IPv6 Fundamentals

Category: Networking & Security | **Vendor:** Various

Duration: 32.00 hours (4 days) **26.0 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

- Course Introduction
- IP History and Overview
- IPv6 Header and Extension Header Format
- IPv6 Address Architecture
- IPv6 Supported Platforms
- IPv6 ICMPv6
- IPv6 Applications
- IPv6 Neighbor Discovery Protocol
- IPv6 Migrations Methods
- IPv6 Transition and Address Design
- IPv6 Network Protection
- IPv6 Traffic Filtering
- IPv6 FHRP Protocols
- IPv6 Routing Protocols

About This Course

- Course Introduction
- IP History and Overview
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Who Should Attend

Administrators, managers, engineers, network architects and network designers.

Prerequisites & Entry Requirements

General Prerequisites:

- Network fundamentals background.
- Knowledge of Host Operating Systems.
- Hands-on experience in building, managing and/or troubleshooting IPv4 networks on Cisco devices.

Learning Outcomes

Upon successful completion of this course, participants will be able to:

- This course is a 4-day immersion into IPv6 Fundamentals.
- In order to enhance the course, an Dual-Stack lab environment based on IPv4/IPv6 native addresses is used.
- Dual-Stack allows students to get real IPv4 or IPv6 internet access.
- Configuration is done on Cisco devices, Windows and LINUX hosts.
- This course provides theoretical and technical training to help participants with the Knowledge of how to design, implement, configure, and maintain an IPv6 network.

Detailed Course Outline

Course Introduction

IP History and Overview

- IP Address Assignment
- IPv4 History and Status
- IPv6 History and Status
- IPv6 Features and Benefits

IPv6 Header and Extension Header Format

- IPv6 Header Changes
- IPv6 Extension Headers

IPv6 Address Architecture

- IPv6 Address Allocation and Assignment

- IPv6 Address Types

- IPv6 Address Text Representation

- IPv6 Address Structure

IPv6 Supported Platforms

- IPv6 on Windows OS

- IPv6 on MAC OS

- IPv6 on Linux OS

- IPv6 on Cisco IOS

IPv6 ICMPv6

- ICMPv6 Introduction

- ICMPv6 Message Types

- ICMPv6 Path MTU Discovery

- ICMPv6 Multicast Listener Discovery

- ICMPv6 Neighbor Discovery Protocol

- ICMPv6 Recommendations

IPv6 Applications

- DHCPv6

- DNS for IPv6

IPv6 Neighbor Discovery Protocol

- IPv6 Neighbor Discovery Introduction

- IPv6 Neighbor Discovery (SLAAC)

- IPv6 Neighbor Discovery (DHCPv6)

IPv6 Migrations Methods

- Dual Stack

- Tunneling

- Translation

- DNS64/NAT64

IPv6 Transition and Address Design

- Strategy

- Address Planning and DHCPv6 Implementation

IPv6 Network Protection

- RA Guard

- DHCP Snooping

IPv6 Traffic Filtering

- ACL Rules

- ACL Recommendations

IPv6 FHRP Protocols

- VRRP, GLBP, HSRP

- HSRP Optimisation

IPv6 Routing Protocols

- IPv6 Static/Default Route

- IPv6 enabled Routing Protocols

- IPv6 named OSPFv3

- IPV4/IPv6 Single Area OSPFv3

Skills You Will Learn:

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- Dual-Stack allows students to get real IPv4 or IPv6 internet access.
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- This course provides theoretical and technical training to help participants with the Knowledge of how to design, implement, configure, and maintain an IPv6 network.

Frequently Asked Questions

Q: What delivery options are available for IPv6 Fundamentals?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 4-day IPv6 Fundamentals course provides up to 26.0 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the IPv6 Fundamentals training?

The training takes place over 4 day(s), with each day lasting approximately 32.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for IPv6 Fundamentals?

Yes, we provide corporate training, dedicated training, and closed classes for IPv6 Fundamentals. Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: IPv6 Fundamentals, IPv6 Training, IPV6FUN

Q: Why choose Nexus Human for IPv6 Fundamentals?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your IPv6 Fundamentals training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

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