



Implementing Cisco MPLS v3.0 - (Digital Library)

CODICE

MPLS - EL

DURATA

180 Giorni

PREZZO

750,00€ (iva escl.)

LINGUA

Inglese

MODALITÀ

e-Learning

CONTINUING EDUCATION CREDIT

40

CERTIFICAZIONI ASSOCIATE

CCIE - Cisco Certified Internetworking Expert Routing and Switching

* Il prezzo potrebbe differire in base al cambio del dollaro

SCHEDULAZIONE

- A Richiesta

Multiprotocol Label Switching (MPLS) is a high-performance method for forwarding packets through a network enabling routers at the edge of a network to apply simple labels to packets.

This practice allows the edge devices to switch packets according to labels, with minimal lookup overhead. MPLS integrates the performance and traffic-management capabilities of data link Layer 2 with the scalability and flexibility of network Layer 3 routing.

This course covers both introductory and advanced MPLS and MPLS VPNs concepts.

Configuration, implementation and troubleshooting skills are all included with a significant focus on the use of labs to consolidate the learners knowledge.

At the end of this course you should be able to design, implement and maintain core IP routing network infrastructures.

Each student will have their own virtual pod of equipment with access to the labs 24x7 for 90 days.

PREREQUISITI

Attendees should meet the following prerequisites:

- Delegates should hold a valid CCNA or equivalent knowledge
- Delegates should have attended ROUTE or SPROUTE or have equivalent knowledge
- Delegates should have attended BGP or SPADVROUTE or have equivalent knowledge

OBIETTIVI

After you complete this course you will be able to:

- Describe the features of MPLS
- Describe how MPLS labels are assigned and distributed
- Configure and troubleshoot frame-mode MPLS on Cisco IOS platforms



- Describe the MPLS peer-to-peer architecture and explain the routing and packet-forwarding model in this architecture
- Configure, monitor, and troubleshoot VPN operations
- Describe how the MPLS VPN model can be used to implement managed services and Internet access
- Describe the various Internet access implementations that are available and the benefits and drawbacks of each mode
- Describe the tasks and commands that are necessary to implement MPLS TE

DESTINATARI

Service Provider and Enterprise network engineers that design, deploy and maintain core IP routing network infrastructures.

CONTENUTI

MPLS Concepts:

- Introducing Basic MPLS Concepts
- Introducing MPLS Labels and Label Stack
- Identifying MPLS Applications

Label Assignment and Distribution:

- Discovering LDP Neighbors
- Introducing Typical Label Distribution in Frame-Mode MPLS
- Introducing Convergence in Frame-mode MPLS

Frame-Mode MPLS Implementation on Cisco IOS Platforms:

- Introducing Cisco Express Forwarding (CEF) Switching
- Configuring Frame-Mode MPLS on Cisco IOS Platforms
- Monitoring Frame-Mode MPLS on Cisco IOS Platforms
- Troubleshooting Frame-Mode MPLS on Cisco IOS Platforms

MPLS VPN Technology:

- Introducing Virtual Private Networks
- Introducing MPLS VPN Architecture
- Introducing the MPLS VPN Routing Model
- Forwarding MPLS VPN Packets

MPLS VPN Implementation:

- Using MPLS VPN Mechanisms of Cisco IOS platforms
- Configuring an MP-BGP Session Between PE Routers
- Configuring VRF Tables
- Configuring Small-Scale Routing Protocols Between PE and CE routers
- Monitoring MPLS VPN Operations
- Configuring OSPF as the Routing Protocol Between PE and CE Routers
- Configuring BGP as the Routing Protocol between PE and CE Routers
- Troubleshooting MPLS VPNs

**Complex MPLS VPNs:**

- Introducing Overlapping VPNs
- Introducing Central Services VPNs
- Introducing the Managed CE Routers Service

Internet Access and MPLS VPNs:

- Combining Internet Access with MPLS VPNs
- Implementing Internet Access in the MPLS VPN Environment

MPLS Traffic Engineering Overview:

- Introducing MPLS Traffic Engineering Components
- MPLS Traffic Engineering Operations
- Configuring MPLS Traffic Engineering on Cisco IOS Platforms
- Monitoring Basic MPLS TE on Cisco IOS Platforms

Labs:

Discovery 1: Verifying CEF Switching

Discovery 2: Enabling MPLS

Discovery 3: Change IP TTL Propagation

Discovery 4: Configure MP-IBGP

Discovery 5: Configure the VRF Instances

Discovery 6: Configure RIP as a PE-CE Routing Protocol

Discovery 7: Configure EIGRP as a PE-CE Routing Protocol

Discovery 8: Configure OSPF as a PE-CE Routing Protocol

Discovery 9: Configure BGP as a PE-CE Routing Protocol

Discovery 10: Configure a Central Services VPN

Discovery 11: Configure MPLS Traffic Engineering

Challenge 1: Implement the Service Provider's and Customer's IP Addressing and IGP Routing

Challenge 2: Implement the Core MPLS Environment in the Service Provider Network

Challenge 3: Implement EIGRP Based VPNs

Challenge 4: Implement OSPF Based MPLS VPNs

Challenge 5: Implement BGP Based MPLS VPNs

Challenge 6: Implement MPLS Traffic Engineering

Prezzi e corsi potrebbero subire variazioni; si consiglia di verificare sul sito www.novanext.it/training.