

# IPv6 Addressing and Subnetting

## Course Content

The IPv6 Addressing and Subnetting course is an instructor-led course. This 1-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 IPv6 addresses.

## Who should attend

This course is primarily intended for:

- Network Engineers and Technicians
- Network Operations Center (NOC) Support Personnel and Help Desk Technicians
- 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 Enterprise Networks, it is recommended that you attend IP6FD.

## Prerequisites

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

## Outline: IPv6 Addressing and Subnetting

### You will learn:

#### Module 1: Introduction to IPv6

- Explaining the Rationale for IPv6
- Evaluating IPv6 Features and Benefits
- IPv6 Operations

#### Module 2: Understanding the IPv6 Addressing Architecture

- IPv6 Address Format
- IPv6 Address Prefix
- IPv6 Address Types
- IPv6 Address Assignment

- IPv6 Unicast Address
- IPv6 Global Unicast Address
- IPv6 Link-Local Unicast Address
- IPv6 Anycast Address

### Module 3: Describing the IPv6 Header Format

- IPv6 Header Fields
- Description of IPv6 Header Fields
- IPv6 Extension Headers
- Routing Header
- Fragment Header
- ICMPv6 Packet

### Module 4: Ipv6 Subnetting

- Understanding IPv6 Subnetting
- Related Concepts
- IPv6 Subnetting
- IPv6 Subnetting Planning Suggestions