

Course Outline: Building Cisco Multilayer Switched Networks (BCMSN)

Learning Method: Instructor-led Classroom Learning

Duration: 5.00 Day(s)/ 40 hrs

Overview:

This course will enable learners to implement appropriate technologies to build scalable multilayer switched networks, and implement basic troubleshooting techniques in environments that use Cisco multilayer switches for client hosts and services.

Who Should Attend:

This course is intended for Channel Partner / Reseller, Customer and Employee.

At Course Completion:

After completing this course, students will be able to: - After completing this course, students will be able to: - Given a network design that includes multilayer switching over Fast Ethernet, deploy the required Cisco products and services that enable connectivity and traffic transport - Implement the necessary services at each layer of the network to all users to obtain services in a working multilayer switched network - Given a working multilayer switched network, control network traffic by implementing the necessary admission policy at each layer of the network topology - When presented with an incorrectly working multilayer switched network, restore proper network operations through the use of Cisco devices and external management tools - Explain how service providers implement transparent LAN services to deliver Ethernet connectivity to the customer site

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Outline:

Lesson 1: Introduction to Campus Networks

Lesson 2: Defining Virtual Networks (VLANs)

- Implementing Best Practices for VLAN Topologies
- Implementing VLANs
- Implementing Trunks
- Propagating VLAN Configurations with VTP
- Correcting Common VLAN Configuration Errors

Lesson 3: Implementing Spanning Tree

- Describing the STP
- Implementing RSTP
- Implementing MSTP
- Configuring Link Aggregation with EtherChannel

Lesson 4: Implementing Inter-VLAN Routing

- Describing Routing Between VLANs
- Enabling Routing Between VLANs on a Multiplayer Switch
- Deploying CEF-Based Multilayer Switching

Lesson 5: Implement High Availability in a Campus Environment

- Configuring Layer 3 Redundancy with HSRP
- Optimizing HSRP
- Configuring Layer 3 Redundancy with VRRP and GLBP

Lesson 6: Wireless LANs

- Introducing WLANs
- Describing WLAN Topologies
- Explaining WLAN Technology and Standards
- Configuring Cisco WLAN Clients
- Implementing WLANs
- Configuring WLANs

Lesson 7: Configuring Campus Switches to Support Voice

- Planning for Implementation of Voice in a Campus Network
- Accommodating Voice Traffic on Campus Switches

Lesson 8: Minimizing Service Loss and Data Theft in a Campus Network

- Understanding Switch Security Issues
- Protecting Against VLAN Attacks
- Protecting Against Spoof Attacks
- Describing STP Security Mechanisms
- Preventing STP Forwarding Loops
- Securing Network Switches

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