CompTIA NET+ Cert, Part 06 of 17: LAN and WAN Infrastructure[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: TCP/IP Addressing and Data 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 took a more detailed look at the various network devices that you will be involved with working as a network technician. We'll start by analyzing the various types of switches as well as their cost and capabilities. Next in this session we'll shift focus to look at WAN transmission and connectivity options that exist for today's networks. We start by describing the various methods that organizations might tap into to provide connections to the internet as well as other offices. These included various styles of networks such as circuit switching networks used by DSL, ISDN, and T-Carriers, cell-switching networks used by ATM, and packet-switching networks used by Frame Relay and MPLS. We then discuss various options for connecting to the service provider providing access to those networks. We'll finish by looking at the common concept of converged networks where we can maintain different types of traffic, such as voice, video, and data on the same underlying infrastructure.

Course outline:

Network Switches
- Introduction
- Switches & Network Performance
- Types of Switches
- Circuit Switching Networks
- Packet Switching Networks
- Virtual Circuit Switching
- Cell Switching Networks
- Summary

Routing
- Introduction
- Routing
- Static Routing
- Types of Routers
- Routers vs. Switches
- Routing Tables
- Routing Table Entries
- Routing Entry Components
- The Route Command
- The Routing Process
- Autonomous Systems
- Router Roles in Autonomous Sys
- Routing Methods in Auton. Sys.
- Summary

Routing Protocols
- Introduction
- Dynamic Routing
- Distance-Vector Routing
- Link-State Routing
- Path-Vector Routing
- Route Convergence
- Routing Loops
- Count-to-Infinity Loops
- Router Discovery Protocols
- STP
- Summary

VLANs
- Introduction
- VLANS
- Types of VLANs
- VLAN Switch Functions
- VTP
- Summary

SOHO Networks
- Introduction
- SOHO Networks
- SOHO Network Hardware
- Summary

WAN Transmission Technologies
- Introduction
- ATM
- Frame Relay
- MPLS
- DSL
- ISDN
- T-Carrier Systems
- Digital Network Hierarchies
- SONET/SDH
- The Optical Carrier System
- Satellite Transmission Systems
- Satellite Transmission (Cont.)
- WWAN
- WiMAX
- WiMAX (Cont.)
- Summary

WAN Connectivity Methods
- Introduction
- Cable Internet Access
- Cable Modems
- Cable Modems (Cont.)
- Dial-Up Connections
- Dial-Up Modems
- Dial-Up Modems (Cont.)
- Leased Data Lines
- ICS
- Satellite Media
- Summary

Voiceover IP
- Introduction
- Converged Networks
- Converged Networks (Cont.)
- Voice over Data Systems
- VoIP
- VoIP Protocols
- Summary