering to Border Gateways
Multi-Site Route Server List	<input type="text"/>	? Multi-Site Router-Server peer list, e.g. 128.89.0.1, 128.89.0.2
Multi-Site Route Server BGP ASN List	<input type="text"/>	? 1-4294967295 1-65535[.0-65535], e.g. 65000, 65001
Multi-Site Underlay IFC Auto Deployment Flag	<input checked="" type="checkbox"/>	?

General	DCI	Resources
* Multi-Site Routing Loopback IP Range	<input type="text" value="10.10.0.0/22"/>	? Typically Loopback100 IP Address Range

步骤4. 点击“Save”，然后导航对MSD结构并且点击“Save” & 部署。您的拓扑应该看起来类似于(所有

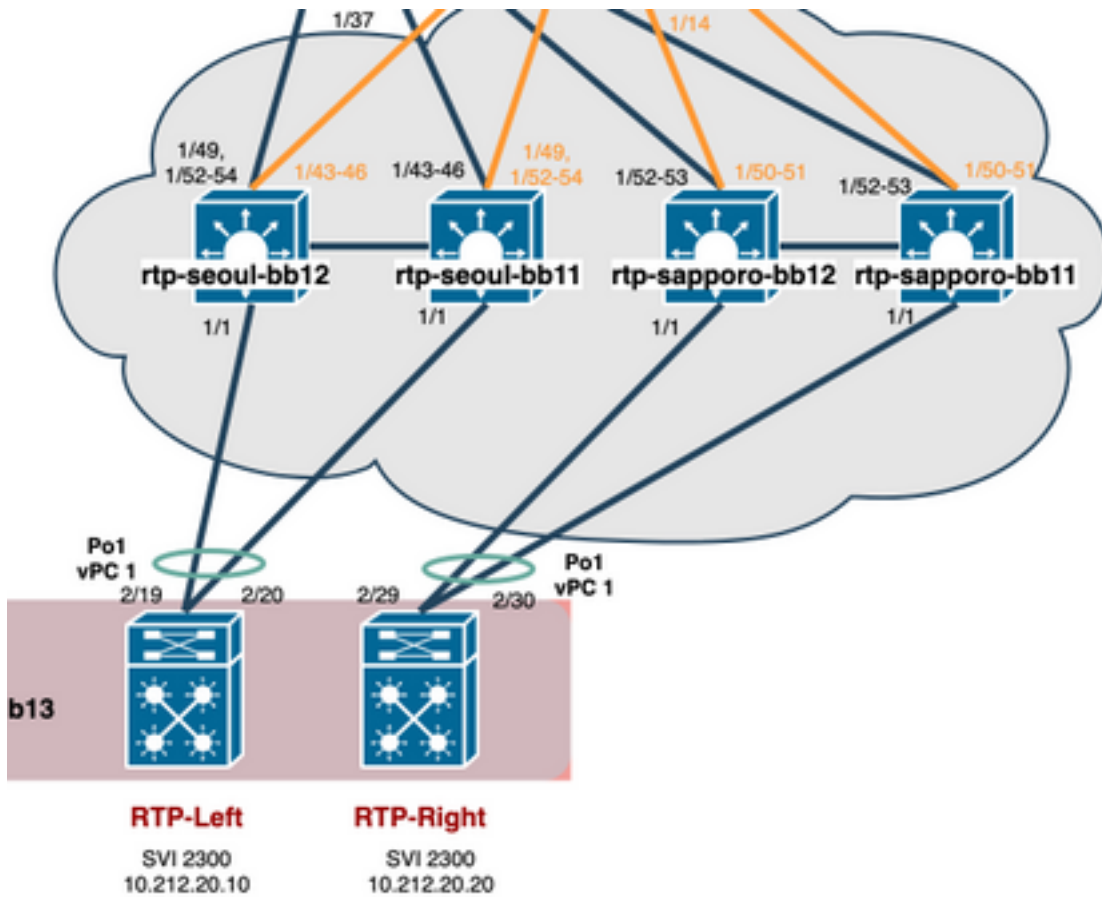
交换机+连接格林)一次顺利地完成的这些：



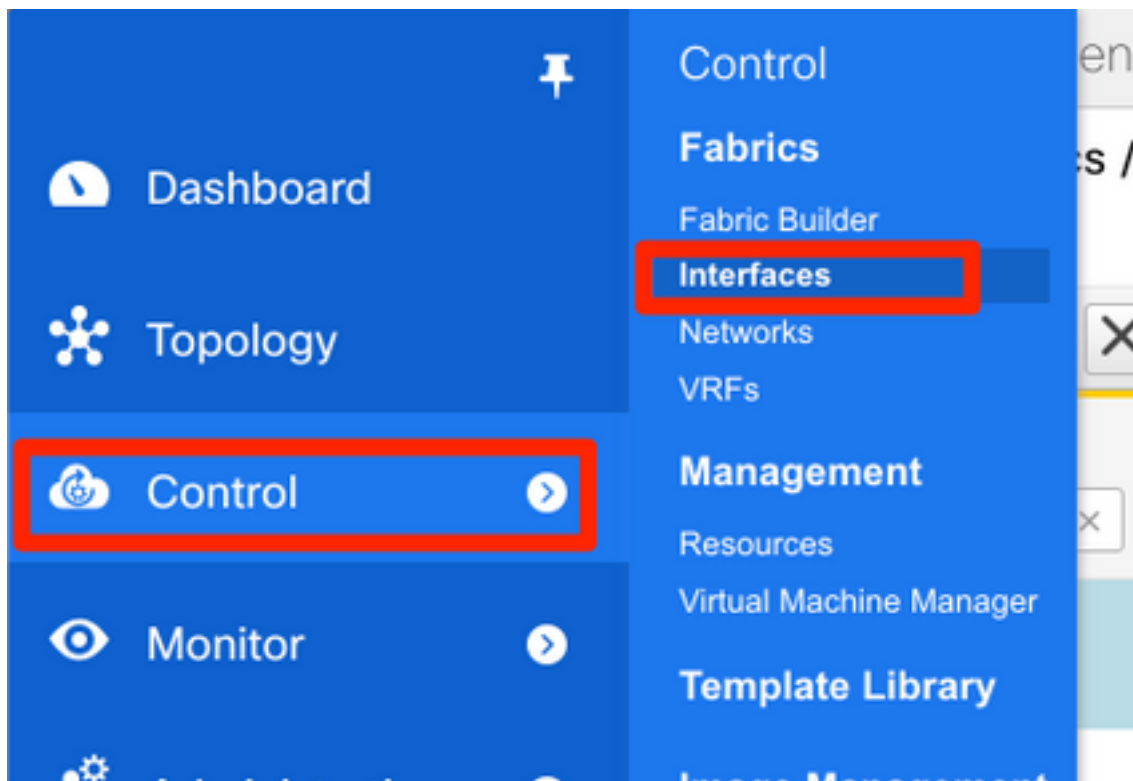
Do not forget to re-deploy any Networks/VRFs across both fabrics + the MSD Fabric!

实施主机访问/中继策略

对于此示例，vPC建立中继两个不同的VTEP对配置并且测试在本地RTP结构内的连接。如镜像所显示的相关拓扑：



步骤1.如镜像所显示，导航控制>结构>接口。



步骤2.如镜像所显示，点击+符号输入添加接口向导。

Interfaces

	Device Name	Name	Admin	Oper	Reason	Policy	Overlay Network	Status
	sapporo-bb	1/1	up	up	ok			
<input checked="" type="checkbox"/>	rtp-sapporo-bb11	Ethernet1/1	↑	↑	ok	int_trunk_host_11_1	NA	✔
<input checked="" type="checkbox"/>	rtp-sapporo-bb12	Ethernet1/1	↑	↑	ok	int_trunk_host_11_1	NA	✔

在本例中，vPC中继是创建的下行对用于ping测试在此走过的N7K。

步骤3.选择适当的vPC对、开/关物理接口、的LACP，Bpduguard等等。

Add Interface

* Type: virtual Port Channel (vPC)

* Select a vPC pair: rtp-sapporo-bb11---rtp-sapporo-bb12

* vPC ID: 1

* Policy: int_vpc_trunk_host_11_1

Note : PeerOne = rtp-sapporo-bb11 & PeerTwo = rtp-sapporo-bb12

General

Peer-1 Port-Channel ID: 1 Peer-1 VPC port-channel number (Min:1, Max:4096)

Peer-2 Port-Channel ID: 1 Peer-2 VPC port-channel number (Min:1, Max:4096)

Peer-1 Member Interfaces: Eth1/1 A list of member interfaces for Peer-1 [e.g. e1/5,eth1/7-9]

Peer-2 Member Interfaces: Eth1/1 A list of member interfaces for Peer-2 [e.g. e1/5,eth1/7-9]

* Port Channel Mode: active Channel mode options: on, active and passive

* Enable BPDU Guard: false Enable spanning-tree bpduguard

Enable Port Type Fast: Enable spanning-tree edge port behavior

Save Preview Deploy

Note : PeerOne = rtp-sapporo-bb11 & PeerTwo = rtp-sapporo-bb12

General

* MTU ? MTU for the Port Channel

* Peer-1 Trunk Allowed... ? Allowed values: 'none', 'all', or vlan ranges (ex: 1-200,500-2000,3000)

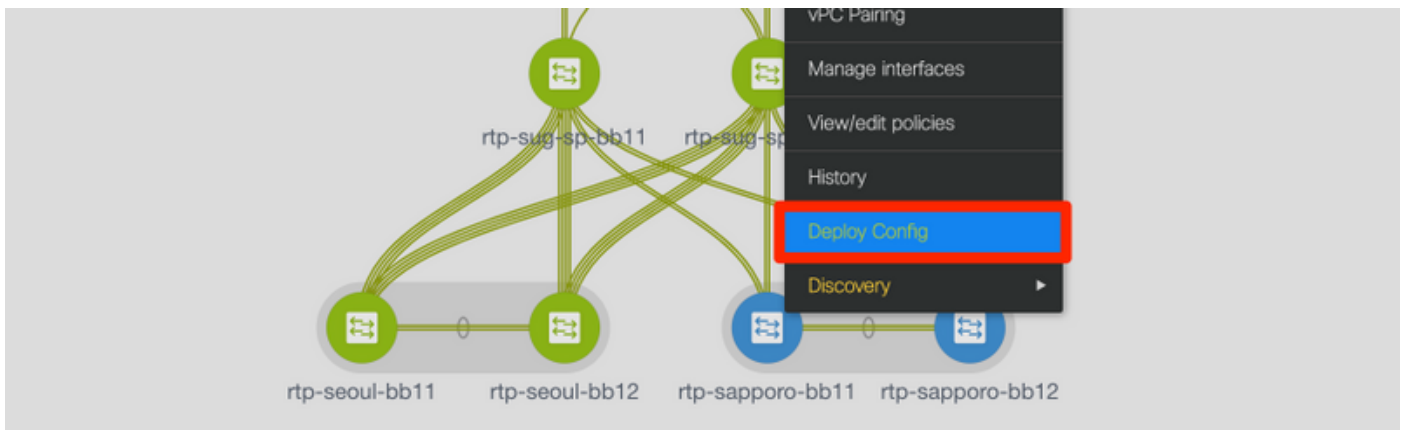
* Peer-2 Trunk Allowed... ? Allowed values: 'none', 'all', or vlan ranges (ex: 1-200,500-2000,3000)

Peer-1 PO Description ? Add description to Peer-1 VPC port-channel (Max Size 254)

Peer-2 PO Description ? Add description to Peer-2 VPC port-channel (Max Size 254)

Note ! All configs :

步骤4. 点击“Save”，当完成。或者，如镜像所显示，您可以直接地部署。



Config Deployment



Step 1. Configuration Preview

Step 2. Configuration Deployment Status

Switch Name	IP Address	Switch Serial	Preview Config	Status	Re-sync	Progress
rtp-sapporo-bb12	192.168.128.105	FDO21302J5Z	15 lines	Out-of-sync		<div style="width: 100%;"><div style="width: 100%;"></div></div> 100%
rtp-sapporo-bb11	192.168.128.101	FDO213001M0	15 lines	Out-of-sync		<div style="width: 100%;"><div style="width: 100%;"></div></div> 100%

步骤5. (可选)复核将应用的配置。

Config Preview - Switch 192.168.128.105



Pending Config

Side-by-side Comparison

```
interface ethernet1/1
  no spanning-tree port type edge trunk
interface port-channel1
  switchport
  switchport mode trunk
  mtu 9216
  vpc 1
  spanning-tree bpduguard disable
  description To N7K RTP-Right Eth2/29
  no shutdown
  switchport trunk allowed vlan 1-4094
interface ethernet1/1
  channel-group 1 force mode active
  no shutdown
configure terminal
```

Config Deployment



Step 1. Configuration Preview >

Step 2. Configuration Deployment Status >

Switch Name	IP Address	Status	Status Description	Progress
rtp-sapporo-bb11	192.168.128.101	COMPLETED	Deployed successfully	100%
rtp-sapporo-bb12	192.168.128.105	COMPLETED	Deployed successfully	100%

在7K的步骤6. (可选)手动配置：

```
RTP-Right# show run interface port-channel 1 membership
```

```
!Command: show running-config interface port-channel1 membership  
!Running configuration last done at: Mon Sep 9 17:29:39 2019  
!Time: Mon Sep 9 17:33:01 2019
```

```
version 8.2(4)
```

```
interface port-channel1  
  switchport  
  switchport mode trunk
```

```
interface Ethernet2/29  
  description vPC from sapporo-bb11/12 eth1/1  
  switchport  
  switchport mode trunk  
  channel-group 1 mode active  
  no shutdown
```

```
interface Ethernet2/30  
  description vPC from sapporo-bb11/12 eth1/1  
  switchport  
  switchport mode trunk  
  channel-group 1 mode active  
  no shutdown
```

```
RTP-Right# show port-channel summary interface po1
```

```
Flags: D - Down          P - Up in port-channel (members)  
       I - Individual    H - Hot-standby (LACP only)  
       S - Suspended     r - Module-removed  
       b - BFD Session Wait  
       S - Switched      R - Routed  
       U - Up (port-channel)  
       M - Not in use. Min-links not met
```

```
-----  
Group Port-      Type      Protocol  Member Ports  
Channel  
-----  
1      Po1(SU)     Eth       LACP      Eth2/29(P) Eth2/30(P)
```

步骤7.(Optional)创建在N7K的一测验SVI ping在RTP的VTEPs (VTEPs有10.212.20.1任播网关在 andrea_red的VRF) :

```
RTP-Right# show run interface vlan 2300
```

```
!Command: show running-config interface Vlan2300  
!Running configuration last done at: Mon Sep 9 17:41:10 2019  
!Time: Mon Sep 9 17:44:30 2019
```

```
version 8.2(4)
```

```
interface Vlan2300  
  description VRF Andrea_Red in TEPs  
  no shutdown  
  no ip redirects  
  ip address 10.212.20.20/24  
  no ipv6 redirects
```

```
RTP-Right# ping 10.212.20.1
```

```
PING 10.212.20.1 (10.212.20.1): 56 data bytes  
64 bytes from 10.212.20.1: icmp_seq=0 ttl=254 time=1.235 ms  
64 bytes from 10.212.20.1: icmp_seq=1 ttl=254 time=0.832 ms  
64 bytes from 10.212.20.1: icmp_seq=2 ttl=254 time=0.819 ms  
64 bytes from 10.212.20.1: icmp_seq=3 ttl=254 time=0.81 ms  
64 bytes from 10.212.20.1: icmp_seq=4 ttl=254 time=0.828 ms
```

```
--- 10.212.20.1 ping statistics ---  
5 packets transmitted, 5 packets received, 0.00% packet loss  
round-trip min/avg/max = 0.81/0.904/1.235 ms
```

步骤8. (可选)验证在RTP内的其他VTEPs通过EVPN/HMM看到此主机：

```
rtp-seoul-bb12# show bgp l2vpn evpn 10.212.20.20 vrf andrea_vrf_red
BGP routing table information for VRF default, address family L2VPN EVPN
Route Distinguisher: 10.1.0.10:35067 (L2VNI 20001)
BGP routing table entry for [2]:[0]:[0]:[48]:[002a.6a5c.6045]:[32]:[10.212.20.20]/272, version 168
Paths: (2 available, best #1)
Flags: (0x000212) (high32 00000000) on xmit-list, is in l2rib/evpn, is not in HW

Advertised path-id 1
Path type: internal, path is valid, is best path, in rib
Imported from 10.1.0.13:35067:[2]:[0]:[0]:[48]:[002a.6a5c.6045]:[32]:[10.212.20.20]/272
AS-Path: NONE, path sourced internal to AS
10.1.0.1 (metric 6) from 10.1.0.11 (10.1.0.11)
Origin IGP, MED not set, localpref 100, weight 0
Received label 20001 30000
Extcommunity: RT:65534:20001 RT:65534:30000 S00:10.1.0.1:0 ENCAP:8
Router MAC:3890.a5eb.05cf
Originator: 10.1.0.13 Cluster list: 10.1.0.11
```

步骤9.(Optional)重复seoul-bb11/12的同一进程(请创建vPC Port-Channel，创建SVI 2300)。ping从RTP离开到RTP权限确认L2在EVPN的连接在RTP结构内：

```
RTP-Left# ping 10.212.20.20
PING 10.212.20.20 (10.212.20.20): 56 data bytes
64 bytes from 10.212.20.20: icmp_seq=0 ttl=254 time=1.385 ms
64 bytes from 10.212.20.20: icmp_seq=1 ttl=254 time=1.03 ms
64 bytes from 10.212.20.20: icmp_seq=2 ttl=254 time=0.98 ms
64 bytes from 10.212.20.20: icmp_seq=3 ttl=254 time=0.997 ms
64 bytes from 10.212.20.20: icmp_seq=4 ttl=254 time=0.974 ms

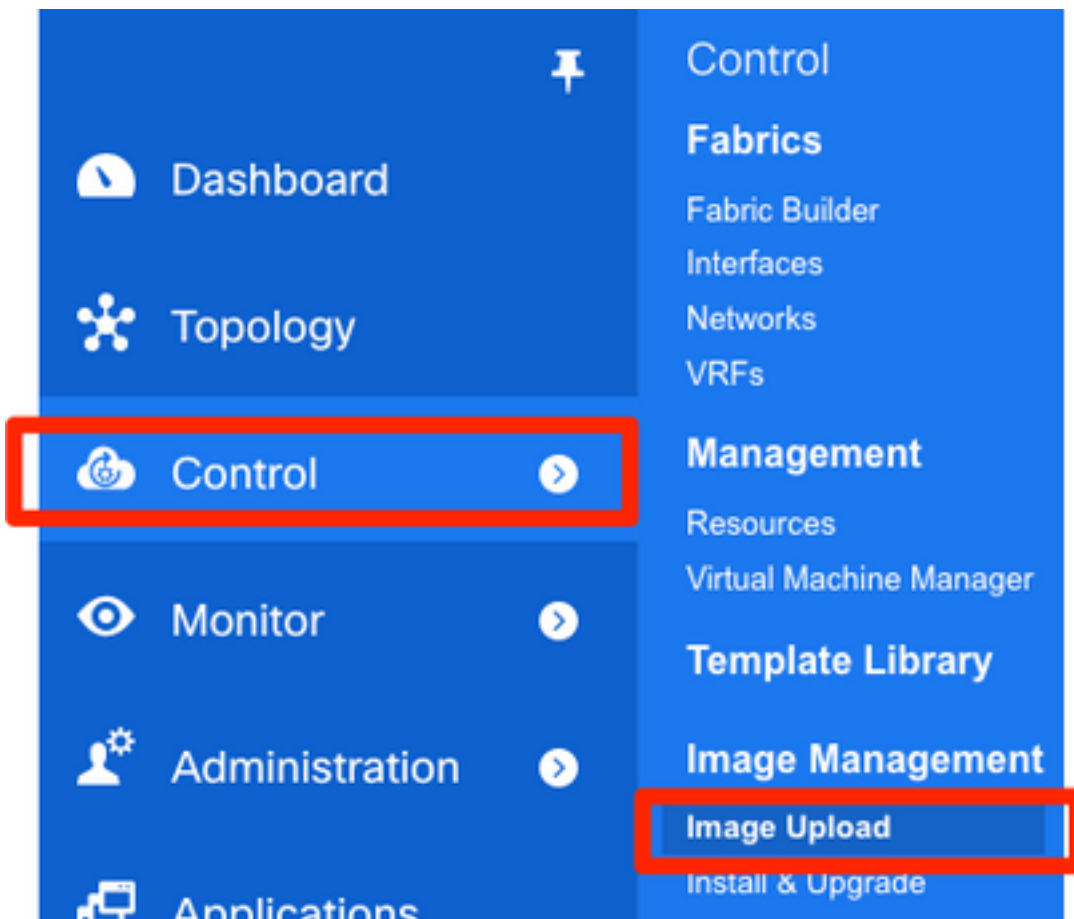
--- 10.212.20.20 ping statistics ---
5 packets transmitted, 5 packets received, 0.00% packet loss
round-trip min/avg/max = 0.974/1.073/1.385 ms
```

相似的步骤可以跟随创建非VPC端口通道、访问接口等等在添加接口上下文下。

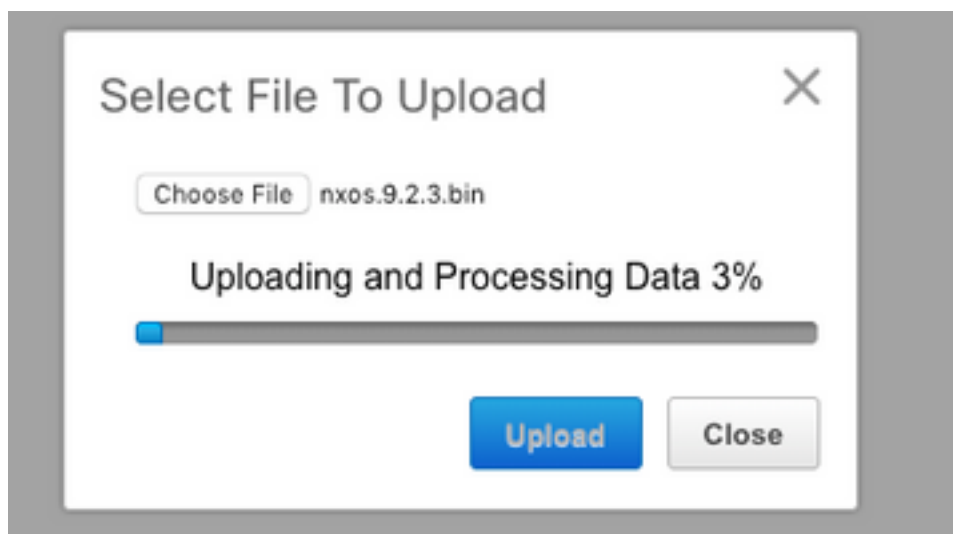
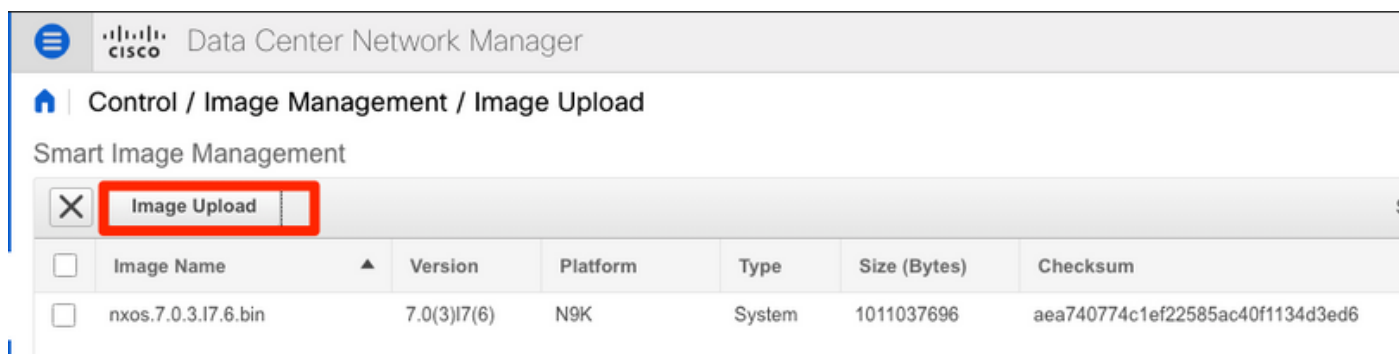
天2操作

升级NX-OS软件通过DCNM

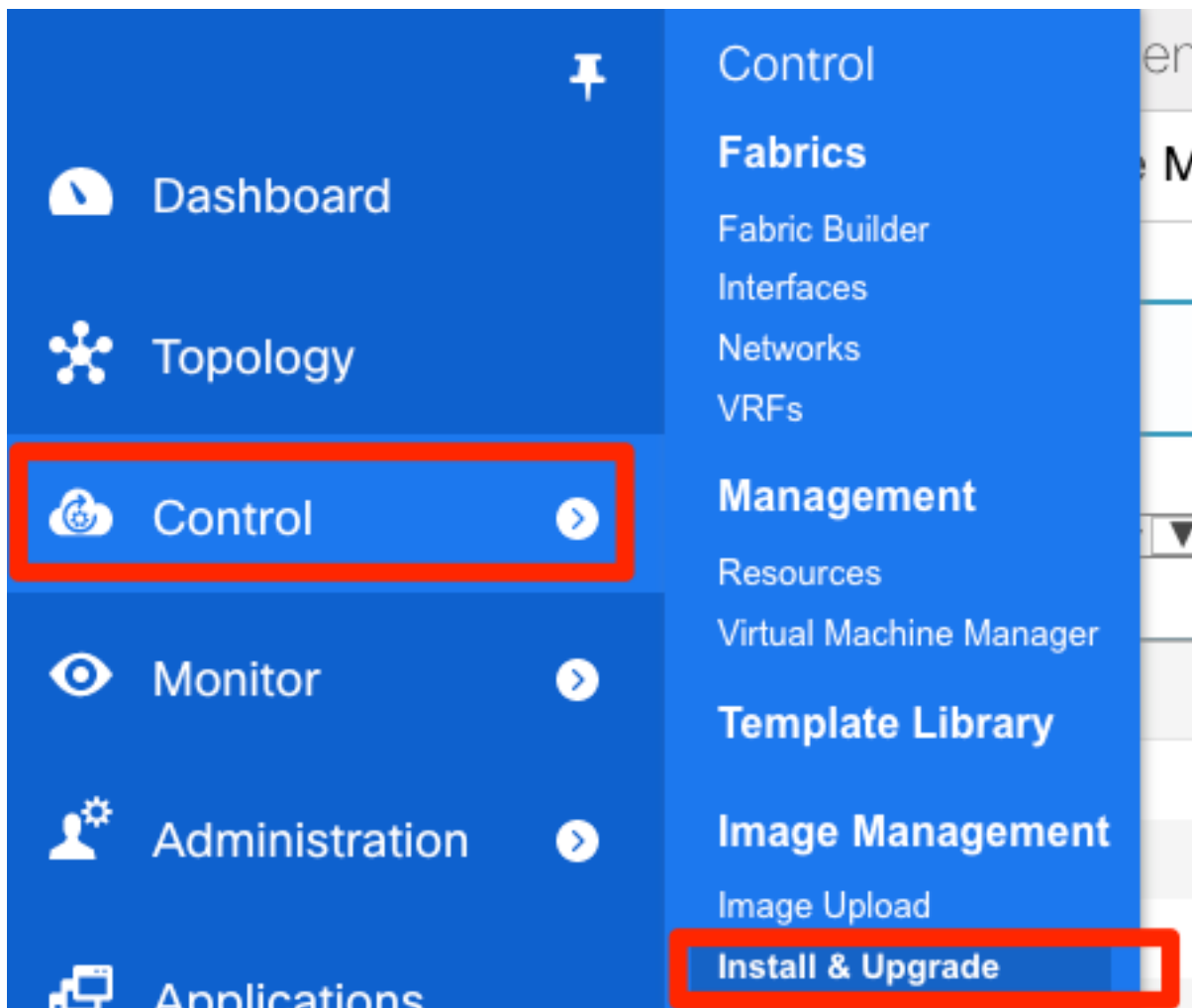
步骤1.上载镜像(或套对DCNM的服务器的镜像)如镜像所显示，然后导航控制>镜像Management>镜像加载。



第二步：按照提示输入本地加载，如此镜像所显示，然后文件应该出现：



第 3 步：一旦文件上传，您能继续前进**安装&升级**，如果交换机要求升级。如镜像所显示，导航**控制>镜像Management>安装&升级**。



步骤4.选择您会想要升级的交换机。对于此示例，整个RTP结构升级。

Control / Image Management / Install & Upgrade

1 Select Switches → 2 Specify Software Images ✓ → 3 Pre-Installation Checks → 4 Schedule Job

Device Scope: Data Center ▼

Available Switches

<input type="checkbox"/>	Switch Name	IP Address	Model	Version
<input type="checkbox"/>	sjc-davos-bb14	192.168.254.106	N9K-C92160YC-X	9.2(2.71)
<input type="checkbox"/>	sjc-davos-bb15	192.168.254.102	N9K-C92160YC-X	7.0(3)I7(5)
<input type="checkbox"/>	sjc-hom-bb14	192.168.254.107	N9K-C93180YC-FX	9.2(1)
<input type="checkbox"/>	sjc-hom-bb15	192.168.254.103	N9K-C93180YC-FX	9.2(1)
<input type="checkbox"/>	sjc-t2-sp-bb14	192.168.254.104	N9K-C9508	7.0(3)I7(1)
<input type="checkbox"/>	sjc-t2-sp-bb15	192.168.254.100	N9K-C9508	7.0(3)I7(3)
<input type="checkbox"/>	sjc-t2-tep-bb14	192.168.254.105	N9K-C9372TX-E	7.0(3)I7(5a)
<input type="checkbox"/>	sjc-t2-tep-bb15	192.168.254.101	N9K-C9372TX-E	7.0(3)I7(4)

Selected Switches

<input type="checkbox"/>	Switch Name
<input type="checkbox"/>	rtp-sug-sp-bb12
<input type="checkbox"/>	rtp-sug-sp-bb11
<input type="checkbox"/>	rtp-seoul-bb12
<input type="checkbox"/>	rtp-seoul-bb11
<input type="checkbox"/>	rtp-sapporo-bb12
<input type="checkbox"/>	rtp-sapporo-bb11
<input type="checkbox"/>	rtp-hea-bgw-bb12
<input type="checkbox"/>	rtp-hea-bgw-bb11

Previous Next Finish Cancel

步骤5.选择NX-OS版本您想要交换机升级(作为最佳实践，请升级所有交换机对同一个NX-OS版本)

:

Control / Image Management / Install & Upgrade

1 Select Switches ✓ → 2 Specify Software Images ✓ → 3 Pre-Installation Checks → 4 Schedule Job

Auto File Selection Select File Server: Default_S... Image Version: 7.0(3)I7(6) Path*: /var/lib/dcnm/images/ Apply

Name	Version	Kickstart Image	System Image	KSI Image	Vrf	Available Space (MB)		Selected Files Size(MB)	Skip Ver... Compati...	Select P... Line Ca...	Upgrade Options
						Primary Supervi...	Secondary Supervisor				
rtp-hea-b...	7.0(3)I7(5)	Not Applicab	nxos.7.0.3.I7.	Not Applicable	manage...	115145	Not Available	1012	<input type="checkbox"/>	<input type="checkbox"/>	Options
rtp-hea-b...	7.0(3)I7(5)	Not Applicab	nxos.7.0.3.I7.	Not Applicable	manage...	115146	Not Available	1012	<input type="checkbox"/>	<input type="checkbox"/>	Options
rtp-sapp...	7.0(3)I7(3)	Not Applicab	nxos.7.0.3.I7.	Not Applicable	manage...	49821	Not Available	1012	<input type="checkbox"/>	<input type="checkbox"/>	Options
rtp-sapp...	7.0(3)I7(3)	Not Applicab	nxos.7.0.3.I7.	Not Applicable	manage...	50535	Not Available	1012	<input type="checkbox"/>	<input type="checkbox"/>	Options
rtp-seoul...	7.0(3)I7(6)	Not Applicab	nxos.7.0.3.I7.	Not Applicable	manage...	35476	Not Available	1012	<input type="checkbox"/>	<input type="checkbox"/>	Options
rtp-seoul...	7.0(3)I7(...)	Not Applicab	nxos.7.0.3.I7.	Not Applicable	manage...	33780	Not Available	1012	<input type="checkbox"/>	<input type="checkbox"/>	Options
rtp-sug-s...	7.0(3)I7(5)	Not Applicab	nxos.7.0.3.I7.	Not Applicable	manage...	20294	Not Available	1012	<input type="checkbox"/>	<input type="checkbox"/>	Options
rtp-sug-s...	7.0(3)I7(5)	Not Applicab	nxos.7.0.3.I7.	Not Applicable	manage...	46651	Not Available	1012	<input type="checkbox"/>	<input type="checkbox"/>	Options

*Provide absolute path in case of SCP and SFTP servers. For TFTP and FTP servers, please provide the relative path from TFTP/FTP home directory. For more information on auto file selection refer to online help.

Previous Next Finish Cancel

步骤6.其次单击，并且DCNM通过装配前准备工作检查运行交换机。此窗口能采取相当一些时间

，因此您能二者择一选择后芬通社的安装和安排升级，当您离开时。

The screenshot shows the 'Control / Image Management / Install & Upgrade' workflow. The progress bar indicates that steps 1 and 2 are complete, and step 3, 'Pre-Installation Checks', is currently active. A 'Finish Installation Later' button is highlighted with a red box. Below the progress bar, a table lists the devices being checked for compatibility.

Name	Current Action	Version Compatibility Verification
<input checked="" type="radio"/> rtp-sug-sp-bb12	Compatibility check in progress	STARTED
<input type="radio"/> rtp-sug-sp-bb11	Compatibility check in progress	STARTED
<input type="radio"/> rtp-seoul-bb12	Compatibility check in progress	STARTED
<input type="radio"/> rtp-seoul-bb11	Compatibility check in progress	STARTED
<input type="radio"/> rtp-sapporo-bb12	Compatibility check in progress	STARTED
<input type="radio"/> rtp-sapporo-bb11	Compatibility check in progress	STARTED
<input type="radio"/> rtp-hea-bgw-bb12	Compatibility check in progress	STARTED

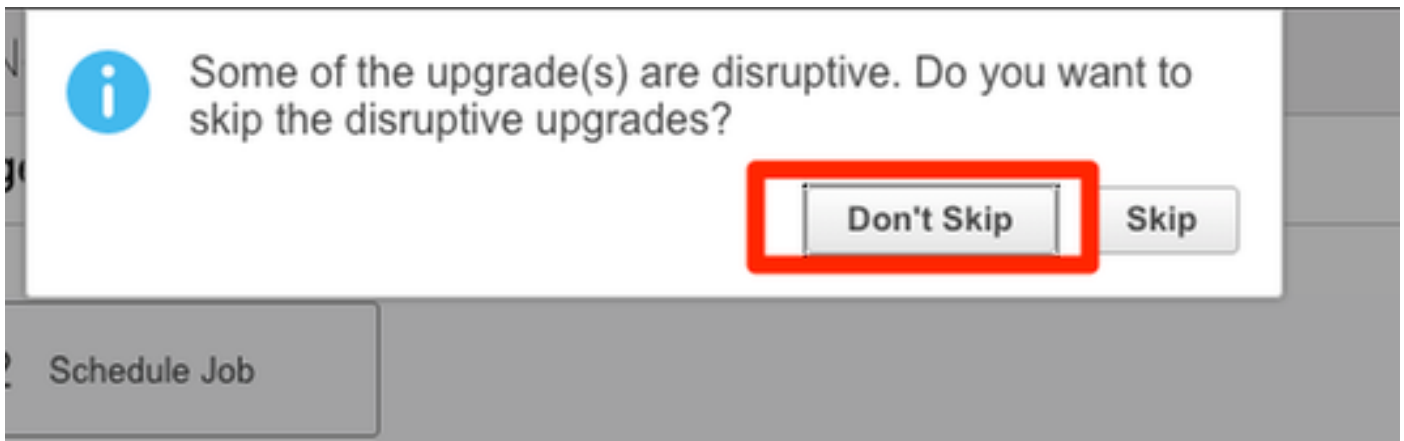
这排队任务并且看起来与如镜像所显示相似此处，一旦完成。

The screenshot shows the 'Software Upgrade Tasks' table. The 'Finish Installation' button is highlighted with a red box. The table shows a single task with the status 'COMPLETED WITH EXCEPTION' highlighted in orange.

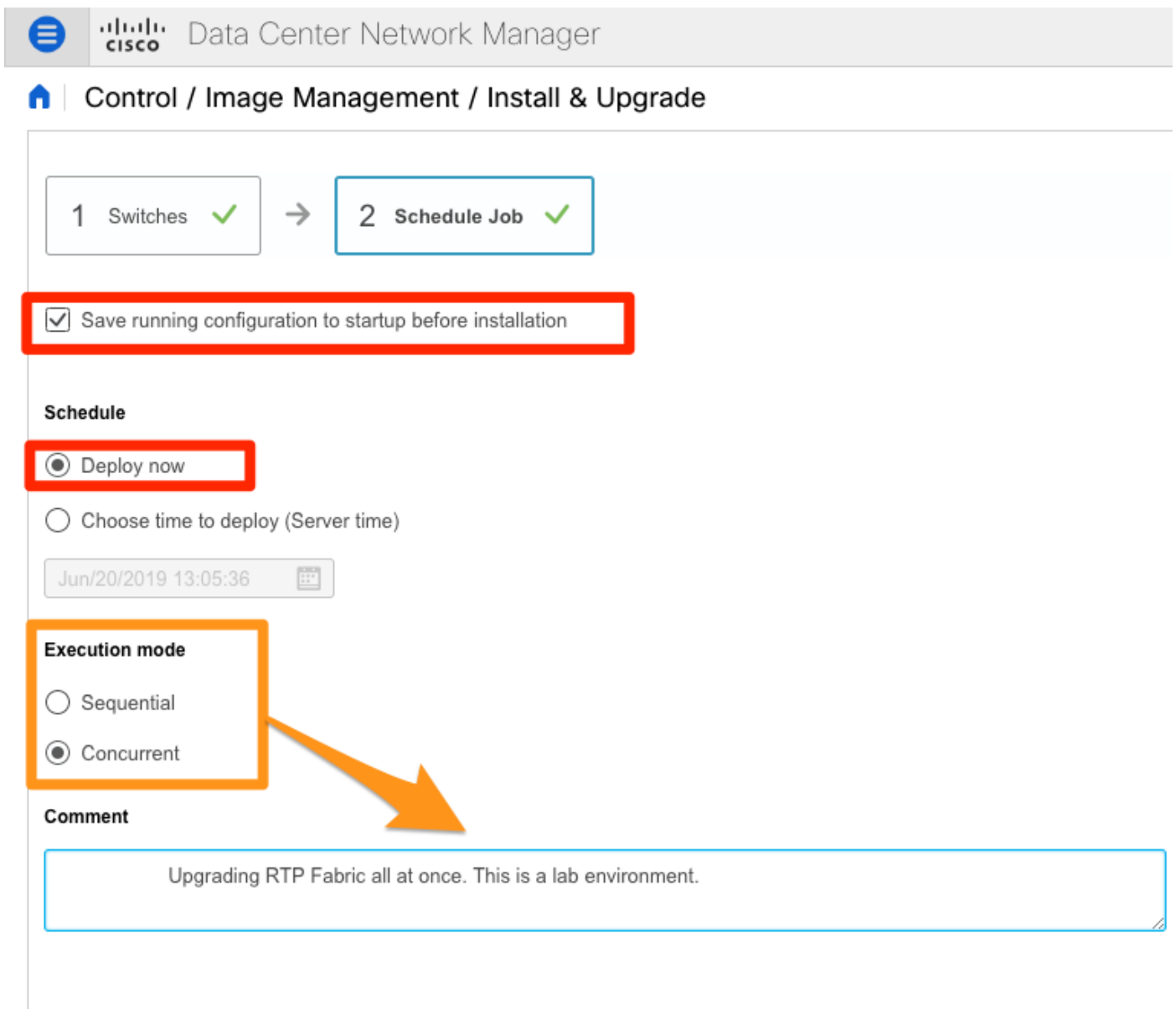
Task Id	Task Type	Owner	Devices	Job Status	Created Time	Scheduled At	Completed Time
<input checked="" type="checkbox"/> 1	Compatibility	admin	rtp-hea-bgw-bb11,rtp-hea...	COMPLETED WITH EXCEPTION	2019-06-20 12...	2019-06-20 12...	2019-06-20 13:03...

Note: 在上述案件的例外是其中一RTP交换机没有NX-OS镜像的足够的空间。

第 7 步：一旦兼容性完成，如镜像所显示，请点击同一个窗口的芬通社安装。





步骤 8 您能选择升级执行的并发(所有同时)或连续的(一次一个)。因为这是实验室环境，选择**并发**。



任务创建，并且看起来**进展中**，如镜像所显示。



Upgrade History | Switch Level History

Software Upgrade Tasks Selected 0 / Total 1  

Show

<input type="checkbox"/>	Task Id	Task Type	Owner	Devices	Job Status	Created Time	Scheduled At	Completed Time	Comment
<input type="checkbox"/>	1	Upgrade	admin	rtp-hea-bgw-bb11,rtp-hea...	IN PROGRESS	2019-06-20 13...	2019-06-20 13...		Upgrading RTP Fabric all

Upgrade History | Switch Level History

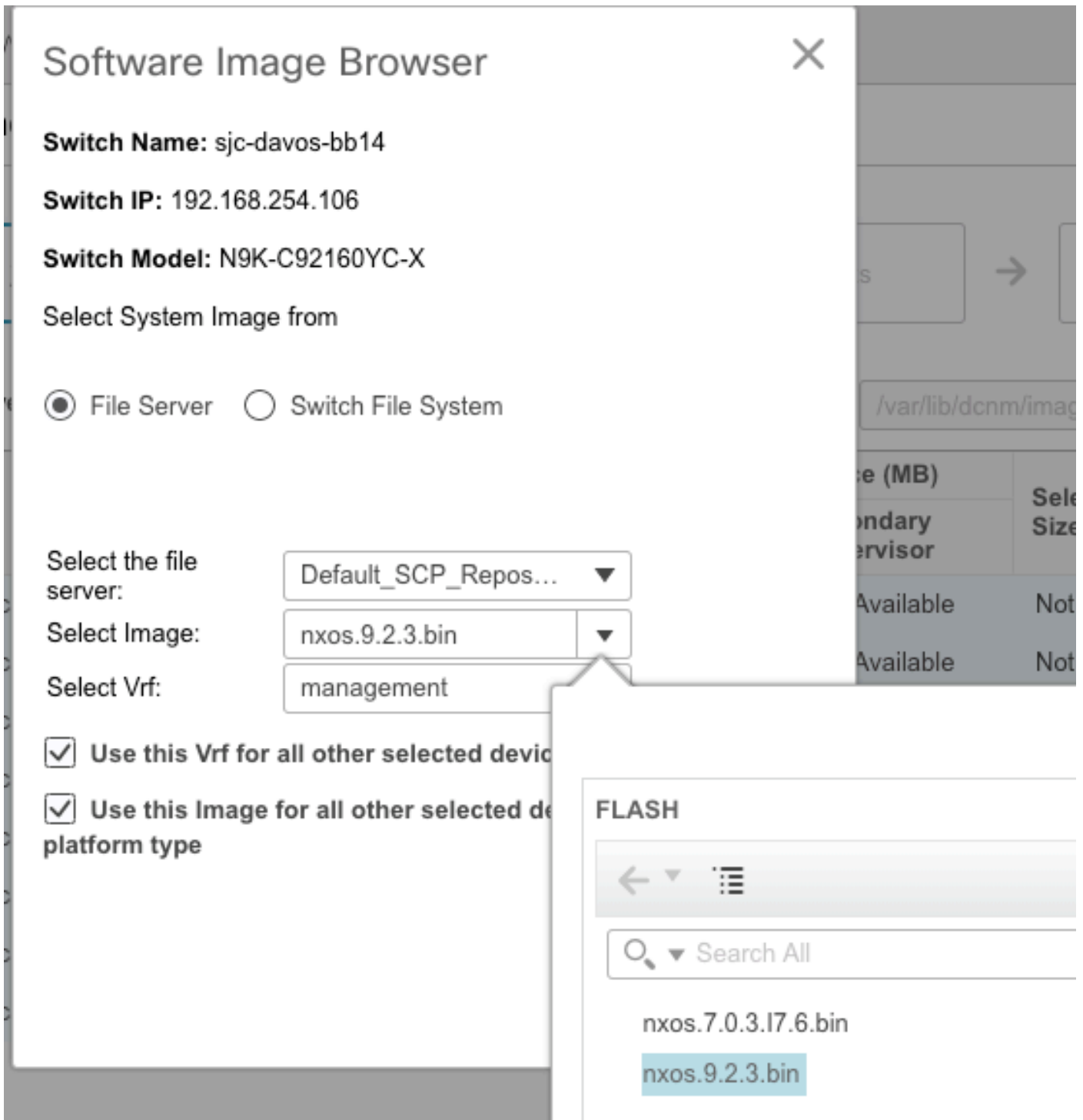
Software Upgrade Tasks Selected 0 / Total 1  

Show

<input type="checkbox"/>	Task Id	Task Type	Owner	Devices	Job Status	Created Time	Scheduled At	Completed Time	Comment
<input type="checkbox"/>	1	Upgrade	admin	rtp-hea-bgw-bb11,rtp-hea...	COMPLETED	2019-06-20 13...	2019-06-20 13...	2019-06-20 13:20:...	Upgrading RTP Fabric all

一个备选方式选择镜像显示此处。

sjc-t2-sp...	7.0(3)I7(1)	Not Applicabl	Select Image	Not Applicable	manage...	6326	2683	Not Applicable	<input type="checkbox"/>	<input type="checkbox"/>	Options
sjc-t2-sp...	7.0(3)I7(3)	Not Applicabl	Select Image	Not Applicable	manage...	4437	Not Available	Not Applicable	<input type="checkbox"/>	<input type="checkbox"/>	Options



安装终端定位器

为了DCNM Apps能适当地工作，您必须有DCNM服务器和前面板端口之间的带内连接到一个在结构的连结9000s。对于此示例，DCNM服务器连接对Ethernet1/5其中一块在RTP结构的脊椎。

第 1 步：此CLI手工被添加到连结9000：

```
rtp-sug-sp-bb12# show run interface ethernet1/5

!Command: show running-config interface Ethernet1/5
!Running configuration last done at: Wed Sep 11 14:41:05 2019
!Time: Wed Sep 11 14:53:25 2019

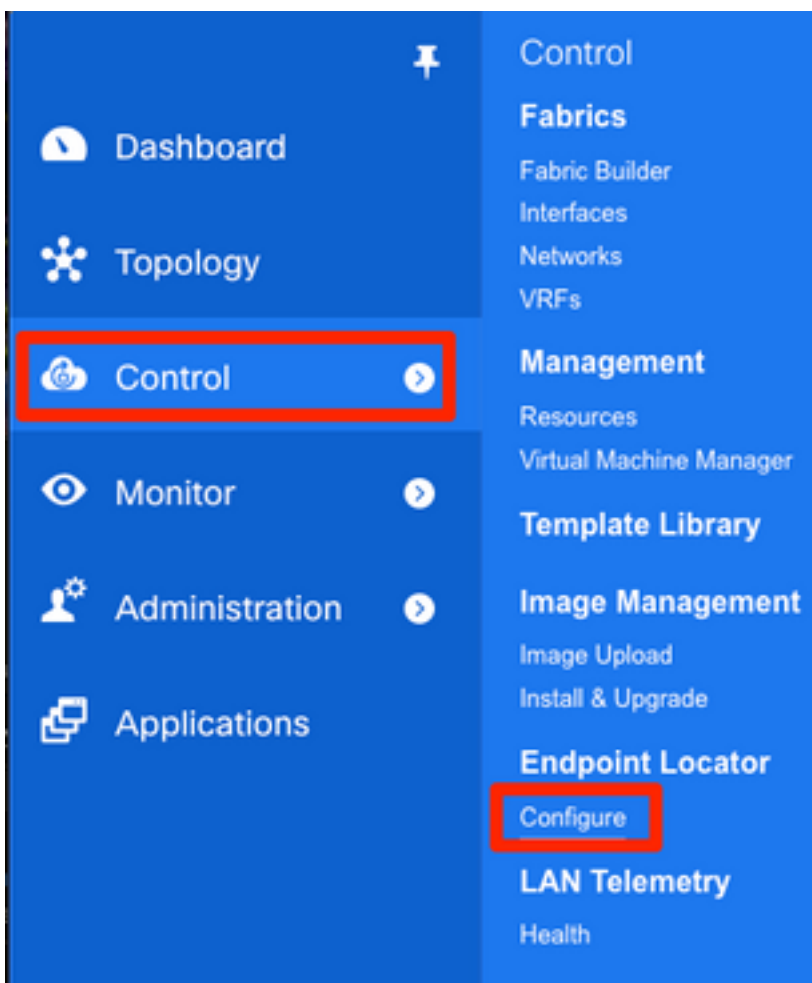
version 7.0(3)I7(7) Bios:version 08.36

interface Ethernet1/5
 description To DCNM Server for Endpoint Locator & Apps
 mtu 9216
 no ip redirects
 ip address 99.99.99.2/30
 no ipv6 redirects
 no shutdown
```

第二步：保证您能ping DCNM服务器和反过来也是一样地在此点对点连接。

```
[root@dcg-rtp-dcnm-fab ~]# ping 99.99.99.2
PING 99.99.99.2 (99.99.99.2) 56(84) bytes of data:
 64 bytes from 99.99.99.2: icmp_seq=1 ttl=255 time=0.780 ms
 64 bytes from 99.99.99.2: icmp_seq=2 ttl=255 time=0.802 ms
 64 bytes from 99.99.99.2: icmp_seq=3 ttl=255 time=0.772 ms
^C
--- 99.99.99.2 ping statistics ---
 3 packets transmitted, 3 received, 0% packet loss, time 2001ms
 rtt min/avg/max/mdev = 0.772/0.784/0.802/0.034 ms
```

步骤3.如镜像所显示，导航对DCNM GUI >控制>终端定位器>配置。



步骤4.选择如镜像所显示，结构您希望终端定位器启用。

1. Select a Fabric

Choose a fabric where you want the Endpoint Locator functionality to be enabled.

Continue

步骤5.如镜像所显示，请选择脊椎。

2. Select Spine

For an iBGP-based fabric, choose the Route-Reflectors.
For an eBGP-based fabric, choose the transit spines.

Spine 2 (optional)

步骤6. (可选)。在移动向前对下一步，eth2 IP从原始部署更改通过在DCNM服务器的此CLI (此步骤不是需要的，如果在DCNM服务器新安装时配置的原始IP保持正确)：

```

[root@dcg-rtp-dcnm-fab ~]# ifconfig eth2 0.0.0.0
[root@dcg-rtp-dcnm-fab ~]# appmgr setup inband
Configuring Interface for InBand Connectivity...
Please enter the information as prompted:
InBand Physical IP [e.g. 2.2.2.69]: 99.99.99.1
InBand Network Mask [e.g. 255.255.255.0]: 255.255.255.252
InBand Gateway [e.g. 2.2.2.1]: 99.99.99.2
Validating Inputs ...
You have entered these values..
PIP=99.99.99.1
NETMASK=255.255.255.252
GATEWAY=99.99.99.2

Press 'y' to continue configuration, 'n' to discontinue [y] y
{"ResponseType":0,"Response":"Refreshed"}
Done.

[root@dcg-rtp-dcnm-fab ~]# ifconfig eth2
eth2: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 99.99.99.1 netmask 255.255.255.252 broadcast 99.99.99.3
    inet6 fe80::250:56ff:fe9e:23f5 prefixlen 64 scopeid 0x20<link>
    ether 00:50:56:9e:23:f5 txqueuelen 1000 (Ethernet)
    RX packets 0 bytes 0 (0.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 11 bytes 698 (698.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

```

步骤7.验证在波段之内接口配置。这应该匹配什么在上一步配置。

3. Verify DCNM In-band Interface

Choose the Ethernet interface on the DCNM that will provide reachability to the Spine(s) within the fabric.

eth2

Interface IP

99.99.99.1 / 30

5. Review and Enable Endpoint Locator

Fabric: RTP-EVPN-Fabric

DCNM Interface: eth2 (99.99.99.1/30)

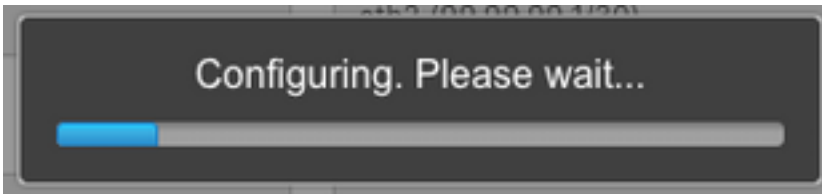
* Collect additional information (Port, VLAN, etc.) Yes

Spine 1: rtp-sug-sp-bb12 (192.168.128.104)

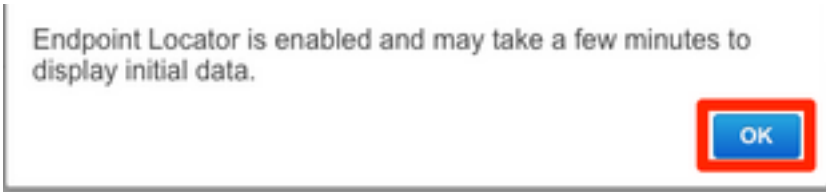
Next-hop IP: 99.99.99.1

Spine 2:

步骤 8一旦查看配置，请点击**Configure**。此步骤可能花费几分钟：



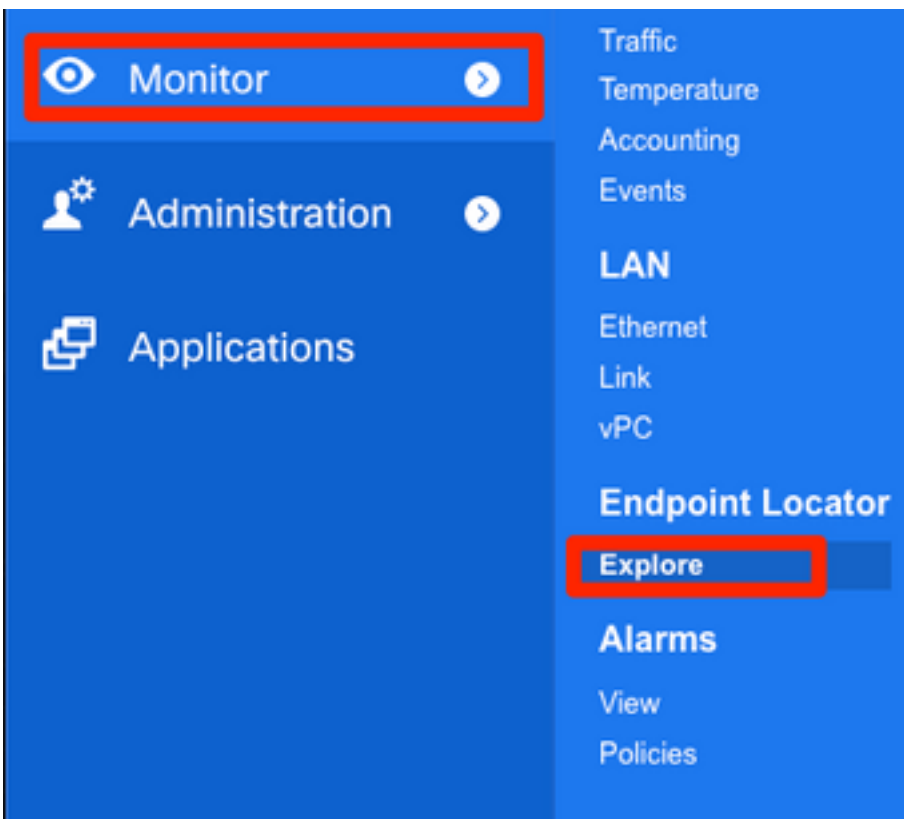
一旦完成，通知，如镜像所显示出现。



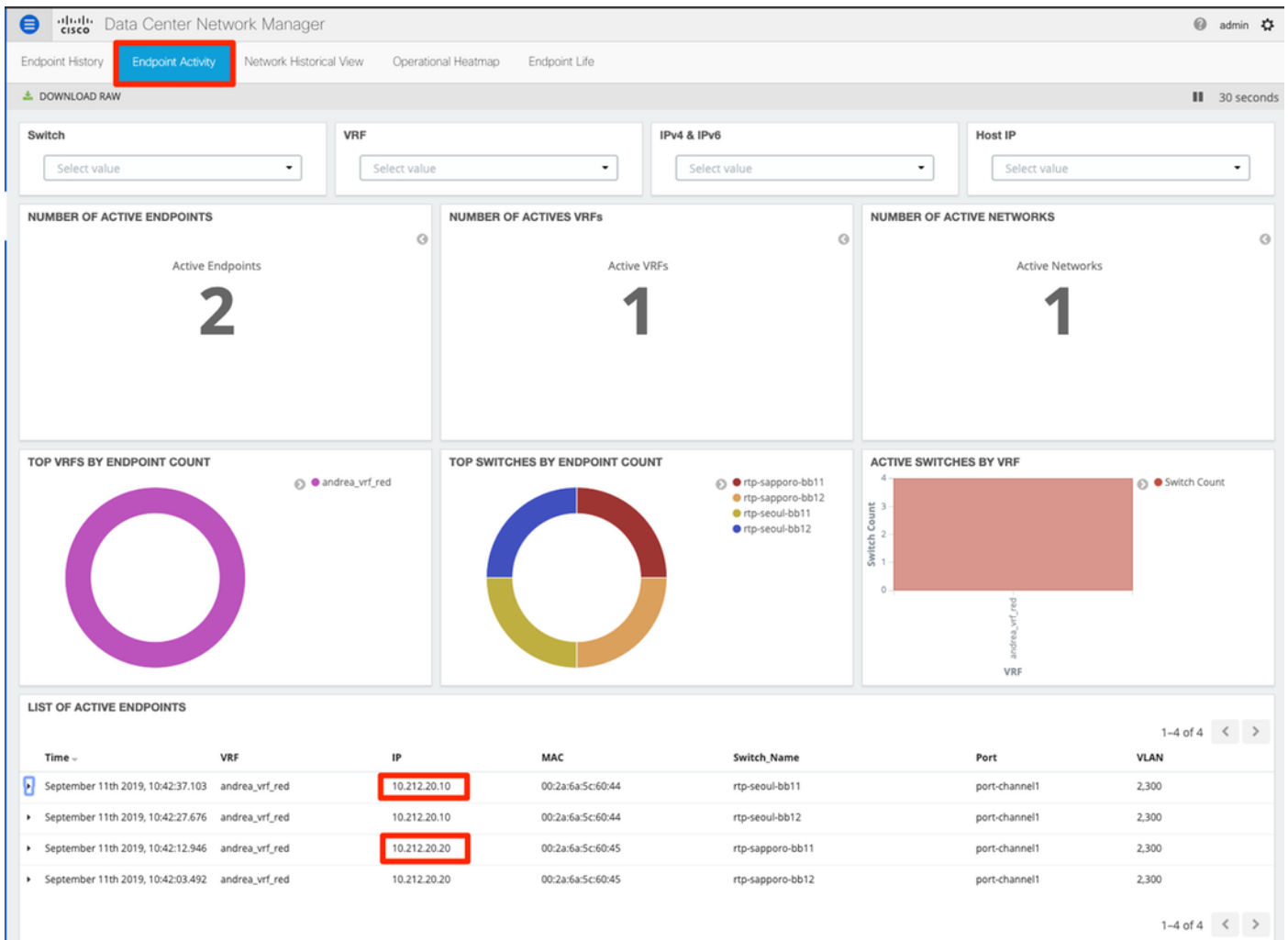
公告DCNM配置选定脊椎的一个BGP邻居在L2VPN EVPN家族。

```
rtp-sug-sp-bb12# show run bgp | sec "neighbor 99"  
neighbor 99.99.99.1  
remote-as 65534  
address-family l2vpn evpn  
send-community  
send-community extended  
route-reflector-client
```

步骤 9您能当前使用终端定位器。导航到**监视器>终端定位器>测试**。



在本例中，您能看到为在RTP结构的本地ping测试配置的两台主机：



在此部署期间遇到的问题

连线错误

一个对交换机有导致vPC对等体链路的port-channel500一个捆绑的错误的坏布线。示例：

Switch Name	IP Address	Status	Status Description	Progress
rtp-sapporo-bb11	192.168.128.101	FAILED	feature ngoam is an invalid command	2%
rtp-sapporo-bb12	192.168.128.105	FAILED	channel-group 500 force mode active Failed with follo...	15%
rtp-sug-sp-bb11	192.168.128.100	COMPLETED	Deployed successfully	100%
rtp-sug-sp-bb12	192.168.128.104	COMPLETED	Deployed successfully	100%
rtp-seoul-bb11	192.168.128.102	COMPLETED	Deployed successfully	100%
rtp-seoul-bb12	192.168.128.106	COMPLETED	Deployed successfully	100%

步骤1.导航回到控制>结构建造者并且查看错误：

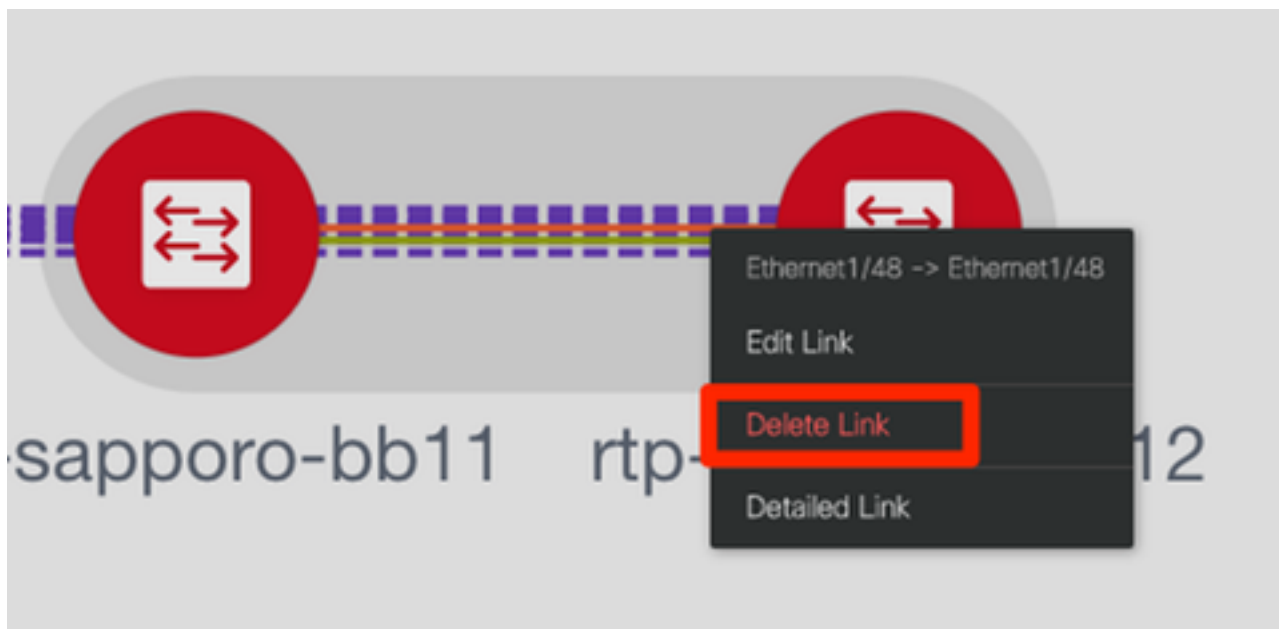
Fabric errors & warnings

2 Errors, 0 Warnings, 0 Info

Delete all

- ✘ Switch[FDO21302J5Z] - CLI command 'channel-group 500 force mode active' failed with following error:command failed: port not compatible:[Buffer boost] ** You can use force option to override the port's parameters ** (e.g. "channel-group X force") ** Use "show port-channel compatibility-parameters" to get more information on failure ✘
- ✘ Switch[FDO213001M0] - CLI command 'feature ngoam' failed with following error:CLI command is invalid. ✘

第二步：关于通过show cdp neighbors 验证的port-channel500命令失败的第一个错误对vPC对等体的连接在10G和40G端口(不兼容)。物理的删除10G端口并且删除从DCNM的链路：



Do you want to remove the Link:
Ethernet1/48(rtp-sapporo-bb11) --> Ethernet1/48(rtp-sapporo-bb12) ?

OK

Cancel

失败配置功能

关于“失败功能的ngoam的”第二个错误配置—交换机升级对“功能ngoam”支持的一个更加最近的NX-OS版本并且点击“Save” &再部署。两个问题是解决的。

交迭不同的结构的管理子网

当第二个结构部署时，相同子网使用了SJ (如果物理的分开，这应当是好);然而，DCNM记录冲突，并且POAP发生故障。解决这，当SJ结构在不同的管理VLAN和更改放置DHCP地址的范围。

Add Fabric

* Fabric Name :

* Fabric Template :

General	Replication	vPC	Advanced	Resources	Manageability	Bootstrap	Configuration Backup
---------	-------------	-----	----------	-----------	---------------	-----------	----------------------

Enable Bootstrap ? Automatic IP Assignment For POAP

Enable Local DHCP Server ? Automatic IP Assignment For POAP From Local DHCP Server

* DHCP Scope Start Address ? Start Address For Switch Out-of-Band POAP

* DHCP Scope End Address ? End Address For Switch Out-of-Band POAP

* Switch Management Default Gate... ? Default Gateway For Mgmt VRF On The Switch

* Switch Management Subnet Prefix ? Prefix For Mgmt0 Interface On The Switch (Min:8, Max:30)



The fabric **SJ-EVPN-Fabric** was added with below message:

Management Default Gateway network 192.168.128.0 for fabric SJ-EVPN-Fabric has conflict with fabric RTP-EVPN-Fabric's Management Default Gateway network 192.168.128.0. Same Gateway network cannot be used within the same or different fabrics, please use different Gateway Network.

Close

断裂接口

第 1 步：对于断裂在某些建立接口交换机(参考的拓扑)，此CLI为T2脊椎手工被添加了：

```
sjc-t2-sp-bb14# show run | i i breakout
interface breakout module 1 port 6-7 map 10g-4x
```

步骤2.导航控制>接口，并且删除parent接口：

Data Center Network Manager SCOPE: SJ-Fabric-EVPN

Control / Fabrics / Interfaces

Interfaces Selected 4 / Total 520

Show Quick Filter

	Device Name	Name	Admin	Oper	Reason	Policy	Overlay Network	Status	Port-C
<input checked="" type="checkbox"/>	sjc-t2-sp-bb14	Ethernet1/7			Not discovered	int_trunk_host_11_1	NA	✕	
<input checked="" type="checkbox"/>	sjc-t2-sp-bb14	Ethernet1/6			Not discovered	int_trunk_host_11_1	NA	✕	
<input checked="" type="checkbox"/>	sjc-t2-sp-bb15	Ethernet1/7			Not discovered	int_trunk_host_11_1	NA	✕	
<input checked="" type="checkbox"/>	sjc-t2-sp-bb15	Ethernet1/6			Not discovered	int_trunk_host_11_1	NA	✕	

实际上使用的接口是Eth1/6/1-4和Eth1/7/1-4。如果不更正此，保存& Deploy稍后将发生故障。有方式通过DCNM执行断裂(在旁边的按钮+符号;然而，没覆盖在此条款)

矩阵错误，当部署对不支持的功能

Data Center Network Manager SCOPE: SJ-Fabric-EVPN admin

Network / VRF Selection > Network / VRF Deployment > VRF View | Continue

Fabric Selected: SJ-Fabric-EVPN

Networks Selected 1 / Total 2

Show All

	Network Name	Network ID	VRF Name	IPv4 Gateway/Subnet	IPv6 Gateway/Prefix	Status	VLAN ID
<input type="checkbox"/>	Andrea_TestNetwork_20001	20001	Andrea_VRF_RED	10.212.20.1/24	2001:db8::1/64	DEPLOYED	2300
<input checked="" type="checkbox"/>	mesau-22302	22302	mesau-southeas...	10.23.2.1/24		OUT-OF-SYNC	2302

Network Information

* Network ID

* Network Name

* VRF Name

Layer 2 Only

* Network Template

* Network Extension Template

VLAN ID ?

Network Profile

Please click only to generate a New Multicast Group Address and override the default value!

General

Advanced

DHCPv4 Server 2 ? DHCP Relay IP

DHCPv4 Server VRF ?

Loopback ID for DHCP Relay interface (Min:0, Max:1023) ?

Routing Tag ? 0-4294967295

TRM Enable ? Enable Tenant Routed Multicast

L2 VNI Route-Target Both Enable ?

Enable L3 Gateway on Border ?

某些机箱(T2s)在SJ结构不如此支持TRM，当设法的DCNM推送此配置，它无法移动向前。此处TRM支持：https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus9000/sw/92x/vxlan-92x/configuration/guide/b-cisco-nexus-9000-series-nx-os-vxlan-configuration-guide-92x/b_Cisco_Nexus_9000_Series_NX-OS_VXLAN_Configuration_Guide_9x_chapter_01001.html#concept_vw1_syb_zfb

非选定TRM Enable复选框在网路下，并且VRF在镜像编辑windows显示。

重复同一进程在控制>结构建造者> VRF下。

Data Center Network Manager

SCOPE: SJ-Fabric-EVPN admin

Network / VRF Selection > Network / VRF Deployment

Fabric Selected: SJ-Fabric-EVPN

VRFs Selected 1 / Total 2

<input type="checkbox"/>	VRF Name	VRF ID	Status
<input type="checkbox"/>	Andrea_VRF_RED	30000	DEPLOYED
<input checked="" type="checkbox"/>	mesau-southeast-corner	32302	PENDING

Edit VRF
✕

▼ VRF Information

* VRF ID

* VRF Name

* VRF Template

* VRF Extension Template

▼ VRF Profile

General

Advanced

VRF Intf MTU ? 68-9216

Loopback Routing Tag ? 0-4294967295

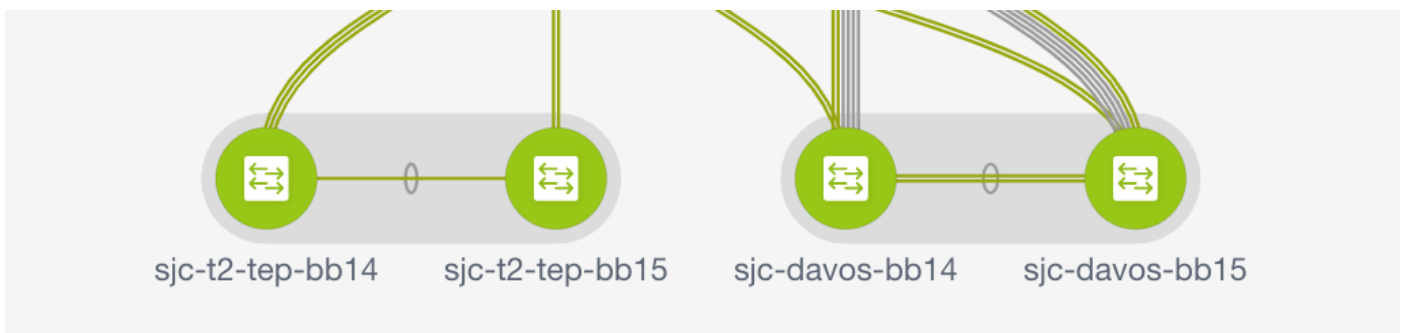
Redistribute Direct Route Map ?

Max BGP Paths ? 1-64

Max iBGP Paths ? 1-64

TRM Enable ? Enable Tenant Routed Multicast

* Is RP External ? Is RP external to the fabric?



单击分别**继续**然后**部署**如以前执行。

什么新建在DCNM 11.2 ?

- vPC结构同位体
- eBGP基于已路由结构在上面的Enable (event) EVPN
- 容易结构布朗菲尔德增强边界脊椎/边界GW脊椎PIM Bidir承租人路由的组播
- 与外部DHCP服务器的Day-0/Bootstrap

天2操作：

- 网络洞察资源
- 网络洞察顾问
- 外部访问的(eth0) IPv6支持
- VMM与UCS-FI的估计可见性
- 结构视图增强

- 从11.0/11.1的轴向升级

更改从传统vPC到MCT少的vPC使用DCNM :

MCT少的vPC的好处 :

- 没有浪费物理端口的改进的双归属解决方案
- 保留传统vPC特性
- 被选拔的址的终端的优化路由与小核

相关信息

- Cisco DCNM LAN结构配置指南，版本11.2(1)
https://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/11_2_1/config_guide/lanfabric/b_dcnm_fabric_lan/control.html
- 章节：边界在VXLAN BGP EVPN结构的供应用例-多站点
https://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/11_2_1/config_guide/lanfabric/b_dcnm_fabric_lan/border-provisioning-multisite.html
- 与VXLAN EVPN多站点的NextGen DCI使用vPC边界网关白皮书
https://www.cisco.com/c/en/us/products/collateral/switches/nexus-9000-series-switches/whitepaper-c11-742114.html#_Toc5275096
- 章节：DCNM应用程序
https://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/11_2_1/config_guide/lanfabric/b_dcnm_fabric_lan/applications.html