

Course Outline: CompTIA Network+

Learning Method: Instructor-led Classroom Learning

Duration: 5.00 Day(s)/ 40hrs

Overview:

In this course students learn skills that help prepare for the CompTIA Network+ certification, 2005 objectives (exam N10-003). The course describes the major networking technologies, systems, skills, and tools used in modern PC-based computer networks.

Who Should Attend: This course is intended for individuals who are employed as a Systems Administrator, Systems Engineer and IT Manager

At course completion:

Upon successful completion of this course, students will be able to:

- Identify the basic components of network theory
- Identify the major network communications methods
- Identify network data delivery methods
- List and describe network media and hardware components
- Identify the major types of network implementations
- Identify the components of a TCP/IP network implementation
- Identify the major services deployed on TCP/IP networks
- Identify characteristics of a variety of network protocols
- Identify the components of a LAN implementation
- Identify the components of a WAN implementation
- Identify major issues and technologies in network security
- Identify the components of a remote network implementation
- Identify major issues and technologies in disaster recovery

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- Identify major data storage technologies and implementations
- Identify the primary network operating systems
- Identify major issues, models, tools, and techniques in network troubleshooting.

Outline:

Module 1: Networking Theory

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

Module 2: Network Communications Methods

- Transmission Methods
- Media Access Methods
- Signaling Methods

Module 3: Network Data Delivery

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

Module 4: Network Media and Hardware

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

Module 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

Module 6: Networking with TCP/IP

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

Module 7: TCP/IP SERVICES

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

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- TCP/IP Interoperability Services

Module 8: Other Network Protocols

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

Module 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

Module 10: Wide Area Network (WAN) infrastructure

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

Module 11: Network Security

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

- Internet Security

Module 12: Remote Networking

- Remote Network Architectures
- Terminal Services Implementations
- Remote Access Networking Implementations
- Virtual Private Networking

Module 13: Disaster Recovery

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

Module 14: Network Data Storage

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

Module 15: Network Operating Systems

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

Module 16: Network Troubleshooting

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

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