LPI

Exam 201-400

LPIC-2 Exam 201

Version: 8.0

[Total Questions: 459]

Topic break down

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Topic 1, Capacity Planning

Question No : 1 - (Topic 1)

In the following output, what percentage of time was the CPU waiting for pending I/O?

vmstat 1 100

procs -----------memory---------- ---swap-- -----io---- --system-- ----cpu----

r b swpd free buff cache si so bi bo in cs us sy id wa

0 0 0 282120 134108 5797012 0 0 0 2 0 0 0 0 100 0

0 0 0 282120 134108 5797012 0 0 0 0 1007 359 0 0 100 0

0 0 0 282120 134108 5797012 0 0 0 0 1117 577 0 0 100 0

0 0 0 282120 134108 5797012 0 0 0 0 1007 366 0 0 100 0

A. 0
B. 100
C. 35.9
D. 57.7
E. 36.6

Answer: A

Question No : 2 - (Topic 1)

Which command will report information on memory usage, paging and block input/output?

A. free
B. memshow
C. ps
D. top
E. vmstat

Answer: E

Question No : 3 - (Topic 1)

When is historical data of resource usage important? (Select THREE correct answers.)

A. Predicting when resources will need to be increased.
B. Selecting a computer vendor.
C. Identifying processes killed during out of memory occurrences.
D. Diagnosing capacity problems.
E. Troubleshooting a software problem.

Answer: A,D,E

Question No : 4 - (Topic 1)

In the following output, the load averages represent the system load averages for what time frames?

uptime

12:10:05 up 18 days, 19:00, 2 users, load average: 0.47, 24.71, 35.31

A. 1, 5 and 15 minutes
B. 1, 15 and 30 minutes
C. 1, 15, and 30 seconds
D. 15, 30 and 60 minutes
E. 15, 30 and 60 seconds

Answer: A

Question No : 5 - (Topic 1)

In this example output, which descriptions match the purpose of the free, buff and cache columns? (Choose THREE correct answers.)

vmstat 1 100

procs -----------memory---------- ---swap-- -----io---- --system-- ----cpu----

r b swpd free buff cache si so bi bo in cs us sy id wa

0 0 0 282120 134108 5797012 0 0 0 2 0 0 0 0 100 0

0 0 0 282120 134108 5797012 0 0 0 0 1007 359 0 0 100 0

0 0 0 282120 134108 5797012 0 0 0 0 1117 577 0 0 100 0

0 0 0 282120 134108 5797012 0 0 0 0 1007 366 0 0 100 0

A. Used swap space
B. RAM available for filesystem buffers
C. Available free RAM
D. RAM used for buffers
E. RAM used for filesystem cache

Answer: C,D,E

Question No : 6 - (Topic 1)

In the following output from top, which processes contribute to the percentage of time that the CPU spends in the state of wa?

Tasks: 193 total, 1 running, 190 sleeping, 2 stopped, 0 zombie

Cpu(s): 0.5%us, 0.3%sy, 0.0%ni, 98.2%id, 1.0%wa, 0.0%hi, 0.0%si, 0.0%st

A. Processes waiting for user interaction.
B. Processes that were already closed and are waiting to be launched again.
C. Processes that have not been scheduled yet because they haven't been fully loaded into RAM or are in swap.
D. Processes waiting for IO operations to complete.

Answer: D

Question No : 7 - (Topic 1)

Which of the following is a side effect of extensive usage of swap space?

A. The root filesystem may become full because swap space is always located on the system root partition.
B. The overall system performance may degrade because of heavy hard disk use and memory reorganization.
C. Since processes always exist completely in either RAM or swap, regular RAM may become unused if the kernel does not move processes back from the swap space to

memory.

D. The memory may become fragmented and slow down the access to memory pages. However, this can be kept to a minimum by the regular use of memfrag -d.

E. Applications need to restart because their virtual memory addresses change to reflect memory relocation to the swap address area.

Answer: B

Question No : 8 - (Topic 1)

What mechanism does collectd use to gather monitoring information on systems?

A. It uses a library of plugins.

B. A master server connects to a collectd service on each machine to retrieve the information.

C. It collects its own information on each server and sends that to a master server.

D. It makes SNMP queries to the clients being monitored.

Answer: A

Question No : 9 - (Topic 1)

When planning a web server which of the following choices will impact system sizing? (Choose THREE correct answers.)

A. How many concurrent users are expected.

B. Which hardware vendor has better Linux support.

C. What type of content will be served.

D. What scripting languages will the web server support.

E. Will the OS install be CD, DVD or network based.

Answer: A,C,D

Question No : 10 - (Topic 1)

What option in the collectd configuration file is required in order to define what to start monitoring?

A. LoadModule

B. Module
C. Plugin
D. LoadPlugin

Answer: D

Question No : 11 - (Topic 1)

In the following output, what is the 5 minute load average for the system?

uptime

12:10:05 up 18 days, 19:00, 2 users, load average: 0.47, 24.71, 35.31

A. 0.47
B. 24.71
C. 35.31
D. There is no 5 minute interval. It is some value between 0.47 and 24.71.
E. There is no 5 minute interval. It is some value between 24.71 and 35.31.

Answer: B

Question No : 12 - (Topic 1)

Which commands below are useful to collect data about remote filesystem connections? (Choose TWO correct answers.)

A. pidstat
B. nfsiostat
C. sadf
D. cifsiostat

Answer: B,D

Question No : 13 - (Topic 1)

Which of the following commands will provide the PIDs of the processes sorted by which are using the most CPU cycles on the Linux system?

A. top
B. uptime
C. ps aux
D. vmstat
E. freemem

Answer: A

Question No : 14 - (Topic 1)

Which of the following tools are used to measure memory usage? (Choose THREE correct answers.)

A. mpstat
B. pstree
C. sar
D. top
E. vmstat

Answer: C,D,E

Question No : 15 - (Topic 1)

In capacity planning exercises, which tools assist in listing and identifying processes of interest? (Choose TWO correct answers.)

A. acpid
B. lsof
C. pstree
D. telinit

Answer: B,C

Question No : 16 - (Topic 1)

In the below example output, which columns detail the percent of time the CPU spent running non-kernel code and the percent of time the CPU spent running kernel code? (Choose TWO correct answers.)

vmstat 1 100

procs -----------memory---------- ---swap-- -----io---- --system-- ----cpu----

r b swpd free buff cache si so bi bo in cs us sy id wa

0 0 0 282120 134108 5797012 0 0 0 2 0 0 0 0 100 0

0 0 0 282120 134108 5797012 0 0 0 0 1007 359 0 0 100 0

0 0 0 282120 134108 5797012 0 0 0 0 1117 577 0 0 100 0

0 0 0 282120 134108 5797012 0 0 0 0 1007 366 0 0 100 0

A. id
B. us
C. wa
D. sy

Answer: B,D

Topic 2, Linux Kernel

Question No : 17 CORRECT TEXT - (Topic 2)

A new kernel version needs to be compiled to use a new feature. If the old kernel configuration file is available, which make target creates a configuration file for the new kernel based on the configuration of the old kernel?

Answer: oldconfig, make oldconfig

Question No : 18 - (Topic 2)

What information does the file modules.dep provide?

A. A list of all modules, compiled or not, that are available to the kernel.
B. A list of modules trusted by the installed kernel.
C. A list of devices and their module name.
D. A list of all compiled modules and their dependencies.
E. A list of modules the kernel needs to run.

Answer: D

Question No : 19 - (Topic 2)

What is a key difference between a zImage and bzImage kernel image?

A. zImage is compressed using gzip, bzImage is compressed using bzip2.
B. zImage is for 2.6 series kernels, bzImage is for 3.x series kernels.
C. zImage is limited to 64k, bzImage has no such restriction.
D. zImage gets loaded completely into low memory. bzImage will load into high memory once low memory is full.

Answer: D

Question No : 20 - (Topic 2)

How can the kernel parameter for the maximum size of the shared memory segment (shmmax) be changed to 2GB (2147483648 Bytes) on a running system? (Choose TWO correct answers.)

A. Edit /etc/shmmax and set the parameter to 2147483648.
B. sysctl shmmax=2147483648
C. sysctl kernel.shmmax=2147483648
D. echo 2147483648 > /proc/sys/kernel/shmmax
E. export kernel.shmmax=2147483648

Answer: C,D

Question No : 21 - (Topic 2)

On a server running the 3.4.50-11 Linux kernel, which file in the /boot directory contains the kernel configuration parameters?

A. config-linux-3.4.50-11
B. config-3.4.50-11
C. system-3.4.50-11
D. vmlinuz-3.4.50-11
E. rc.config-3.4.50-11

Answer: B

Question No : 22 CORRECT TEXT - (Topic 2)

According to the Filesystem Hierarchy Standard (FHS), what is the path to the Linux kernel source and may be a symbolic link to the real Linux source code? (Please specify the full path with no version information.)

Answer: /usr/src/linux, /usr/src/linux/

Question No : 23 - (Topic 2)

What is the correct parameter to pass to the kernel at boot time to force it to use only one of the available processors?

A. maxcpus=1
B. usecpus=1
C. smpcpus=1
D. vcpumx=1

Answer: A

Question No : 24 - (Topic 2)

Which archive format is used to create an initramfs image?

A. gzip
B. tar
C. RAR
D. cpio
E. bzip2

Answer: D

Question No : 25 - (Topic 2)

Which of the following terms are used to describe 3.x kernel releases? (Choose TWO correct answers.)

A. beta
B. final
C. longterm
D. prerelease
E. stable

Answer: C,E

Question No : 26 CORRECT TEXT - (Topic 2)

Which directory contains the system-specific udev rule files? (Specify the absolute path including the directory name)

Answer: /etc/udev/rules.d, /etc/udev/rules.d/

Question No : 27 CORRECT TEXT - (Topic 2)

Which command is used to unload a single module currently loaded by the kernel without unloading any modules that it depends upon? (Specify the command with or without path information)

Answer: rmmod, /sbin/rmmod

Question No : 28 CORRECT TEXT - (Topic 2)

After installing a compiled kernel, it can not find any modules that are needed to be loaded. What make target was likely missed while installing the kernel?

Answer: make modules_install, modules_install

Question No : 29 - (Topic 2)

How is the source code for the main Linux kernel modules distributed?

A. It is included with the Linux kernel source code.
B. The kernel modules are downloaded on demand as they are used during compilation.
C. The kernel modules have their own release cycle and can be maintained separately from the Linux kernel source.
D. It is provided as a separate download alongside the Linux kernel source code of the same version.

Answer: A

Question No : 30 - (Topic 2)

Which of the following command sequences can be used to extract files contained in a initramfs file (/boot/initramfs) which is used by the kernel at boot time?

A. cp /boot/initramfs /tmp/initramfs.gz; gzip -c /tmp/initramfs.gz; mkdir /tmp/initramfs.dir ; cd /tmp/initramfs.dir ; cpio -i < /tmp/initramfs
B. cp /boot/initramfs /tmp/initramfs.gz; gunzip /tmp/initramfs.gz; mkdir /tmp/initramfs.dir ; cd /tmp/initramfs.dir ; cpio -i < /tmp/initramfs
C. cp /boot/initramfs /tmp/initramfs.gz; gunzip /tmp/initramfs.gz; mount /tmp/initramfs /mnt/ -o loop -t initramfs
D. cp /boot/initramfs /tmp/initramfs.gz; gunzip /tmp/initramfs.gz; mkdir /tmp/initramfs.dir ; cd /tmp/initramfs.dir ; cpio -e /tmp/initramfs
E. cp /boot/initramfs /tmp/initramfs.gz; gunzip /tmp/initramfs.gz; mount /tmp/initramfs /mnt/ -o loop -t initrd

Answer: B

Question No : 31 - (Topic 2)

Which commands are used to load modules into the Linux kernel? (Choose TWO correct answers.)

A. insmod
B. loadmod
C. kernload
D. modprobe
E. probemod

Answer: A,D

Question No : 32 - (Topic 2)

What is the purpose of the command udevadm monitor?

A. It listens to kernel events produced by a udev rule and print information to the console.
B. It monitors the /dev directory for new devices.
C. It monitors the udev process and prints performance statistics to the console.
D. It communicates with D-Bus to setup new devices.

Answer: A

Topic 3, System Startup

Question No : 33 CORRECT TEXT - (Topic 3)

Which file tells GRUB the paths of the filesystem partitions in both Linux format and in the GRUB syntax? (Specify the file name only with no path information)

Answer: device.map

Question No : 34 - (Topic 3)

A system with SysV-init has a service installed called apache2. Which file controls the start and stop of this service and is referenced by the various runlevel directories?

A. /etc/init.d/apache2
B. /etc/rc2.d/70apache2
C. /etc/rc2.d/apache2
D. /etc/rc2.d/apache2.start

Answer: A

Question No : 35 - (Topic 3)

During booting, when the Linux kernel loads an initramfs file, which command from the initramfs will be executed first, if present?

A. /init
B. /initrd
C. /linuxrc
D. /rc.local
E. /sbin/init

Answer: A

Question No : 36 CORRECT TEXT - (Topic 3)

Please enter the complete path to the main SysV init process configuration file.

Answer: /etc/inittab

Question No : 37 - (Topic 3)

Where is the LILO boot loader code typically installed on a system with only a single Linux installation and no other operating systems?

A. In the master boot record.
B. In the boot sector.
C. In the /boot directory.
D. At the start of the kernel.

Answer: A

Question No : 38 - (Topic 3)

What are the main network services used by the PXE protocol? (Choose TWO correct answers.)

A. DNS
B. DHCP
C. HTTP
D. TFTP

E. NFS

Answer: B,D

Question No : 39 - (Topic 3)

Which option to the update-rc.d command will cause the removal of all symlinks to /etc/rcX.d/*test2 even when the script /etc/init.d/test2 still exists?

A. -d
B. -f
C. -n
D. -r

Answer: B

Question No : 40 - (Topic 3)

If all of the following files and/or symlinks exist in a SysV-init runlevel directory, which of the following will be executed first when booting the system directly into the runlevel?

A. S99lpi
B. K99lpi
C. PRE-S99lpi
D. S98lpi
E. S99a-lpi

Answer: D

Question No : 41 - (Topic 3)

A server requires a GRUB2 boot option which will always boot to runlevel 1. Which line of a GRUB2 configuration file starts the beginning of the settings needed to make this new choice available?

A. initrd
B. linux
C. menuentry
D. runlevel

Answer: B

Question No : 42 - (Topic 3)

In case the file containing the Linux kernel is lost, what happens when the system is booting?

A. The system starts normally since the bootloader copies the kernel to the master boot record of the hard disk.
B. Instead of the kernel, the initramfs is loaded and instructed to mount the root filesystem and reinstall the kernel from the original package or from source.
C. The bootloader mounts the root filesystem read-only and launches /bin/sh directly in order to allow the administrator to reinstall the kernel.
D. Without a kernel a system cannot boot and, depending on the bootloader, an error is displayed.

Answer: D

Question No : 43 - (Topic 3)

What is the functionality that PXE provides?

A. The ability to boot a computer using its network interface.
B. The ability to launch an remote X11 desktop on a computer.
C. The ability to verify a system's configuration after completing the boot process.
D. The ability to verify a system's configuration before completing the boot process.

Answer: A

Question No : 44 - (Topic 3)

A Linux server is running in single user mode for regular maintenance. Which commands are used to restore the server to its usual runlevel? (Choose TWO correct answers.)

A. telinit 0
B. shutdown -r now
C. sync
D. shutdown -h now
E. reboot

Answer: B,E

Question No : 45 CORRECT TEXT - (Topic 3)

What is the full path to the directory which contains the scripts (or links to the original scripts) to run while the system boots to SysV-init runlevel 2?

Answer: /etc/rc2.d, /etc/rc2.d/, /etc/init.d/rc2.d, /etc/init.d/rc2.d/

Question No : 46 - (Topic 3)

What happens if the Linux kernel can't mount the root filesystem when booting?

A. An error message is shown and the administrator is asked by the kernel to specify a valid root filesystem to continue the boot process.
B. An error message is shown and the system reboots after a keypress.
C. An error message is shown and the system boots in maintenance mode.
D. An error message is shown showing which device couldn't be mounted or informing that init couldn't be found.
E. An error message is shown stating that the corresponding kernel module couldn't be loaded.

Answer: D

Question No : 47 - (Topic 3)

Which command is used to install a new LILO boot loader?

A. lilo
B. lilo-config
C. lilo-install
D. install-lilo

Answer: A

Topic 4, Filesystem and Devices

Question No : 48 CORRECT TEXT - (Topic 4)

After a lot of write operations, the administrator want to ensure that the kernel flushes the file system buffers to disk. Which command will accomplish this? (Specify ONLY the command without any path or parameters.)

Answer: sync

Question No : 49 - (Topic 4)

What is the main template file used by autofs?

A. default.maps
B. auto.conf
C. auto.master
D. autofs.master

Answer: C

Question No : 50 - (Topic 4)

What is the purpose of the smartd daemon?

A. It is a user space daemon used for reading smart cards and integrated circuit chips.
B. It attempts to automatically repair file systems upon a failed file system check.
C. It monitors process activity and helps the kernel decide which processes to kill when the kernel overcommits.
D. It monitors certain disk drives and attempts to predict when they will fail.

Answer: D

Question No : 51 - (Topic 4)

How can the label root be added to the ext2 filesystem on /dev/sda1?

A. relabel /dev/sda1 root
B. tune2fs -L root /dev/sda1
C. echo 'root' > /proc/fs/sda1/label

D. labelfs --device /dev/sda1 root

Answer: B

Question No : 52 CORRECT TEXT - (Topic 4)

Consider the following /etc/fstab file:

/dev/hda1 swap swap defaults 0 0

/dev/hda2 / ext2 defaults 1 1

/dev/hda3 /home ext2 defaults 1 2

none /proc proc defaults 0 0

/dev/sdb1 /media/usb0 vfat user,noauto 0 0

What is one of the possible commands that an ordinary (non-root) user can use to mount the /dev/sdb1 partition on the /media/usb0 mount point? (Please enter the command with all parameters and/or options but without any file system type options.)

Answer: mount /dev/sdb1, mount /media/usb0, /bin/mount /dev/sdb1, /bin/mount /media/usb0, mount /media/usb0/, /bin/mount /media/usb0/

Question No : 53 CORRECT TEXT - (Topic 4)

Which command is used to create a ISO9660 filesystem? (Specify ONLY the command without any path or parameters.)

Answer: mkisofs, genisoimage

Question No : 54 - (Topic 4)

Which of the following are common Linux filesystem types used for root partitions?

(Choose THREE correct answers.)

A. ext4
B. VFAT
C. NTFS
D. XFS
E. Btrfs

Answer: A,D,E

Question No : 55 - (Topic 4)

What does a 0 in the last field (fsck order) of /etc/fstab indicate about the filesystem?

A. The filesystem should be checked before filesystems with higher values.
B. The filesystem should be checked after filesystems with higher values.
C. The filesystem check counter is ignored.
D. The filesystem has been disabled from being checked and mounted on the system.
E. The filesystem does not require an fsck check when being mounted.

Answer: E

Question No : 56 CORRECT TEXT - (Topic 4)

What keyword is missing in the following line from /etc/fstab in order to make a USB flash device writeable by the user fred when mounted:

/dev/sda1 /mnt/usbflash vfat defaults,users,_____=fred,umask=022, 0 0

(Provide the option name only without any settings)

Answer: uid

Question No : 57 - (Topic 4)

What component of a system does smartd monitor?

A. CPU
B. RAM
C. Hard drives
D. Ethernet traffic

Answer: C

Question No : 58 - (Topic 4)

Which of the following best describes the format of the /etc/fstab file?

A. device name; filesystem type; mount point; mount options; dump filesystem; fsck order
B. device name; mount point; filesystem type; mount options; dump filesystem; fsck order
C. device name; mount point; mount options; filesystem type; dump filesystem; fsck order
D. mount point; filesystem type; device name; mount options; dump filesystem; fsck order
E. mount point; device name; filesystem type; mount options; dump filesystem; fsck order

Answer: B

Question No : 59 - (Topic 4)

Where would fsck put any unreferenced file or file fragments on a ext4 filesystem?

A. recover
B. lost+found
C. back
D. lost

Answer: B

Question No : 60 - (Topic 4)

Due to extreme system use, a Linux system requires some additional swap space. To initialize 5GB of additional swap space, which combination of commands should be used?

A. dd if=/dev/zero of=/tmp/swapfile bs=1024 count=5120000; mkswap /tmp/swapfile; mount /tmp/swapfile
B. dd if=/dev/zero of=/tmp/swapfile bs=1024 count=5120000; swapon /tmp/swapfile
C. dd if=/dev/zero of=/tmp/swapfile bs=1024 count=5120000; mkswap /tmp/swapfile;

swapon /tmp/swapfile
D. touch -5G /tmp/swapfile; swapon /tmp/swapfile
E. mkswap /tmp/swapfile 512000; swapon /tmp/swapfile

Answer: C

Question No : 61 - (Topic 4)

Which of the following is a CD-ROM filesystem standard?

A. OSI9660
B. ISO9660
C. SR0FS
D. ISO8859
E. ROM-EO

Answer: B

Question No : 62 - (Topic 4)

The main configuration file for autofs has this entry:

/home /etc/auto.home

What is the meaning of the /etc/auto.home file?

A. It has the indirect maps for the mounting of file systems.
B. It has configuration information, such as passwords and keys, for the remote file server.
C. It has configuration information on settings for the /home mount point.
D. It is the holds the SSL key to allow authentication to the remote file server.

Answer: A

Question No : 63 CORRECT TEXT - (Topic 4)

Which directory in /dev/disk/ can be used to determine the UUID of a connected hard disk?

Answer: /dev/disk/by-uuid, by-uuid, /dev/disk/by-uuid/

Question No : 64 - (Topic 4)

Which files are updated as devices are mounted and unmounted to provide information on the currently mounted devices and the options used? (Choose TWO correct answers.)

A. /proc/dtab
B. /etc/mtab
C. /etc/fstab
D. /proc/mounts
E. /proc/devices

Answer: B,D

Question No : 65 CORRECT TEXT - (Topic 4)

Which command turns an existing ext2 filesystem non-destructively into an ext3 filesystem? (Specify ONLY the command without any path or parameters.)

Answer: /sbin/tune2fs, tune2fs

Topic 5, Advanced Storage Device Administration

Question No : 66 CORRECT TEXT - (Topic 5)

What keyword is missing in the following line from /etc/fstab in order to make a USB flash device writeable by the user fred when mounted:

/dev/sda1 /mnt/usbflash vfat defaults,users,_____=fred,umask=022, 0 0

(Provide the option name only without any settings)

Answer: uid

Question No : 67 - (Topic 5)

What mount option must be used in /etc/fstab when mounting an iSCSI target?

A. _santarget
B. iscsi
C. waitiscsi
D. _netdev

Answer: D

Question No : 68 - (Topic 5)

The correct command sequence to create and mount logical volumes on a Linux system is:

A. lvcreate, pvcreate, vgcreate, mkfs, mount
B. pvcreate, vgcreate, lvcreate, mkfs, mount
C. vgcreate, lvcreate, pvcreate, mount, mkfs
D. mkfs, pvcreate, vgcreate, lvcreate, mount
E. pvcreate, lvcreate, vgcreate, mkfs, mount

Answer: B

Question No : 69 - (Topic 5)

What is the minimum number of disks required in a fully redundant RAID5 array?

A. 1
B. 2
C. 3
D. 4
E. 5

Answer: C

Question No : 70 - (Topic 5)

Which RAID level value must be used with Linux software RAID in order to create an array of mirrored devices?

A. 1
B. 5
C. 6
D. container
E. mirrorstripe

Answer: A

Question No : 71 - (Topic 5)

Due to extreme system use, a Linux system requires some additional swap space. To initialize 5GB of additional swap space, which combination of commands should be used?

A. dd if=/dev/zero of=/tmp/swapfile bs=1024 count=5120000; mkswap /tmp/swapfile; mount /tmp/swapfile
B. dd if=/dev/zero of=/tmp/swapfile bs=1024 count=5120000; swapon /tmp/swapfile
C. dd if=/dev/zero of=/tmp/swapfile bs=1024 count=5120000; mkswap /tmp/swapfile; swapon /tmp/swapfile
D. touch -5G /tmp/swapfile; swapon /tmp/swapfile
E. mkswap /tmp/swapfile 512000; swapon /tmp/swapfile

Answer: C

Question No : 72 - (Topic 5)

What is the purpose of the command vgextend?

A. Extend a volume group's footprint on disk.
B. Add physical volumes to an existing volume group.
C. Increase the number of days between scheduled error checking.
D. Create a volume group which uses all available space on disk.

Answer: B

Question No : 73 - (Topic 5)

Which of the following is a CD-ROM filesystem standard?

A. OSI9660
B. ISO9660
C. SR0FS
D. ISO8859
E. ROM-EO

Answer: B

Question No : 74 - (Topic 5)

The main configuration file for autofs has this entry:

/home /etc/auto.home

What is the meaning of the /etc/auto.home file?

A. It has the indirect maps for the mounting of file systems.
B. It has configuration information, such as passwords and keys, for the remote file server.
C. It has configuration information on settings for the /home mount point.
D. It is the holds the SSL key to allow authentication to the remote file server.

Answer: A

Question No : 75 CORRECT TEXT - (Topic 5)

What command will remove a physical volume from a volume group? (Specify ONLY the command without any path or parameters.)

Answer: vgreduce, /sbin/vgreduce

Question No : 76 - (Topic 5)

What are the options to node.startup in the iscsid.conf file? (Choose TWO correct answers.)

A. login
B. initiate
C. manual
D. discover
E. automatic

Answer: C,E

Question No : 77 - (Topic 5)

The IDE hard drive /dev/hda does not have DMA enabled. Which command must be run to enable DMA on it?

A. hdparm -d /dev/hda
B. hdparm --dma /dev/hda
C. hdparm --dma /dev/hda1
D. hdparm -d /dev/hda1
E. hdparm -d 1 /dev/hda

Answer: E

Question No : 78 - (Topic 5)

What command is used to make an exact copy, at a single point in time, of a logical volume for backup purposes?

A. lvsnap
B. lvsnapshot
C. lvcreate
D. lvcopy
E. lvclone

Answer: C

Question No : 79 - (Topic 5)

How can the label root be added to the ext2 filesystem on /dev/sda1?

A. relabel /dev/sda1 root

B. tune2fs -L root /dev/sda1
C. echo 'root' > /proc/fs/sda1/label
D. labelfs --device /dev/sda1 root

Answer: B

Question No : 80 - (Topic 5)

Which single command will simulate a failed device within a RAID 5 array?

A. mdadm --remove /dev/md0 /dev/sdd1
B. mdadm --zero-superblock /dev/sdf3
C. mdadm --force-fault /dev/md2 /dev/sde2
D. mdadm --fail /dev/md0 /dev/sdc1
E. mdadm /dev/md0 --offline /dev/sdc1

Answer: D

Question No : 81 - (Topic 5)

Where would fsck put any unreferenced file or file fragments on a ext4 filesystem?

A. recover
B. lost+found
C. back
D. lost

Answer: B

Question No : 82 - (Topic 5)

Which of the following is an example path to a Linux software RAID array?

A. /dev/raid0
B. /dev/rd1
C. /dev/pr0
D. /dev/md1

Answer: D

Question No : 83 - (Topic 5)

Which of the following commands is used to set up a RAID volume?

A. makerd
B. mdadm
C. mkfs.raid
D. makeraid
E. rdconfig

Answer: B

Question No : 84 - (Topic 5)

What component of a system does smartd monitor?

A. CPU
B. RAM
C. Hard drives
D. Ethernet traffic

Answer: C

Question No : 85 - (Topic 5)

Which file in /proc contains information on the status of local software RAID devices?

A. /proc/raidstat
B. /proc/mdstat
C. /proc/raidstatus
D. /proc/mdstatus
E. /proc/raid/status

Answer: B

Question No : 86 CORRECT TEXT - (Topic 5)

Which directory in /dev/disk/ can be used to determine the UUID of a connected hard disk?

Answer: /dev/disk/by-uuid, by-uuid, /dev/disk/by-uuid/

Question No : 87 - (Topic 5)

What action should be performed after increasing the size of a logical volume?

A. Run vgresize.
B. Increase the size of the filesystem used for the logical volume.
C. Run lvresize.
D. Remount the logical volume.

Answer: B

Question No : 88 - (Topic 5)

Which of the following best describes the format of the /etc/fstab file?

A. device name; filesystem type; mount point; mount options; dump filesystem; fsck order
B. device name; mount point; filesystem type; mount options; dump filesystem; fsck order
C. device name; mount point; mount options; filesystem type; dump filesystem; fsck order
D. mount point; filesystem type; device name; mount options; dump filesystem; fsck order
E. mount point; device name; filesystem type; mount options; dump filesystem; fsck order

Answer: B

Question No : 89 - (Topic 5)

A system has one hard disk and one CD writer which are both connected to SATA controllers. Which device represents the CD writer?

A. /dev/hdb
B. /dev/sdd
C. /dev/scd1
D. /dev/sr0
E. /dev/sr1

Answer: D

Question No : 90 - (Topic 5)

Which two LVM commands are missing from the following sequence which is used to create a logical volume and make use of it on a Linux system?

pvcreate, _____, _____, mkfs, mount

A. lvcreate, mdadm
B. lvcreate, vgcreate
C. lvmcreate, vgcreate
D. vgcreate, lvcreate
E. vgcreate, mdadm

Answer: D

Topic 6, Networking Configuration

Question No : 91 - (Topic 6)

Which of the following commands can be used to list IPv4 addresses and MAC addresses for IP devices that the system has seen on the local network?

A. arp
B. ifconfig
C. ipadm
D. iwlist

Answer: A

Question No : 92 - (Topic 6)

Considering the following kernel IP routing table below, which of the following commands must be used to remove the route to the network 10.10.1.0/24? (Select TWO answers)

Kernel IP routing table

Destination Gateway Genmask Flags Metric Ref Use Iface

203.0.113.162 0.0.0.0 255.255.255.255 UH 0 0 0 ppp0

172.16.87.0 0.0.0.0 255.255.255.0 U 0 0 0 eth0

192.168.246.0 0.0.0.0 255.255.255.0 U 0 0 0 eth1

10.10.1.0 192.168.246.11 255.255.255.0 UG 0 0 0 eth1

127.0.0.0 0.0.0.0 255.0.0.0 U 0 0 0 lo

0.0.0.0 203.0.113.162 0.0.0.0 UG 0 0 0 ppp0

A. ip net delete 10.10.1.0/24
B. route del 10.10.1.0/24
C. route del -net 10.10.1.0/24
D. route del 10.10.1.0/24 gw 192.168.246.11
E. ip route delete 10.10.1.0/24

Answer: C,E

Question No : 93 - (Topic 6)

Which of the following files are used to resolve hostnames to IP addresses? (Choose TWO correct answers.)

A. /etc/systems
B. /etc/hosts
C. /etc/network
D. /etc/dns.conf
E. /etc/resolv.conf

Answer: B,E

Question No : 94 CORRECT TEXT - (Topic 6)

Which program lists information about files and network connections opened by processes? (Specify ONLY the command without any path or parameters.)

Answer: lsof, /usr/bin/lsof

Question No : 95 CORRECT TEXT - (Topic 6)

The users of the local network complain that name resolution is not fast enough. Enter the command, without the path or any options, that shows the time taken to resolve a DNS query.

Answer: dig, time dig, time host, time nslookup

Question No : 96 CORRECT TEXT - (Topic 6)

Running tcpdump -nli eth1 'tcp' shows the following output:

14:41:53.694538 IP 10.1.52.145.51738 > 24.215.7.162.143: Flags [.], ack 33051, win 1002, options [nop,nop,TS val 36789130 ecr 1746004159], length 0

What is the source IP address of this packet? (Please specify the answer in digits and dots ONLY.)

Answer: 10.1.52.145

Question No : 97 - (Topic 6)

Which of the following commands will list the IPv4 neighbors of the current system? This includes IP and MAC addresses. (Choose TWO correct answers.)

A. arp
B. ifconfig -lv eth0
C. netstat -al
D. ip neigh show

Answer: A,D

Question No : 98 - (Topic 6)

Which of the following wireless tools can be used to check the wireless network link quality? (Choose TWO correct answers.)

A. iwconfig
B. iwlink
C. iwscan
D. iwifi
E. iw

Answer: A,E

Question No : 99 CORRECT TEXT - (Topic 6)

According to the tcpdump output below, what is the IP address of the client host?

02:12:40.511381 IP 192.168.246.11.1045 > 192.168.246.1.22: S 3838532429:3838532429(0) win 5840 <mss 1460,sackOK,timestamp 31325740,nop,wscale 2>

02:12:40.511540 IP 192.168.246.1.22 > 192.168.246.11.1045: S 1209330085:1209330085(0) ack 383853 2430 win 5792 <mss 1460,sackOK,timestamp 11553457 3132574,nop,wscale 0>

02:12:40.511755 IP 192.168.246.11.1045 > 192.168.246.1.22: . ack 1 win 1460 <nop,nop,timestamp 3 132574 11553457>

02:12:40.515122 IP 192.168.246.1.22 > 192.168.246.11.1045: P 1:26(25) ack 1 win 5792 <nop,nop,timestamp 11553460 3132574>

02:12:40.515511 IP 192.168.246.11.1045 > 192.168.246.1.22: . ack 26 win 1460 <nop,nop,timestamp 3132578 11553460>

02:12:40.515952 IP 192.168.246.11.1045 > 192.168.246.1.22: P 1:23(22) ack 26 win 1460 <nop,nop,timestamp 3132578 11553460>

Answer: 192.168.246.11

Question No : 100 - (Topic 6)

A correctly formatted entry has been added to /etc/hosts.deny to prevent certain clients from connecting to a service but this is having no effect. What could be the cause of this? (Choose TWO correct answers.)

A. tcpd needs to be sent the HUP signal.
B. The service needs to be restarted.
C. The machine needs to be restarted.
D. There is a conflicting entry in /etc/hosts.allow.
E. The service does not support tcpwrapper.

Answer: D,E

Question No : 101 - (Topic 6)

Which command can be used to scan a specified network looking for IP addresses that appear to be in use?

A. nmap
B. tcpdump
C. ip
D. netscan
E. hostdiscover

Answer: A

Question No : 102 - (Topic 6)

Which of the following commands can be used to script interactions with various TCP or UDP services?

A. ftp
B. nc
C. tcpdump
D. strings
E. wget

Answer: B

Question No : 103 - (Topic 6)

Which /etc/hosts.allow entries will permit access to sshd for users from the 192.168.1.0/24 subnet? (Choose TWO correct answers.)

A. sshd : 192.168.1.
B. sshd : 192.168.1
C. sshd : 192.168.1.0 netmask 255.255.255.0
D. sshd : 192.168.1.0/255.255.255.0
E. sshd : 192.168.1.0

Answer: A,D

Question No : 104 - (Topic 6)

Which of the following filter keywords for tcpdump specify the transfer direction for network packets? (Choose TWO correct answers.)

A. source
B. src
C. dest
D. src or dst
E. both

Answer: B,D

Question No : 105 - (Topic 6)

What is the command to add another IP address (192.168.1.2) to a network interface (eth0) that already has (at least) one IP address in the 192.168.1.0/24 subnet?

A. ip add addr 192.168.1.2/32 dev eth0
B. ifconfig eth0 192.168.1.2 netmask 255.255.255.255
C. ip addr add 192.168.1.2/32 dev eth0
D. ipconfig eth0 192.168.1.2

Answer: C

Question No : 106 - (Topic 6)

What is incorrect about these entries in /etc/hosts which could be causing host name

lookup problems with host2?

host1 192.168.1.12

host2 192.168.1.12

A. Two host names are using the same IP address.
B. The server doing the query is on a different subnet.
C. The fields are out of order.
D. host2 is not a fully qualified domain name.

Answer: C

Question No : 107 - (Topic 6)

The following is an excerpt from the output of tcpdump -nli eth1:

13:03:17.277327 IP 192.168.123.5.1065 > 192.168.5.112.21: Flags [.], ack 1 (truncated)

13:03:17.598624 IP 192.168.5.112.21 > 192.168.123.5.1065: Flags [P.], seq (truncated)

Which network service or protocol was used?

A. FTP
B. HTTP
C. SSH
D. DNS
E. DHCP

Answer: A

Question No : 108 - (Topic 6)

The following is an excerpt from the output of tcpdump -nli eth1 'udp':

13:03:17.277327 IP 192.168.123.5.1065 > 192.168.5.112.53: 43653+ A? lpi.org. (25)

13:03:17.598624 IP 192.168.5.112.53 > 192.168.123.5.1065: 43653 1/0/0 A 198.51.100.42
(41)

Which network service or protocol was used?

A. FTP
B. HTTP
C. SSH
D. DNS
E. DHCP

Answer: D

Question No : 109 - (Topic 6)

A network client has an ethernet interface (eth0) configured with an IP address in the subnet 192.168.0.0/24. This subnet has a router, with the IP address 192.168.0.1, that connects this subnet to the Internet. What needs to be done on the client to enable it to use the router as its default gateway? (Choose TWO correct answers.)

A. route add default gw 192.168.0.1 eth0
B. ifconfig eth0 defaultroute 192.168.0.1
C. ip route add default via 192.168.0.1 dev eth0
D. echo defaultroute 192.168.0.1 >> /etc/resolv.conf
E. route add defaultgw=192.168.0.1 if=eth0

Answer: A,C

Question No : 110 - (Topic 6)

Under which of the following circumstances would the command ping output the string (DUP!)?

A. When the ICMP packets are send to a broadcast address and multiple hosts respond.
B. When the host being sent ICMP packets is on a different network.
C. When the router responds to the ICMP packet in addition to the host receiving the ICMP packets.
D. When the host sending the ICMP packet is the same host as the one receiving the ICMP packets.

Answer: A

Question No : 111 - (Topic 6)

What should be done to ensure a client machine uses the recursive nameserver running on the IP address 192.168.0.1? (Choose TWO correct answers.)

A. Add nameserver 192.168.0.1 to /etc/resolv.conf.
B. Run route add nameserver 192.168.0.1.
C. Run ifconfig eth0 nameserver 192.168.0.1.
D. Ensure that the dns service is listed in the hosts entry in the /etc/nsswitch.conf file.
E. Run bind add nameserver 192.168.0.1.

Answer: A,D

Question No : 112 - (Topic 6)

What should be done after updating the configuration file for syslogd in order to make the changes become effective? (Choose TWO correct answers.)

A. No action is required, syslogd will notice the updated configuration file after a few minutes.
B. Send the HUP signal to the syslogd process.
C. Restart the syslogd service.
D. Run the command syslogd -u.

Answer: B,C

Topic 7, System Maintenance

Question No : 113 CORRECT TEXT - (Topic 7)

What is the device name for the first SCSI tape drive on a system when used without automatic rewinding after each write operation? (Please specify the full path to the device.)

Answer: /dev/nst0

Question No : 114 - (Topic 7)

Which one of these directories should not be backed up?

A. /backup

B. /etc
C. /opt
D. /proc
E. /var/log

Answer: D

Question No : 115 - (Topic 7)

What does the -p3 option to the patch command do?

A. It will strip off path information from each file mentioned in the patch file up to and including the third / character.
B. patch continues execution as long as there are three or fewer errors.
C. It instructs patch to look up to three lines of context before or after the declared line in the original file for a match.
D. patch will keep three previous versions of each file in the output to prevent loss of change history.
E. It instructs patch to conform more strictly to the POSIX standard.

Answer: A

Question No : 116 - (Topic 7)

Which of the following commands will securely copy the directory ./fyf/ to /var/tmp/ on the remote host deltaur using the remote user account kevin?

A. rsync -a -e ssh kevin@deltaur:/var/tmp/ fyf/
B. rsync -a -u kevin -e ssh fyf/ deltaur:/var/tmp/
C. rsync -a -u kevin -e ssh deltaur:/var/tmp/ fyf/
D. rsync -a -e ssh fyf/ kevin@deltaur:/var/tmp/

Answer: D

Question No : 117 CORRECT TEXT - (Topic 7)

Which file contains the text message that is displayed after logging into the console? (Specify the full name of the file, including path.)

Answer: /etc/motd

Question No : 118 - (Topic 7)

The following command has just been run successfully:

cd /opt; tar xvf /dev/nst0;

What will happen if the command sequence is run again?

A. An error saying that there is no tape present is generated because the tape has been ejected after being used.
B. The contents of /opt will be restored again.
C. The entire contents of /opt will be replaced with the contents of the next file on the tape.
D. The contents of /opt will have additional content added from the next file on the tape.

Answer: D

Question No : 119 - (Topic 7)

Which of the following commands will erase the contents of the /dev/sdb3 partition?

A. rm /dev/sdb3
B. dd if=/dev/zero of=/dev/sdb3
C. dd of=/dev/zero if=/dev/sdb3
D. umount /dev/sdb3

Answer: B

Question No : 120 CORRECT TEXT - (Topic 7)

Which file contains the message that is displayed above the login prompt of the system console? (Specify the full name of the file, including path.)

Answer: /etc/issue

Question No : 121 - (Topic 7)

Which of the following files will be looked for and used by GNU make, if one of them exists, unless a different file is specified on the command line when trying to compile software from source code? (Choose TWO correct answers.)

A. configure
B. config.h.in
C. makefile
D. Makefile
E. Makefile.in

Answer: C,D

Question No : 122 - (Topic 7)

Which of the following are common backup systems used in Linux? (Choose TWO correct answers.)

A. Amanda
B. Bacula
C. DrBackup
D. BREWBackup
E. SARcheck

Answer: A,B

Question No : 123 - (Topic 7)

When a makefile is included in a source code package, what are commonly defined targets in the file?

A. CFLAGS, CPPFLAGS, LIBS, LDFLAGS
B. clean, install, uninstall
C. PATHS, DESTDIR, LIBS, LDFLAGS
D. prefix, exec_prefix, bindir, mandir

Answer: B

Question No : 124 - (Topic 7)

A regular user, joe, has just run:

./configure && make && make install

to build and install a program. However, the installation fails. What could be done to install the program? (Choose TWO correct answers.)

A. Install the binaries manually with suinstall.
B. Run make install with root privileges.
C. Do not run ./configure in order to maintain the default configuration for correct installation.
D. Rerun ./configure with a --prefix option where the user has permissions to write.
E. Run make install_local to install into /usr/local/.

Answer: B,D

Topic 8, Exam Set Mix Questions A

Question No : 125 - (Topic 8)

When you back up only the files that have changed since the last backup, this is called a _____ backup.

A. Partial
B. Differential
C. Full
D. Copy

Answer: B

Explanation: When you run a full backup, the files are marked as having been backed up (the archive attribute is cleared). When a file is created or changed, it is marked as 'not backed up' (the archive attribute is set). A differential backup backs up any files created or changed since the last full backup (the files marked as 'not backed up'). It does not mark files as having been backed up (in other words, the archive attribute is not cleared).

Reference: http://www.raid-unix-mac-disk-datarecovery-service.com/diferential_backup.htm

Incorrect Answers

A: A partial backup is not an actual backup type. It is just a description of backing up a few selected files.

C: A full backup backs up all files and marks them as having been backed up by clearing the archive attribute.

D: A copy backup backs up all files but does not mark them as having been backed up.

Question No : 126 - (Topic 8)

You are in charge of a domain. Your developers have asked that mirrors of certain sites be placed as actual directories off the default path. Specifically they have asked that the ftp.example-debian.org Debian tree should be mapped at /usr/local. Assume that ftp.example-debian.org does an NFS export of their site. What would be the correct entry in the /etc/auto.master file?

A. /usr/local/debian ro ftp.example-debian.org:/pub/debian
B. /usr/local/debian /etc/auto.debian with /etc/auto.debian containing debian-ro,soft,intr:ftp.example-debian.org:/pub/debian
C. /usr/local/debian :etc/auto.debian with /etc/auto.debian containing debian:rw,soft,intr:ftp.example-debian::/pub/debian
D. /etc/auto.debian with /etc/auto.debian containing debian-ro,soft,intr:ftp.example-debian.org:/pub/debian
E. /etc/auto.debian with /etc/auto.debian containing debian:rw,soft,intr:ftp.example-debian.org::/pub/debian

Answer: B

Explanation: Autofs uses the automount daemon to manage your mount points by only mounting them dynamically when they are accessed. Autofs consults the master map configuration file /etc/auto.master to determine which mount points are defined. It then starts an automount process with the appropriate parameters for each mount point. Each line in the master map defines a mount point and a separate map file that defines the filesystems to be mounted under this mount point.

In this question, the /etc/auto.master file would contain the line "/usr/local/debian /etc/auto.debian". /usr/local/debian is the mount point on the local machine. /etc/auto.debian is the name of the map file that defines what should be mounted at the

mount point.

The /etc/auto.debian file should contain "debian-ro,soft,intr:ftp.example-debian.org:/pub/debian". This contains the mount point (debian), followed by some mount options (ro,soft,intr) followed by the directory to be mounted in the form of hostname:directory (ftp.example-debian.org:/pub/debian).

Reference: http://www.redhat.com/docs/manuals/linux/RHL-7.3-Manual/custom-guide/s1-nfs-mount.html

Incorrect Answers

A:There is no map file defined in this line.

C:The syntax is wrong. usr/local/debian :etc/auto.debian should be /usr/local/debian /etc/auto.debian.

D:There is no mount point (usr/local/debian) defined in this answer.

E:There is no mount point (usr/local/debian) defined in this answer.

Question No : 127 CORRECT TEXT - (Topic 8)

You want to create a compressed backup of the users home directories so you can issue the command gzip /home/* backup.gz but it fails. The reason it failed is that gzip will only compress one _____ at a time.

Answer: file

Explanation: The command: gzip <filename> backup.gz will compress <filename> and rename it to backup.gz. This only works with a single file. To compress multiple files into one file (archive), you should use the tar utility with the z option. Tar can archive multiple files into a single file (archive). The z option causes tar to use gzip to compress the files first.

Question No : 128 - (Topic 8)

You have been given the job of administering a new server. It houses a database used by the sales people. This information is changed frequently and is not duplicated anywhere else. What should you do to ensure that this information is not lost?

A. Create a backup strategy that includes backing up this information at least daily.
B. Prepare a proposal to purchase a backup server.
C. Recommend that the server be made part of a cluster.
D. Install an additional hard drive in the server.

Answer: A

Explanation: To ensure that data isn't lost, it should be backed up. The question states that the information is changed frequently, so it should be backed up frequently.

Incorrect Answers

B:A backup server usually runs backup software. This may not be necessary and is no use without a backup strategy.

C:Clustering the server would require additional servers and would be very expensive. Furthermore, depending on the type of cluster, you may only have one set of hard disks containing the information.

D:Installing an additional hard drive would only work if the data was regularly backed up to the additional hard drive. However, if the server failed, the data would still be unavailable.

Question No : 129 - (Topic 8)

You suspect malicious behavior by one of your console session users. Which of the following methods could be used so that you will be notified whenever the suspect user is logged in? The method should not tip off the suspect user or affect overall system integrity or performance to a noticeable degree.

A. Pipe the btmp file to a filter and launch a notification script if the user logs on.
B. Insert into the suspect user's profile a script to notify you.
C. Configure syslogd to pipe all auth log messages to a script which checks for the suspect user and then notifies you via email.
D. Modify the user's login script to inform you of his presence and then exec itself with the

real shell.

Answer: C

Explanation: Syslogd (the system log daemon) can be configured via the syslog.conf file. This file specifies where log entries should be written. You can configure syslogd to send authentication log messages to a script which checks for the suspect user and then notifies you via email.

Incorrect Answers

A: The btmp file is used to record failed logon attempts. This won't work because the user is able to log on successfully.

B: Inserting a script into the users profile file won't work because the user may notice the script if he/she looks at the profile file.

D: Modifying the users login script won't work because the user may notice the modification if he/she looks at the script.

Question No : 130 - (Topic 8)

An ext2 filesystem is used by an application that frequently reads a large number of small files. Performance can be improved by mounting the filesystem with the _____ option.

A. atime
B. noatime
C. noexec
D. nosuid
E. sync

Answer: B

Explanation: Linux records information about when files were created and last modified as well as when it was last accessed. There is a cost associated with recording the last access time. The ext2 file system of Linux has an attribute that allows the super-user to mark individual files such that their last access time is not recorded. This may lead to significant performance improvements on often accessed frequently changing files.

Reference: http://www.tldp.org/LDP/solrhe/Securing-Optimizing-Linux-RH-Edition-

v1.3/chap6sec73.html

Incorrect Answers

A: The atime option will record the last access time for each file which may degrade system performance.

C: Noexec is a mount flag to not allow any executables to be run from the filesystem. This won't work since the files are likely to be text files.

D: Nosuid is a mount flag to disallow any setuid binaries on the filesystem. This will not improve system performance.

E: The sync command is used to write the buffers to disk. This will not improve system performance.

Question No : 131 CORRECT TEXT - (Topic 8)

To list the filesystem available from the NFS server 'castor', the command" _____ -e castor" can be used.

Answer: showmount

Explanation: The showmount is used to display information about NFS filesystems. The –e option is used to specify an exported filesystem.

Question No : 132 - (Topic 8)

When is the most important time to restore a file from your backup?

A. On a regular scheduled basis to verify that the data is available.
B. When the system crashes.
C. When a user inadvertently loses a file.
D. When your boss asks to see how restoring a file works.

Answer: A

Explanation: According to 'best practice', you should regularly restore files to verify that your backup procedures are working. It's no good backing up files regularly if you are unable to restore files when needed.

Question No : 133 CORRECT TEXT - (Topic 8)

You routinely compress old log files. You now need to examine a log from two months ago. In order to view its contents without first having to decompress it, use the _____ utility.

Answer: zless

Question No : 134 CORRECT TEXT - (Topic 8)

In order to create a file called DirContents containing the contents of the /etc directory you would type _____.

Answer: ls /etc > DirContents

Explanation: Mostly all commands send their output to the screen or take input from the keyboard, but in Linux it is possible to send output to a file or to read input from a file. For example, the **ls** command sends it's output to screen; to send the output to a file, you can use the command **ls > filename**. This will send the output of the ls command to filename. In this question, the ls command lists the contents of the /etc directory and sends the list to a file named DirContents.

Question No : 135 - (Topic 8)

On an ext2 filesystem, a running daemon has created a large logfile that is beginning to fill the disk. After deleting the file with an "rm-f" command as root, "df" shows that the space is still in use even though the file is not shown using "ls". To reclaim this space you must:

A. Restart the daemon.
B. Unmount and remount the filesystem.
C. Use sync.
D. Recreate the file.
E. Run fsck.

Answer: A

Explanation: Explanation: If you have a daemon which writes a log file and keeps that file open for writing then removing the file will not free up the disk space. The filesystem still sees the program as having a
reference to it. Therefore the filesystem will not free up that disk space. The only way to free the space is to restart the daemon

Reference: http://mail.gnu.org/pipermail/bug-fileutils/2001-February/001495.html

Question No : 136 CORRECT TEXT - (Topic 8)

When planning your backup strategy you need to consider how often you will perform a backup, how much time the backup takes and what media you will use.

What other factor must you consider when planning your backup strategy?

Answer: what to backup

Explanation: The first thing to consider when planning a backup strategy is what you are going to back up. Then you can think about the amount of data this will be. This will affect your other decisions such as what media to use etc.

Question No : 137 - (Topic 8)

In your present working directory, you have the files.

maryletter

memo1

MyTelephoneandAddressBook

What is the fewest number of keys you can type to open the file
MyTelephoneandAddressBook with vi?

A. 6
B. 28
C. 25
D. 4

Answer: A

Explanation: Tab completion is where you can type the first few letters of a command or
filename then press tab to automatically complete the command or filename. You need to
type enough letters so that there is only one command or filename starting with those
letters. In this question you could type v then i then space then m then y then tab. This
equals six keystrokes. There is only one filename starting with 'my' so this file will be
opened.

Reference: http://www.cmp.liv.ac.uk/misc/guide/linux_guide/node28.html

Question No : 138 - (Topic 8)

You have been asked to block network access to an NFS sever. You need to block all
access except NFS access. Which of the following actions would you take to achieve this?

A. Make sure that xinetd is switched off.
B. Place "ALL: ALL" in /etc/hosts.deny and "NFS: ALL" in /etc/hosts.allow
C. Add IPChains rules to deny all incoming packets except for portmapper
D. Place "ALL: ALL" in /etc/hosts.deny and "portmap: ALL" in /etc/hosts.allow
E. Ensure that the nfs-access.o module is configured into the kernel and use the command
"nfs-ctl-allow <your IP range>" to provide the required access

Answer: D

Explanation: The hosts.allow file is read before the hosts.deny file. This means that you
can block access to 'all' in the hosts.deny file, but allow access to specific ports by specific
hosts in the hosts.allow file. In this answer, we are blocking all ports to all hosts in the

hosts.deny file. However, we are allowing access to the portmap service for all hosts in the hosts.allow file. (The portmap service is for access to NFS).

Reference: http://www.mandrakeuser.org/docs/connect/cnfs2.html

Incorrect Answers

A:Xinetd must be running.

B:NFS uses the portmapper service. Therefore, you should enter 'portmap: ALL' in the hosts.allow file.

C:IPChains is a firewall program. This may work (if you have IPChains running), however using the hosts.allow and hosts.deny files is much simpler.

E:The module and command in this question don't exist or are incorrectly named.

Question No : 139 - (Topic 8)

You have elected to use the automounter and the autofs script. Your /etc/auto.master file contains the following:

/home/etc/auto.home

/project/etc/auto.project

/datayp:data.map

If you change the contents of /etc/auto.project to include a new source path what must be done to access the new path?

A. Shutdown and restart the local NFS client daemons.
B. Run fsck on the affected mount point.
C. Issue the /etc/init.d/autofs reload command.
D. Add the newly mapped path to /etc/fstab.
E. Nothing, simply access the newly mapped resource.

Answer: E

Explanation: Autofs uses the automount daemon to manage your mount points by only mounting them dynamically when they are accessed. Autofs consults the master map configuration file /etc/auto.master to determine which mount points are defined. It then starts an automount process with the appropriate parameters for each mount point. Each line in the master map defines a mount point and a separate map file that defines the filesystems to be mounted under this mount point. For example, the /etc/auto.misc file might define mount points in the /misc directory; this relationship would be defined in the /etc/auto.master file.

Each entry in auto.master has three fields. The first field is the mount point. The second field is the location of the map file, and the third field is optional. The third field can contain information such as a timeout value. If the source path changes, you can access the new path without changing anything because the mount points are mounted and unmounted dynamically when accessed or closed.

Reference: http://www.redhat.com/docs/manuals/linux/RHL-7.3-Manual/custom-guide/s1-nfs-mount.html

Incorrect Answers

A:As the mount points are mounted and unmounted dynamically, there is no need to restart the NFS daemons.

B:It is not necessary to run fsck (file system checker) on the mount point.

C:As the mount points are mounted and unmounted dynamically, there is no need to restart the autofs daemon.

D:Fstab and autofs are two separate methods for mounting filesystems.

Question No : 140 CORRECT TEXT - (Topic 8)

You want to create a compressed backup of the users home directories. What utility should you use?

Answer: tar

Explanation: The tar utility is used to archive multiple files into one 'tarball'. The –z option

invokes another utility called gzip and instructs it to compress the files before tar archives them.

Question No : 141 - (Topic 8)

To allow a user to mount a CD and read from it, which entry should be put into /etc/fstab?

A. /dev/cdrom /mnt/cdrom iso9660 noauto,user,ro 0 0
B. /dev/cdrom /mnt/cdrom iso9660 noauto,uid=user,gid=group,ro 0 0
C. /dev/cdrom /mnt/cdrom iso9660 noauto,User,ro 0 0
D. /dev/cdrom /mnt/cdrom iso9660 noauto,usermap,ro 0 0
E. /dev/cdrom /mnt/cdrom iso9660 noauto,owners,ro 0 0

Answer: A

Explanation: This entry in the fstab file allows any user to mount the CD-ROM (/dev/cdrom) in the /mnt/cdrom 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.

Question No : 142 - (Topic 8)

On a running system, where can you find specific information about the partition tables, such as major and minor device numbers, and number of blocks?

A. /proc/partitions
B. /proc/cpuinfo
C. /proc/fstab
D. /etc/partitions
E. /etc/fstab

Answer: A

Explanation: The /proc/partitions file contains information about the partition tables, such as major and minor device numbers, and number of blocks.

Reference: http://www.goavatar.com/linux_pcmcia.htm

Incorrect Answers

B: The /proc/cpuinfo file contains information about the CPU, not the disks.

C: The /proc/fstab file contains information about mounted filesystems and permissions on the filesystems. It does not contain information such as the number of blocks.

D: The partitions file is in the /proc directory, not /etc.

E: The fstab file is in the /proc directory, not /etc.

Question No : 143 - (Topic 8)

Which of the following parameters in your smb.conf file specifies the relationship between Windows/SMB usernames and Linux/UNIX usernames?

A. smb usernames = /etc/smbusers
B. username map = /etc/smbusers
C. map usernames = lowercase nospace
D. smb usernames = map to same unix name
E. usernames map = /etc/windows-usernames.map

Answer: B

Explanation: To map Windows usernames to Linux/UNIX usernames, you would specify the username map = /etc/smbusers parameter in the smb.conf file. You would then add mappings for each user account in the smb.conf file. For example, windows_username = linux_username.

Reference: http://www.mandrakeuser.org/docs/connect/csamba2.html

Incorrect Answers

A:smb usernames = /etc/smbusers is the wrong syntax for this parameter.

C:map usernames = lowercase nospace is the wrong syntax for this parameter.

D:smb usernames = map to same unix name is the wrong syntax for this parameter.

E: usernames map = /etc/windows-usernames.map is the wrong syntax for this parameter.

Question No : 144 - (Topic 8)

Assuming modules for all supported filesystems have been loaded, which file contains a list of filesystems that can be currently mounted on the system?

A. /proc/filesystems
B. /dev/filesystems
C. /etc/filesystems
D. /var/fs/filesystems
E. /etc/config/filesystems

Answer: A

Explanation: In the file *proc/filesystems* you can find which filesystems your kernel currently supports. (If you need a currently unsupported one, you'll need to insert the corresponding module or recompile the kernel.)

Reference: http://www.fifi.org/cgi-bin/man2html/usr/share/man/man5/fs.5.gz

Incorrect Answers

B:The list of currently supported filesystems is in the filesystems file in the /proc directory, not the /dev directory.

C:The list of currently supported filesystems is in the filesystems file in the /proc directory, not the /etc directory.

D:The list of currently supported filesystems is in the filesystems file in the /proc directory, not the /var/fs directory.

E:The list of currently supported filesystems is in the filesystems file in the /proc directory, not the /etc/config directory.

Question No : 145 CORRECT TEXT - (Topic 8)

You wish to restore the file memo.ben which was backed up in the tarfile MyBackup.tar. What command should you type?

Answer: tar xf MyBackup.tar memo.ben

Explanation: Tarfiles are created using the 'tar' utility. Therefore, you should use the 'tar' utility to extract the files. The x option is to extract and the f option is to specify a filename to extract from.

Question No : 146 - (Topic 8)

How would you find out the version of the kernel in /usr/src/linux?

A. cat /usr/src/linux/.version
B. cat /usr/src/linux/VERSION
C. Look in the README
D. head –4 /usr/src/linux/Makefile

Answer: D

Explanation: The head command is used to display the first few lines of a file. The default is 10 lines but you can specify a number (in this case 4). The makefile is a script the tells the make utility how to build a program or programs (in this case, the kernel). Most makefiles contain comments at the top of the file which describe the program and version information.

Reference: http://www.opussoftware.com/tutorial/TutMakefile.htm

Incorrect Answers

A: .version doesn't usually exist as a subdirectory of file. Rather, it is usually a directory /usr/src/linux.version or /usr/src/linux[VERSION] containing the kernel source.

B: VERSION doesn't usually exist as a subdirectory of file. Rather, it is usually a directory /usr/src/linux.version or /usr/src/linux[VERSION] containing the kernel source.

C: There usually isn't a README file containing version information.

Question No : 147 CORRECT TEXT - (Topic 8)

In order to display the last five commands you have entered using the fc command, you would type _____.

Answer: fc –l -5

Explanation: The –l option used with the fc commands is used to list the previously entered commands. You can specify how many commands to list with the -<number> option after the –l option, for example, fc –l -5.

Question No : 148 CORRECT TEXT - (Topic 8)

The _____ command can be used to change the default root device hardcoded into a kernel image.

Answer: rdev

Explanation: The rdev command is used to change the default root device hardcoded into a kernel image.

Question No : 149 - (Topic 8)

What would be displayed as the result of issuing the command ps ef?

A. A listing of the users running processes formatted as a tree.
B. A listing of the stopped processes.
C. A listing of all the running processes formatted as a tree.
D. A listing of all system processes formatted as a tree.

Answer: A

Explanation: Without any options, the ps command displays the running processes associated with the current user ID. The e option displays the processes' environment and the f option displays the processes in a tree format, illustrating the relationship between parent and child relationships.

Reference: http://www.oreillynet.com/linux/cmd/p/ps.html

Incorrect Answers

B: Only the running processes are listed, not the stopped processes.

C: You would need the a option to display all the running processes.

D: Only the user processes are listed, not the system processes.

Question No : 150 - (Topic 8)

You have created a local ext2 file system on the third partition of your first IDE disk drive. You want to facilitate easy manual mounting but you DO NOT wish the filesystem to be automatically mounted at a boot. What is the correct /etc/fstab entry?

A. /dev/hda3/newfilesystem ext2 noboot 0 1
B. /newfilesystem /dev/hda3 ext2 defaults 0 1
C. /newfilesystem ext2 /dev/hda3 user 0 1
D. /dev/hda3/newfilesystem ext2 noauto 0 1
E. /dev/hda3 ext2 /newfilesystem defaults 0 –1

Answer: D

Explanation: /dev/hda3 indicates the 3rd partition on the first IDE hard disk (hda). Ext2 indicates the filesystem type. Noauto means that the filesystem will not be automatically mounted. The first '0' means that the filesystem shouldn't be backed up and the 1 means that the filesystem should be checked for errors when the machine boots.

Reference: http://www.humbug.org.au/talks/fstab/fstab_options.html

Incorrect Answers

A:Noboot is an incorrect option.

B:The syntax of this command (the path of the filesystem) is incorrect.

C:The syntax of this command (the path of the filesystem) is incorrect.

E:The defaults option will use the default fstab options. The default is to automatically mount the filesystem at boot time.

Question No : 151 - (Topic 8)

You are trying to boot a system and change the root password, which you do not know. What do you type at he LILO prompt?

A. linux /etc/passwd
B. linux norootpass
C. linux disable passwords
D. linux init=/bin/bash
E. linux passwd=0

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: linux /etc/passwd is not a valid boot prompt command.

B:linux norootpass is not a valid boot prompt command.

C:linux disable passwords is not a valid boot prompt command.

E:linux passwd=0 is not a valid boot prompt command.

Question No : 152 - (Topic 8)

When you only back up one partition, this is called a _____ backup.

A. Differential
B. Full
C. Partial
D. Copy

Answer: C

Explanation: If you are backing up just one partition and not the entire system, you are backing up only 'part' of the system. This is therefore a partial backup.

Incorrect Answers

A:A differential backup backs up all files that have been changed or created since the last full or incremental backup. A differential backup does not describe what portion of a system was backed up.

B:A full backup backs up all the specified files. A full backup does not describe what portion of a system was backed up.

D:A copy backup backs up all the specified files. The difference between a full backup and a copy backup is that a full backup marks the files as having been backed up, whereas a copy backup doesn't. A copy backup does not describe what portion of a system was

backed up.

Question No : 153 CORRECT TEXT - (Topic 8)

What command would you type to use the cpio command to create a backup called backup.cpio of all the users home directories?

Answer: find /home | cpio –o > backup.cpio

Explanation: The cpio command expects to receive a list that contains one file per line. That is exactly the type of list that the find utility creates. The ls utility can also create this type of list, meaning that you will see either of the ls or the find utilities used in conjunction with cpio. And since cpio archives a list of files it receives from standard input, you usually use a pipe (|) whenever you create an archive with the cpio utility.

A lot of documentation suggests using the –print option with the find command. For example, **find /home -print | cpio –o > backup.cpio.** However, this is not required on Linux systems, and other systems that use GNU find, although it is required on Unix systems.

Question No : 154 - (Topic 8)

You want to export a local file system /data, and permit read-write access for all users on hostA. In addition, the root account on hostA should be allowed root level access. All other hosts are to have read-only access. Which of the following /etc/exports lines would you use?

A. /data hostA(rw,no_root_squash) (ro)
B. /data hostA(allow_root) –ro
C. /data –ro,rw=hostA(root)
D. /data hostA=rw,root *=ro
E. /data hostA(rw,all_squash,anonid=0) @all(ro)

Answer: A

Explanation: The format of the /etc/exports lines is 'directoryname hostname(options)'. In this case you are exporting the /data directory. HostA has the (rw,no_root_squash) permissions applied and everyone else gets the (ro) permission. The rw permission allows HostA read/write permissions. The no_root_squash option gives the root account on HostA root access to the /data directory. Everyone else gets the ro permission which means read only.

Reference: http://www.comptechdoc.org/os/linux/usersguide/linux_ugnfs.html

Incorrect Answers

B:The option to allow root access is no_root_squash, not allow_root.

C:The syntax in this answer is incorrect.

D:The syntax in this answer is incorrect.

E:The syntax in this answer is incorrect.

Question No : 155 CORRECT TEXT - (Topic 8)

When typing at the command line, the default editor is the _____ library.

Answer: readline

Explanation: The default command line editor is the Readline library. As with most text editor programs, it allows certain keystrokes to aid in the writing/editing of a command. For example, there are keystroke combinations that allow you to jump to the beginning or end of the line, or to jump to the start or end of a previous word.

Question No : 156 - (Topic 8)

You are creating a script with demands that the previous command execute correctly. How would you correctly test the exit status of the previous command in BASH?

A. if ["$#" –eq "0"]; then…
B. if ["$?" –eq "0"]; then…
C. if ['$#' == 0]; then…
D. if ['$?' == '0']; then…
E. if [$@ -eq 0]; then…

Answer: B

Explanation: The variable "$?" checks the exit status of the last command run. The –eq "0" statement is used to check whether a condition is true. The statement if ["$?" –eq "0"]; then… will check that the last command executed correctly and run the next part of the script.

Reference: http://www.bolthole.com/solaris/ksh-basics.html

Incorrect Answers

A: The variable is "$?" not "$#".

C: The variable is "$?" not "$#".

D: The variable is "$?" not '$?' (double quotes, not single quotes).

E: The variable is "$?" not $@.

Question No : 157 - (Topic 8)

Which one of the following factors does not play a role in choosing the type of backup media to use?

A. How frequently a file changes.
B. How long you need to retain the backup.
C. How much data needs to be backed up.
D. How frequently the backed up data needs to be accessed.

Answer: A

Explanation: Your choice of backup media will depend on its capacity, its shelf life and the time it takes to access the data. The frequency of file changes is irrelevant.

Question No : 158 - (Topic 8)

You have to mount the /data filesystem from an NFS server (srv 1) that does not support locking. Which of the following mount commands should you use?

A. mount –a –t nfs
B. mount –o locking=off srv1:/data /mnt/data
C. mount –o nolocking srv1:/data /mnt/data
D. mount –o nolock srv1:/data /mnt/data
E. mount –o nolock/data@srv1 /mnt/data

Answer: D

Explanation: If you are mounting a volume that does not support locking, you need to use the nolock option with the mount command. The nolock option tells the system to not use the NFS locking protocol.

Reference: http://docsrv.caldera.com:8457/cgi-bin/info2html?(am-utils.info.gz)opts%2520Option

Incorrect Answers

A: This answer has the wrong command options.

B: 'Locking=off' is the wrong option. It should be 'nolock'.

C: 'Nolocking' is the wrong option. It should be 'nolock'.

E: /data@srv1 is the wrong syntax. It should be <servername>:/<foldername>.

Question No : 159 - (Topic 8)

Using command substitution, how would you display the value of the present working directory?

A. echo $(pwd)
B. echo pwd
C. $pwd
D. pwd | echo

Answer: A

Explanation: The echo command can be used to display the contents of variables. The present working directory is held in the pwd variable. Echo $(pwd) will display the contents of the pwd variable. Other commands that would work are echo $ PWD and echo "$PWD".

Reference: http://www.bolthole.com/solaris/ksh-beforeyoustart.html

Question No : 160 - (Topic 8)

Every time you attempt to delete a file using the rm utility, the operating system prompts you for confirmation. You know that this is not the customary behavior for the rm command. What is wrong?

A. rm has been aliased as rm –i
B. The version of rm installed on your system is incorrect.
C. This is the normal behavior of the newest version of rm.
D. There is an incorrect link on your system.

Answer: A

Explanation: The –i option with the rm command runs the command in 'interactive' mode. This will cause rm to prompt you for the deletion of a file.

Reference: http://www.oreillynet.com/linux/cmd/r/rm.html

Incorrect Answers

B: The fact that rm is prompting for a confirmation indicates that the version of rm is compatible with your system.

C: This is not the normal behaviour for rm although it will prompt you if you are attempting to delete a write protected file.

D: The rm command is running the rm program so there is not an incorrect link.