

## CI - IP6FD

### IPv6 Fundamentals, Design and Deployment v3.0

#### Summary

##### Duration

5 Days

##### Vendor

Cisco

##### Category

IP



#### Introduction

This five-day course 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.

Some of the significant improvements in the version 3.0 course include: how to enable IPv6 on hosts, how to troubleshoot IPv6, how to configure IPv6 policy-based routing, FHRP for IPv6, and router redistribution and how to use IPv6 MLD. It also covers why service providers should switch to IPv6. Finally, IPv6 3.0 includes real-world case studies and practical hands on exercises to illustrate why and how the IPv6 is used.

#### Prerequisites

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

- CCNA
- Understanding of networking and routing on CCNP level ( ROUTE and SWITCH)
- Working knowledge of the Microsoft Windows operating system

#### Course Objectives

After completing this course the student should be able to:

- 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 practices for IPv6-enabled networks
- 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

## Course Outline

- Module 1: Intro to IPv6
- Module2: IPv6 Operations
- Module3: IPv6 Services
- Module 4: IPv6-Enabled Routing Protocols
- Module 5: IPv6 Multicast Services
- Module 6: IPv6 Transition Mechanisms
- Module 7: IPv6 Security
- Module 8: Deploying IPv6
- Module 9: IPv6 and Service Providers
- Module 10: IPv6 Case Studies

## Associated Certifications & Exams

There is no associated certification exam for this course.

On successful completion of this course students will receive a Torque IT attendance certificate.