

## **Course Outline**

### **Day 1**

#### **Course Introduction**

#### **Ethernet Switching and Virtual LANs**

- Ethernet LANs
- Bridging
- Configuring and Monitoring VLANs
- Automating VLAN Administration
- Configuring and Monitoring IRB
- Layer 2 Address Learning and Forwarding
- Layer 2 Firewall Filtering
- Lab 1: Ethernet Switching and VLANs

#### **Virtual Switches**

- Routing Instances Overview
- Configuring and Monitoring Virtual Switches
- Interconnecting Routing Instances
- Logical Systems
- Lab 2: Virtual Switches

#### **Provider Bridging**

- Expanding the Bridged Network
- Provider Bridging
- Configuring and Monitoring Provider Bridging
- Lab 3: Provider Bridging

### **Day 2**

#### **Spanning-Tree Protocols**

- Overview of STP
- Overview of RSTP
- Overview of MSTP
- Overview of VSTP
- Configuring and Monitoring Spanning-Tree Protocols
- Understanding BPDU, Loop, and Root Protection
- Lab 4: MSTP

#### **Ethernet OAM**

- OAM Overview

- LFM
- CFM
- Configuring and Monitoring Ethernet OAM
- Lab 5: Ethernet OAM

### **High Availability and Network Optimization**

- ERP Overview
- Configuring and Monitoring ERP
- Link Aggregation Group Overview
- Configuring and Monitoring a LAG
- MC-LAG Overview
- Configuring and Monitoring an MC-LAG
- Lab 6: High Availability and Network Optimization

### **Troubleshooting and Monitoring**

- Introduction to Troubleshooting and Monitoring
- Troubleshooting and Monitoring Tools
- Troubleshooting Case Study: Network Congestion
- Lab 7: Troubleshooting and Monitoring

### **Appendix A: Carrier Ethernet**

- Ethernet in the WAN
- Ethernet Standards Organizations
- MX Series Layer 2 Features

### **Appendix B: Deprecated Syntaxes**

### **Appendix C: MX Series Overview**