

MCAST

Implementing Cisco Multicast

40 horas

Routing & Switching

Cisco

Cisco Continuing Education Credits

40 CE Credits

INTRODUÇÃO

The Implementing Cisco Multicast (MCAST) v2.0 course teaches you the fundamentals of IP multicasting, including multicast applications, sources, receivers, group management, and IP multicast routing protocols such as Protocol Independent Multicast (PIM) used within a single administrative domain. You will learn about issues in switched LAN environments and reliable IP multicasting, and technical solutions for simple deployments of IP multicast within a provider or customer network. The course reviews the configuration and troubleshooting guidelines for implementation of IP multicast on Cisco® routers. Labs offer hands-on experience to help you prepare to deploy IP multicast successfully.

OBJETIVO DO CURSO

After taking this course, you should be able to:

Describe IP multicast services

Identify IP multicast issues on a data link layer

Explain why Protocol Independent Multicast Sparse Mode (PIM-SM) is the most current scalable IP multicast routing protocol

Describe Rendezvous Point (RP) distribution solutions

Recognize the drawbacks of the PIM-SM and describe two extensions to provide possible solutions

Explain basic concepts of Multiprotocol BGP (MP-BGP) and its use in the IP multicast environment

Configure and deploy Multicast Source Discovery Protocol (MSDP) in the interdomain environment

Describe solutions to mitigate security issues in the IP multicast network

Describe the process of monitoring and maintaining multicast high-availability operations

Design multicast-related application and network solutions in customer and service provider networks

PÚBLICO-ALVO

Network professionals

Systems engineers

Partners

Customers

PRÉ-REQUISITOS

We recommend that you have the following knowledge and skills before taking this course:

Work experience and configuration skills for Cisco routers and LAN switches

Course Introduction

IP Multicast Concepts and Technologies

- Introducing IP Multicast
- Understanding the Multicast Service Model
- Defining Multicast Distribution Trees and Forwarding
- Reviewing Multicast Protocols

Multicast on the LAN

- Mapping Layer 3 to Layer 2
- Working with Cisco Group Management Protocol
- Using Internet Group Management Protocol (IGMP) Snooping

PIM Sparse Mode

- Introducing Protocol Independent Multicast Sparse Mode
- Understanding PIM-SM Protocol Mechanics
- Using PIM-SM in a Sample Situation
- Configuring and Monitoring PIM-SM

Rendezvous Point Engineering

- Identifying RP Distribution Solutions
- Implementing Auto-RP
- Using PIMv2 Bootstrap Router (BSR)
- Using Anycast RP and MSDP

PIM Sparse Mode Protocol Extensions

- Introducing Source-Specific Multicast (SSM)
- Configuring and Monitoring SSM
- Reviewing Bidirectional PIM
- Configuring and Monitoring Bidirectional PIM

Multiprotocol Extensions for BGP

- Introducing MP-BGP
- Configuring and Monitoring MP-BGP

Interdomain IP Multicast

- Examining Dynamic Interdomain IP Multicast
- Explaining Multicast Source Discovery Protocol
- Using MSDP Source-Active (SA) Caching
- Configuring and Monitoring MSDP

IP Multicast Security

- Introducing IP Multicast and Security
- Securing a Multicast Network

Multicast Optimization and High-Availability Features

- Using Multicast Optimization and High-Availability Features

Applications of Multicast

Exploring IP Multicast and Video Applications

Using IP Multicast in Mission-Critical Environments

Exploring How Enterprise IT Uses IP Multicasting Globally

Labs

Lab 1: Layer 2 and Layer 3 Multicast

Lab 2: PIM-SM Protocol Basics

Lab 3: PIM-SM Protocol Mechanics and Timers

Lab 4: PIM Sparse-Dense Mode and Manual RP Configuration

Lab 5: Configuring Dynamic RP Information Distribution

Lab 6: Bidirectional PIM

Lab 7: Source-Specific Multicast

Lab 8: Anycast RP, External MP-BGP, and MSDP Peering