



CompTIA Certification

NET+007: CompTIA Network+ Certification Training

This 5-day CompTIA Network + training course will teach you the fundamental principles of installing, configuring, and troubleshooting network technologies and help you to progress in a network administration career. It will prepare you to take the CompTIA Network+ N10- 007 exam by providing complete coverage of the objectives and content examples listed on the syllabus. Study of the course can also help to prepare you for vendor-specific technical support qualifications and act as groundwork for more advanced training.

\$2,795.00

- 5 Days
- Advance Your IT skills
- 24/7 Access to Online Labs During Class Week

Upcoming Dates

Oct 07 - Oct 11

Dec 02 - Dec 06

Course Description

This 5-day CompTIA Network + training course will teach you the fundamental principles of installing, configuring, and troubleshooting network technologies and help you to progress in a network administration career. It will prepare you to take the CompTIA Network+ N10- 007 exam by providing complete coverage of the objectives and content examples listed on the syllabus. Study of the course can also help to prepare you for vendor-specific technical support qualifications and act as groundwork for more advanced training.

Course Outline

Module 1 - Local Area Networks

Part 1 - Topologies and the OSI Model

- Key Features of Networks
- Network Topologies
- The OSI Model
- Physical Layer
- Data Link Layer
- Network Layer
- Transport Layer
- Upper Layers
- OSI Model Summary

Part 2 - Ethernet

- Transmission Media
- Media Access Control
- Broadcast Domains
- Ethernet Frames
- Ethernet Deployment Standards

- MAC Addressing
- Address Resolution Protocol (ARP)
- Packet Sniffers

Part 3 - Hubs, Bridges, and Switches

- Hubs and Bridges
- Switches
- Switch Interface Configuration
- Spanning Tree Protocol (STP)
- Power over Ethernet (PoE)

Part 4 - Infrastructure and Design

- Network Infrastructure Implementations
- Planning an Enterprise Campus Network
- Network Hierarchy and Distributed Switching
- Software Defined Networking
- Planning a SOHO Network
- TCP/IP Protocol Suite

Part 5 - Policies and Best Practices

- Procedures and Standards
- Safety Procedures
- Incident Response Policies
- Security and Data Policies
- Password Policy
- Employee Policies

Module 2 – IP Addressing

Part 1 – Internet Protocol

- IPv4
- IPv4 Address Structure
- Subnet Masks
- IP Routing Basics
- ipconfig / ifconfig
- ICMP and ping

Part 2 - IPv4 Addressing

- IPv4 Addressing Schemes
- Classful Addressing
- Public versus Private Addressing
- Subnetting and Classless Addressing
- Planning an IPv4 Addressing Scheme
- Public Internet Addressing
- Variable Length Subnet Masks (VLSM)

Part 3 - IPv6 Addressing

- IPv6 Address Format
- IPv6 Addressing Schemes
- IPv6 Address Autoconfiguration
- Migrating to IPv6

Part 4 - DHCP and APIPA

- IPv4 Address Autoconfiguration
- Configuring DHCP
- DHCPv6

Module 3 - Internetworking

Part 1 - Routing

- Routing Basics
- Routing Algorithms and Metrics
- Dynamic Routing Protocols
- Administrative Distance and Route Redistribution
- IPv4 and IPv6 Internet Routing
- High Availability Routing
- Installing and Configuring Routers
- Routing Troubleshooting Tools

Part 2 – TCP and UDP

- Transmission Control Protocol (TCP)
- User Datagram Protocol (UDP)
- TCP and UDP Ports
- Port Scanners
- Protocol Analyzers

Part 3 - Name Resolution and IPAM

- Host Names and FQDNs
- Domain Name System
- Configuring DNS Servers
- Resource Records
- Name Resolution Tools
- IP Address Management (IPAM)

Part 4 - Monitoring and Scanning

- Performance Monitoring
- Network Monitoring Utilities
- Logs and Event Management
- Simple Network Management Protocol
- Analyzing Performance Metrics
- Patch Management
- Vulnerability Scanning

Part 5 - Network Troubleshooting

- Troubleshooting Procedures
- Identifying the Problem
- Establishing a Probable Cause
- Establishing a Plan of Action
- Troubleshooting Hardware Failure Issues
- Troubleshooting Addressing Issues
- Troubleshooting DHCP Issues
- Troubleshooting Name Resolution
- Troubleshooting Services

Module 4 - Internetworking

Part 1 - Applications and Services

- TCP/IP Services
- HTTP and Web Servers
- SSL / TLS and HTTPS
- Email (SMTP / POP / IMAP)
- Voice Services (VoIP and VTC)
- Real-time Services Protocols
- Quality of Service
- Traffic Shaping
- Bottlenecks and Load Balancing
- Multilayer Switches

Part 2 - Virtualization, SAN, and Cloud Services

- Virtualization Technologies
- Network Storage Types
- Fibre Channel and InfiniBand
- iSCSI
- Cloud Computing
- Configuring Cloud Connectivity

Part 3 - Network Security Design

- Security Basics
- Common Networking Attacks
- Network Segmentation and DMZ
- Virtual LANs (VLAN)
- VLAN Trunks
- Network Address Translation (NAT)
- Device and Service Hardening
- Honeypots and Penetration Tests

Part 4 - Network Security Appliances

- Basic Firewalls
- Stateful Firewalls
- Deploying a Firewall
- Configuring a Firewall
- Deploying a Proxy
- Intrusion Detection Systems (IDS)
- Denial of Service

Part 5 - Authentication and Endpoint Security

- Authentication and Access Controls
- Social Engineering
- Authentication Technologies
- PKI and Digital Certificates
- Local Authentication
- RADIUS and TACACS+
- Directory Services
- Endpoint Security
- Network Access Control

Module 5 - Operations and Infrastructure

Part 1 - Network Site Management

- Network Cabling Solutions
- Distribution Frames
- Change and Configuration Management
- Network Documentation and Diagrams
- Labeling
- Physical Security Devices
- Business Continuity and Disaster Recovery
- Network Link Management
- Power Management
- Backup Management

Part 2 - Installing Cabled Networks

- Twisted Pair Cable (UTP / STP / ScTP)
- Twisted Pair Connectors
- Wiring Tools and Techniques
- Cable Testing Tools
- Troubleshooting Wired Connectivity
- Other Copper Cable Types
- Fiber Optic Cable and Connectors
- Transceivers and Media Converters

Part 3 - Installing Wireless Networks

- Wireless Standards (IEEE 802.11)
- Wireless Network Topologies
- Wireless Site Design
- Troubleshooting Wireless Connectivity
- Wireless Security
- Wi-Fi Authentication
- Extensible Authentication Protocol
- Troubleshooting Wireless Security
- Wireless Controllers

Part 4 - Installing WAN Links

- Wide Area Networks (WAN)
- Telecommunications Networks
- Modern Telecommunications Networks
- Local Loop Services
- Installing WAN Links
- Wireless WAN Services
- Internet of Things

Part 5 - Configuring Remote Access

- Remote Access Services (RAS)
- MPLS and PPP
- SIP Trunks
- Virtual Private Networks (VPN)
- SSL / TLS / DTLS VPNs
- IPsec
- Internet Key Exchange / ISAKMP
- Remote Access Servers

- Remote Administration Tools
- Managing Network Appliances
- Remote File Access

Audience

CompTIA Network+ is the first certification IT professionals specializing in network administration and support should earn. Network+ is aimed at IT professionals with job roles such as network administrator, network technician, network installer, help desk technician and IT cable installer.

Prerequisites

To get started with this course, you should have successfully completed CompTIA A+ certification or have around 9-12 months' experience of IT administration. It is not necessary that you pass the A+ exams before completing Network+ certification, but it is recommended.

Regardless of whether you have passed A+, it is recommended that you have the following skills and knowledge before starting this course:

- Configure and support PC, laptop, mobile (smartphone or tablet), and print devices.
- Know basic network terminology and functions (such as Ethernet, TCP/IP, switches, routers).
- Configure and manage users, groups and shared resources in a simple SOHO network.
- Understand the use of basic access control measures, such as authentication, security policy, encryption, and firewalls.
- It is also recommended that students have experience with Windows and Linux operating systems

What You Will Learn

On course completion, you will be able to:

- Describe the features of different network protocols and products for LANs, WANs, and wireless networks.
- Understand the functions and features of TCP/IP addressing and protocols.
- Identify threats to network security and appropriate countermeasures and controls.
- Install and configure network cabling and appliances.
- Manage, monitor, and troubleshoot networks.

This course is divided into five modules, each covering a different subject area:

- Module 1 Local Area Networks
- Module 2 IP Addressing
- Module 3 Internetworking
- Module 4 Applications and Security
- Module 5 Operations and Infrastructure