

Network Domain 3 Study Guide
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Introduction

The CompTIA Network+ Domain 3 Network Implementation represents 25% of the entire examination or approximately 21 or 85 questions. This domain stresses interoperability of Windows, UNIX/Linux, and Mac OS X Server. Don't be fooled by the short length of objectives listed.

This section of the examination will require you to use deduction and reasoning skills based on network knowledge of implementation. One of your best resources for study of implementation is the web site associated with all of the major operating systems.

Check out the Apple web site as well as the most commonly used Linux web sites such as SUSE, Red Hat, Xandros, for implementation and troubleshooting the setup or interoperability issues. This will be your best source of accurate information pertaining to Linux and UNIX.

Links and additional questions are presented in [blue text](#). Original CompTIA test objectives are in black text. The blue text questions and web site links are added to better help you prepare for the exam and to emphasize or clarify certain aspects of the test. A basic understanding of Apple OS X and Linux is required for domain 3 interoperability. The Linux information will parallel UNIX information.

The following link will take you to the Apple web page as a starting point to learn the basics about Apple OS X visit <http://www.apple.com/macosx/> The <http://www.linux.org/docs/> link is an excellent reference to learn basic Linux information.

3.1 Identify the basic capabilities.

Client support, interoperability, authentication, file and print services, application support and security) of the following server operating systems to access network resources:

UNIX / Linux / Mac OS X Server

Netware

Windows

Appleshare IP (Internet Protocol)

[Which protocol suite is installed by default by UNIX, Windows Server,](#)

NetWare 5.x and later versions, and Apple OS X?

What is the purpose of SAMBA?

What is the purpose of LPD protocol?

What is required by a user to logon to a Windows 2003 server, Linux server, or NetWare 5.x or later server from a Windows XP client?

What is NFS and is it a requirement for sharing files?

What is the name of the Linux proxy server software program?

Which operating systems support VLAN?

What is required to connect a Windows Client to a Windows Server using VLAN?

A Microsoft white paper outlining Windows server 2003 and UNIX interoperability is available at the following TechNet link.
<http://www.microsoft.com/windowsserver2003/r2/unixinterop/whitepaper.mspx>

You can download it in Word format.
For Microsoft interoperability issues, check the following link.
<http://www.microsoft.com/technet/interopmigration/apple.mspx>

3.2 Identify the basic capabilities needed for client workstations to connect to and use network resources, media, network protocols and peer and server services).

Which operating system clients are capable of joining a network domain? (Note Windows XP professional, Home, and Vista Versions, Linux Clients, UNIX clients.)

3.3 Identify the appropriate tool for a given wiring task (For example: wire crimper, media tester / certifier, punch down tool or tone generator).

Download a picture of a wire crimper used for cat5e cable.

Download a picture of Cat5e punch down tool.

Explain how a tone generator is used to trace a cable.

3.4 Given a remote connectivity scenario comprised of a protocol, an authentication scheme, and physical connectivity, configure the connection. Includes connection to the following servers:

- UNIX / Linux / MAC OS X Server
- Netware
- Windows
- Appleshare IP (Internet Protocol)

Outline the steps to configure a Windows XP client to connect to a NetWare Network.

Explain the purpose and advantage(s) to using a network gateway to connect Windows XP clients to a NetWare Server.

Explain how to configure a Linux client (Red Hat or SuSE Linux) to a Windows 2003 server.

Explain how to configure an Apple Mac PC to connect to a Windows 2003 Server.

3.5 Identify the purpose, benefits and characteristics of using a firewall.
How does a firewall work?

What is the function or purpose of a port number in relation to a firewall?

Is a firewall a software program or a hardware device or both?

3.6 Identify the purpose, benefits and characteristics of using a **proxy service**.

What is the name of the common Linux proxy service?

3.7 Given a connectivity scenario, determine the impact on network functionality of a particular security implementation (For example: port blocking / filtering, authentication and encryption).
Explain how you would configure a firewall to stop an Internet messaging service.

3.8 Identify the main characteristics of VLANs (Virtual Local Area Networks).

3.9 Identify the main characteristics and purpose of extranets and intranets.
What is the main difference between an extranet and an intranet?

3.10 Identify the purpose, benefits and characteristics of using antivirus software.

3.11 Identify the purpose and characteristics of fault tolerance:

- Power
- Link redundancy
- Storage
- Services

3.12 Identify the purpose and characteristics of disaster recovery:

- Backup / restore
- Offsite storage
- Hot and cold spares
- Hot, warm and cold