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

CONTEÚDO PROGRAMÁTICO

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