

# **Introducing IP Fundamentals of Cisco Fabric for Media (IPFMFD) v2.0 - On Demand**

**Modality: On Demand**

**Duration: 40 Hours**

**CLC: 5 Units**

## **About this course:**

The Introducing IP Fundamentals of Cisco Fabric for Media (IPFMFD) v2.0 course introduces you to IP technologies.

This course covers Ethernet functions and standards, the basic principles of IP, the TCP/IP stack, and other technologies used in modern networks. Lab exercises focus on configuring basic IP functionality on switches and servers.

## **Course Objective:**

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).

## **Audience:**

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

## **Prerequisite:**

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)

### **Course Outline:**

- **Describing Ethernet Functions and Standards**
- **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**