Implementing Cisco MPLS

Category: Networking & Security | **Vendor:** Cisco

Duration: 40.00 hours (5 days) **32.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

The Implementing Cisco Multiprotocol Label Switching training teaches you the high-performance method for forwarding packets through a network. MPLS enables 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. When used in conjunction with other standard technologies, MPLS gives the ability to support value-added features.

Please note that this course lab access is valid for 60 hours or 90 days whichever is the shorter, so please ensure you exit the lab exercises when not in use.

How You'll Benefit

- Acquire the skill of implementing MPLS high-performance methods for forwarding packets in a network
- Learn to configure routers at the network edge to apply simple labels to packets
- Gain the knowledge to enable edge devices, ATM switches, or existing routers to switch packets based on labels within the service provider core
- Master the skill of minimizing lookup overhead in the packet-switching process
- Gain proficiency in integrating the performance and traffic-management capabilities of data-link Layer 2 using MPLS
- Acquire the skill of combining the scalability and flexibility of network Layer 3 routing through MPLS
- Learn to leverage MPLS with other standard technologies to implement value-added features for service providers' networks

About This Course

The Implementing Cisco Multiprotocol Label Switching training teaches you the high-performance method for forwarding packets through a network. MPLS enables 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. When used in conjunction with other standard technologies, MPLS gives the ability to support value-added features.

Please note that this course lab access is valid for 60 hours or 90 days whichever is the shorter, so please ensure you exit the lab exercises when not in use.

How You'll Benefit

- Acquire the skill of implementing MPLS high-performance methods for forwarding packets in a network
- Learn to configure routers at the network edge to apply simple labels to packets
- Gain the knowledge to enable edge devices, ATM switches, or existing routers to switch packets based on labels within the service provider core
- Master the skill of minimizing lookup overhead in the packet-switching process
- Gain proficiency in integrating the performance and traffic-management capabilities of data-link Layer 2 using MPLS
- Acquire the skill of combining the scalability and flexibility of network Layer 3 routing through MPLS
- Learn to leverage MPLS with other standard technologies to implement value-added features for service providers' networks

Who Should Attend

- Network administrators
- Network engineers
- Network managers
- Systems engineers (who would like to implement MPLS and MPLS Traffic Engineering)

Prerequisites & Entry Requirements

General Prerequisites:

It is recommended, but not required, to have the following skills and knowledge before attending this course:

- Intermediate to advanced knowledge of Cisco IOS Software configuration
- Configuring and troubleshooting EIGRP, OSPF, IS-IS and BGP

The following Cisco courses can help you gain the knowledge you need to prepare for this course:

- Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR)

Learning Outcomes

Upon successful completion of this course, participants will be able to:

Upon completion of the course, students will have the knowledge and skills to:

- Describe the features of MPLS
- Describe how MPLS labels are assigned and distributed
- Identify the Cisco IOS tasks and command syntax necessary to implement MPLS on frame-mode Cisco IOS platforms
- Describe the MPLS peer-to-peer architecture and explain the routing and packet forwarding model in this architecture
- Identify the Cisco IOS command syntax required to successfully configure, monitor, and troubleshoot VPN operations
- Identify 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 model
- Provide an overview of MPLS Traffic Engineering

Detailed Course Outline

- MPLS Features
- Label Assignment and Distribution
- Frame-Mode MPLS Implementation on Cisco IOS Platforms
- MPLS Virtual Private Network Technology
- MPLS VPN Implementation
- Complex MPLS VPNs
- Internet Access and MPLS VPNs
- MPLS Traffic Engineering Overview

Skills You Will Learn:

Upon completion of the course, students will have the knowledge and skills to:

- Describe the features of MPLS
- Describe how MPLS labels are assigned and distributed
- Identify the Cisco IOS tasks and command syntax necessary to implement MPLS on frame-mode Cisco IOS platforms
- Describe the MPLS peer-to-peer architecture and explain the routing and packet forwarding model in this architecture
- Identify the Cisco IOS command syntax required to successfully configure, monitor, and troubleshoot VPN operations
- Identify 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 model
- Provide an overview of MPLS Traffic Engineering

Frequently Asked Questions

Q: What delivery options are available for Implementing Cisco MPLS?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 5-day Implementing Cisco MPLS course provides up to 32.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Implementing Cisco MPLS training?

The training takes place over 5 day(s), with each day lasting approximately 40.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Implementing Cisco MPLS?

Yes, we provide corporate training, dedicated training, and closed classes for Implementing Cisco MPLS. Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: Implementing Cisco MPLS, Cisco Networking, MPLS

Q: Why choose Nexus Human for Implementing Cisco MPLS?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Implementing Cisco MPLS training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

Nexus Human

Professional Training & Development

Email: info@nexushuman.com

Website: www.nexushuman.com

Phone: +353 1 889 8700 (Ireland) | +44 20 8142 8961 (UK)

© 2026 Nexus Human. All rights reserved. This brochure was generated on 13/11/2026.