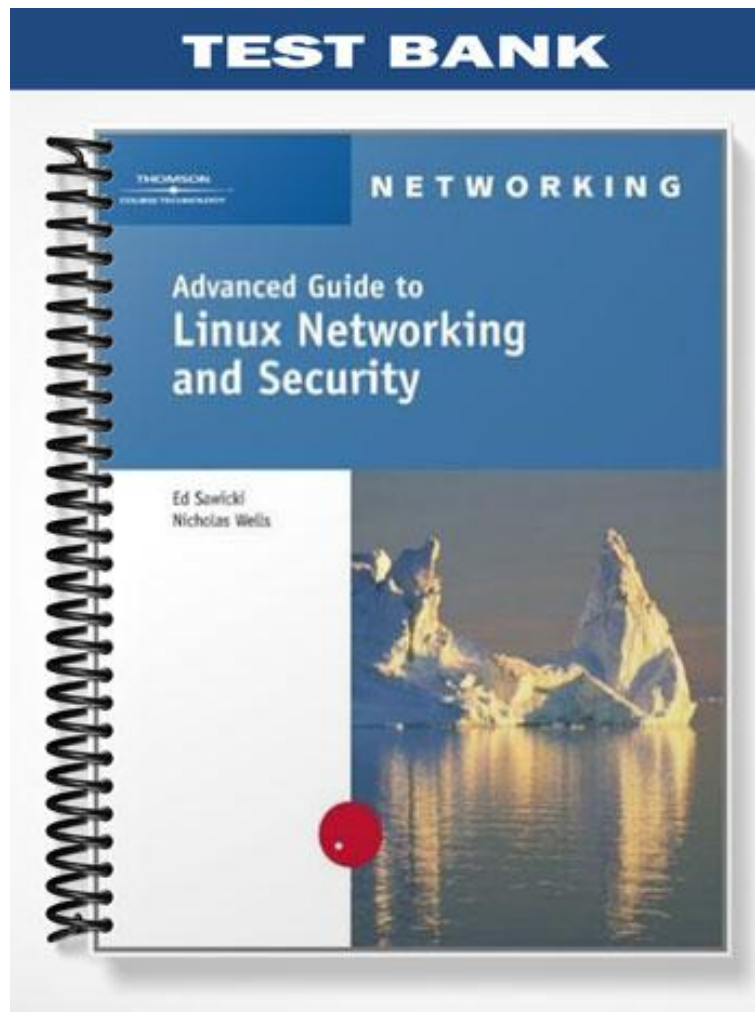


TEST BANK



Chapter 2: Configuring Basic Networking

TRUE/FALSE

1. When you load a kernel module, you do not need to specify the path to the module's directory.

ANS: T PTS: 1 REF: 55

2. The loopback interface exists as a physical device.

ANS: F PTS: 1 REF: 57

3. When you use the *ip* program to create aliases, the aliases do not have names.

ANS: T PTS: 1 REF: 64

4. Scripts that control individual network interfaces contain the actual configuration data.

ANS: F PTS: 1 REF: 69

5. If you work with NetWare, you can use Linux as a client to communicate with NetWare servers.

ANS: T PTS: 1 REF: 80

MULTIPLE CHOICE

1. If you are running a Linux kernel earlier than 2.6, you have to look in the ____ file to see the network interfaces.

a. /proc/net/netstat c. /proc/net/dev
b. /proc/net/packet d. /proc/net/route

ANS: C PTS: 1 REF: 52

2. The command ____ displays information about an interface renamed to *inside*.

a. ifconfig inside c. ip inside
b. ifconfig show inside d. ip show inside

ANS: A PTS: 1 REF: 53

3. You can see which modules are loaded into a system with the ____ command.

a. modprobe c. cat
b. lsmod d. ip

ANS: B PTS: 1 REF: 54

4. A T-3 line provides a speed of ____ Mb/s, but usually costs many thousands of dollars per month.

a. 1 c. 10
b. 1.544 d. 45

ANS: D PTS: 1 REF: 56

5. The MTU (maximum transmission unit) for Ethernet always defaults to ____.

a. 250 c. 1500

b. Perl d. Python

ANS: B PTS: 1 REF: 73

15. To use Telnet as a terminal emulator program, you must connect to a host running a Telnet ____.
- a. server
 - b. interface
 - c. interpreter
 - d. client

ANS: A PTS: 1 REF: 74

16. By default, Telnet uses port ____ to connect to a remote host.
- a. 20
 - b. 21
 - c. 23
 - d. 80

ANS: C PTS: 1 REF: 74

17. The utility that you use to send ICMP echo packets is called ____.
- a. ip
 - b. ifconfig
 - c. route
 - d. ping

ANS: D PTS: 1 REF: 75

18. When you press Ctrl + ____ to end the *ping* program, it calculates the statistics that are printed at the end of the listing.
- a. Alt + C
 - b. Alt + Del
 - c. C
 - d. Z

ANS: C PTS: 1 REF: 76

19. Ping ____ to check that the internal networking stacks are functioning and that networking is enabled in the Linux kernel.
- a. 127.0.0.1
 - b. 128.0.0.1
 - c. 128.0.0.254
 - d. 128.0.1.255

ANS: A PTS: 1 REF: 76

20. The ____ option of the *ping* command lists all of the intervening routers that your ping packet passed through to reach the destination host.
- a. -A
 - b. -F
 - c. -I
 - d. -R

ANS: D PTS: 1 REF: 77

21. *Traceroute* relies on the ____ field and ICMP “packet timed out” messages to move step-by-step through the Internet to reach the host in which you are interested.
- a. TTL
 - b. Identification
 - c. Protocol
 - d. Header Checksum

ANS: A PTS: 1 REF: 78

COMPLETION

1. Network interfaces use device drivers that are implemented as _____ modules.

ANS: kernel

PTS: 1 REF: 54

2. The _____ command is meant to be a replacement for the ifconfig, route, and arp commands.

ANS: ip

PTS: 1 REF: 63

3. _____ is a terminal emulator program.

ANS: Telnet

PTS: 1 REF: 74

4. When the information provided by *ping* is not enough to help you figure out a routing problem, _____ is the next logical step.

ANS: traceroute

PTS: 1 REF: 77

5. _____ is the name of the networking protocol used by Macintosh computers.

ANS: AppleTalk

PTS: 1 REF: 80

MATCHING

Match each term with the correct statement below.

- | | |
|---------------------------------------|---|
| a. <i>ifconfig</i> program | f. Integrated Services Digital Network (ISDN) |
| b. Internetwork Packet Exchange (IPX) | g. Webmin |
| c. hot-pluggable interfaces | h. ICMP protocol |
| d. ARP cache | i. <i>route</i> program |
| e. <i>neat</i> command | |

- special type of telephone service providing 128- or 144-kb/s bandwidth.
- traditional way of viewing and controlling network interfaces.
- traditional way to view and configure the routing table.
- devices that may be inserted and removed anytime you want.
- table that contains a mapping of IP addresses to interface hardware addresses.
- starts the graphical Network Configuration Tool included in Fedora Core.
- Web browser-based configuration program.
- used to send status or error messages about an IP connection.
- protocol designed by Novell Inc. in the early 1980s for use in its NetWare server product.

- | | | |
|-----------|--------|---------|
| 1. ANS: F | PTS: 1 | REF: 56 |
| 2. ANS: A | PTS: 1 | REF: 57 |
| 3. ANS: I | PTS: 1 | REF: 59 |
| 4. ANS: C | PTS: 1 | REF: 64 |

5. ANS: D	PTS: 1	REF: 68
6. ANS: E	PTS: 1	REF: 70
7. ANS: G	PTS: 1	REF: 73
8. ANS: H	PTS: 1	REF: 75
9. ANS: B	PTS: 1	REF: 80

SHORT ANSWER

1. Describe the functions performed by the *modprobe* command when loading a driver module.

ANS:

The *modprobe* command automatically handles dependencies. It loads any other modules that are required. The module initializes the interface hardware. If everything is successful, the command prompt returns after the *modprobe* command with no additional output. No news is good news.

PTS: 1 REF: 54

2. Describe the Parallel Line Internet Protocol (PLIP).

ANS:

Similar to SLIP, this protocol uses a parallel port as a network interface. PLIP allows you to connect two computers using a parallel cable. Because this is a parallel interface, bytes are sent—not a serial bit stream. The data rate depends on the speed of both parallel ports, but can reach about 20 kb/s.

PTS: 1 REF: 56

3. What content appears in the *Flags* column output by the *route* command?

ANS:

The nine single-letter flags that indicate information about this routing table entry. A *U* indicates that the route is up; a *G* indicates that the route refers to a gateway. An *H* indicates that the route refers to a host. The other six flags are only displayed when the host is running a dynamic routing protocol.

PTS: 1 REF: 60

4. Describe the process of configuring and activating a PCMCIA or PC Card interface.

ANS:

To use a PCMCIA or PC Card interface, edit the */etc/pcmcia/network.opts* file. Then create a hotplug event by removing and inserting the card. The scripts should run and activate the interface with the settings you placed in the *network.opts* file.

PTS: 1 REF: 65

5. Describe the scripts contained in the *network-scripts* subdirectory located under the directory */etc/sysconfig*.

ANS:

The *network-scripts* subdirectory contains scripts that start and stop individual network interfaces. In that directory, you see two main scripts called *ifup* and *ifdown*. These are used to control more common interfaces such as localhost and Ethernet. Other specialized scripts can also be found in the subdirectory for interfaces, such as IPv6, PPP, or ISDN.

PTS: 1 REF: 69

6. Describe the process of accessing the Webmin program.

ANS:

When you start Webmin, you're starting a tiny Web server that runs on a high-numbered TCP port—usually 10,000. You then point your Web browser at that port and Webmin answers. It first requires that you log on. Thereafter, you can configure most aspects of Linux, including networking.

PTS: 1 REF: 73

7. Describe the process of accessing a Telnet host using the *telnet* command.

ANS:

The *telnet* command in Linux requires you to enter the host name or IP address to which you want to connect. If a connection can be made—that is, if a Telnet server on that host accepts your client's request for a connection—then you are prompted to enter a username and password. After logging on, you see a command prompt as if you were sitting at the remote computer.

PTS: 1 REF: 74

8. Describe two attacks that have relied on the *ping* command.

ANS:

Several types of attacks in the past have relied on the *ping* command. One example is the “flood ping,” which sends many *ping* commands in rapid succession, overwhelming the server that tries to respond to them. Another example is the “ping of death,” in which a single *ping* command with a very large payload is sent to a server; the payload overflows the memory space allocated to receive ICMP packets and corrupts other parts of the server's memory.

PTS: 1 REF: 76

9. Describe how *traceroute* is used to diagnose where a packet stops and where a packet slows down.

ANS:

Traceroute is a very useful tool for diagnosing problems such as the following:

Where a packet stops. You try to reach a certain host, but because of bad routing information, it reaches a certain point on the Internet and doesn't go any farther. The output of *traceroute* shows you the last router reached by the packet.

Where a packet slows down. Your connectivity to a certain site seems unusually slow. *Traceroute* indicates the time to receive a response from each router. The one that takes an inordinate amount of time to respond deserves special attention.

PTS: 1 REF: 78

10. Describe the variety of application options made available through the Mac desktop.

ANS:

Mac users can also choose from a wide variety of applications. They can run native OS X applications, older applications written for Mac OS, X applications ported from Linux or UNIX, and most Windows applications via Apple's Virtual PC software. Mac OS X users have one of the most flexible and compatible desktop computers on the planet with a user interface more attractive than either Windows or Linux.

PTS: 1

REF: 81