



Exam : XK0-002

Title : Linux+ (2005)

Ver : 12.15.08

QUESTION 1:

On an NIS client, the following is a portion of the output of cat /etc/passwd:

```
+Joe::::::  
+Sam::::::  
+:*::::::/bin/false
```

Which of the following is true for all users other than Joe and Sam?

- A. They have full access.
- B. They are denied access.
- C. They are granted limited access.
- D. They gain access after being prompted for a shell.

Answer: B

Explanation: login denied users are displayed with + symbol at the starting of line.

QUESTION 2:

How can a user view an X Window from a remote system on their local system?

- A. from the local system:
export DISPLAY=local:0.0
- B. from the remote system:
export DISPLAY=local:0.0
- C. from the local system:
export DISPLAY=remote:0.0
- D. from the remote system:
export DISPLAY=remote:0.0

Answer: D

Explanation: First Local host should give the permission to display the X Terminal on local host using xhost command. Then user can export the display from remote host.

See the example



Suppose you want to run application on Certkiller B from Certkiller A.

Certkiller B in GUI Terminal: # xhost +192.168.0.1

Certkiller A in GUI Terminal: # export DISPLAY=192.168.0.2:0

xterm &

Now Terminal of Certkiller A will display on Certkiller B

QUESTION 3:

Which of the following commands can be used to confirm that the FTP server is listening?

- A. netstat -a ftp
- B. netstat | grep ftp
- C. netstat -u | grep ftp
- D. netstat -a | grep ftp

Answer: D

Explanation: netstat is the multipurpose command, it can list active network connections, routing tables, interface statistics and other vital network information.

Syntax: netstat [options]

Options are

- a à List listening and connected sockets
- t à List TCP connection
- u à List UDP Connection
- p à Show PID and name of the program.

QUESTION 4:

When a RAID 5 array is configured with a hot-spare disk under Linux, which of the following is the minimum number of drives required?

- A. 2
- B. 3
- C. 4
- D. 5

Answer: C

Explanation:

RAID 5 is the most common type of RAID. By distributing parity information across some or all of an array's member disk drives, RAID 5 eliminates the write bottleneck of using one parity disk.

The minimum requirements for RAID 5 is 3 disks. According to questions, 3 disks for RAID Level 5 and one spare disk so total 4.

QUESTION 5:

A system administrator wants to see if an RPM package is installed on a user workstation. Which of the following commands should be used?

- A. rpm -query <filename>
- B. rpmfind <name of package>
- C. rpm -qa | grep <name of package>
- D. find -name rpm | grep <filename>

Answer: C

Explanation: RPM format packages can manage using rpm command. to query the package either installed or not,
rpm -q packagename
To list all installed package:
rpm -qa packagename

QUESTION 6:

Which of the following can be used to determine who has scheduled a job?

- A. who
- B. whodo
- C. at -d
- D. at -l

Answer: B

QUESTION 7:

Which of the following encryption schemes is the LEAST secure?

- A. DES
- B. MD5
- C. AES
- D. Blowfish

Answer: A

The Data Encryption Standard, a block cipher with 64-bit blocks and a 56-bit key
Like MD4, it produces a 128-bit hash. For details see RFC 1321
AES ciphers use a 128-bit block and 128, 192 or 256-bit keys
A block cipher using 64-bit blocks and keys of up to 448 bits

QUESTION 8:

A Linux machine has a local address of 192.168.1.1 with subnet mask of 255.255.255.0. All services are currently denied. Which of the following lines should be appended to hosts.allow file to permit access to the Web service on the local subnet.

- A. httpd: 192.168.1.0/24
- B. ALL: 192.168.1.255/24
- C. ALL except httpd: 192.168.1.1/24
- D. 192.168.1.255/255.255.255.0:httpd

Answer: A

Explanation:

The /etc/hosts.allow and /etc/hosts.deny each have two or more colon-separated fields. The first field specifies the comma separated list of executable name. The second field contains a comma-separated list of client specifications, using IP address or host name or network name.

httpd: 192.168.1.0/24 à specified the network

vsftpd: .example.com à specified the domain.

QUESTION 9:

A Linux administrator is about to install a Linux server. The server has 256MB of RAM. Which of the following sizes of the swap partition is generally recommended?

- A. 128MB
- B. 256MB
- C. 512MB
- D. 1024MB

Answer: C

Explanation:

Swap space in Linux is used when the amount of physical memory (RAM) is full. If the system needs more memory resources and the RAM is full, inactive pages in memory are moved to the swap space. While swap space can help machines with a small amount of RAM, it should not be considered a replacement for more RAM. Swap space is located on hard drives, which have a slower access time than physical memory. Swap space can be a dedicated swap partition (recommended), a swap file, or a combination of swap partitions and swap files. The size of your swap should be equal to twice your computer's physical RAM for up to 2 GB of physical RAM. For physical RAM above 2 GB, the size of your swap should be equal to the amount of physical RAM above 2 GB. The size of your swap should never less than 32 MB. Using this basic formula, a system with 2 GB of physical RAM would have 4 GB of swap, while one with 3 GB of physical RAM would have 5 GB of swap.

QUESTION 10:

Which driver, if any, is required to support L3 cache on the system processor?

- A. msr.o
- B. mtrr.o
- C. cache.o
- D. No driver is required.

Answer: D

Explanation: To Support L3 cache on the system processor, no any driver is required.

QUESTION 11:

A user wants to remotely connect to a Linux system to transfer files from an overseas IP address. Which of the following programs allows the user to do this securely?

- A. rcp
- B. ftp
- C. sftp
- D. telnet

Answer: C

Explanation:

ssh is the service, which provides the secure communication. Other services like telnet, ftp, rlogin are unsecured services. scp, sftp etc are services that provide the secure communication provided by openssh packages.

QUESTION 12:

When the command `mke2fs -j` is run, what type of system is created?

- A. ext2
- B. ext3
- C. jfs
- D. xfs

Answer: B

Explanation:

By default mke2fs command creates the ext2 file system, To create the file system on ext3 file system

Use mke2fs -j device

Or

mkfs -t ext3 device

What are the advantages of ext3? Why do you want to migrate from ext2 to ext3? Four main reasons: availability, data integrity, speed, and easy transition.

Availability

After an unclean system shutdown (unexpected power failure, system crash), each ext2 file system cannot be mounted until its consistency has been checked by the e2fsck program. The amount of time that the e2fsck program takes is determined primarily by the size of the file system, and for today's relatively large (many tens of gigabytes) file systems, this takes a long time. Also, the more files you have on the file system, the longer the consistency check takes. File systems that are several hundreds of gigabytes in size may take an hour or more to check. This severely limits availability.

By contrast, ext3 does not require a file system check, even after an unclean system shutdown, except for certain rare hardware failure cases (e.g. hard drive failures). This is because the data is written to disk in such a way that the file system is always consistent. The time to recover an ext3 file system after an unclean system shutdown does not depend on the size of the file system or the number of files; rather, it depends on the size of the "journal" used to maintain consistency. The default journal size takes about a second to recover (depending on the speed of the hardware).

Data Integrity

Using the ext3 file system can provide stronger guarantees about data integrity in case of an unclean system shutdown. You choose the type and level of protection that your data receives. You can choose to keep the file system consistent, but allow for damage to data on the file system in the case of unclean system shutdown; this can give a modest speed up under some but not all circumstances. Alternatively, you can choose to ensure that the data is consistent with the state of the file system; this means that you will; never see garbage data in recently-written files after a crash. The safe choice, keeping the data consistent with the state of the file system, is the default.

Speed

Despite writing some data more than once, ext3 is often faster (higher throughput) than ext2 because ext3's journaling optimizes hard drive head motion. You can choose from three journaling modes to optimize speed, optionally choosing to trade off some data integrity.

1. One mode, data=writeback, limits the data integrity guarantees, allowing old data to show up in files after a crash, for a potential increase in speed under some circumstances. (This mode, which is the default journaling mode for most journaling file systems, essentially provides the more limited data integrity guarantees of the ext2 file system and merely avoids the long file system check at boot time.)
2. The second mode, data=ordered (the default mode), guarantees that the data is consistent with the file system; recently-written files will never show up with garbage contents after a crash.
3. The last mode, data=journal, requires a larger journal for reasonable speed in most cases and therefore takes longer to recover in case of unclean shutdown, but is sometimes

faster for certain database operations.

The default mode is recommended for general-purpose computing needs. To change the mode, add the `data=something` option to the mount options for that file system in the `/etc/fstab` file, as documented in the mount man page (`man mount`).

Easy Transition

It is easy to change from `ext2` to `ext3` and gain the benefits of a robust journaling file system, without reformatting. That's right, there is no need to do a long, tedious, and error-prone backup-reformat-restore operation in order to experience the advantages of `ext3`. There are two ways to perform the transition:

1. The Red Hat Linux installation program offers to transition your file systems when you upgrade your system. All you have to do is select one checkbox per file system. The `tune2fs` program can add a journal to an existing `ext2` file system. If the file system is already mounted while it is being transitioned, the journal will be visible as the file `.journal` in the root directory of the file system. If the file system is not mounted, the journal will be hidden and will not appear in the file system. Just run `tune2fs -j /dev/hda1` (or whatever device holds the file system you are transitioning) and change `ext2` to `ext3` on the matching lines in `/etc/fstab`. If you are transitioning your root file system, you will have to use an `initrd` to boot. Run the `mkinitrd` program as described in the manual and make sure that your LILO or GRUB configuration loads the `initrd`. (If you fail to make that change, the system will still boot, but the root file system will be mounted as `ext2` instead of `ext3` - you can tell this by looking at the output of the command `cat /proc/mounts`.) More information on `tune2fs` can be found in the `tune2fs` man page (`man tune2fs`).

QUESTION 13:

In addition to selected packages and partition maps, which of the following should also be documented during a Linux server installation?

- A. System hardware and user passwords
- B. Root password and performance baseline
- C. Daemon configuration and performance baseline
- D. System hardware and daemon configuration

Answer: C

Explanation: During Server Installation, you should think, which services are required. You should select the respective packages.

QUESTION 14:

Which of the following commands can be run to determine which package owns `/etc/exports`?

- A. rpm -qf /etc/exports
- B. rpm -ql /etc/exports
- C. rpm --file /etc/exports
- D. rpm --verify /etc/exports

Answer: A

Explanation: To determine the package owns the specified file, rpm -qf filename where -q means query and -f means filename.

QUESTION 15:

The root user types 'echo \$PATH' and sees the following output:

./bin:/usr/bin:/sbin:/usr/X11R6/bin:/usr/src

Which of the following parts of this path is considered to be a security risk?

- A. .
- B. /sbin
- C. /usr/src
- D. /usr/X11R6/bin

Answer: A

A common mistake in the past (?) was to keep '.' in the root's path. Malicious hacker makes program 'ls' in his home directory. If root makes

```
# cd ~hacker
```

```
# ls
```

he executes ls command of hacker's.

QUESTION 16:

Which of the following commands can be used to mount a Samba share?

- A. smbmount //servername/sharename /mountdirectory -o username=mywindowsusername, password=mywindowpassword
- B. mount -t samba /servername/sharename /mountdirectory -o username=mywindowsusername, password=mywindowpassword
- C. mount -t smbfs //servername/sharename /mountdirectory -o username=mywindowsusername, password=mywindowpassword
- D. smbmount -t smbfs //servername/sharename /mountdirectory -o username=mywindowsusername, password=mywindowpassword

Answer: A

Explanation: We can mount the samba share using mount, smbmount command.

smbmount command automatically apply the smbfs filesystem. But to mount samba share using mount command, we should specify the smbfs filesystem.

Syntax for mount:

```
mount -t smbfs //server/sharename /mountpoint -o username=server's username,  
password=user's password
```

Syntax for msbmount

```
smbmount //server/sharename /mountpoint -o username=server's username,  
password=user's password
```

Always netbios name specified using //.

QUESTION 17:

Once a Linux Installation Disk image has been downloaded, which of the following is the next step?

- A. Run /sbin/verify_iso
- B. Run chkdsk on the .iso system image
- C. Verify the checksum match for the .iso
- D. Check the file size to ensure the file is uncorrupted

Answer: C

Explanation:

Each package has different checksum or signature supplied by vendor. Before that you should check the checksum or signature of every particular. Using md5sum package or rpm --checksig package.rpm

QUESTION 18:

What is the result of the following command?

Sendmail -qp5m

- A. Processes mail in blocks of five messages
- B. Quits and restarts sendmail every five minutes
- C. Limits queue to five messages
- D. Processes mail every five minutes

Answer: D

Explanation: Sendmail sends a message to one or more recipients, routing the message over whatever networks are necessary. Sendmail does internetwork forwarding as necessary to deliver the message to the correct place. Sendmail is not intended as a user interface routine; other programs provide user-friendly front ends; sendmail is used only to deliver pre-formatted messages

-q[time] à Process saved messages in the queue at given intervals. If time is omitted, process the queue once. Example: sendmail -q5m -> process saved messages in the queue and send in mail on every 5 minutes.

-qp[time] Similar to -qtime, except that instead of periodically for Bill a child to process the queue, sendmail forks a single persistent child for each queue that alternates between processing the queue and sleeping. The sleep time is given as the argument; it defaults to 1 second. The process will always sleep at least 5 seconds if the queue was empty in the previous queue run.

QUESTION 19:

A Linux technician would like to change the default lpr queue to print to a new printer. Which file should be edited to make this change?

- A. /etc/vprint
- B. /etc/printcap
- C. /etc/lpd.conf
- D. /etc/printers/default.conf

Answer: B

Explanation: lpd reads the queue name and default information from /etc/printcap file whether cups reads from /etc/cups/printers.conf file. To change the default printer either use the printer configuration command or edit file which stores the quest information. In answer /etc/printcap file only specified so, it is the good answer.

QUESTION 20:

Which of the following commands can be used to configure a router to reject the address for the 192.168.100.0/24 network using the route command?

- A. route del -net 192.168.100.0 netmask 255.255.255.0 deny
- B. route add -net 192.168.100.0 netmask 255.255.255.0 deny
- C. route del -net 192.168.100.0 netmask 255.255.255.0 reject
- D. route add -net 192.168.100.0 netmask 255.255.255.0 reject

Answer: D

Explanation: Using route command we can show or chage the routing table. To display the routing table: route -n

To Add routing table for 192.168.2.0/24 network:

- i. route add -net 192.168.2.0 netmask 255.255.255.0 dev eth0
- ii. route add -net 192.168.2.0 netmask 255.255.255.0 gw 192.168.0.1

Syntax is: route add or del -net or host remote network or host remote netmask gateway reject
By default the accept. If you want reject the packets for certain network write the reject at the end of route command.

QUESTION 21:

A company wants to install a Linux server to act as an internal file and print server. They have a limited budget. Which of the following is the MOST important hardware investment for this user?

- A. Hard drive
- B. Processor
- C. Video card
- D. IEEE-1394 card

Answer: A

Explanation: According to the question, hard drive will be the most important hardware devices for printer server as well as internal file server.

QUESTION 22:

When using fdisk and a partition type of 85 is selected, which kind of partition will be created?

- A. swap
- B. reiserfs
- C. linux native
- D. linux extended

Answer: D

Explanation:

At the partition creating time we can select the partition type. Default is 83 that means linux native. Using t command on fdisk prompt can change the partition type.

82 Linux Swap

83 Linux native

85 Linux extended

QUESTION 23:

The man page for the 'ls' command states:

The full documentation for ls is maintained as a Texinfo manual.

Which of the following commands will retrieve the full documentation for the ls command?

- A. info ls
- B. infoman ls
- C. text ls
- D. man -info ls

Answer: A

Texinfo is a documentation system that uses a single source file to produce both online information and printed output. It is primarily designed for writing software manuals. For a full description of the Texinfo language and associated tools, please see the Texinfo manual (written in Texinfo itself). Most likely, running this command from your shell:
info texinfo

QUESTION 24:

A user needs to attach a Linux laptop to a wireless access point using 802.11b. Which of the following applications would allow the user to configure the WEP (Wired Equivalent Privacy) key?

- A. WINE
- B. wlanconfig
- C. wl-keygen
- D. netconfig

Answer: B

QUESTION 25:

When the application 'top' is used, which of the following interactive commands in 'top' will display the process with highest memory usage?

- A. L
- B. I
- C. R
- D. M

Answer: C

Explanation: R option on top command displays the process using highest memory. r option to renice the nice value and q for quit.

QUESTION 26:

Which of the following commands will display the last 15 lines of an application log?

- A. tail 15 filename
- B. cat filename | less 15
- C. grep -l 15 | cat
- D. cat filename | more 15

Answer: A

Explanation: tail command displays the few lines from the bottom of file. Default is 10 lines.

tail [OPTION]... [FILE]...

-n, --lines=N output the last N lines, instead of the last 10

QUESTION 27:

Which of the following commands will allow a system administrator to determine which user have attempted to logon but failed?

- A. lastb
- B. last
- C. cat /var/log/wtmp
- D. cat /var/log/btmp

Answer: A

Explanation:

Last searches back through the file /var/log/wtmp (or the file designated by the -f flag) and displays a list of all users logged in (and out) since that file was created. Names of users and tty's can be given, in which case last will show only those entries matching the arguments. Names of ttys can be abbreviated, thus last 0 is the same as last tty0.

Lastb is the same as last, except that by default it shows a log of the file /var/log/btmp, which contains all the bad login attempts.

QUESTION 28:

Which of the following commands is used to check the current iptables configuration?

- A. iptables -LFZ
- B. iptables -n -L
- C. iptables natadd

D. iptables -A -D -C

Answer: B

Explanation: iptables is the command used for ipv4 packet filtering and NAT.

-L or --list option list all rules in the selected Chain.

Exaple: iptables -L

Chain INPUT (policy ACCEPT)

target prot opt source destination

Chain FORWARD (policy ACCEPT)

target prot opt source destination

Chain OUTPUT (policy ACCEPT)

target prot opt source destination

-n, --numeric à Numeric output. IP addresses and port numbers will be printed in numeric format. By default, the program will try to display them as host names, network names, or services (whenever applicable).

We can combine the options: iptables -nL

QUESTION 29:

Which of the following commands allows an administrator to add an existing user's phone number to the system as a comment?

A. usermod -c 555-1234 bsmith

B. modinfo -u bsmith 555-1234

C. useradd -u bsmith -c 555-1234

D. groupadd -u bsmith -c 555-1234

Answer: A

Explanation: To modify the user account, we should use the usermod command.

Syntax: usermod [option] username

Options: -d à Change the home directory.

-s à Change the login shell

-c à Set the comment of user.

-e à Set the Account Expire Date

-g à Change the primary group.

-G à set the Supplementary group.

QUESTION 30:

Suppose b is a link to another file. The output of ls -l b is:

lrwxrwxrwx 1 root root 1 Jun 13 12:44 b -> a

Which of the following is the effect if root issues the command 'chmod 600 b'

- A. The user will receive an error message.
- B. Permissions listed for both the symbolic link and the target file are changed.
- C. Permissions for the target file are set to 600 while permissions listed for the link are unchanged.
- D. Permissions associated with the symbolic link itself are set to 600 while permissions for the target file are unchanged.

Answer: C

Explanation: when we create the symbolic link, the permission will be automatically lrwxrwxrwx. Whenever we change the permission of original file, it will not effect the link file.

QUESTION 31:

Which of the following commands can be used to gather information about the CPU found during boot?

- A. dmesg | grep CPU
- B. cat /proc/cpuinfo | grep CPU
- C. find /var/log/dmesg | grep CPU
- D. cat /var/log/messages | grep CPU

Answer: A

Explanation: dmesg command displays the kernel related log messages. Kernel related log messages stores on /var/log/dmesg. And grep command displays the lines matching the string pattern.

Here the output of dmesg goes as an input to grep. grep filter the output and displays only the lines having CPU string pattern.

QUESTION 32:

Which of the following is the correct way to specify the algorithm for an SSH (Secure Shell) connection to 10.10.10.1?

- A. ssh -a 3des 10.10.10.1
- B. ssh -c 3des 10.10.10.1
- C. ssh -alg=3des 10.10.10.1
- D. ssh -crypto=3des 10.10.10.1

Answer: B

Explanation:

-c cipher_spec à Selects the cipher specification for encrypting the session.

Protocol version 1 allows specification of a single cipher. The supported values are 3des, blowfish, 3des (triple-des) is an encrypt-decrypt-encrypt triple with three different keys. It is believed to be secure, blowfish is a fast block cipher; it appears very secure and is much faster than 3des. des is only supported in the ssh client for interoperability with legacy protocol 1 implementations that do not support the 3des cipher. Its use is strongly discouraged due to cryptographic weaknesses. Default is 3des.

Example:

```
ssh -c 3des 192.168.3.4
```

```
ssh -c blowfish 192.168.3.4
```

```
ssh -c des 192.168.3.4
```

QUESTION 33:

Which of the following daemons could be used for printing on a Linux system?

- A. lprd
- B. sane
- C. cupsd
- D. postfix

Answer: C

Explanation: CUPS (Common Unix Printing System) is the printing system based on IPP (Internet Printing Protocol). cupsd is the daemon of cups and lpd is the daemon of LPRng.

QUESTION 34:

A new router is installed to share the Internet connection for all users on the LAN (Local Area Network). The router has an IP address of 10.1.1.1 on the LAN-side interface. Which of the following commands on the client allows Internet access on the Linux workstations?

- A. route add default gw 10.1.1.1
- B. route change gateway 10.1.1.1
- C. ifconfig eth0 dstaddr 10.1.1.1
- D. ifconfig eth0 gateway 10.1.1.1

Answer: A

Explanation: Using route command we can show or change the routing table. To display the routing table: route -n

To Add routing table for 192.168.2.0/24 network:

- i. route add -net 192.168.2.0 netmask 255.255.255.0 dev eth0
- ii. route add -net 192.168.2.0 netmask 255.255.255.0 gw 192.168.0.1

In LAN Router's LAN interface is the gateway so we can set the gateway for every destination. For that route add default gw 10.1.1.1

QUESTION 35:

Which of the following modules is the first to load to provide any USB functionality?

- A. usbmain
- B. usbcore
- C. usb-ohci
- D. usb-storage

Answer: B

Explanation: usbcore module provides the USB functionality. You can display the loaded modules using lsmod command

QUESTION 36:

A newly created user, john, reports that he has access to the file '/var/mail/joe', but should not have this access. Which of the following MOST likely caused this?

- A. User john and joe are sharing a home directory.
- B. User john is forwarding all of his mail to joe.
- C. User john was created with the same UID (User ID) as the removed user named joe.
- D. User joe's email is still cached by the system although his UID (User ID) has been removed.

Answer: C

Explanation:

By default mail spooling file is created on /var/spool/mail/username. That user will be the user owner and mail group will be group owner. If you remove the user without -r option user related files i.e home directory and mail spooling file preserve but own will be like -rw-rw---- 1 501 mail 0 Mar 9 08:38 user1

See on the output 501 is the owner user and name is user1.

If you create new user system will assign the Userid 501 and that user can't read the mail until and unless change the file ownership.

QUESTION 37:

A Linux system administrator needs to edit the quotas for a user. Which of the following commands can be used to do this?

- A. edquota user
- B. quota -e user
- C. vi /quota.user
- D. vi ~/user/.quota

Answer: A

Explanation: To edit or to transfer the quota policy of one user to another user we can use the edquota command.

To edit or set the quota policy: edquota -u username directory

To edit or set the quota policy: edquota -g grouname directory

QUESTION 38:

Which of the following commands will add a user to a group from a Telnet session?

- A. useradd
- B. groupuse
- C. groupset
- D. user2group

Answer: A

Explanation: Very tricky question, either local login or ssh login or telnet login sessions, at user creating time, we can make user belongs to other group. Later we use the usermod command.

QUESTION 39:

How could a user arrange for a command to be run daily at a certain time on a Linux system, using the cron service?

- A. Edit /etc/periodic/cron.daily
- B. Specify the schedule using entries in a file at /etc/cron.conf
- C. Use a text editor to create a file in /var/cron that specifies the schedule.
- D. Create a file to specify the schedule, and use crontab to install the file.

Answer: D

Explanation:

Syntax: crontab [options] filename

In total there are six fields, first five fields specify the time to execute:

Minute Hour Day Month Day of Week command

0-59 0-23 1-31 1-12 0-7 where 0 or 7 is Sunday.

To add the file on crontab schedule:

crontab filename

QUESTION 40:

Which of the following files can be edited to enable the Telnet service?

- A. /bin/init
- B. /sbin/init
- C. /etc/init.d/telnet
- D. /etc/xinetd.d/telnet

Answer: D

Explanation:

Linux is configured to run the Telnet and FTP server, but by default, these services are not enabled. To enable the telnet these service, login to the server as the root userid and edit the files:

/etc/xinetd.d/telnet

In this file, find the line for disable and change it from the value "yes" to "no".

Another way we can enable using following command

chkconfig telnet on

service xinetd restart

QUESTION 41:

Which of the following commands could be used to show the waiting print jobs on printhost using the CUPS printing system?

- A. lpstat -h printhost
- B. showqueue -h printhost
- C. cups --queue -h printhost
- D. lpr --list-jobs -h printhost

Answer: A

Explanation:

lpstat [-E] [-h server] [-l] [-W which-jobs] [-a [destination(s)]] [-c [class(es)]]

-d] [-o [destination(s)]] [-p [printer(s)]] [-r] [-R] [-s] [-t] [-u [user(s)]] [-v [printer(s)]]

-h server Specifies the CUPS server to communicate with.

Another command lpq also used to display the waiting queue of specified printer.

QUESTION 42:

The administrator suspects the system has been compromised and runs the ps command:

615 ? Ss 0:00 /usr/sbin/sshd

624 ? Ss 0:00 /usr/bin/X11/xfs -daemon

707 ? Ss 0:00 /usr/sbin/cron

709 ? Ss 0:00 /usr/.sbin/httpd

775 ? Ss 0:00 /usr/sbin/X11/xdm

776 tty1 Ss+ 0:00 /sbin/getty 38400 tty1

Which of the following should be investigated?

- A. The cron process should have a lower PID (Process ID).
- B. The httpd program is not normally in /usr/.sbin.
- C. The xfs process should not be run in daemon modes.
- D. The getty program should not run with 38400 baud.

Answer: B

/usr/.sbin is a hidden catalog.

QUESTION 43:

A system is very likely compromised if which of the following has occurred?

- A. The system is extremely slow
- B. The /root file system is full.
- C. Some commands behave abnormally
- D. One of the hard drives has crashed

Answer: C

QUESTION 44:

The administrator needs to set permissions on the /tmp directory as follows:

drwxrwxrwt 9 root root 4096 Jun 13 09:42 tmp

Which of the following commands will accomplish this?

- A. chmod 0777 /tmp

- B. chmod 1777 /tmp
- C. chmod 2777 /tmp
- D. chmod 4777 /tmp

Answer: B

Explanation:

4 à SUID

2 à SGID

1 à Sticky Bit.

We can set special permission at the time of setting permission by chmod command.

chmod 1777 /tmp

or

chmod o+t directory

QUESTION 45:

Six Linux servers share a tape library in a different room located 80 meters away. Which of the following technologies would allow this server to connect directly to the tape library?

- A. Differential SCSI
- B. Single-Ended SCSI
- C. Fiber Channel
- D. IEEE-1394

Answer: C

Explanation:

30 meters device to device (copper), 10 kilometers device to device (optical) so to connect the share tape library in different room located on 80 meters using Fiber channel.

QUESTION 46:

Which of the following symbols is added to the beginning of the password field in the /etc/passwd file so that the user cannot log in?

- A. +
- B. -
- C. !
- D. /

Answer: A

Explanation: See the example of /etc/passwd
+user2:x:501:501::/home/user2:/bin/bash
so user2 can't login on system.

QUESTION 47:

On a dual-boot system, which of the following file systems would be accessible from both Windows and Linux operating system?

- A. xfs
- B. ufs
- C. vfat
- D. reiserfs

Answer: C

Explanation: FAT32 filesystem called vfat in Linux supported by both windows as well as Linux. So, partition formatted with vfat can access from windows as well as linux.

QUESTION 48:

Which of the following commands could be used to display all recognized drives and all existing partitions?

- A. fdisk -l
- B. showdrives
- C. ls /dev/disks/*
- D. cat /proc/disks

Answer: A

Explanation: fdisk command is used to delete, display as well as create new partition. To display all recognized partition use fdisk -l command. As well as virtual filesystem /proc/partitions contains the information of partitions.

QUESTION 49:

If a system uses ACPI (Advanced Control and Power Interface), which of the following files would be edited to map the power button to the desired command?

- A. /etc/acpi.conf
- B. /etc/modules.conf

- C. /etc/acpi/events/power
- D. /etc/acpi/powerbutton

Answer: C

Explanation: /etc/acpi/events/power file should be edited to manage the power button to the desired command: see the sample
event=button/power.*
action=/sbin/shutdown -h now

QUESTION 50:

The DNS administrator learns that the IP address of one of the Internet root name servers has been changed. Which is the next course of action?

- A. Update the root.hints file.
- B. Update the named.root file
- C. Update the resolve.conf file
- D. Update the in-addr.arpa file.

Answer: A

Explanation: If the IP address of Internet root name server changes, administrator should change in root.hints or named.ca file. named.ca on Redhat Enterprise Linux

QUESTION 51:

To which of the following IRQ settings does ttyS1 default on a Linux server?

- A. 3
- B. 5
- C. 4
- D. 12

Answer: A

Explanation: See the Output
[root@localhost ~]# setserial /dev/ttyS0
/dev/ttyS0, UART: 16550A, Port: 0x03f8, IRQ: 4
[root@localhost ~]# setserial /dev/ttyS1
/dev/ttyS1, UART: 16550A, Port: 0x02f8, IRQ: 3
Correct is 3.

QUESTION 52:

When executed, what type of installation file is created by the following command?

```
tar cvjf filename file4 file2 file12
```

- A. jar archive
- B. gzip archive
- C. bzip2 tarball
- D. lha tarball

Answer: C

Explanation: tar is the Linux's standard Archiving tool. At the same time of archiving we can compress using gzip or bzip2 utility.

To create the archive file with compress using gzip

```
tar czvf filename files
```

To create the archive file with compress using bzip2

```
tar cjvf filename files
```

QUESTION 53:

A Linux system will not boot, even in single-user mode, but hard drive diagnostics indicate that the drive is working properly. Which of the following should be done to repair the file system?

- A. Use the custom tool provided by the hard drive manufacturer.
- B. Use a bootable Linux medium to boot into Linux and run fsck.
- C. Use a bootable Linux medium to boot into Linux and run fdisk.
- D. Reinstall Linux from the original install drive and apply all patches.

Answer: B

Explanation:

fsck command checks and repair the linux file system. File system means the partition i.e

```
/dev/hda1
```

Example

```
fsck /dev/hda6
```

QUESTION 54:

The MBR (master boot record) created from lilo on a system is corrupt. How can this be fixed?

- A. Boot using a rescue disk, verify the lilo.conf file and run "fixboot --mbr -t lilo".
- B. Boot using the Linux distribution installation CD and run fsck on the /boot partition.
- C. Boot using a rescue disk, verify the lilo.conf file and run "fdisk /mbr"
- D. Boot using a live CD distribution and run chroot, verify the lilo.conf, and run lilo.

Answer: D

Explanation: If boot loader corrupt, we can re-install the boot loader. Like grub and lilo boot loader.

To install lilo:

Boot the system in rescue mode and run the lilo, which fixed the load install the boot loader by reading the configuration from /etc/lilo.conf.

QUESTION 55:

The company hires a temporary employee and wants to provide limited access to its production server. Which of the following would accomplish the goal?

- A. rbash
- B. bash -r
- C. exec bash
- D. bash -limited

Answer: A , B

Explanation:

If bash is started with the name rbash, or the -r option is supplied at invocation, the shell becomes restricted.

RESTRICTED SHELL

If bash is started with the name rbash, or the -r option is supplied at invocation, the shell becomes restricted. A restricted shell is used to set up an environment more controlled than the standard shell.

QUESTION 56:

Which of the following commands should be used to allow SSH (Secure Shell) to connect to a server with IP address 192.168.0.100?

- A. sshd -6 192.168.0.100
- B. ssh -l user 192.168.0.100
- C. sshd -l user 192.168.0.100
- D. ssh -6 -l user 192.168.0.100

Answer: B

Explanation:

Pattern of ssh is:

ssh user@host

or

ssh -l username host

where -l means login name and -6 means forces to use IPV6 address only.

QUESTION 57:

The primary usages of the Snort application include which of the following?

- A. Intrusion detection, vulnerability assessment, and network mapping.
- B. Intrusion detection, virus detection, and malware detection
- C. Intrusion detection, password cracking, and network scanning
- D. Intrusion detection, packet sniffing, and packet logging

Answer: D

Snort is a lightweight network intrusion detection system, capable of performing real-time traffic analysis and packet logging on IP networks. It can perform protocol analysis, content searching/matching and can be used to detect a variety of attacks and probes, such as buffer overflows, stealth port scans, CGI attacks, SMB probes, OS fingerprinting attempts, and much more. Snort uses a flexible rules language to describe traffic that it should collect or pass, as well as a detection engine that utilizes a modular plugin architecture. Snort has a real-time alerting capability as well, incorporating alerting mechanisms for syslog, a user specified file, a UNIX socket, or WinPopup messages to Windows clients using Samba's smbclient.

Snort has three primary uses. It can be used as a straight packet sniffer like tcpdump, a packet logger (useful for network traffic debugging, etc), or as a full blown network intrusion detection system.

QUESTION 58:

Files created in the /home/ourgroup directory need to automatically have group ownership that is identical to the directory itself. Which of the following actions will accomplish this?

- A. Set the SGID bit using 'chmod g+s /home/ourgroup'.
- B. Set the sticky bit using 'chmod 2770 /home/ourgroup'.
- C. Assign private permissions on the directory using 'chown g+s /home/ourgroup'.
- D. Set permanent permissions on the directory by running 'mkdir g+s /home/ourgroup'.

Answer: A

Explanation: When we set the SGID bit on directory, the group owner of all files/directory on that directory automatically will be the group owner of parent directory.

Example:

The group owner of /home/ourgroup is training and when SGID bit is set on that directory all files created on /home/ourgroup automatically will be training.

To Set the SGID bit: `chmod g+s directory`

To Remove the SGID bit: `chmod g-s directory`

QUESTION 59:

The following command is about to be executed:

`Ifconfig eth0 192.168.0.120 netmask 255.255.255.0 up`

Which of the following will this command accomplish?

- A. Sets eth0 to 192.168.0.120
- B. Sets eth0 to listen for all addresses.
- C. Adds an alias for 192.168.0.120 on eth0.
- D. At the next reboot, the eth0 will be set to 192.168.0.120

Answer: A

Explanation: `ifconfig` command displays the interface information as well as can set the different address for current session.

This command sets the ip address 192.168.0.120 on First Ethernet Device with subnet mask 255.255.255.0 and brings up the interface.

For permanent: Either use `netconfig` or edit the file
`/etc/sysconfig/network-scripts/ifcfg-eth0`

QUESTION 60:

How can the Apache working directory be set to /home/user/html from the command line?

- A. `httpd -d /home/user/html`
- B. `httpd -r /home/user/html`
- C. `httpd --root /home/user/html`
- D. `httpd --directory /home/user/html`

Answer: A

Explanation:

`-d serverroot` Set the initial value for the `ServerRoot` directive to `server-root`. This can be overridden by the `ServerRoot` directive in the configuration file. The default

is /etc/httpd.
httpd -d directory : set the server root directory.

QUESTION 61:

A system administrator routinely needs to see the list of who has logged in and logged out on a machine as well as their login times. Which of the following commands searches the "/var/log/wtmp" file and displays who has logged onto the machine and when they logged on?

- A. w
- B. who
- C. last
- D. log --list

Answer: C

Explanation:

Last

searches back through the file /var/log/wtmp and displays a list of all users logged in since that file was created. Names of users and ttyS can be given, in which case last will show only those entries matching the arguments. Names of ttys can be abbreviated, thus last 0 is the same as last tty0.

QUESTION 62:

A user wants to copy files in the directory /tmp/tocd to the first recordable CD-ROM (CDRW) device. Which of the following commands could do this?

- A. cdrecord -R /tmp/tocd
- B. mkisofs -o /dev/cd /tmp/tocd
- C. dd if=/tmp/tocd of=/dev/write
- D. mkisofs /tmp/tocd | cdrecord dev=0,0,0-

Answer: D

Explanation:

cdrecord [general options] dev=device [track options] track1...trackn

QUESTION 63:

Review the following Samba configuration file entry:
[global]

workgroup = NT-FAKERS

netbios name = DUDE

security = share

browseable = yes

[public]

guest ok = yes

writeable = yes

security = share

browseable = yes

path = /export/public

Which of the following lines allows the user to access the public share on this server without authentication?

- A. guest ok = yes
- B. writeable = yes
- C. security = share
- D. browseable = yes

Answer: A

Explanation: To allow the share without authentication we can write either public=yes or guest ok =yes

QUESTION 64:

If the /etc/shadow file does not exist when pwconv is run, which of the following occur?

- A. The system will give an error message.
- B. /etc/passwd is renamed to /etc/shadow and a new soft link is created.
- C. Entries in the /etc/passwd file are added to a new /etc/shadow file. The /etc/passwd file is unchanged.
- D. Password attributes in /etc/passwd are moved to a corresponding entry in a new /etc/shadow file.

Answer: D

Explanation: The pwconv command creates and updates /etc/shadow with information from /etc/passwd. If the /etc/shadow file does not exist, this command will create /etc/shadow with information from /etc/passwd. Password attributes (for example, password and aging information) that exist in an /etc/passwd entry will be moved to the corresponding entry in /etc/shadow.

QUESTION 65:

Which of the following fstab entries will mount a Samba share at boot time?

- A. `servername:sharename /mountdirectory smbfs
username=windowsusername,password=windowpassword 0 0`
- B. `//servername/sharename /mountdirectory smbfs
username=windowsusername,password=windowpassword 0 0`
- C. `//servername/sharename /mountdirectory sambafs
username=windowsusername,password=windowpassword 0 0`
- D. `smbmount //servername/sharename /mountdirectory -o
username=windowsusername,password=windowpassword`

Answer: B

Explanation:

Pattern of /etc/fstab

filesystem mount point filesystem type mount options dump fsck

Example

`//computer1/test1 /mnt/samba smbfs defaults 0 0`

QUESTION 66:

Which of the following are the default permission of /tmp?

- A. 1777
- B. 1755
- C. 0755
- D. 0222

Answer: A

Explanation: see the output of `ls -ld /tmp` command

`drwxrwxrwt 10 root root 4096 Mar 9 15:44 /tmp/`

Sticky Bit is set so 1777

QUESTION 67:

The network card in the server is on the Linux distributor's HCL (Hardware Compatibility List), but no binary drivers are provided. The drivers may be downloaded in source code form only. Which of the following is needed to make these drivers work?

- A. The distributor's source code
- B. The manufacturer's installation kit

- C. The manufacturer's development library
- D. The Linux kernel sources for the installed kernel

Answer: D

Explanation: If HCL showing that the device will support, we can turn on from the kernel. If Default kernel doesn't loading the modules for the device we can recompile the kernel from the source code and add the hardware support feature.

QUESTION 68:

Which of the following files holds the XFree86 configuration by default?

- A. XF86.conf
- B. XF86Config
- C. XFree86.conf
- D. XFree86Config

Answer: B

Explanation: The file /etc/X11/XF86Config file holds the XFree86 Configuration.

QUESTION 69:

A system administrator has recently downloaded a network analysis tool from a FTP repository. After installation of the tool, suspicious behavior is noted. How can it be verified that the package has not been altered?

- A. Boot the system from a live CD distribution and run the fsck tool on the partition where the package is installed.
- B. Uninstall the application and re-install it while in single user mode and carefully watch the install logs for suspicious activity.
- C. Download the MD5 hash file from the original FTP site and compare it against the MD5 hash generated from the downloaded file.
- D. Download the MD5 hash file from the original software developer's website and compare it against the MD5 hash generated from the downloaded file.

Answer: D

Explanation: Every Software developer developed the signature of every software. We can check by downloading the MD5 hash key. After downloading the MD5 hash key we can compare.

QUESTION 70:

A mid-sized technology firm wants a dedicated machine to analyze data from previous client projects. Which of the following server packages would MOST likely be installed?

- A. KDE
- B. PHP
- C. MySQL
- D. LDAP (Lightweight Directory Access Protocol)

Answer: C

Explanation: MySQL is the database program and it comes on mysql package. So to use the mysql database mysql package should installed.

QUESTION 71:

Which of the following commands can be used to verify that an NIS client is reading authentication information from the NIS server?

- A. ypwhich
- B. yppasswd
- C. nispasswd
- D. ypcat passwd

Answer: D

Explanation: ypcat command print values of all keys in a NIS database. To display the user's information from /etc/passwd file of server , ypcat passwd.

QUESTION 72:

Which of the following files sets the default time zone used by the date command?

- A. /etc/timezone
- B. /etc/localtime
- C. /etc/default_time
- D. /etc/defaults/date

Answer: B

Explanation: The file /etc/localtime contains the default time zone used by the date command. If you change the time zone it will update this file.

QUESTION 73:

The pwconv command does the following?

- A. It removes the /etc/shadow file and places the encrypted passwords in the second field of the /etc/passwd file.
- B. It removes the /usr/lib/shadow file and places the encrypted passwords in the second field of the /etc/passwd file.
- C. It creates the /etc/shadow file, moves the encrypted passwords into it, and places an x in the password field of the /etc/passwd file.
- D. It creates the /usr/lib/shadow file, moves the encrypted passwords into it, and places an x in the password field of the /etc/passwd file.

Answer: C

Explanation: Generally Linux uses the /etc/shadow file to store the user's password. That's why password field in /etc/passwd is appearing x. If you use the pwunconv command all password moves on password field of /etc/passwd. And pwconv command copy the password in /etc/shadow.

QUESTION 74:

When a user begins to use a shell, the only information showing is the prompt. Which of the following can be used to determine which commands are available?

- A. man
- B. help
- C. locate
- D. manual

Answer: A

Explanation: man command is the best choice from the answer list. man command format and display the on-line manual pages.

QUESTION 75:

Which of the following services commonly uses Port 139?

- A. DNS

- B. SMB
- C. FTP
- D. POP3

Answer: B

Explanation: SAMBA consists two different services, smbd and nmbd. These two services uses different ports 137, 138 and 139.
you can check in /etc/services.

QUESTION 76:

Which Apache configuration file controls the mapping of SSL certificates?

- A. .htaccess
- B. access.conf
- C. httpd.conf
- D. srm.conf

Answer: C

Explanation: In Older version apache configuration, http as well as https are configured on httpd.conf. But now there are separate file, httpd.conf and ssl.conf.

QUESTION 77:

Which of the following commands will recursively search through all subdirectories from the current directory for files owned by the root user?

- A. find .-uid 0
- B. grep -r root .
- C. grep -u root .
- D. find -user root

Answer: D

Explanation: find command is used to search files as well as directories.
Syntax: find path [condition] [action]
find / -user root à Search all files or directories owned by root user.
find / -group sysadmin à Search all files or directories owned by sysadmin group.

QUESTION 78:

What command should be run in order to add /usr/local/program1/bin to the path and make it active in the current shell?

- A. setpath PATH=\$PATH:/usr/local/program1/bin
- B. setenv PATH=\$PATH: /usr/local/program1/bin
- C. export PATH=\$PATH: /usr/local/program1/bin
- D. PATH=PATH\$:/usr/local/program1/bin

Answer: C

Explanation: There is an environmental variable named PATH, containing the path. To set new path PATH=\$PATH:/newdirectory, all directory is separated by comma. To make active in current shell should set by export command.

QUESTION 79:

An error was returned stating that the proper MPEG-2 codec could not be found. Once the correct codec is received, where should it be placed?

- A. In the user's home directory
- B. As an accessible device in /dev
- C. In the application's specific codec directory
- D. In the program's source directory, then compiled into it.

Answer: C

Explanation: codec should be placed in application specific directory because it searches in that directory.

QUESTION 80:

How can a Linux user use vi to edit the first 30 lines of a 60-line file and replace all occurrences of 'test' to 'TEST'?

- A. :s/test/TEST/g
- B. :s/test/TEST/g
- C. :30s/test/TEST/g
- D. :1,30s/test/TEST/g

Answer: D

Explanation :

Any command that begins with a ":" is called a line mode command and performs its duty on the line the cursor is currently on. However, you can override vi's default of

operating only on the current line by preceding them with a range of line numbers. For example, if we wanted to replace guy with gal on lines 32 through 56 we would type :32,56s/guy/gal/g

QUESTION 81:

Which backup type only copies files that have changed since the previous backup?

- A. Full
- B. Modular
- C. Partial
- D. Incremental

Answer: D

Explanation: There are two types of backup one is full backup which copy the all files and another type is incremental, which copies the files which have changed since the previous backup.

QUESTION 82:

A system administrator of a 200-server network wants to simplify routine monitoring of log files on each server. Which of the following is considered the BEST practice method to do this?

- A. Create a script on the administrator's workstation to attach to each server and copy its log files to the local drive.
- B. Create a new server called 'loghost'. Modify the syslog.conf file on each server so log files are forwarded to 'loghost'.
- C. Run logcp at each server. Specify the administrator's workstation as the destination and "*" for which log files to forward.
- D. Create a script on each server to analyze each of the log files on the server and forward important information to the administrator's workstation.

Answer: B

Explanation: By Configuring the log server you can centralize the logs generated from the other hosts.

In Log Server:

i. vi /etc/sysconfig/syslog

SYSLOGD_OPTIONS="-m 0 -r"

ii. service syslog restart

In Other Hosts:

i. vi /etc/syslog.conf

mail.* @logserver

ii. service syslog restart

Now all mail related log messages sent to log server.

QUESTION 83:

Which of the following is contained in the init.d directory?

- A. New user templates
- B. Access control lists
- C. Service startup scripts
- D. Infrared remote control configuration files

Answer: C

Explanation: /etc/init.d/ directory contains the service startup scripts should start or stop on that particular runlevel.

QUESTION 84:

After a power outage, a Linux machine reboots but fails to mount all of its file systems. The file systems are unable to be mounted manually. Which of the following should be done first?

- A. Reboot to runlevel 6.
- B. Reinstall the operating system.
- C. Edit /etc/fstab and correct any problems identified.
- D. Run fsck on each file system and try to mount again.

Answer: D

Explanation: fsck command checks and maintain the errors of linux filesystem. Due to problem on filesystem we unable to mount at that time we can check using fsck command.

QUESTION 85:

Which of the following runlevels is generally used to ensure the Linux server will boot into full multi-user mode without starting X Windows?

- A. 0
- B. 3
- C. 5

D. 6

Answer: B

Explanation:

Default runlevel. The runlevels used by RHS are:

0 - halt (Do NOT set initdefault to this)

1 - Single user mode

2 - Multiuser, without NFS (The same as 3, if you do not have networking)

3 - Full multiuser mode

4 - unused

5 - X11

6 - reboot (Do NOT set initdefault to this)

QUESTION 86:

How can an administrator prevent /etc/hosts from overriding DNS resolution?

A. Use a higher serial number in the DNS zone file.

B. Use a firewall to close the port used by "hosts".

C. Move the NIS entry beneath the DNS entries in /etc/resolv.conf

D. Change the order in which DNS and hosts are used by editing /etc/nsswitch.conf

Answer: D

Explanation:

For host not member of NIS.

i. /etc/host.conf contains the order of hosts and DNS.

cat /etc/host.conf

order hosts,bind

For that host which are member of NIS:

The /etc/nsswitch.conf file is used to configure which services are to be used to determine information such as hostnames, password files, and group files.

passwd: files

shadow: files

group: files

#hosts: db files nisplus nis dns

hosts: files dns

Example - obey only what nisplus tells us...

#services: nisplus [NOTFOUND=return] files

#networks: nisplus [NOTFOUND=return] files

#protocols: nisplus [NOTFOUND=return] files

#rpc: nisplus [NOTFOUND=return] files
#ethers: nisplus [NOTFOUND=return] files
#netmasks: nisplus [NOTFOUND=return] fil

QUESTION 87:

LPR access for specific hosts can be configured in which of the following files?

- A. printcap
- B. lpd.allow
- C. hosts.equiv
- D. hosts.allow

Answer: D

Explanation:

The /etc/hosts.allow and /etc/hosts.deny each have two or more colon-separated fields. The first field specifies the comma separated list of executable name. The second field contains a comma-separated list of client specifications, using IP address or host name or network name.

lpd: 192.168.1.0/24 à specified the network

lpd: .example.com à specified the domain.

QUESTION 88:

Users being reporting 'Unable to obtain IP address' error messages. Which of the following daemons should the administrator verify is running?

- A. kerneld
- B. named
- C. routed
- D. dhcpd

Answer: D

Explanation: For DHCP dhcpd service should be start.

To verify whether service is running or not
service dhcpd status

To Start service

service dhcpd start

To Stop service

service dhcpd stop

QUESTION 89:

An administrator need to synchronize a workstation's system time with a network server. Which of the following services will allow the workstation to automatically set the time?

- A. time
- B. utime
- C. NTP (Network Tim Protocol)
- D. NNTP (Network News Transport Protocol)

Answer: C

Explanation:

NTP protocol allows workstation to synchronize the time with NTP server. You can use ntpdate command.

QUESTION 90:

Which of the following commands will locate files that have been modified in the past two days?

- A. locate -t2
- B. find / -mtime 2
- C. whereis -time 2
- D. grep / -ctime 2

Answer: B

Explanation:

Syntax for find:

find path [condition] [action]

example: find / -user root

find /etc -name passwd

find / -atime +10

find / -mtime 30 à mtime means modified time. It will search all files modified in past 30 days.

QUESTION 91:

A superuser wants to transform the following permission set from

-rw-r--r-- 1 root root 4096 Apr 20 17:30 filename

To

-rwx-w---- 1 root root 4096 Apr 20 17:40 filename

Which of the following commands will accomplish this?

- A. chmod u+x,g-w,o-r filename
- B. chmod u+x,g+w-r,o-r filename
- C. chmod 710 filename
- D. chown 720 filename

Answer: D

Explanation:

r=4

w=2

x=1

So Super user wants to set the permission, full to owner user, write permission to group member and no permission to others.

chmod 720 filename

QUESTION 92:

The administrator must change the IP address of the server to 192.168.5.4/26.

Which of the following is the correct representation of the subnet mask?

- A. 192.168.5.0
- B. 192.168.5.255
- C. 255.255.255.0
- D. 255.255.255.192

Answer: D

Explanation: Total bits for Network is 26. Upto 24 bits default subnetmask is:

255.255.255.0

Now 11111111.11111111.11111111.11000000

On the last octet on bits are two and subnet value is 192.

So

Subnet Mask is 255.255.255.192

QUESTION 93:

Which of the following command lines can be used to show a map of the current process hierarchy, including information about userid transition points?

- A. pstree -u

- B. psgraph -u
- C. ps --map -u
- D. top --map -u

Answer: A

Explanation:

pstree shows running processes as a tree.

-u Show uid transitions. Whenever the uid of a process differs from the uid of its parent, the new uid is shown in parentheses after the process name.

QUESTION 94:

Shadow passwords are disabled on a Linux server. Which of the following appears after a user's name in the /etc/passwd file when a user account is disabled?

- A. X
- B. ?
- C. &
- D. *

Answer: D

Explanation: If shadow password is disabled it will display the * mark on the user name filed in /etc/passwd.

QUESTION 95:

When a user runs 'ls -al', the following output is displayed:

drwxrwxrwt 3 john1 users2 4096 Aug 06 13:42 research

Who has permission to delete files in this directory?

- A. All users
- B. Only root and file owner
- C. Only root and group owner
- D. Only root, file owner, and group owner

Answer: B

Explanation: If Sticky bit is set on directory only either the root or owner user can remove the file.

To set sticky bit:

chmod o+t directory

To remove sticky bit:
chmod o-t directory

QUESTION 96:

An Acme SCSI controller was installed on the server to support the boot drive. The system, which runs LILO and uses kernel 2.4.20, will no longer boot. After booting from the recovery CD-ROM, the Acme driver (acme.o) is manually loaded and works. The driver is also available in the modules directory on the server's hard drive. Which of the following commands will fix the problem?

- A. modprobe -p acme.o
- B. lilo append=acme.o -v /boot/initrd-2.4.20.gz 2.4.20
- C. mkinitrd -f --with=acme.o /boot/initrd-2.4.20.gz 2.4.20
- D. cat "alias scsi_hostcontroller acme.o">>/etc/modules.conf

Answer: C

Explanation:

mkinitrd creates an initial image used by the kernel for preloading the block device modules (such as IDE, SCSI or RAID) which are needed to access the root filesystem. mkinitrd automatically loads filesystem modules (such as ext3 and jbd), IDE modules, all scsi_hostadapter entries in /etc/modprobe.conf, and raid modules if the system root partition is on raid, which makes it simple to build and use kernels using modular device drivers.

-f Allows mkinitrd to overwrite an existing image file.

--with=module Load the modules module in the initial ramdisk image. The module gets loaded after any SCSI modules which are specified in /etc/modprobe.conf. This option may be used as many times as necessary.

QUESTION 97:

A user receives a file named package.rpm.bz2. Which of the following commands will uncompress the file for use?

- A. bunzip package.rpm.bz2
- B. bunzip2 package.rpm.bz2
- C. bzip -d package.rpm.bz2
- D. bzip2 --uncompress package.rpm.bz2

Answer: B

Explanation: when file compress with bzip2 it gives the extension .bz2. To uncompress the file compressed with bzip2 use the bunzip2 command.

QUESTION 98:

A user wants the script 'name1' to process the contents of the file 'name2', then redirect the output to the program 'name3'. Which of the following shell commands will do this?

- A. name1 | name2 > name3
- B. name1 < name2 | name3
- C. name1 > name2 | name3
- D. name1 | name2 < name3

Answer: A

Explanation: we can combine the multiple command using pipe symbol. In piping output of first command goes as an input to second command. And > symbol is used redirect the output of command to file.

Example:

ls -l /etc/ | less >result

QUESTION 99:

Which of the following commands will mount a USB flash drive successfully in Linux?

- A. mount /dev/sda1 /mnt/usb
- B. mount -t usbfs /dev/usb001 /mnt/usb
- C. mount /dev/uda1 /mnt/usb
- D. mount /dev/hde1 /mnt/usb

Answer: A

Explanation: Linux System Recognize the USB flash drive as SCSI Disk. So Device Name is /dev/sda1, /dev/sda2 etc.

To use USB Flash Drive , you should mount it on directory
mount /dev/sda1 /mnt/usb

QUESTION 100:

A technician added a PCI network card to a stable Linux server. The server is now generating I/O errors when the kernel module for the network card is loaded.

Which of the following actions will solve the problem?

- A. Disable the power management in the BIOS.
- B. Move the network card to another available slot.
- C. Reconfigure the network card to use a different IP address.
- D. Change the server BIOS setting to disable the network card BIOS.

Answer: B

Explanation: If you get I/O Error while you loading the Module of Device, that means Device is not detected by your system due to some problem i.e not placed on proper slot. PNP (Plug and Play) is enabled on Linux, while you add new device kudzu will detect the device.

QUESTION 101:

A DHCP server has been added to the network. The local system has been reconfigured to connect using DHCP. How could an administrator restart network services and test that the interface and the DHCP server are functioning properly?

- A. /sbin/route restart; ifconfig lo
- B. /bin/netstat -R; ping comptia.org
- C. /usr/bin/network restart; ping comptia.org
- D. /etc/init.d/network restart; ifconfig eth0

Answer: D

Explanation:

Daemon is a background process, runs on background and provides the system services.

There two types of services:

1. Stand alone

- Location : /etc/init.d/*
- To start on Current Session : service servicename start or restart
- To display the status of Service : service servicename status
- To stop the service for current session: service servicename stop

2. Transient or xinetd based services

- Location: /etc/xinetd.d
- To on or off the xinetd based service : chkconfig servicename on or off
- xinetd service must restart : service xinetd restart

network service is a stand alone, we can restart for current session using: service network restart , if you are working in /etc/init.d you can start just using network restart

While you restart the network restart, it down and up the network interface. When

interface is up it sends the request to DHCP service for IP address. Or you can use the dhclient DHCP client tool.

QUESTION 102:

Which of the following is supported when creating a Linux VPN (Virtual Private Network)?

- A. RC2
- B. 3DES
- C. chap
- D. NTLMv2

Answer: B

QUESTION 103:

If /etc/syslog.conf has the following entry:

mail.* -/var/log/mail.log

Which of the following log events will this line cause to be logged to mail.log?

- A. The events generated by a user called ail?
- B. The events logged by a program called ail?
- C. The events logged to the mail facility at any priority.
- D. The events logged from any host that begins with the name mail.

Answer: C

Explanation: The standard system logging daemons syslogd and klogd are both configured with /etc/syslog.conf. It is possible to configure what kind and what amount of system messages is stored in specific log files.

The format is straightforward, the first entry specifies a semi-colon delimited of facility.priority declarations. The second field specifies the log locations, which is usually a file.

Facility ie. cron, mail, authpriv, daemons, kern, lpr, news, syslog, user etc

Priority: debug, info, notice, warning, err, crit, alert, emerg etc

mail.info means à information or more than information of log message of mail service send to /var/log/maillog

QUESTION 104:

Which of the following commands can be used to check for file corruption?

- A. md5sum
- B. cat -vet
- C. checkfile
- D. tar --checksum

Answer: A

Explanation: md5sum command compute and check MD5 message digest.

QUESTION 105:

A user wants to know how to set up SSH (Secure Shell) to communicate between systems without requiring passwords. Which of the following is the BEST way to accomplish this?

- A. Use ssh-keygen to generate public-private keys.
- B. Disable passwords on specific accounts that will use SSH.
- C. Add systems that do not need passwords to the /etc/ssh.hosts file.
- D. Use RSH (Remote Shell) rather than SSH because it does not require passwords.

Answer: A

Explanation: ssh-keygen command manages the key passphrases and creates the private and public keys for communication, ~/.ssh/id_dsa is the public key file used by ssh and ~/.ssh/id_dsa is the private key file used by ssh. For secure Communication, you should copy the public key file into next host's ~/.ssh/authorized_keys file.

QUESTION 106:

Which of the following configurations does cardmgr read at startup on a Linux system?

- A. PCI cards
- B. USB cards
- C. SCSI cards
- D. PCMCIA cards

Answer: D

Explanation: PCMCIA support is also implemented by Linux Kernel Modules, with the system-specific PCMCIA controller defined in /etc/sysconfig/pemica. Hotswap events are monitored by /sbin/cardmgr daemon. The /etc/pcmcia directory provides numerous configuration files which map detected cards to appropriate kernel

modules. The PCMCIA infrastructure is initialized using the /etc/init.d/pcmica service script.

QUESTION 107:

After an upgrade of Apache, Web pages are no longer available and are replaced with a default page. Which of the following files should be edited or replaced to correct the problem?

- A. srm.conf
- B. httpd.conf
- C. xinetd.conf
- D. /etc/services

Answer: B

Explanation: When we upgrade the RPM Package, configuration files of lower version renamed with .rpmsave extension in RedHat as well as configuration files contains the default configuration. /etc/httpd/conf/httpd.conf is the main configuration of Apache web server for http and /etc/httpd/conf.d/ssl.conf is the main configuration file for https.

QUESTION 108:

Which of the following is a common tool used to determine what services and ports are running on a remote Linux box?

- A. arp
- B. nmap
- C. netstat
- D. ifconfig

Answer: B

Explanation: nmap scans for the active services of remote or local system.
Example: nmap -sTU reotehost: Which scans the active services or opened port of remote system;

QUESTION 109:

Which of the following services needs to be installed on a server to support new diskless client workstations?

- A. named and httpd
- B. dhcpd and rexec
- C. remoted and dhcpd
- D. PXE (Preboot eXecution Environment) and tftpd

Answer: D

QUESTION 110:

Which of the following commands can be run to remove all the rules in an iptables table?

- A. iptables -L
- B. iptables -A
- C. iptables -F
- D. iptables --delete

Answer: C

Explanation: iptables -F : Flush all the iptables rules.

iptables -L : List the all iptables rules as well as iptables policy

service iptables save : Saves all iptables rules as well as iptables policy into /etc/sysconfig/iptables file.

QUESTION 111:

A user complained that a laptop system seems slow. Which of the following commands can be used to see what processor was detected on boot?

- A. proc
- B. POST
- C. dmesg
- D. cpuinfo

Answer: C

Explanation: dmesg displays the boot/kernel related log messages.

/var/log/dmesg file contains the logs of boot related

/var/log/messages file contains the standard log messages

/var/log/maillog file contains the mail related log messages

/var/log/secure file contains the network and security related log messages

QUESTION 112:

The LILO boot configuration needs to be updated to support a new IDE hard drive that was installed. How should this be accomplished?

- A. Run "lilo -o /dev/hda"
- B. Edit lilo.conf and run "lilo -v -v"
- C. Edit lilo.conf and run "liloconf -v -v"
- D. Set LILO=/dev/hda and then run "liloconf /dev/hda"

Answer: B

Explanation: LILO (Linux Loader) is a boot loader and its configuration file is /etc/lilo.conf

Sample Configuration of /etc/lilo.conf

Sample Configuration of /etc/lilo.conf

prompt

timeout=20

default=linux

boot=/dev/hda

map=/boot/map

install=/boot/boot.b

message=/boot/message

linear

image=/boot/vmlinuz-2.6.9-5.EL

label=linux

initrd=/boot/initrd-2.6.9-5.EL.img

read-only

append="rhgb quiet root=LABEL=/"

After changing the lilo.conf configuration file you should update the MBR (Master Boot Record) where boot stage loader is reside using the lilo command.

QUESTION 113:

A Linux system is configured with a RAID 5 array consisting of six 20GB hard drives. How much usable storage space is available?

- A. 50
- B. 80
- C. 100
- D. 120

Answer: C

Explanation: RAID 5 also called the "Striping with parity" and requires at least three equal disks. Like RAID 0 this RAID level allows creation of file system bigger

then any one disk. However, additional parity data is stored on the RAID device which can be used to preserve file system data even if a single disk in the RAID device fails. So, RAID 5 use one disks equivalent space to store the parity of data.

QUESTION 114:

Which of the following allows for secure remote command line access?

- A. SSH (Secure Shell)
- B. SSL
- C. Telnet
- D. Rlogin

Answer: A

Explanation: Telnet, ftp and all rlogin services are called insecure communication. The communication using these tools on plain text format so Man in the middle can hi-jack the information. SSH (Secure Shell) is the secured tool for remote communication, which uses the data encryption and decryption for secure communication.

QUESTION 115:

A technician created a new directory for use by a user "User12". User12 is unable to create new files or subdirectories within this new directory. Using the ls command, the technician observes the following:

drwxr-xr-x 2 root root 4096 May 24 13:11 dirname

Which of the following is the BEST way to enable User12 to use the directory without letting other users manipulate its content?

- A. chmod 700 dirname
- B. chown dirname User12
- C. chgrp User12 dirname
- D. chown User12:User12 dirname

Answer: D

Explanation: chown command changes the ownership of file to specific user and group. chown user12:user12 dirname sets the user and group ownership to user12, and user12 user gets the permission of user.

QUESTION 116:

Which of the following files contains the key or keys required to login using SSH (Secure Shell) without a password?

- A. .ssh/known_keys
- B. .ssh/trusted_keys
- C. .ssh/allowed_keys
- D. .ssh/authorized_keys

Answer: D

Explanation: ssh-keygen command manages the key passphrases and creates the private and public keys for communication, ~/.ssh/id_dsa is the public key file used by ssh and ~/.ssh/id_dsa is the private key file used by ssh. For secure Communication, you should copy the public key file into next host's ~/.ssh/authorized_keys file.

QUESTION 117:

Which of the following ifconfig commands can be used to assign the IP address 192.168.1.15/24 to the second NIC (Network Interface Card) in a workstation?

- A. ifconfig eth1 192.168.1.15 subnet 255.255.255.0
- B. ifconfig eth2 192.168.1.15 subnet 255.255.255.0
- C. ifconfig eth1 192.168.1.15 netmask 255.255.255.0
- D. ifconfig eth2 192.168.1.15 netmask 255.255.255.0

Answer: C

Explanation: ifconfig is used to configure the kernel-resident network interfaces. ifconfig interfacename command displays the information about interface, i.e ip address, netmask, MAC address.

To set the IP Address to interface for current session:

ifconfig interfacename IPADDRESS NETMASK

To set the IP Address for permanently : /etc/sysconfig/network-scripts/ifcfg-ethX
DEVICE=ethX

ONBOOT=yes OR no

BOOTPROTO=static OR dhcp

IPADDR=X.X.X.X

NETMASK=X.X.X.X

GATEWAY=X.X.X.X

QUESTION 118:

Which of the following protocols is used while configuring a Linux workstation to

use a connection via a DSL modem?

- A. ATM
- B. SLIP
- C. PPTP
- D. PPPoE

Answer: D

QUESTION 119:

Which of the following services commonly uses Port 22?

- A. FTP
- B. DNS
- C. SSH (Secure Shell)
- D. SMTP

Answer: C

Explanation: Every Services uses the Logical port for communication. ssh uses the port 22, telnet 23, SMTP 25, pop3 110, http 80, https 443, ftp 20/21 .
You can check in /etc/services file for services and respective logical port.

QUESTION 120:

A Linux technician accessed the Web server on http://127.0.0.1 with a default install of Apache, and received a forbidden message. Where can the technician find detailed messages about this problem?

- A. error_log
- B. httpd_log
- C. access_log
- D. apache_log

Answer: A

Explanation: By Default, the ErrorLog writes into /var/log/httpd/error_log file. If you specify the ErrorLog directive within the <VirtualHost> container, error messages relating to that virtual host will be logged on that file. If not specified sends to /var/log/httpd/error_log.

QUESTION 121:

After the Linux technician has completed the server configuration documentation, where should this documentation be stored, according to best practice?

- A. In a binder, securely stored in an area located near the server
- B. In a predetermined secure location on-site, but not in the server room
- C. In an approved fire-proof container, located in a secure off-site facility
- D. In an office, to be filed and labeled appropriately with the rest of the system documentation

Answer: A

QUESTION 122:

Which of the following environment variables specifies the location where user files are stored by default?

- A. PATH
- B. HOME
- C. FILES
- D. SHELL

Answer: B

Explanation: There are two types of variables, shell and environmental variables. Environmental variables are available in all shells. Some Environmental Variables are: LANG, PWD, HISTFILE, HISTFILESIZE, HOME, LOGNAME etc. HOME environmental carries the information of home directory. You can display the value of variable using echo \$HOME command.

QUESTION 123:

A company's mail server is unable to send mail to the domain comptia.org. Which of the following commands might help determine if their DNS records are correct?

- A. dig comptia.org
- B. mailtest comptia.org
- C. dig -t mx comptia.org
- D. dig -t ms comptia.org

Answer: C

Explanation: dig (domain information groper) is a flexible DNS client tool, which sends the request to DNS server, it performs DNS lookups and displays the answer

that are returned from the name server that were required.

-t option sets the query type to type. It can be any valid query which is supported in BIND9. The default query type "A", unless the -x option is supplied to indicate a reverse lookup.

Example: dig -t A comptia.org displays the information about A record.

QUESTION 124:

Which of the following commands is used to search the whole directory structure to locate a specific file, but still can execute other commands while the 'find' command is searching for the file?

- A. find / filename &
- B. find / -name filename
- C. find / -name filename &
- D. find filename > background

Answer: C

Explanation: There are two types of process, one is foreground and another is background process.

Foreground: When a command is entered, the shell will not process further input the process is complete and the shell prompt is redisplayed.

Background : Running a command in the background allows another process to run concurrently on the same terminal.

By default command runs on foreground so, to run on background use the & at the end of every command.

QUESTION 125:

A file with permission set to octet 540 allows which of the following?

- A. Read and write permissions to root, and read-only permission to the group. No permission to others.
- B. Read and execute permissions to root, and read-only permission to the group. No permission to others.
- C. Read and write permissions to the owner, and read-only permission to the group. No permission to others.
- D. Read and execute permissions to the owner, and read-only permission to the group. No permission to others.

Answer: D

Explanation: Types of permission: Read, Write and Execute.

Permission category : owner user, owner group member and others.

Read Numeric Value 4

Write Numeric Value 2

Execute Numeric Value 1

Example: `chmod 540 filename`, which sets the read and execute for owner user, read only to owner group member and no permission to others.

QUESTION 126:

A network administrator has enabled IP forwarding on a Linux server with the following command:

```
echo "1" > /proc/sys/net/ipv4/ip_forward
```

After the server is restarted several weeks later, IP forwarding is not working.

Which of the following commands should the network administrator have issued?

- A. Run `save proc`
- B. Restart the network daemon
- C. Edit the `/etc/sysctl.conf` file
- D. Run `echo "1" > /proc/sys/net/ipv4/ip_forward --save`

Answer: C

Explanation: `/proc` is the Virtual Filesystem, which contains the information about the running Kernel. To enable the IP Forwarding for current boot session, `echo "1" > /proc/sys/net/ipv4/ip_forward` where 1 means enable and 0 means disable.

To Enable permanently:

```
vi /etc/sysctl.conf
```

```
net.ipv4.ip_forward=1
```

Which enables the system to forward IP automatically on reboot

QUESTION 127:

A Linux print server must limit access to its printers. Only the database server must be allowed to print. Which method is considered best practice?

- A. Edit `/etc/hosts.lpd` to only include the database server
- B. Edit `/etc/printcap` and add a filter to only include the database server
- C. Limit file permissions on the printer filter to users on the database server
- D. Limit file permissions on the spool directory to users on the database server

Answer: A

Explanation: `/etc/hosts.lpd` file control for printing to hosts. Only the host written into `/etc/hosts.lpd` file can access the printer and remaining host deny to print.

QUESTION 128:

Which of the following processors would be fully supported by glibc-2.5.3-100.i686.rpm?

- A. HP Alpha processor
- B. IBM PowerPC processor
- C. Intel Pentium III processor
- D. Silicon Graphics MIPS processor

Answer: C

QUESTION 129:

In which subdirectory of the Apache root should scripts be placed?

- A. bin
- B. htbin
- C. htdocs
- D. cgi-bin

Answer: D

Explanation: By default scripts should placed in cgi-bin directory.

QUESTION 130:

Which of the following commands can be used to view the first 10 lines of the boot.log file?

- A. top /var/log/boot.log
- B. head /var/log/boot.log
- C. tail /var/log/boot.log
- D. first /var/log/boot.log

Answer: B

Explanation: head commands displays the few lines from the top of file. By default head command displays the 10 lines from the top of file.

Example: head filename

To change the number of lines to display:

head -n linenummer filename

QUESTION 131:

Which of the following types of partitions can be used to provide a reliable shared partition on a dual-boot system with Linux and Windows 98?

- A. Ext2
- B. FAT
- C. HFS (Hierarchical File System)
- D. NTFS

Answer: B

Explanation: ext2 is the Linux Native Filesystem, by default Linux Kernel doesn't support the NTFS filesystem so FAT (VFAT) is the correct answer, which is supported by Linux as well as Windows.

QUESTION 132:

Which of the following commands should be used to monitor system logs in real time?

- A. tail -s /var/log/messages
- B. tail -v /var/log/messages
- C. tail -r /var/log/messages
- D. tail -f /var/log/messages

Answer: D

Explanation: tail command displays the few lines from the bottom of the file. By default it displays the 10 lines.

tail -f or --follow filename -> output appended data as the file grows.

QUESTION 133:

Which of the following files should be edited to provide static name to IP address mapping?

- A. /etc/hosts
- B. /etc/host.conf
- C. /etc/resolv.conf
- D. /etc/hosts.allow

Answer: A

Explanation: /etc/hosts file maps IP Address to Name. By Default every try to resolve the name to IP address from /etc/hosts then request to DNS. To change the priority, Edit the file /etc/hosts.conf

QUESTION 134:

A user has a cron job that clears print queues at midnight each day. The cron job has run correctly for several months; however the job is apparently did not run the night before. Which of the following should be done FIRST to resolve the problem?

- A. Check the process list for an instance of crond running.
- B. Check the user's cron job for syntax errors and correct as needed.
- C. Check to make sure the printer is connected to the server and powered on.
- D. Check to make sure the user was properly logged into the network the night before.

Answer: A

Explanation: crond is the background service, which provides the cron services. To execute the cron schedule, crond service should be running.

To check whether crond service is running or not
service crond status

To Start the crond service
service crond start

QUESTION 135:

Which of the following commands sets the permissions of a file to the following?
-rwsr-sr-x

- A. chmod 6755 filename
- B. chmod 1755 filename
- C. chown 2755 filename
- D. change 4755 filename

Answer: A

Explanation: According to the output of permission SUID and SGID bit is set. When SUID or SGID bit is set on the executable file, process starts under the security context of owner rather than executer and numeric value is 4.

Example: chmod u+s /bin/cat: which sets the SUID bit on /bin/cat command.

When SGID bit is set on directory the owner of every contents of directory is same as directory.

Example: `chmod g+s /data`

If Group owner of /data is training group then, every files or directories created on /data will be training group.

SUID and SIGID bit is denoted by s character in the place of x.

QUESTION 136:

Which of the following is a reversible encryption standard?

- A. AES
- B. MD5
- C. SHA
- D. MD4

Answer: A

QUESTION 137:

After replacing the network card in a Linux machine, a user wants to find out if the card was detected properly at boot. Which of the following commands will provide this information?

- A. `ls -l /dev/eth*`
- B. `dmesg | grep eth`
- C. `hwstat | grep eth`
- D. `cat /proc/net | grep eth`

Answer: B

Explanation: dmesg command displays the boot related messages. grep command displays the contents of file of matching the criteria.

Example: `grep root /etc/passwd`, which displays only the lines having root pattern.

Similarly,

`cat /etc/passwd | grep root` à Same as previous.

QUESTION 138:

Which of the following commands displays the name of the current shell?

- A. `shell`
- B. `cat /proc/shell`
- C. `echo $SHELL`
- D. `uname -s`

Answer: C

Explanation: There are two types of variables, shell and environmental variables. Environmental variables are available in all shells. Some Environmental Variables are: LANG, PWD, HISTFILE, HISTFILESIZE, HOME, LOGNAME etc. HOME environmental carries the information of home directory. The SHELL environmental variable carries the Name of current shell. To display the value of SHELL variable, use echo \$SHELL command.

QUESTION 139:

Root logins should NOT be allowed over the network for which of the following reasons?

- A. It restricts sudoers who can su to root.
- B. It prevents the system from being rebooted remotely.
- C. It stops brute forcing attempts on the root account over the network.
- D. It creates accountability by writing all "su" attempts to a su log.

Answer: C

QUESTION 140:

A set of computers is used for technical support. The manager has asked that users have restricted time periods in which they can login. Which of the following must be edited to accomplish this?

- A. /etc/pam.conf
- B. /etc/logon.conf
- C. ~/.bashrc
- D. /etc/group

Answer: A

Explanation: All PAM (Pluggable Authentication Modules) Stores in /etc/pam.d/. If both /etc/pam.conf as well as /etc/pam.d/ exists then it will ignore the /etc/pam.conf (deprecated file). For Time based Authentication you should configure in /etc/security/time.conf and module should call either in /etc/pam.d/login or /etc/pam.d/system-auth.

QUESTION 141:

An administrator needs to add support for PERL to Apache for the company's Website. The administrator wants to do this by adding perl_module to the Apache configuration. How can this be done?

- A. Run `http -lm perl_module` from the command line.
- B. Run `httpd --module perl_module` from the command line.
- C. Remove the # from `#AddModule perl_module libexec/httpd/libssl.so` in `httpd.conf` file.
- D. Remove the # from `#LoadModule perl_module libexec/httpd/libssl.so` in `httpd.conf` file.

Answer: D

Explanation: LoadModule option in `httpd.conf` file loads the modules dynamically from the modules directory. By default Perl Module is commented so to load the perl module dynamically you should load using LoadModule option.

QUESTION 142:

Which of the following is a valid entry for `/etc/fstab`?

- A. `/dev/hd1 /mnt/hda1 ntfs defaults,noatime,notail 0 0`
- B. `/dev/hdb1 /mnt/hdb1 ext3 defaults,noatime,notail 0 0`
- C. `/dev/hda1 /proc/hda1 ntfs defaults,noatime,notail 0 0`
- D. `/dev/hdb1 /mnt/hdb1 reiser defaults,noatime,notail 0 0`

Answer: B

Explanation: Pattern of `/etc/fstab`

Device Mountpoint filesystem mounting options dump frequency fsck order

Example:

`/dev/hda1 /data ext3 defaults 0 1`

QUESTION 143:

A system administrator wants to disable shell access for a user. Which of the following is the appropriate shell to set?

- A. `/bin/sh`
- B. `/bin/false`
- C. `/bin/passwd`
- D. `/bin/disable`

Answer: B

Explanation: `/etc/passwd` is the user database file contains lots of information

regarding the user. i.e login name, UID, GID, Comment, Home directory and Login shell. If Login shell bash or sh or csh or tcsh provided then user can login with shell. To disable shell access to user, you should write /bin/false or /sbin/nologin instead of login shell.

See the Example:

user1:x:500:500:Normal User:/home/user1:/bin/false, Where can't access the Login shell, but user1 can access the services i.e Internet, email etc.

QUESTION 144:

The system administrator notices the following file in a user's home directory:

-rwsr-xr-x 1 root user1 628684 Jun 13 09:38 ksh

Which of the following does this file indicate?

- A. The system has been compromised.
- B. Only root has shared access for ksh.
- C. The ksh service needs to be restarted.
- D. ksh was inadvertently installed in user's directory.

Answer: A

Explanation: When SUID or SGID bit is set on the executable file, process starts under the security context of owner rather than executer and numeric value is 4.

Example: `chmod u+s /bin/cat`: which sets the SUID bit on /bin/cat command.

When SGID bit is set on directory the owner of every contents of directory is same as directory.

Example: `chmod g+s /data`

If Group owner of /data is training group then, every files or directories created on /data will be training group.

QUESTION 145:

An administrator wants to install Linux onto a computer that does not have a CD-ROM drive. Which of the following is the BEST way to complete the installation?

- A. Install via TFTP (Trivial File Transfer Protocol) from the network.
- B. Install via FTP from an FTP server.
- C. Install via NFS (Network File Server) from a Web server.
- D. Copy the CD-ROM files to the machine using the 3.5" diskette drive.

Answer: B

Explanation: There are different installation method:

Local CD-ROM based

Network based either FTP or HTTP or NFS

And

Automatic Installation called Kickstart installation.

So, If Local CD-ROM is not available then Network based installation can start by creating the Installation disk i.e bootdisk.img, drvnet.img, diskboot.img etc

QUESTION 146:

Examine the following /etc/passwd file:

root:X:11423:0:99999:7:::

dgringold:X:11423:0:99999:7:::

jjones:!!:11432:0:99999:7::11688:

tgold:!!:11342:11231:11678:7:::

Which of the following is the password field?

- A. The first field
- B. The second field
- C. The third field
- D. The fourth field

Answer: B

Explanation: /etc/passwd file is called user database file, which contains the lots of information regarding the user.

Pattern of /etc/passwd

Loginname:password:UID:GID:Comment:Home Directory>Login Shell

Password is represented by X means user password is stored in /etc/shadow.

QUESTION 147:

The UMASK value is set to 22 Which of the following will the default permissions be on filename.txt when the file is created?

- A. r-xr-wr-w
- B. ---w--w-
- C. rwxr-xr-x
- D. rw-r--r--

Answer: D

Explanation: umask command is used to display and set the default permission for current session. For Permanently /etc/bashrc file is used for default permission to root and non-root user.

When 22 umask is set:

File Permission: 666

644

Which set the read and write to owner user, read only to group member and others.

QUESTION 148:

Which of the following group-level permissions is needed to create user accounts?

- A. adm
- B. root
- C. nobody
- D. ntadmin

Answer: B

Explanation: root is called the super user in the Linux system. We can create root level privileged user using sudo. Either we should assign certain commands to user to work or that user should have root group level permission.

QUESTION 149:

The output of an "ls -la" is the following:

-rw-r-xrwx 5 root root 4096 Apr 20 10:03 file.txt

How many hard links have been created to this file?

- A. 0
- B. 4
- C. 5
- D. 6

Answer: C

Explanation: when we use the ls -la command it displays the normal as well as hidden file with long listing. In long listing, first column denote the permission to owner user, owner group member and others and second column represent the number of links files.

QUESTION 150:

Which of the following is an IDS (Intrusion Detection System)?

- A. SSH (Secure Shell)

- B. Snort
- C. openssl
- D. ethereal

Answer: B

QUESTION 151:

How can a user change their default BASH shell prompt?

- A. Change the \$PS1 variable in ~/.cshrc
- B. Change the \$PS1 variable in ~/.bash_profile
- C. Change the \$PROMPT variable in ~/.cshrc
- D. Change the \$PROMPT variable in ~/.profile

Answer: B

Explanation: PS1 (Prompt String 1) is the environmental variable, which carry the format of bash shell prompt. ~/.bash_profile file is configured to start the user specific application automatically when user logged on and to set the value on environmental variable.

To change the default format of bash shell, you can set the new format into ~/.bash_profile file.

Example:

PS1="[u @ \H \t]"

Where \u means user name, \H means hostname and \t Time in 24 hours clock system.

QUESTION 152:

Which of the following commands can be used to start and stop printers and classes?

- A. lpr
- B. lprm
- C. start and stop
- D. enable and disable

Answer: D

Explanation: enable or cupsenable starts the named printers or classes.
disable or cupsdisable stops the named printers or classes.

QUESTION 153:

A server requires more swap space. A new swap partition is created at /dev/sdb2 using fdisk. After editing the configuration, which of the following commands is used to activate the new partition?

- A. swapon -a
- B. mkfs -swap
- C. sfdisk /dev/sdb2
- D. mount -t vfs /dev/sdb2

Answer: A

Explanation: swap also called the Virtual Memory.

To on the swap space:

swapon -a : All devices marked as swap in /etc/fstab are made on.

swapon device : Enable the individual swap device.

You can check the total Memory, Virtual Memory using free command.

QUESTION 154:

Which of the following is a secure authentication method?

- A. MD5
- B. RC5
- C. Blowfish
- D. Kerberos

Answer: D

Explanation: The Kerberos system authenticates individual users in a network environment. After authenticating yourself to Kerberos, you can use network utilities such telnet, rlogin, rcp and rsh without entering the password. So, this method is called the secure authentication method.

QUESTION 155:

How would a user send /etc/aliases as the text of an email to another user on the same system?

- A. wall -s 'Our Aliases' > /etc/aliases
- B. mail someone@localhost -s 'Our Aliases' < /etc/aliases
- C. postfix someone@localhost -s 'Our Aliases' < /etc/aliases

D. `sendmail someone@localhost -s 'Our Aliases' > /etc/aliases`

Answer: B

Explanation: mail command is used to send mail as well as read mail from command line. -s option is use to write the subject. And to take input from another file < symbol is used.

Example: `mail someone@localhost -s "test message" <testfile` which sends the text of testfile as message.

`ls -l | mail someone@localhost -s "Contents of Directory"` which sends the output of `ls -l` as message.

QUESTION 156:

Which of the following files contains a list of file systems that can be currently mounted on the system if all supported modules have been loaded?

- A. `/etc/filesystems`
- B. `/var/filesystems`
- C. `/dev/filesystems`
- D. `/proc/filesystems`

Answer: D

Explanation: `/proc` is the virtual filesystem, which contains the information of running kernel, eg total memory detected by kernel, total mounted filesystem, swap memory, recognized devices etc.

`/proc/filesystem` file contains the list of filesystem currently mounted on the system.

QUESTION 157:

Why should `/tmp` be located on a separate partition from the `/` file system?

- A. `/tmp` requires a lot of space.
- B. `/tmp` is used to simulate RAM.
- C. `/tmp` file system is cleared after every reboot.
- D. `/tmp` could become full and fill up the root file system.

Answer: D

Explanation: There are some filesystem, which shouldn't separate from the root filesystem. Eg, `/etc/`, `/dev/`, `/bin/`, `/sbin/`, `/lib/` and `/`. Other filesystem eg `/var`, `/tmp`, `/home/`, `/usr`, `/opt` can separate from the root. If `/tmp` is not created separate then it takes space from root (`/`) filesystem and it can growth until space available on `/`.

QUESTION 158:

Which runlevel would be used to repair a system and grant access to the root user only?

- A. 0
- B. 1
- C. 2
- D. 6

Answer: B

Explanation: Runlevel 1 is called Single user mode, this runlevel is used to repair the system.

QUESTION 159:

An administrator types the command `ps xl` and the following is a portion of the output obtained:

F	UID	PID	PPID	NI	VSZ	RSS	WCHAN	TTY	TIME	COMMAND
---	-----	-----	------	----	-----	-----	-------	-----	------	---------

4	0	1707	1706	15	2304	830	wait4	tty1	0:00	-bash
---	---	------	------	----	------	-----	-------	------	------	-------

4	0	1708	1706	15	4804	420	wait4	tty1	0:00	awk
---	---	------	------	----	------	-----	-------	------	------	-----

4	0	1701	1707	15	4304	820	wait4	tty1	0:00	nmap
---	---	------	------	----	------	-----	-------	------	------	------

4	0	1836	1713	15	4405	941	wait4	tty1	0:00	vi
---	---	------	------	----	------	-----	-------	------	------	----

4	0	1921	1707	15	7205	820	wait4	tty1	0:00	xterm
---	---	------	------	----	------	-----	-------	------	------	-------

Which process number should be killed to stop the map?and term?processes?

- A. 15
- B. 820
- C. 1707
- D. 1921

Answer: C

Explanation: Every Child process maintains the PID of parent process. You can kill the child process either by individually or directly by deleting the parent Process.

In output the parent process of nmap as well as xterm is 1707.

So to remove all child process kill the 1707.

QUESTION 160:

An update CD-ROM for a distribution contains the latest RPMs for all packages

that they provide. Which of the following is the BEST command to use to update all of the existing RPMs on a server without making any other changes?

- A. rpm -F /mnt/cdrom/RPMS/*.rpm
- B. rpm -i /mnt/cdrom/RPMS/*.rpm
- C. rpm -update /mnt/cdrom/RPMS/*.rpm
- D. rpm --update /mnt/cdrom/RPMS/*.rpm

Answer: A

Explanation: There are -U or -F option for update the packages. -U option update if lower version is installed and install new if lower version is not installed. -F option update if lower version is installed but doesn't install new as -U.
So According the question scenario, Answer A is best choice.

QUESTION 161:

Which of the following Linux files is used to assign users to groups?

- A. /usr/group
- B. /etc/group
- C. /etc/users
- D. /etc/passwd

Answer: B

Explanation: /etc/group is a group database file, which defines the groups to which users belong. There is one entry per line and each line has the format:
Group_name:password:GID:user_list

QUESTION 162:

The following is an extract of a password file:

Smith:*:1133:334:John Smith:/usr/people/jsmith:/bin/tcsh

Which of the following is the purpose of the ??in Smith's password field?

- A. It deactivates Smith's account.
- B. It indicates that Smith is a superuser.
- C. It forces Smith to change his password at his next login.
- D. It indicates that Smith's home directory is shared by other members of his group.

Answer: A

QUESTION 163:

A Linux administrator just installed Xfree86. Which of the following files should the administrator edit in order to change the default system runlevel from 3 to 5?

- A. /etc/inittab
- B. /etc/runlevels
- C. /etc/rc.sysinit
- D. /etc/default/runlevel

Answer: A

Explanation: /etc/inittab file reads by init program at boot time to start the system on particular runlevel as well as to read the runlevel specific scripts from the directory.

To set the default runlevel 5:

id:5:initdefault: in /etc/inittab file.

If system is booting on runlevel 5 then, X Window System will load.

QUESTION 164:

A user has added a PCMCIA wireless network card to a Linux laptop. The network services fail on boot. After boot, if they are restarted by hand, network services load properly. Which of the following could solve the problem?

- A. Check that the PCMCIA ports are enabled in the BIOS.
- B. Reinstall the wireless network card drivers on the system.
- C. Check the order of execution of services in the boot scripts.
- D. Reconfigure the wireless access point to access Linux connections.

Answer: C

Explanation: Answer C is Correct according to the question scenario, So check the order of execution of services in the boot scripts because that fail is due to dependencies.

QUESTION 165:

Which of the following commands can be used to back up all the files in the current directory and compress them?

- A. tar zcvf backup.tgz *
- B. gtar zcvf backup.tgz *

- C. tar -Zxvf backup.tgz *
- D. tar -cvf - * | gunzip > backup.tgz

Answer: A

Explanation: tar is the standard archiving tool in linux and use to backup, transfer and store the file.

To create the tar file:

tar cfv mytar.tar * : which creates the mytar.tar of tar file taking all contents of current directory as input. By default it will not compress.

We can compress using gzip or bzip2 tool.

gzip filename : which compress the file with gzip tool.

To compress at the same time of archiving:

tar zcvf filename.tgz * : which creates the archive file as well as compressed file using the gzip tool.

To compress using bzip2 use the j instead of z.

QUESTION 166:

A Linux server is configured as a router, but the administrator notices that packets are no longer being routed. Which of the following should the administrator run on the server to verify routing functionality?

- A. cat /proc/self/status
- B. /etc/rc.d/squid status
- C. /etc/rc.d/network status
- D. cat /proc/sys/net/ipv4/ip_forward

Answer: D

Explanation: /proc virtual filesystem contains the information of running kernel.

To check whether IP Forwarding is enabled or not read the file

/proc/sys/net/ipv4/ip_forward if contents is 1 IP Forwarding is enabled and if 0 IP Forwarding is disabled. To enable the IP Forwarding automatically at next reboot you should write in /etc/sysctl.conf:
net.ipv4.ip_forward=1

QUESTION 167:

A user who has a file open in vi wants to search for the next occurrence of the word 'coexistence'. Which of the following commands will accomplish this from within the editor's command mode?

- A. /coexistence

- B. :f coexistence
- C. :s/coexistence
- D. find_forward coexistence

Answer: A

Explanation: In vi editor, we can search the text in different direction:

/text : Search in forward direction

?text : Search in backward direction

n : Find next in same direction

N : Find next in backward direction

QUESTION 168:

The following command run as root will search the system for which of the following?

`find / -name '.*'`

- A. All hidden files
- B. All files created in /
- C. All files created today

Answer: B

Explanation: Using find command we can search file or direction on the basis of different criteria. It is slower then slocate but reliable output then slocate.

Syntax of find command:

`find path condition action`

`find / -name passwd`: Searches all files having name passwd, you can user wildcard in this place.

`find / -atime +10`: Searches all files access time is more then 10 days

`find /home -user user1` : searches all files owned by user1

QUESTION 169:

Which of the following commands will list all RPM packages installed on the system?

- A. `rpm -i`
- B. `rpm -Uvh`
- C. `rpm -qa`
- D. `rpm --list`

Answer: C

Explanation: rpm -qa command query on local RPM database and displays all installed rpm. Local database of RPM command is /var/lib/rpm.

QUESTION 170:

Which of the following is the FIRST step that should be taken prior to installing Linux on new hardware?

- A. Verify that the hard drive has been formatted.
- B. Run the sysprep utility from the Linux vendor's CD.
- C. Download all appropriate device drivers from the Linux vendor's Website.
- D. Review the HCL (Hardware Compatibility List) on the Linux distributor's Website.

Answer: D

Explanation: Before installing the Linux check to distributor's official site for hardware compatible whether that product support hardware or not.

QUESTION 171:

When a Linux laptop runs on battery, the hard drive performance significantly decreases. Which of the following can improve the hard drive performance?

- A. Increase the amount of swap space on the disk.
- B. Decrease the amount of swap space on the disk.
- C. Increase the APM (Advanced Power Management) value for the hard drive.
- D. Decrease the APM (Advanced Power Management) value for the hard drive.

Answer: C

QUESTION 172:

If the command below is executed in a user's home directory, which of the following would be accomplished?

echo hello >> allusers

- A. Sends the message 'hello' to all users on the system.
- B. Creates a new file called 'hello' and sends it to all users.
- C. Sends the message 'hello' to all currently logged in users.
- D. Appends 'hello' to the end of the file llusers? if it exists.

Answer: D

Explanation:

Common Redirection Operator:

Command >file à Redirect the Standard Output of command into file.

Command >>file à Append the Standard Output of command into file.

Command <file à Command receives input from file.

Command 2>file à Redirect the error message to file.

Command 2>>file à Append the error message to file.

QUESTION 173:

Which of the following files is commonly included with source code to automate the compilation?

- A. Makefile
- B. Autorun
- C. README.config
- D. Auto.so

Answer: A

Explanation: Makefile contains the program information and relationship of programs with others as well as directory hierarchy. So when we use the make install, it reads the MakeFile for automate.

QUESTION 174:

A technician needs to create a diskette to transfer data from a Linux server to a Windows 2000 server. The diskette is unformatted. Which of the following commands should be used to prepare the diskette for writing?

- A. mount /dev/fd0 /mnt/floppy mkdosfs /dev/fd0
- B. mkfs -t ext2 /dev/fd0 mount /dev/fd0 /mnt/floppy
- C. mount /dev/fd0 /mnt/floppy mkfs -t msdos /dev/fd0
- D. mkdosfs /dev/fd0 mount -t msdos /dev/fd0 /mnt/floppy

Answer: D

Explanation: mkdosfs command creates the MS-DOS file system under the Linux system, which recongenized by Linux as well as Windows.

QUESTION 175:

A user complains that the mount point the system uses for the CD-ROM device is too long. The user wants to change the mount point from /media/cdrom to /cdrom. Which of the following files needs to be edited?

- A. /etc/mtab
- B. /etc/fstab
- C. /etc/mount
- D. /etc/exports

Answer: B

Explanation: /etc/fstab is the file, which reads by the program and mount on boot time as well as specify the filesystem as well as mount point, mounting options, dump frequency and fsck order.

QUESTION 176:

An employee has been terminated from the company. Which of the following commands will remove the user from the system and maintain the contents of the employee's home directory?

- A. userdel
- B. passwd -l
- C. usermod -f
- D. userdel -r

Answer: A

Explanation: userdel command removes the user from the system.
userdel username : commands remove the user by preserving the user's home directory.
userdel -r username: Removes the user with home directory.

QUESTION 177:

In the file /etc/nsswitch.conf, what does the following line do?
hosts: nis files dns

- A. NIS requests are forwarded to DNS.
- B. NIS is used first for hostname resolution.
- C. /etc/hosts is used for all NIS, NetBIOS, and DNS lookups.
- D. NSS (Network Security Services) lookup is enabled for NIS, DNS, and remote files.

Answer: B

Explanation: nsswitch.conf file is called system databases and Name Service Switch Configuration file.

By default system checks the order of name lookup, authentication method etc from /etc/nsswitch.conf file.

hosts: nis files dns means first hostname resolution sends the request to nis server, if not found then local file /etc/hosts at last to dns server.

If you want to change the order of name lookup

hosts: dns files means sends the resolution to dns server if not found then sends to local file /etc/hosts.

QUESTION 178:

A user needs the ability to create new users on a system. How can the user be given this privilege without the root password?

- A. Add the user to the /etc/sudoers file
- B. Edit the /etc/sysconfig/policies file
- C. Make the user a member of the operator group
- D. Grant the user execute privileges to useradd, groupadd, and usermod

Answer: A

Explanation: root is called super user having full control on System. To give the root level privilege or privilege on some commands to normal user, we can give using sudo.

EXAMPLE:

user1 ALL=(ALL) ALL : user1 gets the root level privileged.

Cmnd_Alias MINIMUM=/usr/sbin/useradd, /usr/bin/passwd

User_Alias LIMITEDTRUST=user1

LIMITEDTRUST ALL=MINIMUM

In This example user1 gets the privilege of useradd and passwd command.

QUESTION 179:

After a printer is removed from a Linux workstation, which of the following commands can be used to restart the printing module?

- A. lp restart
- B. cups restart
- C. /etc/init.d/lp restart
- D. /etc/init.d/cups restart

Answer: D

Explanation: cups is the printing system on Linux. To print using cups you should start the cups service which controls the printer. After adding or deleting the new printer from the system, you should restart the cups services, which reads the configuration from /etc/cups/printers.conf, /etc/cups/cupsd.conf file.
cups is the standalone service located in /etc/init.d/. So to restart the cups : service cups restart

QUESTION 180:

A Linux technician is preparing to install a 64-bit Ultra 320 SCSI PCI controller on a x86 system. Which of the following must the system have to allow this to work at full functionality?

- A. 64 bit PCI slot
- B. 64 bit diskette
- C. 64 bit processor
- D. 64 bit memory path

Answer: A

QUESTION 181:

The user would like to find documentation files of an installed package. Which of the following is the MOST likely place to find the documentation?

- A. /etc/doc
- B. /documents
- C. /usr/share/doc
- D. /usr/local/doc

Answer: C

Explanation: /usr/share/doc directory contains the MOST likely documentation. You will get sub directory on /usr/share/doc and each directory contains the most useful documentation.

QUESTION 182:

Which of the following files is used to specify drives to be mounted on boot?

- A. nfs
- B. mtab

- C. fstab
- D. inet.d

Answer: C

Explanation: /etc/fstab is the file, which reads by the program and mount on boot time as well as specify the filesystem as well as mount point, mounting options, dump frequency and fsck order.

QUESTION 183:

Which of the following is the economical choice for high capacity off-site archiving?

- A. NVRAM
- B. SCSI
- C. Tape
- D. Optical Recordable

Answer: C

QUESTION 184:

A Linux system has been installed using Chinese. The system administrator has been asked to change the language setting to English. Which of the following commands can be used to do this?

- A. lsmod
- B. depmod
- C. xmodmap
- D. keyboard

Answer: C

Explanation: The xmodmap program is used to edit and display the keyboard modifier map and keymap table that are used by client applications to convert event keycodes into keycodes.

QUESTION 185:

Which of the following is the BEST tool to measure system performance baseline over a period of time?

- A. sar

- B. var
- C. pmap
- D. netstat

Answer: A

QUESTION 186:

After properly installing both the sound card and modules, the technician attempted to play an MP3 file, but no sound was heard. Which of the following is MOST likely to be the problem?

- A. The sound card does not support MP3 playback.
- B. The sound module was not added to the kernel.
- C. The sound card is not on the HCL (Hardware Compatibility List).
- D. The ALSA (Advanced Linux Sound Architecture) sound server was not started.

Answer: D

QUESTION 187:

A user downloads the software package "package.tar.bz2" from the vendor. Which of the following command lines can be used to extract the contents of the package?

- A. tar xf package.tar.bz2
- B. tar xvf package.tar.bz2 | bzip2 -d
- C. bzip2 -d < package.tar.bz2 | tar xvf -
- D. bzip2 package.tar | tar xvf package.tar.bz2

Answer: C

Explanation: File is compressed with bzip2 as well as archive file. To uncompress the file: Either bunzip2 or bzip2 -d filename.

And To extract from the archive file:

tar xvf filename.

Answer C is correct because bzip2 -d getting input from file and passing output to tar command.

QUESTION 188:

Which of the following tripwire commands can be run to analyze the current status of the system?

- A. tripwire --check
- B. tripwire --verify
- C. tripwire --status
- D. tripwire --monitor

Answer: A

Explanation:

tripwire can be configured to detect changes in file/directory size, access time, inode timestamp, user/group, owner and a number of file/directory attributes.

Tripwire is a policy based program that monitors file system changes as specified in a policy file. An encrypted database is used to keep track of modifications that have occurred in a system.

tripwire --check : runs to analyze the current status of the system.

QUESTION 189:

Which of the following describes the contents of the file /etc/ftpusers?

- A. Users that may log in using FTP
- B. Hosts that may connect through FTP
- C. Hosts that may not connect through FTP
- D. Users that may not log in using FTP

Answer: D

Explanation: /etc/ftpusers file contains the name of user one per line to deny login via ftp

QUESTION 190:

User 'jones' cannot login to a Linux server. The technician checked the server records and noted that shadow passwords are disabled. The technician also noted that /etc/passwd contains the following entry:

jones*:1001:300:Bob Jones:/home/jones:/bin/bash

Which of the following is MOST likely to be the problem?

- A. The account is expired.
- B. The account is disabled.
- C. Jones used the wrong password.
- D. The account is using a service UID (User ID).

Answer: B

Explanation: If /etc/shadow file containing the user password the x will appear in /etc/passwd file in second field if account is disabled then * will appeared in password field of /etc/passwd file.

QUESTION 191:

When an ATA-133 hard drive is installed, which of the following cables should be used?

- A. 40 pin 80 wire
- B. 80 pin 40 wire
- C. 80 pin 80 wire
- D. 68 pin 68 wire

Answer: A

QUESTION 192:

Which of the following can be used to view username, UID (User ID), GID (Group ID), full name, home directory, and default shell information?

- A. cat /etc/group
- B. cat /etc/services
- C. cat /etc/shadow
- D. cat /etc/passwd

Answer: D

Explanation: /etc/passwd file is called the user database file containing the full user information i.e login name, UID, GID, Comment, Home Directory and Login shell.

QUESTION 193:

The directory /home is on an ext2 file system. The owner is able to delete other files in the directory, but all attempts by the owner of /home/owner/A to delete the one file result in the output: bash:

A: Permission denied

Given the file listing:

-rw-r--r-- 1 owner owner 5 Jun 13 12:14 A

Which of the following should be checked next in order to diagnose this problem?

- A. mkfs
- B. dmesg

- C. `rm -r /home/owner`
- D. `lsattr /home/owner/A`

Answer: D

Explanation: `lasttr` command list the file attributes of ext2 or ext3 file system.
`chattr` command changes the file attributes of ext2 or ext3 file system.

Some Attribute:

A à atime record is not modified upon access or modification.

a à File can only be opened in append mode for writing.

d à File is excluded in backup by dump

j à File data is journaled to ext3

i à File is immutable means can't remove.

To List attribute:

`lsattr filename/directoryname`

To Change File Attribute

`chattr + or - attribute file/directory: + Add the attribute and - remove the attribute.`

QUESTION 194:

Which of the following commands could be used to set the number of days a user can maintain the same password?

- A. `uname`
- B. `chfn`
- C. `chage`
- D. `chpasswd`

Answer: C

Explanation: `chage` command is used to set the maximum number of days user can use the same password, password expiration days, warning start days, Inactive days etc.

Example:

`chage -M days username` : Maximum number of days a password may be used.

`chage -m days username` : Minimum number of days allowed between password changes.

`chage -W days username` : Number of days warning given before a password expires.

`chage -I days username`: Number of days account should be inactive before password expires.

`chage -l username` : To list the user password aging policy.

QUESTION 195:

A new tape drive has been added to a Linux system. Which of the following commands can be used to verify that the tape drive is operational?

- A. tcpdump ftape
- B. tar -xvf ftape
- C. mount -f ftape
- D. dmesg | grep ftape

Answer: D

Explanation: Using dmesg we can print out their bootup messages. grep command displays online the line matching the condition.

Example: grep root /etc/passwd : command displays only the lines matching root pattern.

QUESTION 196:

Before performing a new Linux server installation, what part of the installation should be planned and documented?

- A. System hardware, partition map, required services, user passwords
- B. System hardware, required packages, required services, partition map
- C. Partition map, root password, required packages, performance baseline
- D. Partition map, required packages, daemon configuration, performance baseline

Answer: B

Explanation: Before Installing the Linux Server, you should check the Hardware compatible list (HCL) in distributor website, which programs are required to you so that can select all required packages, services as well as how many partitions required to you.

QUESTION 197:

The company wants to have its laptops perform a clean shutdown of the Linux operating system when the power button is pressed. Which of the following modules must be installed to accomplish this?

- A. APM (Advanced Power Management)
- B. ACPI (Advanced Control and Power Interface)
- C. power
- D. i2c-core

Answer: B

QUESTION 198:

A system report indicates that /var is full. Which of the following is the MOST likely resolution to the problem?

- A. Truncate the log files.
- B. Increase the allowable size of swap file.
- C. Ensure that users have not exceeded disk quota.
- D. Remove unnecessary applications that may be using too much disk space.

Answer: A

Explanation: /var contains the Log files, spooling of mail and printing. If /var is full then by truncating the log message can solve the problem.

QUESTION 199:

Users begin reporting that they receive 'Unable to resolve hostname' error messages. Which of the following daemons should the administrator verify is running?

- A. bind
- B. dhcpd
- C. resolvld
- D. named

Answer: D

Explanation: named is a Domain Name System server, you should start the named service to give response to DNS client.
You can check whether named is running on server or not
service servicename status

QUESTION 200:

Which is the correct way to define a default route to 10.10.10.1 for a Linux host?

- A. route add default gw 10.10.10.1
- B. ifconfig default_route=10.10.10.1
- C. ifconfig eth0 defaultgw 10.10.10.1

D. route default add gateway=10.10.10.1

Answer: A

Explanation: Using route command can display or manipulate the IP routing table.

route add | del -net | -host netaddress|host address netmask gw next hop

Example:

route add -net 192.168.4.0 netmask 255.255.255.0 gw 192.168.0.2

where 192.168.4.0 is the remote network 255.255.255.0 is the netmask of remote network 192.168.0.2 is the gateway for remote network.

route add -host 192.168.0.1 255.255.255.0 gw 192.168.1.1

It is a route to 192.168.0.1 host

Similarly to remove the route from routing table: route del -net network address netmask

QUESTION 201:

Which of the following syslog keywords has the highest priority?

- A. err
- B. crit
- C. emerg
- D. alert

Answer: C

Explanation: /etc/syslog.conf file is used to configure the facility of priority to store in file.

First column contains the facility.priority and second column contains the filename to send the log messages.

Example:

mail.info /var/log/maillog : All information of mail will append into /var/log/maillog file.

Among all priority emerg (Emergency) will get the highest priority among all priority. So /etc/syslog.conf is configured as

*.emerg * means emergency related messages will sends to every log files.

QUESTION 202:

Which of the following is necessary for a user to scan images from a flatbed scanner?

- A. gimp
- B. saned
- C. cups

D. twain

Answer: B

Explanation: saned is the SANE (Scanner Access Now Easy) daemon that allows remote clients to access image acquisition devices available on the local host.

QUESTION 203:

For troubleshooting, a technician needs to boot an SMP (Symmetric Multi-Processor) system to use a single CPU. Which of the following is the correct parameter to pass to the kernel at boot time?

- A. nosmp
- B. disable-smp
- C. block-cpu-1
- D. enable_smp=no

Answer: A

Explanation: By default Linux Kernel supports the multi processor. To disable you should pass the nosmp kernel parameter.

QUESTION 204:

The administrator wants to deny ICMP traffic from being forwarded. Which of the following commands would accomplish this?

- A. iptables -A FORWARD -p icmp -j DENY
- B. iptables -A FORWARD -p icmp -j DROP
- C. iptables -A FORWARD -p udp --dport icmp -j DROP
- D. iptables -A FORWARD -a all -proto ICMP -j REJECT

Answer: B

Explanation: Answer B is correct. B is the rule for FORWARD chain, Where protocol is specified using -p protocol and decision is using -j either ACCPT or REJECT.

iptables -L : List all rules and chain policy

iptables -F : Flush all rules and chain policy

iptables -t filter -A INPUT -p tcp -j DROP : drop All tcp related packets coming to system.

QUESTION 205:

A user wants to install Linux as a dual-boot option on the second hard drive on the primary IDE controller. Which of the following devices would be the target of the Linux partitioning?

- A. /dev/hda
- B. /dev/hdb
- C. /dev/sda
- D. /dev/sdb

Answer: B

Explanation: Linux System Recognized IDE Harddisk as follow:

Primary Master /dev/hda

Primary Slave /dev/hdb

Secondary Master /dev/hdc

Secondary Slave /dev/hdd

QUESTION 206:

A business wants to be able to track all Websites that are visited by its employees. Which of the following Linux packages would BEST serve this need?

- A. BIND
- B. Samba
- C. Apache
- D. Squid

Answer: D

Explanation: squid is a high-performance proxy caching server for web clients, supporting FTP, gopher and HTTP data objects. Squid keeps meta data and especially hot objects cached in RAM, caches DNS lookup, supports non-blocking DNS lookups and implements negative caching of failed requests. As well as you can apply the rules to block the site, can trap the site visited by the users etc. Squid program belongs to squid package.

QUESTION 207:

In which of the following runlevels is X Windows started by default?

- A. 2

- B. 3
- C. 5
- D. 6

Answer: C

Explanation: To run X window system by default system should started in runlevel 5. In /etc/inittab file can specify the default run level.

QUESTION 208:

A technician is creating MPEG-2 video files in Linux. In addition to a video card with input source, which of the following multimedia components is also required?

- A. XFree86
- B. Sound card
- C. MPEG-2 encoder
- D. MPEG-2 capable camera

Answer: C

QUESTION 209:

A Linux administrator is trying to set up a server that provides the MOST secure communication for remote administration. Which of the following is the BEST choice for this situation?

- A. SSH (Secure Shell)
- B. RSH (Remote Shell)
- C. FreeRADIUS
- D. Kerberos

Answer: A

Explanation: ssh (Secure shell) is a program for logging into a remote machine and for executing commands on a remote machine. It is intended to replace rlogin, telnet, rsh all these are called insecure communication tools because communication using these tools are traveled in plain text format so ssh is the best way for secure communication. ssh uses different methods to make communication secure.

QUESTION 210:

Using the BASH shell, which of the following commands will set number of entries

in the command history to 1000?

- A. set NEWSIZE=1000
- B. setenv HSIZE=1000
- C. alias HISTORY=1000
- D. export HISTSIZE=1000

Answer: D

Explanation: HISTSIZE is the environmental variable, which carry the numeric value to store the number of commands on history.

You can print the value of echo \$HISTSIZE

To assign value export HISTSIZE=1000 where export exports the HISTSIZE environmental to sub shell with new value.

Other related environmental variables are:

HISTFILE, HISTFILESIZE etc

QUESTION 211:

Which of the following commands will display a list of system hardware after the Linux system boots?

- A. proc
- B. POST
- C. dmesg
- D. systeminfo

Answer: C

Explanation: dmesg is the command displays the kernel boot messages. At boot time Kernel detected the device or not can identify from the boot messages.

/var/log/dmesg contains the boot related messages.

QUESTION 212:

Users are unable to print to a remote printer on a Linux server. The technician determines that all of the users and machines have the right to print to the server. The permissions on the printer's spool directory are set to allow access to all users. Users can print to other printers on the server. Which of the following is MOST likely the problem?

- A. The /etc/printcap file is missing.
- B. The SUID bit on this printer's spool directory is not set.
- C. Root does not have read permission on the print filter.

D. Users do not have execute permission on the print filter.

Answer: B

QUESTION 213:

A production Web server is experiencing an unusually large amount of new incoming TCP connections. Which of the following is MOST likely the problem?

- A. DoS (Denial of Service)
- B. Virus
- C. Too many users
- D. NIC malfunction

Answer: A

Explanation: The Denial of Service (DoS) attack does not necessarily involve exploiting a particular vulnerability, but instead attempts to exhaust or otherwise deprive a system of necessary resources like CPU time, memory or network "Bandwidth".

QUESTION 214:

The IDS (Intrusion Detection System) reports many events that are not security incidents. Which of the following is the term for these types of events?

- A. True positives
- B. True negatives
- C. False positives
- D. False negatives

Answer: C

QUESTION 215:

A Linux server is to be used as a Web server. Which of the following is the BEST way to configure its Ethernet adapter?

- A. Use an IP alias.
- B. Use a static IP address.
- C. Configure the DHCP Server.
- D. Configure the DHCP Client.

Answer: B

Explanation: We can assign IP address in Network Interface either static or dynamic. In Network LAN we use the firewall to filter the packets. In LAN Web server, mail server, ftp server etc required fixed IP address because we apply the firewall rule on the basis of Source Address, Destination Address etc.

QUESTION 216:

An administrator wants to create a script that installs NewFonts.rpm on several desktop computers. The script should check if the RPM is already installed. Which of the following commands would determine if NewFonts.rpm is already installed?

- A. rpm -a NewFonts
- B. rpm -q NewFonts
- C. rpm --list NewFonts
- D. rpm --checksig NewFonts

Answer: B

Explanation: rpm -q packagename : Checks whether package is installed or not.
rpm -qa : Check and prints all installed packages from the local RPM database.
rpm -ivh packagename : Install the Package
rpm -Uvh or -Fvh packagename : Upgrade the package.

QUESTION 217:

A recent hard drive addition to a server has a problem: the administrator has to manually mount the drive every time the server is rebooted. Which of the following needs to be done in order to resolve this issue?

- A. Edit the /etc/fstab file.
- B. Load a kernel module for the drive.
- C. Edit the /dev entry for the device.
- D. Change the default run level in /etc/inittab.

Answer: A

Explanation: At boot time system automatically mounts all device or network filesystem written in /etc/fstab.

Pattern of /etc/fstab

Device mount point file system mount options dump frequency fsck order

Example:

/dev/hda10 /data ext3 defaults 0 1 : Mounts /dev/hda10 on /data
server1.example.com:/data /mnt/nfs nfs defaults 0 0 : Mounts the /data shared from
server1.example.com on /mnt/nfs.

QUESTION 218:

A user wants to define a new Web space. The browser header will be examined by Apache to determine which Web space the client will be sent, rather than by examining the port number of IP address. Which of the following directives can be used to accomplish this?

- A. HeaderSite
- B. VirtualHost
- C. VirtualWebsite
- D. NamedSiteEntry

Answer: B

Explanation: VirtualHost directive starts to define a new web space having lots of other directives. Example:

```
<VirtualHost 192.100.1.1>  
.....  
ServerName www.certkiller.com  
DocumentRoot /var/www/certkiller  
ServerAdmin webmaster@certkiller.com  
DirectoryIndex index.php index.htm index.html  
</VirtualHost>
```

QUESTION 219:

The administrator notices malicious network traffic from the example.com domain and would like to contact the example.com administrator. Which of the following commands would display contact information for this domain?

- A. whois
- B. fuser
- C. whoip
- D. ipuser

Answer: A

Explanation: whois is called the client for the whois server, which displays the user's information from the whois server.

QUESTION 220:

Which of the following are the default permissions for a symbolic link file?

- A. Same as the target file
- B. Full access to everyone
- C. Full access to root only
- D. Full access to the owner only

Answer: B

Explanation: When we create the symbolic link, the link file comes with 777 permissions. As per security it is dangerous.

Example:

In -s testfile testlinkfile

See the Long listing of testlinkfile:

lrwxrwxrwx

Where l represents the link file.

QUESTION 221:

An administrator needs to check which users are utilizing the u command and when it is being utilized. Which of the following log files reveals this information?

- A. /etc/wtmp
- B. /etc/sudoers
- C. /var/log/lastlog
- D. /var/log/messages

Answer: D

Explanation: /var/log/messages contains the standard log messages ie. service start, stop, user login, user logout, as well as maintains the record of commands etc.

QUESTION 222:

Which of the following commands is used to rebuild the man page database used by the whatis command?

- A. man -k
- B. whatis -r
- C. makewhatis
- D. man --rebuilddb

Answer: C

Explanation: makewhatis command is used to update the whatis database used by whatis and man command. By default makewhatis command is run by cron daily job.

QUESTION 223:

A daemon unexpectedly terminates. Which of the following files can be viewed to determine the source of the problem?

- A. wtmp
- B. dmesg
- C. boot.log
- D. messages

Answer: D

Explanation: /var/log/messages contains the standard log messages, i.e service start, service stop, errors while service stop or start, user login or logout etc. So, to debug with the service problem better read carefully the /var/log/messages.

QUESTION 224:

Using SSH (Secure Shell), what is the correct syntax for the user doe4?to login remotely to the example.com server?

- A. ssh jdoe4 example.com
- B. ssh -l jdoe4 example.com
- C. ssh --user jdoe4@example.com
- D. ssh example.com jdoe4:password

Answer: B

Explanation: Answer B is correct :
Syntax of ssh is: ssh server : by default assume to root user
ssh username@server : Login as username
ssh -l username server

QUESTION 225:

A hard drive is taking a long time to complete file copies. The user suspects that the

IDE drive may not be using DMA. Which of the following commands can be used to verify the hard drive connected on /dev/hda has DMA enabled?

- A. sysinfo /dev/hda
- B. fdisk -l /dev/hda
- C. grep dma /proc/hdinfo
- D. grep dma /proc/ide/hda/settings

Answer: D

Explanation: /proc is the Virtual Filesystem contains the information of running kernel. Which devices are detected by kernel, how much swap space are available, number of partitions on IDE or SCSI are available on /proc file system. Similarly either DMA is using or not you can verify from /proc/ide/hda/settings file.

Similarly number of partitions: /proc/partitions

Swap Space : /proc/swaps

QUESTION 226:

Which of the following encryption algorithms are natively supported for the /etc/shadow file?

- A. RC4
- B. DES
- C. 3DES
- D. twofish

Answer: B

Explanation: DES the variants of DES and other crypto algorithms of OpenSSL. /etc/shadow supports MD5 or DES encryption algorithm.

QUESTION 227:

Which of the following commands can be used to verify if a specific cron job is scheduled?

- A. at -m
- B. crond -q
- C. crontab -l
- D. cat /proc/timer/crond

Answer: C

Explanation: Using crontab command can install or remove the cron schedule for

specific user.

crontab -l : Lists all cron job

crontab -r : Removes the cron job

crontab -e : Open in Edit mode of cron job.

QUESTION 228:

A technician is installing hardware in a Linux system that is not supported by the current kernel. The Linux distribution does not provide any updates. Where should the user obtain a newer kernel?

- A. The gnu.org Website
- B. The kernel.org Website
- C. The SourceForge Website
- D. The hardware manufacturer's Website

Answer: B

Explanation: www.kernel.org is the official site for Linux Kernel. All New kernel, Kernel patch etc available on www.kernel.org.

QUESTION 229:

Which of the following file system types should be used for the /boot partition, assuming it should be accessible from a minimal boot kernel?

- A. jfs
- B. ext2
- C. ext3
- D. reiserfs

Answer: B

Explanation: ext2 also called The Second Extended File system should create for /boot partition if it should accessible from the minimal boot kernel.

QUESTION 230:

Which of the following commands creates a swap file system?

- A. swapon
- B. mkswap
- C. mkswapfs

D. mkswapfsiso

Answer: B

Explanation: mkswap command creates the swap file system on device or disk image file. Before creating the swap filesystem device should create as Linux swap (82) type.

Example: mkswap /dev/hda11 : which creates the swap file system on /dev/hda11
swapon /dev/hda11 : which on the swap space of /dev/hda11

QUESTION 231:

Which of the following commands is used to obtain the summary of mounted hard drive partitions?

- A. df
- B. fsck
- C. ls -la
- D. fdisk -l

Answer: A

Explanation: df (Disk Freespace) displays the amount of disk space available on the filesystem containing each file name argument, if no file name is given, the space available on all currently mounted filesystems is shown.

QUESTION 232:

DMA (Direct Memory Access) is required for which of the following items?

- A. Mouse
- B. Keyboard
- C. Serial port
- D. Sound card

Answer: D

QUESTION 233:

On an NIS client, 'cd ~www' changes to /var/www. The correct location for the NIS 'www' user is /mnt/www.

'ypcat passwd | grep www' reports:

www:X:73:NIS www user:/mnt/www:/bin/sh

Which of the following is the BEST solution to the problem?

- A. Remove the www user from the NIS passwd map.
- B. Remove the www user from the local passwd file.
- C. Change the home directory for the www user in the NIS passwd map.
- D. Change the home directory for the www user in the local passwd file.

Answer: B

Explanation: Problem occurred due to same www user is created on local system as well as on NIS server and /etc/nsswitch.conf file indicating the passwd file first local then NIS means user first check on local system if not found sends the query to NIS server. So, to solve the problem, delete the user from the local system.

QUESTION 234:

A user is trying to print a .pdf document using the following command:
lpr flyer.pdf Which of the following results will MOST likely occur?

- A. An error message will appear.
- B. The flyer.pdf file will be displayed.
- C. The flyer.pdf file will print correctly.
- D. The printer will print pages with strange characters.

Answer: D

QUESTION 235:

A Linux technician needs to check the current resource utilization for processes. Which of the following commands should be used?

- A. top
- B. sar
- C. pmap
- D. netstat

Answer: A

Explanation: top command provides the information of real -time view of running processes. It can display system summary information as well as a list of tasks currently being managed by the Linux Kernel.

QUESTION 236:

An administrator watches a Linux system boot and noticed an error with one of the hda partitions. It went by too quickly on the screen for the administrator to read the details. How can this information be recalled?

- A. top
- B. fsck
- C. debug
- D. dmesg

Answer: D

Explanation: dmesg is the command displays the kernel boot messages. At boot time Kernel detected the device or not or error while detecting the device can identify from the boot messages. /var/log/dmesg contains the boot related messages.

QUESTION 237:

An administrator wants to temporarily disable the eth0 network interface on a server. Which of the following commands will accomplish this?

- A. ifconfig disable
- B. ifconfig eth0 off
- C. ifconfig eth0 disable
- D. ifconfig eth0 down

Answer: D

Explanation: Temporarily disable means down the interface, we can disable the interface : either ifconfig eth0 down or ifdown eth0
If you use the ifconfig command, it will displays only the active interface's information.

QUESTION 238:

A network problem occurs somewhere between a Linux PC and a remote Website. Which of the following commands will help locate the point of failure?

- A. netstat
- B. netview
- C. pathping
- D. traceroute

Answer: D

Explanation: traceroute command displays the local as well as remote network path. So, it is use to displays the route packets take to the network host.

QUESTION 239:

No users can connect via SSH (Secure Shell). The SSH daemon is confirmed to be running. Which of the following configuration files may need to be edited to permit logins?

- A. /etc/passwd
- B. pam_deny.so
- C. sshd_config
- D. /etc/xinetd.conf

Answer: C

Explanation: /etc/ssh/sshd_config is the ssh daemon configuration file which contains the keyword-arguments pairs on per line i.e authentication type, protocols, login to root is allowed or not etc.

QUESTION 240:

A user wants to create an image of a system boot disk in order to copy it. Which of the following commands will do this?

- A. dd
- B. cpd
- C. xcopy
- D. cp --disk

Answer: A

Explanation: dd command creates the disk image file.
i.e dd if=diskboot.img of=/dev/fd0 : which create the image of diskboot.img into /dev/fd0.

QUESTION 241:

The /usr/bin/passwd command has the following permissions:

-r-s--x--x 1 root root passwd

Which of the following will occur?

- A. The command will have the sticky bit set.
- B. The command restricts permissions to the superuser.
- C. The command runs with permissions of the superuser.
- D. The command would use SSL (Secure Socket Layer) by default.

Answer: C

Explanation: If SUID bit is set on file, process will run under the security context of owner not executor. SUID bit is represented by s character in the field of user permission.

To set the SUID bit:

`chmod u+s filename`

To Remove SUID bit:

`chmod u-s filename`

QUESTION 242:

Which of the following configuration files should a Linux administrator edit in order to restrict the use of su to a single group?

- A. `/etc/pam.d/su`
- B. `/etc/login.conf`
- C. `/etc/environment`
- D. `/etc/sysctl.conf`

Answer: A

Explanation: `/etc/pam.d/su` file controls the authentication method of su login.

Example:

`auth sufficient /lib/security/pam_rootok.so` : This line allowed to root login.

Similarly

`# Uncomment the following line to implicitly trust users in the "Wheel" group.`

`auth sufficient /lib/security/pam_wheel.so`

QUESTION 243:

A user created the following `grub.conf` file.

`default=0`

`timeout=10`

`splashimage=(hda1)/grub/splash.xpm.gz`

`title Linux Server (2.4.22)`

`root(hda1)`

`kernel /vmlinuz-2.4.22 ro root=LABEL=/ hdc=ide-scsi rhgb`

`initrd initrd-2.4.22`

Which of the following is wrong with this file?

- A. The splashimage should not be gzipped.
- B. The correct path should be /boot/vmlinuz-2.4.22.
- C. The root partition should be mounted "rw", not "ro".
- D. The hard drive label should be (hd0,0), not (hda1).

Answer: D

Explanation: D is the correct answer. In /etc/grub.conf file Disk represent by two different values

splashimage= (hd0,0)/grub/splash.xpm.gz : where hd0 means first harddisk /dev/had and partition index starts from 0 in /etc/grub.conf means /dev/hda1 represents by 0 partition number.

QUESTION 244:

An administrator needs to adjust the MTU (Maximum Transmission Unit) value on an Ethernet interface. Which of the following commands can be used to change the current MTU value to a new one?

- A. route
- B. netstat
- C. iptables
- D. ifconfig

Answer: D

Explanation: ifconfig command is used to display as well as configure the network interface.

ifconfig : Displays the information of network interface information of all active interface.

ifconfig metric N : Sets the metric value

ifconfig mtu N : Sets the Maximum Transmission Unit) to interface.

QUESTION 245:

A new driver version has been downloaded. When it is compiled it asks for the location of the kernel sources. Where are the kernel sources normally located?

- A. /usr/src
- B. /usr/kernel
- C. /opt/kernel
- D. /usr/kernel/src

Answer: A

Explanation: /usr/src/ directory contains the source code of Linux Kernel, you should install the kernel-version.src.rpm RPM.

QUESTION 246:

Using octal permissions, how would a user modify the file test.txt to have the following access privileges?

```
-rwxr----- 1 user1 staff 0 8 May 11:45 test.txt
```

- A. chmod 740 test.txt
- B. chmod 310 test.txt
- C. chmod 047 test.txt
- D. chmod 013 test.txt

Answer: A

Explanation: Answer A is correct because, in output, full permission to owner user, read only to owner group member and no permission to others.

chmod 740 filename:

Read : 4

Write : 2

Execute: 1

Total Permission is 7.

QUESTION 247:

Which of the following is the function of the ARP (Address Resolution Protocol)?

- A. It maps a hostname to a MAC address.
- B. It maps a MAC address to a hostname.
- C. It maps an IP address to a MAC address.
- D. It maps a MAC address to an IP address.

Answer: C

Explanation: ARP (Address Resolution Protocol) is used to map an IP Address to MAC address and RARP (Reverse Address Resolution Protocol) is used to map MAC Address to IP Address.

arp -a : displays the arp table.

QUESTION 248:

Which of the following tools can be used to identify poor password usage from the user by auditing password usage?

- A. crypt
- B. passwd
- C. crackpasswd
- D. crack

Answer: D

QUESTION 249:

A Linux administrator converted the root file system from ext2 to ext3, but neglected to update /etc/fstab. Which of the following will happen the next time the system boots?

- A. The root file system will be corrupted.
- B. The kernel will halt mounting the root file system.
- C. The file system will be automatically detected as ext3.
- D. The system will boot as normal, except journaling will be disabled.

Answer: D

Explanation: Using tune2fs command can upgrade the ext2 filesystem to ext3. But to get the feature of filesystem, you should mount by specifying the filesystem otherwise it takes from /etc/fstab.

At system boot time, all devices automatically mounts by reading /etc/fstab with mounting options, filesystem specified in /etc/fstab.

Suppose filesystem in upgraded in ext3 but mounting with ext2 filesystem means data journaling feature of ext3 will not apply but work normally as ext2 filesystem.

QUESTION 250:

Which of the following commands enables a user to make a newly-created shell script executable by only its owner?

- A. ./<filename>
- B. chown 755 <filename>
- C. ./configure <filename>
- D. chmod u+x <filename>

Answer: D

Explanation: Permission can set either character format or octal format. To execute the file there should be the execute permission on file.

chmod u+x filename: sets the execute permission to owner user.

chmod o-x filename : Removes the execute permission to others.

chmod 700 filename: Sets the Fully Permission to owner user and no permission to group member as well as to others.

QUESTION 251:

An administrator needs to add a new application to an existing Linux machine. The application is available in source code and distributed in a file called "application.tar.gz". After extracting the file, which of the following is the next step in installing the application?

- A. run rpm
- B. run apt-get
- C. run configure, make, make install
- D. move the extracted directory to /usr/local/application

Answer: C

Explanation: Generally Source Code are in archive/compressed format, you should extract or uncompress first.

Suppose you got the file named test.tar.gz

First uncompress using gunzip test.tar.gz

Second Extract from archive : tar -xvf test.tar

In the console (In Current Working Directory) type './configure' when completed check for any errors. If there are no errors you will want to type 'make'. Again check that there are no errors and then type 'make install'.

So installation Process is

Extract from compress/archived files

Use ./configure to check errors

Use make to make executables files

Use make install to install the proper program on proper directories.

QUESTION 252:

Which of the following services commonly uses Port 25?

- A. FTP
- B. POP3
- C. SMTP
- D. SMNP

Answer: C

Explanation: SMTP (Simple Mail Transport Protocol) Uses the Port 25 , POP3 uses 110, HTTP uses 80, telnet uses 23, SSH uses 22 .
/etc/services file maps services with protocol as well as port.

QUESTION 253:

Which of the following commands can be used to provide a reverse lookup of an IP address?

- A. rarp 192.168.0.50
- B. dig -x 192.168.0.50
- C. rlookup 192.168.0.50
- D. hostname -r 192.168.0.50

Answer: B

Explanation: Forward lookup maps the hostname to IP address, Reverse Lookup maps the IP address into hostname.
dig is a DNS lookup utility, which sends the query to DNS server.
-x options is supplied to indicate a reverse lookup.

QUESTION 254:

A Linux user has a file named ackup.tar. How can the detailed file information in the file be viewed without extracting the contents?

- A. tar lf backup.tar
- B. tar tf backup.tar
- C. tar lvf backup.tar
- D. tar tvf backup.tar

Answer: D

Explanation: tar is the standard archiving tool for Linux.
tar cvf tarfilename.tar inputfile : Creates the tar archive file
tar tvf tarfilename.tar : Test the file and lists all archived files
tar xvf tarfilename.tar : Extract the tar file in current directory

QUESTION 255:

A user is unable to access the Internet from their Client. The client's TCP/IP settings are 192.168.1.87/26. The default gateway's IP address is 192.168.1.1. What command must be entered on the client machine to enable communications to the Internet?

- A. `ifconfig eth0 up 192.168.1.87 netmask 255.255.255.128`
- B. `ifconfig eth0 up 192.168.1.87 netmask 255.255.255.192 broadcast 192.168.1.255`
- C. `ifconfig eth0 up 192.168.1.87 netmask 255.255.255.255`
- D. `ifconfig eth0 up 192.168.1.1 netmask 255.255.255.0`

Answer: A

Explanation: `ifconfig` command is used to display as well configure the network interface for current session.

`ifconfig` : Displays the information of all active interfaces.

`ifconfig eth0 up` : which brings the `eth0` interface in up state.

`ifconfig eth0 up 192.168.1.87 netmask 255.255.255.128` : which assign the IP address of 192.168.1.87 and brings up.

QUESTION 256:

A Linux user wants to access the X interface on a remote server. How can this be made secure?

- A. Use SSH (Secure Shell) to forward X11.
- B. Install a secure version of X.
- C. Install an X server on the local client.
- D. Configure local X server to allow the remote host.

Answer: A

Explanation: X Windows System is developed on the basis of client and server architecture. X clients and Server communicate using X protocol over the layer of TCP/IP. But communication between X server and X clients is unencrypted. Using ssh tunnel can make encrypted communication. But to access the application from the X sever using ssh, `X11Forwarding` should be yes in `/etc/ssh/sshd_config` file.

QUESTION 257:

A USB memory stick is plugged into a server, but the `mount` command generates the following error: `mount: special device /dev/sda1 is not a valid block device`
Which of the following is the MOST likely cause of this error?

- A. `/dev/sda` does not exist.

- B. The USB memory stick is not formatted.
- C. The kernel module loader is not available.
- D. A USB 2.0 device was plugged into a USB 1.0 socket.

Answer: C

Explanation: That error comes when module to support USB disks is not loaded.
You can check using the lsmod command.

QUESTION 258:

Which of the following commands can be used to confirm checksums on the Samba package?

- A. rpm -V samba.rpm
- B. rpm -v samba.rpm
- C. rpm -c samba.rpm
- D. rpm -i samba.rpm

Answer: A

Explanation: rpm -V samba.rpm : Verifying a package compares information about the installed files in the packages with information about the files taken from the package metadata stored in the rpm database. Among other things, verifying compares the size, MD5 sum, permissions, type, owner and group of each file.

QUESTION 259:

Which of the following is used to register a new printer with CUPS on a system using default settings?

- A. cupsctl
- B. cups --add-printer
- C. lynx http://127.0.0.1:631
- D. edit /etc/cups/printcap

Answer: C

Explanation: CUPS printing services runs on port 631 and CUPS also called IPP (Internet Printing Protocol). So to access the cups admin page:
lynx http://server:631

QUESTION 260:

Which of the following commands will secure a script file so it could be modified only by the owner?

- A. chmod 700 file
- B. chmod 770 file
- C. chmod 077 file
- D. chmod 777 file

Answer: A

Explanation: Permission can set using the character or octal value.

chmod u+rwx,g-rwx,o-rwx filename : Sets the full permissions to owner user and no permission to group member as well as others.

chmod 700 filename: Same as previous example.

QUESTION 261:

Under which of the following scenarios should an administrator initiate single user mode?

- A. To suspend a user account
- B. To reset a forgotten user password
- C. To run fsck on a damaged filesystem
- D. To check the root and postmaster mail boxes

Answer: C

Explanation: Single user mode is also called the maintenance mode. fsck command checks and repair the filesystem. To check damage filesystem or for system support should login is single user mode. There is another mode emergency which is specially use for filesystem check and maintenance.

QUESTION 262:

A company currently has four Linux servers and wants to install a fifth server to perform user authentication. Which of the following is a valid protocol for centralized user authentication?

- A. MD4
- B. LDAP
- C. SHA1

D. 3DES

Answer: B

Explanation: For Centralize Authentication , Kerberos, LDAP, NIS, SMB, protocols are available in Linux.

QUESTION 263:

An administrator wants to add a new forward DNS Zone file to the Linux DNS server. Which of the following files should be edited to ensure the server will return answers for this zone?

- A. dns.conf
- B. named.conf
- C. resolv.conf
- D. nameserver.conf

Answer: B

Explanation: /etc/named.conf is the main configuration file for zone. User should write in /etc/named.conf file while stating to register new zone.

Example:

```
zone "example.com" IN
{
type master;
file "example.com.zone";
};
```

So, when user sends the request to DNS server, DNS server checks whether zone is available or not in /etc/named.conf.

QUESTION 264:

Which of the following commands can be used to create a link to the file /home/joe/help in /tmp/help.old?

- A. ln -s help help.old
- B. ln -s /home/joe/help /tmp/help.old
- C. ln -s /tmp/help.old /home/joe/help
- D. ln -v /home/joe/help /tmp/help.old

Answer: B

Explanation: There are two types of link: soft link and hard link:

Soft link also called the symbolic link:

ln -s filename linkfilename : Always symbolic link file represents to the original file

Hard Link: New Physical file in the system. It represents to the data of original file rather than the original file name

ln filename linkfilename.

QUESTION 265:

Which of the following will happen when the following command is run?

userdel johnd

- A. The user johnd is removed from the system, deleting all of the data in his home directory.
- B. The user johnd is removed from the system while keeping all of the data in his home directory.
- C. The user johnd is removed from the system and all of his data is moved to the /var/archive directory.
- D. The user johnd is removed from the system and all data in the home directory is moved to the /home/deletedusers directory.

Answer: B

Explanation: userdel command removes the user from the system.

userdel -r username : Removes the user with user's home directory

userdel username: Removes the user from the system by preserving the user's home directory.

QUESTION 266:

Which of the following commands is used to show all of the root processes running on a system?

- A. psroot
- B. jobs 0
- C. ps -au | grep root
- D. cat /proc/sys/proc

Answer: C

Explanation: ps command displays the snapshot of the current processes.

-a All process from all terminals

-u With Process owner.

And grep command filter the string from the output of ps command.

QUESTION 267:

The /etc/exports file on a Linux system contains the following entry:

/var logger(ro,no_root_squash)

In this file, the name logger is which of the following?

- A. A username
- B. A hostname
- C. A program name
- D. A directory or filename

Answer: B

Explanation: In NFS (Network File Services) /etc/exports file is use to exports the directories across the network.

Pattern of /etc/exports

path client(Permission)

so logger is the client name.

QUESTION 268:

When the command 'gcc' is run in a newly created directory, the system returns the error:

command not found

After confirming gcc is installed on the system, which environmental variable must be modified to correct this problem?

- A. \$PATH
- B. \$PROMPT
- C. \$DISPLAY
- D. \$EXECUTABLES

Answer: A

Explanation: \$PATH is the environmental variable, which carry on the information about the system path. After installing the new program you should add the directory of executable path of gcc on PATH environmental variable.

PATH=\$PATH:/root : which add the /root directory in PATH.

QUESTION 269:

A Linux machine always reboots shortly after the boot loader completes. The system should boot into multi-user mode with a non-graphical interface. In order to correct

this, which file needs to be edited and what is the correct parameter?

- A. inittabid:5:initdefault:
- B. inittabid:3:initdefault:
- C. sysinit.confinitdefault 3
- D. sysinit.confinitdefault 5

Answer: B

Explanation:

Standard runlevels are:

0 : Halt

1, Single: Single User Mode

2 : Multi User without NFS

3 : Multi User with NFS

5 : X Window System

6 : Reboot

So Multi User with NFS but without X windows system, system should boot on runlevel 3.

Default Runlevel is specified in /etc/inittab file.

id:3:initdefault:

QUESTION 270:

A Linux server has been configured as a gateway to allow local LAN access to the Internet. Users can ping the gateway address but cannot access the Internet. After further troubleshooting, it has been determined that IP forwarding is not enabled on the Linux server. Which of the following commands will enable routing?

- A. route add IP_FORWARD eth0
- B. sysctl -a net.ipv4.conf.forwarding = 1
- C. echo "1" > /proc/sys/net/ipv4/ip_forward
- D. sysctl -n net.ipv4.conf.eth0.forwarding = 1

Answer: C

Explanation: When IP forwarding is enable, system forwards the packets between different networks.

To enable IP Forwarding for current Session:

echo "1" >/proc/sys/net/ipv4/ip_forward : which tunes the feature of kernel recently on running states.

If you wish to IP Forward on next reboot also you should write in /etc/sysctl.conf
Net.ipv4.ip_forward=1

QUESTION 271:

What does enabling the "dead keys" option during installation do?

- A. It disables the function keys.
- B. It enables application shortcut keys.
- C. It provides the ability to create special characters.
- D. It disables unused keys based on the language option selected.

Answer: C

QUESTION 272:

A telecommunications controller will be installed in a Linux server. The model number is available to identify the card. How can the Linux technician confirm that the device is supported by the Linux distribution?

- A. Check the government's telecommunications Website.
- B. Check the /etc/sysconfig directory.
- C. Check the /dev directory.
- D. Check the Linux distribution's Website.

Answer: D

QUESTION 273:

Which of the following commands lists the file systems available for the NFS (Network File System) server upiter?

- A. ls jupiter
- B. ls -l jupiter
- C. showmount e jupiter
- D. showmount -e jupiter

Answer: D

QUESTION 274:

Which of the following commands could an administrator use to switch to single-user mode without rebooting the system?

- A. init 1

- B. chroot -so
- C. su --single
- D. sudo --single

Answer: A

QUESTION 275:

Which of the following commands allows a user to view undelivered messages on a server using sendmail as the MTA (Mail Transport Agent)?

- A. mail
- B. smtpd
- C. mailq
- D. sendmail -bd

Answer: C

QUESTION 276:

Which of the following is used to terminate a hile loop in a BASH shell?

- A. end
- B. wend
- C. done
- D. elihw

Answer: C

QUESTION 277:

A user named 'john' needs to have read, write, and execute permissions to the following file:

/home/john/resume.

John currently has read-only permission. Which of the following commands can be used to add write and execute permissions for him without changing anyone else's permissions?

- A. chown -f
- B. chmod 700
- C. chmod u+wx
- D. chown -u +wx

Answer: C

QUESTION 278:

How could a user substitute all instances of C with omputer in a file named nstructions and display the results in the terminal window?

- A. sed s/PC/computer/g instructions
- B. sed -s PC -r computer instructions
- C. cat instructions | awk C omputer
- D. cat instructions | awk '/PC/ print omputer'

Answer: A

QUESTION 279:

Which of the following commands is used to check the status of a software RAID?

- A. cat /proc/mdstat
- B. cat /proc/ide/raid
- C. mkraid --status
- D. mkraid --verify

Answer: A

Explanation: /proc/mdstat file contains the status of RAID device.

QUESTION 280:

A system is running slowly and the administrator wants to find the process that is using the MOST resources. Which of the following will accomplish this?

- A. Use top to list processes ranked by CPU utilization.
- B. Use obs to list CPU-intensive processes in order.
- C. Use ice -l -n 1 to list the process with highest CPU utilization.
- D. Use is free to list processes with the highest foreground priority.

Answer: A

Explanation: top program provides a dynamic real-time view of running system. It can display system summary information as well as a list of tasks currently being

managed by the Linux Kernel.
Use R option in top command to sort the processes by cpu utilization.

QUESTION 281:

Which of the following packages would be selected during installation to provide a Web server?

- A. Bind
- B. Squid
- C. Apache
- D. Mozilla

Answer: C

Explanation: Apache is the default web server, you should select this to install.

QUESTION 282:

Which of the following is used to secure http communications?

- A. Blowfish
- B. SSH (Secure Shell)
- C. PGP (Pretty Good Privacy)
- D. TLS (Transport Layer Security)

Answer: D

QUESTION 283:

Which of the following services could be used to provide remote configuration of the networking address, routing, and DNS settings for other devices on a network?

- A. dhcpd
- B. routed
- C. netsetup
- D. netconfig

Answer: A

Explanation: dhcpd is Dynamic Host Configuration Protocol Server, which provides IP address, gateway, DNS settings to client.

QUESTION 284:

Company security policy requires that all authentication errors be logged to a printed hard copy. Which of the following entries in /etc/syslog.conf would BEST accomplish this?

- A. auth.err | lpr
- B. auth.err -print
- C. auth.err +/dev/lp0
- D. auth.err -/var/log/auth -lpr

Answer: A

Explanation: lpr command sends the printing queue to printer. If you want to print the hard copy of log better pipe in /etc/syslog.conf

QUESTION 285:

If the IP address of a host on the network is known, which of the following commands can be used to find the MAC address of that host?

- A. arp
- B. dig
- C. nslookup
- D. traceroute

Answer: A

Explanation: arp (Address Resolution Protocol) manipulates the kernel's ARP cache in various ways. The primary options are clearing an address mapping entry and manually setting up one.

arp -a : Display all arp cache

QUESTION 286:

A Linux technician is installing a new SCSI tape drive. Which of the following is the default ID on a SCSI controller card?

- A. 1
- B. 7
- C. 11
- D. 16

Answer: B

QUESTION 287:

After setup has completed, the user decides to test the DVD drive to ensure it was installed properly. After issuing `mount /mnt/dvdrom`, the error "mount: no medium found" is returned. Which of the following actions will MOST likely solve this problem?

- A. Create the directory `/mnt/dvdrom`.
- B. Issue the command `"mount /dev/dvdrom /mnt/dvdrom"`.
- C. Ensure that `/mnt/dvdrom` has an entry in `/etc/fstab`.
- D. Insert a DVD into the drive, then re-issue the mount command.

Answer: D

Explanation: if you have DVD rom in you system the mount point for DVD (`/mnt/dvdrom`) creates automatically at installation time. So better way is insert and re-issue the mount command.

QUESTION 288:

When a USB memory stick is used on a Linux server, which of the following device files would likely be used to access it?

- A. `/dev/sda`
- B. `/dev/ram0`
- C. `/dev/usb/hd1`
- D. `/dev/usb/lun0`

Answer: A

Explanation: In Linux USB Memory stick recognized as a SCSI disks, device name so device name `/dev/sda`, `/dev/sdb` etc.

QUESTION 289:

A Samba server is not functioning properly. Which of the following commands should be run to verify that the configuration is correct?

- A. `testparm`
- B. `smbcheck`

- C. `smbd --check`
- D. `chkconfig samba`

Answer: A

Explanation: `testparm` is a simple tool used to check the configuration file of `smbd`. It checks `/etc/samba/smb.conf` file and return error if error exists.

QUESTION 290:

The administrator sees this line in `/etc/fstab`:

`/dev/md0 / ext3 defaults 0 1`

Which of the following BEST describes the `/dev/md0` device?

- A. ATA device
- B. SCSI device
- C. LOOP device
- D. RAID device

Answer: D

Explanation: RAID (Redundant Array of Independent Disks) uses for fault tolerance. In Linux RAID Device name starts from `/dev/md0`, `md1` etc.

QUESTION 291:

Which of the following can be used to determine if the entries in `/etc/shadow` are corrupt?

- A. `pwd`
- B. `pwck`
- C. `grpck`
- D. `passwd`

Answer: B

Explanation: `pwck` command verifies the integrity of system authentication information. All entries in the `/etc/passwd`, `/etc/shadow` are checked to see that the entry has the proper format and valid data in each field.

QUESTION 292:

new user must have local FTP access but not interactive login access. The following

entry in /etc/passwd corresponds to this user:

repositoryuser:x:502:502::/home/repositoryuser:/bin/false

Upon testing, repositoryuser cannot login to the FTP server. Which of the following is MOST likely the problem?

- A. The repositoryuser is not in the FTP group.
- B. There is an entry in /etc/ftpusers for repositoryuser.
- C. There is an entry in /etc/shells for repositoryuser's shell.
- D. There is no entry in /etc/exports for repositoryuser's home directory.

Answer: B

Explanation: /etc/ftpusers file contains a list of user to whom denied for FTP login. If you want to allow you should remove the user from that file.

QUESTION 293:

When remotely administering a Linux machine using SSH (Secure Shell), the administrator added a rule to deny traffic on Port 22. SSH is now no longer accepting connections. Which of the following would resolve this problem?

- A. Restart the SSH service
- B. SSH to Port 23 and remove the rule
- C. Remove the rule before it is activated
- D. From the system console, remove the Port 22 rule

Answer: D

Explanation: SSH (Secure Shell) uses the port 22. You can deny ssh login from remote hosts using TCP wrappers, iptables or other firewall utilities. If you want to allow the SSH connection from remote hosts remove the rule for 22 port.

Example:

iptables -t filter -A INPUT -p tcp -dport 22 -j DROP : It drops ssh connection from all hosts.

iptables -t filter -L : Lists all iptables filter rules

iptables -D INPUT RULNUMBER : which removes the rule

QUESTION 294:

Which of the following commands would ensure that the Linux server would send packets destined for 192.168.100.0/25 to 192.168.200.5?

- A. route 192.168.100.0 netmask 255.255.255.128 gw 192.168.200.5
- B. route 192.168.100.0 netmask 255.255.255.192 gw 192.168.200.5

- C. route add -net 192.168.100.0 netmask 255.255.255.128 gw 192.168.200.5
- D. route add -net 192.168.100.0 netmask 255.255.255.192 gw 192.168.200.5

Answer: C

Explanation: Answer C is correct Number of bits for network is 25 so subnet mask is 255.255.255.128.

QUESTION 295:

When a new Snort system is installed, where should the system be placed on the network?

- A. On the network perimeter
- B. On the core network router
- C. On an isolated network segment
- D. Near the system administrator's workstation

Answer: A

QUESTION 296:

A workstation user is unable to mount a CD-ROM drive. Which of the following commands can be used to confirm the operating system recognizes the drive?

- A. find cdrom
- B. dmesg | grep CD
- C. cat fstab | grep CD
- D. cat mtab | grep cdrom

Answer: B

Explanation: demsg command prints the kernel boot time message where what device recognized by kernel, which modules loaded, which failed to recognized etc are written.

So to identify that kernel has recognized the CD or not you can search the certain pattern in the output of dmesg and prints the lines using grep command.

QUESTION 297:

A system administrator inherits a Linux system with a 2.2 kernel. After upgrading to a 2.4 kernel, the ipchains commands no longer function. Which of the following is the likely cause?

- A. The 2.4 kernel does not support ipchains
- B. The ipchains package needs to be upgraded
- C. The old ipchains module needs to be loaded
- D. The new kernel was not compiled with ipchains support

Answer: D

Explanation: You should compile the kernel with ipchains support. If kernel doesn't has a support to certain feature, alternative way is compiled with feature support.

QUESTION 298:

A new administrator is asked to reconfigure a Linux machine. The prior administrator did not give the root password to the current administrator. Which of the following is the FIRST step the new administrator should do to reset the root password?

- A. Boot to single user mode.
- B. Reinstall the operating system.
- C. Run a password recovery utility.
- D. Use view to edit the password file.

Answer: A

Explanation: If you forget the root password, you can set new password by booting the system in single user mode. When you boot the linux system in single user mode, you will get directory bash shell without authentication.

QUESTION 299:

Which of the following is the BEST security practice for compiling the package from the source?

- A. Compile and install the package as root.
- B. Compile as a normal user and install as root.
- C. Compile as root and install as a normal user.
- D. Compile and install the package as a normal user.

Answer: B

Explanation: Normal user can compile the source code but can't install because at installation time, program creates lots of directory, sub-directory under /bin or

/sbin or /usr/bin or /usr/sbin so normal user doesn't have sufficient permission to create these directories. Better compile as a non-root and install as root user.

QUESTION 300:

Which of the following is the default file name for the make command?

- A. Make
- B. Config.in
- C. Makefile
- D. Config.make

Answer: C

Explanation: make command helps to determine automatically which pieces of a large program need to be compiled and issue the commands to recompile them. By default make command reads the MakeFile to describe the relationships among files in the program.

QUESTION 301:

Which of the following processes has the lowest PID (Process ID)?

- A. init
- B. klogd
- C. kswapd
- D. syslogd

Answer: A

Explanation: init also called the parent of other processes, which starts at boot time so always init has Process ID 1.

QUESTION 302:

The administrator issues the 'ls -l /home' command and sees the following output:
drwxr-sr-x 2 578 578 4096 Jun 13 13:50 user1
The output indicates which of the following?

- A. User1 is a system administrator.
- B. The user1 directory has 578 inodes.
- C. The user1 entry was deleted from /etc/passwd.
- D. The user1 directory is now owned by user 578.

Answer: D

Explanation: Every user maps into unique User ID called UID and every group maps into unique Group ID called GID. You can read from /etc/passwd file regarding the UID and primary group ID of user.

Every file is owned by user and their primary group. In Output 578 is the owner user and 578 is the owner group of user1 directory.

QUESTION 303:

Which of the following virtual console sessions does XFree86 use by default?

- A. 1
- B. 3
- C. 5
- D. 7

Answer: D

Explanation: by default 6 Virtual Consoles from F1-F6 for console login and F7 Virtual Console for GUI Login.

QUESTION 304:

An administrator wishes to mount an NFS (Network File System) export of the directory /usr located on 10.0.0.1 onto the local mount point called /usr. Which of the following commands should be used?

- A. mount
- B. mountd
- C. remount
- D. smbmount

Answer: A

Explanation: mount command helps to mount to different devices, shared filesystem etc.

mount /dev/hda11 /data : Which mounts the /dev/hda11 into /data directory

mount -t nfs 192.168.0.75:/public /local : Which mounts the shared directory from 192.168.0.75 into /local directory. mounts command brings the external filesystem into the same system hierarchy.

QUESTION 305:

Which of the following protocols is used by NIS?

- A. rpc
- B. ftp
- C. snmp
- D. dhcp

Answer: A

Explanation: NIS, NFS etc services are called RPC (Remote Procedure call) so portmap service is required for all RPC services.

QUESTION 306:

The /var/log/messages file was deleted and the syslog daemon did not recreate it. Which of the following commands would remedy this situation?

- A. touch /var/log/messages
- B. syslogd --recreate-file
- C. logform /var/log/messages
- D. cat /dev/random > /var/log/messages

Answer: A

Explanation: /var/log/messages is the log file contains the standard system log. If this file is deleted then simply you can issue
touch /var/log/messages : which creates the blank file and system started to write the log into this file.

QUESTION 307:

How can the Apache working directory be set to /home/user/html from the command line?

- A. httpd -d /home/user/html
- B. httpd -r /home/user/html
- C. httpd --root /home/user/html
- D. httpd --directory /home/user/html

Answer: A

Explanation: By default /etc/httpd is the default sever root for httpd service. If you want to change the server root directory
#httpd -d directorypath

QUESTION 308:

The administrator discovers that the SSH (Secure Shell) key may have been compromised. Which of the following commands would the administrator run to create a new key?

- A. keygen-ssh
- B. ssh-keygen
- C. make ssh-key
- D. make clean | ssh-key

Answer: B

Explanation: ssh-keygen command generates, manages and conferts the authentication keys for ssh.
ssh-keygen -t rsa

QUESTION 309:

A user is editing a file in vi and wants to run the command ps -aux without leaving vi. Which of the following commands will do this?

- A. :# ps -aux
- B. :! ps -aux
- C. :// ps -aux
- D. :cmd ps -aux

Answer: B

Explanation: if you want to execute external command in vi editor, you should write escape + :!command but it doesn't write the output into the file.
If you want to execute the command as well as you want to write the output into the file:
Escape + !!command

QUESTION 310:

When a login shell exits, BASH reads and executes commands from which of the following files?

- A. ~/.bash_exit
- B. ~/.logoff_now
- C. ~/.bash_logout
- D. ~/.logoff_shell

Answer: C

Explanation: ~/.bash_logout file executes when user logout from the bash shell. Most of the automatic scripts can execute while user logout for the shell.

QUESTION 311:

Which of the following is a popular open source tool that is used for vulnerability assessment?

- A. dig
- B. nessus
- C. slocate
- D. nslookup

Answer: B

Explanation: nessus is the remote security scanner for Linux, BSD, Solaris. nessus open source tool for vulnerability assessment. You can visit www.nessus.org for more details.

QUESTION 312:

Which of the following commands will display information in the manual page for the passwd file?

- A. man 2 passwd
- B. man 5 passwd
- C. man -k 2 passwd
- D. man -k 5 passwd

Answer: B

Explanation: man 5 passwd displays manual page for passwd command.

QUESTION 313:

Which of the following is a valid command to format a partition as Reiser FS?

- A. mkfs /dev/hda6
- B. reiserfs /dev/hda6
- C. mkfs.reiserfs /dev/hda6
- D. mkfs -reiserfs /dev/hda6

Answer: C

Explanation: mkfs.reiserfs command creates the reiserfs filesystem similarly mkfs.ext2 for ext2 filesystem, mkfs.msdos for ms-dos filesystem.

QUESTION 314:

The user of a Linux workstation reports slow network performance during heavy Web access. The workstation is connected to an unmanaged switch. Which of the following is MOST likely the problem?

- A. The network card is bad.
- B. The network card is disabled.
- C. The network card is in promiscuous mode.
- D. The network card duplex setting is incorrect.

Answer: D

Explanation: That problem can occur due the duplex problem of network interface card.

Use the mii-tool -v eth0 to list the duplex setting of your card as well as change settings using the mii-tool.

QUESTION 315:

Where is the ACPI (Advanced Control and Power Interface) power management dynamic information stored when devfs is compiled into the kernel?

- A. /dev
- B. /usr
- C. /var
- D. /proc

Answer: D

Explanation: you can the ACPI information in /proc/acpi directory.

QUESTION 316:

The command `ls -l file` is issued, and the result is:

`-rwxrw---x 5 root wheel 8192 Jan 01 21:00 file`

Which of the following `chmod` commands corresponds to the current permissions of the file?

- A. `chmod 471 file`
- B. `chmod 623 file`
- C. `chmod 726 file`
- D. `chmod 761 file`

Answer: D

Explanation: In output permission of file is:

Read, write and execute to user owner, read, write to owner group member and execute is for others.

For user: `rw`: 7

For group member: `rw`: 6

For Others: `r`: 4

`chmod 761 filename`

QUESTION 317:

Linux disk indicates that it has errors. Which of the following commands tests an entire ext2 file system and repairs errors without user interaction?

- A. `fdisk -V`
- B. `e2fsck -a`
- C. `e2fsck -V`
- D. `e2fsck -y`

Answer: D

Explanation: `e2fsck` command is used to check a Linux ext2 or ext3 filesystem.

`e2fsck` supports ext3 filesystem by applying the journal to the filesystem before continuing with normal `e2fsck` processing,

`e2fsck /dev/hda11`

`-y` option helps to assume the answer of yes to all questions means (doesn't ask for the user interaction)

QUESTION 318:

Which of the following commands will allow a Linux administrator to view waiting print jobs for all printers?

- A. lpq -a
- B. lpq -A
- C. printq -A
- D. printq -a

Answer: A

Explanation: lpq prints the all printing queue of printer. -a option specified the verbose option.

lpr -Pprinter1 filename: Sends the printing job to printer

lpq -a -Pprinter1 : Prints all printing queue of printer printer1 in verbose.

QUESTION 319:

Which of the following commands can be used to display the location of all the setuid regular files on /mnt?

- A. find /mnt -mode s -ls
- B. find /mnt -setuid -ls
- C. find /mnt -suid -type f -ls
- D. find /mnt -type f -perm -u+s -ls

Answer: D

Explanation: find command find all files on the basis of type, time stamp, owner, permission.

find / -name test : search all files having name test

find / -type f : search all normal files

find / -perm +u+w : search all files having write permission to user

SUID or SGID bit is represents by the s character. So to find all files suid regular files

find / -type f -perm -u+s

QUESTION 320:

The following line is found in /etc/inittab

~ 3:2345:respawn:/sbin/mingetty tty3 ~

What is the meaning of the second field in this configuration line?

- A. A terminal id
- B. A timeout value

- C. A flag or option code
- D. A list of runlevels

Answer: D

Explanation: Second field represents the run levels to make available the terminal.

QUESTION 321:

Which of the following packages is needed on a server to allow other Linux workstations to authenticate local users through the server?

- A. NIS
- B. Imapd
- C. Samba
- D. NFS (Network File System)

Answer: A

Explanation: NIS (Network Information Services) known as traditional directory services for centralize authentication.

QUESTION 322:

A RAID controller is to be installed in Linux as the boot device. Which of the following sources will BEST confirm that the hardware is supported by the version of Linux being installed?

- A. Internet search engine
- B. www.linuxdoc.org
- C. Linux distribution Website
- D. RAID manufacturer's Website

Answer: C

Explanation: Check the Hardware Compatibility list of distributor's web site.

QUESTION 323:

Which of the following commands will create the directory /home/gawd/tools/security regardless of the existence of its parent directories?

- A. `md -m /home/gawd/tools/security`

- B. `mkdir -m /home/gawd/tools/security`
- C. `mkdir -p /home/gawd/tools/security`
- D. `mkdir --makepath /home/gawd/tools/security`

Answer: C

Explanation: `mkdir` command creates the directory by default it should have the parent directory. `-p` option doesn't generate any errors if parent directory doesn't exist as well as create the parent directory also.

QUESTION 324:

Which of the following IRQs is commonly used by `/dev/hda`?

- A. 3
- B. 7
- C. 14
- D. 15

Answer: C

QUESTION 325:

After a company-standard installation, a user with a Swedish keyboard has the English character set loaded. Which of the following configuration files should be edited to support the specific country keyboard?

- A. `Xmodmap`
- B. `keyb.conf`
- C. `XF86Config`
- D. `.bash_profiles`

Answer: C

Explanation: `XF86Config` file contains the information of Keyboard, Video card, Monitor etc so to change the country keyboard you should configure the `XF86Config` file.

QUESTION 326:

How should a Linux administrator prevent the root user from logging in remotely via SSH (Secure Shell)?

- A. Add denyLogin to /root/.ssh/sshd_config
- B. Add denyRootLogin to /etc/ssh/sshd_config
- C. Add permitLogin no to /root/.ssh/sshd_config
- D. Add permitRootLogin no to /etc/ssh/sshd_config

Answer: D

QUESTION 327:

The system administrator wishes to view vmstat output once every 10 seconds for the next minute. Which of the following commands accomplishes this?

- A. vmstat 10 6
- B. vmstat -10 -1min
- C. vmstat 10; sleep 60
- D. vmstat --time='1 min' 10

Answer: A

Explanation: vmstat command reports information about processes, memory, paging, Block IP, traps and cpu activity.

Syntax: vmstat [options] [delay] [count]

QUESTION 328:

Which of the following commands can be used to ensure that all the files in /home/user and its subdirectories are accessible only by the owner of /home/user?

- A. chmod 711 /home/user
- B. chmod 700 /home/user
- C. chown user /home/user/*
- D. chown -R user /home/user

Answer: B

Explanation: chmod command helps to change the permission of file/directory.

Default permission for home directory also same that no one can access the home directory then owner user. That is read, write and execute only to owner user.

ls -ld /home/user1

drwx----- 12 user1 user1

If you want to set this permission to home directory or any other directory

chmod 700 directory

Where r=4, w=2 and x=1 total 7

QUESTION 329:

Which of the following RAID configurations is BEST for a streaming-video server where reliability is NOT important?

- A. RAID 0
- B. RAID 1
- C. RAID 3
- D. RAID 5

Answer: A

Explanation: RAID Level 0 is called stripping without parity and required at least two disks. The resulting RAID device is a virtual partition the size of all the member of RAID partitions added together. RAID 0 allows creation of file system bigger than any one disk and has high performance for reads and writes. However, it is not truly for redundant array, if any disk in the RAID device fails, the file system on the RAID device is destroyed.

QUESTION 330:

Which command would set a file's permissions to the following?

`rwxr--r--`

- A. `chmod 744 filename`
- B. `chmod 755 filename`
- C. `chmod o+x filename`
- D. `chmod u=rw filename`

Answer: A

Explanation: Permission can category into the three different category, for owner user, for group member and for others.

In output read,write and execute owner user, read only to group member and others so to set that permission into the file,

User: `rw` total numeric value is 7

Group Member : `r` numeric value is 4

Others : `r` numeric value is 4

So

`chmod 744 filename`

QUESTION 331:

An administrator would like to test a newly installed printer. Which of the following commands would accomplish this?

- A. `print -check`
- B. `lpr -P/dev/zero`
- C. `echo testing | lpr`
- D. `lpr -test < /dev/zero`

Answer: C

Explanation: `lpr` command helps to send the printing queue to the printer.

`lpr filename` : which sends the file to print

`ls -l | lpr` : which sends the output of `ls` command to print

`echo $HOSTNAME | lpr` : which sends the output of `HOSTNAME` variable to print

QUESTION 332:

Ping requests to a network gateway fail. It is determined that an interface's subnet mask is incorrect. Which of the following commands will correct this issue?

- A. `if eth0 subnet 255.255.255.0 up`
- B. `ifconfig eth0 netmask 255.255.255.0`
- C. `ifup eth0 subnet_mask=255.255.255.0`
- D. `ethtool eth0 subnet_mask=255.255.255.0`

Answer: B

Explanation: `ifconfig` command is used to configure or display the configuration of an interface.

`ifconfig` : displays the information of all enabled interfaces.

`ifconfig -a` : displays the information of all enabled/disabled interface

`ifconfig eth0` : displays the information of `eth0`

`ifconfig eth0 netmask mask`: sets the netmask value to interface.

QUESTION 333:

Which of the following services is commonly started from `xinetd`?

- A. `smbd`
- B. `httpd`
- C. `sendmail`
- D. `finger`

Answer: D

Explanation: Daemon is the process runs in background and provides the services. In Linux two types of daemon one is called standalone located in /etc/init.d another is transient or controlled by xinetd super daemon located in /etc/xinetd.d/. finger is the transient service controlled by xinetd.

QUESTION 334:

Which of the following commands can be used to view a user's crontab entry?

- A. cronview
- B. crontab -l
- C. crontab -v
- D. crontab -e

Answer: B

Explanation: crontab command is used to manager crontab schedule.

crontab filename : install the crontab schedule to the user

crontab -l : List all user's crontab schedule entry

#crontab -r : Remove the user's crontab schedule entry

crontab -e : Edit the user's crontab schedule entry

QUESTION 335:

In a Linux software RAID 1 array created during the installation process, the primary IDE master has a hardware failure. Now the system will not boot. Which of the following will allow the system to boot properly and salvage the information?

- A. Run fsck on the faulty drive.
- B. Use Disk Druid to repair the array.
- C. Use fdisk to repair the partition table.
- D. Remove the faulty drive from the system.

Answer: D

Explanation: RAID (Redudant Array of Independent Disks) use for fault tolerance.

In RAID Level 1 you required minimum two disks which is called mirroring. When any disk failed from the RAID, you can replace by other new disks and reboot the system, it will re-generate the mirror data of another disk.

QUESTION 336:

An application is failing and indicates that the error.log should be viewed, but no location is provided. How can this file for the error.log be found effectively?

- A. find / -n error.log
- B. find -name error.log
- C. find / -name error.log
- D. find / -daystart -amin 60 -name error.log

Answer: C

Explanation: you can find out the files on the basis of name, atime, mtime, ctime, type of file, ownership etc.

-name options find the files on filename basis

Example:

find /etc -name passwd : search all files having filename passwd

find /etc -iname passwd : case-insensitive version of name option.

QUESTION 337:

After installing or updating a dynamically linked library, the technician needs to reload /etc/ld.so.conf and refresh the dynamic linker's cache so new programs that need the new library can run. Which of the following programs should be run?

- A. ldconfig
- B. ldupdate
- C. ld --reload
- D. kill -HUP 1

Answer: A

Explanation:

ldconfig creates the necessary links and cache to the most recent shared libraries found in the directories specified on the command line, in the file /etc/ld.so.conf, and in the trusted directories (/lib and /usr/lib). The cache is used by the run-time linker, ld.so or ld-linux.so. ldconfig checks the header and file names of the libraries it encounters when determining which versions should have their links updated.

QUESTION 338:

Which of the following settings of the UMASK would cause new files to be created with mode 640?

- A. 137

- B. 177
- C. 367
- D. 640

Answer: A

Explanation: umask command used to set and display the default permission.

To get the 640 created mode

777

640

137

umask 137

umask : Just print the value of umask

touch testfile

ls -l testfile : Verify that you are getting 640 permission on file or not.

QUESTION 339:

Which of the following file systems are compatible with a partition that is typed as 82?

- A. vfat
- B. ext3
- C. swap
- D. reiserfs

Answer: C

Explanation: swap also called virtual Memory has 82 system ID and Linux Native has 83 system ID.

QUESTION 340:

The root user receives a 'Permission denied' error message when trying to write files to an NFS (Network File System) mounted directory. Which of the following is the MOST likely cause of this error?

- A. The server needs to allow NFS UDP packets.
- B. The directory needs to be remounted as NFSv3.
- C. The server share needs to specify no_root_squash.
- D. The server is not allowing the client to connect.

Answer: C

Explanation: Entries in /etc/exports are exported with root_squashing turned on. This ensures that requests from the root user on a client machine are denied root access to root-owned files on a server machine. Such requests are mapped instead to a uid such as 65534. This behaviour can be defeated with the no_root_squash option but this is not recommended.

QUESTION 341:

If a user wishes to monitor the last three lines of the log file messages.log and update it every 15 seconds, which of the following commands should be issued?

- A. sar -f -s 15 -n 3 messages.log
- B. tail -f -s 15 -n 3 messages.log
- C. watch -f -s 15 -n 3 messages.log
- D. follow -f -s 15 -n 3 messages.log

Answer: B

Explanation: tail command prints the by default 10 lines from the bottom of file.

Syntax tail [options] filename

-f : prints the appended line at the bottom of file.

-s : sleep or interval

-n : Number of lines.

QUESTION 342:

A Linux specialist wants to check which shares are offered by a Windows server. Which of the following commands is used to perform this task?

- A. smbclient
- B. smbserver
- C. listshares
- D. showshares

Answer: A

Explanation: smbclient is ftp-like client to access SMB/CIFS resources on servers.

Example:

smbclient -L //computerName -U username : List the shared resources from the computer.

smbclient //computerName/share -U username : Connect to shared directory.

QUESTION 343:

A Linux administrator has decided to remove a software package called `exim.rpm`. Which of the following commands could be used to uninstall the software?

- A. `rm -r exim`
- B. `uninstall exim`
- C. `rpm --erase exim`
- D. `rpm --uninstall exim`

Answer: C

Explanation: `rpm -e` or `--erase packagename`, this command removes the package from the system.

QUESTION 344:

A customer requires that the following packages be installed on a server:

quota
raidtools
Samba
Amanda
yp-serv

For which of the following purposes is this server MOST likely to be used?

- A. Firewall
- B. File server
- C. Database server
- D. Streaming media server

Answer: B

Explanation: File server is that server, which shares data to others. To install these we require the backup of all packages in NFS Server.

Copy all packages from all CD to some directory ie. `/var/ftp/pub`

Share directory :

```
#vi /etc/exports
```

```
/var/ftp/pub *(ro,sync)
```

```
# service nfs start
```

```
#service portmap restart
```

QUESTION 345:

A Linux server may have vulnerabilities if which of the following occurs?

- A. The system is unpatched.
- B. There are too many users.
- C. The SSH (Secure Shell) is disabled.
- D. The Apache Web server is running.

Answer: A

QUESTION 346:

How would an administrator ensure that the command `/usr/local/radius/startrad.pl` was executed after each reboot?

- A. Copy the command to the `/boot` directory.
- B. Place the command in the `/etc/rc.boot` file.
- C. Place the command in the `/etc/rc.local` file.
- D. Place the command in the `/etc/sysconfig/startup.cfg` file.

Answer: C

Explanation: `/etc/rc.local` file executes by `init` program after the run-level specific scripts. This file is for administrative customization. You can call your own scripts to execute after the run-level specific scripts.

QUESTION 347:

A technician needs to extract the entire archive 'backup.tar.bz2'. Which of the following commands will accomplish this?

- A. `tar xjf backup.tar.bz2`
- B. `tar xZa backup.tar.bz2`
- C. `tar xbf backup.tar.bz2`
- D. `tar x --bz2 backup.tar.bz2`

Answer: A

Explanation: In different two ways can extract from the compressed archive file.

1. Directly uncompress and extract from the archive file suing:

`tar xjf filename`

Where `x` means extract, `j` means compressed with `bzip2`, `f` means filename

2. First uncompress using `bunzip2` and then extract the tar file

`bunzip2 filename`

`tar xvf filename`

QUESTION 348:

A Linux user wants to create a hard link named ile2 in the current directory that points to /usr/var/file. Which of the following commands can be used?

- A. ln file2 /usr/var/file
- B. ln /usr/var/file file2
- C. ln -h file2 /usr/var/file
- D. ln -h /usr/var/file file2

Answer: B

Explanation: ln command is used to create the link We can create either soft link or hard link. Hard link is called a separate physical file.

To create soft link:

ln -s sourcefile linkfile

To create Hard link:

ln sourcefile linkfile

QUESTION 349:

The administrator has added a specific route for 192.168.3.0/24 to the routing table as shown below:

Destination	Gateway	Genmask	Flags	Metric	Ref	Use	Iface
192.168.3.0	192.168.1.243	255.255.255.0	UG	0	0	0	eth0
192.168.1.0	0.0.0.0	255.255.255.0	U	0	0	0	eth
0.0.0.0	192.168.1.1	0.0.0.0	UG	0	0	0	eth0

Which of the following is a valid method for removing the route?

- A. edit /proc/net/netstat
- B. route remove 192.168.3.0 255.255.255.0
- C. route remove -net 192.168.3.0 netmask 255.255.255.0 gw 192.168.1.1
- D. route del -net 192.168.3.0 netmask 255.255.255.0 gw 192.168.1.243

Answer: D

Explanation: To add in the routing table

route add -net 192.168.0.0 netmask 255.255.255.0 dev eth0

If you want to remove from the routing table

route del -net 192.168.0.0 netmask 255.255.255.0 dev eth0

Verify using the route -n or netstat -rn command

QUESTION 350:

An administrator is seeking to view the information contained in the wtmp log file. Which of the following commands is designed to display the contents of this file in human-readable format?

- A. last
- B. wshow
- C. showtmp
- D. displaytmp

Answer: A

Explanation: last command display the login and reboot history from /var/log/wtmp file in human readable format.

QUESTION 351:

A user wants to set up a parallel port printer on the workstation's second parallel port. Which of the following device identifiers needs to be used during configuration?

- A. /dev/lp1
- B. /dev/epp2
- C. /dev/prn2
- D. /dev/ecp1

Answer: A

Explanation: First Parallel Port device name is /dev/lp0 and second parallel port device name is /dev/lp1

QUESTION 352:

Which of the following BASH shell built-in commands can be used to apply a CPU time limit of 90 seconds on the current shell session?

- A. limits -t 90
- B. ulimit -t 90
- C. setlimit -t 90
- D. echo 90 >/proc/me/limits/time

Answer: B

Explanation: ulimit command provides control over the resources available to the shell and to processes started by it, on systems that allow such control.
-t options specify the maximum number of cpu time in seconds

QUESTION 353:

The system administrator wants to create a list of all of the RPM packages installed on a server in alphabetical order. Which of the following is a quick and easy way to do this?

- A. rpmdb --dump rpmlist.text
- B. rpm -q --dump rpmlist.text
- C. rpm -q -a | sort > rpmlist.text
- D. rpm -qa %-1,[A-Z]% > rpmlist.text

Answer: C

Explanation:

rpm -qa : this command lists all installed packages

rpm -q package : Query either the package is installed or not.

To create the list of all installed package is use the rpm -qa and redirect to list file.

QUESTION 354:

The DNS administrator needs to change the IP address of the primary Webserver. Any downtime would have a major impact. Which of the following is the BEST way to minimize the downtime?

- A. Update /etc/resolv.conf on the Webserver.
- B. Change the Webserver PTR record to the new hostname.
- C. Notify the domain registrar of the change in advance.
- D. Change the Webserver TTL (Time-To-Live) record to 5 minutes.

Answer: D

QUESTION 355:

A new RPM package returns a large number of errors and has never run successfully. Which of the following commands should be run as a FIRST step to troubleshooting this problem?

- A. verify <package_name>

- B. rpm -V <package_name>
- C. rpmdb -v <installation_file>
- D. diff --rpm <package_name> <installation_file>

Answer: B

Explanation: rpm -V or -verify package : Verifying a package compares information about the installed files in the packer with information about the files taken from the package metadata stored in the rpm database (/var/lib/rpm). Among other things, verifying compares the size, MD5 sum, permissions, type, owner and group of each file

QUESTION 356:

A new shell command generates too much output to read on the screen and does not write to a log file. Which of the following would capture the output for evaluation?

- A. Run the command as a daemon
- B. Reduce LOG_LEVEL=6 in /etc/syslog.conf to a lower number
- C. Pipe the output to the cat command
- D. Use on the command line

Answer: D

QUESTION 357:

Which of the following commands could be used to convert the ext2 file system on /dev/hda2 to use the ext3 file system?

- A. tune2fs -j /dev/hda2
- B. e2image -j /dev/hda2
- C. mkfs -t ext3 -j /dev/hda2
- D. e2label -t ext3 /dev/hda2

Answer: A

Explanation: tune2fs command helps to upgrade the ext2 filesystem into ext3 filesystem

QUESTION 358:

Which of the following commands can be used to confirm checksums on the Samba package?

- A. rpm -V samba.rpm
- B. rpm -v samba.rpm
- C. rpm -c samba.rpm
- D. rpm -i samba.rpm

Answer: A

Explanation: rpm -V or -verify package : Verifying a package compares information about the installed files in the packer with information about the files taken from the package metadata stored in the rpm database (/var/lib/rpm). Among other things, verifying compares the size, MD5 sum, permissions, type, owner and group of each file

QUESTION 359:

Which of the following commands can be used to hide the file "help.new"?

- A. attrib -h help.new
- B. chmod 4000 help.new
- C. mv help.new .help.new
- D. cp help.new .help.new

Answer: C

Explanation: while you use the ls command, it will only list the normal files. To list hidden as well as normal files, you should use the ls -a command.

That file or directory starting with . is called hidden file or directory.

To make hidden to test file

```
# mv test .test
```

To unhide the test file

```
# mv .test test
```

QUESTION 360:

The system administrator suspects the machine has been compromised and would like to search the system for any setuid programs. Which of the following commands would accomplish this?

- A. rpm -Va
- B. search u+s
- C. locate --suid
- D. find / -perm -4000

Answer: D

Explanation: find command is used to search the files on the basis of different condition ie name, atime, ctime, mtime, user owner, group owner, permission mode, type etc.

find / -perm -4000 : searches all files, where SUID bit is set.

SUID = 4

SGID= 2

Sticky Bit = 1

QUESTION 361:

A script set to run using /bin/sh has executed a grep command, and grep has returned an error. If the grep result is analyzed by the following logic:

```
if [ "$?" = 0 ]
```

```
then
```

```
echo BLUE
```

```
else echo GREEN
```

```
fi
```

Which of the following will be the script's output?

A. end

B. BLUE

C. GREEN

D. Error: Unexpected input "\$"

Answer: B

Explanation: \$? Symbol is used to trap the return value. When you execute the program, exit return a value that is either 0 or 1-255. 0 means executed successfully and non-zero values means exited with error. While you execute above program, it will not give any error comparing either 0 or not . So answer will be B.

QUESTION 362:

The named service needs to be secured. Which of the following would BEST accomplish this?

A. Run named as root.

B. Run named in a chroot jail.

C. Run named in UDP mode only.

D. Run named on a non-standard port.

Answer: B

Explanation: The idea behind chroot is fairly simple. When you run BIND in a chroot jail, the process is simply unable to see any part of the filesystem outside the jail. Chroot directory for BIND is /var/named/chroot/ , well to the BIND, the contents

of this directory will appear to be /, the root directory. Nothing outside this directory will be accessible to it.

While running the BIND behind chroot jail is to limit the amount of access any malicious individual could gain by exploiting vulnerabilities in BIND. It is for the same reason that we run BIND as a non-root user.

QUESTION 363:

A technician wants to allow the computer to sniff incoming and outgoing packets on the Ethernet interface. Which of the following ifconfig commands will do this correctly?

- A. ifconfig eth0 promisc
- B. ifconfig eth0 unicast
- C. ifconfig eth0 multicast
- D. ifconfig eth0 listenall

Answer: A

Explanation: ifconfig eth0 promisc : enable or disable the promiscuous mode of interface. If selected, all packets on the network will be received by the interface.

QUESTION 364:

A Linux workstation that has been configured with the IP address of 192.168.4.235/26 and a default gateway of 192.168.4.1. It can ping a server at 192.168.4.250. The workstation cannot ping a second server at 192.168.5.3. The administrator has verified that the default gateway setting is correct. Which of the following is the problem?

- A. The Ethernet card is faulty.
- B. The Ethernet cable is faulty.
- C. The netmask is wrong and should be changed to 255.255.255.0.
- D. The netmask is wrong and should be changed to 255.255.255.128.

Answer: C

Explanation: Problem in ping with the second server having 192.168.5.3 IP address if gateway is correct then probably problem in subnet mask, write the subnet mask 255.255.255.0

QUESTION 365:

After downloading a new Linux distribution for a new installation, the administrator discovers the machine does not have a bootable CD-ROM drive. Which of the following DOS utilities would the administrator use to write a diskette image onto a 3.5" diskette?

- A. copy
- B. xcopy
- C. linload
- D. rawwrite

Answer: D

Explanation: To create the Installation disk, you will get the one utility in 1st CD of Linux, rawwrite.exe file, which you can run in windows and can create the Installation disk.

QUESTION 366:

Which of the following is the function of the chroot command?

- A. Change the root password.
- B. Change the root login name.
- C. Change the root application.
- D. Change the root directory for the shell.

Answer: D

Explanation: chroot command changes the root directory for the shell. While you boot your system on rescue mode, you can change the root filesystem of your installed Linux using :
`chroot /mnt/sysimage`

QUESTION 367:

Which of the following programs could be used to display a remote login prompt on a serial line or terminal?

- A. sshd
- B.agetty
- C. portmap

D. console

Answer: B

Explanation: agetty also called the alternative Linux getty. agetty opens a tty port, prompts for a login name and invokes the /bin/login command.

QUESTION 368:

After the LILO configuration file is edited, which of the following needs to be done to implement the changes?

- A. lilo
- B. loadlin
- C. lilo.conf
- D. fdisk-mbr

Answer: A

Explanation: /etc/lilo.conf is the file used by lilo command to update the MBR or first sector of the partition with the appropriate booting information ie. root partition, kernel file etc. After reconfiguring the file you should update the MBR or first sector of boot partition using lilo command.

QUESTION 369:

Which of the following commands can be used to find all instances of files in the /etc directory containing tp in the file name?

- A. find *ntp
- B. find ntp*
- C. find /etc/ntp
- D. find /etc/*ntp*

Answer: D

Explanation: find command is more reliable then slocate or locate, slower to find but accurate then slocate or locate. You can use the wildcard character while you finding the files.

Example: find /etc -name *ntp* : which find all files having ntp pattern.

find /etc/*ntp* : same as previous command

QUESTION 370:

When a file server is installed, which of the following directories would MOST likely be on a separate partition?

- A. /usr
- B. /var
- C. /home
- D. /local

Answer: C

Explanation: /home is called the user's base directory, you should separate the /home on different partition.

QUESTION 371:

A Linux administrator wants to disable the use of setuid and setgid files for the /var file system. How would this be accomplished?

- A. Add an entry to /etc/setuid.conf
- B. Run the command "tune2fs --nosuid /var"
- C. Add an entry to the options list in /etc/fstab
- D. Add an entry to the options list in /etc/sysctl.conf

Answer: C

Explanation: By default filesystem mounts on defaults mounting options. Default options for ext2/ext3 filesystem
rw, suid, dev, exec, auto, nouser, and async.
If you want to disable the setuid and setgid you can use the nosuid, nosgid options in /etc/fstab

QUESTION 372:

A workstation is unable to browse a Website by name. Which of the following files must be checked to confirm DNS settings?

- A. /etc/init.d
- B. /etc/resolv.conf
- C. /etc/named.conf
- D. /etc/nameserver.conf

Answer: B

Explanation: /etc/resolv.conf is the DNS client file, where you should write the DNS server address.

nameserver DNSserver

nameserver DNSserver

When you try to access the website it will send the request to dns server specified in /etc/resolv.conf to resolve the name to IP if resolved only can access. So, you should write the correct DNS server's IP address in this file.

QUESTION 373:

A Linux system is powered down unexpectedly. After reboot, an automatic disk check is run and numerous inode errors are reported and corrected. Which of the following file systems was MOST likely used?

- A. jfs
- B. ext2
- C. ext3
- D. ReiserFS

Answer: B

Explanation: ext2 stands for the second extended filesystem, in ext2 filesystem you should unmount the all mounted filesystem before rebooting or halting. If you reboot without unmounting you will get filesystem error.

QUESTION 374:

The following is part of the Samba configuration file:

[aprinter]

path = /usr/spool/public

read only = yes

printable = yes

Which of the following lines needs to be added to the file to allow print access to everyone?

- A. users = *
- B. printall = yes
- C. guest ok = yes
- D. anonymous = yes

Answer: C

Explanation: guest ok = yes allows the guest user to print.

QUESTION 375:

A user who is installing Linux inserts the install CD-ROM and then reboots the computer. However, the computer boots into Windows. Which of the following MOST likely caused the problem?

- A. The MD5 sum is erroneous.
- B. The hard drive does not support Linux.
- C. The computer BIOS has the wrong boot order.
- D. The user needs to install a Windows driver.

Answer: C

Explanation: You must select the proper boot device from the BIOS.

QUESTION 376:

Which of the following modules is a dependency module for PCMCIA card services?

- A. hid
- B. tulip
- C. parport_pc
- D. yenta_socket

Answer: D

Explanation: yenta_socket is the dependency module for PCMCIA card you can check in /lib/modules/Kernel-version/modules.dep file

QUESTION 377:

The system administrator needs to examine the processes owned by the user with the login 'john'. Which of the following commands would accomplish this?

- A. ps john
- B. ps -U john
- C. ps -r john
- D. ps --all | grep john

Answer: B

Explanation: ps command helps to display process.

ps -a : displays all user processes
ps -x : displays all processes from all terminals
ps -u : Process with owner user
ps -U username : Displays all processes owned by that user

QUESTION 378:

User jsmith needs read and write access to the file named employees but should have no access to the file named salary . User jsmith is member of the groups smith and belso?

```
-rw-rw---- 1 jsmith root 113 Jun 16 12:59 employees  
-rw-r----- 1 salary belso 4230 Jun 18 18:01 salary
```

Which of the following should be done to accomplish the goal?

- A. Add jsmith to the group root
- B. Remove jsmith to the group salary
- C. Remove jsmith from the group belso
- D. Remove jsmith from the group jsmith

Answer: C

Explanation: jsmith is the member of smith and belso in salary file read only permission is set to the group member. If jsmith is remove from the belso group then jsmith can't access the file.

QUESTION 379:

When BASH is invoked as an interactive login shell, in which of the following sequences are the scripts sourced?

- A. ~/.bash_login, ~/.bash_profile, /etc/profile, ~/.profile
- B. /etc/profile, ~/.bash_profile, ~/.bash_login, ~/.profile
- C. ~/.bash_profile, ~/.bash_login, ~/.profile, /etc/profile
- D. /etc/profile, ~/.profile, ~/.bash_login, ~/.bash_profile

Answer: B

Explanation:

Login Shell Scripts for Login Shell Provided user:

1. /etc/profile
2. 1. /etc/profile.d/*
2. ~/.bash_profile
3. 1. ~/.bashrc
2. 1. /etc/bashrc

Non Login Shell Scripts:

1. ~/.bashrc
 2. 1. /etc/bashrc
 2. 1. /etc/profile.d/*.sh
-

QUESTION 380:

Which of the following commands should be run after editing the /etc/aliases file in order for sendmail to recognize any changes to that file?

- A. newaliases
- B. makemap newaliases
- C. killall -HUP sendmail
- D. /etc/init.d/aliasd restart

Answer: A

Explanation: /etc/aliases file is used to send the mail to different address then coming address.

Syntax: boob: peter : means mail of boob will get by peter. After modifying the file /etc/aliases you should re-build the database using newaliases command

QUESTION 381:

A Linux technician would like to change the default lpr queue to print to a new printer. Which file should be edited to make this change?

- A. /etc/vprint
- B. /etc/printcap
- C. /etc/lpd.conf
- D. /etc/printers/default.conf

Answer: B

Explanation: /etc/printcap file contains all installed printer information either local printer or remote printer. If user want to change the queue information ie. default printer etc should edit in /etc/printcap

QUESTION 382:

The root user types echo \$PATH and sees the following output:

./bin:/usr/bin:/sbin:/usr/X11R6/bin:/usr/src

Which of the following parts of this path is considered to be a security risk?

- A. .
- B. /sbin
- C. /usr/src
- D. /usr/X11R6/bin

Answer: A

Explanation: PATH is the environmental variable in Linux, we can display the value of PATH variable using echo \$PATH:

To set the some directory into path

PATH=\$PATH:/newdir

According to the principle of security . which represent the current directory setting on path is danger.

QUESTION 383:

LPR access for specific hosts can be configured in which of the following files?

- A. printcap
- B. lpd.allow
- C. hosts.equiv
- D. hosts.allow

Answer: C

Explanation: hosts.equiv file defines the trusted remote hosts and user accounts that can use the local services without supplying passwords. The hosts.lpd file lists remote hosts that are permitted to print on a local system.

QUESTION 384:

The administrator must change the IP address of the server to 192.168.5.4/26.
Which of the following is the correct representation of the subnet mask?

- A. 192.168.5.0
- B. 192.168.5.255
- C. 255.255.255.0
- D. 255.255.255.192

Answer: D

Explanation:

Given IP Address is 192.168.5.4/26

11111111.11111111.11111111.11000000

Subnet Mask for Given Subnetted Address is : 255.255.255.192

Default Subnet Mask for Class C is : 255.255.255.0

Network ID is : 256-192 = 64

QUESTION 385:

An Acme SCSI controller was installed on the server to support the boot drive. The system, which runs LILO and uses kernel 2.4.20, will no longer boot. After booting from the recovery CD-ROM, the Acme driver (acme.o) is manually loaded and works. The driver is also available in the modules directory on the server's hard drive. Which of the following commands will fix the problem?

- A. modprobe -p acme.o
- B. lilo append=acme.o -v /boot/initrd-2.4.20.gz 2.4.20
- C. mkinitrd -f --with=acme.o /boot/initrd-2.4.20.gz 2.4.20
- D. cat "alias scsi_hostcontroller acme.o" >> /etc/modules.conf

Answer: C

Explanation: initrd which is called boot loader initialized RAM disk. The special file /dev/initrd is a read-only block device. Device /dev/initrd is a RAM disk that is initialized by the boot loader before the kernel is started. The kernel then can use the block device /dev/initrd's contents for a two phased system boot up.

mkinitrd command creates an initial image used by the kernel for preloading the block device modules (i.e IDE, SCSI or RAID) which are needed to access the root filesystem. Mkinitrd automatically loads filesystems modules such as ext2 or ext3, IDE modules, SCIS modules, it simple to build and use kernel's using modular device drivers.

To create the initrd file:

mkinitrd -f /boot/initrd-2.6.9-5.EL.img 2.6.9-5.EL

If you want to build the initrd file with specific module

mkinitrd -f --with=modulename /boot/initrd-2.6.9-5.EL.img 2.6.9-5.EL

QUESTION 386:

A Linux system administrator needs to edit the quotas for a user. Which of the following commands can be used to do this?

- A. edquota user
- B. quota -e user
- C. vi /quota.user
- D. vi /~user/.quota

Answer: A

Explanation: edquota is the quota editor, where you can set the quota policy . You can set the quota policy on the basis of number of files or size.

Example: edquota -u user1 /home

You will get like:

/dev/hda6 blocks soft hard inode soft hard

40 0 0 10 0 0

QUESTION 387:

Which of the following commands will locate files that have been modified in the Run fsck on

- A. locate -t2
- B. find / -mtime 2
- C. whereis -time 2
- D. grep / -ctime 2

Answer: B

Explanation: Linux store the meta information with three different timestamp eg atime, mtime and ctime. You can find the file on that timestamp basis.

Example: find / -mtime 2 : find all files modified exact on before two days.

QUESTION 388:

Which of the following file systems CANNOT be mounted by using the mount command?

- A. ext2
- B. vfat
- C. swap
- D. iso9660

Answer: C.

Explanation: The Swap file system is used as virtual memory. This is not a 'mounted' file system. The swap partition is configured during setup, and can be extended using the 'swapon' command.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: page 39, 465.

Incorrect Answers:

- A. You can mount an ext2 file system using the 'mount -t ext2' command.

- B. You can mount an VFAT file system using the 'mount -t vfat' command.
 - D. You can mount an iso9660 file system using the 'mount -t iso9660' command (iso9660 is used for CD-ROM drives).
-

QUESTION 389:

A Linux user has sent a report to the printer queue, but then realizes he needs to make corrections to the report. He now wants to remove the report from the printer queue. Which of the following should be done?

- A. Use the lpq command to remove the job
- B. Use the kill command to remove the report
- C. Use the lprm command to remove the report
- D. Ask the superuser to remove the report from the queue because users cannot do this.

Answer: C.

Explanation: The lprm command can be used to remove one or more print jobs from the print queue. The command is issued with the job ID to delete a print job. The print queue and job IDs can be viewed with the lpq command.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: page 557.

Incorrect Answers:

- A. The lpq command is used to view the print queue, but not to delete print jobs.
 - B. The kill command is used to end a process. It cannot be used to delete individual print jobs.
 - D. A user can delete any print jobs that belong to the user.
-

QUESTION 390:

What does the lpq command do?

- A. Prints a file.
- B. Removes a print job.
- C. Sets up a printer on the system.
- D. Shows status of the print queue.

Answer: D.

Explanation: The lpq command is used to display the status of the print queue. The information displayed includes the print job IDs and owners.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: page 556.

Incorrect Answers:

- A. The lpr command is used to print, not the lpq command.

- B. The `lprm` command is used to remove a print job, not the `lpq` command.
 - C. The `/etc/printcap` file can be used to set up a printer, not the `lpq` command.
-

QUESTION 391:

A system administrator who has forgotten his root password on a server can do which of the following to change the root password?

- A. Use the brute-force password sniffer.
- B. Edit the `/etc/inittab` file to load without NIS.
- C. Use the `passwd` command from the administrator group.
- D. Reboot the system in runlevel 1 and use "`init=/bin/sh`" as a boot option.

Answer: D.

Explanation: If you forget the root password, you can boot init into the shell and change the password using the following commands:

```
boot: Linux init=/bin/sh
bash# mount -o remount / -rw
bash# passwd root
```

Reference: Michael J. Tobler. New Riders, Inside Linux: Page 466.

Incorrect Answers:

- A. A sniffer can only be used to capture a password traveling over the network.
 - B. If you bypassed NIS, you would still need the local root password.
 - C. There is no 'Administrator' group in Linux. The equivalent is the 'Root' group. You would still need to be logged in to change the password.
-

QUESTION 392:

The system administrator needs to create two new groups, 'develop' and 'admin'. Which of the following should be done to accomplish this?

- A. Use the `newgrp` command.
- B. Use the `groupadd` command.
- C. Use the `creategroup` command.
- D. Enter the group data in the `/etc/group.conf` file.

Answer: B.

Explanation: The `groupadd` command is used to create new groups.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: page 270.

Incorrect Answers:

- A. The `newgrp` command is used to change a user accounts group membership. It cannot be used to create a group.

- C. Creategroup is a non-existent command.
 - D. There is no group.conf file.
-

QUESTION 393:

How would an administrator change the ownership of the directory /tmp/data/user1 from the account 'user1' to the account 'user2'?

- A. chown /tmp/data/user2 user 1
- B. chown -R /tmp/data/user1 user2
- C. chown -R user2 /tmp/data/user1
- D. chown user2 /tmp/data/user1 user2

Answer: C.

Explanation: The syntax of the chown command is 'chown <new owner> <directory/file>'. The -R option makes the command recursive meaning that the ownership will be changed on the entire contents of the directory.

Reference: Mark Minasi. Sybex, Linux for Windows NT/2000 Administrators: page 212.

Incorrect answers:

- A. The syntax is incorrect.
 - B. The new owner should be entered before the directory/file name.
 - D. The new owner is entered twice. It should only be entered once.
-

QUESTION 394:

A user needs to securely connect to a server. It is mandatory that encrypted passwords be used. Which of the following network utilities should be used?

- A. ssh
- B. rsh
- C. tftp
- D. telnet

Answer: A.

Explanation: SSH (Secure Shell) provides a secure connection between an SSH server and an SSH host. All data and passwords are encrypted over the connection.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: page 368.

Incorrect answers:

- B. RSH (Remote Shell) is very insecure. It allows a user on one system to run programs on another system without authentication. RSH should be disabled on servers.
- C. TFTP (Trivial File Transfer Protocol) is used to transfer files over a network. It is not

used to securely connect to a server.
D. Telnet sends passwords in plain text.

QUESTION 395:

A user wants the script name1 to process the contents of the file "name2", then redirect the output to the program name3. Which if the following shell commands will do this?

- A. name1 | name2 > name3
- B. name1 < name2 | name3
- C. name1 > name2 | name 3
- D. name1 | name2 < name3

Answer: B.

Explanation: The < symbol is known as the input redirection operator. This can be used to pass the contents of a file to a program or script. To have one program or script use the output of another program of script as input, you would use the pipe symbol (|).

Reference: Roderick W. Smith. Sybex Linux + Study Guide: page 656.

Incorrect Answers:

- A. To pass the contents of a file to a program or script, you should use the input redirection operator (<).
 - C. The input redirection operator should point from the file to the script. In this answer, it faces the wrong way.
 - D. To pass the contents of a file to a program or script, you should use the input redirection operator (<).
-

QUESTION 396:

A system is going to have its memory and CPU upgraded. This information will be created in Linux in which of the following?

- A. The /proc directory
- B. The /etc/hwinfo.conf file
- C. The /dev/hwinfo.conf file
- D. The /usr/src/linux/devices directory

Answer: A.

Explanation: The /proc directory isn't actually a directory. It's a virtual file system created by Linux to provide information about hardware devices. For example, the command 'cat /proc/cpuinfo' will display information about the CPU.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: page 476.

Incorrect Answers:

- B. There is no hwnfo.conf file.
- C. There is no hwnfo.conf file.
- D. The /usr directory contains Linux documentation and program files. It doesn't contain any machine specific data.

QUESTION 397:

When a new user account is created, the default settings are copied from which of the following?

- A. /usr/skel
- B. /etc/skel
- C. /etc/start
- D. /etc/default

Answer: B.

Explanation: When a new user account is created, the default configuration files are copied from the /etc/skel directory.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: page 260.

Incorrect Answers:

- A. This is the incorrect path to the default user account configuration files.
- C. This is the incorrect path to the default user account configuration files.
- D. This is the incorrect path to the default user account configuration files.

QUESTION 398:

Which if the following commands can be used to compare two text files to find out how they are different?

- A. comp
- B. diff
- C. compare
- D. filediff

Answer: B.

Explanation: The diff command is used to display line by line differences between pairs of text files.

Reference: <http://www.numenor.demon.co.uk/ccfaq/common.htm>

Incorrect Answers:

- A. There is no comp command.

- C. There is no compare command, although 'compare' can be used as an option for the 'tar' utility.
- D. There is no filediff command.

QUESTION 399:

What command, when issued from a non-root user, will remove all files from the /tmp directory by prompting the user for the root password?

- A. cirtmp
- B. rm -rf /tmp/* -su
- C. su "rm 'rf /tmp*"
- D. su -c "rm -rf /tmp*"

Answer: D.

Explanation: The su command is used to switch to another user account. If no username is specified with the su command, then Linux assumes that you want to change to the root user account. The -c option tells Linux to run a command in the context of the root account. The rm command is used to remove the files. The -rf option, make the command recursive and forceful (i.e. it won't ask you to confirm the file deletion).

Reference: <http://www.oreillynet.com/linux/cmd/s/su.html>

Incorrect Answers:

- A. There is no cirtmp command.
- B. You must use su to switch user before the remove command.
- C. You must use the -c option with su if you want it to run a command after switching user.

QUESTION 400:

Which of the following commands can be used to go to the 25th line of a file in vi?

- A. :25
- B. 25G
- C. G25
- D. g25

Answer: B.

Explanation: The way to go to a specific line in Vi is to use the "G" command. With a count, this command positions you at the given line number. For example, "25G" puts you on line 25.

Reference: http://vimdoc.sourceforge.net/cgi-bin/vim2html2.pl?page=usr_03.txt#03.5

Incorrect Answers:

- A. You must use the "G" command to go to a specific line.
- C. The "G" must follow the line number.
- D. The "G" is case sensitive and follows the line number.

QUESTION 401:

Which of the following commands can be used to create new directories?

- A. rm
- B. ls
- C. mv
- D. mkdir

Answer: D.

Explanation: The mkdir command is used to create new directories.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: page 523.

Incorrect Answers:

- A. The rm command is used to remove a file or directory.
- B. The ls command is used to list the contents of a directory.
- C. The mv command is used to move or rename a file or directory.

QUESTION 402:

A customer wants to backup her entire Website into a file. Which if the following commands would best accomplish this?

- A. tar -cvf www.tar /home/httpd/
- B. tar -cvf /home/httpd /dev/st0
- C. tar -cvf /home/httpd/ webbackup.tar
- D. tar -cvf /dev/st0/web.tar /home/httpd/

Answer: A.

Explanation: The syntax of the tar command is 'tar <options> <filename> <files to add>'. In this question, the contents of the /home/httpd directory (the default location for a website) are backed up to a file named www.tar. The -cvf options mean compressed, verbose and forceful.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: page 194/5.

Incorrect Answers:

- B. You must specify a filename when using the tar command.
- C. The source files and destination file are in the wrong order.

D. This command is trying to backup the files to a tape drive. However, when using 'tar' to backup to a tape drive, you must use the '--file' option.

QUESTION 403:

Which of the following commands is used to set default file permissions for any newly created file?

- A. mask
- B. umask
- C. fmask
- D. createMask

Answer: B.

Explanation: When a file is created, the file has a default set of permissions. For example, the creator of the file is the owner of the file and the group is the owners primary group. However, these default settings are known as the user mask can be changed with the umask command.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: page 258.

Incorrect Answers:

- A. The mask command is used when configuring the IP address of a Linux computer.
 - C. Fmask is a non-existent command.
 - D. Createmask is a non-existent command.
-

QUESTION 404:

The following is an extract in a password file:

```
Smith: * : 1133 : 334 : John Smith: /usr/people/jsmith:  
/bin/tcsh
```

What is the purpose of the "*" IN Smith's password field?

- A. To deactivate Smith's account.
- B. To indicate that Smith is a superuser.
- C. To force Smith to change his password at his next login.
- D. To indicate that Smith's home directory is shared by other members of his group.

Answer: A.

Explanation: When you create a user account with the adduser command, the account doesn't have a password. The password field in the password file contains a "*". To enable the account, you must specify a password with the passwd command. You can disable an account by placing a "*" in the password field of the password

file.

Reference: Michael J. Tobler. New Riders, Inside Linux: Page 397.

Incorrect Answers:

B. The "*" is in the password field and so does not indicate that the account is a superuser.

C. The user will not be able to log in when the password field contains a "*" because the account is disabled.

D. The "*" is in the password field and so is not related to the users' home directory.

QUESTION 405:

A Linux system is planned to have both an Ethernet card and a modem. On each of these networks the IP addresses are dynamically assigned. Which if the following services should be considered for installation?

- A. DNS
- B. Pump
- C. SNMP
- D. Router

Answer: B.

Explanation: The pump command is used to verify that the computer is receiving DHCP information from the DHCP servers. It's output included the IP address, netmask and DHCP server address.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: page 628.

Incorrect Answers.

A. DNS (Domain Name System) is used to resolve host names to IP addresses. It would not be useful in this case.

C. SNMP (Simple Network Management Protocol) is used for the monitoring of hardware devices. It would not be useful in this case.

D. A router is used to route traffic between networks. It would not be useful in this case.

QUESTION 406:

Which if the following services is installed when a "workstation" installation is selected?

- A. nntpd
- B. Squid
- C. XFree86
- D. dhcpd

Answer: C.

Explanation: XFree86 provides a graphic user interface and is installed by default when a workstation installation is selected.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: page 22.

Incorrect Answers:

- A. NNTPd is the Network News Transfer Protocol daemon. This is a server service and is not installed in a workstation configuration.
- B. Squid is a proxy server application. This is a server service and is not installed in a workstation configuration.
- D. DHCPd is the Dynamic Host Configuration Protocol daemon. This is a server service and is not installed in a workstation configuration.

QUESTION 407:

Linux will be installed on a new system. Where will LILO be installed?

- A. In the /boot directory.
- B. In the /root directory.
- C. In the master boot record.
- D. In the /usr/sbin directory.

Answer: C.

Explanation: LILO (the Linux boot loader) is installed by default in the Master Boot Record (MBR).

Reference: Roderick W. Smith. Sybex Linux + Study Guide: page 212.

Incorrect Answers:

- A. LILO is installed by default in the Master Boot Record, not the /boot directory.
- B. LILO is installed by default in the Master Boot Record, not the /root directory.
- D. LILO is installed by default in the Master Boot Record, not the /usr/sbin directory.

QUESTION 408:

Why is the Shadow Password Suite important?

- A. It provides a second level of encryption for the /etc/passwd file.
- B. It improves the encryption for all passwords in the /etc/passwd file.
- C. It moves the passwords to a separate file that has more restrictive permissions.
- D. It moves the passwords to a separate file and will also encrypt the password file.

Answer: C.

Explanation: If you are not using the Shadow Password Suite, the users' passwords are stored in the /etc/passwd file. This file can be read by anyone. When using the Shadow Password Suite, the passwords are moved to another file, which can only be

read by the root user.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: page 117-118.

Incorrect Answers

- A. The Shadow Password Suite does not change the password encryption.
- B. The Shadow Password Suite does not change the password encryption.
- D. The Shadow Password Suite does not encrypt the password file.

QUESTION 409:

Which if the following is the only required partition when Linux is installed?

- A. /
- B. /var
- C. /etc
- D. /boot

Answer: A.

Explanation: At a bare minimum, Linux requires just one partition to install and boot. This is the root partition, which is known as the / partition.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: page 37.

Incorrect Answers:

- B. Linux requires a root (/) partition, not a /var partition.
- C. Linux requires a root (/) partition, not a /etc partition.
- D. Linux requires a root (/) partition, not a /boot partition.

QUESTION 410:

A DHCP server has been added to the network. The local system has been reconfigured to connect using DHCP. How could an administrator restart the network services and test that the interface and the DHCP server are functioning properly?

- A. ifconfig -test
- B. netstat -R- test
- C. route restart; ping comptia.org
- D. network restart; ping comptia.org

Answer: D.

Explanation: After configuring DHCP you need to restart the network services with the etc/rc.d/init.d/network restart command. You can verify that that your computer has received the DHCP settings by pinging and internet address such as comptia.org.

Reference: <http://www.linuxheadquarters.com/howto/networking/networkconfig.shtml>

Incorrect Answers:

- A. Ifconfig is not the correct command to restart the network services.
 - B. Netstat is not the correct command to restart the network services.
 - C. Route restart is not the correct command to restart the network services.
-

QUESTION 411:

The Ethernet card fails on a Linux machine without modular support, and is replaced by one from a different manufacturer. The new card is verified as Linux compatible. When the system restarts, the operating system does not recognize the new card.

Which if the following is necessary to finish the installation?

- A. Change the network routing table.
- B. Recompile the kernel with support for the new device.
- C. Download a new driver and add it to the /dev directory.
- D. Edit the Ethernet configuration file to point to the new device.

Answer: B.

Explanation: A network card without modular support will have its drivers integrated into the kernel. If you replace the network card with one from a different vendor, you'll need to recompile the kernel to remove the old network card driver.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: page 211.

Incorrect Answers:

- A. The routing table is unrelated to the physical network card or its drivers.
 - C. You need to recompile the kernel to remove the old network card driver.
 - D. The old driver is integrated into the kernel and needs to be removed.
-

QUESTION 412:

A client has downloaded the latest Linux kernel source and wants to compile and install it on a home machine. The downloaded file is named "linux-2.4.3.tar.gz". What command should be issued first?

- A. tar xvf linux-2.4.3.tar.gz
- B. tar xzvf linux-2.4.3.tar.gz
- C. gzip -q linux-2.4.3.tar.gz; tar xvf linux-2.4.3.tar
- D. gzip -c linux-2.4.3.tar.gz; tar cvf linux-2.4.3.tar

Answer: B.

Explanation: The .tar.gz extension indicates that the file has been tarred and compressed (zipped) using the tar and gzip programs. The first thing to do is to

extract the files using the same programs. The tar command invokes the tar program. The 'x' option means extract. The 'z' option means use gzip to uncompress the files. The 'v' option means verbose mode and the 'f' option means to force the operation with any conformation messages.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: page 194-195.

Incorrect Answers:

- A. You need the 'z' option to invoke gzip.
- C. You need to use the tar program and invoke gzip with the 'z' option.
- D. You need to use the tar program and invoke gzip with the 'z' option.

QUESTION 413:

An administrator has installed a DHCP daemon. Which if the following should be run to see if the process is running?

- A. top
- B. dhcpd -restart
- C. ps aux | grep dhcpd
- D. rpm -check dhcpd

Answer: C.

Explanation: The ps aux command displays all the running processes. The pipe (|) passes the output to the grep utility. Grep is a search utility. Grep dhcpd will search for dhcpd in the output from the ps aux command.

Reference: <http://www.unixgeeks.org/security/newbie/unix/man9/misc3.html#ps>

Incorrect Answers:

- A. The top command displays the running processes that are using the most CPU time. The DHCP daemon doesn't use much CPU time and is therefore unlikely to be displayed using the top command.
- B. The dhcpd -restart command will restart the DHCP daemon. It will not verify the process is running.
- D. The rpm command cannot be used to verify that a process is running.

QUESTION 414:

What minimum permission must a directory have for a user to both enter the directory and list its contents?

- A. read only
- B. execute only
- C. write and read
- D. execute and read

Answer: D.

Explanation: You can list the contents of a directory with the read permission.

However, to enter the directory, you need the execute permission.

Reference: <http://www.firstlinux.com/articles/cards/permissions.shtml>

Incorrect Answers:

- A. The read only permission will not allow you to enter the directory.
- B. The execute permission will not allow you to list the contents of the directory.
- C. The write permission will allow to create files in the directory. This is not the minimum required permission to enter a directory and list its contents.

QUESTION 415:

While a technician was installing Linux on a customer's server, the customer asked for the ability to expand the partition size, as needed. Which of the following would best provide this ability?

- A. HPFS
- B. ext2
- C. FAT32
- D. ReiserFS

Answer: B.

Explanation: There are more Linux utilities to expand an ext2 partition than partitions with a different file system.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: page 542.

Incorrect Answers:

- A. There are more utilities to expand an ext2 partition than partitions with the HPFS file system.
- C. There are more utilities to expand an ext2 partition than partitions with the FAT32 file system.
- D. There are more utilities to expand an ext2 partition than partitions with the ReiserFS file system.

QUESTION 416:

What services would need to be installed to build a combination Web server and Domain Name Server (DNS)?

- A. Apache and BIND
- B. Apache and Squid
- C. ipchains and BIND
- D. Squid and ipchains

Answer: A.

Explanation: The Linux web server software is called Apache and the Linux DNS software is called BIND.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: page 56, 59.

Incorrect Answers:

B. Squid is a proxy server program.

C. IPChains is a firewall program.

D. Squid is a proxy server program and IPChains is a firewall program.

QUESTION 417:

Which if the following should be done before installing Linux on a home computer?

A. Upgrade the computer's memory to at least 64 MB.

B. Create ext2 and swap partitions on the hard drive.

C. Verify the hardware on the Linux hardware compatibility list.

D. Defragment the drive using the computer's current operating system.

Answer: C.

Explanation: The first thing to do before installing any operating system is to ensure that the system hardware is compatible with the operating system.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Chapter 1.

Incorrect Answers:

A. Linux will run on systems with less than 64 MB or RAM (memory).

B. The partitions can be created during the installation. It is not necessary to create them before the installation.

D. The hard drive will be partitions and formatted during the installation and therefore will not need defragmenting.

QUESTION 418:

Which of the following services would need to be installed and configured in order to provide proxy and caching services to a Linux network?

A. NFS

B. Squid

C. BIND

D. ipchains

Answer: B.

Explanation: Squid is a full featured web proxy program running on Linux or Unix.

Reference: <http://www.squid-cache.org/>

Incorrect Answers:

- A. NFS is the Linux Network File System used for sharing files over a network. It does not provide web proxy services.
- C. BIND is the Linux DNS software. It does not provide web proxy services.
- D. IPChains is the Linux Firewall software. It does not provide web proxy services.

QUESTION 419:

A customer wants internal office information to be accessible by employees through a Web browser. Which of the following Linux services should be used?

- A. Squid
- B. MySQL
- C. Apache
- D. Sendmail

Answer: C.

Explanation: Apache is the Linux web server software. Web server software is needed to enable employees to access office information through their web browsers.

Reference: <http://www.apache.org/>

Incorrect Answers:

- A. Squid is the Linux web proxy software. It does not provide web server services.
- B. MySQL is a Linux database program. It does not provide web server services.
- D. Sendmail is a Linux email server program. It does not provide web server services.

QUESTION 420:

A user wants to set up his parallel port printer on the workstation's first parallel port. What device identifier needs to be used during configuration?

- A. /dev/lp0
- B. /dev/lpa
- C. /dev/lp1
- D. /dev/tty0

Answer: A.

Explanation: Hardware devices are identified in the /dev 'folder'. Parallel ports use the 'lp' identifier followed by the number of the port. The first parallel port number

is zero; therefore the first parallel port would be listed as /dev/lp0.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 548/9.

Incorrect Answers:

- B. Parallel ports use lp followed by a numeric identifier. The first one being zero.
- C. The first parallel port number is zero. Lp1 signifies the second parallel port.
- D. Tty signifies a modem, not a parallel port.

QUESTION 421:

A user has overwritten the master boot record. How could the Linux record be restored?

- A. edit fstab
- B. edit lilo.conf
- C. run "fdisk /mbr"
- D. run "/sbin/lilo"

Answer: B.

Explanation: LILO (the Linux boot loader) consists of a program that converts the lilo.conf file into an installed boot loader. Therefore, by editing the lilo.conf file, you can instruct LILO to recreate the linux boot loader in the master boot record.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 218.

Incorrect Answers:

- A. The fstab file instructs Linux which partitions to mount and where to mount them. It does not restore the master boot record.
- C. Fdisk/mbr will write a new master boot record. However, it does not write a Linux boot loader into the master boot record.
- D. LILO needs to be run only after editing the lilo.conf file.

QUESTION 422:

Which of the following actions will provide the greatest benefit to system administration in a large organization?

- A. Print out script source files.
- B. Update packages and kernels as updates are released.
- C. Document and log standards and changes to the systems.
- D. Install all packages from the same source type, such as RPMs.

Answer: C.

Explanation: It is highly recommended that you document the systems and company standards.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 438.

Incorrect Answers:

- A. Printing out scripts would not aid system administration.
- B. Package and kernel updates should be thoroughly tested before being installed.
- D. Packages can be installed from various source types as long as the installations are documented.

QUESTION 423:

A new computer came preconfigured with an internal PCI modem. After Linux was installed, the modem does not respond. Which of the following is most likely the cause of the problem?

- A. The modem is not Hayes compatible.
- B. Linux does not support internal modems.
- C. The installed kernel does not support Winmodems.
- D. Linux requires modems that use the Rockwell chipset.

Answer: C.

Explanation: When computers are supplied with internal PCI modems, the modems are usually Winmodems. Linux has limited support for these modems.

Reference: <http://www.linmodems.org/>

Incorrect Answers:

- A. Most modems are Hayes compatible and therefore, this is an unlikely situation.
- B. Linux does have limited support for internal modems.
- D. Rockwell chipsets are not a requirement for modems running under Linux.

QUESTION 424:

A system administrator is logged into a system as root. When trying to run the command `/usr/local/bin/a.out`, the administrator does the following:

```
root@linux> cd /usr/local/bin
```

```
root@linux> a.out
```

```
bash: a.out: command not found
```

What command should be issued to start the program?

- A. `/a.out`
- B. `chmod o-x a.out`
- C. `su - user, a.out`
- D. `chown root a.out`

Answer: A.

Explanation: You cannot run a command if you are in the same directory as the

program. You must precede the command with "/" or "./". When you precede the command with "/", you are running the program from the root directory, so the program would need to be in the path. "./" means to go back one level in the directory structure and run the command from there. For example, in this question, "./" would go back to the /usr/local folder and run the command /bin/a.out.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 432.

Incorrect Answers:

- B. The chmod command is used to modify the permissions on a file. It is not required here.
- C. The su command is used to run a command under a different account. The question states that you are already logged in as root, so changing accounts is unnecessary.
- D. The chown command is used to change ownership of a file. This is unnecessary because you are running the command as root.

QUESTION 425:

Which utility can remove, list, and add modules, as well as autoclean?

- A. lsmod
- B. insmod
- C. modprobe
- D. Modconfigurator

Answer: C.

Explanation: The modprobe -r command is used to remove modules. Modprobe -a lists all the modules. Modprobe with no options loads a module. Modprobe -k is used to autoclean the modules.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 573.

Incorrect Answers:

- A. Lsmod can only list the modules.
- B. Insmod can only insert a module.
- D. There is no modconfigurator command.

QUESTION 426:

Which command will verify that an NIS client is bound to an NIS server?

- A. ypwhich
- B. nisbind
- C. ypconfig
- D. nis.client

Answer: A.

Explanation: The ypwhich command returns the hostname of the NIS server. Without arguments, ypwhich displays the NIS server for the local machine.

Reference: <http://www.oreillynet.com/linux/cmd/y/ypwhich.html>

Incorrect Answers:

- B. Nisbind is not the correct command.
- C. Ypconfig is not the correct command.
- D. Nis.client is not the correct command.

QUESTION 427:

Which of the following files would modify the daemon which logs system activity?

- A. /etc/syslog.conf
- B. /usr/syslog.conf
- C. /etc/systemlog.conf
- D. /usr/etc/systemlog.conf

Answer: A.

Explanation: Most system logs are maintained by the system log daemon and the kernel log daemon. These services rely on the /etc/syslog.conf file for their configurations.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 292.

Incorrect Answers:

- B. The syslog.conf file is in the /etc directory, not the /usr directory.
- C. Systemlog.conf is the wrong filename.
- D. Systemlog.conf is the wrong filename.

QUESTION 428:

In an Apache default installation, which of the following configuration files contains the DocumentRoot?

- A. root.html
- B. httpd.conf
- C. httpd.root
- D. apache.conf

Answer: B.

Explanation: Apache is the Linux web server software. It uses the httpd.conf file for its configuration. The Document root parameter specifies the default location for the web pages.

Reference:

<http://www.redhat.com/docs/manuals/linux/RHL-7.1-Manual/ref-guide/s1-configuration-config.html>

Incorrect Answers:

- A. The DocumentRoot parameter is specified in the httpd.conf file, not the root.html file.
- C. The DocumentRoot parameter is specified in the httpd.conf file, not the httpd.root file.
- D. The DocumentRoot parameter is specified in the httpd.conf file, not the apache.conf file.

QUESTION 429:

How should an administrator test that Domain Name Services (DNS) are working correctly on a client workstation?

- A. ftp.comptia.org
- B. ping 168.168.168.18
- C. telnet 168.168.168.18
- D. nslookup www.comptia.org

Answer: D.

Explanation: The nslookup utility is used to query a DNS server. The command "nslookup www.comptia.org" will return the IP address of www.comptia.org if the DNS is correctly configured on the workstation and the DNS server is functioning correctly.

Reference: Michael J. Tobler. New Riders, Inside Linux: Page 195.

Incorrect Answers:

- A. Ftp.comptia.org is the FQDN for a machine called ftp in the comptia.org domain. It is not a command that will test DNS.
- B. Pinging an IP address will not test DNS.
- C. Telnetting an IP address will not test DNS.

QUESTION 430:

Review the following entry:

```
/dev/cdrom /cd iso9660 ro, user, noauto 0 0
```

What is this entry?

- A. An "fstab" entry that lets any user mount the CD-ROM.
- B. An "fstab" entry that allows only root to mount the CD-ROM.
- C. An "mtab" entry that mounts a CD-ROM as a read-only device at boot time.
- D. An "fstab" entry that mounts a CD-ROM as a read-only device at boot time.

Answer: A.

Explanation: This entry in the fstab file allows any user to mount the CD-ROM

(/dev/cdrom) in the /cd directory. Iso9660 is the file system for the CD-ROM. Noauto means that the CD-ROM won't be automatically mounted when the system boots. The first '0' means that the CD-ROM shouldn't be backed up and the second '0' means that the CD-ROM file system shouldn't be checked for errors when the machine boots.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 400/1.

Incorrect Answers:

- B. The 'user' option allows any user account to mount the CD-ROM.
- C. The line is from the fstab file, not the mtab file.
- D. The noauto option prevents the CD-ROM being mounted at boot time.

QUESTION 431:

Configuring hosts.deny and hosts.allow will protect the server from intruders that attempt which of the following?

- A. Attacks from machines using TCP.
- B. Exploitation of ICMP security holes.
- C. Attacks from machines using IPX/SPX.
- D. Exploitation of services that are started with TCP wrappers.

Answer: D.

Explanation: Inetd is a service that listens for network connection and starts a requested server service. Inetd can use a service called TCP Wrappers to start the server services. When a server service is requested, inetd hands the request to TCP Wrappers. TCP Wrappers then authenticates the request by using the hosts.deny and hosts.allow files and starts the server service if the requesting client has permission.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 363/4.

Incorrect Answers:

- A. TCP Wrappers use the hosts.allow and hosts.deny files, not TCP.
- B. TCP Wrappers use the hosts.allow and hosts.deny files, not ICMP.
- C. TCP Wrappers use the hosts.allow and hosts.deny files, not IPX/SPX.

QUESTION 432:

A user has installed and configured an internal modem to connect the workstation to the Internet. The user claims that the modem is not connecting properly. What diagnostic tool can be used to test the modem?

- A. mgetty
- B. minicom
- C. pppconfig

D. A web browser

Answer: B.

Explanation: Minicom is a graphical utility that runs in a console, used for testing PPP connections (Modems use PPP to connect to the Internet via an ISP).

Reference: http://www.oreilly.com/catalog/debian/chapter/ch11_07.html

Incorrect Answers:

A. Mgetty is not used to test modems.

C. PPPconfig is not used to test modems.

D. A web browser could be used to test Internet connectivity, but it can't test the actual modem.

QUESTION 433:

Which of the following commands is used to associate a logical 32-bit or 128-bit IP address with a physical Ethernet device?

A. arp

B. masq

C. mount

D. route

Answer: A.

Explanation: ARP (Address Resolution Protocol) is used to map hardware addresses (sometimes referred to as MAC addresses) to IP addresses.

Reference: <http://www.oreillynet.com/linux/cmd/a/arp.html>

Incorrect Answers:

B. Masq is not used to associate hardware addresses with IP addresses.

C. The mount command is used to mount a hardware device. It is not used to associate hardware addresses with IP addresses.

D. The route command is used to add a static route to a routing table. It is not used to associate hardware addresses with IP addresses.

QUESTION 434:

A Linux system seems to be unstable, with several services unresponsive. Before rebooting, which of the following commands could be entered to help ensure the system restarts into a stable state?

A. sync

B. fsck

C. lilo

D. uptime

Answer: B.

Explanation: An unstable system could be caused by file system errors. The fsck (File System Check) command will check the file system for errors.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 461.

Incorrect Answers:

A. Sync is used to ensure file system integrity when shutting down a machine. It does not check the file system for errors.

C. Lilo is the Linux boot loader. . It does not check the file system for errors.

D. Uptime is a utility that displays the uptime of a system (the time a system has been running).

QUESTION 435:

Which of the following commands searches the contents of files for a specific string?

A. find

B. grep

C. search

D. whereis

Answer: B.

Explanation: The grep command can search the contents of files for a specific string.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 653.

Incorrect Answers:

A. The find command is used to search for files that meet specified conditions (such as type). It does not search the contents of the files for a specific string.

C. The search command does not search the contents of the files for a specific string.

D. The whereis command is used to locate the binary file, source code or manual pages for a specified command. It does not search the contents of the files for a specific string.

QUESTION 436:

A system is built for a new employee who needs a particular application for computing critical data. The application is installed and tested. The application suddenly hangs. After killing the process, which of the following is the best course of action to take?

A. Reinstall the application and restart X.

B. Go to /usr/local/apps/logfile to access specific information.

C. Go to /etc/log/<name of application>.log to read the error messages.

D. Check any error log generated by the application and the manufacturer's Website for known issues or patches.

Answer: D.

Explanation: To troubleshoot a faulty application, you should look for any error messages in the logs and go to the manufacturer's website to see if the problem is a known issue or if there is a patch (update) for the application.

Incorrect Answers:

A. If the problem is caused by a known issue, the problem will reoccur after reinstalling the application.

B. The application may not generate an error log in this path.

C. The application may not generate an error log in this path.

QUESTION 437:

A customer reports that his server will not allow users to retrieve their email through POP3 or connect to the server via telnet. What service needs to be restarted?

A. lmap

B. snmp

C. pop3

D. inetd

Answer: D.

Explanation: POP3 and Telnet are two separate server services. These services are controlled by the inetd service. It is unlikely that the POP3 and Telnet services would both fail at the same time. It is more likely that the problem lies with the inetd service. Restarting the inetd service should rectify the problem.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 286.

Incorrect Answers:

A. Restarting the lmap service won't affect the POP3 and Telnet services.

B. Restarting the snmp service won't affect the POP3 and Telnet services.

C. Restarting the POP3 service may solve the POP3 problem, but it won't affect the Telnet problem.

QUESTION 438:

What are the full paths to the general log files that can be accessed to find out how a system is running?

A. /var/log/messages

/var/log/mail

/var/log/wtmp
B. /etc/bootlog.log
/var/log/install.log
/etc/boot/messages
C. /usr/local/install.log
/usr/local/messages
/tmp/boot.log
D. /var/spool/logs/messages
/var/spool/logs/dmesg
/var/spool/log/install.log

Answer: A.

Explanation: Most system log files are stored in subdirectories of the /var/log directory.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 293.

Incorrect Answers:

- B. These are the wrong paths to the system log files.
- C. These are the wrong paths to the system log files.
- D. These are the wrong paths to the system log files.

QUESTION 439:

A user notices some problems with his Linux system. He finds a file in his home directory that he has never seen before. It has the following permissions:

-r-sr-srwk 1 root root 531 Jan 19 02:15 shell.run

Where did the file come from?

- A. The file was generated by cron.
- B. The root account put the file there for his use.
- C. The file is included in most common distributions.
- D. This file was created when the root account security was breached.

Answer: B.

Explanation: The file is owned by the root user account and the root group account.

Reference: <http://www.wbglinks.net/pages/reads/linux/filepermissions.html>

Incorrect Answers:

- A. This file would not be generated by Cron.
- C. The file is not included in users' home directories in most distributions.
- D. A root account security breach would not generate this file.

QUESTION 440:

A customer calls the support desk and complains that her company's Web server is not responding to requests from Web clients. When asked about recent work done on the machine, she responds that the server has not been reconfigured recently and normally performs without problems. A process list on the machine gives the following result:

PID TTY STAT TIME COMMAND

```
1 ? S 0:04 init
444 ? S 0:00 /usr/sbin/automount " "timeout 60 /misc file /etc/auto.misc
462 ? S 0:00 /usr/sbin/automount " "timeout 60 /net yp /auto.net
526 ? S 0:00 syslogd ~m 0
579 ? S 0:00 crond
595 ? S 0:00 xinetd ~reuse ~pidfile /var/run/xinetd.pid
625 ? SW 0:00 [lockd]
636 ? SW 0:00 [rpciod]
646 ? S 0:00 rpc.statd
796 ? S 0:00 gpm -t ps/2
814 ? S 0:00 httpd-perl -f /etc/httpd/conf/httpd-perl.conf
955 ? S 0:00 httpd
956 ? S 0:00 httpd
957 ? S 0:00 httpd
958 ? S 0:00 httpd
958 ? S 0:00 httpd
958 ? S 0:00 httpd
958 ? S 0:00 httpd
958 ? S 0:00 httpd
1080 tty1 S 0:00 /sbin/mingetty tt /etc/httpd/conf/httpd-perl.conf
1721 pts/1 R 0:00 ps -x
```

What is the best way to resolve this issue?

- A. Use "/usr/sbin/httpd -r" to restart the Web server.
- B. Stop the Web server by using "killall http" and restart it using "/usr/sbin/httpd".
- C. Examine the httpd module list in /etc/httpd/modules/httpd.exp for incompatibilities.
- D. Stop the Web server by using "kill -9 <pid>" and run fsck to make sure the /home httpd partition is functioning properly.

Answer: B.

Explanation: Server service (such as HTTPd) problems can usually be resolved by restarting the service. The output above shows that there are numerous instances of the httpd service. To stop multiple instances of a process, you would use the 'killall' command.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 519.

Incorrect Answers:

- A. There are multiple instances of the httpd service that need to be stopped before restarting the service.
- C. Restarting the httpd service should be the first step to resolving the problem.

D. The kill command is used to stop a single instance of a process. It will not stop multiple instances of a process.

QUESTION 441:

A user executed a Pearl script that initiated a connection request to a server without ever completing the network connection. This was done multiple times until the server could no longer communicate on the network. What kind of attack was initiated?

- A. Spoofing
- B. Trojan horse
- C. Buffer overflow
- D. Denial of Service

Answer: D.

Explanation: A Denial of Service (DoS) attack is where multiple connection requests are made to a server without completing the connection. This loads the server which prevents it communicating on the network.

Reference: Michael J. Tobler. New Riders, Inside Linux: Page 385.

Incorrect Answers:

- A. Spoofing is sending data from a 'fake' network address. This is not described in the question.
- B. A Trojan horse is a method used to gain entry to a system. This is not described in the question.
- C. A buffer overflow is not described in the question.

QUESTION 442:

A user wants to have the latest version of elm installed. Which of the following will identify the currently installed version?

- A. Run "man elm"
- B. Run "rpm -q elm"
- C. Run "version elm"
- D. Check /var/log/rpm

Answer: B.

Explanation: The rpm -q command will query a package for information. The information will include the installed files and their versions.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 178.

Incorrect Answers:

- A. The man elm command will display the manual pages for the elm program. It will not

identify the currently installed version.

C. The version elm command is an invalid command.

D. Checking the log files for the rpm package will not identify the currently installed version of Elm.

QUESTION 443:

What does the command "rpm -Uvh package-update-3.5.i386.rpm" do?

A. Uninstalls the package and related hidden files.

B. Upgrades the package and provides installation status.

C. Allows the user to view hidden files installed with the package.

D. Verifies that the package is installed correctly and reports errors.

Answer: B.

Explanation: The rpm -Uvh command upgrades a package. The 'v' option is for verbose mode. This provides the installation status. The package will still be installed if no previous versions exist.

Reference: Michael J. Tobler. New Riders, Inside Linux: Page 340.

Incorrect Answers:

A. The 'e' option is used to uninstall a package.

C. The command does not display hidden files.

D. The 'vf' option is used to verify an installation.

QUESTION 444:

An application is created that is called through the Web server. However, upon restarting the Web server, it is discovered that the application is not writing its error to the Web error log properly. Which of the following methods would resolve the problem?

A. Change the application to write its error logs into the /root directory.

B. Change the Web server user to 'root' so that applications run within it will run as root.

C. Change the permission and ownerships of the application to match the user group of the Web server.

D. The application does not have sufficient rights to write the directory specified, so the suid bit on the application must be set to allow it to run as root.

Answer: D.

Explanation: It is most likely that the application does not have sufficient rights to write the directory specified. Set User ID (SUID) is used to run a program as the user who owns the program (usually root) rather than the user running the program.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 254.

Incorrect Answers:

- A. It would need root permissions to write to the root directory. Also, it is desirable to have applications writing their error logs to the usual log file location.
- B. It is a security risk to have the entire web server running as root. Only the application within it needs to run as root.
- C. The application needs to run as root.

QUESTION 445:

Based on best practices, where is the best location to maintain documentation of work performed on Linux servers at a site?

- A. In a binder in the server room.
- B. Off-site at a different facility.
- C. In a text file kept on a Linux file server.
- D. In a text file on the local machine where the changes were made.

Answer: A.

Explanation: The documentation should be kept in a safe place, easily accessible by the network administrators.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 438.

Incorrect Answers:

- B. The documentation should be easily accessible by the network administrators.
- C. The documentation should not be kept on a computer, in case the computer fails.
- D. The documentation should not be kept on a computer, in case the computer fails.

QUESTION 446:

A system administrator has written a script that scans the password file for "unusual" things. For which of the following should the script check?

- A. A user with an unusual account name.
- B. A user with the default group of 'wheel'.
- C. A user ID number that has been set to zero.
- D. A group ID number that has been set to zero.

Answer: C.

Explanation: Intruders usually create a user account with the ID number set to zero. A user account with a user ID of zero has root privileges.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 245.

Incorrect Answers:

- A. An unusual name does not create a security risk.
- B. A group account of 'wheel' does not pose a security risk.
- D. A group account with an ID of zero is a root group. However, it would be better to look for user accounts with an ID of zero.

QUESTION 447:

Which of the following would correctly format a 3.5" diskette?

- A. `mkfs /dev/fd0`
- B. `fdisk /dev/fd0`
- C. `mount -f /mnt/floppy`
- D. `mkfs -t vfat /mnt/floppy`

Answer: A.

Explanation: The `mkfs` (make file system) command is used to format a disk. `/dev/fd0` is the first floppy disk on a Linux system.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 459-460.

Incorrect Answers:

- B. `Fdisk` is used for partitioning a hard disk, not formatting a floppy disk.
- C. The `mount` command is used to mount a drive, not to format a floppy disk.
- D. `Vfat` is the wrong file system for a floppy disk. You should use the `msdos` option.

QUESTION 448:

The administrator wants to use `/sbin/special.sh` to do a backup every Friday the 13th. What would be a solution?

- A. Run
`at "Fri, 13" < /sbin/special.sh`
- B. Run
`at 'date | cut -d -e \f3' /sbin/special.sh`
- C. Add "`5 1 13 * 5 /sbin/special.sh`" to his crontab
- D. Add "`1 1 13 ** if ['date' == 'Frid']; then /sbin/special.sh fi`" to his contrab

Answer: C.

Explanation: The `crontab` is used to schedule a program such as a backup program. The first 5 signifies 5 minutes past the hour. The 1 signifies 01:00 (1.00 a.m.). The 13 signifies the date of the month. The * signifies any month. The 5 signifies a Friday. This means that if the 13th day of a month is a Friday, the program will run at 01:05 (5 past 1 in the morning).

Reference: Michael J. Tobler. New Riders, Inside Linux: Page 408/9.

Incorrect Answers:

- A. The 'at' command can schedule a program, but it will only run once. Also, the syntax is incorrect.
- B. The 'at' command can schedule a program, but it will only run once. Also, the syntax is incorrect.
- D. The syntax is incorrect.

QUESTION 449:

Which of the following commands is used to determine if network interfaces are up and running?

- A. cksum
- B. netcfg
- C. siginit
- D. ifconfig

Answer: D.

Explanation: The ifconfig command will display detailed information about an interface. The information will include the operational status of the interfaces.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 335.

Incorrect Answers:

- A. Cksum is used to calculate a Cyclic Redundancy Check to check a file for errors. It is not used to determine if network interfaces are up and running.
- B. Netcfg is not used to determine if network interfaces are up and running.
- C. Siginit is not used to determine if network interfaces are up and running.

QUESTION 450:

Which of the following is LEAST affected by electromagnetic interference (EMI)?

- A. Fiber Optic Cable
- B. Encrypted Wireless
- C. RG-68 Coaxial Cable
- D. Shielded Twisted Pair (STP)

Answer: A.

Explanation: Fiber Optic cable uses pulses of light along a glass fiber to transmit data. As it uses no copper wires, it is immune to electromagnetic interference.

Reference: <http://www.erg.abdn.ac.uk/users/gorry/course/phy-pages/fibre.html>

Incorrect Answers:

- B. Wireless data transmission is susceptible to electromagnetic interference.

- C. Coaxial Cable uses copper wires and is therefore susceptible to electromagnetic interference.
- D. Shielded Twisted Pair (STP) cable uses copper wires and is therefore susceptible to electromagnetic interference. It is less susceptible to EMI than UTP (unshielded twisted pair) because the copper wires are shielded.

QUESTION 451:

If the Linux installation process continuously locks up, which of the following should be done?

- A. Repartition the drive.
- B. Remove all unnecessary hardware.
- C. Enable power management in the BIOS.
- D. Ensure that the network card is installed prior to the installation.

Answer: B.

Explanation: If a Linux installation continuously locks up, it is likely that a hardware device is incompatible with Linux. To troubleshoot this, you should remove all unnecessary hardware, and add the hardware one device at a time, to discover the incompatible device.

Incorrect Answers:

- A. Repartitioning the drive will not resolve the problem.
- C. Power management is more likely to cause problems, than resolve them.
- D. It is not necessary to install the network card prior to an installation.

QUESTION 452:

Under which of the following hardware upgrades would a system NOT have to be rebooted?

- A. Upgrading the CPU.
- B. Replacing a PS/2 mouse.
- C. Adding a USB CDROM drive.
- D. Installing additional RAM.

Answer: C.

Explanation: One of the features of USB devices is that they are 'hot swappable'. This means that you can disconnect and reconnect USB devices without needing to reboot the system.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 402.

Incorrect Answers:

- A. The CPU can only be changed when the system is shut down.
 - B. A PS/2 mouse may not work if it has been replaced without rebooting the machine.
 - D. RAM can only be installed when the system is shut down.
-

QUESTION 453:

Which of the following connectors is hot pluggable?

- A. Serial port
- B. Parallel port
- C. IEEE-1394 port
- D. Ultra2 SCSI external connector

Answer: C.

Explanation: An IEEE-1394 port is a firewire port. This is a relatively new technology provide high data transfer rates and is hot pluggable.

Reference: <http://www.apple.com/firewire/>

Incorrect Answers:

- A. Serial ports are not hot pluggable.
 - B. Parallel ports are not hot pluggable.
 - D. Ultra2 SCSI ports are not hot pluggable.
-

QUESTION 454:

When SCSI, video and I/O boards are installed in a PC, which of the following allows the installed card to be integrated with the current system on a hardware level?

- A. CMOS
- B. POST
- C. BIOS
- D. Boot strap

Answer: A.

Explanation: The CMOS chip is the 'configurable' part of the BIOS. When the computer boots, the BIOS reads configuration information from the CMOS. The BIOS and CMOS are hardware and are not related to the operating system which is software.

Reference: <http://www.wimsbios.com/>

Incorrect Answers:

- B. The POST (power on self test) is the process of the BIOS checking the system for installed hardware during system boot up.
- C. The BIOS cannot be directly configured. It reads its configuration information from

the CMOS.

D. Boot Strap is the process of a computer booting up.

QUESTION 455:

A user has three SCSI devices (two internal and one external) connected to his computer. He adds another external device, and this device and one of the internal devices do not work. Which of the following is the most likely cause?

- A. An ID conflict
- B. AN IRQ conflict
- C. A memory conflict
- D. A driver is not installed

Answer: A.

Explanation: SCSI devices use SCSI identifiers (IDs). Each device must have a unique SCSI ID to function correctly. If two devices have the same ID, none of the two devices will work.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 32.

Incorrect Answers:

- B. The SCSI devices don't have separate IRQs. The SCSI controller (to which the SCSI devices are attached) uses one IRQ.
 - C. A memory conflict is less likely than an ID conflict.
 - D. If the driver wasn't installed, only the recently added device would not work. The previously added devices would still work.
-

QUESTION 456:

After the failed memory has been replaced, the PC does not boot and beeps several times. The beep code indicates there is no memory. The technician observes that the old SIMMs use 9 chips while the new SIMMs only use 8 chips. What is most likely the problem?

- A. EDO memory is required
- B. Parity memory is required
- C. Fast Page Mode memory is required
- D. Unregistered SDRAM memory is required

Answer: B.

Explanation: Parity memory boards have an extra chip for parity checking.

Reference: <http://www.anandtech.com/showdoc.html?i=113&p=6>

Incorrect Answers:

- A. The extra chip indicates parity memory, not EDO memory.

- C. The extra chip indicates parity memory, not Fast Page Mode memory.
 - D. The extra chip indicates parity memory, not SDRAM memory.
-

QUESTION 457:

All of the following are common BIOS options EXCEPT

- A. mouse type
- B. parity/non parity
- C. floppy drive type
- D. hard drive auto-detect

Answer: A.

Explanation: The mouse type is not a common BIOS option although the PS/2 mouse PORT is often mentioned.

Incorrect Answers:

- B. The option to disable or enable parity checking is common.
 - C. The floppy drive type, (3.5 inch or 5.25 inch) is a common option.
 - D. The option to disable or enable hard drive auto detection is common.
-

QUESTION 458:

A user has just installed a new 3.5" diskette drive in his desktop computer. He turns the computer on and discovers that the diskette drive light stays on all the time. What is the most likely reason the light stays on?

- A. The system BIOS is misconfigured.
- B. The light on diskette drive is broken.
- C. The power cable has not been connected properly.
- D. The ribbon cable is inserted backwards in the drive.

Answer: D.

Explanation: Inserting the ribbon cable backwards is an easy mistake to make and often causes the symptoms mentioned in this question.

Reference: <http://www.computerhope.com/issues/ch000278.htm>

Incorrect Answers:

- A. The only configurable floppy drive option is the size. The BIOS default would most likely have the correct size (3.5 inch) configured.
 - B. If the light was broken, it wouldn't come on at all.
 - C. If the power cable wasn't connected, the light wouldn't come on at all.
-

QUESTION 459:

Which network interface card has BNC connector on it?

- A. IR
- B. Thinnet
- C. Fiber optic
- D. Twisted pair

Answer: B.

Explanation: Thinnet (otherwise known as 10Base2) uses the BNC connector.

Reference:

http://searchnetworking.techtarget.com/sDefinition/0,,sid7_gci211681,00.html

Incorrect Answer:

- A. IR (infra-red) is a wireless technology and therefore uses no connectors.
- C. Fiber Optic does not use BNC connectors.
- D. Twisted Pair does not use BNC connectors.

QUESTION 460:

On a Plug-and-Play system, some legacy hardware (non-Plug-and-Play) is required. Which of the following should be done to ensure the proper operation of all hardware on the system?

- A. Enable IRQ routing in the BIOS.
- B. Replace the BIOS with a non-Plug-and-Play BIOS.
- C. Reserve the resources in CMOS for the legacy hardware.
- D. Replace the legacy devices with current Plug-and-Play devices.

Answer: C.

Explanation: The resources for the legacy devices should be reserved in the CMOS. This will prevent the resources being dynamically assigned to plug and play devices, which would cause a resource conflict.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 30.

Incorrect Answers:

- A. It is not necessary to enable IRQ routing in the BIOS.
- B. It is not necessary to replace the BIOS.
- C. It is not necessary to replace the devices.

QUESTION 461:

A battery fails in a Linux workstation. Which of the following will need to be reconfigured to get the system working after replacing the battery?

- A. MBR settings
- B. CMOS settings
- C. POST settings
- D. Data on each partition

Answer: B.

Explanation: The CMOS relies on a battery to 'remember' its configuration. If the battery fails, the CMOS will need to be reconfigured.

Reference: <http://www.pcmech.com/show/motherboards/80/>

Incorrect Answers:

- A. The MBR settings are written to the hard disk and do not rely on battery power.
- C. The POST settings are in the BIOS which does not rely on battery power.
- D. The data on each partition is written to the hard disk and does not rely on battery power.

QUESTION 462:

A user adds a new CD-RW to an existing system with a diskette drive, single IDE hard disk drive, and CDROM drive. The user then reports the system is taking longer to load applications. Which of the following will most likely resolve the problem?

- A. Switch the CD-RW to cable select.
- B. Install CD-R accelerator software.
- C. Replace the CD-RW drive, as it is damaged.
- D. Move the CD-RW to the secondary IDE controller.

Answer: D.

Explanation: Most systems come with two IDE controllers. The hard disk is always on the primary IDE controller. System performance can be improved by installing CD devices on the secondary IDE controller so that they are separate to the hard drive.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 31.

Incorrect Answers:

- A. Using cable select will not improve system performance.
 - B. Moving the CD device to the secondary IDE controller will improve performance without the need for extra software. CD-R accelerator software may improve the CD-R performance, but it won't improve the overall system performance.
 - C. It is unlikely that a faulty CD-RW would degrade the system performance.
-

QUESTION 463:

A system's serial device is not operating correctly. Which of the following IRQs is likely to be conflicting and causing the problem?

- A. 4
- B. 5
- C. 7
- D. 13

Answer: A.

Explanation: Serial devices use COM ports. COM ports 1 and 3 use IRQ 4.

Reference: Michael J. Tobler. New Riders, Inside Linux: Page 137.

Incorrect Answers:

- B. IRQ 5 is commonly used by sound cards.
- C. IRQ 7 is commonly used by the parallel port.
- D. IRQ13 is used by the Math co-processor.

QUESTION 464:

A user has just hot-swapped the CDROM with the diskette drive in his mobile system. Now the diskette drive is not responding. Which of the following actions will correct the problem?

- A. Reboot the system.
- B. Reinstall the driver.
- C. Remove the drive and reinstall it.
- D. Set up hot-swapping capabilities in CMOS.

Answer: C.

Explanation: If a device doesn't work after hot plugging it into a mobile system, the first troubleshooting step would be to remove the device and reinstall it.

Incorrect Answers:

- A. It may not be necessary to reboot the system. Try refitting the device first.
- B. If the device worked before, then the driver is already installed and does not need reinstalling.
- D. Laptop PCMCIA devices are hot swappable. This does not need to be configured in the CMOS.

QUESTION 465:

Which if the following IDs should be avoided when assigning IDs to SCSI peripherals?

- A. 2
- B. 4
- C. 5
- D. 7

Answer: D.

Explanation: SCSI devices need separate SCSI IDs. The SCSI controller itself uses a SCSI ID. This is usually ID 7.

Reference: <http://cmtunix.tstc.edu/database/hardware/scsi.html>

Incorrect Answers:

- A. The SCSI controller usually uses SCSI ID 7, not 2.
- B. The SCSI controller usually uses SCSI ID 7, not 4.
- C. The SCSI controller usually uses SCSI ID 7, not 5.

QUESTION 466:

Which device commonly uses the ATAPI interface?

- A. Modem
- B. CD-ROM
- C. Video card
- D. Network card

Answer: B.

Explanation: CD-ROM devices commonly use the ATAPI interface.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 24.

Incorrect Answers:

- A. Modems commonly use the serial interface, not the ATAPI interface.
- C. Video Cards commonly use the AGP interface, not the ATAPI interface.
- D. Network cards commonly use PCI interfaces, not the ATAPI interface.

QUESTION 467:

A user believes that his telecommunications software is not dialing his modem properly. Which of the following AT commands can be used to have the modem dial 432-3604?

- A. AT4323604
- B. ATM4323604
- C. ATDT4323604
- D. AT4323604DT

Answer: C.

Explanation: The ATDT<number> command is used to have a modem dial a number.

Reference: <http://www.option.co.za/hayesat.htm#Hayes%20AT%20Commands>

Incorrect Answers:

- A. You need the ATDT command, not the AT command.
- B. You need the ATDT command, not the ATM command
- D. You need the ATDT command, not the AT command

QUESTION 468:

A Linux vendor has recently come out with a necessary patch to the server software to improve security on the server. Which of the following is the best practice, if any, for updating this patch on a production system?

- A. Never apply patches on production servers, because they may introduce errors and conflicts.
- B. Apply the patch during business hours, to validate the patch under normal system operation.
- C. Apply the patch onto a secondary system to test the patch before installing it on a production machine.
- D. Apply the patch immediately to the production system, because security patches need to be installed right away.

Answer: C.

Explanation: Any new software or software patch should be installed on a secondary system and thoroughly tested before installation of production systems.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 203.

Incorrect Answers:

- A. A patch may introduce errors and conflicts, but this is why should test it first on a secondary system.
- B. A patch should be tested on a secondary system before installation on a production system.
- D. Security patches should be installed as soon as possible, but not before testing on a secondary system.

QUESTION 469:

A Linux system crashes every day at the same time and needs to be rebooted. Which of the following would provide evidence of what was happening on the system at that time?

- A. Run dmesg
- B. Run uptime
- C. Look in /etc/shutdown
- D. Look in /var/log/messages

Answer: D.

Explanation: Most applications write error messages to files in the /var/log/messages directory. You should look here to see if you can discover what is causing the system to crash.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 613.

Incorrect Answers:

- A. Dmesg is a utility that displays the text that is displayed during system startup. You need find out what caused the system to crash before the reboot was necessary.
- B. Uptime is a utility that displays how long the system has been running for.
- C. Error messages are not written to this file or directory.

QUESTION 470:

After installing Linux onto a dual-processor machine, the administrator suspects that only one processor initialized successfully during the boot process. How could this be verified?

- A. Run cpuinfo
- B. Check /var/log/messages for errors.
- C. Run dmesg to review the log file.
- D. Run ps to see if both CPUs appear.

Answer: A.

Explanation: Cpuinfo is a utility that displays information about all running processors on a system. If the output contains information about only one processor, then only one processor is working.

Reference:

http://www.cpan.org/modules/by-category/04_Operating_System_Interfaces/Linux/Linux-Cpuinfo-1.5.readme

Incorrect Answers:

- B. A non-functional processor would generate any error messages in the error logs.
- C. Dmesg displays the text that was displayed when the system booted. This will not contain any information about a non-functional processor.
- D. Ps lists the running processes, not the processors.

QUESTION 471:

A system has a utility that is regularly updated with new versions. Rather than

overwriting the older versions, they need to be retained for testing purposes. Therefore, they keep older versions in the following format utility1.3 utility1.4 utility1.5 What is the best way the system can be set up so that users can simply type "utility" to run the latest version of the application?

- A. Copy the latest version of the utility to "utility".
- B. Move the latest version of the utility to "utility".
- C. Make a symbolic link "utility" to the latest version.
- D. Make a symbolic link from the latest version to "utility.lnk".

Answer: C.

Explanation: A symbolic link is like a shortcut. A symbolic link named utility will open the file (program/utility) that the link points to, when a user types 'utility'.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 134.

Incorrect Answers:

- A. A copy of the latest version of the program should not be renamed 'utility' because other files that the program uses, might have links to the original program name.
- B. The latest version of the program should be renamed 'utility' because other files that the program uses, might have links to the original program name.
- D. The symbolic link needs to point to the latest version of the program.

QUESTION 472:

A machine that usually executes its tasks very quickly becomes remarkably slow. What information from the ps command would suggest that a process is problematic and must be killed?

- A. A high CPU time.
- B. A high process ID.
- C. A high load average.
- D. A high memory percentage.

Answer: A.

Explanation: The PS command is used to display information about the running processes. A faulty process can be recognized by having a high CPU time. This means that a high percentage of the processor time is spent trying to run the process. This can usually be fixed by restarting the process.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 514.

Incorrect Answers:

- B. The process ID is just an identifier for the process. A high ID would not slow the machine.
- C. The PS command does not display the load average for the processor.
- D. The PS command does not display information about the memory.

QUESTION 473:

When dial-up users are able to connect to the dial-in Linux server but are unable to authenticate, which of the following should be done?

- A. Reboot the server.
- B. Check spooler for errors.
- C. Check that RAS is running.
- D. Check that RADIUS is running.

Answer: D.

Explanation: RADIUS stands for Remote Authentication Dial In User Service. It is a service that is used to authenticate dial in users.

Reference: <http://www.gnu.org/software/radius/radius.html>

Incorrect Answers:

- A. It is not necessary to reboot the server, just start the RADIUS service.
- B. The spooler is for printing, not authentication.
- C. If RAS wasn't running, the users would not be able to dial in.

QUESTION 474:

The system administrator is asked to install a file called zope-2.2.5-0.rpm. The administrator downloads the file and attempts to install it. While installing the file the following error is displayed:

failed to open /var/lib/rpm/packages.rpm: Permission denied
error: cannot open /var/lib/rpm/packages.rpm

What has to be done before the program will work?

- A. Run "rpm -i zope-2.2.5-0" as root.
- B. Change ownership of file to 'root'
- C. Run "rpm -i --nodeps zope-2.2.5-0" to bypass the error.
- D. Return to the Website to receive an uncorrupted .rpm file.

Answer: A.

Explanation: You must be logged in as root to install a program.

Incorrect Answers:

- B. The file does not need to be owned by root, to enable its installation.
- C. You cannot bypass a 'permission denied' error message.
- D. The system was able to read the permissions, which means the file is not corrupted.

QUESTION 475:

A Linux machine is not booting after a power outage. No rescue/boot disk is readily available. Where could a rescue/boot disk be found?

- A. In /boot
- B. In /root
- C. From linuxdocs.org
- D. At the distribution's Website.

Answer: D.

Explanation: You can download a rescue/boot disk from the distributions Website.

For example, you can download Redhat Linux boot disk images from:

<ftp://ftp.redhat.com/pub/redhat/linux/7.3/en/os/i386/images/>

Incorrect Answers:

- A. There are no boot disk images in /boot.
- B. There are no boot disk images in /root.
- C. Linuxdocs.org contains documentation, not boot disk images.

QUESTION 476:

Why is "netstat -nr" used in substitution of the route command when a network connection is not functioning correctly?

- A. "netstat -nr" displays the routing table without performing reverse name lookup.
- B. Route requests the network driver for data, but "netstat -nr" will display the kernel's routing table.
- C. The route command can be used if the network is functional. The "netstat -nr" displays only the local machine.
- D. Route will attempt to contact and verify the connections to each host in the routing table using ping.

If the network fails, route will stop responding.

Answer: C.

Explanation: The Route command is used to display the routing table. If the network is not functional, the routing table will only contain static routes; it will not contain any dynamic routes. The netstat command displays information about the local machine whether the network is functional or not.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 373/4.

Incorrect Answers:

- A. Netstat is used rather than route because netstat displays information about the local machine.

- B. Netstat is used rather than route because netstat displays information about the local machine.
 - D. Route does not attempt to contact and verify the connections to each host.
-

QUESTION 477:

In order to control runaway processes, an administrator creates a cron job. Which of the following commands should be run so that he can scan the logs later?

- A. ps
- B. sar
- C. top
- D. tail

Answer: C.

Explanation: A 'runaway' process is a process that is using a high amount of CPU time. The 'top' command displays the processes that use the highest amount of CPU time.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 668.

Incorrect Answers:

- A. The ps command displays all processes. We just need the processes with the highest amount of CPU time.
 - B. There is no sar command.
 - C. The tail command displays the processes with the lowest amount of CPU time.
-

QUESTION 478:

After setting up a cron job to backup a system to tape, the first few backups on the tape cartridge are successful. They then fail, reporting the "device is full." What could be the cause of the problems?

- A. Tapes can only be used once.
- B. The tape is not being erased.
- C. The tape drive needs to be replaced.
- D. Incremental backups need to be used.

Answer: B.

Explanation: If you're using a single tape to run scheduled backups, then the cron job will need to be configured to erase the tape before performing the backup.

Incorrect Answers:

- A. Tapes can be used many times.
- C. It is unlikely that the tape drive is faulty and therefore does not need to be replaced.

D. Incremental backups back up only the files that have changed since the last backup. These backups use less tape space but the tape will eventually fill up if it isn't erased.

QUESTION 479:

A new user has been issued a Linux system that automatically boots to an X login, but would rather have the system automatically boot to the console login. How should the system be configured to accommodate the user?

- A. By typing "init 3" in an xterm.
- B. By running the Xbootmgr utility.
- C. By editing /etc/lilo.conf and adding the line:
boot = console
- D. By changing the line in /etc/inittab that reads:
id :5:initdefault:
to read:
id:3:initdefault:

Answer: D.

Explanation: The inittab file specifies the default runlevel for the machine. Run level 5 will automatically boot to an X login. Runlevel 3 will boot to a console login. Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 410, 399.

Incorrect Answers:

- A. Init 3 will change the runlevel to runlevel 3, but the default boot runlevel won't be changed.
 - B. Xbootmgr will not change the default runlevel of the machine.
 - C. The is an incorrect use of the boot command in a lilo.conf file.
-

QUESTION 480:

A user complains that they can send and receive mail on the Internet, but cannot browse the Web. They have tried using different Web browsers in X. Working offline is disabled. What is most likely to be the problem?

- A. The user is not typing the Web address correctly.
- B. Web support was not added during the initial installation.
- C. X dropped Web access to the browser and needs to be restarted.
- D. There is a proxy sever that the browsers have not been configured to use.

Answer: D.

Explanation: If you have a proxy server configured on the network, the client computers need to be configured to use it to access the internet.

Reference: <http://www.squid-cache.org/>

Incorrect Answers:

- A. An incorrect web address would return a page not found error or a different website.
- B. Web support is added by default in most installations.
- C. This is not something that X can do.

QUESTION 481:

A user-defined cronjob is configured incorrectly and is slowing down a server. What is the best way to address this issue?

- A. Use "cron-d*" to delete each user's cron jobs.
- B. Use "userdel <user>" to delete the user to prevent additional cron jobs.
- C. Use "crontab -u <user> -l" for each user to find out who has the incorrect crontab.
- D. Prevent cron from launching any additional processes by using "killall -9 crond".

Answer: C.

Explanation: You need to find out which users' cron job is causing the problem and stop the cron job.

Reference: <http://www.oreillynet.com/linux/cmd/c/crontab.html>

Incorrect Answers:

- A. It is not necessary to delete all the users' cron jobs.
- B. It is not necessary to delete any user accounts.
- D. Cron is already running a troublesome process. Killing any additional processes won't help.

QUESTION 482:

Which of the following tasks cannot be accomplished with the touch command?

- A. Create a new file.
- B. Change a file's modification time.
- C. Change a file's access time.
- D. Change a file's creation time.

Answer: D.

Explanation: The touch command is used to display information about a file, including its modification and last access times. If the file doesn't exist, touch will create it. It cannot modify a file's creation time.

Reference: <http://www.oreillynet.com/linux/cmd/t/touch.html>

Incorrect Answers:

- A. If a file doesn't exist, touch can create it.

- B. You can change a files modification time with the touch command.
 - C. You can modify a files access time with the touch command.
-

QUESTION 483:

A site administrator instructs the technician to install Linux as a secondary OS on an existing workstation. He wants to use the boot loader of the primary OS. When requested where to place LILO, the technician should select which location?

- A. BIOS
- B. /etc/disktab
- C. Master boot record
- D. Partition superblock

Answer: B.

The default location for a Linux boot loader is in the Master Boot Record. However, if you want to use the boot loader of another operating system, you'll need to put the Linux boot loader into a directory in a Linux partition such as /etc/disktab.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 213.

Incorrect Answers:

- A. You cannot put a Linux boot loader into the BIOS.
 - C. If you want to use the boot loader of another operating system, you'll need to put the Linux boot loader into a directory in a Linux partition such as /etc/disktab.
 - D. You cannot put a Linux boot loader into the partition superblock.
-

QUESTION 484:

A network administrator attempted to configure the Ethernet interface. He issued the insmod command along with the driver's object file. However, insmod reports errors about unresolved symbols. Which of the following is the cause of the problem?

- A. A driver of that type has already been installed.
- B. The latest version of insmod is not installed.
- C. The compiled driver is incompatible with the kernel.
- D. The module is designed for a device of another type.

Answer: C.

Explanation: Unresolved symbol errors are usually caused by attempting to install a module/driver which is incompatible with the kernel.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 571.

Incorrect Answers:

- A. This would not cause an unresolved symbol error.
- B. It is not necessary to have the latest version on insmod installed.

D. The module would still load if it were designed for another device. The device just wouldn't work.

QUESTION 485:

A computer has a FAT32 partition that takes up the entire 16 GB hard driver. Another operating system is currently installed, but only uses 8 GB of the partition. What is the best way to install Linux without removing the other operating system?

- A. Run FIPS
- B. Run rsize
- C. Run fdisk
- D. Run format

Answer: A.

Explanation: To install Linux, you need to reduce the size of the FAT32 partition to free up enough space to create a Linux partition. FIPS is a utility that can resize partitions without losing data.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 43.

Incorrect Answers:

- B. Rsize is the incorrect command.
 - C. Fdisk creates partitions but it cannot resize them.
 - D. Format will erase everything on the partition, not resize it.
-

QUESTION 486:

A client terminal requires the BOOTP protocol in order to access the server. Which protocol must be installed on the BOOTP server to communicate with the client terminal?

- A. SMB
- B. IGRP
- C. OSPF
- D. TCP/IP

Answer: D.

Explanation: BootP is an IP protocol, commonly used with diskless workstations.

Reference: <http://www.webopedia.com/TERM/B/BOOTP.html>

Incorrect Answers:

- A. SMB is a NetBIOS protocol used for communication with Windows computers. It is not used with BootP.
- B. IGRP is a routing protocol. It is not used with BootP.
- C. OSPF is a routing protocol. It is not used with BootP.

QUESTION 487:

Where is the first place to look for error messages while installing and testing an application?

- A. /tmp/boot.log
- B. /var/log/dmesg
- C. /var/log/messages
- D. /var/log/kernel/errors

Answer: C.

Explanation: Most applications write messages to error logs stored within /var/log/messages.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 613.

Incorrect Answers:

- A. This is not the default location for application error messages.
- B. This is not the default location for application error messages.
- D. This is not the default location for application error messages.

QUESTION 488:

A new shell command is installed and does not perform correctly. It generates too much diagnostic output to read on the screen and does not write to a log file. Which of the following would capture the output for evolution?

- A. Run the command as a daemon.
- B. Make the changes to /etc/syslog.conf
- C. Run the command in the background.
- D. Add redirection to the command line.

Answer: D.

Explanation: By redirecting the output to a command line in a console, you could read the output by scrolling up the window.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 656.

Incorrect Answers:

- A. Running the command as a daemon would not capture the output.
- B. Making changes to the syslog.conf file won't help because the program doesn't write to a log file.
- C. Running the command in the background would not capture the output.

QUESTION 489:

Which runlevel only grants root access?

- A. 0
- B. 1
- C. 2
- D. 3

Answer: B

Explanation: Runlevel 1 is 'single user maintenance mode'. In the mode, only the root user can log in to the system.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 410.

Incorrect Answers:

- A. Runlevel 0 shuts down the computer.
- C. Runlevel 2 is a multiuser mode in which any user can log in.
- D. Runlevel 2 is a multiuser mode in which any user can log in.

QUESTION 490:

A new employee having a problem with account login has the following enter in the /etc/passwd file:

User1:*:51:501:John Doe:/home/user1:/bin/bash

What is wrong with this entry in the /etc/passwd file?

- A. The UID is not valid.
- B. The account is locked.
- C. The UID and GID must match.
- D. Spaces are not permitted between the first and last name.

Answer: B.

Explanation: The second field is the password field. This account has no password as indicated by the '*'. This means that the account is locked.

Reference: Michael J. Tobler. New Riders, Inside Linux: Page 397.

Incorrect Answers:

- A. The user ID is valid.
- C. The User ID and Group ID do not have to be the same.
- D. Spaces are permitted between the first and last name. (note: This is not the login name).

QUESTION 491:

What command is used to remove an rpm package from Linux?

- A. rpm -e <package name>
- B. rm -rf <package name>

- C. rpm -m <package name>
- D. rpm --remove <package name>

Answer: A.

Explanation: The rpm -e <package name> command is used to remove an rpm package.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 178.

Incorrect Answers:

- B. This is the command used to delete a directory. You would need to delete every file installed by the package if you were to use this command.
- C. There is no -m option in the rpm program.
- D. There is no --remove option in the rpm program.

QUESTION 492:

In order to prevent monitor damage when configuring X, all of the following must be configured correctly EXCEPT

- A. RAMDAC
- B. Video RAM
- C. Refresh rate
- D. Resolution capability

Answer: D.

Explanation:

The resolution capability is a graphics card setting. However, this setting when incorrectly configured would not damage a monitor.

Reference: Michael J. Tobler. New Riders, Inside Linux: Page 135.

Incorrect Answers:

- A. The RAMDAC must be configured.
- B. The Video RAM must be configured.
- C. The refresh rate must be configured.

QUESTION 493:

The following is an example of a ".forward" file found in user Audrey's home directory.

/audrey,audrey@comptia.org

Which of the following best describes what the mail handler will do when user "audrey" receives mail?

- A. It forwards a copy to comptia.org and does not keep a local copy.
- B. It saves a copy of the mail locally and forwards a copy of the mail to audrey@comptia.org.
- C. It runs a program audrey that is found in the root directory and forwards the mail to

audrey@comptia.org.

D. It runs a program called audrey that is found in the root directory and forwards the program's results to comptia.org.

Answer: B.

Explanation: A .forward file is used to tell an email client what to do with received email. You can have multiple entries in the file, separated by commas. /Audrey will keep a copy in a directory called /Audrey. Audrey@comptia.org will forward a copy of the email to that address.

Reference: Bryan Costales, O-Reilly Press. Sendmail. Page 429.

Incorrect Answers:

- A. It will save a copy in the /Audrey directory.
- C. It does not run a program called Audrey.
- D. It does not run a program called Audrey.

QUESTION 494:

What file should be edited to add two additional gettys to runlevel 3?

- A. /etc/inittab
- B. /etc/termcap
- C. /etc/rc.d/init.d/inittab
- D. /usr/local/etc/getty.conf

Answer: A.

Explanation: The /etc/inittab file contains the default configuration information for the various runlevels.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 400.

Incorrect Answers:

- B. /etc/termcap does not contain configuration information for the various runlevels.
- C. /etc/rc.d/init.d/inittab does not contain configuration information for the various runlevels.
- D. /usr/local/etc/getty.conf does not contain configuration information for the various runlevels.

QUESTION 495:

Which of the following programs can be reconfigured to boot Linux?

- A. Minix
- B. FIPS.EXE
- C. Disk Druid

D. LOADLIN.EXE

Answer: D.

Explanation: There are various boot loaders for Linux such as LILO, Grub and LOADLIN.EXE. LOADLIN.EXE is a DOS program that can load Linux.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 490.

Incorrect Answers:

- A. Minix is an old UNIX operating system, not a Linux boot loader.
- B. Fips is a partition resizing utility, not a Linux boot loader.
- C. Disk Druid is a hard disk partitioning utility, not a Linux boot loader.

QUESTION 496:

A Linux machine has a local address of 192.168.1.1 with a subnet mask of 255.255.255.0. At this time, all services are denied. Which of the following lines would be appended to the hosts.allow file to permit access to the Web service on the local subnet?

- A. httpd: 192.168.1.
- B. ALL: 192.168.1.255/24
- C. ALL except httpd: 192.168.1.1/24
- D. 192.168.1.255/255.255.255.0:httpd

Answer: A.

Explanation: To permit access to the Web service, you need to permit access to the HTTP daemon (httpd). You then need to specify which IP addresses can access it. 192.168.1.0 is the network address of a host with an IP address of 192.168.1.1. The statement 'httpd: 192.168.1.' (without the 0) will allow all machines in the 192.168.1.0 subnet access to the Web service.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 364.

Incorrect Answers:

- B. The ALL statement is invalid. It can only be used in the client list to mean 'all' IP addresses.
- C. The ALL statement is invalid. It can only be used in the client list to mean 'all' IP addresses.
- D. The server service come before the client list.

QUESTION 497:

A server has the following Class C IP address:

192.168.1.2

What are the default network and broadcast addresses?

- A. Network: 19.0.0.1; Broadcast: 192.0.0.2
- B. Network: 19.0.0.0; Broadcast: 192.168.1.0
- C. Network: 19.168.1.1; Broadcast: 192.168.1.0
- D. Network: 19.168.1.0; Broadcast: 192.168.1.255

Answer: D.

Explanation: The first three octets of a Class C address are the network address. The last octet is the host portion of the address. The network address has a zero as the host portion (e.g. 192.168.1.0). The broadcast address has 255 as the host portion (255 = all 1s in binary). This gives us 192.168.1.255 as the broadcast address.

Incorrect Answers:

- A. These are incorrect network and broadcast addresses.
- B. These are incorrect network and broadcast addresses.
- C. These are incorrect network and broadcast addresses.

QUESTION 498:

A new video card is added to a Linux workstation. Which of the following files is used to configure X?

- A. /usr/conf/Xconfig
- B. /etc/X11R6/Xconfig
- C. /etc/X11/XF86Config
- D. /root/Xwindows/Xconf

Answer: C.

Explanation: XF86Config is the configuration file for X. It resides in the /etc/X11 directory.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 124.

Incorrect Answers:

- A. This is not the correct file to configure X.
- B. This is not the correct file to configure X.
- D. This is not the correct file to configure X.

QUESTION 499:

What command is used to remove a kernel module?

- A. rmmod
- B. rm module
- C. rm -rf <module name>
- D. /uninstall <module name>

Answer: A.

Explanation: The 'rmmod' (remove module) command is the correct command to remove a module.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 574.

Incorrect Answers:

- B. The command rm module would delete a file called module from the current directory.
- C. The rm -rf command would delete all files in a directory called <module name>.
- D. This is a non-existent command.

QUESTION 500:

The root user types "echo \$path" and sees the following output:

./bin:/usr/bin:sbin:/usr/X11R6/bin:/usr/src

Which part of this path is considered to be a security risk?

- A. .
- B. /sbin
- C. /usr/src
- D. /usr/X11R6/bin

Answer: A.

Explanation: The current directory indicator (.) in the path poses a security risk because someone could create a malicious program with the name of some other program (like ls) and trick the user into running it just by typing the name of the program.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 408.

Incorrect Answers:

- B. Having /sbin in the path does not pose a security risk.
- C. Having /usr/src in the path does not pose a security risk.
- D. Having /usr/X11R6/bin in the path does not pose a security risk.

QUESTION 501:

Which of the following contains system user default configuration files and directories?

- A. /etc/skel
- B. /usr/config
- C. /usr/local/bin
- D. /etc/user.conf

Answer: A.

Explanation: The default configuration files for user accounts are in /etc/skel. These settings are copied when a user account is first created.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 260.

Incorrect Answers:

- B. The default user configuration files are not stored in the /usr/config directory.
- C. The default user configuration files are not stored in the /usr/local/bin directory.
- D. The default user configuration files are not stored in the /etc/user.conf file.

QUESTION 502:

A new printer has been installed and the printcap file has been edited. Is the printer ready to use?

- A. No, because the printer daemon must be restarted.
- B. No, because there is also a spool daemon that will need to be restarted.
- C. Yes, because the printer configuration files are read every time the printer spool is used.
- D. Yes, because it is necessary to run the program called printcap which creates a separate file used by the printer daemon.

Answer: A.

Explanation: After making changes to the printcap file, you need to restart the printer daemon to activate the changes.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 550.

Incorrect Answers:

- B. There isn't a separate spool daemon that needs to be restarted.
- C. The printer is not ready for use without restarting the printer daemon.
- D. The printer is not ready for use without restarting the printer daemon.

QUESTION 503:

Which of the following protocols is used while configuring a workstation to dial into and connect to a new ISP?

- A. PPP
- B. UDP
- C. UUCP
- D. SNMP

Answer: A.

Explanation: PPP (point-to-point) protocol is the protocol used to connect to an ISP (Internet Service Provider).

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 339.

Incorrect Answers:

- B. UDP is not used to connect to an ISP.
- C. UUCP is not used to connect to an ISP.
- D. SNMP is not used to connect to an ISP.

QUESTION 504:

An Internet Web server is being installed. No DHCP server is available. What is the proper method to obtain a valid Internet IP address?

- A. Use ping.
- B. Use netstat.
- C. Use nslookup.
- D. Contact the Internet Service Provider (ISP).

Answer: D.

Explanation: When installing an Internet Web server, you'll need to contact the Internet Service Provider to find out what IP address to assign to the Web server.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 346.

Incorrect Answers:

- A. Ping is used to test IP connectivity, not to obtain an IP address.
- B. Netstat is used to troubleshoot network connectivity, not to obtain an IP address.
- C. Nslookup is used to test DNS, not to obtain an IP address.

QUESTION 505:

Which of the following tasks is the most important best practice when performing a new installation of Linux for a customer?

- A. Document all configuration settings used during the installation.
- B. Apply the latest patches and updates to the operating system and applications.
- C. Use a single distribution for the operating system, utilities, and applications.
- D. Use default settings during the installation and make custom changes after the operating system is running and validated.

Answer: A.

Explanation: When installing Linux for a customer, it is good practice to document all configuration settings used during the installation. This will make it easier to troubleshoot any problems that may occur in the future.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 438.

Incorrect Answers:

- B. Applying the latest patches is important, but documentation is more important.

- C. Using a single distribution is a good idea, but documentation is more important.
 - D. Using default settings may make the installation easier, but this is not required and is not the most important 'best practice'.
-

QUESTION 506:

A user has just connected a SCSI scanner device to his computer. After installing the vendor's drivers, the scanner cannot be correctly used by the software. All of the following are possible reasons EXCEPT

- A. The scanner device is damaged.
- B. The SCSI ID is set incorrectly.
- C. The last device is not terminated.
- D. There is an IRQ conflict between the scanner and another device.

Answer: D.

Explanation: SCSI devices don't use IRQs. They use SCSI IDs to differentiate between devices. Only the SCSI controller to which the SCSI devices connect uses an IRQ.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 565.

Incorrect Answers:

- A. It is possible that the scanner is damaged.
 - B. It is possible that the SCSI ID is not set correctly.
 - C. It is possible that the last SCSI device on the SCSI chain is not terminated.
-

QUESTION 507:

What may happen if a network cable and a power cable are too close together?

- A. EMI may occur.
- B. Jabber may occur.
- C. Crosstalk may occur.
- D. Power surges may occur on the network cable.

Answer: A.

Explanation: All power cables produce an electro magnetic field around them. This magnetic field can interfere with data traveling along a network cable if the network cable is close to the power cable. This is known as EMI (Electro Magnetic Interference).

Reference: <http://www.kemcointernational.com/newcoatings.htm>

Incorrect Answers:

- B. Jabber can be caused by a faulty network card, not by a power cable.
- C. Crosstalk can occur when network cables are close together. It is not caused by a

power cable.

D. Power surges would not occur on a network cable, if it was close to a power cable.

QUESTION 508:

What is the advantage of using an extended capabilities port (ECP) over an enhanced parallel port (EPP)?

- A. Daisy chaining capability.
- B. Bi-directional communication.
- C. Omni-directional communication.
- D. Direct memory access (DMA) capability.

Answer: D.

Explanation: Extended Capabilities Ports support direct memory access (DMA).

This is not supported by Enhanced Parallel Ports.

Reference: <http://www.fapo.com/ecpmode.htm>

Incorrect Answers:

- A. Daisy chaining is support by both types of parallel port.
 - B. Bi-directional communication is support by both types of parallel port.
 - C. Omni-directional communication is support by both types of parallel port.
-

QUESTION 509:

A technician booted a PC and noted that none of the four ATA devices were detected. He verified that the devices were cabled properly, physically connected to the ATA controller and power supply, and jumpered correctly. Which of the following is the most likely problem?

- A. No PC can support four ATA devices.
- B. The CMOS setup is set to ignore all ATA devices.
- C. The BIOS does not appear to support ATA devices.
- D. ATA devices have not been set up with the configuration diskette.

Answer: B.

Explanation: ATA devices are usually auto-detected by the CMOS during system boot up. However, this can be disabled. As all the devices are correctly fitted, this is the most likely cause of the problem.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 31.

Incorrect Answers:

- A. All modern PCs can support at least four ATA devices.
 - C. All modern BIOSs support ATA devices.
 - D. ATA devices do not need to be set up with a configuration diskette.
-

QUESTION 510:

A technician wants to replace a system processor. What should he do before beginning the work?

- A. Properly ground the PC.
- B. Remove the CMOS battery.
- C. Properly ground himself.
- D. Ensure that the humidity is below 5%.

Answer: C.

Explanation: When working with components in a PC, it is important to ground yourself to prevent static electricity shocks which can destroy PC components. A common way to do this is to wear a strap that fits to your wrist and connects to the metal case of the computer.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 563/4.

Incorrect Answers:

- A. You should ground yourself, not the PC.
- B. You don't need to remove the CMOS battery to change the processor.
- D. It is not necessary to ensure that the humidity is below 5%.

QUESTION 511:

Enabling Init13h support on a SCSI controller card enables use of which of the following devices?

- A. Scanner
- B. Printer
- C. Tape drive
- D. Hard drive

Answer: D.

Explanation: To use a SCSI hard disk, you need to ensure that Init13h support is enabled on the SCSI controller.

Incorrect Answers:

- A. Init13h support enables the use of a SCSI hard disk, not a scanner.
- B. Init13h support enables the use of a SCSI hard disk, not a printer.
- C. Init13h support enables the use of a SCSI hard disk, not a tape drive.

QUESTION 512:

How can an ATA-66 hard drive be utilized with an UDMA-33 controller?

- A. Flash the BIOS.
- B. Install the hard drive normally.
- C. An ATA-66 controller must be installed.
- D. Reconfigure the jumper settings on the motherboard.

Answer: B.

Explanation: An ATA-66 hard drive can run on a UDMA-33 controller.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 30-31.

Incorrect Answers:

- A. It is not necessary to flash the BIOS.
- C. It is not necessary to install a new controller.
- D. It is not necessary to reconfigure the jumper settings on the motherboard.

QUESTION 513:

A single SCSI device is not recognized during SCSI BIOS initialization. Which of the following has most likely caused this?

- A. The SCSI bus is not properly terminated.
- B. External SCSI devices are not supported by Linux.
- C. More than one device is required for proper SCSI operation.
- D. The cable is over the 2-foot limit for the type controller.

Answer: A.

Explanation: It is most likely that the SCSI bus is incorrectly terminated. It is

possible that the bus was terminated at the device before the unrecognized device.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 579.

Incorrect Answer:

- B. External SCSI devices are supported by Linux.
- C. You don't need more than one device on a SCSI chain for proper SCSI operation.
- D. There is no 2 foot limit on a SCSI chain.

QUESTION 514:

What is the Media Access Control (MAC) address of an Ethernet interface?

- A. The encryption key used for IPSEC.
- B. An identifier used when forwarding packets between routers.
- C. A 32-bit address that is often associated with a logical name.
- D. A hexadecimal number that makes a network interface card unique.

Answer: D.

Explanation: Every network card has a 96 bit unique identifier 'burned' into the card. The 48 bits signify the vendor of the card and the last 48 bits are unique for every card sold by the vendor. The 96 bit number is usually displayed as a hexadecimal number.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 327.

Incorrect Answers:

- A. The MAC address is unrelated to IPSEC.
- B. The MAC address is a hardware address. Routers use software addresses such as IP addresses.
- C. The 32 bit address is the IP address, not the MAC address.

QUESTION 515:

After having worked for several months, a PC fails to boot and indicates that the HDD has bad sectors. Which is the first action to take?

- A. Reboot the system to remove the message.
- B. Run the manufacturer's Diagnostic Utility.
- C. Replace the defective HDD and reload the system.
- D. Run Scandisk and Defrag to repair the damaged sectors.

Answer: B.

Explanation: The best course of action would be to test the hard drive with the manufacturer's diagnostic utility to confirm that the hard disk has bad sectors.

Incorrect Answers:

- A. If the PC failed to boot due to a bad hard disk, it will fail again if you try to reboot.
- C. It may not be necessary to replace the hard drive.
- D. Defrag does not repair bad sectors and Scandisk is a Windows utility.

QUESTION 516:

What is the maximum bandwidth of 100BaseTX in half-duplex mode?

- A. 10 Mbps
- B. 50 Mbps
- C. 100 Mbps
- D. 200 Mbps

Answer: C.

Explanation: The 100 in 100BaseTX stands for 100 Mbps. In full duplex mode, this speed is doubled.

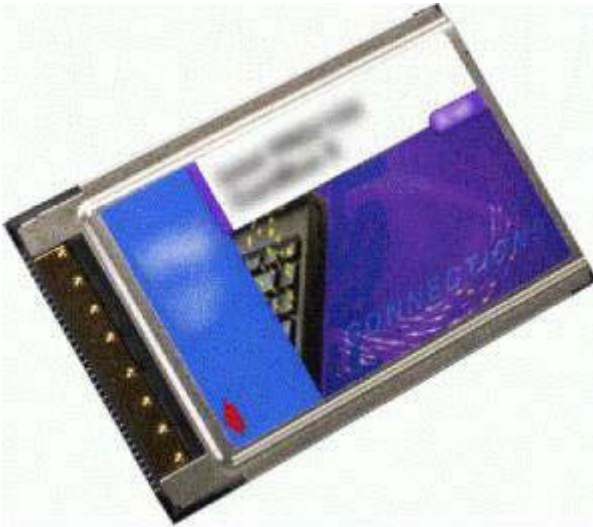
Reference: <http://www.wikipedia.com/wiki/100baseTX>

Incorrect Answers:

- A. The 100 in 100BaseTX stands for 100 Mbps, not 10.
- B. The 100 in 100BaseTX stands for 100 Mbps, not 50.
- D. The 100 in 100BaseTX stands for 100 Mbps. 200Mbps can be achieved in full duplex mode.

QUESTION 517:

Exhibit:



Based on the exhibit, in which type of system would the device most commonly be used?

- A. Network switch.
- B. Network firewall.
- C. Stand-alone server.
- D. Mobile workstation.

Answer: D.

Explanation: The exhibit shows a PCMCIA card. These are commonly used in laptops.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 589.

Incorrect Answers:

- A. This is not a network switch.
- B. This is not a network firewall.
- C. This is not a stand-alone (or any other) server.

QUESTION 518:

During boot, the system reports a configuration error. The technician fixes the BIOS

settings and the problem is solved. After a cold reboot, the system reports the same configuration error. The CMOS battery tests good. What is the most likely problem?

- A. Bad BIOS chip.
- B. Bad system board.
- C. Bad system memory.
- D. Bad or missing command interpreter.

Answer: B.

Explanation: When configuring the BIOS, you are actually configuring the CMOS. The BIOS reads the information in the CMOS during boot up. The CMOS is remembering the configuration settings and the battery is good, which suggest a bad system board (motherboard).

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 12.

Incorrect Answers:

- A. The fact that you received the same error after configuring the CMOS suggests that the BIOS was able to read the CMOS. Therefore, the BIOS chip is functional.
- C. The system memory (RAM) is unrelated to the BIOS or CMOS.
- D. A bad command interpreter would cause problems when running programs, not startup problems.

QUESTION 519:

Which type of memory not only detects, but also corrects single-bit errors?

- A. EDO
- B. ECC
- C. Parity
- D. RAMDAC

Answer: B.

Explanation: In digital electronic systems, information is represented in binary format (1's and 0's). When binary information is passed from one point to another, there is always some chance that a mistake can be made; a 1 interpreted as a 0 or a 0 taken to be a 1. This can be caused by media defects, electronic noise, component failures, poor connections, deterioration due to age, and other factors. When a bit is mistakenly interpreted, a bit error has occurred.

Error correction is the process of detecting bit errors and correcting them and can be done in software or hardware. For high data rates, error correction must be done in special-purpose hardware because software is too slow.

Taken from ECC Tech <http://members.aol.com/mnecctek/faqs.html>

Incorrect Answers:

- A. EDO RAM does not detect errors.
 - C. ECC Parity in itself does not correct errors.
 - D. RAMDAC is used with video adapters and does not perform error checking.
-

QUESTION 520:

What AT command is used to reset a modem?

- A. ATX
- B. ATZ
- C. ATDT
- D. ATM0

Answer: B.

Explanation: The ATZ command is the correct command to reset a modem.

Reference: <http://www.option.co.za/hayesat.htm#Hayes%20AT%20Commands>

Incorrect Answers:

- A. The ATX command does not reset a modem.
 - C. The ATDT command does not reset a modem.
 - D. The ATM0 command does not reset a modem.
-

QUESTION 521:

Which IRQ is used by most FDD controllers?

- A. 0
- B. 2
- C. 6
- D. 8

Answer: C.

Explanation: Floppy disk drive controllers commonly use IRQ 6.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 565.

Incorrect Answers:

- A. IRQ 0 is used by the system timer, not the FDD controller.
 - B. IRQ 2 is not used by any system devices but is used to enable the use of extra IRQs.
 - D. IRQ 8 is available for use by a device added to the system.
-

QUESTION 522:

What command would allow an administrator to add an existing user's phone number to the system as a

comment?

- A. `usermod -c 555-1234 bsmith`
- B. `modinfo -u bsmith 555.1234`
- C. `useradd -u bsmith -c 555-1234`
- D. `echo bsmith:x:502:502:555-1234:/home/chris:/bin/bash> /etc/passwd`

Answer: A.

Explanation: The `usermod` command is used to modify a user's settings. The `-c` option allows you to add a comment. The comment should be followed by the username of the account that you are modifying.

Reference: <http://www.oreillynet.com/linux/cmd/u/usermod.html>

Incorrect Answers:

- B. `Modinfo` is the wrong command to modify a user account.
- C. `Useradd` is the wrong command to modify a user account.
- D. `Echo` is the wrong command to modify a user account.

QUESTION 523:

A group of users would like accounts created for them. They want to access a particular application on the server. The group requires sharing the files created using the application. What method would be used to accomplish these goals?

- A. As root, edit the `/etc/group` file and include all the users to the 'users' group.
- B. As root, run the `adduser` command to create the shared group, then `adduser` to create the user accounts.
- C. As root, run the `adduser` command to create the users' accounts, then edit the `/etc/passwd` file to change each users GID.
- D. As root, run the `groupadd` command to create the shared group, and then use the `adduser` command to create the user accounts.

Answer: D.

Explanation: The best way to enable users to share files is to put the users into a shared group. The group must be created before the user accounts.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 270.

Incorrect Answers:

- A. The users that require access to the files should be placed into a separate group, not the 'users' group.
- B. You need to run the `groupadd` command to create a group.
- C. You need to create a shared group before you can add the users to it.

QUESTION 524:

On a Linux system, where is the compiled kernel typically located?

- A. /bin
- B. /dev
- C. /boot
- D. /root

Answer: A.

Explanation: The /bin directory typically contains the binary files used by the system. This includes the kernel.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 169.

Incorrect Answers:

- B. The kernel is not typically located in the /dev directory.
- C. The kernel is not typically located in the /boot directory.
- D. The kernel is not typically located in the /root directory.

QUESTION 525:

Which of the following is the most dangerous command to run as root at the root prompt?

- A. df*
- B. fsck
- C. rm-rf*
- D. umount -a

Answer: C.

Explanation: The rm command is used to delete files or directory. The -rf options make the command recursive and forceful. This means that the contents of any subdirectories will be deleted without giving any confirmation messages. This command when run from the root prompt will effectively delete every file on the system.

Reference: <http://www.oreillynet.com/linux/cmd/r/rm.html>

Incorrect Answers:

- A. The df command reports the amount of free disk space. This is not dangerous.
- B. The fsck command checks the file system for errors. This is not dangerous.
- D. The umount command unmounts a disk drive or remote share. This is not dangerous.

QUESTION 526:

What command in vi quits without saving changes?

- A. :ZZ

- B. :q!
- C. :QQ
- D. Esc-q

Answer: B.

Explanation: To exit Vi without saving your changes, you would use the :q! command.

Reference: <http://www.bris.ac.uk/is/selfhelp/documentation/vi-r2/vi-r2.htm>

Incorrect Answers:

- A. This is the incorrect command to exit Vi.
- C. This is the incorrect command to exit Vi.
- D. This is the incorrect command to exit Vi.

QUESTION 527:

A user has just completed an important document, and wishes to save it to his diskette drive and remove the disk. How should the user unmount the diskette that is mounted on /floppy to ensure that the data is saved on the disk?

- A. umount /floppy
- B. mount -u /floppy
- C. unmount /dev/floppy,
- D. Simply eject the disk and the system will unmount the disk.

Answer: A.

Explanation: Care should be taken when ejecting floppy disks because Linux caches access to them. To save the cached data to disk, you must use the umount command followed by the device name or mount point.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 469-470.

Incorrect Answers:

- B. Mount is the wrong command.
- C. /dev/floppy is the wrong mount point. The question states that the floppy is mounted as /floppy.
- D. If you eject the disk without unmounting it, you will lose the cached data.

QUESTION 528:

Which of the following commands can be used to generate a list of all errors recorded during the month of March?

- A. grep
- B. find

- C. more
- D. syslogd

Answer: A.

Explanation: Grep is a very useful tool for searching the contents of files based on various search criteria. For example, you could return every line of text that contains the word 'March'.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 433.

Incorrect Answers:

- B. Find is used to find files, not search the contents of files.
- C. More is used to find files, and display them one screen at a time.
- D. Syslogd is used to generate TCP/IP error messages and write them to a file as specified in the syslog.conf file.

QUESTION 529:

The recommended minimum size of the swap partition is _____ MB?

Answer: 16.

Explanation: The swap partition should ideally be twice the amount of physical RAM, although a minimum of 16 MB is recommended.

Reference: Michael J. Tobler. New Riders, Inside Linux: Page 13.

QUESTION 530:

The maximum size of the swap partition is _____ MB?

Answer: 128 (?)

Explanation: The maximum size of a Linux swap partition is 128MB, although Linux supports up to 16 swap partitions.

Reference: Michael J. Tobler. New Riders, Inside Linux: Page 17.

Comment, possible incorrect answer: in the kernel archive, the limit is 8 files of 2 gig for an maximum of 32 gig for the 2.4 and 2.6 kernel. [Andrew Morton] (the linuxhacker)
<http://www.ussg.iu.edu/hypermail/linux/kernel/0306.0/1685.html>

QUESTION 531:

You have a computer with Windows 95 installed and want to install Linux on it. However, there is no free space available. How could you manage to install Linux on this computer with the least amount of effort?

- A. Use fips to resize the partition containing the Windows 95.
- B. Reparation the hard drive; reinstall Window 95.
- C. You cannot run Windows 95 and Linux on the same computer.
- D. Create a directory under Windows 95 and install Linux in that directory.

Answer: A.

Explanation: FIPS is a partition resizing tool. It can reduce the size of the Windows 95 partition without losing any data, thus freeing up enough space to create a Linux partition.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 43.

Incorrect Answers:

- B. It is not necessary to reinstall Windows 95.
- C. You can run Windows 95 and Linux on the same computer.
- D. You cannot install Linux into a subdirectory in Windows 95.

QUESTION 532:

You are partitioning your second SCSI hard drive. What command should you use?

- A. fdisk sda2
- B. fdisk sdb
- C. fdisk hdb
- D. fdisk hda2

Answer: B.

Explanation: SCSI hard drives use the sd<letter> notation with the first drive being letter a (sda) and the second drive being letter b (sdb).

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 463.

Incorrect Answers:

- A. SCSI hard drives use letters, not numbers.
- C. SCSI hard drives use sd not hd.
- D. SCSI hard drives use sd not hd.

QUESTION 533:

While using fdisk what command would you use to see the partition table?

- A. w
- B. m
- C. a
- D. p

Answer: D.

Explanation: The p option used with fdisk is used to display the partition table.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 457.

Incorrect Answers:

- A. The w option is used to write the changes, not display the partition table.
- B. The m option is used to display the main menu, not the partition table.
- C. The a option is used to toggle a bootable flag on a partition, not display the partition table.

QUESTION 534:

What type would you set on a partition to make it a swap partition?

- A. 0x82
- B. 0x83
- C. s
- D. swap

Answer: A.

Explanation: Swap partitions use the type code 0x82.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 541.

Incorrect Answers:

- B. 0x83 is the type code for a file system partition.
- C. S is not a partition type code.
- D. Swap is not a partition type code.

QUESTION 535:

You have a new, empty hard drive that you will use for Linux. What is the first step you use?

- A. Create an extended partition to be used for the data.
- B. Format the hard drive to use the ext2 filesystem.
- C. Create a swap partition of type 82.
- D. Create a primary partition using fdisk.

Answer: D.

Explanation: The first step to installing Linux on a new hard disk is to create a primary partition. (This can also be done as part of the installation process).

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 457.

Incorrect Answers:

- A. Linux needs a primary partition to boot from, not an extended partition.
 - B. You need to create a partition before you can format it.
 - C. Linux needs a primary partition to boot from, not a swap partition.
-

QUESTION 536:

You have created a primary partition, a swap partition and an extended partition. You can format the primary partition but when you try to format the extended partition it fails. What is the problem?

- A. You should have created another primary partition instead of an extended partition.
- B. Your syntax is wrong for the format command when attempting to format the extended partition.
- C. You cannot format an extended partition.
- D. You have to use the fdformat command to format extended partitions.

Answer: C.

Explanation: The purpose of an extended partition is to house logical partitions. For this reason, you cannot format an extended partition (you must create a logical partition first).

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 458.

Incorrect Answers:

- A. You don't need to create two primary partitions.
 - B. You successfully formatted the primary partition, so the syntax is likely to be correct.
 - D. There is no special command to format extended partitions.
-

QUESTION 537:

When you create a new partition, you need to designate its size by defining the starting and ending _____.

Answer: cylinders.

Explanation: When creating a new partition, you are prompted to enter the starting and ending cylinders (although you can specify a size in bytes, kilobytes, megabytes or gigabytes).

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 459.

QUESTION 538:

In order to apply a filesystem to your new partitions you must format them. What

command would you use to create the ext2 filesystem?

Answer: mkfs.

Explanation: The command used to format a partition (which creates a file system) is mkfs (make file system).

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 459.

QUESTION 539:

When formatting your partition with the mkfs command, you can also pass to the command the type of filesystem and the number of _____?

Answer: blocks.

Explanation: When formatting a partition with the mkfs command, you can specify the number of blocks although this isn't necessary because mkfs can calculate this based on the size of the partition.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 459.

QUESTION 540:

You have new documentation that you wish to install so that it will be available to your users. Which directory would be the most appropriate to use for these files?

- A. /tmp
- B. /usr
- C. /lib
- D. /mnt

Answer: B.

Explanation: Most documentation including man pages is kept in the /usr directory.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 469.

Incorrect Answers:

- A. /tmp is not the usual location for documentation.
 - C. /lib is not the usual location for documentation.
 - D. /mnt is not the usual location for documentation.
-

QUESTION 541:

Each inode contains extensive information on a file. Which of the following is not contained in the inode?

- A. File size.
- B. Filename.
- C. File's owner.
- D. Number of links to the file.

Answer: B.

Explanation: An inode contains the type (for example, plain file, directory, symbolic link, or device file) of the file; its owner, group, and public access permissions; the owner and group ID numbers; its size in bytes; the number of links (directory references) to the file; and the times of last access and last modification to the file. However, an inode does not contain the name of the file.

Reference: <http://perl.plover.com/yak/ext2fs/slide019.html>

Incorrect Answers:

- A. An inode does contain the file size.
- C. An inode does contain the file's owner.
- D. An inode does contain the number of links to a file.

QUESTION 542:

When you issue the command `ls -l`, the first character of the resulting display represents the file's _____.

Answer: type.

Explanation: The first character displayed in the output of the `ls -l` command represents the file's type. For example, `d` represents a directory.

Reference: <http://www.firstlinux.com/articles/cards/permissions.shtml>

QUESTION 543:

In order to run `fsck` on the root partition, the root partition must be mounted as _____.

Answer: read only.

Explanation: `fsck` must only be run on unmounted or read only partitions. This is because any changes to the file system during normal read/write operations can confuse `fsck` and cause file system corruption.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 462.

QUESTION 544:

You cannot mount /dev/hdb1 and suspect that the superblock is bad. How do you fix this?

- A. Use the mkfs command.
- B. Use the fsck command with the -f option.
- C. Use the e2fsck to replace the superblock with a copy saved to another location on your disk.
- D. Restore the superblock from your tape backup.

Answer: C.

Explanation: The e2fsck utility can be used to replace the superblock with a copy saved to another location on the disk.

Reference: <http://www.mandrakeuser.org/docs/admin/arecov3.html>

Incorrect Answers:

- A. The mkfs command will format the disk causing data loss.
- B. Fsck cannot be used to restore the superblock.
- D. You cannot restore the superblock from a tape backup because you cannot mount the drive.

QUESTION 545:

Why should you track the amount of free space on your disk?

- A. If there is no free space, you will not be able to write to that filesystem.
- B. If there is no free space, you will not be able to install new applications.
- C. If the amount of free space becomes less than 50 percent, then your system will slow down.
- D. If the amount of free space is too low, your system will not boot.

Answer: A.

Explanation: If there is no free space on a disk, you will not be able to write to that disk.

Incorrect Answers:

- B. You will not be able to install new applications, but that is less of a problem than not being able to write to the disk.
- C. Disk space of less than 50% will not slow the system down.
- D. Low disk space will not prevent the system booting.

QUESTION 546:

You want to know how much space is being occupied by your user's home

directories. Which of the following will provide you with this information?

- A. du -l /home
- B. du -b /home
- C. du -m /home
- D. du -c /home

Answer: D.

Explanation: The du (disk usage) command with the -c option will display the total used space in the specified directory.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 477.

Incorrect Answers:

- A. The -l option is used to count the size of all files, whether or not they have already appeared (i.e., via a hard link).
- B. The -b option is used to display the size in bytes of all the files in the specified directory.
- C. The -m option is used to display the size in megabytes of all the files in the specified directory.

QUESTION 547:

You also need to know the amount of free space on the partition containing the user's home directories. Which of the following commands will provide this information?

- A. df /home
- B. df -i /home
- C. df --sync
- D. df -T

Answer: A.

Explanation: The df (disk free) command is used to display the free space in the specified partition or directory.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 471.

Incorrect Answers:

- B. The -i option is used to display information about the inodes, not the free space.
- C. You need to specify the /home directory. Also, the -sync option is incorrect.
- D. You need to specify the /home directory. Also, the -T option is incorrect.

QUESTION 548:

You notice that the amount of free space is getting low. When you check the

contents of the /tmp directory, you find several hundred files so you delete them. After deleting these temp files, you check the amount of free space, however, it has not increased. What should you do?

- A. Move the /tmp directory to another partition.
- B. Delete the partition containing the /tmp directory, recreate it and restore its contents.
- C. Delete the /tmp directory and recreate it.
- D. Run fsck on the filesystem containing the /tmp directory.

Answer: C.

Explanation: The easiest way to fix this is to delete and recreate the /tmp directory (it's easy because the directory is empty).

Incorrect Answers:

- A. It is not necessary to move the /tmp directory to another partition.
- B. There are no contents to restore as they have been deleted.
- D. Fsck is time consuming and hence unnecessary.

QUESTION 549:

You have the /var directory on its own partition. You have run out of space. What should you do?

- A. Reconfigure your system to not write to the log files.
- B. Use fips to enlarge the partition.
- C. Delete all the log files.
- D. Delete the partition and recreate it with a larger size.

Answer: B.

Explanation: FIPS is a partition resizing tool. It can reduce or enlarge a partition without losing data.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 43.

Incorrect Answers:

- A. You should not prevent the system writing log files.
- C. You should not delete all the log files.
- D. It is unnecessary to delete the partition, which would require restoring the data.

QUESTION 550:

You can start Linux in many different ways. Which of the following is not one of these?

- A. Type linux from a DOS prompt under Windows 95.

- B. Using a boot loader such as LILO.
- C. From a floppy disk.
- D. Type linux at the boot: prompt.

Answer: A.

Explanation: 'Linux' is not a DOS command and so cannot be used to start Linux.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 213/4.

Incorrect Answers:

- B. You can boot Linux using a boot loader such as LILO.
- C. You can boot Linux with a Linux boot floppy disk.
- D. You can boot Linux by typing Linux at the Linux boot prompt.

QUESTION 551:

When the kernel is loading, it writes any messages to the _____ file.

Answer: /var/log/boot.messages.

Explanation: When the kernel is loading, it writes any messages to the /var/log/boot.messages file.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 615.

QUESTION 552:

What command can you use to see the boot messages?

- A. dmesg
- B. cat kernel.messages
- C. logview
- D. man logs

Answer: A.

Explanation: The dmesg utility displays all the boot messages that were displayed during system boot up.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 615.

Incorrect Answers:

- B. The boot messages are not stored in the kernel.messages file.
- C. Logview is the incorrect command to view the boot messages.
- D. Man logs would display the man files for a program named logs.

QUESTION 553:

After the kernel is loaded, it calls the _____ daemon which is responsible for creating new processes.

- A. inittab
- B. sys.conf
- C. init
- D. syslog

Answer: C.

Explanation: The init daemon (initd) is sometimes known as a "super server", because it is responsible for starting all the other services (processes).

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 393.

Incorrect Answers:

- A. Inittab is the configuration file for the init daemon.
- B. Sys.conf is not a daemon.
- D. Syslog is not a daemon.

QUESTION 554:

Each entry in the /etc/inittab file contains four fields the third of which is the Action field. What is the purpose of this field?

- A. Identifies the entry.
- B. Specifies the command to execute.
- C. Defines how to handle the entry.
- D. Defines which runlevels this line applies to.

Answer: C.

Explanation: The inittab file is the configuration file for the init daemon. The purpose of the action field is to tell the init daemon what to do with each process.

The format of each entry in the inittab file is ID: runlevel: action: process.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 399.

Incorrect Answers:

- A. The ID field identifies the entry.
- B. The process field specifies the command to execute.
- D. The runlevel field defines which runlevels this line applies to

QUESTION 555:

Which file should you examine to determine the defined runlevels for your system?

Answer: /etc/inittab

Explanation: The inittab file is the configuration file for the init daemon. This file contains the defined runlevels on a Linux system.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 399.

QUESTION 556:

How does single user mode differ from other runlevels?

- A. Init does not read the /etc/inittab file.
- B. Users can only log into the system across the network.
- C. Network services are disabled.
- D. All processes are stopped and the root filesystem is mounted as read-only when in single user mode.

Answer: C.

Explanation: Single user mode (sometimes known as single user maintenance mode or runlevel 1) is used to carry out maintenance to a system. In this mode, network services are disabled and only the root user can log in.

Reference:

<http://www.redhat.com/docs/manuals/linux/RHL-7.3-Manual/custom-guide/s1-rescuemode-booting-single.html>

Incorrect Answers:

- A. Init does read the inittab file.
 - B. Users cannot log in to the system; only root can log in.
 - D. Not all processes are stopped and the file system is not mounted in read only mode.
-

QUESTION 557:

What should you type to change the runlevel of your system?

- A. init [runlevel]
- B. halt [runlevel]
- C. /etc/inittab
- D. sys.init [runlevel]

Answer: A.

Explanation: The correct command to change the runlevel of a Linux system is 'init [runlevel]'.

Reference: <http://www.oreillynet.com/linux/cmd/i/init.html>

Incorrect Answers:

- B. Halt is the incorrect command.

- C. /etc/inittab is not a command. It is a configuration file for the init daemon.
 - D. sys.init is not a command.
-

QUESTION 558:

Where are the startup scripts defined?

- A. /etc/init.d
- B. /etc/scripts
- C. /etc/start
- D. /etc/inittab

Answer: A.

Explanation: When a system starts up, the init daemon starts the scripts defined in the /etc/init.d folder according to the configuration in the inittab file.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 394.

Incorrect Answers:

- B. This is the incorrect folder.
 - C. This is the incorrect folder.
 - D. Inittab is the configuration file for the init daemon.
-

QUESTION 559:

Which of the following tasks is not controlled by one of the rc startup scripts?

- A. Backup user's directories.
- B. Run fsck.
- C. Mount files ystem.
- D. Load modules.

Answer: A.

Explanation: The init daemon runs the rc startup scripts to start various processes when the system boots. Backing up user directories is not controlled by one of these scripts.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 411-412.

Incorrect Answers:

- B. There is a script to run fsck.
 - C. There is a script to mount the file system.
 - D. There is a script to load modules.
-

QUESTION 560:

Modules are pieces of kernel code that you can load or unload. What file do you use to pass parameters to a module?

- A. /etc/conf.mod
- B. /etc/modules
- C. /etc/inittab
- D. /etc/conf.modules

Answer: D.

Explanation: The /etc/conf.modules file is used to associate a module (driver) with hardware device.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 402.

Incorrect Answers:

- A. /etc/conf.mod is not the name of the module configuration file.
- B. /etc/modules is not the name of the module configuration file.
- C. The /etc/inittab file is used by the init daemon.

QUESTION 561:

You have installed a new UPS (Uninterruptible Power Supply) and the powerd daemon. Which file should you use to define the steps to be taken in the case of a power failure?

- A. /etc/ups.conf
- B. /etc/inittab
- C. /etc/power.conf
- D. /etc/conf.ups

Answer: B.

Explanation: The init daemon is responsible for starting processes. The configuration file for the init daemon is /etc/inittab. This file should be edited to instruct the system to run the powerd daemon in the event of a power failure.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 399.

Incorrect Answers:

- A. The /etc/inittab file, not the /etc/ups.conf file, is used to configure the init daemon which is used start the powerd daemon.
- C. The /etc/inittab file, not the /etc/power.conf file, is used to configure the init daemon which is used start the powerd daemon.
- D. The /etc/inittab file, not the /etc/conf.ups file, is used to configure the init daemon which is used start the powerd daemon.

QUESTION 562:

You have made changes to the /etc/inittab after installing your UPS. How do you institute these configuration changes without having to reboot your computer or have your users log off?

- A. Issue the command source /etc/inittab.
- B. Change the runlevel to single user mode.
- C. Issue the init q command.
- D. The init daemon only reads its configurations file during boot.

Answer: C.

Explanation: The init q command is used to instruct the init daemon to reread the /etc/inittab file and carry out the instructions in the file.

Reference: <http://www.oreillynet.com/linux/cmd/i/init.html>

Incorrect Answers:

- A. Source is the incorrect command.
- B. It is not necessary to change the runlevel.
- D. The init daemon can be instructed to read its configuration file at any time.

QUESTION 563:

Which of the following statements is not true about LILO?

- A. It can be used on a floppy to boot Linux.
- B. It must replace the master boot record on your hard drive.
- C. It will work with other operating systems such as DOS and Windows.
- D. It can specify up to 16 different boot images.

Answer: B.

Explanation: The default location for the Linux boot loader is in the Master Boot Record (MBR), but this isn't a requirement. It can be located elsewhere.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 213.

Incorrect Answers:

- A. LILO can be used on a floppy disk to install Linux.
- C. LILO will work with other operating systems such as DOS and Windows.
- D. LILO can be used to specify up to 16 different boot images.

QUESTION 564:

You boot your system using LILO. Although you have four different boot images on your system, you cannot remember what you named them and you do not want to boot your default image. What should you do?

- A. At the boot: prompt, press the Alt key.
- B. Hold the shift key down when booting until you get a prompt.
- C. At the boot: prompt, press the Tab key.
- D. You have to boot your default image and then look at the configuration file.

Answer: C.

Explanation: At the LILO boot prompt, you can use the tab key to toggle between the various boot images on the system.

Reference: Michael J. Tobler. New Riders, Inside Linux: Page 374.

Incorrect Answers:

- A. You need to press the tab key, not the Alt key.
- B. You don't need to hold the shift key down whilst booting.
- D. You can choose any installed boot image, you don't have to boot the default image.

QUESTION 565:

You have made changes to the LILO configuration file but you are not sure the changes will work. How can you test the new configuration without installing it?

- A. LILO -t
- B. LILO -c filename
- C. LILO -s filename
- D. LILO

Answer: A.

Explanation: The -t option used with LILO is used to test the LILO configuration file (/etc/lilo.conf).

Reference: <http://www-ugrad.cs.colorado.edu/udp/admin/linux-howto.html>

Incorrect Answers:

- B. You need the -t option to test the configuration, not the -c option.
- C. You need the -t option to test the configuration, not the -s option.
- D. The LILO command without any options will install LILO without testing the configuration file.

QUESTION 566:

What is the complete name of the default configuration file for LILO?

Answer: /etc/lilo.conf

Explanation: The LILO configuration file is /etc/lilo.conf.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 216.

QUESTION 567:

Part of your /etc/lilo.conf file is as follows:

```
boot=/dev/hda
map=/boot/map
install=/boot/boot.b
image=/boot/vmlinuz-2.0.36.0.7
label=linux
root=dev/dha1
```

You would like to start in a single user mode but you do not get a boot: prompt. What changes should you make to the /etc/lilo.conf file to make a prompt appear every time you boot your system?

- A. Add a line containing prompt.
- B. Add a line containing a timeout.
- C. Add a line containing prompt=30.
- D. Change the label to boot: instead of linux.

Answer: A.

Explanation: To configure LILO to display a boot prompt, you need to add a line containing the word prompt to the lilo.conf file. You must then run the LILO command to activate the changes.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 216/7.

Incorrect Answers:

- B. There is no timeout option for the lilo.conf file.
- C. The line should contain just prompt, not prompt=30.
- D. The label is just the displayed name of the operating system.

QUESTION 568:

You have changed /etc/lilo.conf to cause a boot: prompt to show, however, when you restart your computer you still do not have a prompt. What should you do?

- A. Rename your configuration file to /etc/lilo.conf.new.
- B. Install the configuration changes by issuing the command /sbin/lilo.
- C. Install the configuration changes by issuing the command /sbin/lilo -t.
- D. Install the configuration changes by issuing the command /sbin/lilo -u.

Answer: B.

Explanation: After making changes to the lilo.conf file, you must run the lilo command to activate the changes.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 218.

Incorrect Answers:

- A. You must not rename the configuration file.
 - C. The -t option will test the configuration but not activate the changes.
 - D. You need to run the lilo command without any options to activate the changes.
-

QUESTION 569:

When booting your system after installing LILO you see LIL- and then nothing happens. What could be the problem?

- A. LILO loaded successfully but the kernel is corrupt.
- B. LILO is not installed properly.
- C. LILO could only complete the first stage, usually media failure.
- D. LILO could not load the map file, usually a geometry mismatch.

Answer: D.

Explanation: If you only see LIL- when booting the system, it means that LILO could not load the map file.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 634.

Incorrect Answers:

- A. If LILO loaded successfully, you would see the word LILO during boot up.
 - B. If LILO wasn't installed properly, you wouldn't see any part of the word LILO during boot up.
 - C. If LILO could only complete the first stage, you would see the word LI during boot up.
-

QUESTION 570:

You are going to install a new hard disk in your system. Which of the following commands will halt your system so you can install the new hardware?

- A. shutdown -k now
- B. shutdown -h now
- C. shutdown -r now
- D. shutdown -t now

Answer: B.

Explanation: The shutdown -h command will shut down your system properly. The -h option issues the halt command as part of the shutdown process.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 420/1.

Incorrect Answers:

- A. The -k option would display a warning message, but would not actually shut down the system.

- C. The -r option would cause the system to restart.
- D. The -t option is used to delay the shutdown.

QUESTION 571:

You have a technician who will come in after hours to install new hardware in your system. You do not want to give him the root password, but he needs to be able to shutdown the system. How can you accomplish this?

- A. You cannot do this, only root can run the shutdown command.
- B. Add his username to the /etc/shutdown.conf file.
- C. Add his username to the /etc/shutdown.allow file.
- D. Give him the root password and change it when you arrive the next morning.

Answer: C.

Explanation: The /etc/shutdown.allow file contains the names of the user accounts that are permitted to shutdown the system.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 420/1.

Incorrect Answers:

- A. Any user listed in the shutdown.allow file can shutdown the system.
- B. Shutdown.conf is the wrong file.
- D. It is not necessary or desirable to give the technician the root password.

QUESTION 572:

You are going to reboot your system but want to warn your users to log off. Which of the following commands will send a message to the users?

- A. init
- B. halt
- C. reboot
- D. shutdown

Answer: D.

Explanation: When using the shutdown command, you can enter a message that will be displayed to users before the system shuts down.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 420/1.

Incorrect Answers:

- A. The init command does not send a message to users.
- B. The halt command does not send a message to users.
- C. The reboot command does not send a message to users.

QUESTION 573:

You want to review the man page on the files used to control host access, however, when you enter `man hosts_access` you get the man page for routines used to programmatically manipulate access. What is the problem?

- A. The page you are looking for does not exist on your system.
- B. The page you are looking for resides in a directory that is searched later.
- C. You typed the name of the page incorrectly.
- D. The installation of man pages on your system is corrupt.

Answer: C.

Explanation: You typed the command incorrectly. The files used to control host access is `hosts.allow`, not `hosts_access`. The correct command would be `man hosts.allow`.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 364.

Incorrect Answers:

- A. If a page didn't exist, you would get an error saying so. You wouldn't get a different page.
- B. If the directory was searched later, you would still get the correct page eventually.
- D. If the installation of the man pages is corrupt, you wouldn't receive any man pages.

QUESTION 574:

You want to find how to set the `manpath` variable so you type `man man`. What would you type while displaying the page to find the location where `manpath` is discussed?

- A. `grep manpath`
- B. `find manpath`
- C. `/manpath`
- D. `locate manpath`

Answer: C.

Explanation: To search for text within a man page, you would use the `/` command followed by the word you were looking for.

Incorrect Answers:

- A. You could use the `grep` command, but you would have to come out of the man program to use it.
 - B. `Find` is not a man program command. Furthermore, the `find` command cannot search for text. It is used for locating files.
 - D. You could use the `locate` command, but you would have to come out of the man program to use it.
-

QUESTION 575:

You wish to find the man page that discusses how to change a password. You type `man password` but you get the message that no manual entry for password exists. Which command will find the appropriate page?

- A. `man -C password`
- B. `man -k password`
- C. `man -c password`
- D. `man -q password`

Answer: B.

Explanation: The `man -k` command is used to search the man pages for a specified string.

Reference: <http://www.oreillynet.com/linux/cmd/a/apropos.html>

Incorrect Answers:

- A. `-C` is the wrong option to search the man pages for a specified string.
- C. `-c` is the wrong option to search the man pages for a specified string.
- D. `-q` is the wrong option to search the man pages for a specified string.

QUESTION 576:

You have installed an additional set of man pages but in Spanish. You have one user who wishes to use the Spanish pages rather than English ones. What should you do to accomplish this?

- A. Edit the `man.config` file located in that user's home directory.
- B. Instruct the user in how to reset the `MANPATH` variable whenever he logs in.
- C. Edit the `.profile` file located in that user's home directory.
- D. You can only have one version of man pages installed on your system at a time.

Answer: C.

Explanation: The `manpath` variable can be set in the `.profile` file and is used to instruct the `man` program where to look for the man pages. You would need to edit this variable to point to the Spanish man pages.

Reference: <http://www.uic.edu/depts/accc/hardware/borg/profile.html>

Incorrect Answers:

- A. You need to edit the `.profile` file, not the `man.config` file.
- B. It is unnecessary to reset the `manpath` variable every time the user logs in. You only need to set it once in the `.profile` file.
- D. You can have multiple versions of man pages installed on a system.

QUESTION 577:

You know that the info utility provides easier to understand documentation but you have never used it. How can you access a tutorial on using info?

- A. man info
- B. info
- C. info info
- D. info help

Answer: C.

Explanation: Info pages are easier to understand than the sometimes complex man pages. The info info command is used to access a tutorial on the info program.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 657.

Incorrect Answers:

- A. Man info would display the man pages for the info program. Info info is used to access a tutorial on the info program.
- B. The info command would run the info program, but not display a tutorial about it.
- D. Info help would display documentation on the help command.

QUESTION 578:

There is considerable documentation covering various tasks provided as HOWTOs. These documents are normally installed in which directory?

- A. /etc/HOWTO
- B. /usr/doc/HOWTO
- C. /usr/HOWTO
- D. /usr/lib/HOWTO

Answer: B.

Explanation: The default location for the HOWTO documents is /usr/doc/HOWTO.

Note: /usr/share/doc/HOWTO deserves attention.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 657.

Incorrect Answers:

- A. The HOWTO documents are not located in the /etc/HOWTO directory.
- C. The HOWTO documents are not located in the /usr/HOWTO directory.
- D. The HOWTO documents are not located in the /usr/lib/HOWTO directory.

QUESTION 579:

What does FAQ stand for?

Answer: frequently asked questions

Explanation: Frequently asked questions are often referred to as FAQs.

Reference: Michael J. Tobler. New Riders, Inside Linux: Page 8.

QUESTION 580:

When you install a new application, documentation on that application is also installed. Where would you look for the documentation after installing an application called MyApp?

- A. /usr/MyApp
- B. /lib/doc/MyApp
- C. /usr/doc/MyApp
- D. In the same directory where the application is installed.

Answer: C.

Explanation: The default location for application documentation is in the /usr/doc/<application name> directory.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 657.

Incorrect Answers:

- A. Application documentation is located in the doc subdirectory of the /usr directory.
- B. Application documentation is not located in the /lib/doc directory.
- D. Application documentation is not located in the same directory where the application is installed.

QUESTION 581:

You need to update your HOWTOs. Where should you go to acquire the latest version?

- A. Linux Mall and order a new CD.
- B. Your local Linux User Group should have a copy.
- C. The web site for your distribution.
- D. Linux Documentation Project.

Answer: D.

Explanation: The Linux Documentation Project has all the latest HOWTOs. They can be found at www.tldp.org.

Reference: <http://www.tldp.org/>

Incorrect Answers:

- A. You don't need to order a CD. The HOWTOs can be downloaded from the Linux Documentation Project website.
- B. Your local Linux User Group may have a copy - or they may not.
- C. The website for your distribution will have HOWTOs relating to your distribution but not all the applications that you may have installed.

QUESTION 582:

You have a problem installing an older CD-ROM drive on one of your Linux servers. You have checked the HOWTOs and FAQs but have not found your answer. Where could you go to search the newsgroups to look for a solution?

- A. <http://www.deja.com>
- B. <http://www.news.com>
- C. <http://www.linux-help.com>
- D. <http://www.lug.com>

Answer: A.

Explanation: www.deja.com is the Google search engine specifically designed to search for news groups.

Reference: <http://www.deja.com>

Incorrect Answers:

- B. You would not search for news groups at this site.
- C. You would not search for news groups at this site.
- D. You would not search for news groups at this site.

QUESTION 583:

The whereis command is helpful in finding the location of a command as well as its related man page. What is the disadvantage of using it?

- A. Since it searched the entire directory tree, the whereis command can take an excessive amount of time.
- B. The whereis command will not find source files located on your system.
- C. You have to update the whereis database in order to keep it current.
- D. The whereis command only searches known directories that are hard coded into the command.

Answer: D.

Explanation: The whereis command searches for files in a restricted set of directories such as standard binary file directories, library directories and man

page directories.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 652.

Incorrect Answers:

- A. The whereis command does not search the entire directory tree.
- B. You wouldn't use the whereis command to look for source files.
- C. There is no whereis database to update.

QUESTION 584:

You suspect that you have two commands with the same name as the command is not producing the expected results. What command would you use to determine the location of the command being run?

Answer: which.

Explanation: The which command is used to display the full path to the program that would be run if a specified command was issued.

Reference: <http://www.oreillynet.com/linux/cmd/w/which.html>

QUESTION 585:

You locate a command in the /bin directory but do not know what it does. What command can you use to determine its purpose.

Answer: whatis.

Explanation: The whatis command searches a database of short man pages to determine the purpose of a command.

Reference: <http://www.oreillynet.com/linux/cmd/w/whatis.html>

QUESTION 586:

What command must you run to update the database used by the whatis command?

- A. makewhatis
- B. updatedb
- C. make whatisdb
- D. The database is updated automatically.

Answer: A.

Explanation: The makewhatis command is used to update the whatis database.

Reference: <http://www.tac.eu.org/cgi-bin/man-cgi?makewhatis+8>

Incorrect Answers:

- B. Updatedb is the wrong command to update the whatis database.
 - C. Make whatisdb is the wrong command to update the whatis database.
 - D. The database is not updated automatically.
-

QUESTION 587:

What does the apropos command do?

- A. It is the same as the man -f command.
- B. It is the same as the man -K command.
- C. It searches the short descriptions from the man pages.
- D. It uses the locatedb database to answer your query.

Answer: C.

Explanation: The apropos command is similar to the whatis command in that it searches the short descriptions from the man pages for a specified string. Whatis only searches for a single word.

Reference: <http://www.oreillynet.com/linux/cmd/a/apropos.html>

Incorrect Answers:

- A. It is not the same as the man -f command.
 - B. It is the same as the man -k command, not the man -K command (note the capital K).
 - D. It uses the whatis database, not the locatedb database.
-

QUESTION 588:

Which of the following items would not be important for you to record in your system documentation?

- A. Any kernel patches you might apply.
- B. Applications that are installed.
- C. When did each user log on last?
- D. What problems with the system you have had.

Answer: C.

Explanation: Documentation is an important part of any system administrator's job. However, the last time each user logged on is not important and does not need to be documented.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 438.

Incorrect Answers:

- A. Any kernel patches should be documented.

- B. Any installed applications should be documented.
 - D. Any system problems should be documented.
-

QUESTION 589:

Which of the following would improve your ability to provide user support?

- A. Create a directory containing instructions for using all installed applications.
- B. Email your user's your office hours.
- C. Whenever a user has a problem, fix it and leave.
- D. Use as much technical language as possible when explaining what went wrong.

Answer: A.

Explanation: A directory containing instructions for using all installed applications would make a system administrator's job much easier.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 438.

Incorrect Answers:

- B. It would be helpful for your users to know your working hours, but this is not as helpful as application documentation.
 - C. You wouldn't leave after every problem you fixed.
 - D. Using as much technical language as possible when explaining what went wrong would confuse the user and would gain nothing.
-

QUESTION 590:

Which of the following commands will make your home directory your working directory?

- A. cd
- B. cd home
- C. cd..
- D. cd home/username

Answer: A.

Explanation: When the cd command is used without specifying a directory, you will by default be taken to your home directory.

Reference: Michael J. Tobler. New Riders, Inside Linux: Page 55.

Incorrect Answers:

- B. Cd home would take you to a subdirectory of your current directory named home.
 - C. The cd.. command would take you up one level in the directory tree.
 - D. The cd home/username command would not take you to your home directory.
-

QUESTION 591:

Which of the following commands will show a list of the files in your home directory including hidden files and the contents of all subdirectories?

- A. `ls -c home`
- B. `ls -aR /home/username`
- C. `ls -Af /home/username`
- D. `ls -l /home/username`

Answer: B.

Explanation: The `a` option used with the `ls` command is used to display hidden files. The `R` option makes the search recursive meaning that any subdirectories will be searched.

Reference: <http://www.oreillynet.com/linux/cmd/l/ls.html>

Incorrect Answers:

- A. The `-c` option is used to list files by status change time.
- C. The `-A` option does not search the `'.'` directory.
- D. The `-l` command displays the files permissions. It does not display hidden files and it does not search subdirectories.

QUESTION 592:

What command should you type to see all the files with an extension of `'mem'` listed in reverse alphabetical order in the `/home/ben/memos` directory.

Answer: `ls -r /home/ben/memos/*.mem`

Explanation: The `-r` option displays the files in reverse order. The `'*'` is a wildcard which means that any file that ends with `.mem` will be displayed.

Reference: <http://www.oreillynet.com/linux/cmd/l/ls.html>

QUESTION 593:

You have three files in the `/home/ben/memos` directory called `letters`, `tom`, and `betty`. How could you determine each file's type by issuing only one command?

Answer: `file letters tom betty`

Explanation: The `file` command is used to display a file's type. You can enter multiple filenames after the `file` command.

Reference: <http://www.oreillynet.com/linux/cmd/f/file.html>

QUESTION 594:

Which of the following commands will combine the contents of the files tom and betty into a new file called friends?

- A. ls tom betty > friends
- B. cat tom betty > friend
- C. more tom betty > friends
- D. cat tom; cat betty > friends

Answer: B.

Explanation: You can use the redirection operator (>) with the cat command to combine multiple files into one file.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 654.

Incorrect Answers:

- A. You need the cat command, not the ls command.
- C. You need the cat command, not the more command.
- D. There is no semi-colon (;) between the filenames to be combined.

QUESTION 595:

Which of the following cannot be accomplished with the cat command?

- A. Create a new file.
- B. Display the contents of a file.
- C. Append information to another file.
- D. Change the contents of a file.

Answer: D.

Explanation: The cat command is typically used to display the contents of a file. It cannot be used to change the contents of a file (although it can add append data to a file).

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 654.

Incorrect Answers:

- A. You can create a new file with the cat <filename> command.
- B. The most common use of the cat command is to display the contents of a file.
- C. You can combine multiple files into one file or append information to a file with the cat command.

QUESTION 596:

Which of the following commands will display a file one screen at a time?

- A. less
- B. page
- C. tr
- D. cat

Answer: A.

Explanation: The less command will display the contents of a file one screen at a time.

Reference: <http://www.oreillynet.com/linux/cmd/l/less.html>

Incorrect Answers:

- B. There is no page command.
- C. Tr is used to translate characters. It does not display the contents of a file one screen at a time.
- D. The cat command is used to display the contents of files but it will scroll down to the bottom of the file.

QUESTION 597:

You are debugging a new application that is crashing. You want to watch the messages as they are being written to the log. What command should you use?

- A. tail
- B. head
- C. less
- D. log

Answer: C.

Explanation: less is a program for paging through files or other output.

Reference: <http://www.oreillynet.com/linux/cmd/cmd.csp?path=l/less>

Incorrect Answers:

- A. The tail command is used to display the last ten lines of a specified file.
- B. The head command is used to print the first ten lines of a specified file.
- D. log is not a valid command.

QUESTION 598:

A customer needs a Linux server to act as a Microsoft Windows NT server. Which of the following must be installed for this server?

- A. Syslog daemon.

- B. Network file system daemon.
- C. Server message block daemon.
- D. File transfer protocol daemon.

Answer: C.

Explanation: Server Message Blocks (SMBs) are used by Windows clients for network communications. The Server Message Block daemon provides this service.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 354.

Incorrect Answers:

- A. The syslog daemon is used to log system messages.
- B. The Network File System daemon is used for communication between Linux computers.
- D. The File Transfer Protocol daemon is commonly used for transferring files across the internet.

QUESTION 599:

A user is having problems printing to the network printer. She has sent several jobs to the printer, but nothing is printing out. She wants to power cycle the printer, but does not want the extra jobs to print out when it comes back online. Which command would she use to accomplish this?

- A. lpc
- B. lpr
- C. lpd
- D. lprm

Answer: A.

Explanation: The 'lpc clean all <prntername>' command is used to remove files that cannot be printed from the specified printer queues. The 'lpc restart all <prntername>' is used to restart the printer daemons on the specified printers.

Reference: <http://www.oreillynet.com/linux/cmd/1/lpc.html>

Incorrect Answers

- B: The lpr command is used to send print jobs to a print queue.
- C: Lpd is the line printer daemon. It accepts print jobs submitted by the lpr command.
- D: The lprm command is used to remove specific print jobs from print queues. The print jobs must be specified by job number which can be obtained using the lpq command.

QUESTION 600:

Which command enables a user to make a newly created shell script executable?

- A. /<filename>
- B. chown +x <filename>
- C. chmod +x <filename>
- D. /configure <filename>

Answer: C.

Explanation: To make a script executable, you need to add the execute permission to the file. The chmod command is used to change the access mode (permission) of the file. The +x option keeps the existing permissions and adds the execute permission.

Reference: <http://www.oreillynet.com/linux/cmd/c/chmod.html>

Incorrect Answers

- A: /<filename> is not the correct command.
- B: The chown command is used to change the owner of a file, not to make it executable.
- D: /configure <filename> is not the correct command.

QUESTION 601:

An administrator logged in as a standard user needs to kill process 1010 that was started by the root user.

Which of the following commands will kill the process?

- A. kill 1010
- B. su "kill 1010"
- C. killall -9 1010
- D. cu -c "kill 1010"

Answer: B.

Explanation: To kill a process, you must be the root user or the user who started the process. The su (switch user) command is used to start a shell with a different username. If no username is specified with the su command, the root user account is assumed. Su "kill 1010" will run the kill command under the root account. When entering this command, you will be prompted for the password of the root account.

Reference: <http://www.oreillynet.com/linux/cmd/s/su.html>

Incorrect Answers

- A: The process was started by the root user. Therefore, only the root user can kill the process.
- C: The process was started by the root user. Therefore, only the root user can kill the process
- D: Cu is not the correct command.

QUESTION 602:

The administrator for a Linux server needs to update the system and downloads the required patch. The filename is "update.tar.gz". Which of the following commands would be the best way to uncompress this file?

- A. `gzip -p update.tar.gz`
- B. `tar -xzf update.tar.gz`
- C. `gunzip -update.tar.gz`
- D. `untar -xzf update.tar.gz`

Answer: B.

Explanation: A file with the tar.gz extension has been processed by two programs. The tar utility is used to 'tar' multiple files into one archive and the gzip utility is used to compress the files. To uncompress the file, you should use the tar command. The x option is used to extract the files. The z option is used to invoke gzip to uncompress the files and the f <filename> option is used to specify the filename.

Reference: <http://www.oreillynet.com/linux/cmd/t/tar.html>

Incorrect Answers

A: The file was created with the tar utility which called the gzip utility to compress the files. Therefore, you should use the tar command to uncompress the files.

C: The file was created with the tar utility which called the gzip utility to compress the files. Therefore, you should use the tar command to uncompress the files.

D: Untar is not the correct command.

QUESTION 603:

How could an administrator switch to single-user mode without rebooting the system?

- A. `init 0`
- B. `init 1`
- C. `cd /single`
- D. `su -single`

Answer: B.

Explanation: Single user mode is known as runlevel 1. You can change the runlevel by issuing the 'init <runlevel> command (in this case 'init 1').

Reference: <http://www.oreillynet.com/linux/cmd/i/init.html>

Incorrect Answers

A: Init 0 will change the system to runlevel 0. Runlevel 0 is used to halt the system.

C: Cd /single will change to a directory named /single.

D: Su -single will attempt to switch to a user named single.

QUESTION 604:

An administrator needs to append the list of files in the /tmp directory to the existing file "DoNotCreateBackup". What command would accomplish this goal?

- A. `ls /tmp || DoNotCreateBackup`
- B. `ls /tmp && DoNotCreateBackup`
- C. `ls /tmp >> DoNotCreateBackup`
- D. `ls /tmp :: DoNotCreateBackup`

Answer: C.

Explanation: The >> symbols represent a command redirector. ">>" will take the output of the `ls /tmp` command and instead of displaying it on screen, it will append it to a file (in this case, a file named `DoNotCreateBackup`).

Reference: <http://www.netti.hu/doc/LinuxShellScript/rpf.htm>

Incorrect Answers

- A: `||` is not a valid command redirector.
- B: `&&` is not a valid command redirector.
- D: `::` is not a valid command redirector.

QUESTION 605:

The following is the output from a `ps` command:

PID TTY TIME CMD

1054 pts/1 00:00:00 bash

6894 pts/1 00:00:00 nmap

7123 pts/1 00:00:00 ps

The `nmap` process has been taking up too much processing power. What command can be used to run `nmap` with less resources?

- A. `bg nmap`
- B. `stop | back 6894`
- C. `CTRL-Q, bk nmap:6894`
- D. `Kill 6894 : nice -n19 nmap <arguments>`

Answer: D.

Explanation: The `Kill` command is used to kill the process. The `nice` command is used to run a process with a lower priority. The default 'niceness' is 10. The `-n19` option will lower the priority of the process. When using the `nice` command, the lowest priority is 19 and the highest is 1.

Reference: <http://www.oreillynet.com/linux/cmd/n/nice.html>

Incorrect Answers

- A: The bg command is used to run a process in the background. However, it doesn't lower the priority of the process.
- B: Stop | back is not the correct command.
- C: CTRL-Q, bk is not the correct command. (CTRL-Q is often used to turn all output stopped on screen back on).

QUESTION 606:

The system administrator wants to connect to his servers remotely to create a new user. Which of the following commands can be used?

- A. ftp
- B. ping
- C. telnet
- D. traceroute

Answer: C.

Explanation: Telnet is used to access remote systems. Telnet is the user interface that communicates with another host using the Telnet protocol. Commands entered into a telnet console are executed on the remote system.

Reference: <http://www.oreillynet.com/linux/cmd/t/telnet.html>

Incorrect Answers

- A: FTP is used to transfer files using the FTP (File Transfer Protocol).
- B: Ping is used to test IP connectivity.
- D: Traceroute is another utility used to test IP connectivity by tracing the route to a remote host.

QUESTION 607:

The current working directory is /var/spool/Tom/ip. What does the command "cd~" do?

- A. Returns the user to the root directory.
- B. Returns the user to their home directory.
- C. Keeps the user in their current directory.
- D. Returns the user to the parent directory of "ip".

Answer: B.

Explanation: The 'cd~' command is the same as the 'cd' command in that it will return you to your home directory. Your home directory is the default directory you are taken to when you log in, which is why your home directory is sometimes known as your login directory.

Reference:

<http://www.redhat.com/docs/manuals/linux/RHL-7.3-Manual/getting-started-guide/s1-navigating-cd.html>

Incorrect Answers

A: To go to the root directory, you would have to enter the command: cd /.

C: The cd command is used to 'change directory'. It does not keep you in the current directory.

D: To go to the parent directory of the ip directory (in other words, to go up one level), you would enter the command: cd.. or cd /var/spool/Tom.

QUESTION 608:

Which Linux file shows which users have access to which groups?

- A. /usr/group
- B. /usr/users
- C. /etc/group
- D. /etc/users

Answer: C.

Explanation: The /etc/group file contains a list of all the groups and the members of each group.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 243.

Incorrect Answers

A: The group file is in the /etc directory, not the /usr directory.

B: /usr/users does not contain group information.

D: /etc/users does not contain group information.

QUESTION 609:

Why would setting up separate file systems for /home and /var be appropriate?

- A. Administrators can separate user files from business files.
- B. The system is not subject to failure from log file or user quota overruns.
- C. Guests accounts included in /var are separated from user accounts kept in /home.
- D. Users can access /home for their personal applications and /var can store old applications.

Answer: A.

Explanation: The /var directory contains 'variable' system data such as log files. It is a good idea to keep this data separate from the users' personal data stored in their home directories.

Reference: <http://www.mandrakeuser.org/docs/basics/bfiles2.html>

Incorrect Answers

- B: Quota overruns would not cause a system failure.
- C: There are no guest accounts in the /var directory.
- D: /var is not used to store old applications.

QUESTION 610:

A customer has installed a new IDE hard drive in a Linux system. The drive has been partitioned and formatted with the ext2 file system. She is complaining that the new drive must be mounted manually every time the computer is booted. What needs to be done?

- A. Use a utility to edit fstab.
- B. Add the proper drive module to the kernel.
- C. Add the drive information to the /dev directory.
- D. Change the runlevel to reflect the number of partitions in the system.

Answer: A.

Explanation: The fstab file contains information about the filesystems. This information includes who can mount the filesystems and whether the filesystem should be mounted automatically at system bootup.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 400/1.

Incorrect Answers

- B: No drive module needs to be added to the kernel as the filesystem can be mounted manually.
- C: The drive information must already be in the /dev directory as the filesystem can be mounted manually.
- D: It is not necessary to change the runlevel.

QUESTION 611:

A technician discovers that the route command is being used incorrectly. Which of the following resources is the quickest means of finding examples of correct usage?

- A. Search the distribution documentation CD.
- B. View the HOWTO pages on the Web browser.
- C. Use the built-in help pages by typing "help route".
- D. Use the built-in manual pages by typing "man route".

Answer: D.

Explanation: Every system has manual pages installed by default. The manual pages contain information about various commands including the syntax and the correct usage for each command. You can access the manual pages using the 'man' command. To display information about the route command, you would type 'man

route'.

Reference: <http://www.oreillynet.com/linux/cmd/m/man.html>

Incorrect Answers

A: Searching the distribution documentation CD (if there is one) would be a long way of doing it.

B: The HOWTO pages are very useful. However, using the man pages is quicker.

C: The 'help' pages are known as manual pages and can be accessed using the 'man' command, not the help command.

QUESTION 612:

A user wants to have a custom software daemon run each time the system starts. Where could this be configured?

- A. rc.local
- B. ~/.bashrc
- C. inetd.conf
- D. /etc/profile

Answer: A.

Explanation: Rc.local is a startup script that can be configured to start processes or daemons when the system boots up. The rc.local file exists in the /etc directory or a script subdirectory such as /etc/rc.d.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 394.

Incorrect Answers

B: The bashrc file is used to set environment variables for the BASH shell. It is not used to start daemons.

C: Inetd.conf is used to configure the inet daemon. Inetd starts server processes when they are requested. Inetd could be used to start the custom daemon, but it won't start the daemon until it receives a request for it. For this reason, it is better to use the rc.local file.

D: The /etc/profile file is used to set defaults for environment variables. It is not used to start daemons.

QUESTION 613:

For which of the following reasons could the dd utility be used?

- A. To locate and access system log files.
- B. To create a bootable Linux system disk.
- C. To automate editing system configuration files.
- D. To automate access to system hardware information.

Answer: D.

Explanation: The 'dd' utility is used to take input from an input file (IF) and output to an output file (OF). You could use this to read information about hardware by taking input from the hardware configuration files and output this information to a single file.

Reference: <http://www.oreillynet.com/linux/cmd/d/dd.html>

Incorrect Answers

A: The dd utility cannot be used to locate system log files.

B: The dd utility cannot be used to create a Linux system disk.

C: Editing system configuration files cannot be automated because the configuration information would be different each time, and therefore should be manually entered into the files.

QUESTION 614:

At boot time, the computer reported that there are problems with inodes and blocks. What is the problem, and how is it corrected?

A. The boot sector is corrupt and needs to be replaced.

B. The file system has become corrupt and needs to be repaired.

C. The partition table has become corrupt and needs to be repaired.

D. The drive is configured using an improper file system and needs to be reformatted.

Answer: B.

Explanation: If you get errors about inodes and blocks during system boot up, the most likely problem is that you have a corrupted file system. This can be caused by improperly shutting down the machine. You should use a disk repair utility such as fsck to attempt to recover the filesystem.

Reference: <http://theory.uwinnipeg.ca/faqs/section4.html>

Incorrect Answers

A: If the boot sector was corrupt, the boot loader would not be able to run. Therefore, you would not get errors related to a corrupted filesystem because the filesystem hasn't been read yet.

C: If the partition table had become corrupt, the system would not be able to find the partitions. This would not result in inode or block error messages.

QUESTION 615:

A user is attempting to login to a Linux machine but her password keeps getting rejected. Which of the following actions should be done first to try to solve the problem?

A. Reboot the machine.

B. Replace the keyboard.

- C. Check to see if root can login.
- D. Check to see if <Caps Lock> is on.

Answer: D.

Explanation: Passwords are case sensitive. The most common cause of logon failure due to a rejected password is the keyboard Caps Lock being on.

Incorrect Answers

- A: Restarting the machine won't affect someone's ability to log on if their password is wrong.
- B: It is possible that the keyboard is faulty, but it is more likely that the Caps Lock is on.
- C: You would check to see if root can log in if you were sure your password is correct and the Caps Lock is off.

QUESTION 616:

A customer wants to determine which TCP ports are in use on his Linux server. Which of the following commands should be used?

- A. tftp
- B. lspport
- C. minicom
- D. netstat

Answer: D.

Explanation: Netstat is a TCP/IP command used to show the network status. For all active sockets, it will print the protocol, the number of bytes waiting to be received, the number of bytes to be sent, the port number, the remote address and port, and the state of the socket. The -t option with Netstat is used to display just the TCP ports.

Reference: <http://www.oreillynnet.com/linux/cmd/n/netstat.html>

Incorrect Answers

- A: TFTP (Trivial File Transfer Protocol) is used to transfer files, not to display TCP port information.
- B: Lspport is used to list printer ports, not TCP ports.
- C: Minicom is a utility used for connection modem dial up connections.

QUESTION 617:

An operator is concerned that errors occurred during the last tape backup. Which of the following is the LEAST helpful in determining that a successful backup was performed?

- A. View the log file.

- B. Perform a test restore.
- C. Run a diagnostic of the tape drive.
- D. Inspect the tape media with appropriate utilities.

Answer: C.

Explanation:

If you are concerned about possible errors during a backup operation, the first thing you should do is to check the log files. You should also test the backup by performing a test restore and inspect the tape media. If the tape media proves to be faulty or the restore fails, then you would know that the backup was unsuccessful. Running a diagnostic of the tape drive is probably the least helpful of the answers given. The tape drive may pass the diagnostics, but that wouldn't guarantee that the backup was successful. If the tape drive failed the diagnostics, it still doesn't necessarily mean that the backup was unsuccessful.

Incorrect Answers

- A: Viewing the log file is the first thing you should do.
- B: Performing a test restore is a good way of testing a successful backup.
- D: Inspecting the tape media should be done as tapes do wear out after a while.

QUESTION 618:

A customer wants to identify all of the services that were initially loaded by his server upon boot and compare these with services that are currently running. How should he look for this information?

- A. examine /boot and run "ps-ef".
- B. examine /var/log/dmesg and run "ps -e".
- C. examine /etc/init.d and run "whatism -x".
- D. examine /var/log/boot.log and run "ps -ax".

Answer: D

Explanation: The /var/log/boot.log file will contain all the messages displayed at boot time (plus any other system messages). This will include the services being started at boot time. The ps -ax command will display all currently running processes.

Reference: <http://www.oreillynet.com/linux/cmd/p/ps.html>

Incorrect Answers

- A: /boot does not contain the messages displayed at boot time.
- B: The dmesg utility can be used to display boot messages. However, to display the currently running processes, you need to use the ax options with the ps command.
- C: Whatism is not used to display the currently running processes.

QUESTION 619:

A user is trying to connect to a system via HTTP. How could an administrator verify that HTTP services are running after a default installation?

- A. Run "finger http".
- B. Run "restart httpd".
- C. Run "ps aux | grep http".
- D. View /var/messages to verify that the service started.

Answer: C.

Explanation: The ps aux command is used to list all currently running processes. The output of this command is then handed to the grep command using the pipe (|) redirector. The grep http command will take the output from the ps aux command and search it for any occurrences of 'http'. If any occurrences of http are found, then you know that http is running.

Reference: <http://www.oreillynet.com/linux/cmd/p/ps.html>

Incorrect Answers

- A: The finger command is used to display information about users, not about processes.
- B: The 'restart httpd' command incorrect. 'Httpd restart' would restart the httpd process, but it isn't used to tell you if the process is currently running.
- D: /var/messages is the wrong file to verify that the service started. This information would be in /var/log/boot.log.

QUESTION 620:

The administrator uses the rpm command to install a new software package but he gets the following error message:

cannot get exclusive lock on database

error:cannot open /var/lib/rpm/packages.rpm

What is the best way to solve the problem?

- A. Run "rpm -initdb".
- B. Run "rpm -rebuilddb".
- C. Copy the package to the directory /var/lib/rpm/.
- D. Check whether a second instance of rpm is already running.

Answer: D.

Explanation: The error stated in the question is usually caused by another instance of rpm already running. Killing the other rpm instance should solve the problem.

Reference: <http://www.yolinux.com/TUTORIALS/LinuxTutorialSysAdmin.html#RPM>

Incorrect Answers

- A: "rpm -initdb" is used to build a new database. This is not necessary.
B: "rpm -rebuilddb" is used to rebuild an existing database. This may solve the problem but it is not the first thing you should try.
C: The error "cannot open /var/lib/rpm/packages.rpm" suggests that the package exists in the directory. Otherwise, you would get an error saying it couldn't find the file.
-

QUESTION 621:

What is the quickest way to create a file that lists all the groups to which the user 'bob' belongs?

- A. `whereis bob >> bob_groups.txt`
B. `grep bob /etc/group > bob_groups.txt`
C. `find /etc/passwd bob >> /var/tmp/bob_groups.txt`
D. `cd/etc; cat groups | grep bob | > bob_groups.txt`

Answer: B.

Explanation: The `grep` command is used to search files for occurrences of a string - in this case bob in the `/etc/group` file. The output of this command is placed into a file name `bob_groups.txt` using the `>` command redirector. Using the `>` redirector, the file `bob_groups.txt` will be created if it doesn't already exist.

Reference: <http://www.oreillyn.com/linux/cmd/g/grep.html>

<http://www.netti.hu/doc/LinuxShellScript/rpf.htm>

Incorrect Answers

- A: The `whereis` command is used to locate the binary file and man pages for a command.
C: The `find` command is used to find files, not to find occurrences of a string within a file.
D: This command would almost work but it is a long way of doing it. The only thing wrong with the command is that it has two redirectors together (`|` followed by `>`).
-

QUESTION 622:

A Linux system boots up with only "LI" instead of LILO.
What does this indicate?

- A. LILO is not installed.
B. The video driver is corrupted.
C. The hard drive is not functioning properly.
D. The second stage bootloader was unable to start.

Answer: D.

Explanation: If LI is displayed during bootup, it indicates that the first stage boot

loader was able to load the second stage boot loader, but has failed to execute it.

Reference: <http://www.linuxpeople.cc/howto/liloerrorshowto.htm?link>

Incorrect Answers

A: LI was displayed. This indicates that LILO is installed.

B: LI being displayed has nothing to do with the video driver.

C: If the hard drive wasn't functioning properly, it is unlikely that the first stage of LILO (LI) would be able to run.

QUESTION 623:

A system with an existing Linux installation has an onboard network interface already configured as 'eth0' that is functioning properly. A PCI network interface card is inserted into an empty PCI slot and configured as 'eth1'. After the network services are restarted, neither network interface device has network connectivity. Both devices have link lights, the correct drivers are installed and are supported by the kernel. There is no error message generated.

What is the problem?

- A. A motherboard defect caused both cards to stop functioning properly.
- B. It is not possible to run an onboard and expansion NIC in the same PC.
- C. An IP conflict between the cards caused networking services to fail at boot.
- D. The kernel swapped the identification of the NICs causing neither to operate properly.

Answer: C.

Explanation: The most likely cause of the problem is that both network cards are configured with the same IP address thus causing a conflict.

Incorrect Answers

A: Both network cards have link lights. Therefore, it is unlikely to be a motherboard problem.

B: It is possible to run an onboard and expansion NIC in the same PC.

D: It is very unlikely that the kernel would swap the identification of the NICs.

QUESTION 624:

The server has been rebooted after a kernel panic. Which of the following files can be viewed to try to determine the problem?

- A. wtmp
- B. dmesg
- C. boot.log
- D. messages

Answer: D ?

Explanation: The boot.log file contains system messages. Examining this file might give some indication of the problem. The /var/log/messages file will contain error messages generated by the kernel before the machine was rebooted. Therefore, /var/log/messages would be the first file to look at to determine the problem.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 609.

Incorrect Answers

A: The wtmp file contains information about logins.

B: Dmesg displays the kernel messages displayed at bootup. We need to see the error messages generated before the reboot.

C: The boot.log file may contain some indication of the problem; however, /var/log/messages would be the first file to look at to determine the problem.

QUESTION 625:

Using which of the following commands creates a risk of destroying data on a mounted file system?

- A. fsck
- B. mkfs
- C. mount
- D. setserial

Answer: B.

Explanation: The mkfs command is used to create a filesystem on a hardware device such as a hard disk or a mount point. Creating a new filesystem over an existing filesystem will destroy the data on the existing filesystem.

Reference: <http://www.oreillynet.com/linux/cmd/m/mkfs.html>

Incorrect Answers

A: Fsck (file system checker) is used to check the file system for errors. Although this can cause problems if the filesystem is mounted as read only, it is not as dangerous as the mkfs command.

C: The mount command is used to mount a filesystem. Running this command on a filesystem that is already mounted would just generate an error message. It would not cause the loss of data.

D: Setserial is a program designed to set and/or report the configuration information associated with a serial port. It would not cause the loss of data on a mounted filesystem.

QUESTION 626:

What is the first step in troubleshooting a system problem?

- A. Collect information.

- B. Test a possible solution.
- C. Make a hypothesis about a solution.
- D. Try to modify the configuration files.

Answer: A.

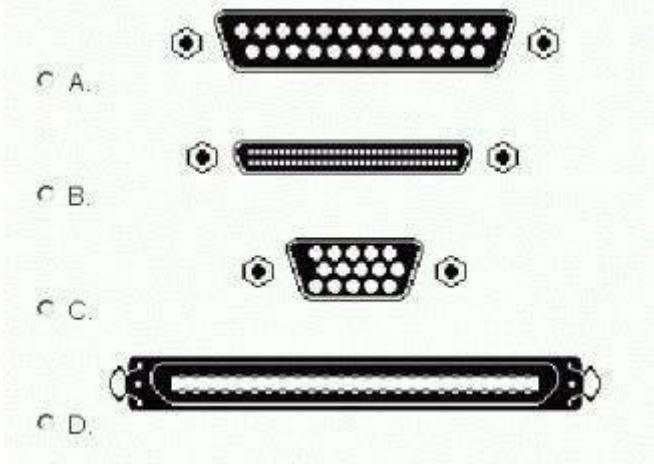
Explanation: The first step in troubleshooting should always be to collect information about the problem. This information can determine whether the problem is hardware or software related, and what the possible cause of the problem could be. When you know the cause of the problem, you can try to find a solution to the problem.

Incorrect Answers

- B: You need to know the cause of the problem before you can test a solution to the problem.
- C: You need to know the cause of the problem before you can try to find a solution to the problem.
- D: You need to know the cause of the problem so that you know what configuration changes to make.

QUESTION 627:

Which of the following is NOT a valid SCSI connector?



Answer: C.

Explanation: This is a DB15 connector commonly used to connect to VGA monitors.

Reference: http://www.ramelectronics.net/html/scsi_connecters.html

<http://www.nullmodem.com/HD-DB-15.htm>

Incorrect Answers

- A: This is a DB 25 connector.
- B: This is an HD 68 connector.
- D: This is a 50 pin Centronics connector.

QUESTION 628:

Exhibit:



Which of the following types of memory modules is shown in the exhibit?

- A. SIMM
- B. DIMM
- C. RIMM
- D. SIPP

Answer: B.

Explanation: The exhibit shows a 168 pin DIMM.

Reference: <http://www.orcalogic.co.uk/Products/Products.htm>

Incorrect Answers

- A: This is not a SIMM.
- C: This is not a RIMM.
- D: This is not a SIPP.

QUESTION 629:

What Linux service is responsible for exporting and importing directories with another system on a network?

- A. NFS
- B. tftp
- C. Squid
- D. Exportfs

Answer: A.

Explanation: The NFS service (Network File Service) is used to share directories on a network. The Network Filesystem (NFS) protocol provides transparent remote access to shared files across networks. The NFS protocol is designed to be portable across different machines, operating systems, network architectures, and transport protocols.

Reference: http://www.freebsd.org/doc/en_US.ISO8859-1/books/handbook/nfs.html

Incorrect Answers

- B: TFTP (trivial file transfer protocol) is used to transfer files across a network. It is not used for exporting or importing directories.
- C: Squid is a web proxy program. It is not used for exporting or importing directories.

D: Exportfs is a command used to export directories. However, it is the NFS service that is responsible for the exporting and importing of directories.

QUESTION 630:

A medium-sized business wants to use GNOME or KDE. Which of the following hardware components is required?

- A. SCSI Card
- B. Modem Card
- C. Video Card
- D. Network Card

Answer: C.

Explanation: Gnome and KDE provide graphical desktop environments for Linux computers. To use these graphical desktop environments, you will need a graphics card otherwise known as a video card.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 145.

Incorrect Answers

A: A SCSI card is required if you have SCSI devices. It is not needed to enable the use of Gnome or KDE.

B: A modem card is required if you want a dial up connection (to an ISP for example). It is not needed to enable the use of Gnome or KDE.

D: A network card is required if you want to connect to a LAN (local area network). It is not needed to enable the use of Gnome or KDE.

QUESTION 631:

A customer installed a new intranet in their company, but the new network is not working. Connection attempts from the clients to the hosts generate "unknown host" errors. Pinging the server's IP address from a client is successful. What service needs to be added to the network to fix this issue?

- A. BIND
- B. Squid
- C. xinetd
- D. portmap

Answer: A.

Explanation: BIND (Berkeley Internet Name Daemon) is a common type of DNS service. DNS is used to map hostnames to IP addresses. In this question, you can ping the server's IP address; therefore, you have network connectivity. You are unable to ping the hostname which means you have a name resolution problem.

Adding the DNS service (BIND) to the network will solve this problem.

Reference: <http://www.isc.org/products/BIND/>

Incorrect Answers

B: Squid is a web proxy program. It is not used for name resolution.

C: Xinetd is the Linux 'superserver'. It is used to start services on a Linux computer.

D: Portmap is used with NFS to mount filesystems.

QUESTION 632:

A client requires a system that is able to store all of his customer records and records of transactions. What type of server should the client implement?

- A. Proxy Server
- B. Database Server
- C. Messaging Server
- D. Application Server

Answer: B.

Explanation: A database is used to store information. This information could be about anything. However, a common use of a database is to store customer information. A database server is a network server hosting a database, that can be accessed by workstations on the network.

Reference: <http://linas.org/linux/db.html>

Incorrect Answers

A: A proxy server is used to provide an internet connection and web caching functionality. It is not used to store customer information.

C: A messaging server is used to provide messaging functionality on a network. It is not used to store customer information.

D: An application server is used to provide access to applications to workstations on a network. It is not used to store customer information.

QUESTION 633:

Which of the following information is NOT returned by ifconfig on a machine connected to an Ethernet network?

- A. Ip address
- B. Mac address
- C. Computer hostname
- D. Active network interface

Answer: C.

Explanation: The ifconfig command is used to configure a network interface or to obtain information about the network interface. The information includes the IP address, the hardware (MAC) address, and the active network interface. However, it does not display the hostname of the computer.

Reference: <http://www.oreillynet.com/linux/cmd/i/ifconfig.html>

Incorrect Answers

A: The ifconfig command displays the IP address.

B: The ifconfig command displays the MAC address.

D: The ifconfig command displays information about the active interface including packets received/sent.

QUESTION 634:

The system administrator notices that the system is running slow. What should be done to find the processes that are using the most resources?

A. Use the command "renice" to show the processes with the highest priority.

B. Use the command "ps a" to list the top five processes with the highest priority.

C. Use the command "jobs" to give a constantly updated list of CPU-intensive processes.

D. Use the command "top" to give a real-time updated list of processes ranked by CPU usage.

Answer: D.

Explanation: The 'top' command is used to display information (frequently refreshed) about the most CPU-intensive processes currently running. If a process is using an excessive amount of CPU time, killing or restarting the process may improve system performance.

Reference: <http://www.oreillynet.com/linux/cmd/t/top.html>

Incorrect Answers

A: The renice command can be used to adjust the priority of a process. However, it does not display the processes with the highest priority.

B: The ps a command will list all running processes. It is easier to use the top command to display just the most CPU-intensive processes.

C: The 'jobs' command to not display a constantly updated list of CPU-intensive processes.

QUESTION 635:

Which of the following commands is used to obtain the summary of hard disk partitions?

A. fsck

B. fdisk

C. fsck -l

D. fdisk -l

Answer: D.

Explanation: The fdisk command is used to create/view hard disk partitions. The -l option is used to display information about all the hard disk partitions.

Reference: <http://www.rt.com/man/fdisk.8.html>

Incorrect Answers

A: Fdisk is used to check the filesystem for errors. It is not used to display partition information.

B: The fdisk command with no options will start a menu driven program, listing various options. The fdisk command on its own does not display partition information.

C: Fdisk is used to check the filesystem for errors. It is not used to display partition information.

QUESTION 636:

Which of the following can be used to apply the package "package-update-3.5.i386.rpm" to the original rpm package?

- A. rpm -qa package-update-3.5.i386.rpm
- B. rpm -Uvh package-update-3.5.i386.rpm
- C. rpm -ivh package-update-3.5.i396.rpm
- D. rpm --update package-update-3.5.i386.rpm

Answer: B.

Explanation: The U option used with rpm is used to install a package or upgrade an existing package. The v and h options are used to display a series of pound signs (#) to indicate the progress of the installation/upgrade.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 178/9.

Incorrect Answers

A: The qa options are used to query the installed packages. This will display information such as the installed files for the package.

C: The i option is used to install a package. However, when using the i option to install a package, a package with the same name must not already exist on the system.

D: Update is not the correct option to upgrade the package.

QUESTION 637:

An assistant network administrator has just been assigned the task of performing a daily check of the security system. A script will be created that will be executed daily as a cron job. Which of the following commands can be included in the script which directly relates to enhancing and checking the system security?

- A. `find /-name * >> /var/log/daily`
- B. `chmod -R 4000 / >> /var/log/daily`
- C. `find / -perm 4000 >> /var/log/daily`
- D. `grep -Ril root /etc/* >> /var/log/daily`

Answer: C.

Explanation: Setuid executable files can be run as the file owner rather than the user running the file. This can be a security risk as it could give an intruder root access to your system. You can use the `find / -perm 4000` command to search for setuid files. The output of the search is appended to a file called `/var/log/daily` with the `>>` redirector.

Reference:

<http://www.intersectalliance.com/projects/LinuxConfig/LinuxConfig-4.0.html>

Incorrect Answers

- A: This command would search `/` (the root directory) for any (*) filename and list the output in the `/var/log/daily` file. This would result in a list of every file on the system.
- B: The `chmod` command is used to change the permissions on files (in this case, every file on the system). It cannot be used to enhance security.
- D: This command would search every file in `/etc/` for an occurrence of the word `root`. This doesn't improve security.

QUESTION 638:

An administrator needs to maintain a log of work performed on a Linux server. Which of the following written records is the most important to maintain?

- A. Updates to hardware drivers.
- B. Updates of user passwords.
- C. New users added to the system.
- D. File system check times and results.

Answer: A.

Explanation: Documenting work performed on a server is very important for troubleshooting purposes. It is often helpful to know the exact version of your hardware drivers. This will make it easier for an administrator to know if he/she has the most recent version of the drivers.

Incorrect Answers

- B: Documenting updates to user passwords is not necessary. Documenting the actual passwords is definitely not recommended.
- C: Documenting new users is not necessary. A list of user accounts can be obtained at any time.
- D: Documenting file system check times could be useful as it could indicate a deteriorating hard disk. However, just noting any file system errors would suffice.

QUESTION 639:

The /etc/passwd file for a Linux system has an "x" in the second field. What does this indicate?

- A. The user account is disabled.
- B. The user is configured for X login.
- C. The system is using shadow passwords.
- D. The user is required to change the password at next login.

Answer: C.

Explanation: The second field is the password field. Linux distributions that use shadow password files typically place an 'x' in this field. Others place the encrypted password in this field.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 273.

Incorrect Answers

- A: If the user account was disabled, the password field would contain a '*'.
- B: The x does not mean the account is configured for an X login.
- D: The x does not mean the user is required to change the password at next login.

QUESTION 640:

A user creates a cron job that deletes all files in /tmp and /var/tmp on her home machine each night. However, she notices several days later that some of the files have not been deleted. What can she do so the cron job performs correctly?

- A. Write a shell script to remove the files.
- B. Make a new crontab while logged in as root.
- C. Log in as superuser and delete the files manually.
- D. Edit her user crontab while logged in as superuser.

Answer: B.

Explanation: To delete the files, she must have the necessary permissions on all the files. To ensure she has the necessary permissions, she should make a new crontab while logged in as root. This will make the cron job run with root permissions, and successfully delete all the files.

Incorrect Answers

- A: If she used a shell script, she would still need the necessary permissions to delete the files.
- C: Deleting the files manually is unnecessary.
- D: Editing the crontab won't make the cron job run with root permissions.

QUESTION 641:

A system administrator of a 200-server network wants to simplify routine monitoring of log files on each server. What is the industry-recommended method to do this?

A. Create a script on the administrator's workstation to attach to each server and copy its log files to the local drive.

B. Create a new server called 'loghost'.

Modify the syslog.conf file on each server so log files are forwarded to 'loghost'.

C. Run logcp at each server.

Specify the administrators workstation as the destination and "*" for which log files to forward.

D. Create a script on each server to analyze each of the log files on the server and forward important information to the administrator's workstation.

Answer: B.

Explanation:

To simplify the monitoring of log files, you should use a central logging server. You can modify the syslog.conf file on each server to configure the servers to save their log files on the central logging server.

Incorrect Answers

A: You shouldn't store important log files on a workstation.

C: This would have to be done every time you wanted the logs copied to your machine.

D: It would be difficult to define 'important information' in a script.

QUESTION 642:

A user tells the administrator that he has found the entry "." in his home directory, and he did not create this entry. Which of the following actions should the administrator take and why?

A. Leave the directory as it is because "." refers to the parent directory.

B. Lock the directory and examine its contents to determine if this is a security risk.

C. Leave the directory as it is because the "." was created by a normal system process at login.

D. Run fsck on the /home partition because the "." is an indication of possible file corruption.

Answer: B.

Explanation: The '.' directory is not created by default. Someone must have created it. Therefore, you should lock the directory and examine its contents to determine if this is a security risk.

Incorrect Answers

- A: '.' does not refer to the parent directory. '..' (2 dots) refers to the parent directory.
 - C: The '.' directory isn't created by a process at login.
 - D: A '.' directory doesn't indicate possible file system corruption.
-

QUESTION 643:

Users on a machine need to run the command `run_file` that requires superuser permissions in order to write to other files. Which of the following will allow that to happen?

- A. Run "`./run_file -su root`".
- B. Use the `chroot` command.
- C. Edit the users ".login" files.
- D. Change `run_file` to a SUID command.

Answer: D.

Explanation: The Set User ID (SUID) option is used in conjunction with executable files, and tells Linux to run the program with the permissions of whoever owns the files, rather than with the permissions of whoever runs the file. For example, if the root user owns the file, the file will run with root permissions when any user runs the file.

Reference: Roderick W. Smith. Sybex Linux + Study Guide: Page 254.

Incorrect Answers

- A: The `su` command is used to 'switch user' and open a shell with the permissions of that user. However, the syntax in this answer is incorrect.
 - B: The `chroot` command is not used to run a command as root.
 - C: Editing the login files will not enable a user to run a program as root.
-

QUESTION 644:

A user has accumulated over 500 MB of programs stored in 25 directories. Now he would like to backup the programs to his home computer by creating a compressed archive and then using `ftp` to transfer the data to his computer at home. Which of the following is the best way to do this?

- A. Use `gunzip` to create a compressed form for each file.
- B. Use `zcat` to create an archive and use `gzip` to compress the archive.
- C. Use `tar` with the "z" option to create a compressed archive in one step.
- D. Use `zcat` to compress all of the files and then `tar` to create an archive.

Answer: C.

Explanation: `Tar` is the best utility to use to create an archive containing multiple

files. The z option invokes the gzip utility to compress the files as part of the archive creation process.

Reference: <http://www.oreillynet.com/linux/cmd/t/tar.html>

Incorrect Answers

A: Gunzip is used to uncompress files, not to compress them.

B: Zcat is not used to create an archive. It is used to list the contents of an archive.

D: Zcat is not used to compressed files. It is used to list the contents of an archive.

QUESTION 645:

How can an original file or kernel be preserved before being updated or patched on a Linux system?

A. Edit the /etc/profile/changelog file and add the filename or kernel version to be backed up.

B. Use the upu, the Update Protection Utility in X to protect the original file or kernel, which is saved in /usr/src.

C. From the directory containing the file to be backed up, type "cp <original file or kernel name> <original file or kernel name>.bak".

D. Files and kernels cannot be saved because the updates will permanently overwrite the originals by default to eliminate the possibility of version conflicts.

Answer: C.

Explanation: The best way to preserve the original version of a file or kernel is to make a backup of it. The easiest way to create a backup of a file is to make a copy of it. The command to copy a file is 'cp'.

Reference: <http://www.oreillynet.com/linux/cmd/c/cp.html>

Incorrect Answers

A: Editing the /etc/profile/changelog won't preserve an original copy of a file.

B: I don't know if there is an 'Update Protection Utility'. However, if the utility exists, it is still not the easiest way to preserve an original copy of a file.

D: Files and kernels can be preserved by making a backup copy of them.

QUESTION 646:

Which of the following commands, when issued, protects a file named classic from being deleted by root?

A. chattr +c classic

B. chattr +i classic

C. chmod 000 classic

D. chmod a-rwx classic

Answer: B.

QUESTION 647:

You are installing the Linux operating system on a computer. You want the Linux installation program to search for bad blocks. Which steps in the Linux installation process for most Linux distribution enables the installation program to search for bad blocks?

- A. The hard disk formatting step.
- B. The hard disk partitioning step.
- C. The installation type step.
- D. The Linux Loader (LILO) configuration step.

Answer: A.

QUESTION 648:

Which of the following lines of text, when added to the /etc/crontab file, will run the cleanup script on the first day of every month at 2:05 A.M.?

- A. 2 5 *1* cleanup
- B. 5 2 1 1 * cleanup
- C. 5 2 1 * * cleanup
- D. 2 5 * * 1 cleanup

Answer: C.

QUESTION 649:

Which of the following best describes what will occur when the su -c 'kill 392' root command is issued and a valid password is entered?

- A. A user will kill the process named 392, which was started by root.
- B. A user is given root-level permissions, and the process with PID number 392 will be terminated.
- C. A user is given root-level permissions, and the processes started in March of 1992 will be terminated.
- D. The root user will kill all of the processes that were started by root.

Answer: B

QUESTION 650:

Which of the following can you use if you want to configure a Linux computer only as a firewall?

- A. Apache
- B. BIND
- C. iptables
- D. Squid

Answer: C.

QUESTION 651:

Your Linux computer has a serial mouse on COM1. You want to connect an external modem to the computer. Connecting the modem to which of the following ports can cause the modem and mouse to malfunction?

- A. COM2
- B. COM3
- C. COM4
- D. USB

Answer: B.

QUESTION 652:

Which of the following statements best describes what will happen when the rpm - qa command is issued?

- A. The name of each installed package will be displayed.
- B. All of the packages installed on the computer will be verified.
- C. Detailed information about an installed package will be displayed.
- D. The name of each file contained within a package will be displayed.

Answer: A.

QUESTION 653:

Which device normally uses a DMA channel?

- A. PCI modem
- B. Laser Printer
- C. ISA sound card

D. Cable video tuner

Answer: C

QUESTION 654:

A technician installs a SCSI card and three SCSI devices on a new system. The system does not recognize any of the SCSI devices or the controller. What is the most likely cause?

- A. There is an Int13h conflict.
- B. There is a SCSI ID conflict.
- C. There is an I/O address conflict.
- D. There are no Linux drivers installed.

Answer: C

QUESTION 655:

Which of the following devices are hot-swappable?

- A. PS/2 mouse
- B. AGP video card
- C. CardBus network card
- D. Parallel port printer

Answer: C

QUESTION 656:

A user adds a serial trackball to his system. Now, neither the existing mouse nor the trackball work. Which of the following will most likely correct the problem?

- A. Reboot the system.
- B. Perform a BIOS upgrade.
- C. Reconfigure the COM ports.
- D. Reinstall the modem drivers.

Answer: C

QUESTION 657:

A user replaces an old 4 GB IDE drive with a new 30 GB IDE drive. During the installation process, Linux recognizes only 8 GB of the available disk space. Which of the following is most likely the problem?

- A. The BIOS does not support larger hard drives.
- B. The hard disk controller has no LBA capability.
- C. The value of the hard disk size in the CMOS is set incorrectly.
- D. The hard disk has to be low-level formatted to access the full capacity.

Answer: A

QUESTION 658:

During a cold boot of a system, which test examines the CPU, memory and video?

- A. CMOS
- B. POST
- C. DIOS
- D. Bootstrap

Answer: B

QUESTION 659:

ATAPI technology is a standard for which of the following items?

- A. CPUs
- B. Power supplies
- C. Mass storage devices
- D. Modulator/demodulator

Answer: C

QUESTION 660:

Unshielded twisted-pair is used for which of the following networks?

- A. 10Base2
- B. 10Base5
- C. 10BaseF
- D. 10BaseT

Answer: D

QUESTION 661:

Based on the exhibit, in what type of I/O bus should the card shown be used?



- A. PCI
- B. ISA
- C. EISA
- D. MicroChannel

Answer: A

QUESTION 662:

Which of the following is a field replaceable unit?

- A. CPU fan
- B. PCI bridge
- C. Level 1 cache
- D. Onboard SCSI controller

Answer: A

QUESTION 663:

The current BIOS version on two workstations does not support the processor that will be installed, but the same motherboard with new BIOS version does. Which of the following is the best way to resolve the problem?

- A. Update the CMOS using a HEX editor.
- B. Flash the BIOS with a binary or HEX file.
- C. Replace the old motherboard with a new one.
- D. Use the debug command to copy the BIOS from a new motherboard.

Answer: B

QUESTION 664:

A new PC is delivered to the site. Upon the initial power up, there is no video display, no beeps are heard, but the hard drive and fans power up. Which of the following has most likely caused this problem?

- A. The mouse is not connected.
- B. The diskette drive has failed.
- C. The CPU is not seated properly.
- D. The network card is not installed.

Answer: C

QUESTION 665:

Which of the following can a parity error indicate?

- A. A DIMM is failing
- B. The IDE hard drive is corrupt
- C. The IRQ settings are incorrect
- D. The software is not compatible with the hardware

Answer: A

QUESTION 666:

A user has just purchased a new external modem and wants to install it on his Linux desktop workstation. What port on the workstation would be used?

- A. USB
- B. PS/2
- C. HD-68
- D. RJ-11

Answer: A

QUESTION 667:

Exhibit



Study the exhibit. When a user installs his new Linux desktop computer, what port would he use to connect a CAT5 cable to establish a connection on the network?

- A. A.
- B. B
- C. C
- D. D

Answer: B

QUESTION 668:

Exhibit



Study the exhibit. A user wants to install an external CDROM drive onto a system. Which interface should be used?

- A. A
- B. B
- C. C
- D. D

Answer: B

QUESTION 669:

What should be terminated on a SCSI bus with one internal hard drive and one external CDROM?

- A. The hard drive only
- B. The SCSI interface card only
- C. Both the hard drive and the CDROM drive
- D. The SCSI controller, hard drive, and CDROM drive

Answer: C

QUESTION 670:

A user installed a new hard drive into a system with an existing hard drive. He then connected a ribbon cable to the new hard disk. He powered on the computer, but the system did not boot. Which of the following most likely caused the problem?

- A. The hard disk needs a new MBR.
- B. The hard disk drive was not low-level formatted first.
- C. The controller was damaged by an electrical discharge.
- D. The ribbon cable was inserted backward on the hard disk.

Answer: D

QUESTION 671:

What is the difference between "shutdown -h now" and "init 0"?

- A. "init 0" does not power down the Linux system
- B. "init 0" does not halt the system during power down
- C. "init 0" does not send a broadcast message to logged-in users
- D. "init 0" does not stop services before powering down the system.

Answer: C

QUESTION 672:

An administrator recursively copies the /home directory to a new hard drive using the command

```
cp -R /home /usr/home
```

What further actions are required, if any, to make the files accessible to the users?

- A. Give executable permission to the users on the new home directory.
- B. Change ownership of the files, and assign directory permissions to users.
- C. Change ownership of the files; directory permissions are automatically assigned.
- D. No further action is required. All permissions are replicates using the cp command

Answer: B

QUESTION 673:

Which of the following commands is issued to create the group 'sqleditors' on a system?

- A. group +sqleditors
- B. addgroup sqleditors
- C. groupadd sqleditors
- D. echo sqleditors:x:601: > /ets/groups

Answer: C

QUESTION 674:

A software developer completed his annual report yesterday. He is now trying to print the report and submit it to his supervisor; however, he has forgotten the name and path of the report file. Which of the following commands can be used to obtain a listing of recently modified files?

- A. locate -t2
- B. find / -mtime 2
- C. whereis -time 2
- D. grep / -ctime 2

Answer: B

QUESTION 675:

A user logs onto the system as root. He attempts to execute the script file a.sh. He is getting the message "Execute permission denied". What command must be used before the file can be executed?

- A. chgrp
- B. chown
- C. chmod
- D. execute

Answer: C

QUESTION 676:

Which of the following commands creates a tar file called back.tar that contains all files ending with extension ".c" in the current directory?

- A. tar back.tar *.c
- B. tar xvf | *.tar *.c
- C. tar cvf back.tar *.c
- D. tar cvzf | *.tar *.c

Answer: C

QUESTION 677:

Where are log files normally found?

- A. /bin
- B. /etc
- C. /tmp
- D. /var

Answer: D

QUESTION 678:

A user wants to load a PDF file from the CDROM. What command would allow the user to access this file?

- A. mount -dos /dev/cdrom
- B. mnt /dev/cd0 /mount/cdrom
- C. mount -t vfat /mnt/cdrom /dev/cdrom

D. mount -t iso9660 /dev/cdrom /mnt/cdrom

Answer: D

QUESTION 679:

Which of the following commands can be used to place print jobs in the print queue?

- A. pr
- B. lpq
- C. lpr
- D. lprm

Answer: C

QUESTION 680:

Which of the following strings indicate that the input of the program called printData should be redirected from the file called "myData"?

- A. printData . myData
- B. printData > myData
- C. printData < myData
- D. printData | myData

Answer: C

QUESTION 681:

What is the most secure way to connect to a remote machine?

- A. ssh
- B. ftp
- C. http
- D. telnet

Answer: A

QUESTION 682:

Which of the following commands will create 'bsmith' as a user in the group

'web_users'?

- A. useradd bsmith web_users
- B. useradd -g web_users bsmith
- C. useradd web_users bsmith
- D. groupadd -group web_users bsmith

Answer: B

QUESTION 683:

A Linux system administrator has forgotten the root password. Which of the following would be the best way for the system administrator to gain access to the machine?

- A. Reinstall Linux.
- B. Enter runlevel 0 and run passwd.
- C. Reboot and use the mdrecovery utility.
- D. Reboot, enter Linux single-user mode and run passwd.

Answer: D

QUESTION 684:

Which of the following commands can be used to save and resume editing the file in the vi editor?

- A. :w
- B. :x
- C. :v
- D. :s!

Answer: A

QUESTION 685:

How can the X Window manager be restarted?

- A. Press <Ctrl><Alt><Delete>
- B. Press <Ctrl><Alt><Backspace>
- C. Press <Ctrl><Alt><F5>, login, and type "startx"
- D. Change consoles and type the command "kill -9 X"

Answer: B

QUESTION 686:

What information about the user does the "x" provide in the following line in the /etc/passwd file?

chris:x:501:501:chris smith:/home/chris:/bin/bash

- A. The user is disabled.
- B. The user has no password.
- C. The user has a blank password.
- D. The user has a shadow password.

Answer: D

QUESTION 687:

Which of the following commands should be used to move the file named John1 from the directory /home/j/john/temp to /home/j/john/save?

- A. mv /home/j/john/temp/john1 /home/j/john/save
- B. mv /home/j/john/save /home/j/john/temp/John1
- C. mv /home/j/john/temp/John1 /home/j/john/save
- D. mv /home/j/john/save/john1 /home/j/john/temp

Answer: C

QUESTION 688:

After completing an installation of Linux, the technician is asked to document the current configuration and place this in a public location. The technician documented the following items:

1. Administrator contact information
2. System network settings
3. Application configuration
4. Installed components

Which of the following did the technician fail to include?

- A. The root password
- B. Disk partitioning scheme
- C. Location of common system files
- D. Cost of replacement system components

Answer: B

QUESTION 689:

A system technician needs to determine with hardware modules are loaded on a particular Linux server. Which of the following commands will perform this task?

- A. lsmod
- B. modules
- C. insmod -list
- D. modprobe -list

Answer: A

QUESTION 690:

Which of the following is the best way to change video resolution from 800x600 to 1024x768?

- A. Run xf86config to change the resolution.
- B. Reinstall Linux with more options for X Server.
- C. Reinstall X Server with support for the 1024x768 resolution.
- D. Restart X Server after typing "resolution=1024x768" as root.

Answer: A

QUESTION 691:

A user tries to dial into his ISP. The modem dials and connects, but loses the connection after a few seconds. The log files indicate tat an "Authentication failed" error occurred, but the password in the configuration file on the client system is correct. Which of the following is most likely to be the problem?

- A. The phone line is bad.
- B. The user dialed the wrong phone number.
- C. The ppp_auth kernel module is not loaded.
- D. The wrong authentication protocol was used by PPP.

Answer: D

QUESTION 692:

What port is commonly used by the POP3 protocol?

- A. 25
- B. 53
- C. 69
- D. 110

Answer: D

QUESTION 693:

Below is a list of possible steps to take in order to change manually from the old IP address to new IP address of a computer.

- I. Use `ifconfig` to disable the network interface**
- II. Use `ifconfig` to enable the network interface using the new IP address**
- III. Update the `arp` table with the new address**
- IV. Update the routing table with the new paths**
- V. Use `insmod` to insert a new driver**

Which of the steps are required?

- A. I, II, and IV only
- B. I, II and V only
- C. I, III, and IV only
- D. I, II, IV and V only

Answer: A

QUESTION 694:

A user typed the following command on a machine:

```
ifconfig eth0:1 192.168.155.5 up
```

What would be the effect of typing this on a machine that already has an address of 192.168.155.1 assigned to eth0?

- A. It will replace the current IP address with 192.168.155.5.
- B. It will assign 192.168.155.5 to eth0 as a second IP address
- C. It will replace the old broadcast address with 192.168.155.5.
- D. It will assign the address of 192.168.155.5 to the second physical Ethernet card.

Answer: B

QUESTION 695:

Which of the following files includes device names, mount points, filesystem types, permissions and information about whether to mount the device at boot time?

- A. /dev/info
- B. /etc/fstab
- C. /boot/info
- D. /etc/inittab

Answer: B

QUESTION 696:

Which of the following commands will set the current system time to 3:00 PM, February 3, 2002?

- A. date 020315002002
- B. dateset 020320021500
- C. time 0300:02:03:2002
- D. timeset 1500.02.03.2002

Answer: A

QUESTION 697:

Which of the following is a configuration file that contains the system virtual console specifications?

- A. XF86Config
- B. /etc/profile
- C. /etc/inittab
- D. /etc/vconsole

Answer: C

QUESTION 698:

Which file can be edited to disable FTP, POP, and RSH services?

- A. /etc/ports

- B. /etc/inittab
- C. /etc/inetd.conf
- D. /etc/remote.conf

Answer: C

QUESTION 699:

If a video card is not recognized by the X configuration utility during the installation process, which of the following actions should be taken to enable X to display after installation is complete?

- A. Edit the /etc/inittab to boot the X Window System
- B. Identify the chipset on the video card and obtain the driver from the manufacturer.
- C. Inspect the CMOS for information on the video card and install the drivers that came with the video card.
- D. Edit /etc/lilo.conf to include a boot message to the kernel pointing to the location of the video drivers.

Answer: B

QUESTION 700:

What is the main difference, if any, between GRUB and LILO?

- A. LILO does not support hard drives larger than 30 GB.
- B. GRUB does not support passing of kernel boot options.
- C. GRUB does not have to be rewritten to the hard drive after changing the configuration file.
- D. There is none.

Answer: C

QUESTION 701:

Which of the following commands is used to cancel print jobs?

- A. lpq
- B. lpc
- C. lpr
- D. lprm

Answer: D

QUESTION 702:

Users contact the administrator and complains that they are unable to browse the Web. nslookup on a popular known site produces the following error:
"Host/domain not found", while a ping to a known WAN IP address is successful.
Which service needs to be restarted and why?

- A. Samba. The file server is not responding.
- B. BIND. Name resolution is not taking place.
- C. Squid. The proxy server is not responding.
- D. HTTPD. The WAN Web Servers are not responding

Answer: B

QUESTION 703:

Which of the following commands can be run to gather specific information regarding the hardware in the system?

- A. dmesg
- B. tail sysinfo
- C. cat /var/log/spool
- D. cat /var/log/syslog

Answer: A

QUESTION 704:

A Linux system is used for various Internet services and remote user access. When a problem arises with one of the machine's services, which of the following actions is the LEAST likely to disrupt other services on that machine?

- A. Kill a daemon
- B. Reboot the machine
- C. Change to runlevel 1
- D. Disable a network device

Answer: A

QUESTION 705:

A user calls into the support line and reports that he is unable to unlock his desktop. After several attempts, he is sure that he has entered his password correctly. What is the first thing to do to troubleshoot this situation?

- A. Change his password.
- B. Check to see if <Caps Lock> is on.
- C. Check if he has a valid password.
- D. Check to see if his account is active.

Answer: B

QUESTION 706:

A system will not allow root to ssh into the system. All others can connect via ssh. Which of the following configuration files should be edited to permit connection as the root user?

- A. ssh_config
- B. pam_deny.so
- C. sshd_config
- D. /root/.ssh/allowed_connections

Answer: C

QUESTION 707:

tar automatically compresses and decompresses using which of the following options?

- A. c
- B. z
- C. /z
- D. -c

Answer: B

QUESTION 708:

The Linux system is not assigning IP addresses to client systems. After a reboot and executing the command "dhcpd start", the problem is not corrected. After changing to the correct directory, which of the following commands should be used to permit IP addresses to be assigned?

- A. ./dhspd start
- B. ./dhcpd restart
- C. touch dhcpd.leases
- D. chkconfig --level 3 dhcpd on

Answer: C

QUESTION 709:

The Linux system has experienced a power failure. After the system is booted up, it hangs with file system corruption messages. What is the best way to resolve this?

- A. Boot into single-user mode and run fsck.
- B. Boot into multi-user mode and run chkdsk.
- C. Boot into single-user mode and run mdrecoveryd.
- D. Boot into multi-user mode and run "/sbin/shutdown -t3 -r now".

Answer: A

QUESTION 710:

Which of the following is a common switch used to display command syntax for most programs?

- A. /?
- B. -h
- C. --man
- D. -help

Answer: B

QUESTION 711:

While attempting to start an application in an X Window System environment, the following error occurs:

Error: Can't open display

What most likely led to this error?

- A. The application is not an X application.
- B. It is the wrong version of the application.
- C. The application was compiled with the wrong graphics library.
- D. The administrator has used "su -" to log into the current account.

Answer: D

QUESTION 712:

Which of the following would correct a corrupt master boot record and allow a clean boot into Linux?

- A. Boot Linux and type "fdisk /MBR"
- B. Boot any OS and type "fdisk /MBR"
- C. Boot DOS with a boot diskette and type "lilo"
- D. Boot Linux with a boot diskette and type "lilo"

Answer: D

QUESTION 713:

Which of the following commands is most useful to determine whether an Ethernet card problem is caused by hardware or the Linux kernel?

- A. init and ps
- B. route and ping
- C. dmesg and ifconfig
- D. kupdate and mprobe

Answer: C

QUESTION 714:

A system is configured to dual-boot Linux with another operating system that is located on /dev/hda1. LILO is the chosen boot manager. The system reboots without access to the other operating system. What lines should be added to lilo.conf to allow access to the other operating system?

- A. table = LILO
label = <shortened name of operating system>
other = /dev/hda
- B. O/S = <shortened name of operating system>
location = /dev/hda1
bootmgr = LILO
- C. label = /dev/hda1
table = /dev/had
other = <shortened name of operating system>

D. other = /dev/hda1
label = <shortened name of operating system>
table = /dev/hda

Answer: D

QUESTION 715:

"netstat -i" is typed at the command line. All of the following information will be displayed EXCEPT

- A. Transmission errors for each network interface
- B. The number of packets dropped for each network interface
- C. The number of packets received for each network interface
- D. A list of masqueraded connections for each network interface

Answer: D

QUESTION 716:

Which of the following commands would be used to watch the mail log for errors?

- A. locate
- B. tail -f
- C. monitor -f
- D. cat mail.log

Answer: B

QUESTION 717:

Linux is being installed on a system that uses SCSI hardware. During partitioning, an error is produced that says there are no valid devices found on which to install partitions. The hard drive spins up. The SCSI controller is functioning properly and supported by Linux. The cable is a known good cable and there is proper termination. What is the problem?

- A. The SCSI hard drive is not jumpered to the proper SCSI ID.
- B. The SCSI controller needs to be reset to factory defaults.
- C. The SCSI controller on the hard drive needs a firmware update.
- D. The SCSI controller on the hard drive has an intermittent problem.

Answer: A

QUESTION 718:

What command is used to access the information about memory availability and usage in Linux?

- A. cat /dev/meminfo
- B. cat /var/log/mem
- C. cat /proc/meminfo
- D. cat /etc/memory/usage

Answer: C

QUESTION 719:

A customer has installed a new hard drive on a Linux system. What would be the order of tasks to allow her to put her MP3 collection on the new drive?

- A. fsck,mount,mkfs
- B. mount,mkfs,chkfs
- C. cfdisk,mkfs,mount
- D. mkfs,mount,fsck,cp

Answer: C

QUESTION 720:

A system administrator complains that a user's system has been forwarding unsolicited email (spam) to mass email lists. Which of the following actions needs to be done to sendmail to stop the spam?

- A. Change the firewall rules.
- B. Restart the sendmail daemon.
- C. Restrict relay domains in the sendmail configuration.
- D. Change the SMTP mail server in the sendmail configuration.

Answer: C

QUESTION 721:

What is the purpose of cron?

- A. Manage incoming and outgoing mail
- B. Runs specified commands at defined times
- C. Sets the system clock to a specified time
- D. Changes the permission settings on a file or directory

Answer: B

QUESTION 722:

Which command will extract the file "backup-4-19-2001.tgz"?

- A. unzip backup-4-19-2001.tgz
- B. tar xf backup-4-19-2001.tgz
- C. tar xzf backup-4-19-2001.tgz
- D. uncompress backup-4-19-2001.tgz

Answer: C

QUESTION 723:

A user calls the help desk, complaining that upon issuing a command to list files in her home directory, a "permission denied" error is received. Which of the following actions should be taken to resolve the problem?

- A. Delete the user's home directory and re-create it.
- B. Ask the user for some patience while the server is rebooted.
- C. Run "chmod 007" on the user's home directory and have the user try again.
- D. Check the UID:GID of the user's home directory and change it if necessary.

Answer: D

QUESTION 724:

Which of the following types of backup minimizes system downtime during restore?

- A. FDD backup
- B. Full backup
- C. Incremental backup
- D. Differential Backup

Answer: B

QUESTION 725:

A system administrator routinely needs to see the list of who has logged in and out on a machine, as well as their login times. Which of the following commands searches the "/var/log/wtmp" file and displays who has logged onto the machine and when they logged on?

- A. who
- B. last
- C. log -l
- D. wtmpst

Answer: B

QUESTION 726:

A user who wants the status listing of all network interfaces will use which of the following commands to obtain this information?

- A. ifconfig -a
- B. ifconfig up
- C. ifconfig eth*
- D. ifconfig --all

Answer: A

QUESTION 727:

A Linux superuser is unable to delete a file. The user is also unable to change permission for the file. What is the problem?

- A. The file is actually a hard link.
- B. The file has the immutable flag set.
- C. The file has been fragmented across directories.
- D. The superuser does not have permission to access the file.

Answer: B

QUESTION 728:

Which of the following packages helps to identify a bad password?

- A. CERT
- B. Hack
- C. Crack
- D. Tiger

Answer: C

QUESTION 729:

Which of the following commands will list all rpm packages installed on the system?

- A. rpm -d
- B. rpm -i
- C. rpm -qa
- D. rpm -Uvh

Answer: C

QUESTION 730:

The system technicians and administrators at a facility are poor at keeping maintenance records up-to-date. The administrator decides to keep only the minimum information in the records and require that it be updated. Which of the following information is the most important to maintain?

- A. Dates and times that the server was rebooted
- B. Version numbers of patches applied to services
- C. Information about new users added to the system
- D. Records of which administrators have logged in to the system

Answer: B

QUESTION 731:

The system administrator needs to examine the processes that the user with the login of 'john' currently owns. Which of the following commands would best do this?

- A. ps john
- B. ps -r john
- C. ps -U john
- D. ps -all | grep john

Answer: C

QUESTION 732:

What Linux service is responsible for successfully sharing files over a NetBios network?

- A. NFS
- B. Samba
- C. XFree86
- D. Xwindows

Answer: B

QUESTION 733:

Why would Kernel 2.3.19-2 be an INAPPROPRIATE kernel for a production web server?

- A. It is a test version of the kernel.
- B. It is not the most recent kernel available.
- C. It needs to be upgraded to Kernel 2.3.20 for network support.
- D. This version of the Linux kernel has a known problem with Apache.

Answer: A

QUESTION 734:

A customer wants to upgrade an old UNIX server to a current version of a Linux OS. The SCSI controller manufacturer is out of business. What should be done to verify that the SCSI controller will work with Linux?

- A. Verify that SCSI emulation is activated in the kernel.
- B. Use the man pages to verify there is a SCSI module available for the controller.
- C. Use the kernel editor to verify there is a SCSI module installed for the controller.
- D. Use the Linux distribution Hardware Compatibility List to verify that the controller is supported.

Answer: B

QUESTION 735:

A customer is concerned about attacks to his network from the Internet. The customer wants a system that will prevent unauthorized intrusion from outside his network. What type of server does the customer require?

- A. Firewall
- B. Web Server
- C. Database Server
- D. System Management Server

Answer: A

QUESTION 736:

During installation of a Linux system, the customer decided to use the ReiserFS file system rather than ext2. What is the most likely reason for this choice?

- A. ext2 allows only 8 character file names.
- B. ReiserFS allows partitions to be journaled.
- C. ReiserFS has built-in USB file system support.
- D. There are no differences between ext2 and ReiserFS.

Answer: B

QUESTION 737:

A Linux workstation is being integrated into a network that uses older Novell Netware servers (version 2.2 and 3.12). The workstations use only the Netware client software to communicate with the server and to share data. Which of the following protocols should be installed on the Linux workstation?

- A. TCP/IP
- B. NetBIOS
- C. IPX/SPX
- D. Apple Talk

Answer: C

QUESTION 738:

A customer has recompiled his kernel to a new image including new modules. GRUB is not being used as the boot loader. After editing the necessary configuration files, what command should be issued?

- A. /etc/lilo
- B. /sbin/lilo
- C. /sbin/loadlin
- D. ./start kernel

Answer: B

QUESTION 739:

What command is commonly issued to compile and install an application from its source code?

- A. run
- B. rpm
- C. make
- D. install

Answer: C

QUESTION 740:

The system administrator has just completed the installation and configuration of a DNS server to be used for external name resolution. The DNS service need to be validated before bringing the server into production.

What would be the best method to validate the proper operation of the service?

- A. Ping an external IP address.
- B. Get a Web page from within the local area network.
- C. Run the dig command for an external domain name.
- D. Run traceroute to the DNS server and analyze the hops.

Answer: C

QUESTION 741:

A package that a user installed has never run successfully and returns a large number of errors. What is the first action that should be taken?

- A. Run "verify <package_name>"
- B. Run "rpm --verify <package_name>"
- C. Validate that the /boot directory exists
- D. Validate that kernel.lib is the correct version

Answer: C

QUESTION 742:

An error message appears that states that no modular support is available. What caused this error message?

- A. A module is corrupted and must be reinstalled
- B. The installation is corrupt and must be reinstalled
- C. A device being installed is not functioning and must be replaced.
- D. The kernel does not support loadable modules and must be recompiled.

Answer:

QUESTION 743:

The user installs the second SCSI hard drive into the computer and needs to partition it. Which of the following commands must be run to partition the disk?

- A. fdisk /dev/hdb
- B. fdisk /dev/hd2
- C. fdisk /dev/sdb
- D. fdisk /dev/sd2

Answer:

QUESTION 744:

During installation of a new server, the technician enabled Shadow Passwords and MD5 Passwords. What changes have been made on the server?

- A. NFS has now been disabled.
- B. Access to /etc/passwd is now limited to root.
- C. The maximum password length is now 64 characters.
- D. User passwords are now kept in the /etc/shadow file.

Answer: D

QUESTION 745:

Which of the following passwords would be the most secure?

- A. xpF57se
- B. range76
- C. 76range
- D. LasVegas

Answer: A

QUESTION 746:

Which of the following packages is usually more important for a "workstation" installation than a "server" installation?

- A. DNS Server
- B. DHCP Server
- C. Proxy Server
- D. XFree86 Server

Answer: D

QUESTION 747:

Which of the following packages is used to implement Telnet services on major Linux distributions?

- A. xinetd
- B. rtelnetd
- C. sshd
- D. rsh

Answer: A

QUESTION 748:

Which of the following is the quickest way to create a file that lists groups to which the user 'bob' belongs?

- A. whereis bob >> bob_groups.txt
- B. grep bob /etc/group > bob_groups.txt
- C. cd /etc; cat groups | grep bob | vi > bob_groups.txt
- D. find /etc/passwd bob >> bob_groups.txt

Answer: B

QUESTION 749:

A superuser wants to transform the following permission set from

`-rw-r--r-- 1 root root 4096 Apr 20 17:40 filename`

to

`-rwx-w---- 1 root root 4096 Apr 20 17:40 filename`

Which of the following commands will accomplish this?

- A. `chmod 710 filename`
- B. `chown 720 filename`
- C. `chmod u+x,g-w-r,o-r filename`
- D. `chmod u+x,g+w-r,o-r filename`

Answer: D

QUESTION 750:

When the command `mke2fs -j` is run, what type of file system is created?

- A. xfs
- B. jfs
- C. ext2
- D. ext3

Answer: D

QUESTION 751:

A system administrator wants to see if an RPM package is installed on a user workstation. Which of the following commands should be used?

- A. `rpmfind <name of package>`
- B. `find -name rpm | grep <filename>`
- C. `rpm -qa | grep <name of package>`
- D. `rpm -query <filename>`

Answer: C

QUESTION 752:

Which of the following packages helps to identify simple passwords?

- A. Hack
- B. Hunt
- C. Crack
- D. gnupg

Answer: C

QUESTION 753:

A user is editing a file in vi and wants to run the command `su` without leaving vi. Which of the following commands will do this?

- A. `:! ps -aux`
- B. `:cmd ps -aux`
- C. `:# ps -aux`
- D. `:// ps -aux`

Answer: A