CompTIA Network+ Certification Domain 1 Study Guide

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This Study Guide for the CompTIA Network+ Certification – Domain 1 is designed to help you prepare for the basics of the CompTIA Network+ Certification examination and is based upon the very latest CompTIA Network+ test objectives in outline form. The author's comments and additional material are presented in a gray font. Excerpts from the CompTIA Network+ test objectives are in black font.

A sample practice test for CompTIA Network+ Domain1 is also provide by www.RMRoberts.com at the following link here .

It is best to complete the study guide before attempting the practice test. The practice test is written specifically at a difficultly level similar to the actual CompTIA Network+ exam.

Domain 1.0 Network Technologies

Domain 1 is 20 % of the exam or approximately 20 questions.

Always convert each acronym in the outline to the words that they represent.

1.1 Explain the function of common networking protocols.

Convert each acronym to the words represented by each letter and then provide an explanation or the purpose of each protocol.

• TCP

• FTP

• UDP

• TCP/IP suite

- DHCP
- TFTP
- DNS
- HTTP(S)
- ARP
- SIP (VoIP)
- RTP (VoIP)
- SSH

- POP3
- NTP
- IMAP4
- Telnet
- SMTP
- SNMP2/3
- ICMP
- IGMP

• TLS

1.2 Identify commonly used TCP and UDP default ports.

This section is straight forward. You will need to memorize the following port numbers and the corresponding protocol.

TCP ports

• FTP – 20, 21

• SSH – 22

• TELNET – 23

• SMTP – 25

• DNS – 53

• HTTP – 80

• POP3 – 110

• NTP – 123

• IMAP4 – 143

• HTTPS – 443

UDP ports

• TFTP – 69

• DNS – 53

• BOOTPS/DHCP – 67

• SNMP – 161

1.3 Identify the following address formats.

Provide an example of each address type.

• IPv6

• IPv4

• MAC addressing

1.4 Given a scenario, evaluate the proper use of the following addressing technologies and addressing schemes.

Provide a short definition of each of the "Addressing Technologies" listed below.

Addressing Technologies

• Subnetting

• Classful vs. classless (e.g. CIDR, Supernetting)

• NAT

• PAT

• SNAT

• Public vs. private

Provide an example of IPv4 Class A, B. and C IPv4 ranges.

• DHCP (static, dynamic APIPA)

Explain the purpose of DHCP. Explain the purpose of APIPA and provide an example of an IPv4 APIPA address.

Addressing schemes

Define each addressing scheme listed below and provide an example of each.

• Unicast

• Multicast

• Broadcast

1.5 Identify common IPv4 and IPv6 routing protocols.

Memorize which are "link state, distance vector, and hybrid" routing protocols. Provide a brief description of each routing protocol so that you can tell the difference between each.

Link state

• OSPF

• IS-IS

Distance vector

• RIP

• RIPv2

• BGP

Hybrid

• EIGRP

1.6 Explain the purpose and properties of routing.

As stated in the domain section, explain the purpose and properties of each.

• IGP vs. EGP

• Static vs. dynamic

• Next hop

• Understanding routing tables and how they pertain to path selection

• Explain convergence (steady state)

1.7 Compare the characteristics of wireless communication standards.

Fill in the blank chart with the corresponding information. Commit to memory.

• 802.11 a/b/g/n - Speeds, Distance, Channels, Frequency.

	Speed	Distance	Channels	Frequency
802.11a				
802.11b				
802.11g				
802.11n				

Also identify which 802.11 specifications are compatible?

• Authentication and encryption

Define each and determine how they are different from each other.

WPA

WEP

RADIUS

TKIP

Study guide provided by www.RMRoberts.com. Feel free to use this study guide in your classroom setting or as a classroom handout for your course. No answers are provided for this study guide. You must complete the answers yourself.