

Course Specifications

Network +™:

Third Edition – 2002
Objectives A
CompTIA Certification

Course number: 077809

Course length: 5 days

Software:
Microsoft Windows

Registration:

Micro Market Business Centre
700 Progress Avenue
Kingston, Ontario, K7M 4W9

Toll Free: 1-877-996-6622
Local: (613) 634-8125 Kingston
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www.micromarket.on.ca



Network +™ Certification: Third Edition – 2002 Objectives A CompTIA Certification

Course Description

This course is designed to prepare students for the 2002 CompTIA's Network+ Exam N10-002. Earning the Network+ Certification means that students have the knowledge needed to use and maintain a wide range of network technologies. From this exam, students often move on to more advanced IT certifications, including Microsoft's MCSA and MCSE, and Novell's CNE.

Prerequisites: We designed *Network+ Certification (Third Edition)* for the student with 18 to 24 months of professional computer support experience. It is assumed that you have a general working knowledge of personal computers, some network experience, and have taken the following courses or have equivalent experience:

- *Windows 98: Introduction*
- *Windows 2000: Introduction*

The following courses are recommended:

- *A+ Certification: Core Hardware*
- *A+ Certification: Operating Systems*

Delivery Method: Instructor-led, group-paced, classroom-delivery learning model with structured, hands-on activities.

Hardware/Software Requirements

You will need:

- Windows 2000 Advanced Server.
- Windows 98 SE.
- 128 MB of RAM (256 MB recommended).
- A 4 GB hard drive or larger.
- A Pentium II 233 MHz or higher processor.
- An SVGA or higher resolution video card and monitor.
- A mouse or compatible tracking device.
- A 12X or faster CD-ROM drive.
- Two network interface cards and network cables for each student.
- Symantec pcAnywhere 9.2 (Optional Apply Your Knowledge: Establishing a Connection Between Partner Machines).
- Internet Access (Optional).

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Performance-Based Objectives

- Describe basic networking and identify different networking models.
- Describe the basics of data movement, physical media, and network connectivity devices.
- Use the OSI model and understand Ethernet, Token Ring, FDDI, and wireless networks.
- Understand data routing and common network protocols such as NetBEUI and TCP/IP.
- Discover a TCP/IP services.
- Understand older network protocols still used today, such as IPX/SPX, AppleTalk, Apple Open Transport, and IPv6.
- Examine the infrastructure of a local area network.
- Distinguish the different methods used to connect networks together through the public carrier services.
- Understand the different methods of remote networking.
- Understand and implement relevant aspects of network security.
- Apply disaster recovery principles.
- Describe and employ advanced data storage techniques.
- Understand and implement network troubleshooting procedures.
- Describe the basics of the network operating systems in use today.

Course Content

Lesson 1: Basic Network Theory

Topic 1A: Network Definitions
Topic 1B: Network Models
Topic 1C: Connectivity
Topic 1D: Network Addressing
Topic 1E: Signaling Concepts

Lesson 2: Network Connectivity

Topic 2A: The Data Package
Topic 2B: Establishing a Connection
Topic 2C: Reliable Delivery
Topic 2D: Network Connectivity
Topic 2E: Noise Control
Topic 2F: Building Codes
Topic 2G: Connection Devices

Lesson 3: Advanced Network Theory

Topic 3A: The OSI Model
Topic 3B: Ethernet
Topic 3C: Network Resources
Topic 3D: Token Ring/IEEE 802.5
Topic 3E: FDDI
Topic 3F: Wireless Networking

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Lesson 4: Common Network Protocols

Topic 4A: Families of Protocols
Topic 4B: NetBEUI
Topic 4C: Bridges and Switches
Topic 4D: The TCP/IP Protocol
Topic 4E: Building a TCP/IP Network
Topic 4F: The TCP/IP Suite

Lesson 5: TCP/IP Services

Topic 5A: Dynamic Host Configuration Protocol
Topic 5B: DNS Name Resolution
Topic 5C: NetBIOS Support
Topic 5D: SNMP
Topic 5E: TCP/IP Utilities
Topic 5F: Upper Layer Services: FTP

Lesson 6: Alternate Network Protocols

Topic 6A: Introduction to IPX/SPX
Topic 6B: AppleTalk
Topic 6C: Introduction to Apple Open Transport
Topic 6D: Introduction to IPv6

Lesson 7: Network LAN Infrastructure

Topic 7A: Implement LAN Protocols on a Network
Topic 7B: IP Routing
Topic 7C: IP Routing Tables
Topic 7D: Router Discovery Protocols
Topic 7E: Data Movement in a Routed Network
Topic 7F: Virtual LANs (VLANs)

Lesson 8: Network WAN Infrastructure

Topic 8A: The WAN Environment
Topic 8B: WAN Transmission Technologies
Topic 8C: WAN Connectivity Devices
Topic 8D: Voice Over Data Services

Lesson 9: Remote Networking

Topic 9A: Remote Networking
Topic 9B: Remote Access Protocols
Topic 9C: VPN Technologies

Lesson 10: Network Security

Topic 10A: Introduction to Network Security
Topic 10B: Virus Protection
Topic 10C: Local Security

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Topic 10D: Network Access
Topic 10E: Internet Security

Lesson 11: Disaster Recovery

Topic 11A: The Need for Disaster Recovery
Topic 11B: Disaster Recovery Plan
Topic 11C: Data Backups
Topic 11D: Fault Tolerance

Lesson 12: Advanced Data Storage Techniques

Topic 12A: Enterprise Data Storage
Topic 12B: Clustering
Topic 12C: Network Attached Storage
Topic 12D: Storage Area Networks

Lesson 13: Network Troubleshooting

Topic 13A: Using a Systematic Approach to Troubleshooting
Topic 13B: Network Support Tools: Utilities
Topic 13C: The Network Baseline

Lesson 14: Network Operating Systems

Topic 14A: Novell NetWare
Topic 14B: Microsoft BackOffice
Topic 14C: Linux History and Operation
Topic 14D: Macintosh

Appendix A: Mapping Element K's Network+ Certification Course to the Exam Blue Print

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