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Red Hat Linux Essentials

Version 3.5

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QUESTION NO: 1

You work as a Network Administrator for McNeil Inc. The company has a Linux-based network. A printer is configured on the network. You want to remove a file from a print queue. Which of the following commands will you use to accomplish this?

- A. LPR
- B. LPQDEL
- C. LPRM
- D. LPQ

Answer: C

Explanation:

The LPRM command is used to remove a file from a print queue.

Answer option D is incorrect. The LPQ command reports the status of a print queue.

Answer option A is incorrect. The LPR command is used to submit a file for printing.

Answer option B is incorrect. There is no command such as LPQDEL in Linux.

QUESTION NO: 2

You are a newly appointed Red Hat Technician for company Inc. The company has a Linux-based network. You want to install a package named httpd on your Linux system. Before installing the package, you want to get the list of those packages that httpd depends on. Which of the following commands will you use to accomplish the task?

- A. rpm deplist httpd
- B. yum deplist httpd
- C. yum list httpd
- D. rpm -qR httpd

Answer: B

Explanation:

If the package is not yet installed, the yum deplist httpd command is used to get the list of packages that httpd depends on. Answer option C is incorrect. The yum list httpd command can be used to list various information about available packages. For example, it lists all available and installed packages and all packages with updates available in the yum repositories.

Answer option D is incorrect. If the package is already installed, the rpm -qR httpd command is used to get the list of packages that this package depends on.

Answer option A is incorrect. This command is incorrect. The deplist option is not used with the rpm command.

QUESTION NO: 3

You work as the Network Administrator for McNeil Inc. The company has a Linux-based network.

You are working as a root user on Red Hat operating system. You are currently running a program named My_program. You are getting some error messages while executing the program. You want to redirect these error messages to a file named file2 rather than being displayed on the screen.

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Which of the following tools should you use to accomplish the task?

- A. `My_program >> file2`
- B. `My_program 2> file2`
- C. `My_program 2>> file2`
- D. `My_program > file2`

Answer: B

Explanation:

This command will execute a program named `My_program` and whatever errors are generated while executing that program will all be added to a file named `file2` rather than being displayed on the screen.

What is redirection of `STDIN`, `STDOUT`, `STDERR` in Linux?

Redirection means diverting data from their normal destination to another. Whenever a program is executed on terminal some output is displayed at the shell prompt. In case a user does not want that output to appear in the shell window, the user can redirect it elsewhere. The user can redirect the output into a file, printer, etc.

Not only the output of programs is redirected, but also input of a program and error messages are redirected to a file.

Common Redirection operators are as follows:

Redirection Operators	Description
<code>command > file</code>	It directs standard output of command to a file.
<code>command >> file</code>	It appends standard output of command to a file.
<code>command < file</code>	It sends a file as input to command.
<code>command 2> file</code>	It redirects error messages from command to a file.

Answer option D is incorrect. This command will direct the standard output of `My_program` to `file2`.

Answer option A is incorrect. This command will append the standard output of `My_program` to `file2`.

Answer option C is incorrect. This command cannot be applied in this scenario.

QUESTION NO: 4

Which of the following key-combinations is used to redo a change undone by a `u` command in vim?

- A. `Ctrl-w`, Arrow
- B. `Ctrl-w`, `s`
- C. `Ctrl-r`
- D. `Ctrl-w`, `v`

Answer: C

Explanation:

The `Ctrl-r` key-combination is used to redo a change undone by a `u` command in vim.

You can go back in time with the `undo` command. You can then go forward again with the `redo` command. If you make a new change after the `undo` command, the `redo` will not be possible anymore.

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Answer options B and D are incorrect. The Ctrl-w, s and Ctrl-w, v key-combinations are used to view a file in two windows in a single vim screen. Ctrl-w, s splits the screen horizontally and Ctrl-w, v splits the screen vertically.

Answer option A is incorrect. The Ctrl-w key-combination with an arrow key is used to jump from one window to another. This will move you to the next window in whichever direction the arrow would normally move your cursor.

QUESTION NO: 5

You work as the Network Administrator for Perfect solutions Inc. The company has a Linux-based Network. You are working as a root user. You want to know what the day will be on 20 July 2010.

Which of the following commands should you use to accomplish this task?

- A. cal
- B. cal 20 July
- C. cal 7 2010
- D. date

Answer: C

Explanation:

The cal 7 2010 command will display the calendar of July 2010.

What is the cal command?

The cal command prints an ASCII calendar of the current month.

Syntax: cal [month] [year]

Given a month and year as arguments, cal displays the calendar for that particular month of the given year.

When a single numeric argument (such as 2005) is given, cal will display a calendar for the given year. Always use a fourdigit year. For example, the command cal 05 will display the calendar for the year 05, not the year 2005.

Answer option B is incorrect. The cal 20 July command will display only the month and year, and not the date.

Answer option A is incorrect. The cal command will display the calendar of the current month.

Answer option D is incorrect. The date command will display the current date and time of the system.

QUESTION NO: 6

Which of the following commands is used to access Windows resources from Linux workstation?

- A. rsync
- B. mutt
- C. scp
- D. smbclient

Answer: D

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Explanation:

smbclient is a command-line tool that provides access to SMB/CIFS shares.

What is the smbclient command?

smbclient is a command-line tool that provides access to SMB/CIFS shares. smbclient is a samba client with an "ftp like" interface. It is a useful tool to test connectivity to a Windows share. It can be used to transfer files, or to look at share names. In addition, it has the ability to backup and restore files from a server to a client and visa versa.

Example:

```
#smbclient -L server1
```

The above command will list all shares on server1.

Some useful options are as follows:

OPTION	DESCRIPTION
-D	It sets the SMB domain of the username.
-U	It specifies user=username, and sets the SMB username or username and password.
-N	This parameter suppresses the normal password prompt from the client to the user. This is useful when accessing a service that does not require a password.

Answer option C is incorrect. scp copies files between hosts on the Linux network.

Answer option A is incorrect. rsync is a fast and extraordinarily versatile file copying tool. It can copy locally, to/from another host over any remote shell or to/from a remote rsync daemon.

What is rsync?

In computing, rsync is a software application for Unix systems. It synchronizes files and directories from one location to another while minimizing data transfer using delta encoding. It can copy or display directory contents and copy files, optionally using compression and recursion.

In daemon mode, rsync listens to the default TCP port of 873, serving files in the native rsync protocol or via a remote shell such as RSH or SSH. In the latter case, the rsync client executable must be installed on both the local and remote hosts.

Answer option B is incorrect. mutt is a small but very powerful text based program for reading electronic mail under Linux operating systems.

QUESTION NO: 7

You want to temporarily change your primary group to another group of which you are a member. In this process, a new shell will be created, and when you exit the shell, your previous group will be reinstated. Which of the following commands will you use to accomplish this task?

- A. chmod
- B. newgrp
- C. chgrp
- D. chown

Answer: B

Explanation:

According to the scenario, you will use newgrp command to accomplish the task. The newgrp command is used to temporarily change the primary group of a user into another group of which that user is a member. In this step, a new shell will be created, and when

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that user will exit from the shell, his previous group will be reinstated. If no group is specified, the GID is changed to the login GID.

Answer option C is incorrect. John will not use the chgrp command to accomplish his task. The chgrp (from change group) command is used by unprivileged users to change the group associated with a file. Unlike the chown command, chgrp allows regular users to change groups, but only to one of which they are a member. The general syntax of the chgrp command is as follows:

```
chgrp group target1 [target2 ..]
```

The group parameter indicates the new group with which the targets should be associated. The target1 parameter indicates the files or directories for which the change should be made.

The target2 parameter indicates the optional additional files or directories for which the change should be made.

For example:

```
[axl@asterisk1 axl]$ls -l ttt
-rw-r--r-- 1 gbeeker staff 545 Nov 04 2004 ttt

[axl@asterisk1 axl]$chgrp system ttt

[axl@asterisk1 axl]$ls -l ttt
-rw-r--r-- 1 gbeeker system 545 Nov 04 2004 ttt
```

The above command changes the group associated with ttt to 'system', provided the executing user is a member of that group.

Answer option D is incorrect. John will not use the chown command to accomplish his task. The chown command is used to change the user and/or group ownership of each given file as specified by the first non-option argument as follows: if only a user name (or numeric user ID) is given, that user is made the owner of each given file, and the file's group is not changed.

If the user name is followed by a colon and a group name (or numeric group ID), with no spaces between them, the group ownership of the files is changed as well.

The syntax of the chown command is as follows: `chown [-R [-H | -L | -P]] [-h] owner[:group] file ...`

Option	Description
-H	If the -R option is specified, symbolic links on the command line are followed. Symbolic links encountered in the tree traversal are not followed.
-L	If the -R option is specified, both symbolic links on the command line and symbolic links encountered in the tree traversal are followed.
-P	If the -R option is specified, no symbolic links are followed.
-R	If file designates a directory, chown recursively changes the owner and group of each file in the entire subtree connected at that point.
-h	Change the owner and group of a symbolic link instead of the file pointed to by the symbolic link.

Answer option A is incorrect.

The chmod command is used to change the access mode of a file. The syntax of the command is: `chmod who=permissions filename`

Here, "who" refers to the owner of the file, group members, or other users, and permissions refers to "rwx".

For example, `chmod 755 File.txt` will give all access permissions to the owner and the read and execute permissions to the group members and other users.

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Fill in the blank with the required permission to complete the statement below. In order to make a script executable in a Linux computer, you must assign the _____ permission to the script file.

A. execute

Answer: A

Explanation: In order to run the script, you are required to add the execute permission to the script file. The permission can be assigned through the chmod command.

What is the chmod command?

The chmod command is used to change file access permissions in Linux.

Syntax:

chmod [option] [mode] <file1, file2, ...>

Option: The following is a list of some important options that can be provided with the command:

Option	Description
-c, --changes	Provides information when a change is made.
-f, --silent, --quiet	Suppresses most error messages.
-R, --recursive	Changes files and directories recursively.
--help	Displays the help of the command.
--version	Displays version information of the command.

Mode: Mode is written in the following format:

[ugoa] [+|=] [rwxXstugo]

The combination of ugoa specifies the users for whom the file access permissions will be changed. In ugoa, u is for the user who owns the file, g is for other users in the file group, o is for other users not in the file group, and a is for all users.

The operator + adds the specified permissions to the existing permissions of each file.

The - operator removes, and the = character specifies that the specified permissions are the only permissions for that file.

The combination of rwxXstugo is permission type. In rwxXstugo, r is for read, w is for write, x is for execute, X is to execute only if the file is a directory or already has execute permission for some user, s is to set user or group

ID on execution, t is to save program text on swap device, u are the permissions that the user who owns the file currently has for it, g are the permissions that other users in the file group have for the file, and o are the permissions that other users not in the file group have for the file.

QUESTION NO: 9

You work as a Network Administrator for McNeil Inc. The company has a Linux-based network.

David, a Sales Manager, wants to know the name of the shell that he is currently using.

Which of the following commands will he use to accomplish the task?

A. ECHO \$shell

B. RM \$shell

C. MV \$shell

D. LS \$shell

Answer: A

Explanation:

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In order to know the name of the current shell, he will run the following command:

```
ECHO $shell
```

The command line interpreter in Linux is known as the shell. When a user runs a command, the shell interprets, processes, and executes the command and provides an output to the user. Linux comes with quite a few shells such as Bourne Shell, Bourne Again Shell (BASH), C Shell, Korn Shell, etc. Bash is the most popular shell used by Linux users.

What is BASH?

The Bourne Again Shell (BASH) is a command language interpreter for the GNU's Not Unix (GNU) operating system. The following files are used to configure BASH:

File	Description
<code>.bash_profile</code>	This is the login initialization file for BASH.
<code>.bashrc</code>	This file is used by BASH for initialization. The global initialization file is located at <code>/etc/bashrc</code> , and a user-specific file is located in a user's home directory.
<code>.bash_logout</code>	This file is used to perform tasks when a user logs out. This file is located in a user's home directory.

QUESTION NO: 10

Which of the following text editing tools can be used to edit text files without having to open them?

- A. less
- B. sed
- C. vi
- D. more

Answer: B

Explanation:

The Unix utility sed (stream editor) is a text editing tool that can be used to edit text files without having to open them. This utility parses text files and implements a programming language which can apply textual transformations to such files.

It reads input files line by line

(sequentially), applying the operation which has been specified via the command line (or a sed script), and then outputs the line.

Answer option D is incorrect. The more command is used to view (but not modify) the contents of a text file on the terminal screen at a time.

The syntax of the more command is as follows: `more [options] file_name`

Where,

Option	Description
<code>-num</code>	It specifies an integer, which is the screen size (in lines).
<code>-d</code>	<code>more</code> will prompt the user with the message "Press space to continue, 'q' to quit," and will display "Press 'h' for instructions," instead of moving the ball when an illegal key is pressed.
<code>-l</code>	<code>more</code> prints "!" at a special character, and pauses after one line that contains a form feed. The <code>-l</code> option prevents this behavior.
<code>-f</code>	It causes <code>more</code> to count logical, rather than screen lines (i.e., long lines are not folded).
<code>-u</code>	It suppresses underlining.
<code>+/</code>	It specifies a string that will be searched for before each file is displayed.
<code>+num</code>	<code>more</code> starts file at line number num.

Answer option A is incorrect. The less command is used to view (but not change) the contents of a text file, one screen at a time. It is similar to the more command. However, it has the extended capability of allowing both forward and backward navigation through the file. Unlike most Unix text editors/viewers, less does not need to read the entire file before starting; therefore, it has faster load times with large files.

The command syntax of the less command is as follows: `less [options] file_name`

Where,

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Option	Description
-g	Highlights just the current match of any searched string
-I	Performs case-insensitive searches
-M	Shows more detailed prompt, including file position
-N	Shows line numbers
-S	Disables line wrap

Answer option C is incorrect. The vi editor is an interactive, cryptic, and screen-based text editor used to create and edit a file. It operates in either Input mode or Command mode. In Input mode, the vi editor accepts a keystroke as text and displays it on the screen, whereas in Command mode, it interprets keystrokes as commands. As the vi editor is case sensitive, it interprets the same character or characters as different commands, depending upon whether the user enters a lowercase or uppercase character. When a user starts a new session with vi, he must put the editor in Input mode by pressing the "I" key. If he is not able to see the entered text on the vi editor's screen, it means that he has not put the editor in Insert mode. The user must change the editor to Input mode before entering any text so that he can see the text he has entered.

QUESTION NO: 11

Which of the following commands will you run to do case-sensitive search for files named foobar.png?

- A. locate -name foobar.png
- B. find -iname foobar.png
- C. grep-name foobar.png
- D. find -name foobar.png

Answer: D

Explanation:

You will use find -name foobar.png command to do case-sensitive search for files named foobar.png.

What is the find command?

The find command can perform a search based on a variety of search limitations. It searches through one or more directory tree(s) of a filesystem, locating files based on some user-specified criteria. By default, find returns all files in the current working directory. Further, find allows a user to specify an action to be taken on each matched file.

Thus, it is an extremely powerful command for applying actions to many files.

The find command can be used with a wild card (*), but it works best when we know the name of the file or directory we are looking for.

The find command can search your system for files that comply with certain numeric criteria, such as the size of the file (-size), the number of links to the file (-links), the date of the last change to the files data (-mtime), or the date of the last time the file was read (-atime). All these criteria accept a numeric value. When a numeric value is provided to find, it looks for an exact match, more than the number, or less than the number.

Answer option B is incorrect. The find -iname foobar.png command will do case-insensitive search for files named foobar.png.

Answer option C is incorrect. The grep-name foobar.png is an invalid command.

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What is the grep command?

The grep command is used to search for a specific pattern of text in a file. It helps administrators in searching large amounts of text for a certain error message or name.

Answer option A is incorrect. The locate -name foobar.png is an invalid command.

What is the locate command?

The locate command is used to search for matching files in a database that is usually updated daily by a cron job. On the forthcoming Linux operating systems, this command is usually replaced by the slocate command, which stores permissions as well as paths and thus prevents users from prying into directories. One more advantage of the locate command is that it matches against any part of a pathname, not just the file itself.

QUESTION NO: 12

You work as the Network technician for McNeil Inc. The company has a Linux-based Network. You are working on the Red Hat operating system. You want to remove some write protected files and directories. Which of the following commands should you use to accomplish this task?

- A. rm -rf
- B. rm -f
- C. rmdir
- D. rm

Answer: A

Explanation:

The rm -rf commarecursively removes directories and its contents, ignoring warnings about removing write-protected files and directories.

Answer option B is incorrect. rm -f removes only files forcibly not a directory. To remove a directory and its contents forcibly, use -r in combination with -f with the rm command.

Answer option C is incorrect. The rmdir command is use to remove an empty directory.

Answer option D is incorrect. rm with no arguments deletes files.

QUESTION NO: 13

Which of the following options is used with aspell to specify the location of the main word list?

- A. d,--master=string
- B. -p,--personal=file
- C. --jargon=string
- D. --dict-dir=dir

Answer: D

Explanation:

The following options may be used with the aspell command to control which dictionaries to use and how they behave: