

Chapter 9



Network Naming

CompTIA Network+



Episode 9.01

Episode title: **Understanding DNS**

Objective: **1.6 Explain the use and purpose of network services**

Key Terms



- Domain Name System (DNS)
- Fully qualified domain name (FQDN)
- `www.totalsem.com`



Quick Review



- The Domain Name System (DNS) resolves fully qualified domain names (FQDNs) to IP addresses
- An example of an FQDN is www.totalsem.com
- Examples of top-level domain (TLD) names are .com and .edu



Episode 9.02

Episode title: **Applying DNS**

Objective: **1.6 Explain the use and purpose of network services**

Key Terms



- Interior DNS
- Authoritative DNS server
- Lookup zones
- SOA (start of authority)
- A record
- A record = IPv4, AAAA, record = IPv6
- Canonical name

Key Terms



- CNAME (canonical name or alias)
- MX record
- Reverse lookup zone
- PTR (pointer record)
- SRV record
- TXT record
- TXT record – DKIM, SPF

Quick Review



- CNAME record creation makes an alias name, or "known name," often created for user interfacing
- A reverse lookup will resolve an IP address to an FQDN, and are used by mail servers
- TXT records, DKIM, and SPF are used to identify e-mail users and reduce spam



Episode 9.03

Episode title: **net Command**

Objective: **5.3 Given a scenario, use the appropriate network software tools and commands**

Key Terms



- net view
- net user
- net use
- net share
- net accounts
- net start
- net stop

Quick Review



- The net command is a very old command that helps manage a network
- The net command has many different options to manage a network (net use, net share, etc.)
- The net view command shows everything that is on the network



Episode 9.04

Episode title: **Windows Name Resolution**

Objective: **5.3 Given a scenario, use the appropriate network software tools and commands**

Key Terms



- NetBIOS
- Linked Local Multicast Name Resolution (LLMNR)
- nbtstat
- Registered name
- nbtstat -n
- nbtstat -c
- nbtstat -a (system_name)
- nbtstat -r
- Take all registered information and rebroadcast it
- Clear the cache

Quick Review



- NetBIOS is an old protocol that manages the connections based on the names of the computers within a LAN
- Link Local Multicast Name Resolution (LLMNR) is a protocol that allows hosts to name resolution for hosts on the same local link
- nbtstat is a diagnostic command that can be useful, but has some issues with LLMNR



Episode 9.05

Episode title: **Dynamic DNS**

Objective:

Key Terms



- Dynamic DNS (DDNS)
- DDNS company in example is TZO – www.tzo.com

Quick Review



- Dynamic DNS enables you to use a DHCP-assigned IP address for connection
- DDNS providers can update IP information



Episode 9.06

Episode title: **DNS Troubleshooting**

Objective: **5.3 Given a scenario, use the appropriate network software tools and commands**
5.5 Given a scenario, troubleshoot general networking issues

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Key Terms



- Try an IP address to test without DNS
- Check for misconfiguration
- Run nslookup to see default DNS server information
- Domain information groper (DIG)
- Use ping to check connectivity to an FQDN

Quick Review



- Use an IP address of a Web site to test connectivity without DNS
- Run `ipconfig /flushdns` to clear the DNS resolver cache
- Run `nslookup` or `dig` to check the status of a DNS server