

## CS-MPLSF



## MPLS FUNDAMENTALS

DURATION	LEVEL	TECHNOLOGY	DELIVERY METHOD	TRAINING CREDITS
5 Days	Intermediate	Cisco BGP	Instructor Led	N/A

### INTRODUCTION

Our five-day BGP Design and Implementation course focuses on real-world problems and provides not only design solutions, but also the background on why they are appropriate and a practical overview of how they apply into a top-down design. The BGP protocol is being used in both service provider and enterprise networks. The design goals of these two groups are different, leading to different architectures being used in each environment. This course breaks out the separate goals, and resulting solutions for each group to assist the learner in further understanding different solution strategies.

This course starts by identifying key features and functionality in BGP. It then delves into the topics of performance tuning, routing policy development, and architectural scalability. It progresses by examining the challenges for both the service provider and enterprise customers and provides practical guidelines and a design framework for each. BGP Design and Implementation finishes up by closely looking at the more recent extensions to BGP through Multi-Protocol BGP for MPLS-VPN, IP Multicast, IPv6, and CLNS.

### AUDIENCE PROFILE

This course is intended primarily for network professionals looking for a comprehensive introduction and operation of BGP and its deployment.

### PREREQUISITES

The knowledge and skills that a learner must have before attending this course are as follows:

- Familiar with IP and IP routing
- Intermediate knowledge of Cisco IOS software configuration
- Basic understanding of computer networking concepts and be familiar with basic networking terminology.

### COURSE OBJECTIVES

The purpose of this course is to go beyond the basic protocol concepts and configurations and to focus on providing practical design and implementation solutions using a hands-on approach. This course is intended to cover advanced BGP topics in designing and implementing networks.

### COURSE CONTENT

#### Lesson 1: Understanding Advanced BGP

- Advanced BGP Introduction
- Understanding BGP Building Blocks
- Tuning BGP Performance
- Effective BGP Policy Control

#### Lesson 2: Designing BGP Enterprise Networks

- Enterprise BGP Core Network Design

- Internet Connectivity for Enterprise Networks

#### Lesson 3: Designing BGP Service Provider Networks

- Scalable iBGP Design and Implementation Guidelines
- Route-Reflection and Confederation Migration Strategies
- Service Provider Architecture

#### Lesson 4: Implement BGP Multiprotocol Extensions

- Multiprotocol BGP and MPLS VPN
- Multiprotocol BGP and Interdomain Multicast
- Multiprotocol BGP Support for IPv6

### ASSOCIATED CERTIFICATIONS & EXAM

There's no exam associated with this course.