

Implementing Cisco Multicast (MCAST) v2.0

Course Duration: 40 Hours (5 Days)

Overview

The Implementing Cisco Multicast (MCAST) v2.0 course is a comprehensive training program aimed at network engineers and system administrators who are responsible for deploying and managing IP multicast within their networks. This Cisco multicast training offers a deep dive into multicast technologies including protocols and concepts required to design, deploy, and troubleshoot multicast-enabled networks. The MCAST course covers a range of topics, from basic IP multicast principles to advanced features like Source-Specific Multicast (SSM), Multiprotocol BGP Extensions for IP Multicast, and Multicast Source Discovery Protocol (MSDP). Learners will gain practical knowledge through lessons that introduce IP multicast services, explain the Multicast service model, and detail Multicast distribution trees and forwarding mechanisms. The course also includes critical Multicast on the LAN, PIM Sparse Mode configurations, Rendezvous Point engineering, Interdomain multicast solutions, IP multicast security, and the application of multicast in various real-world scenarios. Practical labs reinforce theoretical knowledge, ensuring that participants develop hands-on skills essential for multicast network implementations.

Audience Profile

The Implementing Cisco Multicast (MCAST) v2.0 course is designed for professionals who manage and implement Cisco multicast networks, including:

- Network Engineers
- Network Administrators
- Network Architects
- Systems Engineers
- Data Center Engineers
- Technical Support Personnel
- Cisco Integrators and Partners
- IT Professionals working with multicast applications
- Network Designers
- Network, Systems, and Security Consultants
- Network and Systems Managers requiring multicast knowledge

Course Syllabus

- Describe IP multicast services.
- Identify IP multicast issues at the data link layer.

- Explain why Protocol Independent Multicast Sparse Mode (PIM-SM) is the most scalable IP multicast routing protocol.
- Describe Rendezvous Point (RP) distribution solutions.
- Recognize the drawbacks of PIM-SM and describe two extensions that provide possible solutions.
- Explain the basic concepts of Multiprotocol BGP (MP-BGP) and its role in the IP multicast environment.
- Configure and deploy Multicast Source Discovery Protocol (MSDP) in an interdomain environment.
- Describe solutions to mitigate security issues in IP multicast networks.
- Explain the process of monitoring and maintaining multicast high-availability operations.
- Design multicast-related applications and network solutions for customer and service provider networks.

Prerequisites:

- Before taking this training, we recommend that you have the following knowledge and skills:
- Work experience with Cisco routers and LAN switches.
- Configuration skills for Cisco routers and LAN switches.

Lab Outline:

- Layer 2 and Layer 3 Multicast
- PIM-SM Protocol Basics
- PIM-SM Protocol Mechanics and Timers
- PIM Sparse-Dense Mode and Manual RP Configuration
- Configuring Dynamic RP Information Distribution
- Bidirectional PIM
- Source-Specific Multicast
- Anycast RP, External MP-BGP, and MSDP Peering