Implementing and Configuring the Cisco Nexus 7000

Course Outline

Lesson 1: Overview of the Nexus 7000
Cisco Nexus 7000 Series Chassis Overview
Supervisor Engine and Line Cards
Fabric Modules
Virtual Output Queuing Overview
VoQ Operation
Power Supplies and Cooling
Connectivity Management Processor

Lab 1: Using the Cisco Power Calculator

Lesson 2: Overview of NX-OS
Introducing NX-OS
NX-OS Process Recovery
NX-OS Supervisor Redundancy

Lesson 3: Introduction to Virtual Device Contexts
Introducing Virtualization
VDC Configuration
High Availability

Lesson 4: Managing the Nexus 7000
SNMP and XML
Generic OnLine Diagnosis
Embedded Event Manager
SMART Call Home
Data Center Network Manager
System Message Logging
AAA
Role-Based Access Control
Configuration Rollback

Lab 2: Managing System Configuration

Lesson 5: Layer 2 Protocols and Features
Nexus 7000/NX-OS Layer 2 Overview
VLANs and PVLANs
Spanning-Tree Protocols
PortChannels
Virtual Port Channel (vPC)
IGMP Snooping
Unidirectional Link Detection

Lab 3: Layer 2 Switching

Lesson 6: Layer 3 Protocols and Features
Layer 3 Unicast Routing Overview
First-Hop Routing Protocols
Routing Virtualzation
Routing Protocols
Policy Routing
Tunnels
Layer 3 Multicast

Lab 4: First Hop Redundancy Protocols

Lab 5: Configuring Routing Protocols

Lab 6: VDC and VRF Interoperation

Lesson 7: Quality of Service
Nexus 7000 Series QoS Overview
Port QoS
Forwarding Engine QoS
Modular QoS CLI Overview
Class Map
Policy Map
Service Policy

Lab 7: QoS on the Nexus 7000

Lesson 8: Security
Introduction to Nexus/NX-OS Security
Traffic Integrity
Control Plane Protection
Access Control
Admission Control
Data Confidentiality

Lab 8: Security

Lesson 9: Troubleshooting
Ethanalyzer: Wireshark in NX-OS
SPAN and RSPAN

Lab 9: Troubleshooting the Nexus Control Plane

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