

Introducing IP Fundamentals of Cisco Fabric for Media (IPFMFD) v2.0

What you'll learn in this course

The **Introducing IP Fundamentals of Cisco Fabric for Media** (IPFMFD) v2.0 course introduces you to Internet Protocol (IP) technologies. This course covers Ethernet functions and standards, the basic principles of IP, the Transmission Control Protocol/Internet Protocol (TCP/IP) stack, and other technologies used in modern networks. Lab exercises focus on configuring basic IP functionality on switches and servers.

What to expect

- Instructor-led training: 2 days in the classroom with hands-on lab practice
- E-learning: Equivalent of 2 days in the classroom with hands-on lab practice

How you'll benefit

This class will help you:

- Gain a solid foundation in how Ethernet functions and standards, IP, the TCP/IP stack, and other technologies are used in modern networks
- Prepare to use Cisco® IP Fabric for Media (IPFM) to deploy a flexible, scalable, and secure IP-based media infrastructure

Who should enroll

This course is designed for broadcast engineers with no previous IP experience.

How to enroll

Instructor-led training

- Find a class at the [Cisco Learning Locator](#).
- Arrange training at your location through [Cisco Private Group Training](#).

E-learning

- To purchase a single e-learning license, visit the [Cisco Learning Network Store](#).
- For digital library access, visit [Cisco Digital Learning](#).

Technology areas

- Service provider
- Media
- Networking

Course details

Objectives

After taking this course, you should be able to:

- Identify the components of a computer network and describe their basic characteristics
- Describe network fundamentals, and explain a simple LAN
- Describe hardware and wiring that is used to build a network
- Describe the Open Systems Interconnection (OSI) reference model
- Explain the datalink layer characteristics, Ethernet protocol, and switch operation
- Introduce students to key network layer components, definitions, and standards
- Explain the purpose and functions of the transport layer
- Describe end-to-end packet delivery
- Describe routing
- Describe multicast networks, applications, and protocols
- Explain data center architecture in each layer and describe new leaf-spine topology approaches
- Explain virtualization and Software-Defined Networking (SDN)

Prerequisites

To fully benefit from this course, you should have the following knowledge and skills:

- Basic computer literacy
- Basic PC operating system navigation skills
- Basic Internet usage skills
- Basic IP address knowledge
- Basic understanding of networking protocols

These Cisco courses are recommended to help you meet these prerequisites:

Interconnecting Cisco Networking Devices: Accelerated (CCNAX) or Interconnecting Cisco Networking Devices Part 1 (ICND1) and Interconnecting Cisco Networking Devices Part 2 (ICND2)

Outline

- Course Introduction
- Ethernet Hardware
- Describing the OSI and TCP/IP Models
- Understanding Ethernet and Switch Operation
- Describing IPv4 Network Layer Addressing
- Understanding the TCP/IP Transport Layer
- Packet Delivery Process
- Describing Routing
- IP Multicast
- Describing Data Center Network Architectures
- Virtualization and Software-Defined Networking

Lab Outline

- Configure VLANs and Trunks
- Configure Multilayer Switching and IP Addressing
- Configure Open Shortest Path First (OSPF)
- Multicast on Cisco Nexus® Switches




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