Implementing Cisco Multicast

Duration: *5 Day(s)*

Course Overview

The Implementing Cisco Multicast (MCAST) v2.0 course is a five-day instructor-led course covering the fundamentals of IP multicasting, which includes multicast applications, sources, receivers, group management, and IP multicast routing protocols (such as Protocol Independent Multicast, PIM) used within a single administrative domain (intradomain). The issues of switched LAN environments and reliable IP multicasting are covered as well. The course provides technical solutions for simple deployments of IP multicast within a provider or customer network. The curriculum provides the configuration and troubleshooting guidelines for implementation of IP multicast on Cisco routers. The labs provide students with the hands-on experience needed to successfully deploy IP multicast.

Review this course online at https://www.alta3.com/courses/MCAST

Objectives

- Understand IP multicast services and technologies, and evaluate multicast applications.
- Identify multicast issues on a data link layer and explain address mapping methods.
- Configure and deploy PIM-SM and multicast protocols in complex network environments.
- Mitigate IP multicast security issues and implement suitable VPN technologies.

Who Should Attend

- Network professionals
- Systems engineers
- Partners
- Customers

Prerequisites

- Work experience and configuration skills for Cisco routers and LAN switches

Course Outline

Module 1: IP Multicast Concepts and Technologies

1. Lesson 1: Introducing IP Multicast
2. Lesson 2: Understanding the Multicast Service Model
3. Lesson 3: Defining Multicast Distribution Trees and Forwarding
4. Lesson 4: Reviewing Multicast Protocols

Module 2: Multicast on the LAN

5. Lesson 1: Mapping Layer 3 to Layer 2
6. Lesson 2: Working with Cisco Group Management Protocol
7. Lesson 3: Using IGMP Snooping

Module 3: PIM Sparse Mode

8. Lesson 1: Introducing Protocol Independent Multicast Sparse Mode

9. Lesson 2: Understanding PIM-SM Protocol Mechanics

10. Lesson 3: Using PIM-SM in a Sample Situation

11. Lesson 4: Configuring and Monitoring PIM-SM

Module 4: Rendezvous Point Engineering

12. Lesson 1: Identifying RP Distribution Solutions

13. Lesson 2: Implementing Auto-RP

14. Lesson 3: Using PIMv2 BSR

15. Lesson 4: Using Anycast RP and MSDP

Module 5: PIM Sparse Mode Protocol Extensions

16. Lesson 1: Introducing Source Specific Multicast

17. Lesson 2: Configuring and Monitoring SSM

18. Lesson 3: Reviewing Bidirectional PIM

19. Lesson 4: Configuring and Monitoring Bidirectional PIM

Module 6: Multiprotocol Extensions for BGP

20. Lesson 1: Introducing MP-BGP

21. Lesson 2: Configuring and Monitoring MP-BGP

Module 7: Interdomain IP Multicast

22. Lesson 1: Examining Dynamic Interdomain IP Multicast

23. Lesson 2: Explaining Multicast Source Discovery Protocol

24. Lesson 3: Using MSDP SA Caching

25. Lesson 4: Configuring and Monitoring MSDP

Module 8: IP Multicast Security

26. Lesson 1: Introducing IP Multicast and Security

27. Lesson 2: Securing a Multicast Network

Module 9: Multicast Optimization and High-Availability Features

28. Lesson 1: Using Multicast Optimization and High-Availability Features

Module 10: Applications of Multicast

29. Lesson 1: Exploring IP Multicast and Video Applications