

IPv6 Fundamentals, Design and Deployment

The course IPv6 Fundamentals, Design, and Deployment provides network engineers and technicians who are working in the enterprise sector with the knowledge and skills that are needed to study and configure the IP version 6 (IPv6) features of Cisco IOS Software. The course also provides an overview of IPv6 technologies; covers IPv6 design and implementation; describes IPv6 operations, addressing, routing, services, and transition; and describes deployment of IPv6 in enterprise networks as well as in service provider networks. The course also includes case studies that are useful for deployment scenarios and remote labs.



Purpose of the training

The training is aimed at:

- Channel Partner / Reseller
- Customer
- Employee



Benefits of completing the training

The IPV6FD training shows students with issues related to the IPv6 protocol. It covers issues related to the operation, configuration, design and implementation of the IPv6 protocol on a par with Cisco IOS in various scenarios.

The course also includes case studies that are useful for deployment scenarios and remote labs.



Expected Listener Preparation

The knowledge and skills that a learner must have before attending this course are as follows:

- Cisco Certified Network Associate (CCNA) certification.
- Understanding of networking and routing (on CCNP level, but no certification required).
- Working knowledge of the Microsoft Windows operating system.



Training Language

- Training: English
- Materials: English



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Training agenda

Upon completing this course, the learner will be able to meet these overall objectives:

- Describe the factors that led to the development of IPv6, and the possible uses of this new IP structure.
- 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.
- Describe the nature of changes to DNS and DHCP to support IPv6, and how networks can be renumbered using both services.
- Understand the updates to IPv4 routing protocols needed to support IPv6 topologies.
- Understand multicast concepts and IPv6 multicast specifics.
- Describe IPv6 transition mechanisms and which methods will be most effective in your network.
- Describe the standards bodies that define IPv6 address allocation, as well as one of the leading IPv6 deployment issues, multihoming.
- Describe the deployment strategies that service providers are facing when deploying IPv6.
- Describe case studies for enterprise, service provider, branch, and access networks.

Outline

- Module 1: Intro to IPv6
- Module 2: IPv6 Operations
- Module 3: IPv6 Services
- Module 4: IPv6-Enabled Routing Protocols
- Module 5: IPv6 Multicast Services
- Module 7: IPv6 Security
- Module 8: Deploying IPv6
- Module 9: IPv6 and Service Providers
- Module 10: IPv6 Case Studies