

MCAST (IMPLEMENTING CISCO MULTICAST)

Objetivo

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

Carga Horária

40 horas (5 dias).

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

