

SWITCH v2.0 - Implementing Cisco IP Switched Networks



Course outline

Module 1: Basic Concepts and Network Design

- Lesson 1: Analyzing Campus Network Structure
- Lesson 2: Comparing Layer 2 and Multilayer Switches
- Lesson 3: Using Cisco SDM Templates
- Lesson 4: Implementing LLDP
- Lesson 5: Implementing PoE

Module 2: Campus Network Architecture

- Lesson 1: Implementing VLANs and Trunks
- Lesson 2: Introducing VTP
- Lesson 3: Implementing DHCP
- Lesson 4: Implementing DHCP for IPv6
- Lesson 5: Configuring Layer 2 Port Aggregation

Module 3: Spanning Tree Implementation

- Lesson 1: Implementing RSTP
- Lesson 2: Implementing STP Stability Mechanisms
- Lesson 3: Implementing MST

Module 4: Inter-VLAN Routing

- Lesson 1: Implementing Inter-VLAN Routing Using a Router
- Lesson 2: Configuring a Switch to Route

Module 5: High-Availability Networks

- Lesson 1: Configuring Network Time Protocol
- Lesson 2: Implementing SNMP Version 3
- Lesson 3: Implementing the Cisco IOS IP SLA

Lesson 4: Implementing Port Mirroring for Monitoring Support
Lesson 5: Verifying Switch Virtualization

Module 6: First Hop Redundancy Protocol Implementation

Lesson 1: Configuring Layer 3 Redundancy with HSRP
Lesson 2: Configuring Layer 3 Redundancy with VRRP
Lesson 3: Configuring Layer 3 Redundancy with GLBP
Lesson 4: Configuring First Hop Redundancy Protocol for IPv6

Module 7: Campus Network Security

Lesson 1: Implementing Port Security
Lesson 2: Implementing Storm Control
Lesson 3: Implementing Access to External Authentication
Lesson 4: Mitigating Spoofing Attacks
Lesson 5: Securing VLAN Trunks
Lesson 6: Configuring PVLANS
Lesson 7: Module Summary

Lab Outline

Discovery 1: Investigating the CAM
Discovery 2: Configuring VLANs and Trunks
Discovery 3: VTP Operation
Discovery 4: Exploring DHCP
Discovery 5: Obtaining IPv6 Addresses Dynamically
Discovery 6: EtherChannel Configuration and Load Balancing
Discovery 7: Discovering and Modifying STP Behavior
Discovery 8: Root Guard
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
Challenge 1: Network Discovery
Challenge 2: Configure DHCP
Challenge 3: Configure DHCPv6
Challenge 4: Configure EtherChannel
Challenge 5: Implement RSTP
Challenge 6: Improve STP Configuration
Challenge 7: Configure MST
Challenge 8: Configure Routing Between VLANs with a Router

- Challenge 9: Configure Routing on a Multilayer Switch
- Challenge 10: Configure NTP
- Challenge 11: Configure Network Monitoring Using the Cisco IOS 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: Control Network Access with Port Security