

IMPLEMENTING CISCO MPLS

Duración: 5 días, 35 horas

Learn to deploy MPLS and MPLS VPN infrastructures.

This course is designed to introduce you to MPLS concepts, installation, migration, operation, inspection, and troubleshooting. You'll start with an overview of MPLS and MPLS operation, after which you'll concentrate on MPLS Virtual Private Network (VPN) deployment. The MPLS fundamentals covered in this class will provide the theory and hands-on knowledge to implement, integrate, and deploy an MPLS infrastructure. The MPLS VPN lecture and labs will cover the models, diversity, implementation, troubleshooting, and flexibility of MPLS VPNs.

Prerequisites

Cursos o Conocimiento Equivalentes a:

CCNA Certification Fast Track Programme (CCNABC)
Implementing Cisco IP Routing v1.0 (ROUTE)
Configuring BGP on Cisco Routers (BGP)

Objetivos del curso

Label and Tag Distribution Protocol
MPLS VPNs/VPN deployment models
Multi-protocol BGP
MPLS VPN configurations, integration, and management

Contenido

- 1. MPLS Concepts

MPLS Labels and Label Stack
MPLS Applications

- 2. 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

- 3. Frame-Mode MPLS Implementation on Cisco IOS Platforms

CEF Switching

Configuring Frame-Mode MPLS

Monitoring Frame-Mode MPLS

Troubleshooting Frame-Mode MPLS

- 4. MPLS Virtual Private Network (VPN) Technology

VPN Categorization

MPLS VPN Architecture

MPLS VPN Routing Model

MPLS VPN Packet Forwarding

- 5. 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

- 6. Complex MPLS VPNs

Advanced VRF Import/Export Features

Overlapping VPNs

Central Services VPNs

Managed CE Router Service

MPLS Managed Services

- 7. 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

- 8. MPLS Traffic Engineering

Traffic Engineering (TE) Concepts

MPLS TE Components

Configuring MPLS TE on Cisco IOS Platforms

Monitoring Basic MPLS TE on Cisco IOS

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Anyone responsible for designing, implementing, and/or troubleshooting MPLS networks or solutions based on MPLS technology