DCNXA (IMPLEMENTING CISCO NEXUS 9000 SWITCHES IN NX-OS MODE ADVANCED) 1.0

Objetivo

Upon completing this course, students will be able to meet these objectives: â□¢ Configure VXLAN EVPN in a single site using Cisco DCNM; â□¢ Configure a Multi-Site VXLAN EVPN; â□¢ Configure L4-L7 service redirection; â□¢ Configure external connectivity from a VXLAN EVPN; â□¢ Configure tenant-level features and tenant routed multicast (TRM) in VXLAN EVPN; â□¢ Configure Cisco NX-OS Enhanced Policy Based Redirect (ePBR) and Intelligent Traffic Director (ITD).

PÃºblico Alvo

Professionals interested in implementing, configuring, operating and management Cisco Data Center Nexus solutions.

PrÃ©-Requisitos

The knowledge and skills that students are expected to have before attending this course are: â□¢ Students should understand networking protocols, routing, and switching. â□¢ Students should be familiar with Cisco data center technologies. â□¢ Students should be familiar with virtualization fundamentals. â□¢ Students should be familiar with Cisco Nexus platform management. Here are recommended Cisco learning offerings that may help students meet these prerequisites: â□¢ Implementing and Administering Cisco Solutions (CCNA) v1.0 â□¢ Understanding Cisco Data Center Foundations (DCFNDU) v1.0 â□¢ Implementing and Operating Cisco Data Center Core Technologies (DCCOR) v1.0 â□¢ Implementing Cisco Nexus 9000 Switches in NX-OS Mode (DCNX) v1.0

Carga HorÃ¡ria

32 horas (4 dias).

ConteÃºdo ProgramÃ¡tico

Course Introduction
Overview
Course Goal and Objectives
Course Flow
Your Training Curriculum
Learner Introductions

VXLAN EVPN in Single Site
Configure VXLAN EVPN in a single site using Cisco DCNM
Describe VXLAN EVPN Control Plane

Describe VXLAN EVPN Data Plane
Describe the Layer 2 packet walk, including bridging and ARP
Describe the Anycast Gateway feature
Describe Layer 3 Packet Flow
Describe a Packet Walk (Routing Scenario and Silent Host Discovery)
Describe Multitenancy in VXLAN EVPN
Describe Easy Fabric Management with Cisco DCNM
Describe Template Usage in Cisco DCNM LAN Fabric Deployment
Describe vPC in VXLAN EVPN

Multi-Site VXLAN EVPN
Configure a Multi-Site VXLAN EVPN
Describe VXLAN EVPN Multi-Site Features
Describe Supported Multi-Site Topologies
Compare Anycast vs. vPC Border Gateways
Describe Inter-Site BUM Traffic Handling
Describe Multi-Site Control Plane
Describe Multi-Site Data Plane
Describe Multi-Site Packet Flow
Describe VXLAN EVPN Multi-Site Design Considerations

Layer 4-Layer 7 Service Redirection
Configure L4-L7 service redirection
Describe Layer 4-Layer 7 Service Integration Options
Describe Integration of Active/Standby and Active/Active Service Devices
Describe Integration of Active/Active and Active/Standby Services in Multi-Site

External Connectivity from VXLAN EVPN
Configure external connectivity from an VXLAN EVPN
Describe External VRF-Lite Connectivity

VXLAN EVPN Functionality Enhancements
Configure tenant-level features and tenant routed multicast (TRM) in VXLAN EVPN
Describe Fabric Management Options
Describe fabric management options, such as underlay routing, multicasting, VXLANv6 Fabric
Describe Tenant-Level DHCP Relay
Describe Tenant Routed Multicast

Cisco NX-OS Enhanced Policy Based Redirect and Intelligent Traffic Director
Configure Cisco NX-OS Enhanced Policy Based Redirect (ePBR) and Intelligent Traffic Director (ITD)
Describe Enhanced Policy Based Redirect
Describe Intelligent Traffic Director

Labs
Discovery 1: Import an Existing VXLAN BGP EVPN Fabric into Cisco DCNM
How to import an existing VXLAN BGP EVPN Fabric into Cisco DCNM
Task 1: Discover Existing Fabric
Task 2: Create a VXLAN BGP EVPN Fabric in DCNM

Task 3: Transition Fabric Management to DCNM
Task 4: Test the Import
Task 5: Test the VXLAN EVPN Control and Data Plane
Task 6: Test ARP Suppression
Task 7: Test BUM Traffic
Task 8: Test DCNM Templates

Discovery 2: Configure vPC and Layer 3 Connectivity
Configure vPC and Layer 3 Connectivity to the Fabric
Task 1: Configure vPC Pairing Using Physical Peer Link
Task 2: Configure vPC
Task 3: Configure vPC Fabric Peering
Task 4: Create a VRF and Enable Layer 3 Connectivity
Task 5: Test VXLAN Connectivity

Discovery 3: Configure Multi-Site VXLAN EVPN
Configure Multi-Site VXLAN EVPN
Task 1: Synchronize DCNM with the Switches and Configure Second Member Fabric
Task 2: Designate Border Gateways and Create Multi-Fabric Domain
Task 3: Configure Networks and Test Connectivity
Task 4: Test Inter-Site BUM Traffic

Discovery 4: Configure Routed Firewall Integration Into VXLAN EVPN Using PBR
Configure routed firewall integration Into VXLAN BGP EVPN using PBR
Task 1: Create External Fabric, Validate ASAv Configuration, and Enable PBR
Task 2: Configure Layer 4-Layer 7 Service Node, Route Peering and Service Policy
Task 3: Test Service Redirection
Task 4: Redirect Inter-Tenant Traffic to a Layer 4-Layer 7 Service

Discovery 5: Configure External VRF Lite Connectivity and Endpoint Locator
Configure external VRF lite connectivity and endpoint locator
Task 1: Add Virtual CSR to the External Fabric and Set Device Roles
Task 2: Remove the Service Node
Task 3: Configure VRF-Lite Using Manual Deployment Method
Task 4: Test Default Route and Host Route Advertisements
Task 5: Configure VRF Lite for the Second Tenant
Task 6: Configure Route Leaking for DCNM In-Band Management Access
Task 7: Configure the Endpoint Locator in Site1
Task 8: Extend the Endpoint Locator to Multi-Site
Task 9: Examine Endpoints Using the Endpoint Locator
Task 10: Configure Virtual Machine Manager

Discovery 6: Configure Tenant DHCP Relay
Configure the fabric and tenant-level services such as DHCP relay
Task 1: Synchronize the DCNM with the Switches and Verify Default DHCP Operation
Task 2: Configure DHCP Relay with Client and Server in Different VXLAN Networks of the Same VRF
Task 3: Configure DHCP Relay with Client and Server in Different VRFs
Task 4: Configure DHCP Relay with Server in Default VRF

Task 5: Configure DHCP Relay with Server in Nondefault Non-VXLAN VRF
Task 6: Use NGOAM

Discovery 7: Configure Tenant Routed Multicast
Configure tenant routed multicast (TRM) in VXLAN EVPN
Task 1: Synchronize DCNM with the Switches and Remove VRF Lite Connection
Task 2: Test Initial BUM Forwarding
Task 3: Configure Tenant Routed Multicast in the VXLAN Network
Task 4: Configure TRM in the Fabric
Task 5: Configure TRM in the VRF
Task 6: Configure TRM in the Second VXLAN Network
Task 7: Configure TRM in Multi-Site VXLAN EVPN

Discovery 8: Configure Enhanced Policy Based Redirect
Configure enhanced policy based redirect (ePBR)
Task 1: Synchronize Cisco DCNM with Switches and Examine ASA Configuration
Task 2: Configure Service Connectivity
Task 3: Configure ePBR Service Node and Policy
Task 4: Configure ePBR in Entire Site1

Discovery 9: Configure Traffic Load-Balancing Using the ITD
Describe how to load-balance traffic using the Intelligent Traffic Director (ITD)
Task 1: Synchronize Cisco DCNM with the Switches
Task 2: Configure ITD for Local Clients
Task 3: Configure ITD for Remote Clients