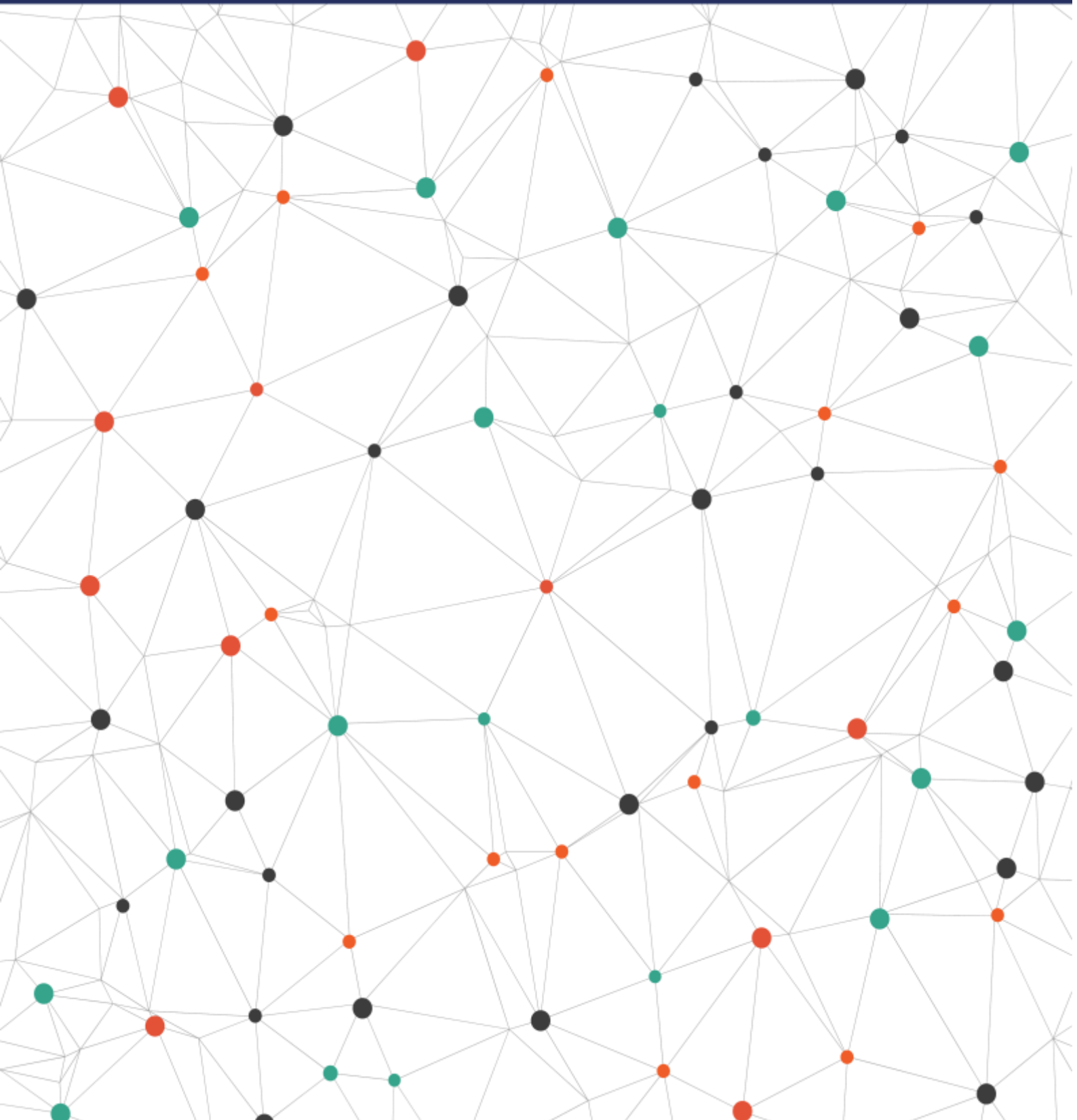




# TEK-Academy

All about networks



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# TEK4001

## Prerequisites

No prerequisites

## Target groups

Technical and non-technical personal that needs a general understanding of the IP Networking Technician .

## Duration

7 days

## Course Content

### Fundamentals

- Introduction to TCP/IP Networking
- Fundamentals of Ethernet LANs
- Fundamentals of WANs
- Fundamentals of IPv4 Addressing and Routing
- Fundamentals of TCP/IP Transport and Applications

### Ethernet LANs

- Using the Command-Line Interface
- Analyzing Ethernet LAN Switching
- Configuring Basic Switch Management

- Configuring Switch Interfaces
- Analyzing Ethernet LAN Designs
- Implementing Ethernet Virtual LANs
- Troubleshooting Ethernet LANs

## **IP Version 4**

Perspectives on IPv4 Subnetting

Analyzing Classful IPv4 Networks

Analyzing Subnet Masks

Analyzing Existing Subnets

Configuring IPv4 Addresses and Static Routes

Learning IPv4 Routes with RIPv2

DHCP and IP Networking on Hosts

Subnet Design

VLSM

Troubleshooting IPv4 Routing

## **ACLs and NAT**

Basic IPv4 Access Control Lists

Advanced IPv4 Access Control Lists

Network Address Translation

## **IP Version 6**

Fundamentals of IP Version 6

IPv6 Addressing and Subnetting

Implementing IPv6 Addressing on Routers

Implementing IPv6 Addressing on Hosts

Implementing IPv6 Routing

## **Network Device Management**

Device Management Protocols

Device Security Features

# TEK4002

## Prequisites :

An understanding of networking fundamentals, Experience implementing local area networks and Internet connectivity

For knowledge background, we recommend the TEK-Academy course TEK4001.

## Target groups

Network administrators, Network engineer & Network Specialist and individuals pursuing the CCNA Routing and Switching certification

## Duration

6 days

## Course Content

### LAN Switching

- Spanning Tree Protocol Concepts
- Spanning Tree Protocol Implementation
- Troubleshooting LAN Switching

### IP Version 4 Routing

- Troubleshooting IPv4 Routing
- Creating Redundant First-Hop Routers
- VPNs

### IP Version 4 Routing Protocols

- Implementing OSPF for IPv4
- Understanding EIGRP Concepts
- Implementing EIGRP for IPv4
- Troubleshooting IPv4 Routing Protocols

## Wide Area Networks

- Implementing Point-to-Point WANs
- Understanding Frame Relay Concepts
- Implementing Frame Relay
- Identifying Other Types of WANs

## IP Version 6

- Troubleshooting IPv6 Routing
- Implementing OSPF for IPv6
- Implementing EIGRP for IPv6

## Network Management

- Managing Network Devices
- Managing IOS Files
- Managing IOS Licensing



# IP Version 6

## Prerequisites

Participants should have basic knowledge of TCP/IP network and especially the IPv4 addressing and technology. For knowledge background, we recommend the TEK-Academy course IP Networks Fundamentals.

## Target groups

Participants who wish to get a technically oriented overview of the technology, applications and internetworking of IPv6.

## Duration

3.0 days

## Course Content

### Fundamentals of IP Version 6

- IPv6 addressing formats & conventions

### IPv6 Addressing and Subnetting

- Global unicast addressing concept
- Unique Local Unicast addresses

### Implementing IPv6 Addressing on Routers

- Unicast & Multicast addressing

### Implementing IPv6 Addressing on Hosts

- NDP
- Dynamic Config
- Tshoot Ipv6

### Implementing IPv6 Routing

- Static ipv6 routes
- Dynamic ipv6 routing
- Ipv6 Security

# IP Networks Fundamentals

## Prerequisites

None.

## Target groups

Technical and non-technical personal that needs a general understanding of the IP Networking.

## Duration

3.0 days

## Course Content

### Introduction to TCP/IP Networking

- TCP/IP model
- Osi Model

### Fundamentals of Ethernet LANs

- LANs
- Physical Ethernet Networks
- Data transmission in Ethernet Networks

### Fundamentals of WANs

- Leased Line WAN
- Ethernet as WAN
- Internet

### Fundamentals of IPv4 Addressing and Routing

- IPv4 addressing
- IPv4 routing
- IPv4 routing Protocols

### Fundamentals of TCP/IP Transport and Applications

- TCP & UDP
- TCP/IP Applications