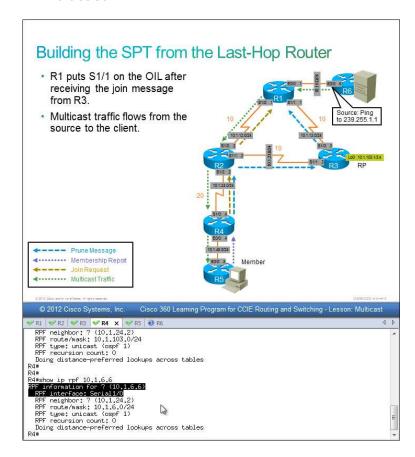


# Cisco 360 Learning Program for CCIE Routing and Switching Self-Paced Lessons: IP Multicast



The centerpiece of this Lesson Module is the Configuring IP Multicast Routing video on demand (VoD) instruction. The split-screen format of each VoD module provides the powerful learning experience of shadowing a Cisco CCIE who is configuring and explaining IP Multicast



# **Duration: Three Hours and Forty Five Minutes**

Each VoD is approximately 15–30 minutes in length, and the VoD modules are grouped into six blocks.

## **Target Audience**

The IP Multicast lesson is for professional-level networking engineers who have 3–5 years of network engineering experience or who have completed the Cisco CCNP certification. This self-paced Lesson Module is for engineers who want to develop expert level skills in networking

# Recommended Prerequisites and Corequisites

A CCNP level of understanding of IP routing is required. It is also recommended that this lesson be completed with these lessons:

- CCIE R&S Lesson: Interior Gateway Routing Protocols (IGP's)
- CCIE R&S Lesson: Border Gateway Protocol (BGP)
- CCIE R&S Lesson: Troubleshooting

# Lesson Module Objectives

Upon completion of this self-paced Lesson Module, learners should be able to formulate well-defined mental simulations to perform the following IP Multicast tasks with the minimally described parameters that are commonly found in CCIE-level tasks:

- · Attain a basic understanding of IP Multicast
- Formulate an opening moves strategy to implement and troubleshoot IP Multicast
- Perform the configuration and troubleshooting of the IP Multicast routing protocols

## Lesson Module Outline

The VoDs in this Lesson Module discuss these topics:

# **Block 1: Reviewing Basic Multicast Operations**

- · Reviewing methods of sending IP packets
- Reviewing IP multicast addressing
- · IP multicast group membership
- · Multicast distribution trees
- · Multicast forwarding
- · Protocol Independent Multicast
- · Recommended reading

#### **Block 2: PIM Dense Mode Operations**

- PIM dense mode
- · Potential issues with PIM-DM

#### **Block 3: PIM Sparse Mode Operations**

- · Comparison of multicast modes
- PIM sparse mode operations
- · RP considerations

#### **Block 4: PIM Protocol Extensions**

- Source-Specific Multicast
- Bidirectional PIM

#### **Block 5: Interdomain Multicast Protocols**

- Multicast Source Discovery Protocol
- Anycast RP
- · MBGP extensions for IP multicast

## **Block 6: Identifying Strategies for Multicast Tasks**

- · Multicast opening-moves options analysis
- Troubleshooting a preexisting PIM-SM multicast configuration
- · Common reasons for failure of an IP multicast configuration

#### For More Information

For more information about Cisco 360 Learning Program for CCIE Routing and Switching, go to www.cisco.com/go/360.

The Cisco 360 Learning Program for CCIE Routing and Switching Learning Portal is available at http://cisco360.cisco.com.



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