Implementing Cisco IP Switched Networks - On Demand (SWITCH 2.0)

Modality: On Demand

Duration: 40 Hours

CLC: 8 Units

Enhance your understanding of Cisco technologies and products with e-learning offerings from Cisco and Cisco's authorized learning partners. E-learning courses focus on a variety of Cisco technologies to prepare you for Cisco certification exams, and to gain Cisco product knowledge. The e-learning offerings are made to be interactive and engaging for learners who prefer self-study.

Some Cisco Self-paced courses provide access to hands-on virtual lab exercises, giving you the opportunity to practice configuration and troubleshooting on real Cisco platforms.

Course Outline:

Lesson 1: Basic Concepts and Network Design

- Analyzing Campus Network Structure
- Comparing Layer 2 and Multilayer Switches
- Using Cisco SDM Templates
- Implementing LLDP
- Implementing PoE

Lesson 2: Campus Network Architecture

- Implementing VLANs and Trunks
- Introducing VTP
- Implementing DHCP
- Implementing DHCP for IPv6
- Configuring Layer 2 Port Aggregation

Lesson 3: Spanning Tree Implementation

- Implementing RSTP
- Implementing STP Stability Mechanisms
- Implementing Multiple Spanning Tree Protocol

Lesson 4: Configuring Inter-VLAN Routing

- Implementing Inter-VLAN Routing Using a Router
- Configuring a Switch to Route

Lesson 5: Implementing High Availability Networks

- Configuring Network Time Protocol
- Implementing SNMP Version 3
- Implementing IP SLA
- Implementing Port Mirroring for Monitoring Support
- Verifying Switch Virtualization

Lesson 6: First Hop Redundancy Implementation

- Configuring Layer 3 Redundancy with HSRP
- Configuring Layer 3 Redundancy with VRRP
- Configure VRRP With Load Balancing
- Configuring Layer 3 Redundancy with GLBP
- Configuring First Hop Redundancy for IPv6

Lesson 7: Campus Network Security

- Implementing Port Security
- Implementing Storm Control
- Implementing Access to External Authentication
- Mitigating Spoofing Attacks
- Securing VLAN Trunks
- Configuring Private VLANs

Lab Outline
The following discovery labs are included in this course:

- Discovery 1: Investigating the CAM
- Discovery 2: Configuring VLANs and Trunks
- Discovery 3: VTP Operation
- Discovery 4: Exploring DHCP
- Discovery 5: Obtaining IPv6 Address Dynamically
- Discovery 6: EtherChannel Configuration and Load Balancing
- Discovery 7: Discovering and Modifying STP Behavior
- Discovery 8: RootGuard
- Discovery 9: Configuring MST
- Discovery 10: Routing with an External Router
- Discovery 11: Routing on a Multilayer Switch
- Discovery 12: NTP Configuration
- Discovery 13: IP SLA Echo Configuration
- Discovery 14: Configuring and Tuning HSRP
- Discovery 15: Configure VRRP and Spot the Differences from HSRP
- Discovery 16: Configure GLBP
- Discovery 17: Port Security

The following challenge labs are included in this course:

- Challenge 1: Network Discovery
- Challenge 2: Configure DHCP

- Challenge 3: Configure DHCPv6
- Challenge 4: Configure EtherChannel
- Challenge 5: Implementing Rapid Spanning-Tree
- Challenge 6: Improving STP Configuration
- Challenge 7: Configure MST
- Challenge 8: Configure Routing Between VLANs Using a Router
- Challenge 9: Configure Routing on a Multilayer Switch
- Challenge 10: Configure NTP
- Challenge 11: Configure Network Monitoring Using IP SLA
- Challenge 12: Configure HSRP With Load Balancing
- Challenge 13: Configure VRRP With Load Balancing
- Challenge 14: Implement GLBP
- Challenge 15: Configure HSRP for IPv6
- Challenge 16: Controlling Network Access Using Port Security