Course ID	Course Title
NETWORK+	**CompTIA Network + Certification Training**

Course Duration
5 days

Related Courses	• Principles of Network Security: CompTIA Security+ US DoD Directive 8570.1 (NETSEC, 3-4 days)
Aimed At	I/T professionals who are responsible for installing, configuring, and troubleshooting basic networking hardware, protocols, and services.
Group Size	5-15
Prerequisites	• CompTIA A+ Certification: IT Essentials Training (A+ESSENT, 3 days) • CompTIA A+ Certification - 220-602: IT Technician Training (A+602, 3 days) General familiarity with personal computers is a must. Six-to-nine months experience with network support or administration along with a CompTIA A+ certification is recommended, though not required.
Course in a Nutshell	This course, designed to meet the requirements of the CompTIA Network+ certification, will help you take advantage of the growing demand for skilled networking professionals. This certification is an internationally recognized vendor-neutral standard for validating computer networking skills. It is recognized by major hardware and software vendors, distributors, and resellers In this course, you will build on your existing user-level knowledge and experience with personal computer operating systems and networks to acquire the concepts and skills that are key to the job of a network support professional. You will learn both the features and functions of networking components as well as how to install, configure, and troubleshoot basic networking hardware, protocols, and services.
Customize It!	Customize this course to your specific background and job requirements at little-to-no additional cost. We'll tailor the topics included in the course, the emphasis given to each topic, the pace of coverage, and the choice of hands-on exercises to suit your needs. If you have an interest in a particular area, let us know, so we can be sure to address it. For those who need a boot camp in IT support basics, networking, and network security, a combined course that consists of pertinent material from our CompTIA A+, Network+, and Security+ course series is also available.
Learn How To	• Identify the basic components of network theory • Identify the major network communication 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
- Identify the primary network operating systems
- Identify major issues, models, tools and techniques in network troubleshooting

Course Outline

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

- Network Communication Methods
  - Transmission Methods
  - Media Access Methods
  - Signaling Methods

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

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

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

- Networking with TCP/IP
  - Family of Protocols
  - The TCP/IP Protocol
  - Default IP Addresses
  - Custom IP Addresses

- o The TCP/IP Protocol Suite
- TCP/IP Services
  - o IP Address Assignment Methods
  - o Host Name Resolution
  - o NetBIOS Name Resolution
  - o TCP/IP Utilities
  - o TCP/IP Upper Layer Services
  - o TCP/IP Interoperability Services
- Other Network Protocols
  - o The NetBEUI Protocol
  - o The IPX/SPX Protocol
  - o The AppleTalk Protocol
  - o The IP Version 6 (IPv6) Protocol
- Local Area Network (LAN) Infrastructure
  - o Bridges and Switches
  - o IP Routing Topology
  - o Static IP Routing
  - o Dynamic IP Routing
  - o Controlling Data Movement with Filters and VLANs
- Wide Area Network (WAN) Infrastructure
  - o WAN Switching Technologies
  - o WAN Transmission Technologies
  - o WAN Connectivity Methods
  - o Voice Over Data Systems
- Network Security
  - o Network Threats
  - o Virus Protection
  - o Local Security
  - o Network Authentication Methods
  - o Data Encryption
  - o Internet Security
- Remote Networking
  - o Remote Network Architectures
  - o Terminal Services Implementations
  - o Remote Access Networking Implementations
  - o Virtual Private Networking (VPN)
- Disaster Recovery
  - o Planning for Disaster Recovery
  - o Data Backup
  - o Fault Tolerance Methods
- Network Data Storage
  - o Enterprise Data Storage Techniques
  - o Clustering
  - o Network Attached Storage (NAS)

- o Storage Area Network (SAN) Implementations
- Network Operating Systems
  - o Microsoft Operating Systems
  - o Novell NetWare
  - o UNIX and Linux Operating Systems
  - o Macintosh Networking
- Network Troubleshooting
  - o Troubleshooting Models
  - o TCP/IP Troubleshooting Utilities
  - o Hardware Troubleshooting Tools
  - o System Monitoring Tools
  - o Network Baselining

- Wrap-up: Course Recap, Q/A, and Evaluations

How You Will Learn

- An experienced I/T professional will teach this class in workshop (interactive lecture/lab) format.
- Hands-on exercises will help you understand each topic and make a bridge from theory to application.
- The instructor will offer real-life examples, applications, and case studies to enrich the class and drive home the essential points.
- You'll learn dos and don'ts, both the tricks of the trade as well as the hidden pitfalls.
- The participant handbooks will provide you with a structure to which you can add information and insight provided in real-time, turning it into a valuable reference resource you can take back to your job.

Revised   *Jan. 30, 2007*