CompTIA Network+

Duration
***5* Days**

Course Overview

CompTIA's Network+ certification is a foundation-level certification designed for IT professionals with around one year of experience, whose job role is focused on network administration.

The CompTIA Network+ exam will certify the successful candidate has the knowledge and skills required to troubleshoot, configure, and manage common network devices; establish basic network connectivity; understand and maintain network documentation; identify network limitations and weaknesses; and implement network security, standards, and protocols. The candidate will have a basic understanding of enterprise technologies, including cloud and virtualization technologies.

The Official CompTIA® Network+® (Exam N10-008): will teach you the fundamental principles of installing, configuring, and troubleshooting network technologies and help you to progress a career in network administration. In this course, you will build on your existing user-level knowledge and experience with personal computer operating systems and networks to master the fundamental skills and concepts that you will need to use on the job in any type of networking career.

Who Should Attend

This course is intended for entry-level computer support professionals with a basic knowledge of computer hardware, software, and operating systems who wish to increase their knowledge and understanding of networking concepts and acquire the required skills to prepare for a career in network support or administration, or who wish to prepare for the CompTIA Network+ certification. 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. This course is also designed for students who are seeking the CompTIA Network+ certification and who want to prepare for the CompTIA Network+ N10-008 Certification Exam.

Course Objectives

In this course, you will describe the major networking technologies and systems of modern networks and configure, manage, and troubleshoot modern networks.

- Explain the OSI and TCP/IP Models.
- Explain properties of network traffic.
- Install and configure switched networks.
- Configure IP networks.
- Install and configure routed networks.

- Configure and monitor ports and protocols.
- Explain network application and storage issues.
- Monitor and troubleshoot networks.
- Explain network attacks and mitigations.
- Install and configure security devices.
- Explain authentication and access controls.
- Deploy and troubleshoot cabling solutions.
- Implement and troubleshoot wireless technologies.
- Compare and contrast WAN technologies.
- Use remote access methods.
- Identify site policies and best practices.

Course Prerequisites

CompTIA A+ Certification (Exams 220-1001 and 220-1002). In order to obtain the Network+ certification students must pass the Network+ 2009 Objectives exam code N10-004. There are no enforced prerequisites, however the recommended prerequisites are the CompTIA A+ certification and nine months of networking experience.

Course Outline

1. **EXPLAINING THE OSI AND TCP/IP MODELS**
    - Topic A: Explain OSI Model Layers
    - Topic B: Explain the TCP/IP Suite

2. **EXPLAINING PROPERTIES OF NETWORK TRAFFIC**
    - Topic A: Explain Media Types and Access Methods
    - Topic B: Deploy Ethernet Standards
    - Topic C: Configure and Monitor Network Interfaces

3. **INSTALLING AND CONFIGURING SWITCHED NETWORKS**
    - Topic A: Install and Configure Hubs and Bridges
    - Topic B: Install and Configure Switches
    - Topic C: Compare and Contrast Network Topologies
    - Topic D: Compare and Contrast Network Types

4. **CONFIGURING IP NETWORKS**
    - Topic A: Configure IPv4 Addressing Components
    - Topic B: Test IP Interfaces with Command Line Tools
    - Topic C: Configure IPv4 Subnets
    - Topic D: Configure Private and Public IPv4 Addressing Schemes
    - Topic E: Configure IPv6 Addressing Components
    - Topic F: Configure DHCP Services

5. **INSTALLING AND CONFIGURING ROUTED NETWORKS**
    - Topic A: Explain Characteristics of Routing
    - Topic B: Install and Configure Routers

6. **CONFIGURING AND MONITORING PORTS AND PROTOCOLS**
    - Topic A: Explain the Uses of Ports and Protocols
    - Topic B: Use Port Scanners and Protocol Analyzers
    - Topic C: Explain the Use of Name Resolution Services
    - Topic D: Configure DNS and IPAM Services

7. **EXPLAINING NETWORK APPLICATION AND STORAGE SERVICES**
    - Topic A: Explain the Uses of Network Applications
    - Topic B: Explain the Uses of Voice Services and Advanced Networking Devices
    - Topic C: Explain the Uses of Virtualization and Network Storage Services
    - Topic D: Summarize the Concepts of Cloud Services

8. **MONITORING AND TROUBLESHOOTING NETWORKS**
    - Topic A: Monitor Network Interfaces and Logs
    - Topic B: Explain Network Troubleshooting Methodology
    - Topic C: Troubleshoot Common Network Services Issues

9. **EXPLAINING NETWORKING ATTACKS AND MITIGATIONS**
    - Topic A: Summarize Common Networking Attacks
    - Topic B: Explain the Characteristics of VLANs
    - Topic C: Explain the Characteristics of NAT and Port Forwarding

10. **INSTALLING AND CONFIGURING SECURITY DEVICES**
    - Topic A: Install and Configure Firewalls and Proxies
    - Topic B: Explain the Uses of IDS/IPS and UTM

11. **EXPLAINING AUTHENTICATION AND ACCESS CONTROLS**
    - Topic A: Explain Authentication Controls and Attacks
    - Topic B: Explain the Uses of Authentication Protocols and Directory Services
    - Topic C: Explain the Uses of Port Security and NAC
    - Topic D: Implement Network Device Hardening
    - Topic E: Explain Patch Management and Vulnerability Scanning Processes

12. **DEPLOYING AND TROUBLESHOOTING CABLING SOLUTIONS**
    - Topic A: Deploy Structured Cabling Systems
    - Topic B: Deploy Twisted Pair Cabling Solutions
    - Topic C: Test and Troubleshoot Twisted Pair Cabling Solutions
    - Topic D: Deploy Fiber Optic Cabling Solutions

13. **IMPLEMENTING AND TROUBLESHOOTING WIRELESS TECHNOLOGIES**
    - Topic A: Install and Configure Wireless Technologies
    - Topic B: Troubleshoot Wireless Performance Issues
    - Topic C: Secure and Troubleshoot Wireless Connectivity

14. **COMPARING AND CONTRASTING WAN TECHNOLOGIES**
    - Topic A: Compare and Contrast WAN Core Service Types

- Topic B: Compare and Contrast WAN Subscriber Service Types
- Topic C: Compare and Contrast WAN Framing Service Types
- Topic D: Compare and Contrast Wireless and IoT WAN Technologies

15. USING REMOTE ACCESS METHODS

- Topic A: Use Remote Access VPNs
- Topic B: Use Remote Access Management Methods

16. IDENTIFYING SITE POLICIES AND BEST PRACTICES

- Topic A: Manage Networks with Documentation and Diagrams
- Topic B: Summarize the Purposes of Physical Security Devices
- Topic C: Compare and Contrast Business Continuity
- Topic D: Identify Policies and Best Practices

Next Course Recommendations

Cisco® Implementing and Administering Cisco® Solutions v1.0 (CCNA).