CompTIA NET+ Cert, Part 01 of 17: Theory and Communications[replaced]

Meet the expert: Patrick Loner has certifications for MCSA, MCSE, MCITP, A+, Network+, Security+, and more. He has been working as a Microsoft Certified Trainer, network administrator, and network consultant for over ten years. He has over a decade of experience working with and teaching about Windows networks with client and server operating systems. He has guided many students toward Microsoft and CompTIA certifications. Most recently, he has worked as a freelance trainer and network consultant specializing in Windows Server 2008 and Microsoft Exchange 2007 and Exchange 2010 implementations, design, and upgrades. Patrick continues to branch out now working with and training on Windows Server 2012, Windows 8, Exchange 2013, and System Center Configuration Manager 2012.

Prerequisites: This course assumes the user has some experience with computer hardware, software, and understands the concept of a computer network.

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Course description: ** this course is updated for current certification N10-008 with parts 1 through 7 starting at https://www.learnnowonline.com/course/npe**

In this session we look at the fundamentals of networking to get you introduced to a number of important concepts. We begin with terminology so that you aren't blindsided by the various acronyms that you are likely to hear in this field. We discuss network models such as peer-to-peer and client/server and the functionality provided by them as well as the typical networks in which you would find them. Finally you will see the topology of the network, both in the physical and logical sense. Next we'll look at the actual signals and data transmission methods that are used on the network. This information can be very helpful if you find yourself analyzing network devices and technologies to give you a better understanding of their functionality. It can also be helpful when diagnosing network problems.

Course outline:

Network Terminology
- Introduction
- Computer Networks
- Network Component
- Nodes
- The Network Backbone
- Types of Network Backbones
- Server
- Client
- Peer Computers
- Host Computers
- Terminals
- LANs
- WANs
- Network Coverage Areas
- The Internet
- Intranet
- Extranet
- Enterprise Network
- Summary

Network Models
- Introduction
- Network Models
- Segments
- Centralized Networks

- Client/Server Networks
- Peer-to-Peer Networks
- Mixed Mode Networks
- Summary

Topologies
- Introduction
- Topology
- Point-to-Point Connections
- Multipoint Connection
- Radiated Connections
- The Physical Bus Topology
- The Physical Star Topology
- The Physical Ring Topology
- The Physical Mesh Topology
- The Physical Tree Topology
- Hybrid Topologies
- Types of Hybrid Topologies
- The Logical Bus Topology
- Data Transmission on a Bus
- The Logical Ring Topology
- The Logical Star Topology
- Summary

Data Transmission Methods
- Introduction
- DataTransmission
- Digital Data Transmission

- Unicast Transmission
- Broadcast Transmission
- Multicast Transmission
- Serial Data Transmission
- Parallel Data Transmission
- Baseband Transmission
- Broadband Transmission
- Summary

Media Access Methods
- Introduction
- Types of Media Access
- Multiplexing
- Polling
- CSMA/CD
- CSMA/CA
- Contention Domains
- Summary

Signaling Methods
- Introduction
- Analog Signals
- Analog Signal Characteristics
- Digital Signals
- Anolog Signal Mod/Demod
- Digital Signal Mod/Demod
- Digital Signal Ref Methods
- Summary