



**Vendor:** CompTIA

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**Exam Name:** CompTIA Linux+ Certification Exam

**Version:** DEMO

### QUESTION 1

A Linux systems administrator needs to set permissions on an application with the following parameters:

- The owner of the application should be able to read, write, and execute the application.
- Members of the group should be able to read and execute the application.
- Everyone else should not have access to the application.

Which of the following commands would BEST accomplish these tasks?

- A. `chmod 710 <application name>`
- B. `chmod 730 <application name>`
- C. `chmod 750 <application name>`
- D. `chmod 760 <application name>`

**Answer: C**

**Explanation:**

**Chmod 750**

**Chmod 750** (`chmod a+rw,g-w,o-rwx`) sets permissions so that, (U)ser / owner can read, can write and can execute. (G)roup can read, can write and can't execute. (O)thers can't read, can't write and can't execute.

	Owner Rights (u)	Group Rights (g)	Others Rights (o)
Read (4)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Write (2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Execute (1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Extra chmod command options

- Verbose ⓘ
- Changes ⓘ
- Silent ⓘ
- Default ⓘ
- Recursive ⓘ
- Preserve-Root ⓘ
- Reference File ⓘ
- Setuid ⓘ
- Setgid ⓘ
- Sticky Bit ⓘ

### QUESTION 2

A systems administrator has received reports of intermittent network connectivity to a particular website. Which of the following is the BEST command to use to characterize the location and type of failure over the course of several minutes?

- A. `mtr www.comptia.org`
- B. `tracert www.comptia.org`
- C. `ping www.comptia.org`
- D. `netstat www.comptia.org`

**Answer: A**

**Explanation:**

`mtr` combines the functionality of the traceroute and ping programs in a single network diagnostic tool.

<https://vitux.com/how-to-use-the-linux-mtr-command/>

### QUESTION 3

A new corporate policy states that Bluetooth should be disabled on all company laptops. Which of the following commands would disable the use of Bluetooth?

- A. echo "blacklist bluetooth" > /etc/modprobe.d/blacklist-bluetooth
- B. echo "kill bluetooth" > /etc/modprobe.d/kill-bluetooth
- C. echo "modprobe bluetooth" > /etc/modprobe.d/modprobe-bluetooth
- D. echo "rmmod bluetooth" > /etc/modprobe.d/rmmod-bluetooth

**Answer:** A

**Explanation:**

To blacklist a module, you have to add the following line to the specified configuration file in the /etc/modprobe.d/ directory as root:

```
blacklist <module_name>
```

where <module\_name> is the name of the module being blacklisted.

You can modify the /etc/modprobe.d/blacklist.conf file that already exists on the system by default. However, the preferred method is to create a separate configuration file, /etc/modprobe.d/<module\_name>.conf, that will contain settings specific only to the given kernel module.

[https://access.redhat.com/documentation/en-us/red\\_hat\\_enterprise\\_linux/6/html/deployment\\_guide/blacklisting\\_a\\_module](https://access.redhat.com/documentation/en-us/red_hat_enterprise_linux/6/html/deployment_guide/blacklisting_a_module)

### QUESTION 4

An administrator needs to create a shared directory in which all users are able, write, and execute its content but none of the regular users are able to delete any content.

Which of the following permissions should be applied to this shared directory?

- A. rwxrwxrwt
- B. rwxrwxrws
- C. rwxrwxrwx
- D. rwxrwxrw\*

**Answer:** A

**Explanation:**

The "T" character in your permission indicates which is the user (and the root) that has created the file inside of/tmp Folder can delete/modify that specific file.

### QUESTION 5

Which of the following will provide a list of all flash, external, internal, and SSD drives?

- A. lspci
- B. lsmod
- C. lsblk
- D. lsusb

**Answer:** C

**Explanation:**

ls: List files in the file system.

lsblk: List block devices (for example, the drives).

lspci: List PCI devices.

lsusb: List USB devices.

lsdev: List all devices.

<https://www.linux.com/learn/intro-to-linux/2017/3/how-format-storage-devices-linux>

### QUESTION 6

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

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

**Answer: D**

**Explanation:**

The permissions we want are 750 for directories and 640 for files.

To calculate the umask value simply subtract the desired permissions from the default one:

Umask value:  $777-750 = 027$

<https://linuxize.com/post/umask-command-in-linux/>

### QUESTION 7

After starting a long-running script, a systems administrator needs to verify the frequency of what is filling up the /var partition and kill it because it is consuming too much space.

Which of the following is the correct sequence given only a terminal is available?

- A. 1. CTRL-C  
2. bg  
3. watch df /var  
4. CTRL-C  
5. fg  
6. CTRL-Z
- B. 1. CTRL-C  
2. fg  
3. watch df /var  
4. CTRL-Z  
5. bg  
6. CTRL-Z
- C. 1. CTRL-Z  
2. bg  
3. watch df /var  
4. CTRL-C  
5. fg  
6. CTRL-C
- D. 1. CTRL-Z  
2. bg  
3. watch df /var  
4. CTRL-Z  
5. fg  
6. CTRL-C

**Answer: C**

**Explanation:**

1. CTRL-Z When you press Ctrl+Z, the “long-running-script” will be stop or suspended.
2. bg will send the long-running-script to the background so you can use the terminal.
3. watch df /var will show used and available disk space. It displays its output on the terminal window that is temporarily cleared of all other content (i.e., prompts, commands and results of commands). This makes it easy to observe the changing output of a command over time.
4. CTRL-C will terminated the watch df /var command.
5. fg will bring back to foreground the long-running-script
6. CTRL-C will terminate the long-running-script

#### QUESTION 8

A Linux administrator is testing connectivity to a remote host on a shared terminal. The administrator wants to allow other users to access the terminal while the command is executing.

Which of the following commands should the administrator use?

- A. bg ping remotehost
- B. fg ping remotehost
- C. ping remotehost < results
- D. ping remotehost &

**Answer: D**

**Explanation:**

bg : put the recently suspended process in the background

fg : put the recently suspended process in the foreground

& : run a program in the background to begin with

[https://afni.nimh.nih.gov/pub/dist/edu/data/CD.expanded/AFNI\\_data6/unix\\_tutorial/basic/basic\\_02.bg.html](https://afni.nimh.nih.gov/pub/dist/edu/data/CD.expanded/AFNI_data6/unix_tutorial/basic/basic_02.bg.html)

#### QUESTION 9

A junior systems is configuring localization option environment variables. The administrator is given a checklist of tasks with the following requirements:

- View current settings of the LC\_ALL environment variable only.
- Modify the LANG environment variable to US English Unicode.

Given this scenario, which of the following should be performed to meet these requirements? (Choose two.)

- A. echo \$LC\_ALL
- B. locale
- C. cat \$LC\_ALL
- D. export LANG = en\_US.UTF-8
- E. export \$LANG = en\_US.UTF
- F. stty

**Answer: AD**

**Explanation:**

LC\_ALL is the strongest locale environment variable, except for LANGUAGE. It overrides every other variable in priority and is the first to be checked by the system when a locale setting is needed.

<https://www.baeldung.com/linux/locale-environment-variables>

### QUESTION 10

A networked has been crashing intermittently. A Linux administrator would like to write a shell script that will attempt to ping the server and email an alert if the server fails to respond. The script will later be scheduled via cron job.

Which of the following scripts would BEST accomplish this task?

- A. 

```
SERVER='192.168.1.50'
RESULT='ping -C 2 $SERVER'
if [ !$RESULT ]; then
    echo "Server is down" | mail -s "Server down" admin@email_address.com
fi
```
- B. 

```
SERVER="192.168.1.50"
ping -c 2 $SERVER >/dev/null 2>/dev/null
if [ $? -ge 1 ]; then
    echo "Server is down" | mail -s "Server down" admin@email_address.com
fi
```
- C. 

```
SERVER="192.168.1.50"
RESULT='ping -c 2 $SERVER >/dev/null 2>/dev/null'
while [ $RESULT != 1 ];
do
    echo "Server is down" | mail -s "Server down" admin@email_address.com
done
```
- D. 

```
SERVER="192.168.1.50"
ping -c 2 $SERVER >/dev/null 2>/tmp/fail.log
if [ -f /tmp/fail/log ]; then
    echo "Server is down" | mail -s "Server down" admin@email_address.com
fi
```

**Answer: B**

**Explanation:**

The \$? checks the exit code of the ping command, if > 0 then the ping failed.

### QUESTION 11

A Linux administrator is using a public cloud provider to host servers for a company's website. Using the provider's tools, the administrator wrote a JSON file to define how to deploy the servers.

Which of the following techniques did the administrator use?

- A. Infrastructure as code
- B. Build automation

- C. Platform as a service
- D. Automated configuration

**Answer: A**

**Explanation:**

with IaC, teams make changes to the environment description and version the configuration model, which is typically in well-documented code formats such as JSON. The release pipeline executes the model to configure target environments. If the team needs to make changes, they edit the source, not the target.

### QUESTION 12

A Linux system is running normally when the systems administrator receives an alert that one application spawned many processes.

The application is consuming a lot of memory, and it will soon cause the machine to become unresponsive.

Which of the following commands will stop each application process?

- A. `kill `pidof application``
- B. `killall application`
- C. `kill -9 `ps -aux | grep application``
- D. `pkill -9 application`

**Answer: D**

**Explanation:**

The pkill application allows you to send Linux signals to applications based on their process name and allows you to specify the process name using wildcard characters. This combination can come in handy if you need to stop multiple applications spawned from a single parent application.

### QUESTION 13

A junior systems administrator is upgrading a package that was installed on a Red Hat-based system. The administrator is tasked with the following:

- Update and install the new package.
- Verify the new package version is installed.

Which of the following should be done to BEST accomplish these task? (Choose two.)

- A. `yum install <package name>`
- B. `yum upgrade`
- C. `rpm -e <package name>`
- D. `rpm -qa`
- E. `apt-get <package name>`
- F. `apt-get upgrade`

**Answer: BD**

**Explanation:**

Since the package is already installed on the machine, yum upgrade will be used. Then rpm -qa used for query.

### QUESTION 14

Which of the following is the template for the grub.cfg file?

- A. /etc/default/grub
- B. /etc/grub2.cfg
- C. /etc/sysct1.conf
- D. /boot/efi

**Answer:** A

**Explanation:**

grub.cfg is generated automatically from the content of the /etc/default/grub file and the /etc/grub.d directory. You should modify or add to those files to configure GRUB 2. After making changes, you must explicitly rebuild the grub.cfg file by typing the update-grub command.  
<https://geek-university.com/linux/grub-version-2/>

#### QUESTION 15

A Linux storage administrator wants to create a logical volume group. Which of the following commands is required to start the process?

- A. pvcreate
- B. vgcreate
- C. lvcreate
- D. mkfs.xfs

**Answer:** A

**Explanation:**

To create the logical partition you have to start by creating the physical partitions. And the question is asking about the command to start the process.

[https://access.redhat.com/documentation/en-us/red\\_hat\\_enterprise\\_linux/7/html/logical\\_volume\\_manager\\_administration/lvm\\_examples](https://access.redhat.com/documentation/en-us/red_hat_enterprise_linux/7/html/logical_volume_manager_administration/lvm_examples)

#### QUESTION 16

Given that a company's policy states that users cannot install third-party tools on Window servers, which of the following protocols will allow a Linux GUI to connect to a Windows server?

- A. VNC
- B. NX
- C. RDP
- D. X11

**Answer:** C

**Explanation:**

On the remote computer, a VNC viewer should be installed. There are several VNC viewers available, you can use the TightVNC viewer which is available for Windows, Linux and macOS. Enter your Windows 10 computer's IP address to connect.

#### QUESTION 17

Ann, a junior Linux administrator, needs to copy software from her local machine to assist in developing a software application on a remote machine with the IP address 192.168.3.22. The file needs to be placed on the /tmp directory. After downloading the RPM to the local machine, which of the following commands would be BEST to use to copy the software?

- A. scp ~/software.rpm USER@192.168.3.22:/tmp

- B. `scp ~/software.rpm USER@192.168.3.22 /tmp`
- C. `wget USER@192.168.3.22:/tmp -f ~/software.rpm`
- D. `scp USER@192.168.3.22 ~/software.rpm :/tmp`

**Answer:** A

**Explanation:**

To transfer the `/root/sample` file on a remote computer called `appserver` to the `/var` directory on the local computer, you could run the following `scp` command:

```
[root@server1 ~]# scp root@appserver:/root/sample /var
```

Similarly, to copy the `/root/sample` file to the `/var` directory on `appserver`, you could use the following `scp` command:

```
[root@server1 ~]# scp /root/sample root@appserver:/var
```

### QUESTION 18

A systems administrator needs to install a new piece of hardware that requires a new driver. The driver should be manually installed.

Which of the following describes the order of commands required to obtain module information, install the module, and check the log for any errors during module installation?

- A. `lsmod`, `modprobe`, `modinfo`
- B. `modinfo`, `insmod`, `modprobe`
- C. `modinfo`, `insmod`, `dmesg`
- D. `lsmod`, `insmod`, `dmesg`

**Answer:** C

**Explanation:**

`lsmod`----> show the status of modules in the Linux Kernel

`modinfo` ----> show information about a Linux Kernel module

`insmod` ----> simple program to insert a module into the Linux Kernel

`modprobe` ----> add and remove modules from the Linux Kernel

### QUESTION 19

A new HTTPS web service is being deployed on a server.

Which of the following commands should the Linux administrator use to ensure traffic is able to flow through the system firewall to the new service?

- A. `iptables -I OUTPUT -p tcp --sport 443 -j ACCEPT`
- B. `iptables -A INPUT -p tcp --dport 443 -j ACCEPT`
- C. `iptables -I INPUT --dport 443 -j ACCEPT`
- D. `iptables -A OUTPUT -p tcp --dport 443 -j ACCEPT`

**Answer:** B

**Explanation:**

```
root@ubuntu:/boot/grub# iptables -I INPUT --dport 443 -j ACCEPT
```

```
iptables v1.8.4 (legacy): unknown option "--dport"
```

```
Try `iptables -h' or 'iptables --help' for more information
```

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