

Course Title: Implementing Cisco MPLS**Course Code: CI-MPLS****Course Duration: 5 days****Who should attend**

- Channel Partner/Reseller
- Customer
- Employees
- Individuals that are working toward their CCIP certification.

Certifications

This course is part of the following Certifications:

- Cisco Certified Internetwork Professional ([CCIP](#))
- CCIE Routing & Switching ([CCIERS Routing & Switching](#))
- CCIE Service Provider ([CCIESP Service Provider](#))
- Cisco Certified Design Expert ([CCDE](#))

Prerequisites

- Interconnecting Cisco Network Devices Part 2 Version 1.1 ([ICND2](#))
- Configuring BGP on Cisco Routers ([BGP](#))
- Practical experience with deploying and operating networks based on Cisco network devices and Cisco IOS is strongly recommended

Course Objectives

The course will enable learners to gather information from the technology basics to a basic introductory level of some of the more updated features and functions such as Traffic Engineering, Fast Reroute and Any Transport over MPLS (AToM). The focus of the course is on VPN technology issues of MPLS from the Service Providers perspective and how to configure some of those features and functions in an existing routed environment. Upon completion of the Internetworking With Cisco MPLS (MPLS) course the student will be able to:

- Describe basic MPLS frame-mode and cell-mode architectures and identify how it supports applications that are used to address the drawbacks in traditional IP routing
- Describe the Label Distribution Protocol (LDP) process by explaining label allocation, label distribution, label retention, label convergence and Penultimate Hop Popping (PHP) in both frame and cell modes
- Given a diagram of a typical MPLS network solution, identify the Cisco IOS command syntax required to successfully configure and monitor MPLS operations on frame, switched WAN and LC-ATM interfaces
- Describe MPLS` s peer-to-peer architecture and explain the routing and packet forwarding model in this architecture
- Given a diagram of a typical simple MPLS VPN solution, identify the Cisco IOS command syntax required to successfully configure, monitor, and troubleshoot VPN operations
- Given a diagram of a typical simple, hub-and-spoke, overlapping and central services MPLS VPN solution identify the Cisco IOS command syntax required to successfully configure VPN

operations and describe how these model are used to implement managed services and Internet access

Course Content

- MPLS Concepts
- MPLS Label Assignment and Distribution
- Frame-Mode/Cell-Mode
- MPLS Implementation on Cisco IOS Platforms
- MPLS Virtual Private Networks Technology
- MPLS Virtual Private Networks Implementation
- MPLS Virtual Private Networks Advanced Features Cell-Mode Implementation on Cisco OS Platforms