



## Network +

**Description:** This class teaches the student the key concepts to work as a network technician and assist in the installation, setup, test, maintenance, and troubleshooting of LANs and/ or WANs. They are responsible for routine tasks such as adding new accounts, assigning passwords, and keeping a variety of logs (e.g., number of failed login attempts, or the number and size of print jobs sent to each printer on the network). They speak with LAN Managers or Network Analysts about specific problems on the network, and are involved in updating and/or fixing existing systems. This training provides the student with a solid foundation in networking as well as the hands-on training necessary to succeed in the Network+ Certification exam. The network+ Certification affirms that you are capable of the basic network setup and maintenance and confirms you can successfully troubleshoot them. The network+ Certification Exam by COMPTIA is an industry exam that is available from authorized testing centers.

### Session 1: Network Theory

#### Networking Terminology

- Network Building Blocks
- Standard Network Models
- Network Topologies
- Network Categories

### Session 2: Network Communications

#### Methods

- Transmission Methods
- Media Access Methods
- Signaling Methods

### Session 3: Network Data Delivery

- Data Addressing and Delivery
- Network Connection Mechanisms
- Reliable Delivery Techniques

### Session 4: Network Media and Hardware

- Bounded Network Media
- Unbounded Network Media
- Noise Control
- Network Connectivity Devices

### Session 5: Network Implementations

- The OSI Model
- Client Network Resource Access
- Ethernet Networks
- Token Ring Networks
- Fiber Distributed Data Interface (FDDI) Networks
- Wireless Technologies and Standards

### Session 6: Networking with TCP/IP

- Families of Protocols
- The TCP/IP Protocol
- Default IP Addresses
- Custom IP Addresses
- The TCP/IP Protocol Suite

### Session 7: TCP/IP Services

- IP Address Assignment Methods
- Host Name Resolution
- NetBIOS Name Resolution
- TCP/IP Utilities
- TCP/IP Upper-layer Services
- TCP/IP Interoperability Services

### Session 8: Other Network Protocols

- The NetBEUI Protocol
- The IPX/SPX Protocol
- The AppleTalk Protocol
- The IP Version 6 (IPv6) Protocol

### Session 9: Local Area Network (LAN)

#### Infrastructure

- Bridges and Switches
- IP Routing Topology
- Static IP Routing
- Dynamic IP Routing
- Controlling Data Movement with Filters and VLANs



**Session 10: Wide Area Network (WAN)**

Infrastructure

- WAN Switching Technologies
- WAN Transmission Technologies
- WAN Connectivity Methods
- Voice Over Data Systems

**Session 11: Network Security**

- Network Threats
- Virus Protection
- Local Security
- Network Authentication Methods
- Data Encryption
- Internet Security

**Session 12: Remote Networking**

- Remote Network Architectures
- Terminal Services Implementations
- Remote Access Networking Implementations
- Virtual Private Networking (VPN)

**Session 13: Disaster Recovery**

- Planning for Disaster Recovery
- Data Backup
- Fault Tolerance Methods

**Session 14: Network Data Storage**

- Enterprise Data Storage Techniques
- Clustering
- Network Attached Storage (NAS)
- Storage Area Network (SAN) Implementations

**Session 15: Network Operating Systems**

- Microsoft Operating Systems
- Novell NetWare
- UNIX and Linux Operating Systems
- Macintosh Networking

**Session 16: Network Troubleshooting**

- Troubleshooting Models
- TCP/IP Troubleshooting Utilities
- Hardware Troubleshooting Tools
- System Monitoring Tools
- Network Baselining