# CompTIA Network+ Training

Duration: **5 Day**

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## Overview

**CompTIA Network+** is a globally recognized **networking certification** that validates the essential skills required to design, deploy, manage, troubleshoot, and secure modern network infrastructures.

This intensive five-day training program is designed to prepare participants for the official **CompTIA Network+ N10-009 certification exam**, which is included with the course.

As organizations continue to rely on both **on-premises infrastructure** and **cloud networking environments**, IT professionals need a strong understanding of network technologies, security principles, and operational best practices. Network+ provides the foundational knowledge required to support networks across a wide range of platforms and technologies.

### Why Choose CompTIA Network+?

Unlike many vendor-specific certifications, **CompTIA Network+** focuses on universal networking concepts that can be applied across multiple technologies and environments.

Benefits include:

- Developing practical **network administration** skills
- Building a strong foundation for **cybersecurity careers**
- Understanding modern **network infrastructure**
- Learning vendor-neutral networking technologies
- Supporting both traditional and cloud-based networks

The latest **N10-009 version** emphasizes:

- Modern networking technologies
- Secure network design
- Cloud networking concepts
- Network automation
- **Zero Trust security principles**
- Business-critical network availability

## Prerequisites

Participants are recommended to have:

- Approximately 9–12 months of experience in an **IT networking environment**
- Basic understanding of networking concepts
- Familiarity with network infrastructure and devices

Prior certification is not required.

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## Who Should Attend

This course is ideal for professionals working in or transitioning into networking roles, including:

- **Junior Network Administrator**
- **Network Engineer**
- **Systems Administrator**
- **NOC Technician**
- **Datacenter Support Technician**
- **Telecommunications Technician**
- **Cable Technician**
- IT professionals pursuing a career in **networking** or **cyber security**

## What You Will Learn

By the end of this course, participants will be able to:

- Understand core **networking concepts**
- Configure and manage network devices
- Implement routing and switching technologies
- Monitor and optimize network performance
- Secure enterprise network environments
- Troubleshoot common networking issues
- Apply modern **network security** practices

## Outline

### 1. Networking Concepts

This module introduces the core foundations of modern networking.

Topics include:

- Network types and characteristics
- The **OSI Model**
- Network devices and appliances
- Cloud networking concepts
- Connectivity options
- Network architecture fundamentals
- Troubleshooting methodologies

### 2. Cabling and Physical Infrastructure

Participants learn how to support and maintain physical network installations.

Topics include:

- Ethernet standards

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- Copper cabling technologies
- Fiber optic cabling
- Connector types
- Datacenter installations
- Server room infrastructure
- Rack-based deployment considerations
- Ethernet cabling troubleshooting

### 3. Configuring Network Interfaces and Switching

This section focuses on deploying and managing network devices.

Topics include:

- Network interfaces
- Ethernet switching technologies
- Common switch configurations
- Network device deployment
- Troubleshooting switching and transceiver issues

### 4. Network Addressing and IP Configuration

Participants gain practical knowledge of IP networking.

Topics include:

- **IPv4 addressing**
- **IPv6 addressing**
- IP forwarding
- Subnetting
- Host configuration
- Network testing tools
- Troubleshooting IP-related issues

### 5. Routing and Advanced Switching

This module explores enterprise routing and switching technologies.

Topics include:

- Routing concepts
- Dynamic routing protocols
- Router deployment and troubleshooting
- Layered switching architecture
- **Virtual LANs (VLANs)**
- Enterprise network segmentation

### 6. Network Services

Participants learn about essential network services that support modern environments.

Topics include:

- Transport protocols
- Port scanning techniques
- Addressing services
- Name resolution services
- **DHCP configuration**
- **DNS configuration**
- Network service troubleshooting

### 7. Application Services

This section covers critical services used in enterprise environments.

Topics include:

- **NTP time synchronization**
- Web services
- File and print services
- Database services
- Email systems
- Voice services
- High availability solutions
- Load balancing technologies

### 8. Network Management and Monitoring

Participants learn how to maintain visibility and performance across enterprise networks.

Topics include:

- Configuration management
- Change management documentation
- Asset discovery tools
- Network monitoring platforms
- Event management systems
- Packet analysis
- Traffic monitoring and optimization

### 9. Network Security Concepts

This module introduces the principles of**network security**.

Topics include:

- Security fundamentals
- Risk, threat, vulnerability, and exploit concepts
- Regulatory compliance
- Security audits
- Common cyber attacks
- Threat impact analysis

### 10. Applying Network Security Controls

Participants learn how to strengthen and protect network environments.

Topics include:

- **Identity and Access Management (IAM)**
- Authentication protocols
- Directory services
- Defense-in-depth strategies
- Access Control Lists (ACLs)
- Content filtering
- Policy-based security controls

### 11. Wireless Networking

This section focuses on modern wireless technologies.

Topics include:

- Wireless standards
- Secure wireless deployment
- Wireless configuration
- Wireless troubleshooting
- Wi-Fi security best practices

### 12. Remote Access Technologies

Participants explore remote connectivity solutions.

Topics include:

- WAN technologies
- Internet access methods
- VPN architectures
- VPN protocols
- Remote access solutions
- Secure remote administration

### 13. Datacenter and Cloud Networking

This module introduces enterprise-grade infrastructure concepts.

Topics include:

- Datacenter architecture
- Storage networking
- Cloud computing concepts
- Software-defined networking
- Network automation
- Coding fundamentals in networking
- **Zero Trust architectures**