CompTIA NET+ Cert, Part 03 of 17: Implementations and Models[replaced]

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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. The user should have viewed CompTIA NET+ Cert: Media and Hardware before taking this course.

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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 course we'll discuss the implementations of two major kinds of networks. The first is the implementation of Ethernet networks. Ethernet is the most common standard in use today for Local Area Networks and thus something you will deal with on a daily basis. We will then jump into another type of implementation, the wireless networks. Next we'll look at the ISO standard OSI / RM. This reference model, as you will see, provides a standard framework for network technicians, design engineers, and developers to utilize. In some ways it helps to identify the capabilities of a protocol or network device and as such can be useful when diagnosing problems or choosing a device to implement on the network. In other ways it helps us as humans understand all that is involved in data transfer on the network. We will also look at the most popular protocol model known as TCP/IP and discuss its function and relation to the OSI Model.

Course outline:

Ethernet Implementation
- Introduction
- Ethernet
- Switched Ethernet
- Ethernet Frames
- MAC Addresses
- Networking Standards
- Standards Organizations
- IEEE 802.x Standards
- The 10Base Standards
- Fast Ethernet
- Gigabit Ethernet
- Ring-Based Networks
- Summary

Wireless Implementation
- Introduction
- WLANs
- WLAN Architecture
- Wireless Antennas
- Wireless Antenna Types
- WAntenna Performance Factors
- The IEEE 802.11 Standard
- 802.11 Modes
- 802.11 Beacon Frames
- Summary

OSI Model
- Introduction
- The OSI Model
- Layer1: The Physical Layer
- Layer 2: The Data Link Layer
- Layer 2: Data Link (Cont. 1)
- Layer 2: Data Link (Cont. 2)
- Layer 3: The Network Layer
- Layer 4: The Transport Layer
- Network & Transport Protocols
- Layer 5: The Session Layer
- Layer 6: The Presentation Laye
- Layer 7: The Application Layer
- Layers 5, 6, & 7 Protocols (1)
- Layers 5, 6, & 7 Protocols (2)
- Summary

TCP/IP Protocol
- Introduction
- The TCP/IP Protocols
- The TCP/IP Network Model
- Layers in the TCP/IP Model
- Comparison: OSI & TCP/IP Models
- Data Encapsulation
- Protocol Bindings
- Summary