Topic 104: (14) Devices, Linux Filesystems, Filesystem Hierarchy Standard

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104.1 (2) Create partitions and filesystems
104.2 (2) Maintain the integrity of filesystems
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104.1 (2) Create partitions and filesystems

Question: 119

104.1 Create partitions and filesystems

Which of the following is the device file name for the second partition on the only SCSI drive?

A. /dev/hda1
B. /dev/sda2
C. /dev/sd0a2
D. /dev/sd1p2

Answer: B

Question: 123

104.1 Create partitions and filesystems

Which type of filesystem is created by mkfs when it is executed with the block device name only and without any additional parameters?

A. ext2
B. ext3
C. ext4
D. XFS
E. VFAT

Answer: A

Question: 128

104.1 Create partitions and filesystems

Which of the following commands creates an ext3 filesystem on /dev/sdb1? (Choose TWO correct answers.)

A. /sbin/mke2fs -j /dev/sdb1
B. /sbin/mkfs -t ext3 /dev/sdb1
C. /sbin/mkfs -c ext3 /dev/sdb1
D. /sbin/mke3fs -j /dev/sdb1

Answer: A,B

Question: 131

104.1 Create partitions and filesystems

Which of the following Linux filesystems preallocates a fixed number of inodes at the filesystem's make/creation time and does NOT generate them as needed? (Choose TWO correct answers.)

A. ext3
B. JFS
C. ext2
D. XFS
E. procfs

Answer: A,C

Question: 132

104.1 Create partitions and filesystems

What is the purpose of the Filesystem Hierarchy Standard?

A. It is a security model used to ensure files are organized according to their permissions and accessibility.
B. It provides unified tools to create, maintain and manage multiple filesystems in a common way.
C. It defines a common internal structure of inodes for all compliant filesystems.
D. It is a distribution neutral description of locations of files and directories.

Answer: D

Question: 134

104.1 Create partitions and filesystems

Instead of supplying an explicit device in /etc/fstab for mounting, what other options may be used to identify the intended partition? (Choose TWO correct answers.)

A . FIND
B. ID
C. LABEL
D. NAME
E . UUID

Answer: C,E

Question: 183

104.1 Create partitions and filesystems

Which of the following are filesystems which can be used on Linux root partitions? (Choose two.)

A. NTFS
B. ext3
C. XFS
D. VFAT
E. swap

Answer: B,C

Question: 188

104.1 Create partitions and filesystems

Which command creates a swap space on a block device or a file? (Specify ONLY the command without any path or parameters.)

Answer: mkswap

Question: 204

104.1 Create partitions and filesystems

Which is the default percentage of reserved space for the root user on new ext4 filesystems?

A. 10%
B. 3%
C. 15%
D. 0% E. 5%

Answer: E

104.2 (2) Maintain the integrity of filesystems

Question: 122

104.2 Maintain the integrity of filesystems

Which of the following commands changes the number of days before the ext3 filesystem on /dev/sda1 has to run through a full filesystem check while booting?

A. tune2fs -d 200 /dev/sda1
B. tune2fs -c 200 /dev/sda1
C. tune2fs -i 200 /dev/sda1
D. tune2fs -n 200 /dev/sda1
E. tune2fs --days 200 /dev/sda1

Answer: C

Question: 125

104.2 Maintain the integrity of filesystems

Which command is used to create and initialize the files used to store quota information? (Specify ONLY the command without any path or parameters.)

Answer: quotacheck

Question: 129

104.2 Maintain the integrity of filesystems

Which of the following commands will change the quota for a specific user?

A. edquota
B. repquota
C. quota -e
D. quota

Answer: A

Question: 130

104.2 Maintain the integrity of filesystems

Which utility would be used to change how often a filesystem check is performed on an ext2 filesystem without losing any data stored on that filesystem?

A. mod2fs

B. fsck
C. tune2fs
D. mke2fs
E. fixe2fs

Answer: C

Question: 180

104.2 Maintain the integrity of filesystems

Which of the following commands will display the inode usage of each mounted filesystem?

A . du - i
B . df - i
C. lsfs -i
D. printfs -i

Answer: B

Question: 182

104.2 Maintain the integrity of filesystems

Which of the following commands is used to change metadata and options for ext3 filesystems?

A. mod3fs
B. tune3fs
C. mod2fs
D. tune2fs
E. dump2fs

Answer: D

Question: 189

104.2 Maintain the integrity of filesystems

Which of the following commands is used to modify quota settings? (Choose two.)

A. editquota
B. setquota
C. edquota
D. quotaedit
E. quotaset

Answer: C

Question: 209

104.2 Maintain the integrity of filesystems

Which command displays the current disk space usage for all mounted file systems? (Specify ONLY

the command without any path or parameters.)

Answer: du

104.3 (3) Control mounting and unmounting of filesystems

Question: 111

104.3 Control mounting and unmounting of filesystems

The /etc/_____ file lists currently mounted devices.

Answer: mtab

Question: 113

104.6 Create and change hard and symbolic links
104.3 Control mounting and unmounting of filesystems

After moving data to a new filesystem, how can the former path of the data be kept intact in order to avoid reconfiguration of existing applications? (Choose TWO correct answers.)

A. By creating an ACL redirection from the old to the new path of the data.
B. By creatinga hard link from the old to the new path of the data.
C. By creating a symbolic link from the old to the new path of the data.
D. By running the command touch on the old path.
E. By mounting the new filesystem on the original path of the data.

Answer: C,E

Question: 117

104.3 Control mounting and unmounting of filesystems

What does the command mount -a do?

A. It ensures that all file systems listed with the option noauto in /etc/fstab are mounted.
B. It shows all mounted file systems that have been automatically mounted.
C. It opens an editor with root privileges and loads /etc/fstab for editing.
D. It ensuresthat all file systems listed with the option auto in /etc/fstab are mounted.
E. It ensures that all file systems listed in /etc/fstab are mounted regardless of their options.

Answer: D

Question: 120

104.3 Control mounting and unmounting of filesystems

In order to display all currently mounted filesystems, which of the following commands could be used? (Choose TWO correct answers.)

A. cat /proc/self/mounts
B. free
C . mount
D. lsmounts
E. cat /proc/filesystems

Answer: A,C

Question: 124

104.3 Control mounting and unmounting of filesystems

How many fields are in a syntactically correct line of /etc/fstab?

A. 3
B. 4
C. 5
D. 6
E. 7

Answer: D

Question: 135

104.3 Control mounting and unmounting of filesystems

After running the command umount /mnt, the following error message is displayed:
umount: /mnt: device is busy.
What is a common reason for this message?

A. The kernel has not finished flushing disk writes to themounted device.
B. A user has a file open in the /mnt directory.
C. Another file system still contains a symlink to a file inside /mnt.
D. The files in /mnt have been scanned and added to the locate database.
E. The kernel thinks that a process is about toopen a file in /mnt for reading.

Answer: B

Question: 136

104.3 Control mounting and unmounting of filesystems

What does the command mount -a do?

A. It mounts all available filesystems onto the current directory.
B. It shows all mounted filesystems.
C. It mounts all user mountable filesystems for thecurrent user.
D. It mounts all filesystems listed in /etc/fstab which have the option auto set.
E. It mounts all filesystems listed in /etc/fstab which have the option noauto set.

Answer: D

Question: 179

104.3 Control mounting and unmounting of filesystems
101.1 Determine and configure hardware settings

Which file from the /proc file system contains a list of all currently mounted devices? (Specify ONLY the command without any path or parameters.)

Answer: mounts

Question: 186

104.3 Control mounting and unmounting of filesystems

Which of the following commands will mount an already inserted CD-ROM in /dev/sr0 onto an existing directory /mnt/cdrom when issued with root privileges?

A. mount /dev/cdrom /mnt/cdrom
B. mount /dev/sr0 /mnt/cdrom
C. mount -t cdrom /dev/sr0 /mnt/cdrom
D. mount -l cdrom /dev/sr0 /mnt/cdrom
E. mount -f /dev/sr0/mnt/cdrom

Answer: C

Question: 192

104.3 Control mounting and unmounting of filesystems

Which of the following options must be passed to a filesystem's entry in /etc/fstab in order to mount the file system without root privileges?

A. auto
B. norestrict
C. noauto
D. user

Answer: D

Question: 205

104.3 Control mounting and unmounting of filesystems

Which of the following is true when a file system, which is neither listed in /etc/fstab nor known to system, is mounted manually?

A. systemd ignores any manual mounts which are not done using the systemctl mount command
B. The command systemctl mountsync can be used to create a mount unit based on the existing m ou n t
C. systemd automatically generates a mount unit and monitors the mount point without changing it
D. Unless a systemd mount unit is created, systemd unmounts the file system after a short period of time
E. systemctl unmount must be used to remove the mount because system opens a file descriptor on

the mount point

Answer: B

Question: 206

104.3 Control mounting and unmounting of filesystems

What does the command mount --bind do?

A. It makes the contents of one directory available in another directory
B. It mounts all available filesystems to the current directory
C. It mounts all user mountable filesystems to the user's home directory
D. It mounts all file systems listed in /etc/fstab which have the option userbind set
E. It permanently mounts a regular file to a directory

Answer: A

104.5 (3) Manage file permissions and ownership

Question: 114

104.5 Manage file permissions and ownership

Which of the following commands changes the ownership of file.txt to the user dan and the group staff?

A. chown dan/staff file.txt
B. chown dan:staff file.txt
C. chown -u dan -g staff file.txt
D. chown dan -g staff file.txt

Answer: B

Question: 115

104.5 Manage file permissions and ownership

Which of the following commands makes /bin/foo executable by everyone but writable only by its owner ?

A. chmod u=rwx,go=rx /bin/foo
B. chmod o+rwx,a+rx /bin/foo
C. chmod 577 /bin/foo D.
chmod 775 /bin/foo

Answer: A

Question: 118

104.5 Manage file permissions and ownership

Which of the following settings for umask ensures that new files have the default permissions -rw-r-----?

A. 0017
B. 0640
C. 0038
D. 0027

Answer: D

Question: 133

104.5 Manage file permissions and ownership

Which umask value will result in the default access permissions of 600 (rw-------) for files and 700 (rwx------) for directories? (Specify only the numerical umask value.)

Answer: 0077, 077

Question: 137

104.5 Manage file permissions and ownership

Which of the following commands set the sticky bit for the directory /tmp? (Choose TWO correct answers.)

A. chmod +s /tmp
B. chmod +t /tmp
C. chmod 1775 /tmp
D. chmod 4775 /tmp
E. chmod 2775 /tmp

Answer: B,C

Question: 140

104.5 Manage file permissions and ownership

What do the permissions -rwSr-xr-x mean for a binary file when it is executed as a command?

A. The command is SetUID and it will be executed with the effective rights of the owner.
B. The command will be executed with the effective rights of the group instead of the owner.
C. The execute flag is not set for the owner. Therefore the SetUID flag is ignored.
D. The command will be executed with the effective rights of the owner and group.

Answer: C

Question: 187

104.5 Manage file permissions and ownership

Which chown command will change the ownership to dave and the group to staff on a file named data.txt?

A. chown dave/staff data.txt
B. chown -u dave -g staff data.txt
C. chown --user dave --group staff data.txt
D. chown dave:staff data.txt

Answer: D

Question: 191

104.5 Manage file permissions and ownership

Which of the following commands enables the setuid (suid) permission on the executable /bin/foo?

A. chmod 1755 /bin/foo
B. chmod 4755 /bin/foo
C. chmod u-s /bin/foo
D. chmod 755+s /bin/foo

Answer: B

Question: 193

104.5 Manage file permissions and ownership

Which permissions and ownership should the file /etc/passwd have?

A. -rw-------1 rootroot531 Jun 5 22:45 /etc/passwd
B. -rw-r--r--1 rootroot531 Jun 5 22:45 /etc/passwd
C. -rw-r--r--1 11531 Jun 5 22:45 /etc/passwd
D. -rw-------1 11531 Jun 5 22:45 /etc/passwd

Answer: B

Question: 203

104.5 Manage file permissions and ownership

Which umask value ensures that new directories can be read, written and listed by their owning user, read and listed by their owning group and are not accessible at all for everyone else?

A. 0750
B. 0027
C. 0036
D. 7640
E. 0029

Answer: B

Question: 208

104.5 Manage file permissions and ownership

Consider the following directory:
drwxrwxr-x 2 root sales 4096 Jan 1 15:21 sales
Which command ensures new files created within the directory sales are owned by the group sales? (Choose two.)

A. chmod g+s sales
B. setpol -R newgroup=sales sales
C. chgrp -p sales sales
D. chown --persistent *.sales sales
E. chmod 2775 sales

Answer: C,E

104.6 (2) Create and change hard and symbolic links

Question: 110

104.6 Create and change hard and symbolic links

You are trying to make a hard link to an ordinary file but ln returns an error. Which of the following could cause this?

A. The source file is hidden.
B. The source file is read-only.
C. The source file is a shell script.
D. You do not own the source file.
E. The source and the target are on different filesystems.

Answer: E

Question: 112

104.6 Create and change hard and symbolic links

After successfully creating a hard link called bar to the ordinary file foo, foo is deleted from the filesystem. Which of the following describes the resulting situation?

A. foo and bar would both be removed.
B. foo would be removed while bar would remain accessible.
C. foo would be removed. bar would still exist but would be unusable.
D. Both foo and bar would remain accessible.
E. The user is prompted whether bar should be removed, too.

Answer: B

Question: 113

104.6 Create and change hard and symbolic links
104.3 Control mounting and unmounting of filesystems

After moving data to a new filesystem, how can the former path of the data be kept intact in order to avoid reconfiguration of existing applications? (Choose TWO correct answers.)

A. By creating an ACL redirection from the old to the new path of the data.
B. By creatinga hard link from the old to the new path of the data.
C. By creating a symbolic link from the old to the new path of the data.
D. By running the command touch on the old path.

E. By mounting the new filesystem on the original path of the data.

Answer: C,E

Question: 126

104.6 Create and change hard and symbolic links

Which of the following file permissions belong to a symbolic link?

A. -r w x r w x r w x
B. + rw x rw x rw x
C. l rw x rw x rw x
D. srwxrwxrwx

Answer: C

Question: 127

104.6 Create and change hard and symbolic links

Creating a hard link to an ordinary file returns an error. What could be the reason for this?

A. The source file is hidden.
B. The source file is read-only.
C. The source file is a shell script.
D. The source file is already a hard link.
E. The source and the target are on different filesystems.

Answer: E

Question: 138

104.6 Create and change hard and symbolic links

Which of the following commands can be used to display the inode number of a given file?

A. inode
B. ls
C. ln
D. cp

Answer: B

Question: 141

104.6 Create and change hard and symbolic links

Which of the following pieces of information of an existing file is changed when a hard link pointing to that file is created?

A. File size

B. Modify timestamp
C. Link count
D. Inode number
E. Permissions

Answer: C

Question: 184

104.6 Create and change hard and symbolic links

How is a symbolic link called bar.conf pointing to foo.conf created?

A. ln -s foo.conf bar.conf
B. ln foo.conf bar.conf
C. ln -s bar.conf foo.conf
D. ln bar.conffoo.conf

Answer: A

Question: 185

104.6 Create and change hard and symbolic links

Which of the following is true for hard linked files? (Choose three.)

A. The output ofstatwill reporthardinstead ofregular file.
B. The hard linked files have the same permissions and owner.
C. The hard linked files share the same inode.
D. The hard linked files are indicated by a -> when listed withls -1.
E. The hard linked files must be on the same filesystem.

Answer: B,C,E

Question: 207

104.6 Create and change hard and symbolic links

Consider the following output from the command ls -i:
How would a new file named c.txt be created with the same inode number as a.txt (Inode 525385)?

A. ln -h a.txt c.txt
B. ln c.txt a.txt
C. ln a.txt c.txt
D. ln -f c.txt a.txt
E. ln -i 525385 c.txt

Answer: C

Question: 210

104.6 Create and change hard and symbolic links

When considering the use of hard links, what are valid reasons not to use hard links?

A. Hard links are not available on all Linux systems because traditional filesystems, such as ext4, do not support them
B. Each hard link has individual ownership, permissions and ACLs which can lead to unintended disclosure of file content
C. Hard links are specific to one filesystem and cannot point to files on another filesystem
D. If users other than root should be able to create hard links, suln has to be installed and configured
E. When a hard linked file is changed, a copy of the file is created and consumes additional space

Answer: C

104.7 (2) Find system files and place files in the correct location

Question: 116

104.7 Find system files and place files in the correct location

Which of the following commands can be used to search for the executable file foo when it has been placed in a directory not included in $PATH?

A. apropos
B. which
C. find
D. query
E. whereis

Answer: C

Question: 121

104.7 Find system files and place files in the correct location

Which of the following commands can be used to locate programs and their corresponding man pages and configuration files?

A . dirnam e
B. which
C . basena m e
D. query
E. whereis

Answer: E

Question: 139

104.7 Find system files and place files in the correct location

Which of the following commands shows the definition of a given shell command?

A. where
B. stat
C. type
D. case

Answer: C

Question: 181

104.7 Find system files and place files in the correct location

Following the Filesystem Hierarchy Standard (FHS), where should binaries that have been compiled by the system administrator be placed in order to be made available to all users on the system?

Answer: /usr/local/bin/

Question: 190

104.7 Find system files and place files in the correct location

Which program updates the database that is used by the locate command?

Answer: updatedb