

# IPv6 Fundamentals, Design & Deployment (IP6FD)

**Duration: 5 days**

## Who should attend?

This course is primarily intended for:

1. Network Engineers and Technicians
2. Network Operations Center (NOC) Support Personnel and Help Desk Technicians
3. Any individual involved in implementation and verification of routing protocols in the enterprise networks

If you are looking for a course that focuses on IPv6 for Service Providers, it is recommended that you attend FL-IPV6SPDI.

## Prerequisites

1. Routing, switching and access product knowledge and skills equivalent.
2. Working knowledge of routing protocols

## Course Objectives

Upon completing this course, you will be able to:

1. Describe the factors that led to the development of IPv6 and possible uses of this new IP structure
2. Describe the structure of the IPv6 address format, how IPv6 interacts with data link layer technologies, and how IPv6 is supported in Cisco IOS Software
3. Implement IPv6 services and applications
4. Understand the updates to IPv4 routing protocols needed to support IPv6 topologies
5. Understand multicast concepts and IPv6 multicast specifics
6. Evaluate the scenario and desired outcome and identify the best transition mechanism for the situation
7. Describe security issues, how security for IPv6 is different than for IPv4, and emerging practices for IPv6-enabled networks
8. Describe the standards bodies that define IPv6 address allocation, in addition to one of the leading IPv6 deployment issues—multihoming
9. Describe the deployment strategies that service providers might consider when deploying IPv6
10. Describe case studies for enterprise, service provider, and branch networks

## Course Content

The IPv6 Fundamentals, Design, and Deployment (IP6FD) v3.0 course is an instructor-led course that is presented by Cisco Learning Partners to their end-user customers. This five-day course aims at providing network engineers and technicians that are working in the enterprise sector with the knowledge and skills that are needed to study and configure Cisco IOS Software IPv6 features. The course also provides an overview of IPv6 technologies, covers IPv6 design and implementation, describes IPv6 operations, addressing, routing, services, transition, and deployment of IPv6 in enterprise as well as in service provider networks, and includes case studies useful for deployment scenarios. The course also includes remote labs. Classroom training