

IPFMSN: Operating Cisco IP Fabric for Media Solution

Course Code: IPFMSN

Duration: 3 days

Instructor-led Training (ILT) | Virtual Instructor-led Training (VILT)

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.

SKILLS COVERED

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 function
- Understand initial sizing and capacity
- 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

WHO SHOULD ATTEND?

This course is designed for broadcast engineers. It might also be of interest to technical solution architects, network engineers, and network administrators.

PRE-REQUISITES

There are no prerequisites for this course. However, we recommend that you complete the Introducing IP Fundamentals of Cisco Fabric for Media (IPFMFD) course before attending this course.

MODULES

Content

- Broadcast and Media Evolution
- Cisco IPFM Architecture
- Cisco DCNM Media Controller
- Precision Timing
- Interior Gateway and Internet Group Management Protocols
- Protocol Independent Multicast
- Non-Blocking Multicast
- Quality of Service (QoS)
- Cisco DCNM Platform
- Quality of Service
- Out-of-Band and In-band Management

- Deployment Topologies Using Cisco IP Fabric for Media
- Cisco DCNM Media Controller Installation, Management, and Maintenance
- Cisco Nexus AAA Features
- Power-On Auto Provisioning
- Environment Discovery
- Host and Flow Policies
- Flow Setup, Teardown, and Verification
- SMPTE 2022-7 Overview
- Sizing and Capacity
- Sample Deployment Scenario
- DCNM and Cisco Nexus 9000 Series High Availability
- Failure Scenarios
- Cisco IPFM Troubleshooting
- Events and Notifications
- Logging on to Cisco Nexus 9000

Lab Outline

- Implement IPFM Without DCNM Media Controller
- Administer and Maintain the IPFM
- Orchestrate Flows with Cisco DCNM Media Controller
- Orchestrate Flows in Highly Available IPFM
- Monitor and Troubleshoot Cisco IPFM Operation

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