1.What is tar command? Why is it used?

Answer: The tar command is used to compress a group of files into an archive. The command is also used to extract, maintain, or modify tar archives.

Tar archives combine multiple files and/or directories together into a single file. Tar archives are not necessarily compressed but they can be. Permissions are preserved and it supports many compression formats.

2.Explain Regular Expressions and Grep

Answer: A regular expression or regex is a pattern that matches a set of strings. A pattern consists of operators, constructs literal characters, and meta-characters, which have special meaning. GNU grep supports three regular expression syntaxes, Basic, Extended, and Perl-compatible.

In its simplest form, when no regular expression type is given, grep interpret search patterns as basic regular expressions. To interpret the pattern as an extended regular expression, use the -E (or --extended-regexp) option.

In GNU's implementation of grep there is no functional difference between the basic and extended regular expression syntaxes. The only difference is that in basic regular expressions the meta-characters ?, +, {, |, (, and) are interpreted as literal characters. To keep the meta-characters' special meanings when using basic regular expressions, the characters must be escaped with a backslash (\). We will explain the meaning of these and other meta-characters later.

Generally, you should always enclose the regular expression in single quotes to avoid the interpretation and expansion of the meta-characters by the shell.

3.What is the minimum number of disk partitions required to install Linux?

Answer: The minimum partition needed to run gnu/linux is one - the / partition.No, need a special /boot partition for grub.This was formerly needed by LILO because older versions didn't support LBA-mode and because of this the kernel had to be in the first 1024 cylinders of the disk. To ensure this, one created a boot-partition in this area, separated from the root-filesystem. Most modern boot-loaders support file-system and lba-mode, so a separate

boot-partition is obsolete.swap it is essentially important especially when you are running processes that require a lot of RAM

4.How to copy a file in Linux?

Answer: To copy files and directories use the cp command under a Linux, UNIX-like, and BSD like operating systems. cp is the command entered in a Unix and Linux shell to copy a file from one place to another, possibly on a different filesystem. The original file remains unchanged, and the new file may have the same or a different name.

To make a copy of a file called file.doc in the current directory as newfile.doc, enter:

```
$ cp file.doc newfile.doc
```

```
$ ls -l *.doc
```

Sample outputs:

```
-rw-r--r--  1 veryv  wheel  20 Mar 20 17:42 file.doc
-rw-r--r--  1 veryv  wheel  20 Mar 20 17:43
newfile.doc
```

5.How to terminate a running process in Linux?

Answer: There are two commands used to kill a process:
kill – Kill a process by ID

killall – Kill a process by name

There are also different signals that can be sent to both kill commands. What signal you send will be determined by what results you want from the kill command. For instance, you can send the HUP (hang up) signal to the kill command, which will effectively restart the process. This is always a wise choice when you need the process to immediately restart (such as in the case of a daemon). You can get a list of all the signals that can be sent to the kill command by issuing kill -l. You'll find quite a large number of signals

6.How to rename a file in Linux?

Answer: To use mv to rename a file type mv, a space, the name of the file, a space, and the new name you wish the file to have. Then press Enter.

You can use ls to check the file has been renamed.

mv oldfile.txt newfile.txt
ls *.txt

7.How to write the output of a command to a file?

Answer: When you type a command at the shell prompt, it displays output on screen or terminal. However, bash allows you to redirect and write the output into the file in Linux or Unix-like systems. This is useful for processing or saves the terminal output to a file for other purposes.

just redirect the output (AKA stdout) to a file:

SomeCommand > SomeFile.txt

Or if you want to append data:

SomeCommand >> SomeFile.txt

If you want stderr as well use this:

SomeCommand &> SomeFile.txt

or this to append:

SomeCommand &>> SomeFile.txt

if you want to have both stderr and output *displayed on the console **and** in a file* use this:

SomeCommand 2>&1 | tee SomeFile.txt

8.How to see the list of mounted devices on Linux?

Answer:

1. Listing from /proc using cat command

To list mount points you can read contents of the file /proc/mounts.

2. Using Mount Command

You can use mount command to list mount points. When you run mount command without any options it will list mount points.

3. Using df command

You can use df command to list mount points.

4. Using findmnt

Findmnt is a powerful tool to find mounted filesystems. This command comes with lots of options to list mount filesystems.

9.How to find where a file is stored in Linux?

Answer:

Type *find* into the command line to track down a particular file by its name or extension. If you want to look for *.err files in the /home/username/ directory and all sub-directories, try this: *find* /home/username/ -name "*.err"

ind command expressions look like this:

find command options *starting/path* expression

The options attribute controls the behavior and optimization method of the *find* process. The *starting/path* attribute defines the top-level directory where the *find* command in Linux begins the filtering process. The *expression* attribute controls the assessments that scour the directory tree to create output.

Let's break down a Linux find command where we don't just want Linux find file by name:

find -O3 -L /var/www/ -name "*.html"

It enables the top-level optimization (-O3) and permits *find* to follow symbolic links (-L). The *find* command in Linux searches through the whole directory hierarchy under /var/www/ for files that have .html on the end.

10.How to find the difference between two configuration files?

Answer: **1. diff Command**

I like to start with the original Unix command-line tool that shows you the difference between two computer files. Diff is simple and easy to use, it comes pre-installed on most Linux distributions. It compares files line by line and outputs the difference between them.

You can check out the manual entry for diff to easily use it.

```
# man diff
```

colordiff Command

Colordiff is a Perl script that produces same output as **diff**, but with color and syntax highlighting. It has customizable color schemes.

wdiff Command

The **wdiff** utility is a front end to **diff** command used to compare files on a word by word basis. This program is very useful when comparing two texts for changed words and for which paragraphs have been refilled.

To install **wdiff** on your Linux systems, run:

```
# yum install wdiff            [On CentOS/RHEL/Fedora]
# dnf install wdiff            [On Fedora 23+ version]
$ sudo apt-get install wdiff    [On Debian/Ubuntu/Mint]
```