

# IP6FD (IPV6 FUNDAMENTALS, DESIGN AND DEPLOYMENT)

## Objetivo

Neste curso, você vai obter o conhecimento e as habilidades necessárias para configurar o Cisco IOS software IPv6. Você vai ter uma visão geral das tecnologias IPv6, projeto e implementação. Você também aprenderá sobre as operações de IPv6, endereçamento, roteamento, serviços e de transição. Ao rever os estudos de caso, você aprenderá a implantar IPv6 em redes de provedores de empresas e serviços.

## Público Alvo

- Engenheiros de redes e técnicos atuantes no setor empresarial.

## Pré-Requisitos

- ICND1 e ICND2 ou Certificação CCNA • ROUTE ou conhecimentos equivalentes da certificação CCNP • Conhecimentos em Microsoft Windows

## Carga Horária

40 horas (5 dias).

## Conteúdo Programático

### Introduction to IPv6

- Explaining the rationale for IPv6
- Evaluating IPv6 features and benefits
- Understanding Market Drivers

### IPv6 Operations

- Understanding IPv6 Addressing Architecture
- Describing the IPv6 Header Format
- Enabling IPv6 on Hosts
- Enabling IPv6 on Cisco Routers
- Using ICMPv6 and Neighbor Discovery
- Troubleshooting IPv6

### IPv6 Services

- IPv6 Mobility
- Describing DNS in an IPv6 Environment
- Understanding DHCPv6 Operations

- Understanding QoS Support in an IPv6 Environment
- Using Cisco IOS Software Features

#### IPv6-Enabled Routing Protocols

- Routing with RIPng
- Examining OSPFv3
- Examining Integrated IS-IS
- Examining EIGRP for IPv6
- Understanding MP-BGP
- Configuring IPv6 Policy-Based Routing
- Configuring FHRP for IPv6
- Configuring Route Redistribution

#### IPv6 Multicast Services

- Implementing Multicast in an IPv6 Network
- Using IPv6 MLD

#### IPv6 Transition Mechanisms

- Implementing Dual Stack
- Describing IPv6 Tunnelling Mechanisms

#### IPv6 Security

- Configuring IPv6 ACLs
- Using IPsec, IKE and VPNs
- Discussing Security Issues in an IPv6 Transition Environment
- Understanding IPv6 Security Practices
- Configuring Cisco IOS Firewall for IPv6

#### Deploying IPv6

- Examining IPv6 Address Allocation
- Understanding the IPv6 Multihoming Issues
- Identifying IPv6 Enterprise Deployment Strategies

#### IPv6 and Service Providers

- Identifying IPv6 Service Provider Deployment
- Understanding Support for IPv6 in MPLS
- Understanding 6VPE
- Understanding IPv6 Broadband Access Services

#### IPv6 Case Studies

- Planning and Implementing IPv6 in Enterprise Networks
- Planning and Implementing IPv6 in Service Provider Networks
- Planning and Implementing IPv6 in Branch Networks

#### Labs

- Lab 2-1: Enabling IPv6 on Hosts
- Lab 2-2: Using Neighbor Discovery
- Lab 3-1: Using Prefix Delegation

- Lab 4-1: Routing with OSPFv3
- Lab 4-2: Routing with IS-IS
- Lab 4-3: Routing with EIGRP
- Lab 4-4: Routing with BGP and MP-BGP
- Lab 5-1: Multicasting
- Lab 6-1: Implementing Tunnels for IPv6
- Lab 7-1: Configuring Advanced ACLs
- Lab 7-2: Implementing IPsec and IKE
- Lab 7-3: Configuring Cisco IOS Firewall
- Lab 9-1: Configuring 6PE and 6VPE