Implementing Cisco MPLS (MPLS) 2.3

Duration: 40 Hrs

Course Outline

MPLS Concepts
MPLS Labels and Label Stack
MPLS Applications

MPLS Label Assignment and Distribution
Discovering LDP Neighbors
Label Distribution in Frame-Mode MPLS
Convergence in Frame-Mode MPLS
MPLS Label Allocation, Distribution, and Retention Modes

Frame-Mode MPLS Implementation on Cisco IOS Platforms
CEF Switching
Configuring Frame-Mode MPLS
Monitoring Frame-Mode MPLS
Troubleshooting Frame-Mode MPLS

MPLS Virtual Private Network (VPN) Technology
VPN Categorization
MPLS VPN Architecture
MPLS VPN Routing Model
MPLS VPN Packet Forwarding

MPLS VPN Implementation
MPLS VPN Mechanisms
Configuring VRF Tables
Configuring an MP-BGP Session Between PE Routers
Configuring Routing Protocols Between PE and CE Routers
RIP
EIGRP
OSPF
BGP
Monitoring MPLS VPN Operation
Troubleshooting MPLS VPN

Complex MPLS VPNs
Advanced VRF Import/Export Features
Overlapping VPNs
Central Services VPNs
Managed CE Router Service
MPLS Managed Services

Integrated Internet Access with MPLS VPNs
VPN Internet Access Topologies
VPN Internet Access Implementation Methods
Separating Internet Access from VPN Services
Internet Access Backbone as a Separate VPN

MPLS Traffic Engineering
Traffic Engineering (TE) Concepts
MPLS TE Components
Configuring MPLS TE on Cisco IOS Platforms
Monitoring Basic MPLS TE on Cisco IOS