

Operating Cisco IP Fabric for Media Solution (IPFMSN) v2.0

Course duration: 3 days

Overview

The Operating Cisco IP Fabric for Media Solution (IPFMSN) v2.0 course introduces you to the Cisco® IP Fabric for Media (IPFM) solution. The course is designed for broadcast engineers who will use IP technologies to replace Serial Digital Interface (SDI)-based deployments. You will learn about Cisco IPFM deployment, operation, and troubleshooting.

The course also covers the Data Center Network Manager (DCNM) Media Controller, a core component of the Cisco IPFM solution. Through lab exercises that focus on building IP fabric as a baseline for a complete IPFM solution, you will learn how to deploy and troubleshoot the DCNM Media Controller to control flows through the fabric.

Target audience

This course is designed for broadcast engineers.

It might also be of interest to technical solution architects, network engineers, and network administrators.

Objectives

The objectives of this course are for participants to understand IPFM deployment, how it operates, how to determine when to expand, and how to troubleshoot.

After taking this course, you should be able to:

- Describe the overall solution and how it works, and identify all components of the solution and their functions
- Understand initial sizing and capacity
- Understand the basic requirements for IPFM
- Understand how Non-Blocking Multicast (NBM) and multicast function in the IPFM
- Understand and verify Precision Time Protocol (PTP) clocking
- Describe the DCNM Media Controller
- Demonstrate the DCNM Media Controller configuration and verification
- Explain how to deploy an IPFM solution in a high-availability manner
- Use the DCNM Media Controller to monitor fabric and to troubleshoot basic connectivity and performance issues

- Understand the approach and basic steps involved in responding to alarms and other notifications

Outline

- Introducing Cisco IP Fabric for Media
- Media over IP Standardization
- Designing Cisco IPFM Solution
- Building Cisco IP Fabric for Media
- Exploring Non-Blocking Multicast in Cisco IPFM
- Describing Cisco DCNM
- Introducing Cisco DCNM PowerOn Auto Provisioning (POAP) Process
- Implementing Cisco DCNM Flow and Host Policies
- Precision Time Protocol
- Cisco IPFM Operations, Administration, and Management
- Cisco IPFM High Availability
- Monitoring and Troubleshooting Cisco IPFM Operation

Lab Outline

- Implement IPFM Without DCNM Media Controller
- Implement POAP Using Cisco DCNM
- Deploy Flows Through Cisco DCNM Media Controller
- Deploy Host Policies Through Cisco DCNM Media Controller
- Configure PTP
- Operate and Administer Cisco DCNM
- Implement Cisco IPFM High Availability
- Troubleshoot Cisco IPFM Operation

Prerequisites

We recommend but do not require that you have the following knowledge and skills before taking this class:

- Understanding of broadcast industry requirements and standardization
- Understanding of data center network architectures
- Understanding of virtualization concepts
- Understanding of Ethernet functions and standards
- Understanding of TCP/IP networks
- Understand and configure basic unicast and multicast routing
- Understanding of Cisco Nexus® Command Line Interface (CLI)
- Use of basic Linux commands

Benefits

This course will help you:

- Learn to use Cisco IPFM to deploy a flexible, scalable, and secure IP-based media infrastructure
- Troubleshoot the DCNM Media Controller to control flows through the fabric
- Practice what you learn through hands-on lab exercises