

Course Outline:

Day 1

1: Course Introduction Chapter 2: Layer 2 Switching

- Ethernet Bridging Basics
- Terminology and Design Considerations
- Overview of Enterprise Switching Platforms
- Enabling and Monitoring Layer 2 Switching Operations

2: Virtual Networks

- Overview of VLANs
- Configuring and Monitoring VLANs
- Voice VLAN
- Native VLAN
- Routed VLAN Interfaces

3: Routing Instances

- Routing Instances Overview
- Configuring and Monitoring Virtual Switches

4: Spanning Tree

- Spanning Tree Protocol
- Rapid Spanning Tree Protocol
- Configuring and Monitoring STP and RSTP
- Protection Features: BPDU Protection
- Protection Features: Loop Protection
- Protection Features: Root Protection

Day 2

5: Port Security

- MAC Limiting
- Persistent MAC Learning
- DHCP Snooping

- Dynamic ARP Inspection (DAI)
- IP Source Guard

6: Device Security and Firewall Filters

- Storm Control
- Firewall Filters

7: Virtual Chassis

- Overview of Virtual Chassis
- Configuring and Monitoring a Virtual Chassis

8: High Availability Features

- Overview of High Availability Networks
- Link Aggregation Groups
- Redundant Trunk Groups
- Graceful Routing Engine Switchover (GRES)
- Nonstop Active Routing (NSR)
- Nonstop Bridging (NSB)

Labs Included:

- 1: Implementing Layer 2 Switching
- 2: Implementing Virtual Networks
- 3: Implementing Spanning Tree
- 4: Implementing Port Security
- 5: Implementing Storm Control and Firewall Filter
- 6: Implementing a Virtual Chassis System
- 7: Implementing High Availability Features