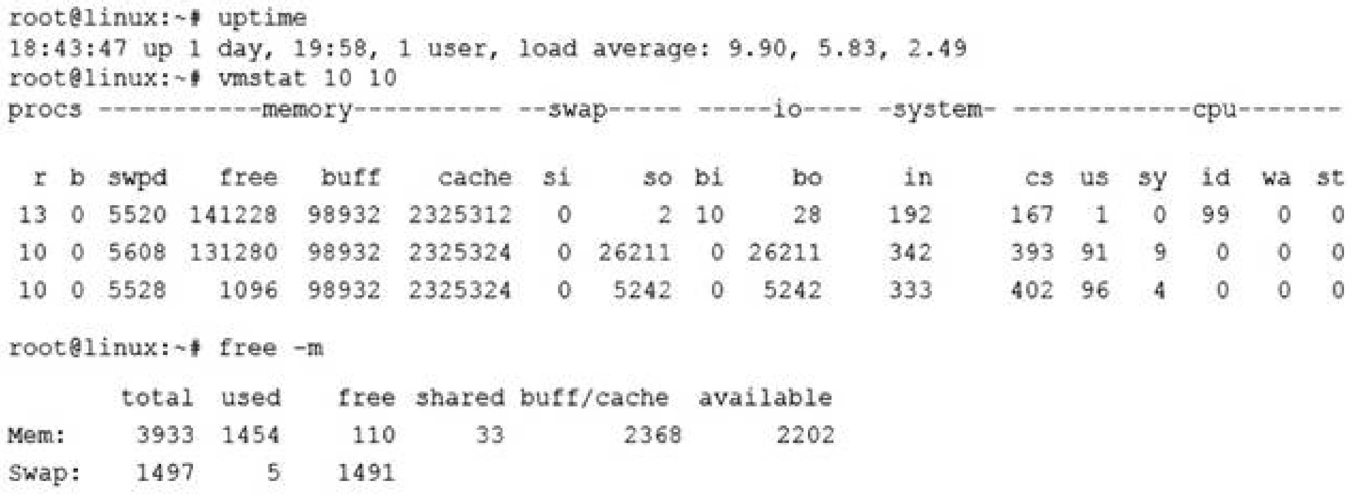
CompTIA

Exam Questions XK0-005

CompTIA Linux+ Certification Exam

NEW QUESTION 1
A Linux administrator was notified that a virtual server has an I/O bottleneck. The Linux administrator analyzes the following output:



```
root@linux:~# uptime
18:43:47 up 1 day, 19:58, 1 user, load average: 9.90, 5.83, 2.49
root@linux:~# vmstat 10 10
procs -----------memory---------- --swap----- -----io---- -system- ------------cpu-------

  r  b  swpd    free   buff    cache  si     so  bi     bo     in      cs  us  sy  id  wa  st
 13  0  5520  141228  98932  2325312   0      2  10     28    192     167   1   0  99   0   0
 10  0  5608  131280  98932  2325324   0  26211   0  26211    342     393  91   9   0   0   0
 10  0  5528    1096  98932  2325324   0   5242   0   5242    333     402  96   4   0   0   0

root@linux:~# free -m

        total  used    free  shared buff/cache  available
Mem:     3933  1454     110      33       2368       2202
Swap:    1497     5    1491
```

Given there is a single CPU in the sever, which of the following is causing the slowness?

A. The system is running out of swap space.
B. The CPU is overloaded.
C. The memory is exhausted.
D. The processes are paging.

Answer: B

Explanation:
The slowness is caused by the CPU being overloaded. The iostat command shows that the CPU utilization is 100%, which means that there are more processes competing for CPU time than the CPU can handle. The other options are incorrect because:
? The system is not running out of swap space, as shown by the iostat command, which shows that there is no swap activity (si and so columns are zero).
? The memory is not exhausted, as shown by the free -m command, which shows that there is still available memory (avail column) and free buffer/cache memory (buff/cache column).
? The processes are not paging, as shown by the vmstat command, which shows that there are no major page faults (majflt column) and no swap activity (si and so columns). References: CompTIA Linux+ Study Guide, Fourth Edition, page 417- 419, 424-425.

NEW QUESTION 2
A user reported issues when trying to log in to a Linux server. The following outputs were received:
Given the outputs above. which of the following is the reason the user is una-ble to log in to the server?

A. User1 needs to set a long password.
B. User1 is in the incorrect group.
C. The user1 shell assignment incorrect.
D. The user1 password is expired.

Answer: D

Explanation:
The user1 password is expired. This can be inferred from the output of the chage -l user1 command, which shows the password expiration information for user1. The output shows that the password expired on 2020-10-01, and the account expired on 2020-10-08. This means that user1 cannot log in to the server unless the password and account are reactivated by the system administrator.
The other options are not correct based on the outputs above. User1 does not need to set a long password, because the output of the passwd -S user1 command shows that the password has a minimum length of 5 characters, which is met by user1's password. User1 is not in the incorrect group, because the output of the groups user1 command shows that user1 belongs to the app group, which is presumably the correct group for accessing the server. The user1 shell assignment is not incorrect, because the output of the grep user1
/etc/passwd command shows that user1 has /bin/bash as the default shell, which is a valid and common shell for Linux users.

NEW QUESTION 3
A Linux administrator wants to find out whether files from the wget package have been altered since they were installed. Which of the following commands will provide the correct information?

A. rpm -i wget
B. rpm -qf wget
C. rpm -F wget
D. rpm -V wget

Answer: D

Explanation:
The command that will provide the correct information about whether files from the wget package have been altered since they were installed is rpm -V wget. This command will use the rpm utility to verify an installed RPM package by comparing information about the installed files with information from the RPM database. The verification process can check various attributes of each file, such as size, mode, owner, group, checksum, capabilities, and so on. If any discrepancies are found, rpm will report them using a single letter code for each attribute.
The other options are not correct commands for verifying an installed RPM package. The rpm -i wget command is invalid because -i is used to install a package from a file, not to verify an installed package. The rpm -qf wget command will query which package owns wget as a file name or path name, but it will not verify its attributes. The rpm -F wget command will freshen (upgrade) an already installed package with wget as a file name or path name, but it will not verify its attributes.
References: rpm(8) - Linux manual
page; Using RPM to Verify Installed Packages

NEW QUESTION 4
After starting an Apache web server, the administrator receives the following error:
Apr 23 localhost.localdomain httpd 4618] : (98) Address already in use: AH00072: make_sock: could not bind to address [: :]80
Which of the following commands should the administrator use to further trou-bleshoot this issue?

A. Ss
B. Ip
C. Dig
D. Nc

Answer: A

Explanation:
The ss command is used to display information about socket connections, such as the port number, state, and process ID. The error message indicates that the port 80 is already in use by another process, which prevents the Apache web server from binding to it. By using the ss command with the -l and -n options, the administrator can list all the listening sockets and their port numbers in numeric form, and identify which process is using the port 80. For example: ss -ln | grep :80. The ip, dig, and nc commands are not relevant for this issue, as they are used for different purposes, such as configuring network interfaces, querying DNS records, and testing network connectivity.

NEW QUESTION 5
In which of the following filesystems are system logs commonly stored?

A. /var
B. /tmp
C. /etc
D. /opt

Answer: A

Explanation:
The filesystem that system logs are commonly stored in is /var. The /var filesystem is a directory that contains variable data files on Linux systems. Variable data files are files that are expected to grow in size over time, such as logs, caches, spools, and temporary files. The /var filesystem is separate from the / filesystem, which contains the essential system files, to prevent the / filesystem from being filled up by the variable data files. The system logs are files that record the events and activities of the system and its components, such as the kernel, the services, the applications, and the users. The system logs are useful for monitoring, troubleshooting, and auditing the system. The system logs are commonly stored in the /var/log directory, which is a subdirectory of the /var filesystem. The /var/log directory contains various log files, such as syslog, messages, dmesg, auth.log, and kern.log. The filesystem that system logs are commonly stored in is /var. This is the correct answer to the question. The other options are incorrect because they are not the filesystems that system logs are commonly stored in (/tmp, /etc, or /opt). References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 16: Managing Logging and Monitoring, page 487.

NEW QUESTION 6
An administrator recently updated the BIND software package and would like to review the default configuration that shipped with this version. Which of the following files should the administrator review?

A. /etc/named.conf.rpmnew
B. /etc/named.conf.rpmsave
C. /etc/named.conf
D. /etc/bind/bind.conf

Answer: A

Explanation:
After installing a new version of a package that includes a configuration file that already exists on the system, such as /etc/httpd/conf/httpd.conf, RPM will create a new file with the .rpmnew extension instead of overwriting the existing file. This allows the administrator to review the default configuration that shipped with this version and compare it with the current configuration before deciding whether to merge or replace the files. The /etc/named.conf.rpmsave file is created by RPM when a package is uninstalled and it contains a configuration file that was modified by the administrator. This allows the administrator to restore the configuration file if needed. The /etc/named.conf file is the main configuration file for the BIND name server, not the httpd web server. The /etc/bind/bind.conf file does not exist by default in Linux systems. References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 19: Managing Packages and Software, page 561.

NEW QUESTION 7
An administrator has source code and needs to rebuild a kernel module. Which of the following command sequences is most commonly used to rebuild this type of module?

A. ./configure makemake install
B. wget gcccp
C. tar xvzf buildcp
D. build install configure

Answer: A

Explanation:
The best command sequence to rebuild a kernel module from source code is A. ./configure make make install. This is the standard way to compile and install a Linux kernel module, as explained in the web search result 5. The other commands are either not relevant, not valid, or not sufficient for this task. For example:
? B. wget gcc cp will try to download, compile, and copy a file, but it does not specify the source code, the module name, or the destination directory.
? C. tar xvzf build cp will try to extract, build, and copy a compressed file, but it does not specify the file name, the module name, or the destination directory.
? D. build install configure will try to run three commands that are not defined or recognized by the Linux shell.

NEW QUESTION 8
Application code is stored in Git. Due to security concerns, the DevOps engineer does not want to keep a sensitive configuration file, app . conf, in the repository. Which of the following should the engineer do to prevent the file from being uploaded to the repository?

A. Run git exclude ap
B. conf.
C. Run git stash ap
D. conf.
E. Add app . conf to . exclude.
F. Add app . conf to . gitignore.

Answer: D

Explanation:
This will prevent the file app.conf from being tracked by Git and uploaded to the repository. The .gitignore file is a special file that contains patterns of files and directories that Git should ignore. Any file that matches a pattern in the .gitignore file will not be staged, committed, or pushed to the remote repository. The .gitignore file should be placed in the root directory of the repository and committed along with the other files.
The other options are incorrect because:
* A. Run git exclude app.conf
This is not a valid Git command. There is no such thing as git exclude. The closest thing is git update-index --assume-unchanged, which tells Git to temporarily ignore changes to a file, but it does not prevent the file from being uploaded to the repository.
* B. Run git stash app.conf
This will temporarily save the changes to the file app.conf in a stash, which is a hidden storage area for uncommitted changes. However, this does not prevent the file from being tracked by Git or uploaded to the repository. The file will still be part of the working tree and the index, and it will be restored when the stash is popped or applied.
* C. Add app.conf to .exclude
This will have no effect, because Git does not recognize a file named .exclude. The only files that Git uses to ignore files are .gitignore, $GIT_DIR/info/exclude, and core.excludesFile.
References:
? Git - gitignore Documentation
? .gitignore file - ignoring files in Git | Atlassian Git Tutorial
? Ignoring files - GitHub Docs
? [CompTIA Linux+ Certification Exam Objectives]

NEW QUESTION 9
A cloud engineer needs to block the IP address 192.168.10.50 from accessing a Linux server. Which of the following commands will achieve this goal?

A. iptables -F INPUT -j 192.168.10.50 -m DROP
B. iptables -A INPUT -s 192.168.10.30 -j DROP
C. iptables -i INPUT --ipv4 192.168.10.50 -z DROP
D. iptables -j INPUT 192.168.10.50 -p DROP

Answer: B

Explanation:
The correct command to block the IP address 192.168.10.50 from accessing a Linux server is iptables -A INPUT -s 192.168.10.50 -j DROP. This command appends a rule to the INPUT chain that matches the source address 192.168.10.50 and jumps to the DROP target, which discards the packet. The other commands are incorrect because they either have invalid syntax, wrong parameters, or wrong order of arguments. References:
CompTIA Linux+ Study Guide, Fourth Edition, page 457-458.

NEW QUESTION 10
During a security scan, the password of an SSH key file appeared to be too weak and was cracked. Which of the following commands would allow a user to choose a stronger password and set it on the existing SSH key file?

A. passwd
B. ssh
C. ssh-keygen
D. pwgen

Answer: C

Explanation:
The command that would allow a user to choose a stronger password and set it on the existing SSH key file is ssh-keygen -p -f <keyfile>. This command uses the ssh-keygen tool, which is used to generate, manage, and convert authentication keys for SSH. The -p option stands for passphrase, and it allows the user to change or remove the passphrase of an existing private key file. The -f option specifies the filename of the key file. The command will prompt the user for the old passphrase, and then for the new passphrase twice.
The other options are not correct commands for changing the password of an SSH key file. The passwd command is used to change the password of a user account on a Linux system, not an SSH key file. The ssh command is used to log in to a remote system using SSH, not to change the password of an SSH key file. The pwgen command is used to generate random passwords, not to change the password of an SSH key file.
References: ssh-keygen(1) - Linux manual page; How To: Change Passphrase for SSH Private Key - Unix Tutorial

NEW QUESTION 10
A systems administrator wants to permit access temporarily to an application running on port 1234/TCP on a Linux server. Which of the following commands will permit this traffic?

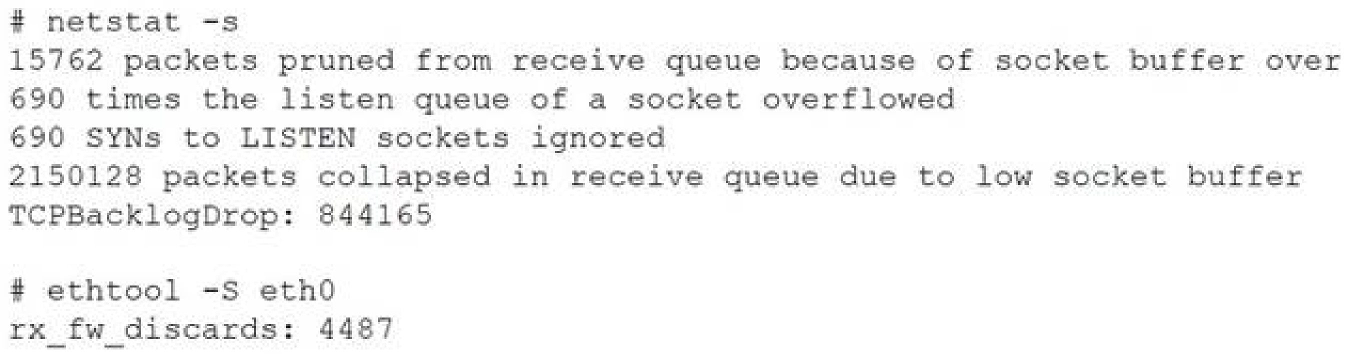
A. firewall-cmd —new-service=1234/tcp
B. firewall-cmd —service=1234 —protocol=tcp
C. firewall-cmd —add—port=1234/tcp
D. firewall-cmd —add-whitelist-uid=1234

Answer: C

Explanation:
The firewall-cmd command is used to manage firewalld, which is a firewall service for Linux systems that provides dynamic and persistent configuration of firewall

rules. Firewalld uses zones and services to define different levels of trust and access for network connections.
To permit access temporarily to an application running on port 1234/TCP on a Linux server, the systems administrator can use the firewall-cmd --add-port=1234/tcp command. This command will add a rule to the default zone (usually public) that allows incoming traffic on port 1234/TCP. The rule will only be effective until the next reload or restart of firewalld. To make the rule permanent, the administrator can add the --permanent option to the command. The statement C is correct.
The statements A, B, and D are incorrect because they do not permit access to port 1234/TCP. The firewall-cmd --new-service=1234/tcp command does not exist. The firewall- cmd --service=1234 --protocol=tcp command does not work because 1234 is not a predefined service name in firewalld. The firewall-cmd --add-whitelist-uid=1234 command does not exist. References: [How to Use FirewallD to Manage Firewall in Linux]

NEW QUESTION 11
The application team has reported latency issues that are causing the application to crash on the Linux server. The Linux administrator starts troubleshooting and receives the following output:



```
# netstat -s
15762 packets pruned from receive queue because of socket buffer over
690 times the listen queue of a socket overflowed
690 SYNs to LISTEN sockets ignored
2150128 packets collapsed in receive queue due to low socket buffer
TCPBacklogDrop: 844165

# ethtool -S eth0
rx_fw_discards: 4487
```

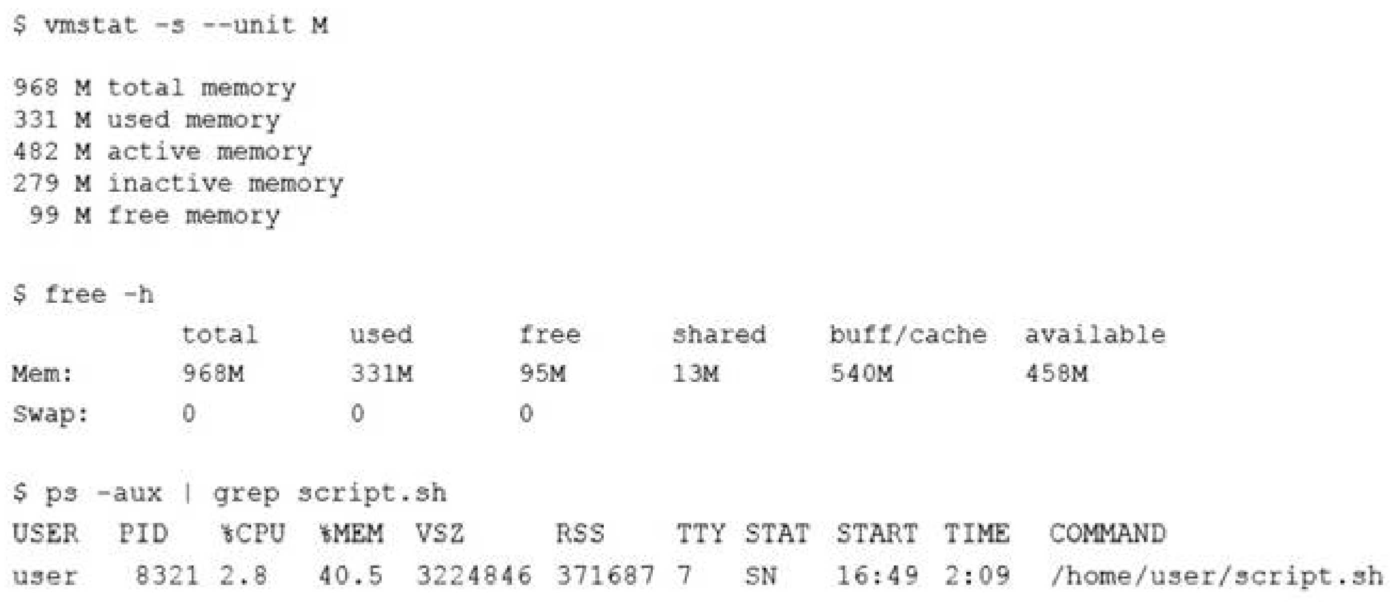
Which of the following commands will improve the latency issue?

A. # echo 'net.core.net_backlog = 5000000' >> /etc/sysctl.conf# sysctl -p# systemctl daemon-reload
B. # ifdown eth0# ip link set dev eth0 mtu 800# ifup eth0
C. # systemctl stop network# ethtool -g eth0 512# systemctl start network
D. # echo 'net.core.rmem max = 12500000' >> /etc/sysctl.conf# echo 'net.core.wmem_max = 12500000' >> /etc/sysctl.conf# sysctl -p

Answer: D

Explanation:
The best command to use to improve the latency issue is D. # echo ‘net.core.rmem max = 12500000’ >> /etc/sysctl.conf # echo ‘net.core.wmem_max = 12500000’ >> /etc/sysctl.conf # sysctl -p. This command will increase the size of the receive and send buffers for the network interface, which can improve the network performance and reduce packet loss. The sysctl command will apply the changes to the kernel parameters without rebooting the system.
The other commands are either incorrect or not suitable for this task. For example:
? A. # echo ‘net.core.net_backlog = 5000000’ >> /etc/sysctl.conf # sysctl -p # systemctl daemon-reload will try to increase the backlog queue for incoming connections, but this is not relevant for the latency issue. The systemctl daemon- reload command is also unnecessary, as it only reloads the systemd configuration files, not the kernel parameters.
? B. # ifdown eth0 # ip link set dev eth0 mtu 800 # ifup eth0 will try to change the maximum transmission unit (MTU) of the network interface to 800 bytes, but this is too low and may cause fragmentation and performance degradation. The default MTU for Ethernet is 1500 bytes, and it should not be changed unless there is a specific reason.
? C. # systemctl stop network # ethtool -g eth0 512 # systemctl start network will try to change the ring buffer size of the network interface to 512, but this is too small and may cause packet drops and latency spikes. The default ring buffer size for Ethernet is usually 4096 or higher, and it should be increased if there is a high network traffic.

NEW QUESTION 14
A Linux administrator is troubleshooting a memory-related issue. Based on the output of the commands:



```
$ vmstat -s --unit M

968 M total memory
331 M used memory
482 M active memory
279 M inactive memory
 99 M free memory

$ free -h
          total     used     free     shared    buff/cache  available
Mem:      968M      331M     95M      13M       540M        458M
Swap:     0         0        0

$ ps -aux | grep script.sh
USER  PID   %CPU  %MEM  VSZ      RSS    TTY STAT  START  TIME   COMMAND
user  8321  2.8   40.5  3224846  371687 7   SN    16:49  2:09   /home/user/script.sh
```

Which of the following commands would address the issue?

A. top -p 8321
B. kill -9 8321
C. renice -10 8321
D. free 8321

Answer: B

Explanation:
The command that would address the memory-related issue is kill -9 8321. This command will send a SIGKILL signal to the process with the PID 8321, which is the mysqld process that is using 99.7% of the available memory according to the top output. The SIGKILL signal will terminate the process immediately and free up the memory it was using. However, this command should be used with caution as it may cause data loss or corruption if the process was performing some critical operations.

The other options are not correct commands for addressing the memory-related issue. The top -p 8321 command will only display information about the process with the PID 8321, but will not kill it or reduce its memory usage. The renice -10 8321 command will change the priority (niceness) of the process with the PID 8321 to -10, which means it will have a higher scheduling priority, but this will not affect its memory consumption. The free 8321 command is invalid because free does not take a PID as an argument; free only displays information about the total, used, and free memory in the system. References: How to troubleshoot Linux server memory issues; kill(1) - Linux manual page

NEW QUESTION 17
A systems technician is working on deploying several microservices to various RPM-based systems, some of which could run up to two hours. Which of the following commands will allow the technician to execute those services and continue deploying other microservices within the same terminal section?

A. gedit & disown
B. kill 9 %1
C. fg %1
D. bg %1 job name

Answer: D

Explanation:
The command that will allow the technician to execute the services and continue deploying other microservices within the same terminal session is bg %1 job name. This command will send the job with ID 1 and name job name to the background, where it will run without occupying the terminal. The other options are incorrect because:
? gedit & disown will launch a graphical text editor in the background and detach it from the terminal, but it will not execute any service.
? kill 9 %1 will terminate the job with ID 1 using a SIGKILL signal, which cannot be ignored or handled by the process.
? fg %1 will bring the job with ID 1 to the foreground, where it will occupy the terminal until it finishes or is stopped. References: CompTIA Linux+ Study Guide, Fourth Edition, page 181-182.

NEW QUESTION 20
In order to copy data from another VLAN, a systems administrator wants to temporarily assign IP address 10.0.6 5/24 to the newly added network interface enp1s0f1. Which of the following commands should the administrator run to achieve the goal?

A. ip addr add 10.0.6.5/24 dev enpls0f1
B. echo "IPV4_ADDRESS=10.0.6.5/24" > /etc/sysconfig/network-scripts/ifcfg-enplsOfl
C. ifconfig 10.0.6.5/24 enpsIs0f1
D. nmcli conn add lpv4.address-10.0.6.5/24 ifname enpls0f1

Answer: A

Explanation:
The command ip addr add 10.0.6.5/24 dev enp1s0f1 will achieve the goal of temporarily assigning IP address 10.0.6.5/24 to the newly added network interface enp1s0f1. The ip command is a tool for managing network interfaces and routing on Linux systems. The addr option specifies the address manipulation mode. The add option adds a new address to an interface. The 10.0.6.5/24 is the IP address and the subnet mask in CIDR notation. The dev option specifies the device name. The enp1s0f1 is the name of the network interface. The command ip addr add 10.0.6.5/24 dev enp1s0f1 will add the IP address 10.0.6.5/24 to the network interface enp1s0f1, which will allow the administrator to copy data from another VLAN. This is the correct command to use to achieve the goal. The other options are incorrect because they either do not add a new address to an interface (echo "IPV4_ADDRESS=10.0.6.5/24" > /etc/sysconfig/network-scripts/ifcfg- enp1s0f1 or ifconfig 10.0.6.5/24 enp1s0f1) or do not use the correct syntax for the command (nmcli conn add ipv4.address-10.0.6.5/24 ifname enp1s0f1 instead of nmcli conn add type ethernet ipv4.address 10.0.6.5/24 ifname enp1s0f1). References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 12: Managing Network Connections, page 385.

NEW QUESTION 25
To harden one of the servers, an administrator needs to remove the possibility of remote administrative login via the SSH service. Which of the following should the administrator do?

A. Add the line DenyUsers root to the /etc/hosts.deny file.
B. Set PermitRootLogin to no in the /etc/ssh/sshd_config file.
C. Add the line account required pam_nologi
D. so to the /etc/pam.d/sshd file.
E. Set PubKeyAuthentication to no in the /etc/ssh/ssh_config file.

Answer: B

Explanation:
The administrator should set PermitRootLogin to no in the /etc/ssh/sshd_config file to remove the possibility of remote administrative login via the SSH service. The PermitRootLogin directive controls whether the root user can log in using SSH. Setting it to no will deny any remote login attempts by the root user. This will harden the server and prevent unauthorized access. The administrator should also restart the sshd service after making the change. The other options are incorrect because they either do not affect the SSH service (/etc/hosts.deny or /etc/pam.d/sshd) or do not prevent remote administrative login (PubKeyAuthentication). References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 13: Managing Network Services, page 413.

NEW QUESTION 26
User1 is a member of the accounting group. Members of this group need to be able to execute but not make changes to a script maintained by User2. The script should not be accessible to other users or groups. Which of the following will give proper access to the script?

A. chown user2:accounting script.sh chmod 750 script.sh
B. chown user1:accounting script.shchmod 777 script.sh
C. chown accounting:user1 script.sh chmod 057 script.sh
D. chown user2:accounting script.sh chmod u+x script.sh

Answer: A

Explanation:

The commands that will give proper access to the script are:
? chown user2:accounting script.sh: This command will change the ownership of the script to user2 as the owner and accounting as the group. The chown command is a tool for changing the owner and group of files and directories on Linux systems. The user2:accounting is the user and group name that the command should assign to the script. The script.sh is the name of the script that the command should modify. The command chown user2:accounting script.sh will ensure that user2 is the owner of the script and accounting is the group of the script, which will allow user2 to maintain the script and the accounting group to access the script.
? chmod 750 script.sh: This command will change the permissions of the script to 750, which means read, write, and execute for the owner; read and execute for the group; and no access for others. The chmod command is a tool for changing the permissions of files and directories on Linux systems. The permissions are represented by three digits in octal notation, where each digit corresponds to the owner, group, and others. Each digit can have a value from 0 to 7, where each value represents a combination of read, write, and execute permissions. The 750 is the permission value that the command should assign to the script.
The script.sh is the name of the script that the command should modify. The command chmod 750 script.sh will ensure that only the owner and the group can execute the script, but not make changes to it, and that the script is not accessible to other users or groups.
The commands that will give proper access to the script are chown user2:accounting script.sh and chmod 750 script.sh. This is the correct answer to the question. The other options are incorrect because they either do not give proper access to the script (chown user1:accounting script.sh or chown accounting:user1 script.sh) or do not change the permissions of the script (chmod 777 script.sh or chmod u+x
script.sh). References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 11: Managing File Permissions and Ownership, pages 346-348.

NEW QUESTION 30
A systems administrator frequently connects to a remote host via SSH and a non-standard port. The systems administrator would like to avoid passing the port parameter on the command line every time. Which of the following files can be used to set a different port
value for that host?

A. /etc/ssh/sshd_config
B. /etc/ssh/moduli
C. ~/.ssh/config
D. ~/.ssh/authorized_keys

Answer: C

Explanation:
The ~/.ssh/config file can be used to set various options for SSH connections, including the port number, for specific hosts or groups of hosts. This file is located in the user's home directory and affects only the current user. The /etc/ssh/sshd_config file is used to configure the SSH server daemon, not the client. The /etc/ssh/moduli file contains parameters for Diffie-Hellman key exchange, not port settings.
The ~/.ssh/authorized_keys file contains public keys for authentication, not port settings. References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 12: Secure Shell (SSH), page 414.

NEW QUESTION 34
An administrator runs ping comptia.org. The result of the command is:
ping: comptia.org: Name or service not known
Which of the following files should the administrator verify?

A. /etc/ethers
B. /etc/services
C. /etc/resolv.conf
D. /etc/sysctl.conf

Answer: C

Explanation:
The best file to verify when the ping command returns the error "Name or service not known" is C. /etc/resolv.conf. This file contains the configuration for the DNS resolver, which is responsible for translating domain names into IP addresses. If this file is missing, corrupted, or has incorrect entries, the ping command will not be able to resolve the domain name and will fail with the error. To fix this issue, the administrator should check that the file exists, has proper permissions, and has valid nameserver entries. For example, a typical /etc/resolv.conf file may look like this:
nameserver 8.8.8.8 nameserver 8.8.4.4
These are the IP addresses of Google's public DNS servers, which can be used as a fallback option if the default DNS servers are not working.

NEW QUESTION 35
A user generated a pair of private-public keys on a workstation. Which of the following commands will allow the user to upload the public key to a remote server and enable passwordless login?

A. scp ~/.ssh/id_rsa user@server:~/
B. rsync ~ /.ssh/ user@server:~/
C. ssh-add user server
D. ssh-copy-id user@server

Answer: D

Explanation:
The command ssh-copy-id user@server will allow the user to upload the public key to a remote server and enable passwordless login. The ssh-copy-id command is a tool for copying the public key to a remote server and appending it to the authorized_keys file, which is used for public key authentication. The command will also set the appropriate permissions on the remote server to ensure the security of the key. The command ssh-copy-id user@server will copy the public key of the user to the server and allow the user to log in without a password. This is the correct command to use for this task. The other options are incorrect because they either do not copy the public key (scp, rsync, or ssh-add) or do not use the correct syntax (scp ~/.ssh/id_rsa user@server:~/ instead of scp ~/.ssh/id_rsa.pub user@server:~/ or rsync ~ /.ssh/ user@server:~/ instead of rsync ~/.ssh/id_rsa.pub user@server:~/). References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 13: Managing Network Services, page 410.

NEW QUESTION 37
Users are reporting that writes on a system configured with SSD drives have been taking longer than expected, but reads do not seem to be affected. A Linux systems administrator is investigating this issue and working on a solution. Which of the following should the administrator do to help solve the issue?

A. Run the corresponding command to trim the SSD drives.
B. Use fsck on the filesystem hosted on the SSD drives.
C. Migrate to high-density SSD drives for increased performance.
D. Reduce the amount of files on the SSD drives.

Answer: A

Explanation:
TRIM is a feature that allows the operating system to inform the SSD which blocks of data are no longer in use and can be wiped internally. This helps to maintain the SSD's performance and endurance by preventing unnecessary write operations and reducing write amplification12. Running the corresponding command to trim the SSD drives, such as fstrim or blkdiscard on Linux, can help to solve the issue of slow writes by freeing up space and optimizing the SSD's internal garbage collection34.
References: 1: What is SSD TRIM, why is it useful, and how to check whether it is turned on 2: How to Trim SSD in Windows 10 3: How to run fsck on an external drive with OS X? 4: How to Use the fsck Command on Linux

NEW QUESTION 38
A user is unable to remotely log on to a server using the server name server1 and port 22.
The Linux engineer troubleshoots the issue and gathers the following information: Which of the following is most likely causing the issue?

A. server 1 is not in the DNS.
B. sshd is running on a non-standard port.
C. sshd is not an active service.
D. serverl is using an incorrect IP address.

Answer: B

Explanation:
The sshd is the Secure Shell Daemon, which is a service that allows remote login to a Linux system using the SSH protocol. The output shows that the sshd is running on port 2222, which is a non-standard port for SSH. The default port for SSH is 22, which is what the user is trying to use. Therefore, the statement B is most likely causing the issue. The statements A, C, and D are incorrect because they do not explain why the user cannot log on using port 22. References: [How to Change SSH Port in Linux]

NEW QUESTION 41
A Linux systems administrator needs to copy files and directories from Server A to Server

A. Which of the following commands can be used for this purpose? (Select TWO)
B. rsyslog
C. cp
D. rsync
E. reposync
F. scp
G. ssh

Answer: CE

Explanation:
The rsync and scp commands can be used to copy files and directories from Server A to Server B. Both commands can use SSH as a secure protocol to transfer data over the network. The rsync command can synchronize files and directories between two locations, using various options to control the copying behavior. The scp command can copy files and directories between two hosts, using similar syntax as cp. The rsyslog command is used to manage system logging, not file copying. The cp command is used to copy files and directories within a single host, not between two hosts. The reposync command is used to synchronize a remote yum repository to a local directory, not copy files and directories between two hosts. References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 13: Networking Fundamentals, pages 440-441.

NEW QUESTION 42
Which of the following directories is the mount point in a UEFI system?

A. /sys/efi
B. /boot/efi
C. /efi
D. /etc/efi

Answer: B

Explanation:
The /boot/efi directory is the mount point in a UEFI system. This directory contains the EFI System Partition (ESP), which stores boot loaders and other files required by UEFI firmware. The /sys/efi directory does not exist by default in Linux systems. The /efi directory does not exist by default in Linux systems. The /etc/efi directory does not exist by default in Linux systems. References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 11: Managing the Linux Boot Process, page 398.

NEW QUESTION 43
A systems administrator wants to be sure the sudo rules just added to /etc/sudoers are valid. Which of the following commands can be used for this task?

A. visudo -c
B. test -f /etc/sudoers
C. sudo vi check
D. cat /etc/sudoers | tee test

Answer: A

Explanation:
The command visudo -c can be used to check the validity of the sudo rules in the /etc/sudoers file. The visudo command is a tool for editing and validating the /etc/sudoers file, which defines the rules for the sudo command. The -c option checks the syntax and logic of the file and reports any errors or warnings. The command visudo - c will verify the sudo rules and help the administrator avoid any mistakes. This is the correct command to use for this task. The other options are incorrect because they either do not check the validity of the file (test, sudo, or cat) or do not exist (sudo vi check). References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 18: Securing Linux Systems, page 546.

NEW QUESTION 46
A cloud engineer needs to change the secure remote login port from 22 to 49000. Which of the following files should the engineer modify to change the port number to the desired value?

A. /etc/host.conf
B. /etc/hostname
C. /etc/services
D. /etc/ssh/sshd_config

Answer: D

Explanation:
The file /etc/ssh/sshd_config contains the configuration settings for the SSH daemon, which handles the secure remote login. To change the port number, the engineer should edit this file and modify the line that says Port 22 to Port 49000. The other files are not related to the SSH service. References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 13: Managing Network Services, page 411.

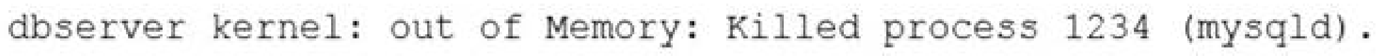
NEW QUESTION 49
An engineer needs to insert a character at the end of the current line in the vi text editor. Which of the following will allow the engineer to complete this task?

A. p
B. r
C. bb
D. A
E. i

Answer: D

Explanation:
The vi text editor is a popular and powerful tool for editing text files on Linux systems. The vi editor has two modes: command mode and insert mode. In command mode, the user can issue commands to manipulate the text, such as moving the cursor, deleting, copying, pasting, searching, replacing, and saving. In insert mode, the user can type text into the file. To switch from command mode to insert mode, the user can press various keys, such as i, a, o, I, A, or O. To switch from insert mode to command mode, the user can press the Esc key.
To insert a character at the end of the current line in the vi editor, the user can press the A key in command mode. This will move the cursor to the end of the line and switch to insert mode. Then, the user can type the desired character and press Esc to return to command mode. The statement D is correct.
The statements A, B, C, and E are incorrect because they do not perform the desired task. The p key in command mode will paste the previously copied or deleted text after the cursor. The r key in command mode will replace the character under the cursor with another character. The bb key in command mode will move the cursor back two words. The i key in command mode will switch to insert mode before the cursor. References: [How to Use vi Text Editor in Linux]

NEW QUESTION 50
Users report that connections to a MariaDB service are being closed unexpectedly. A systems administrator troubleshoots the issue and finds the following message in /var/log/messages:



```
dbserver kernel: out of Memory: Killed process 1234 (mysqld).
```

Which of the following is causing the connection issue?

A. The process mysqld is using too many semaphores.
B. The server is running out of file descriptors.
C. Something is starving the server resources.
D. The amount of RAM allocated to the server is too high.

Answer: B

Explanation:
The message in /var/log/messages indicates that the server is running out of file descriptors. A file descriptor is a non-negative integer identifier for an open file in Linux. Each process has a table of open file descriptors where a new entry is appended upon opening a new file. There is a limit on how many file descriptors a process can open at a time, which depends on the system configuration and the user privileges. If a process tries to open more files than the limit, it will fail with an error message like "Too many open files". This could cause connections to be closed unexpectedly or other problems with the application.
The other options are not correct causes for the connection issue. The process mysqld is not using too many semaphores, which are synchronization mechanisms for processes that share resources. Semaphores are not related to file descriptors or open files. Something is not starving the server resources, which could mean high CPU usage, memory pressure, disk I/O, network congestion, or other factors that affect performance. These could cause slowdowns or timeouts, but not file descriptor exhaustion. The amount of RAM allocated to the server is not too high, which could cause swapping or paging if it exceeds the physical memory available. This could also affect performance, but not file descriptor availability. References: File Descriptor Requirements (Linux Systems); Limits on the Number of Linux File Descriptors

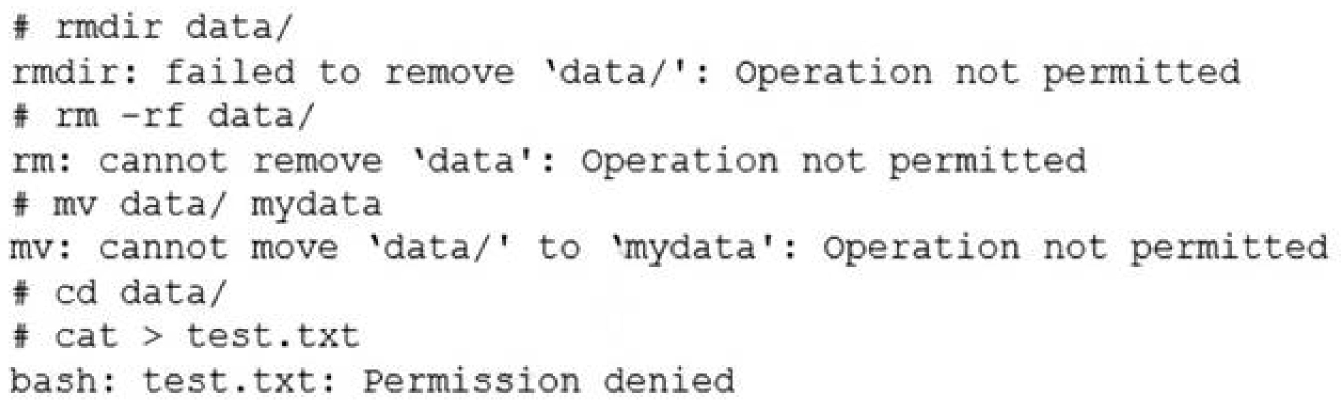
NEW QUESTION 51
Which of the following can be used as a secure way to access a remote termi-nal?

A. TFTP
B. SSH
C. SCP
D. SFTP

Answer: B

Explanation:
SSH, or Secure Shell, is a protocol that allows you to access a remote terminal or virtual machine securely over an encrypted connection. You can use SSH to run commands, transfer files, or tunnel network traffic on a remote system. To use SSH, you need an SSH client program on your local system and an SSH server program on the remote system. You also need to authenticate yourself using a username and password or a public/private key pair. SSH is widely used by system administrators, developers, and engineers to remotely manage Linux servers and other devices.
The other options are not correct answers. TFTP, or Trivial File Transfer Protocol, is a simple protocol that allows you to transfer files between systems, but it does not provide any security or encryption features. SCP, or Secure Copy Protocol, is a protocol that uses SSH to securely copy files between systems, but it does not provide a remote terminal access. FTP, or File Transfer Protocol, is another protocol that allows you to transfer files between systems, but it also does not provide any security or encryption features.

NEW QUESTION 54
A developer has been unable to remove a particular data folder that a team no longer uses. The developer escalated the issue to the systems administrator. The following output was received:



```
# rmdir data/
rmdir: failed to remove 'data/': Operation not permitted
# rm -rf data/
rm: cannot remove 'data': Operation not permitted
# mv data/ mydata
mv: cannot move 'data/' to 'mydata': Operation not permitted
# cd data/
# cat > test.txt
bash: test.txt: Permission denied
```

Which of the following commands can be used to resolve this issue?

A. chgrp -R 755 data/
B. chmod -R 777 data/
C. chattr -R -i data/
D. chown -R data/

Answer: C

Explanation:
The command that can be used to resolve the issue of being unable to remove a particular data folder is chattr -R -i data/. This command will use the chattr utility to change file attributes on a Linux file system. The -R option means that chattr will recursively change attributes of directories and their contents. The -i option means that chattr will remove (unset) the immutable attribute from files or directories. When a file or directory has the immutable attribute set, it cannot be modified, deleted, or renamed.
The other options are not correct commands for resolving this issue. The chgrp -R 755 data/ command will change the group ownership of data/ and its contents recursively to 755, which is not a valid group name. The chgrp command is used to change group ownership of files or directories. The chmod -R 777 data/ command will change the file mode bits of data/ and its contents recursively to 777, which means that everyone can read, write, and execute them. However, this will not remove the immutable attribute, which prevents deletion or modification regardless of permissions. The chmod command is used to change file mode bits of files or directories. The chown -R data/ command is incomplete and will produce an error. The chown command is used to change the user and/or group ownership of files or directories, but it requires at least one argument besides the file name. References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 7: Managing Disk Storage; chattr(1) - Linux manual page; chgrp(1) - Linux manual page; chmod(1) - Linux manual page; chown(1) - Linux manual page

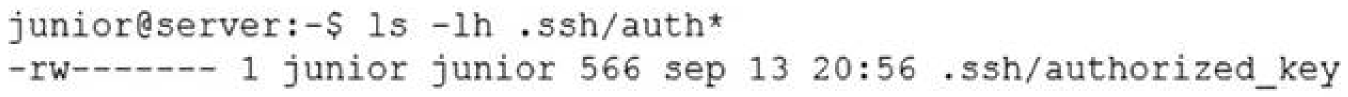
NEW QUESTION 57
A systems administrator wants to delete app . conf from a Git repository. Which of the following commands will delete the file?

A. git tag ap
B. conf
C. git commit app . conf
D. git checkout app . conf
E. git rm ap
F. conf

Answer: D

Explanation:
To delete a file from a Git repository, the administrator can use the command git rm app.conf (D). This will remove the file “app.conf” from the working directory and stage it for deletion from the repository. The administrator can then commit the change with git commit -m "Delete app.conf" to finalize the deletion. The other commands will not delete the file, but either tag, commit, or checkout the file. References:
? [CompTIA Linux+ Study Guide], Chapter 10: Working with Git, Section: Deleting Files with Git
? [How to Delete Files from Git]

NEW QUESTION 62
A junior administrator is trying to set up a passwordless SSH connection to one of the servers. The administrator follows the instructions and puts the key in the authorized_key file at the server, but the administrator is still asked to provide a password during the connection.
Given the following output:



```
junior@server:~$ ls -lh .ssh/auth*
-rw------- 1 junior junior 566 sep 13 20:56 .ssh/authorized_key
```

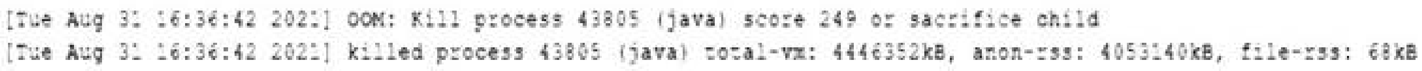
Which of the following commands would resolve the issue and allow an SSH connection to be established without a password?

A. restorecon -rv .ssh/authorized_key
B. mv .ssh/authorized_key .ssh/authorized_keys
C. systemct1 restart sshd.service
D. chmod 600 mv .ssh/authorized_key

Answer: B

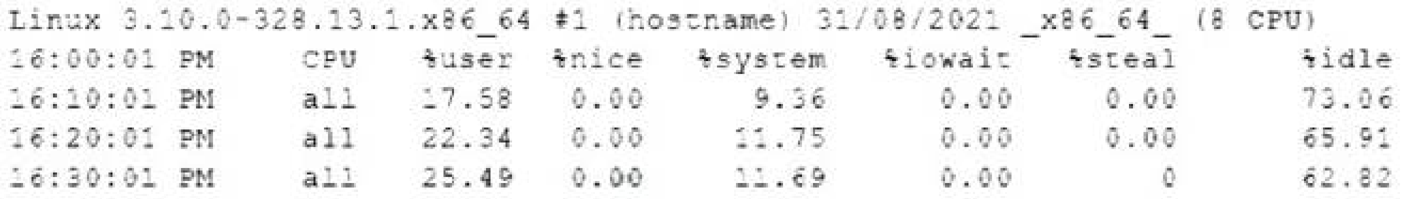
Explanation:
The command mv .ssh/authorized_key .ssh/authorized_keys will resolve the issue and allow an SSH connection to be established without a password. The issue is caused by the incorrect file name of the authorized key file on the server. The file should be named authorized_keys, not authorized_key. The mv command will rename the file and fix the issue. The other options are incorrect because they either do not affect the file name (restorecon or chmod) or do not restart the SSH service (systemct1). References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 13: Managing Network Services, page 410.

NEW QUESTION 64
A Linux systems administrator receives reports from various users that an application hosted on a server has stopped responding at similar times for several days in a row. The administrator logs in to the system and obtains the following output:
Output 1:



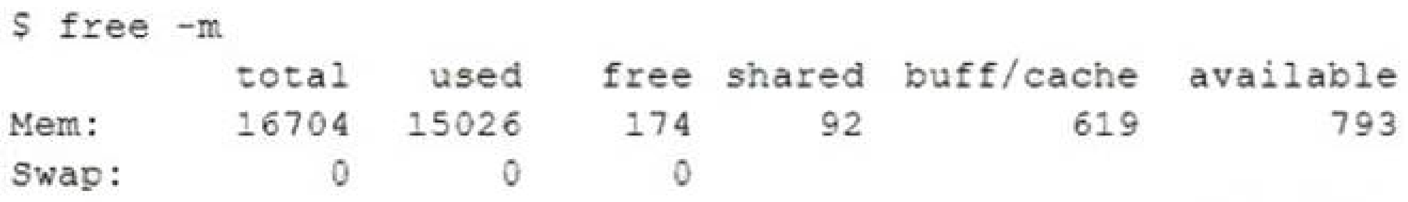
```
[Tue Aug 31 16:36:42 2021] OOM: Kill process 43805 (java) score 249 or sacrifice child
[Tue Aug 31 16:36:42 2021] killed process 43805 (java) total-vm: 4446352kB, anon-rss: 4053140kB, file-rss: 68kB
```

Output 2:



```
Linux 3.10.0-328.13.1.x86_64 #1 (hostname) 31/08/2021 _x86_64_ (8 CPU)
16:00:01 PM     CPU    %user   %nice   %system   %iowait   %steal        %idle
16:10:01 PM     all    17.58   0.00      9.36      0.00      0.00        73.06
16:20:01 PM     all    22.34   0.00     11.75      0.00      0.00        65.91
16:30:01 PM     all    25.49   0.00     11.69      0.00         0        62.82
```

Output 3:



```
$ free -m
          total   used   free  shared  buff/cache  available
Mem:      16704  15026    174      92         619        793
Swap:         0      0      0
```

Which of the following should the administrator do to provide the BEST solution for the reported issue?

A. Configure memory allocation policies during business hours and prevent the Java process from going into a zombie state while the server is idle.
B. Configure a different nice value for the Java process to allow for more users and prevent the Java process from restarting during business hours.
C. Configure more CPU cores to allow for the server to allocate more processing and prevent the Java process from consuming all of the available resources.
D. Configure the swap space to allow for spikes in usage during peak hours and prevent the Java process from stopping due to a lack of memory.

Answer: D

Explanation:
Based on the output of the image sent by the user, the system requires more swap space to allow for spikes in usage during peak hours and prevent the Java process from stopping due to a lack of memory. The output shows that there is only 0 MB of swap space available on the system, which means that there is no room for swapping out memory pages when physical memory is full or low. The output also shows that there is only 793 MB of available memory on the system, which may not be enough to handle high- demand applications such as Java. This may cause Java to stop working due to insufficient memory or trigger an OutOfMemoryError exception. Configuring more swap space on the system would help to alleviate this issue by providing more virtual memory for applications and improving performance. Configuring memory allocation policies during business hours will not help to solve this issue, as it will not increase the amount of available memory or swap space on the system. Configuring a different nice value for Java process will not help to solve this issue, as it will only affect its scheduling priority, not its memory consumption or allocation. Configuring more CPU cores will not help to solve this issue, as it will only increase processing power, not memory capacity or availability. References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 15: Managing Memory and Process Execution, page 468.

NEW QUESTION 69
A Linux system is getting an error indicating the root filesystem is full. Which of the following commands should be used by the systems administrator to resolve this issue? (Choose three.)

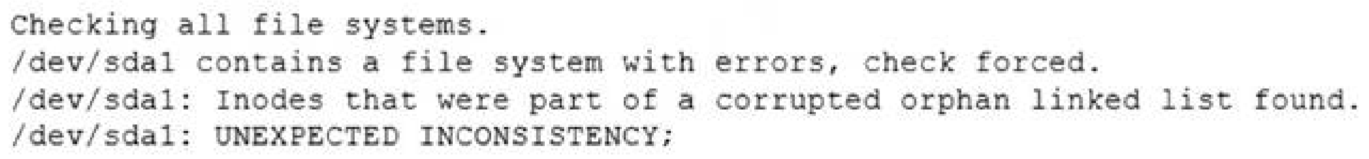
A. df -h /
B. fdisk -1 /dev/sdb
C. growpart /dev/mapper/rootvg-rootlv
D. pvcreate /dev/sdb
E. lvresize –L +10G -r /dev/mapper/rootvg-rootlv
F. lsblk /dev/sda
G. parted -l /dev/mapper/rootvg-rootlv
H. vgextend /dev/rootvg /dev/sdb

Answer: ACE

Explanation:
The administrator should use the following three commands to resolve the issue of the root filesystem being full:
? df -h /. This command will show the disk usage of the root filesystem in a human- readable format. The df command is a tool for reporting file system disk space usage. The -h option displays the sizes in powers of 1024 (e.g., 1K, 234M, 2G). The / specifies the root filesystem. The command df -h / will show the total size, used space, available space, and percentage of the root filesystem. This command will help the administrator identify the problem and plan the solution.
? growpart /dev/mapper/rootvg-rootlv. This command will grow the partition that contains the root filesystem to the maximum size available.
The growpart command is a tool for resizing partitions on Linux systems. The /dev/mapper/rootvg-rootlv is the device name of the partition, which is a logical volume managed by the Logical Volume Manager (LVM). The command growpart /dev/mapper/rootvg-rootlv will extend the partition to fill the disk space and increase the size of the root filesystem. This command will help the administrator solve the problem and free up space.
? lvresize –L +10G -r /dev/mapper/rootvg-rootlv. This command will resize the logical volume that contains the root filesystem and add 10 GB of space.

The lvresize command is a tool for resizing logical volumes on Linux systems. The -L option specifies the new size of the logical volume, in this case +10G, which means 10 GB more than the current size. The -r option resizes the underlying file system as well. The /dev/mapper/rootvg-rootlv is the device name of the logical volume, which is the same as the partition name. The command lvresize –L +10G -r /dev/mapper/rootvg-rootlv will increase the size of the logical volume and the root filesystem by 10 GB and free up space. This command will help the administrator solve the problem and free up space.
The other options are incorrect because they either do not affect the root filesystem (fdisk -1 /dev/sdb, pvcreate /dev/sdb, lsblk /dev/sda, or vgextend /dev/rootvg /dev/sdb) or do not use the correct syntax (fdisk -1 /dev/sdb instead of fdisk -l /dev/sdb or parted -l /dev/mapper/rootvg-rootlv instead of parted /dev/mapper/rootvg-rootlv print). References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 10: Managing Storage, pages 318-319, 331-332.

NEW QUESTION 72
A Linux system fails to start and delivers the following error message:



```
Checking all file systems.
/dev/sda1 contains a file system with errors, check forced.
/dev/sda1: Inodes that were part of a corrupted orphan linked list found.
/dev/sda1: UNEXPECTED INCONSISTENCY;
```

Which of the following commands can be used to address this issue?

A. fsck.ext4 /dev/sda1
B. partprobe /dev/sda1
C. fdisk /dev/sda1
D. mkfs.ext4 /dev/sda1

Answer: A

Explanation:
The command fsck.ext4 /dev/sda1 can be used to address the issue. The issue is caused by a corrupted filesystem on the /dev/sda1 partition. The error message shows that the filesystem type is ext4 and the superblock is invalid. The command fsck.ext4 is a tool for checking and repairing ext4 filesystems. The command will scan the partition for errors and attempt to fix them. This command can resolve the issue
and allow the system to start. The other options are incorrect because they either do not fix the filesystem (partprobe or fdisk) or destroy the data on the partition (mkfs.ext4). References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 10: Managing Storage, page 325.

NEW QUESTION 77
A Linux administrator copied a Git repository locally, created a feature branch, and committed some changes to the feature branch. Which of the following Git actions should the Linux administrator use to publish the changes to the main branch of the remote repository?

A. rebase
B. tag
C. commit
D. push

Answer: D

Explanation:
The push action is used to publish the changes made in a local branch to a remote branch of a Git repository. This action will update the remote branch with the commits made in the local branch and synchronize the two branches. The rebase action is used to reapply commits from one branch onto another branch, creating a linear history of commits. This action does not publish any changes to a remote repository. The tag action is used to create an annotated reference to a specific commit in a Git repository. This action does not publish any changes to a remote repository. The commit action is used to record changes made in the local repository and create a new snapshot of the project state. This action does not publish any changes to a remote repository. References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 20: Writing and Executing Bash Shell Scripts, page 579.

NEW QUESTION 82
A newly created container has been unable to start properly, and a Linux administrator is analyzing the cause of the failure. Which of the following will allow the administrator to determine the FIRST command that is executed inside the container right after it starts?

A. docker export <container_id>
B. docker info <container_id>
C. docker start <container_id>
D. docker inspect <container_id>

Answer: D

Explanation:
The command that will allow the administrator to determine the first command that is executed inside the container right after it starts is docker inspect <container_id>. This command will display detailed information about the container, including its configuration, state, network settings, mounts, and logs. One of the configuration fields is “Entrypoint”, which shows the command that is executed when the container is run. The entrypoint can be specified in the Dockerfile or overridden at runtime using the --entrypoint option.
The other options are not correct commands for determining the first command that is executed inside the container. The docker export <container_id> command will export the contents of the container’s filesystem as a tar archive to STDOUT. This will not show the entrypoint of the container, but only its files. The docker info <container_id> command is invalid because docker info does not take any arguments. It shows system-wide information about Docker, such as the number of containers, images, volumes, networks, and storage drivers. The docker start <container_id> command will start a stopped container and attach its STDOUT and STDERR to the terminal. This will not show the entrypoint of the container, but only its output. References: docker inspect | Docker Docs; docker export | Docker Docs; docker info | Docker Docs; docker start | Docker Docs

NEW QUESTION 87
An administrator installed an application from source into /opt/operations1/ and has received numerous reports that users are not able to access the application without having to use the full path /opt/operations1/bin/*. Which of the following commands should be used to resolve this issue?

A. echo 'export PATH=$PATH:/opt/operations1/bin' >> /etc/profile

B. echo 'export PATH=/opt/operations1/bin' >> /etc/profile
C. echo 'export PATH=$PATH/opt/operations1/bin' >> /etc/profile
D. echo 'export $PATH:/opt/operations1/bin' >> /etc/profile

Answer: A

Explanation:
The command echo 'export PATH=$PATH:/opt/operations1/bin' >>
/etc/profile should be used to resolve the issue of users not being able to access the application without using the full path. The echo command prints the given string to the standard output. The export command sets an environment variable and makes it available to all child processes. The PATH variable contains a list of directories where the shell looks for executable files. The $PATH expands to the current value of the PATH variable.
The : separates the directories in the list. The /opt/operations1/bin is the directory where the application is installed. The >> operator appends the output to the end of the file.
The /etc/profile file is a configuration file that is executed when a user logs in. The command echo 'export PATH=$PATH:/opt/operations1/bin' >> /etc/profile will add the /opt/operations1/bin directory to the PATH variable for all users and allow them to access the application without using the full path. This is the correct command to use to resolve the issue. The other options are incorrect because they either overwrite
the PATH variable (echo 'export PATH=/opt/operations1/bin' >> /etc/profile) or do not use the correct syntax (echo 'export PATH=$PATH/opt/operations1/bin' >> /etc/profile or echo 'export $PATH:/opt/operations1/bin' >> /etc/profile). References: CompTIA Linux+ (XK0- 005) Certification Study Guide, Chapter 9: Working with the Linux Shell, page 295.

NEW QUESTION 92
Which of the following actions are considered good security practices when hardening a Linux server? (Select two).

A. Renaming the root account to something else
B. Removing unnecessary packages
C. Changing the default shell to /bin/csh
D. Disabling public key authentication
E. Disabling the SSH root login possibility
F. Changing the permissions on the root filesystem to 600

Answer: BE

Explanation:
Some good security practices when hardening a Linux server are:
? Removing unnecessary packages (B) to reduce the attack surface and eliminate potential vulnerabilities
? Disabling the SSH root login possibility (E) to prevent unauthorized access and brute-force attacks on the root account References:
? [CompTIA Linux+ Study Guide], Chapter 9: Securing Linux, Section: Hardening Linux
? [How to Harden Your Linux Server]

NEW QUESTION 97
Following the migration from a disaster recovery site, a systems administrator wants a server to require a user to change credentials at initial login. Which of the following commands should
be used to ensure the aging attribute?

A. chage -d 2 user
B. chage -d 0 user
C. chage -E 0 user
D. chage -d 1 user

Answer: B

Explanation:
The chage command can be used to change the user password expiry information. The -d or --lastday option sets the last password change date. If the value is 0, the user will be forced to change the password at the next login. See chage command in Linux with examples and 10 chage command examples in Linux.

NEW QUESTION 101
Using AD Query, the security gateway connections to the Active Directory Domain Controllers using what protocol?

A. Windows Management Instrumentation (WMI)
B. Hypertext Transfer Protocol Secure (HTTPS)
C. Lightweight Directory Access Protocol (LDAP)
D. Remote Desktop Protocol (RDP)

Answer: C

Explanation:
Using AD Query, the security gateway connects to the Active Directory Domain Controllers using Lightweight Directory Access Protocol (LDAP). LDAP is a protocol that provides access to directory services over a network. AD Query uses LDAP queries to retrieve information about users and groups from Active Directory Domain Controllers without installing any software on them. AD Query does not use Windows Management Instrumentation (WMI), Hypertext Transfer Protocol Secure (HTTPS), or Remote Desktop Protocol (RDP) to connect to Active Directory Domain Controllers. References: Check Point Certified Security Administrator (CCSA) R80.x Study Guide, Chapter 5: User Management and Authentication, page 69.

NEW QUESTION 103
A systems administrator checked out the code from the repository, created a new branch, made changes to the code, and then updated the main branch. The systems administrator wants to ensure that the Terraform state files do not appear in the main branch. Which of following should the administrator use to meet this requirement?

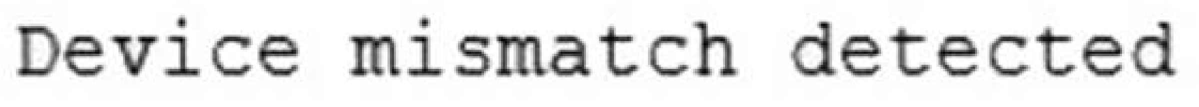
A. clone
B. gitxgnore

C. get
D. .ssh

Answer: B

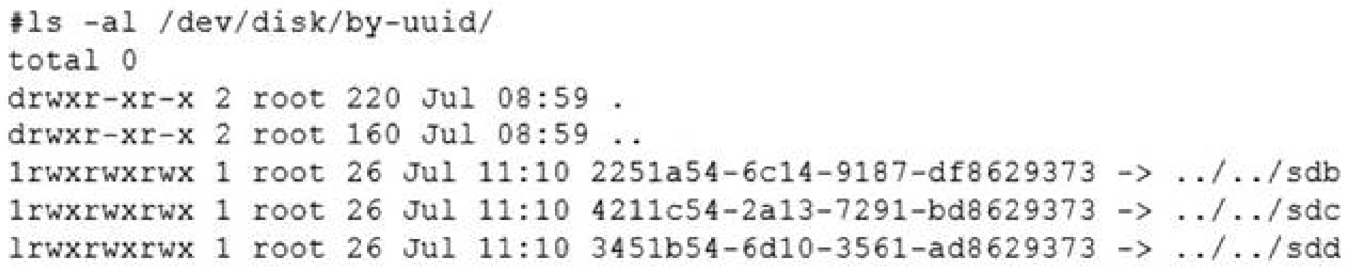
Explanation:
To prevent certain files from being tracked by Git, the administrator can use a .gitignore file (B) in the repository. The .gitignore file can specify patterns of files or directories that Git should ignore. This way, the Terraform state files will not appear in the main branch or any other branch. The other commands are not related to this requirement. References:
? [CompTIA Linux+ Study Guide], Chapter 10: Working with Git, Section: Ignoring Files with .gitignore
? [How to Use .gitignore File]

NEW QUESTION 108
A Linux administrator cloned an existing Linux server and built a new server from that clone. The administrator encountered the following error after booting the cloned server:



```
Device mismatch detected
```

The administrator performed the commands listed below to further troubleshoot and mount the missing filesystem:



```
#ls -al /dev/disk/by-uuid/
total 0
drwxr-xr-x 2 root 220 Jul 08:59 .
drwxr-xr-x 2 root 160 Jul 08:59 ..
lrwxrwxrwx 1 root 26 Jul 11:10 2251a54-6c14-9187-df8629373 -> ../../sdb
lrwxrwxrwx 1 root 26 Jul 11:10 4211c54-2a13-7291-bd8629373 -> ../../sdc
lrwxrwxrwx 1 root 26 Jul 11:10 3451b54-6d10-3561-ad8629373 -> ../../sdd
```

Which of the following should administrator use to resolve the device mismatch issue and mount the disk?

A. mount disk by device-id
B. fsck -A
C. mount disk by-label
D. mount disk by-blkid

Answer: A

Explanation:
The administrator should use the command mount disk by device-id to resolve the device mismatch issue and mount the disk. The issue is caused by the cloned server having a different device name for the disk than the original server. The output of blkid shows that the disk has the device name /dev/sdb1 on the cloned server, but the output of cat /etc/fstab shows that the disk is expected to have the device name /dev/sda1. The command mount disk by device-id will mount the disk by using its unique identifier (UUID) instead of its device name. The UUID can be obtained from the output of blkid or lsblk -f. The command will mount the disk to the specified mount point (/data) and resolve the issue. The other options are incorrect because they either do not mount the disk (fsck -A), do not use the correct identifier (mount disk by-label or mount disk by-blkid), or do not exist (mount disk by-blkid). References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 10: Managing Storage, pages 318-319.

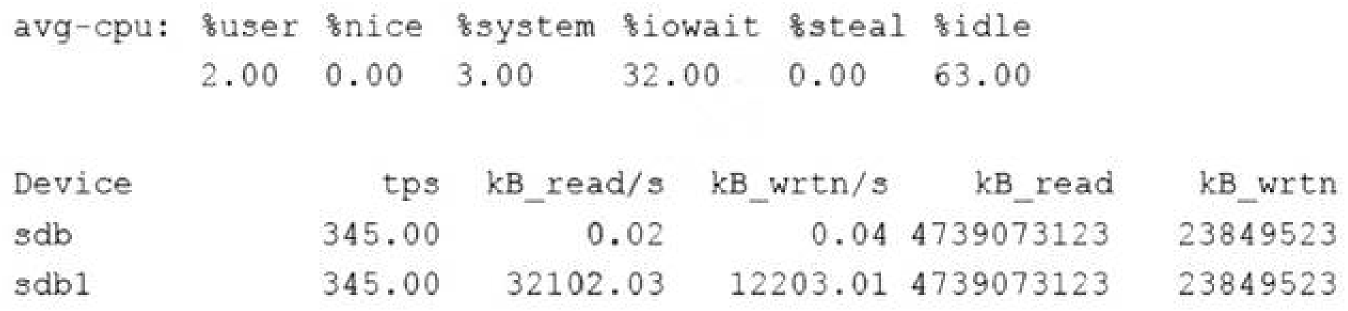
NEW QUESTION 111
A development team asks an engineer to guarantee the persistency of journal log files across system reboots. Which of the following commands would accomplish this task?

A. grep -i auto /etc/systemd/journald.conf && systemct1 restart systemd-journald.service
B. cat /etc/systemd/journald.conf | awk '(print $1,$3)'
C. sed -i 's/auto/persistent/g' /etc/systemd/journald.conf && sed -i 'persistent/s/ˆ#//q'/etc/systemd/journald.conf
D. journalctl --list-boots && systemct1 restart systemd-journald.service

Answer: C

Explanation:
The command sed -i 's/auto/persistent/g' /etc/systemd/journald.conf && sed - i 'persistent/s/ˆ#//q' /etc/systemd/journald.conf will accomplish the task of guaranteeing the persistency of journal log files across system reboots. The sed command is a tool for editing text files on Linux systems. The -i option modifies the file in place. The s command substitutes one string for another. The g flag replaces all occurrences of the string.
The && operator executes the second command only if the first command succeeds. The q command quits after the first match. The /etc/systemd/journald.conf file is a configuration file for the systemd-journald service, which is responsible for collecting and storing log messages. The command sed -i 's/auto/persistent/g' /etc/systemd/journald.conf will replace the word auto with the word persistent in the file. This will change the value of the Storage option, which controls where the journal log files are stored. The value auto means that the journal log files are stored in the volatile memory and are lost after reboot, while the value persistent means that the journal log files are stored in the persistent storage and are preserved across reboots. The command sed -i 'persistent/s/ˆ#//q' /etc/systemd/journald.conf will remove the # character at the beginning of the line that contains the word persistent. This will uncomment the Storage option and enable it. The command sed -i 's/auto/persistent/g' /etc/systemd/journald.conf && sed -i 'persistent/s/ˆ#//q' /etc/systemd/journald.conf will guarantee the persistency of journal log files across system reboots by changing and enabling the Storage option to persistent. This is the correct command to use to accomplish the task. The other options are incorrect because they either do not change the value of the Storage option (grep -i auto /etc/systemd/journald.conf && systemct1 restart systemd-journald.service or cat /etc/systemd/journald.conf | awk '(print $1,$3)') or do not enable the Storage option (journalctl --list-boots && systemct1 restart systemd- journald.service). References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 16: Managing Logging and Monitoring, page 489.

NEW QUESTION 114
An administrator is trying to diagnose a performance issue and is reviewing the following output:



```
avg-cpu:  %user  %nice  %system  %iowait  %steal  %idle
           2.00   0.00   3.00     32.00    0.00    63.00

Device           tps   kB_read/s   kB_wrtn/s    kB_read     kB_wrtn
sdb           345.00        0.02        0.04 4739073123    23849523
sdb1          345.00    32102.03    12203.01 4739073123    23849523
```

System Properties: CPU: 4 vCPU
Memory: 40GB
Disk maximum IOPS: 690
Disk maximum throughput: 44Mbps | 44000Kbps
Based on the above output, which of the following BEST describes the root cause?

A. The system has reached its maximum IOPS, causing the system to be slow.
B. The system has reached its maximum permitted throughput, therefore iowait is increasing.
C. The system is mostly idle, therefore the iowait is high.
D. The system has a partitioned disk, which causes the IOPS to be doubled.

Answer: B

Explanation:
The system has reached its maximum permitted throughput, therefore iowait is increasing. The output of iostat -x shows that the device sda has an average throughput of 44.01 MB/s, which is equal to the disk maximum throughput of 44 Mbps. The output also shows that the device sda has an average iowait of 99.99%, which means that the CPU is waiting for the disk to complete the I/O requests. This indicates that the disk is the bottleneck and the system is slow due to the high iowait. The other options are incorrect because they are not supported by the outputs. The system has not reached its maximum IOPS, as the device sda has an average IOPS of 563.50, which is lower than the disk maximum IOPS of 690. The system is not mostly idle, as the output of top shows that the CPU is 100% busy. The system does not have a partitioned disk, as the output of lsblk shows that the device sda has only one partition sda1. References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 17: Optimizing Linux Systems, pages 513-514.

NEW QUESTION 119
A systems administrator needs to check if the service systemd-resolved.service is running without any errors. Which of the following commands will show this information?

A. systemct1 status systemd-resolved.service
B. systemct1 enable systemd-resolved.service
C. systemct1 mask systemd-resolved.service
D. systemct1 show systemd-resolved.service

Answer: A

Explanation:
The command systemct1 status systemd-resolved.service will show the information about the service systemd-resolved.service. The systemct1 command is a tool for managing system services and units. The status option displays the current status of a unit, such as active, inactive, or failed. The output also shows the unit description, loaded configuration, process ID, memory usage, and recent log messages. This command will show if the service systemd-resolved.service is running without any errors. This is the
correct command to use to accomplish the task. The other options are incorrect because they either perform different actions (enable, mask, or show) or do not show the status of the service (systemct1 show systemd-resolved.service only shows the properties of the service, not the status). References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 14: Managing Processes and Scheduling Tasks, page 427.

NEW QUESTION 123
A systems administrator is tasked with installing GRUB on the legacy MBR of the SATA hard drive. Which of the following commands will help the administrator accomplish this task?

A. grub-install /dev/hda
B. grub-install /dev/sda
C. grub-install /dev/sr0
D. grub-install /dev/hd0,0

Answer: B

Explanation:
The command that will help the administrator install GRUB on the legacy MBR of the SATA hard drive is grub-install /dev/sda. This command will install GRUB on the master boot record (MBR) of the first SATA disk (/dev/sda). The MBR is the first sector of a disk that contains boot code and a partition table. GRUB will overwrite the boot code and place its own code that can load GRUB modules and configuration files from a specific partition.
The other options are not correct commands for installing GRUB on the legacy MBR of the SATA hard drive. The grub-install /dev/hda command will try to install GRUB on the first IDE disk (/dev/hda), which may not exist or may not be bootable. The grub-install /dev/sr0 command will try to install GRUB on the first SCSI CD-ROM device (/dev/sr0), which is not a hard drive and may not be bootable. The grub-install /dev/hd0,0 command is invalid because grub-install does not accept partition names as arguments, only disk names. References: Installing GRUB using grub-install; GRUB Manual

NEW QUESTION 124
A Linux administrator is adding a new configuration file to a Git repository. Which of the following describes the correct order of Git commands to accomplish the task successfully?

A. pull -> push -> add -> checkout
B. pull -> add -> commit -> push

C. checkout -> push -> add -> pull
D. pull -> add -> push -> commit

Answer: B

Explanation:
The correct order of Git commands to add a new configuration file to a Git repository is pull -> add -> commit -> push. The pull command will fetch and merge the changes from the remote repository to the local repository, ensuring that the local repository is up to date. The add command will stage the new configuration file for the next commit, marking it as a new file to be tracked by Git. The commit command will create a new snapshot of the project state with the new configuration file and a descriptive message. The push command will publish the commit to the remote repository, updating the remote branch with the new configuration file. The pull -> push -> add -> checkout order is incorrect, as it will not create a commit for the new configuration file, and it will switch to a different branch without pushing the changes. The checkout -> push -> add -> pull order is incorrect, as it will switch to a different branch before adding the new configuration file, and it will overwrite the local changes with the remote changes without creating a commit. The pull -> add -> push -> commit order is incorrect, as it will not create a commit before pushing the changes, and it will create a commit that is not synchronized with the remote branch. References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 20: Writing and Executing Bash Shell Scripts, page 579.

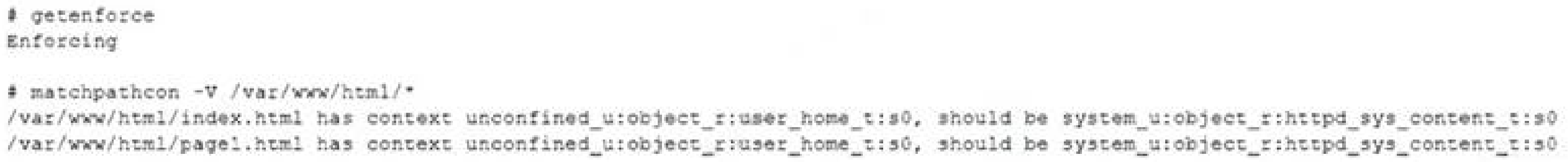
NEW QUESTION 126
A systems administrator is adding a Linux-based server and removing a Windows-based server from a cloud-based environment. The changes need to be validated before they are applied to the cloud-based environment. Which of the following tools should be used to meet this requirement?

A. Ansible
B. git clone
C. git pull
D. terraform plan

Answer: D

Explanation:
Terraform is a tool for building, changing, and managing infrastructure as code in a cloud- based environment. Terraform uses configuration files to describe the desired state of the infrastructure and applies changes accordingly. Terraform supports various cloud providers, such as AWS, Azure, Google Cloud Platform, and more.
To validate changes before they are applied to the cloud-based environment, the administrator can use the terraform plan command. This command will compare the current state of the infrastructure with the desired state defined in the configuration files and show what actions will be performed to achieve the desired state. This command will not make any changes to the infrastructure but only show a plan of changes. The statement D is correct.
The statements A, B, and C are incorrect because they do not validate changes before they are applied to the cloud-based environment. Ansible is another tool for automating infrastructure management, but it does not have a plan command. Git clone and git pull are commands for working with git repositories, which are used for version control of code. References: [How to Use Terraform to Manage Cloud Infrastructure]

NEW QUESTION 129
A Linux systems administrator is setting up a new web server and getting 404 - NOT FOUND errors while trying to access the web server pages from the browser. While working on the diagnosis of this issue, the Linux systems administrator executes the following commands:



```
# getenforce
Enforcing

# matchpathcon -V /var/www/html/*
/var/www/html/index.html has context unconfined_u:object_r:user_home_t:s0, should be system_u:object_r:httpd_sys_content_t:s0
/var/www/html/page1.html has context unconfined_u:object_r:user_home_t:s0, should be system_u:object_r:httpd_sys_content_t:s0
```

Which of the following commands will BEST resolve this issue?

A. sed -i 's/SELINUX=enforcing/SELINUX=disabled/' /etc/selinux/config
B. restorecon -R -v /var/www/html
C. setenforce 0
D. setsebool -P httpd_can_network_connect_db on

Answer: B

Explanation:
The command restorecon -R -v /var/www/html will best resolve the issue. The issue is caused by the incorrect SELinux context of the web server files under th /var/www/html directory. The output of ls -Z /var/www/html shows that the files have the type user_home_t, which is not allowed for web content. The command restorecon restores the default SELinux context of files based on the policy rules. The options -R and -v are used to apply the command recursively and verbosely. This command will change the type
of the files to httpd_sys_content_t, which is the correct type for web content. This will allow the web server to access the files and serve the pages to the browser.
The other options are incorrect because they either disable SELinux entirely (sed -i 's/SELINUX=enforcing/SELINUX=disabled/' /etc/selinux/config or setenforce 0), which is not a good security practice, or enable an unnecessary boolean (setsebool -P httpd_can_network_connect_db on), which is not related to the issue.
References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 18: Securing Linux Systems, page 535.

NEW QUESTION 133
A Linux administrator needs to transfer a local file named accounts . pdf to a remote / tmp directory of a server with the IP address 10.10.10.80. Which of the following commands needs to be executed to transfer this file?

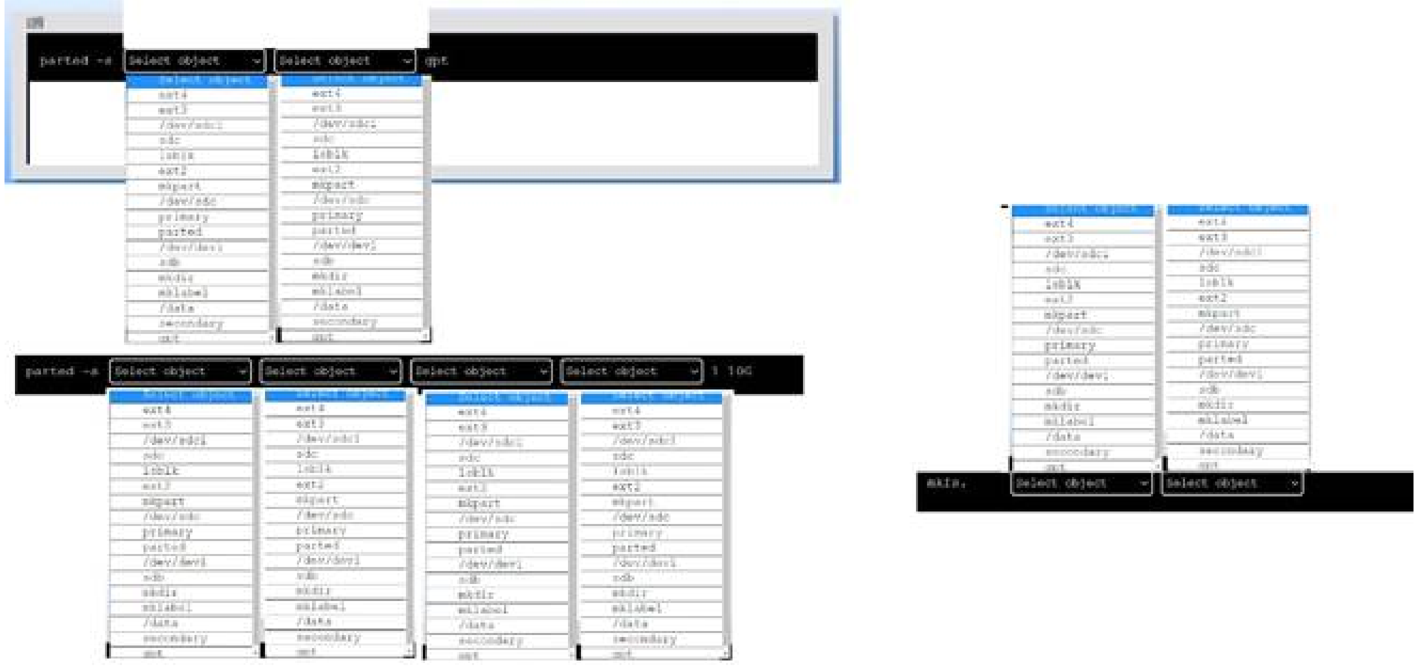
A. rsync user@10.10.10.80: /tmp accounts.pdf
B. scp accounts.pdf user@10.10.10.80:/tmp
C. cp user@10.10.10. 80: /tmp accounts.pdf
D. ssh accounts.pdf user@10.10.10.80: /tmp

Answer: B

Explanation:
The best command to use to transfer the local file accounts.pdf to the remote /tmp directory of the server with the IP address 10.10.10.80 is B. scp accounts.pdf user@10.10.10.80:/tmp. This command will use the secure copy protocol (scp) to copy the file from the local machine to the remote server over SSH. The

command requires the username and password of the user on the remote server, as well as the full path of the destination directory.
The other commands are either incorrect or not suitable for this task. For example:
? A. rsync user@10.10.10.80:/tmp accounts.pdf will try to use the rsync command to synchronize files between the local and remote machines, but it has the wrong syntax and order of arguments. The source should come before the destination, and a colon (:) should separate the remote host and path.
? C. cp user@10.10.10.80:/tmp accounts.pdf will try to use the cp command to copy files, but it does not work over SSH and it has the wrong syntax and order of arguments. The source should come before the destination, and a colon (:) should separate the remote host and path.
? D. ssh accounts.pdf user@10.10.10.80:/tmp will try to use the ssh command to log into the remote server, but it has the wrong syntax and arguments. The username should come before the remote host, and a file name is not a valid argument for ssh.

NEW QUESTION 138
DRAG DROP
A new drive was recently added to a Linux system. Using the environment and tokens provided, complete the following tasks:
• Create an appropriate device label.
• Format and create an ext4 file system on the new partition. The current working directory is /.



A. Mastered
B. Not Mastered

Answer: A

Explanation:
To create an appropriate device label, format and create an ext4 file system on the new partition, you can use the following commands:
? To create a GPT (GUID Partition Table) label on the new drive /dev/sdc, you can use the parted command with the -s option (for script mode), the device name (/dev/sdc), the mklabel command, and the label type (gpt). The command is:
parted -s /dev/sdc mklabel gpt
? To create a primary partition of 10 GB on the new drive /dev/sdc, you can use the parted command with the -s option, the device name (/dev/sdc), the mkpart command, the partition type (primary), the file system type (ext4), and the start and end points of the partition (1 and 10G). The command is:
parted -s /dev/sdc mkpart primary ext4 1 10G
? To format and create an ext4 file system on the new partition /dev/sdc1, you can use the mkfs command with the file system type (ext4) and the device name (/dev/sdc1). The command is:
mkfs.ext4 /dev/sdc1
You can verify that the new partition and file system have been created by using the lsblk command, which will list all block devices and their properties.

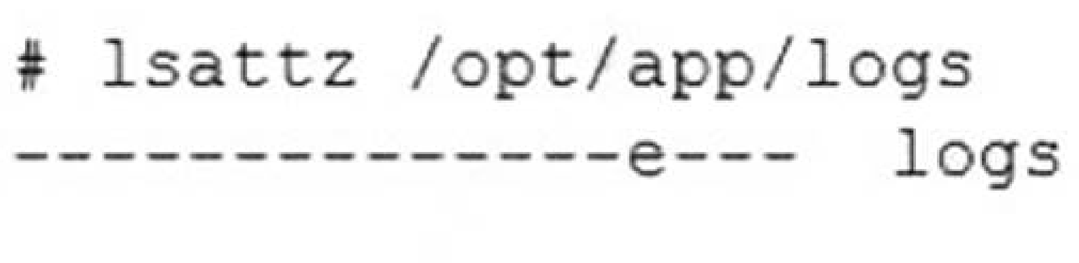
NEW QUESTION 142
Which of the following will prevent non-root SSH access to a Linux server?

A. Creating the /etc/nologin file
B. Creating the /etc/nologin.allow file containing only a single line root
C. Creating the /etc/nologin/login.deny file containing a single line +all
D. Ensuring that /etc/pam.d/sshd includes account sufficient pam_nologin.so

Answer: A

Explanation:
This file prevents any non-root user from logging in to the system, regardless of the authentication method. The contents of the file are displayed to the user before the login is terminated. This can be useful for system maintenance or security reasons12.
References: 1: Creating the /etc/nologin File - Oracle 2: How to Restrict Log In Capabilities of Users on Ubuntu

NEW QUESTION 144
A Linux engineer has been notified about the possible deletion of logs from the file
/opt/app/logs. The engineer needs to ensure the log file can only be written into without removing previous entries.



```
# lsattz /opt/app/logs
---------------e---   logs
```

Which of the following commands would be BEST to use to accomplish this task?

A. chattr +a /opt/app/logs
B. chattr +d /opt/app/logs
C. chattr +i /opt/app/logs
D. chattr +c /opt/app/logs

Answer: A

Explanation:
The command chattr +a /opt/app/logs will ensure the log file can only be written into without removing previous entries. The chattr command is a tool for changing file attributes on Linux file systems. The +a option sets the append-only attribute, which means that the file can only be opened in append mode for writing. This prevents the file from being modified, deleted, or renamed. This is the best command to use to accomplish the task. The other options are incorrect because they either set the wrong attributes
(+d, +i, or +c) or do not affect the file at all (-a). References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 11: Managing Files and Directories, page 357.

NEW QUESTION 145
An administrator attempts to connect to a remote server by running the following command:
$ nmap 192.168.10.36
Starting Nmap 7.60 (https://nmap.org) at 2022-03-29 20:20 UTC Nmap scan report for www1 (192.168.10.36)
Host is up (0.000091s latency). Not shown: 979 closed ports PORT STATE SERVICE 21/tcp open ftp 22/tcp filtered ssh 631/tcp open ipp
Nmap done: 1 IP address (1 host up) scanned in 0.06 seconds
Which of the following can be said about the remote server?

A. A firewall is blocking access to the SSH server.
B. The SSH server is not running on the remote server.
C. The remote SSH server is using SSH protocol version 1.
D. The SSH host key on the remote server has expired.

Answer: A

Explanation:
This is because the port 22/tcp is shown as filtered by nmap, which means that nmap cannot determine whether the port is open or closed because a firewall or other device is blocking its probes. If the SSH server was not running on the remote server, the port would be shown as closed, which means that nmap received a TCP RST packet in response to its probe. If the remote SSH server was using SSH protocol version 1, the port would be shown as open, which means that nmap received a TCP SYN/ACK packet in response to its probe. If the SSH host key on the remote server had expired, the port would also be
shown as open, but the SSH client would display a warning message about the host key verification failure. Therefore, the best explanation for the filtered state of the port 22/tcp is that a firewall is preventing nmap from reaching the SSH server.
You can find more information about nmap port states and how to interpret them in the following web search results:
? Nmap scan what does STATE=filtered mean?
? How to find ports marked as filtered by nmap
? Technical Tip: NMAP scan shows ports as filtered

NEW QUESTION 146
Due to low disk space, a Linux administrator finding and removing all log files that were modified more than 180 days ago. Which of the following commands will accomplish this task?

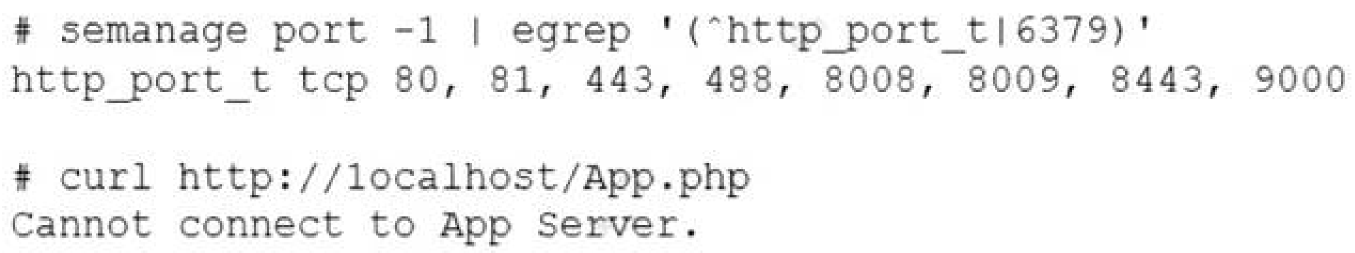
A. find /var/log -type d -mtime +180 -print -exec rm {} \;
B. find /var/log -type f -modified +180 -rm
C. find /var/log -type f -mtime +180 -exec rm {} \
D. find /var/log -type c -atime +180 –remove

Answer: C

Explanation:
The command that will accomplish the task of finding and removing all log files that were modified more than 180 days ago is find /var/log -type f -mtime +180 -exec rm {} ;. This command will use find to search for files (-type f) under /var/log directory that have a modification time (-mtime) older than 180 days (+180). For each matching file, it will execute (-exec) the rm command to delete it, passing the file name as an argument ({}). The command will end with a semicolon (;), which is escaped with a backslash to prevent shell interpretation.
The other options are not correct commands for accomplishing the task. The find /var/log - type d -mtime +180 -print -exec rm {} ; command will search for directories (-type d) instead of files, and print their names (-print) before deleting them. This is not what the task requires. The find /var/log -type f -modified +180 -rm command is invalid because there is no such option as -modified or -rm for find. The correct options are -mtime and -delete, respectively. The find /var/log -type c -atime +180 –remove command is also invalid because there is no such option as –remove for find. Moreover, it will search for character special files (-type c) instead of regular files, and use access time (-atime) instead of modification time. References: find(1) - Linux manual page; Find and delete files older than n days in Linux

NEW QUESTION 147
An administrator deployed a Linux server that is running a web application on port 6379/tcp.
SELinux is in enforcing mode based on organization policies. The port is open on the firewall.

Users who are trying to connect to a local instance of the web application receive Error 13, Permission denied.
The administrator ran some commands that resulted in the following output:



```
# semanage port -l | egrep '(^http_port_t|6379)'
http_port_t tcp 80, 81, 443, 488, 8008, 8009, 8443, 9000

# curl http://localhost/App.php
Cannot connect to App Server.
```

Which of the following commands should be used to resolve the issue?

A. semanage port -d -t http_port_t -p tcp 6379
B. semanage port -a -t http_port_t -p tcp 6379
C. semanage port -a http_port_t -p top 6379
D. semanage port -l -t http_port_tcp 6379

Answer: B

Explanation:
The command semanage port -a -t http_port_t -p tcp 6379 adds a new port definition to the SELinux policy and assigns the type http_port_t to the port 6379/tcp. This allows the web application to run on this port and accept connections from users. This is the correct way to resolve the issue. The other options are incorrect because they either delete a port definition (-d), use the wrong protocol (top instead of tcp), or list the existing port definitions (-l). References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 18: Securing Linux Systems, page 535.

NEW QUESTION 152
A Linux administrator has set up a new DNS forwarder and is configuring all internal servers to use the new forwarder to look up external DNS requests. The administrator needs to modify the firewall on the server for the DNS forwarder to allow the internal servers to communicate to it and make the changes persistent between server reboots. Which of the following commands should be run on the DNS forwarder server to accomplish this task?

A. ufw allow out dns
B. systemct1 reload firewalld
C. iptables -A OUTPUT -p udp -ra udp -dport 53 -j ACCEPT
D. flrewall-cmd --zone-public --add-port-53/udp --permanent

Answer: D

Explanation:
The command that should be run on the DNS forwarder server to
accomplish the task is firewall-cmd --zone=public --add-port=53/udp --permanent.
The firewall-cmd command is a tool for managing firewalld, which is a firewall service that provides dynamic and persistent network security on Linux systems. The firewalld uses zones and services to define the rules and policies for the network traffic. The zones are logical groups of network interfaces and sources that have the same level of trust and security. The services are predefined sets of ports and protocols that are associated with certain applications or functions. The --zone=public option specifies the zone name that the rule applies to. The public zone is the default zone that represents the untrusted network, such as the internet. The --add-port=53/udp option adds a port and protocol to the zone. The 53 is the port number that is used by the DNS service. The udp is the protocol that is used by the DNS service. The --permanent option makes the change persistent across reboots. The command firewall-cmd --zone=public --add-port=53/udp --permanent will modify the firewall on the server for the DNS forwarder to allow the internal servers to communicate to it and make the changes persistent between server reboots. This is the correct command to use to accomplish the task. The other options are incorrect because they either do not modify the firewall on the server for the DNS forwarder (ufw allow out dns or systemct1 reload firewalld) or do not use the correct syntax for the command (iptables -A OUTPUT -p udp -ra udp -dport 53 -j ACCEPT instead of iptables -A OUTPUT - p udp -ra udp --dport 53 -j ACCEPT). References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 12: Managing Network Connections, page 392.

NEW QUESTION 157
A new Linux systems administrator just generated a pair of SSH keys that should allow connection to the servers. Which of the following commands can be used to copy a key file to remote servers? (Choose two.)

A. wget
B. ssh-keygen
C. ssh-keyscan
D. ssh-copy-id
E. ftpd
F. scp

Answer: DF

Explanation:
The commands ssh-copy-id and scp can be used to copy a key file to remote servers. The command ssh-copy-id copies the public key to the authorized_keys file on the remote server, which allows the user to log in without a password. The command scp copies files securely over SSH, which can be used to transfer the key file to any location on the remote server. The other options are incorrect because they are not related to copying key files. The command wget downloads files from the web, the command ssh-keygen generates key pairs, the command ssh-keyscan collects public keys from remote hosts, and the command ftpd is a FTP server daemon. References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 13: Managing Network Services, pages 408-410.

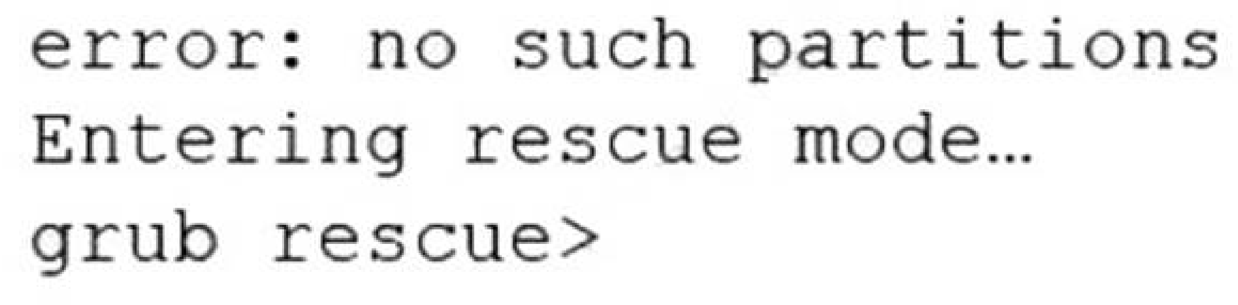
NEW QUESTION 161
A systems administrator was tasked with assigning the temporary IP address/netmask 192.168.168.1/255.255.255.255 to the interface eth0 of a Linux server.
When adding the address, the following error appears:
# ip address add 192.168.168.1/33 dev eth0
Error: any valid prefix is expected rather than "192.168.168.1/33".
Based on the command and its output above, which of the following is the cause of the issue?

A. The CIDR value /33 should be /32 instead.
B. There is no route to 192.168.168.1/33.
C. The interface eth0 does not exist.
D. The IP address 192.168.168.1 is already in use.

Answer: A

Explanation:
The cause of the issue is that the CIDR value /33 is invalid for an IPv4 address. The CIDR value represents the number of bits in the network prefix of an IP address, and it can range from 0 to 32 for IPv4 addresses. A CIDR value of /33 would imply a network prefix of more than 32 bits, which is impossible for an IPv4 address. To assign a temporary IP address/netmask of 192.168.168.1/255.255.255.255 to eth0, the CIDR value should be /32 instead, which means a network prefix of 32 bits and a host prefix of 0 bits. There is no route to 192.168.168.1/33 is not the cause of the issue, as the ip address add command does not check the routing table. The interface eth0 does not exist is not the cause of the issue, as the ip address add command would display a different error message if the interface does not exist. The IP address 192.168.168.1 is already in use is not the cause of the issue, as the ip address add command would display a different error message if the IP address is already in use. References: [CompTIA Linux+ (XK0-005) Certification Study Guide], Chapter 13: Networking Fundamentals, page 435.

NEW QUESTION 165
A Linux system is failing to boot with the following error:



```
error: no such partitions
Entering rescue mode...
grub rescue>
```

Which of the following actions will resolve this issue? (Choose two.)

A. Execute grub-install --root-directory=/mnt and reboot.
B. Execute grub-install /dev/sdX and reboot.
C. Interrupt the boot process in the GRUB menu and add rescue to the kernel line.
D. Fix the partition modifying /etc/default/grub and reboot.
E. Interrupt the boot process in the GRUB menu and add single to the kernel line.
F. Boot the system on a LiveCD/ISO.

Answer: BF

Explanation:
The administrator should do the following two actions to resolve the issue:
? Boot the system on a LiveCD/ISO. This is necessary to access the system and repair the boot loader. A LiveCD/ISO is a bootable media that contains a Linux distribution that can run without installation. The administrator can boot the system from the LiveCD/ISO and mount the root partition of the system to a temporary directory, such as /mnt.
? Execute grub-install /dev/sdX and reboot. This will reinstall the GRUB boot loader to the disk device, where sdX is the device name of the disk, such as sda or sdb. The GRUB boot loader is a program that runs when the system is powered on and allows the user to choose which operating system or kernel to boot. The issue is caused by a corrupted or missing GRUB boot loader, which prevents the system from booting. The command grub-install will restore the GRUB boot loader and fix the issue.
The other options are incorrect because they either do not fix the boot loader (interrupt the boot process in the GRUB menu or fix the partition modifying /etc/default/grub) or do not use the correct syntax (grub-install --root-directory=/mnt instead of grub-install /dev/sdX or rescue or single instead of recovery in the GRUB
menu). References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 8: Managing the Linux Boot Process, pages 265-266.

NEW QUESTION 166
A Linux administrator needs to connect securely to a remote server in order to install application software. Which of the following commands would allow this connection?

A. scp "ABC-key.pem" root@10.0.0.1
B. sftp rooteiO.0.0.1
C. telnet 10.0.0.1 80
D. ssh -i "ABC-key.pem" root@10.0.0.1
E. sftp "ABC-key.pem" root@10.0.0.1

Answer: D

Explanation:
The command ssh -i "ABC-key.pem" root@10.0.0.1 would allow the administrator to connect securely to the remote server in order to install application software. The ssh command is a tool for establishing secure and encrypted connections between remote systems. The -i option specifies the identity file that contains the private key for key-based authentication. The "ABC-key.pem" is the name of the identity file that contains the private key. The root@10.0.0.1 is the username and the IP address of the remote server. The command ssh -i "ABC-key.pem" root@10.0.0.1 will connect to the remote server using the private key and allow the administrator to install application software. This is the correct command to use to connect securely to the remote server. The other options are incorrect because they either do not use key-based authentication (sftp root@10.0.0.1 or telnet 10.0.0.1 80) or do not use the correct syntax for the command (scp "ABC-key.pem" root@10.0.0.1 instead of scp -i "ABC-key.pem" root@10.0.0.1 or sftp "ABC-key.pem" root@10.0.0.1 instead of sftp -i "ABC-key.pem" root@10.0.0.1). References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 17: Implementing Basic Security, page 513.

NEW QUESTION 167
A Linux administrator is creating a primary partition on the replacement hard drive for an application server. Which of the following commands should the administrator issue to verify the device name of this partition?

A. sudo fdisk /dev/sda
B. sudo fdisk -s /dev/sda
C. sudo fdisk -l
D. sudo fdisk -h

Answer: C

Explanation:
The command sudo fdisk -l should be issued to verify the device name of the partition. The sudo command allows the administrator to run commands as the superuser or another user. The fdisk command is a tool for manipulating disk partitions on Linux systems. The -l option lists the partitions on all disks or a specific disk. The command sudo fdisk -l will show the device names, sizes, types, and other information of the partitions on all disks. The administrator can identify the device name of the partition by looking at the output. This is the correct command to use to accomplish the task. The other options are incorrect because they either do not list the partitions (sudo fdisk /dev/sda or sudo fdisk -h) or do not exist (sudo fdisk -s /dev/sda). References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 10: Managing Storage, page 317.

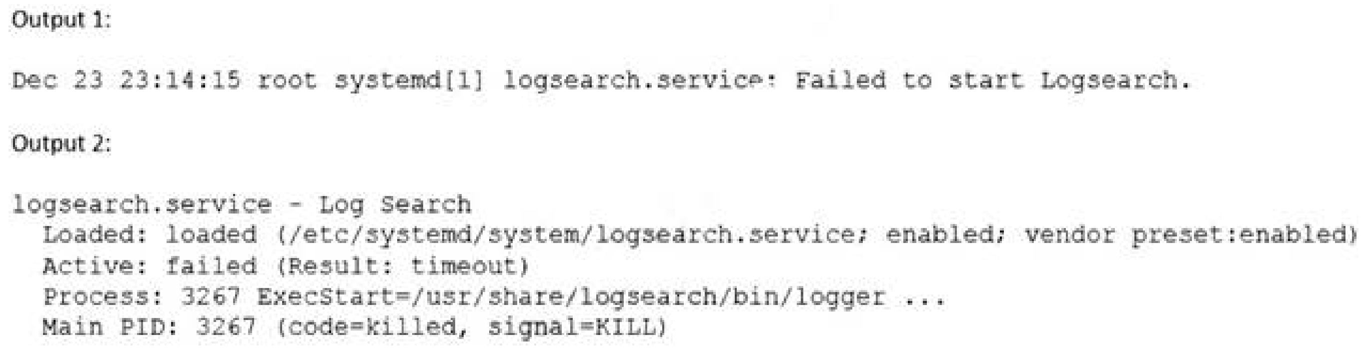
NEW QUESTION 171
A systems administrator creates a public key for authentication. Which of the following tools is most suitable to use when uploading the key to the remote servers?

A. scp
B. ssh-copy-id
C. ssh-agent
D. ssh-keyscan

Answer: B

Explanation:
The best tool to use when uploading the public key to the remote servers is
* B. ssh-copy-id. This tool will copy the public key from the local computer to the remote server and append it to the authorized_keys file, which is used for public key authentication. This tool will also create the necessary directories and files on the remote server if they do not exist. The other tools are either not suitable or not relevant for this task. For example:
? A. scp is a tool for securely copying files between hosts, but it does not
automatically add the public key to the authorized_keys file.
? C. ssh-agent is a tool for managing private keys and passphrases, but it does not upload the public key to the remote server.
? D. ssh-keyscan is a tool for collecting public keys from remote hosts, but it does not upload the public key to the remote server.

NEW QUESTION 173
A Linux administrator is troubleshooting an issue in which an application service failed to start on a Linux server. The administrator runs a few commands and gets the following outputs:



Output 1:

```
Dec 23 23:14:15 root systemd[1] logsearch.service: Failed to start Logsearch.
```

Output 2:

```
logsearch.service - Log Search
  Loaded: loaded (/etc/systemd/system/logsearch.service; enabled; vendor preset:enabled)
  Active: failed (Result: timeout)
  Process: 3267 ExecStart=/usr/share/logsearch/bin/logger ...
  Main PID: 3267 (code=killed, signal=KILL)
```

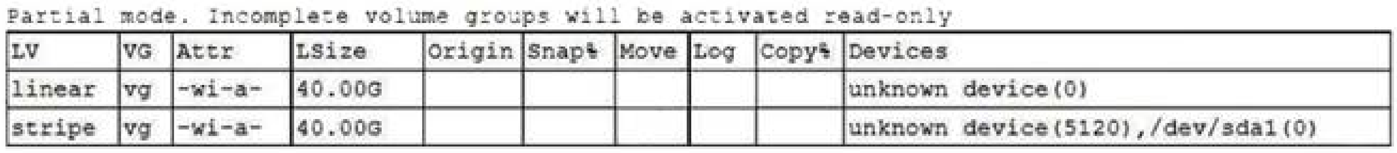
Based on the above outputs, which of the following is the MOST likely action the administrator should take to resolve this issue?

A. Enable the logsearch.service and restart the service.
B. Increase the TimeoutStartUSec configuration for the logsearch.sevice.
C. Update the OnCalendar configuration to schedule the start of the logsearch.service.
D. Update the KillSignal configuration for the logsearch.service to use TERM.

Answer: B

Explanation:
The administrator should increase the TimeoutStartUSec configuration for the logsearch.service to resolve the issue. The output of systemct1 status logsearch.service shows that the service failed to start due to a timeout. The output of cat /etc/systemd/system/logsearch.service shows that the service has a TimeoutStartUSec configuration of 10 seconds, which might be too short for the service to start. The administrator should increase this value to a higher number, such as 30 seconds or 1 minute, and then restart the service. The other options are incorrect because they are not related to the issue. The service is already enabled, as shown by the output of systemct1 is-enabled logsearch.service. The service does not use an OnCalendar configuration, as it is not a timer unit. The service does not use a KillSignal configuration, as it is not being killed by a signal. References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 14: Managing Processes and Scheduling Tasks, pages 434-435.

NEW QUESTION 178
One leg of an LVM-mirrored volume failed due to the underlying physical volume, and a systems administrator is troubleshooting the issue. The following output has been provided:



Partial mode. Incomplete volume groups will be activated read-only

LV	VG	Attr	LSize	Origin	Snap%	Move	Log	Copy%	Devices
linear	vg	-wi-a-	40.00G						unknown device(0)
stripe	vg	-wi-a-	40.00G						unknown device(5120),/dev/sda1(0)

Given this scenario, which of the following should the administrator do to recover this volume?

A. Reboot the serve

B. The volume will automatically go back to linear mode.
C. Replace the failed drive and reconfigure the mirror.
D. Reboot the serve
E. The volume will revert to stripe mode.
F. Recreate the logical volume.

Answer: B

Explanation:
The administrator should replace the failed drive and reconfigure the mirror to recover the volume. The LVM (Logical Volume Manager) is a tool for managing disk space on Linux systems. The LVM allows the administrator to create logical volumes that span across multiple physical volumes, such as hard disks or partitions. The LVM also supports different types of logical volumes, such as linear, striped, or mirrored. A mirrored logical volume is a type of logical volume that creates a copy of the data on another physical volume, providing redundancy and fault tolerance. The output shows that the logical volume is mirrored and that one leg of the mirror has failed due to the underlying physical volume. This means that one of the physical volumes that contains the data of the logical volume is damaged or missing. This can cause data loss and performance degradation. The administrator should replace the failed drive and reconfigure the mirror to recover the volume. The administrator should identify the failed physical volume by using commands such as pvdisplay, vgdisplay, or lvdisplay. The administrator should then remove the failed physical volume from the volume group by using the vgreduce command.
The administrator should then install a new drive and create a new physical volume by using the pvcreate command. The administrator should then add the new physical volume to the volume group by using the vgextend command. The administrator should then reconfigure the mirror by using the lvconvert command. The administrator should replace the failed drive and reconfigure the mirror to recover the volume. This is the correct answer to the question. The other options are incorrect because they either do not recover the volume (reboot the server. The volume will automatically go back to linear mode or reboot the server. The volume will revert to stripe mode) or do not preserve the data of the volume (recreate the logical volume). References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 10: Managing Storage, pages 333-334.

NEW QUESTION 180
A Linux engineer needs to download a ZIP file and wants to set the nice of value to -10 for this new process. Which of the following commands will help to accomplish the task?

A. $ nice -v -10 wget https://foo.com/installation.zip
B. $ renice -v -10 wget https://foo.com/installation.2ip
C. $ renice -10 wget https://foo.com/installation.zip
D. $ nice -10 wget https://foo.com/installation.zip

Answer: D

Explanation:
The nice -10 wget https://foo.com/installation.zip command will help to accomplish the task of downloading a ZIP file and setting the nice value to -10 for this new process. The nice command can be used to run a program with a modified scheduling priority, which affects how much CPU time the process receives. The nice value ranges from -20 (highest priority) to 19 (lowest priority), and the default value is 0. The -10 option specifies the nice value to be used for the wget command, which will download the ZIP file from the given URL. The nice -v -10 wget https://foo.com/installation.zip command is incorrect, as -v is not a valid option for nice. The renice -v -10 wget https://foo.com/installation.zip command is incorrect, as renice is used to change the priority of an existing process, not a new one. The renice -10 wget https://foo.com/installation.zip command is incorrect for the same reason as above. References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 15: Managing Memory and Process Execution, page 469.

NEW QUESTION 185
A Linux administrator recently downloaded a software package that is currently in a compressed file. Which of the following commands will extract the files?

A. unzip -v
B. bzip2 -z
C. gzip
D. funzip

Answer: C

Explanation:
The command gzip can extract files that are compressed with the gzip format, which has the extension .gz. This is the correct command to use for the software package. The other options are incorrect because they either compress files (bzip2 -z), unzip files that are compressed with the zip format (unzip -v or funzip), or have the wrong options (-v or -z instead of -d). References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 11: Managing Files and Directories, page 353.

NEW QUESTION 188
An administrator accidentally deleted the /boot/vmlinuz file and must resolve the issue before the server is rebooted. Which of the following commands should the administrator use to identify the correct
version of this file?

A. rpm -qa | grep kernel; uname -a
B. yum -y update; shutdown -r now
C. cat /etc/centos-release; rpm -Uvh --nodeps
D. telinit 1; restorecon -Rv /boot

Answer: A

Explanation:
The command rpm -qa | grep kernel lists all the installed kernel packages, and the command uname -a displays the current kernel version. These commands can help the administrator identify the correct version of the /boot/vmlinuz file, which is the kernel image file. The other options are not relevant or helpful for this task. References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 8: Managing the Linux Boot Process, page 267.

NEW QUESTION 192
A Linux system is having issues. Given the following outputs:

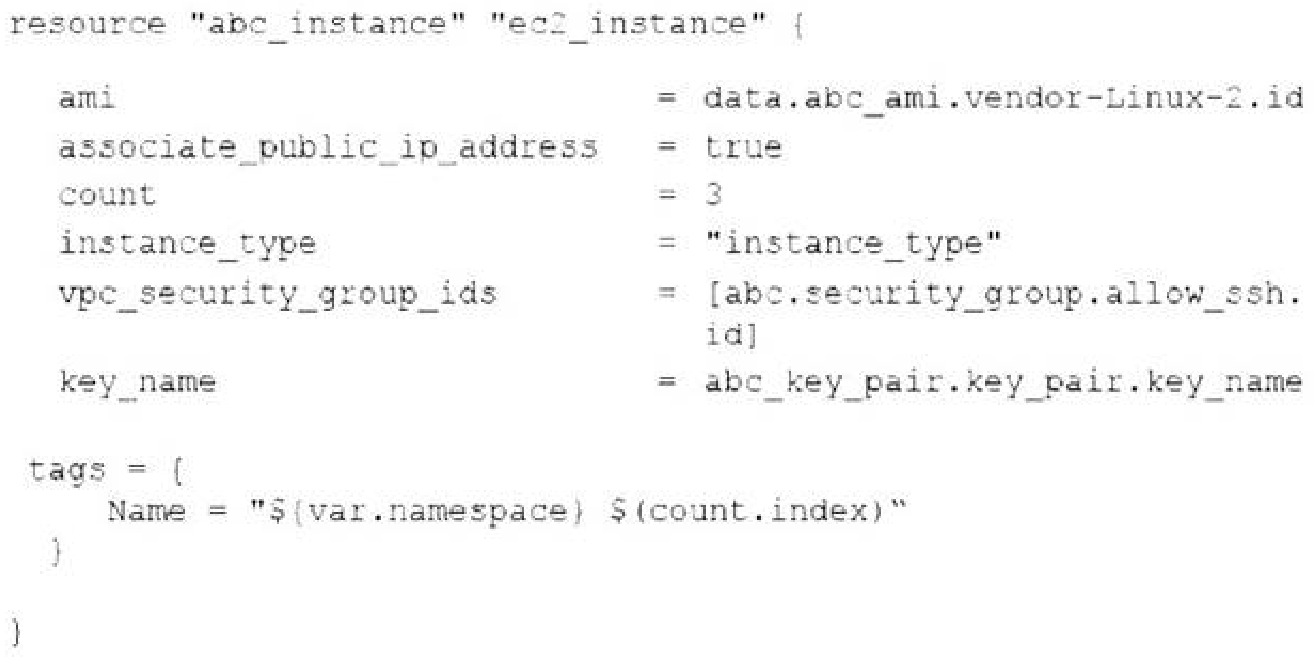
# dig @192.168.2.2 mycomptiahost
; << >> DiG 9.9.4-RedHat-9.9.4-74.el7_6.1 << >> @192.168.2.2 mycomptiahost
; (1 server found)
;; global options: +cmd
;; connection timed out; no servers could be reached
# nc -v 192.168.2.2 53
Ncat: Version 7.70 (https://nmap.org/ncat) Ncat: Connection timed out.
# ping 192.168.2.2
PING 192.168.2.2 (192.168.2.2) 56(84) bytes of data.
64 bytes from 192.168.2.2: icmp_seq=1 ttl=117 time=4.94 ms 64 bytes from 192.168.2.2: icmp_seq=2 ttl=117 time=10.5 ms Which of the following best describes this issue?

A. The DNS host is down.
B. The name mycomptiahost does not exist in the DNS.
C. The Linux engineer is using the wrong DNS port.
D. The DNS service is currently not available or the corresponding port is blocked.

Answer: D

Explanation:
The ping command shows that the Linux system can reach the DNS server at 192.168.2.2, so the DNS host is not down. The dig and nc commands show that the Linux system cannot connect to the DNS server on port 53, which is the standard port for DNS queries. This means that either the DNS service is not running on the DNS server, or there is a firewall or network device blocking the port 53 traffic. Therefore, the DNS service is currently not available or the corresponding port is blocked.References1: How To Troubleshoot DNS Client Issues in Linux - RootUsers2: 6 Best Tools to Troubleshoot DNS Issues in Linux - Tecmint3: How To Troubleshoot DNS in Linux - OrcaCore4: Fixing DNS Issues in Ubuntu 20.04 | DeviceTests

NEW QUESTION 195
A systems administrator is deploying three identical, cloud-based servers. The administrator is using the following code to complete the task:



```
resource "abc_instance" "ec2_instance" {

  ami                            = data.abc_ami.vendor-Linux-2.id
  associate_public_ip_address    = true
  count                          = 3
  instance_type                  = "instance_type"
  vpc_security_group_ids         = [abc.security_group.allow_ssh.
                                   id]
  key_name                       = abc_key_pair.key_pair.key_name

 tags = {
     Name = "${var.namespace} $(count.index)"
  }

}
```

Which of the following technologies is the administrator using?

A. Ansible
B. Puppet
C. Chef
D. Terraform

Answer: D

Explanation:
The code snippet is written in Terraform language, which is a tool for building, changing, and versioning infrastructure as code. Terraform uses a declarative syntax to describe the desired state of the infrastructure and applies the changes accordingly. The code defines a resource of type aws_instance, which creates an AWS EC2 instance, and sets the attributes such as the AMI ID, instance type, security group IDs, and key name. The code also uses a count parameter to create three identical instances and assigns them different names using the count.index variable. This is the correct technology that the administrator is using. The other options are incorrect because they use different languages and syntaxes for infrastructure as code. References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 19: Managing Cloud and Virtualization Technologies, page 559.

NEW QUESTION 196
An administrator needs to get network information from a group of statically assigned workstations before they are reconnected to the network. Which of the following should the administrator use to obtain this information?

A. ip show
B. ifcfg —a
C. ifcfg —s
D. i fname —s

Answer: B

Explanation:
The ifcfg command is used to configure network interfaces on Linux systems. The -a option displays information about all network interfaces, including their IP addresses, netmasks, gateways, and other parameters. This command can help the administrator obtain the network information from the statically assigned workstations before they are reconnected to the network. References: [Linux Networking: ifcfg Command With Examples]

NEW QUESTION 198
A systems administrator is trying to track down a rogue process that has a TCP listener on a network interface for remote command-and-control instructions. Which of the following commands should the systems administrator use to generate a list of rogue process names? (Select two).

A. netstat -antp | grep LISTEN
B. lsof -iTCP | grep LISTEN
C. lsof -i:22 | grep TCP
D. netstat -a | grep TCP
E. nmap -p1-65535 | grep -i tcp
F. nmap -sS 0.0.0.0/0

Answer: AB

Explanation:
The best commands to use to generate a list of rogue process names that have a TCP listener on a network interface are A. netstat -antp | grep LISTEN and B. lsof -iTCP | grep LISTEN. These commands will show the process ID (PID) and name of the processes that are listening on TCP ports, which can be used to identify any suspicious or unauthorized processes. The other commands are either not specific enough, not valid, or not relevant for this task. For example:
? C. lsof -i:22 | grep TCP will only show the processes that are listening on port 22, which is typically used for SSH, and not any other ports.
? D. netstat -a | grep TCP will show all the TCP connections, both active and listening, but not the process names or IDs.
? E. nmap -p1-65535 | grep -i tcp will scan all the TCP ports on the local host, but not show the process names or IDs.
? F. nmap -sS 0.0.0.0/0 will perform a stealth scan on the entire internet, which is not only impractical, but also illegal in some countries.

NEW QUESTION 201
A junior systems administrator has just generated public and private authentication keys for passwordless login. Which of the following files will be moved to the remote servers?

A. id_dsa.pem
B. id_rsa
C. id_ecdsa
D. id_rsa.pub

Answer: D

Explanation:
The file id_rsa.pub will be moved to the remote servers for passwordless login. The id_rsa.pub file is the public authentication key that is generated by the ssh-keygen command. The public key can be copied to the remote servers by using the ssh- copy-id command or manually. The remote servers will use the public key to authenticate the user who has the corresponding private key (id_rsa). This will allow the user to log in without entering a password. The other options are incorrect because they are either private keys (id_rsa, id_dsa.pem, or id_ecdsa) or non-existent files (id_dsa.pem or id_ecdsa). References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 13: Managing Network Services, page 410.

NEW QUESTION 202
A systems administrator is tasked with changing the default shell of a system account in order to disable iterative logins. Which of the following is the best option for the administrator to use as the new shell?

A. /sbin/nologin
B. /bin/ sh
C. /sbin/ setenforce
D. /bin/bash

Answer: A

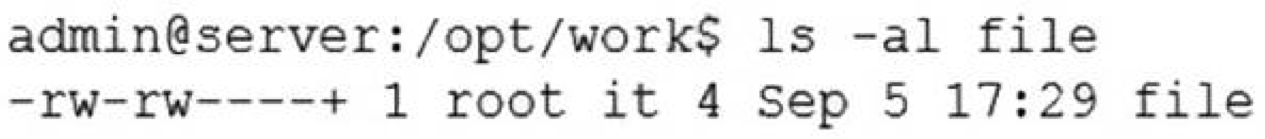
Explanation:
The /sbin/nologin shell is a special shell that prevents the user from logging into an interactive session. It is commonly used for system accounts that are not meant to be accessed by users, such as daemon or service accounts. When a user tries to log in with this shell, they will see a message like “This account is currently not available” and the login will fail.
References:
? The /sbin/nologin shell is listed as one of the valid shells in the /etc/shells file1.
? The CompTIA Linux+ Certification Exam Objectives mention that the candidate should be able to “configure and manage system accounts and groups, including password aging and restricted shells” as part of the Hardware and System Configuration domain2.
? The usermod command can be used to change the user’s login shell with the -s or --shell option3. For example, to change the shell of a user named daemon to /sbin/nologin, the command would be: sudo usermod -s /sbin/nologin daemon

NEW QUESTION 205
A systems administrator is installing various software packages using a pack-age manager. Which of the following commands would the administrator use on the Linux server to install the package?

A. winget
B. softwareupdate
C. yum-config
D. apt

Answer: D

NEW QUESTION 206
Employees in the finance department are having trouble accessing the file /opt/work/file. All IT employees can read and write the file. Systems administrator reviews the following output:



```
admin@server:/opt/work$ ls -al file
-rw-rw----+ 1 root it 4 Sep 5 17:29 file
```

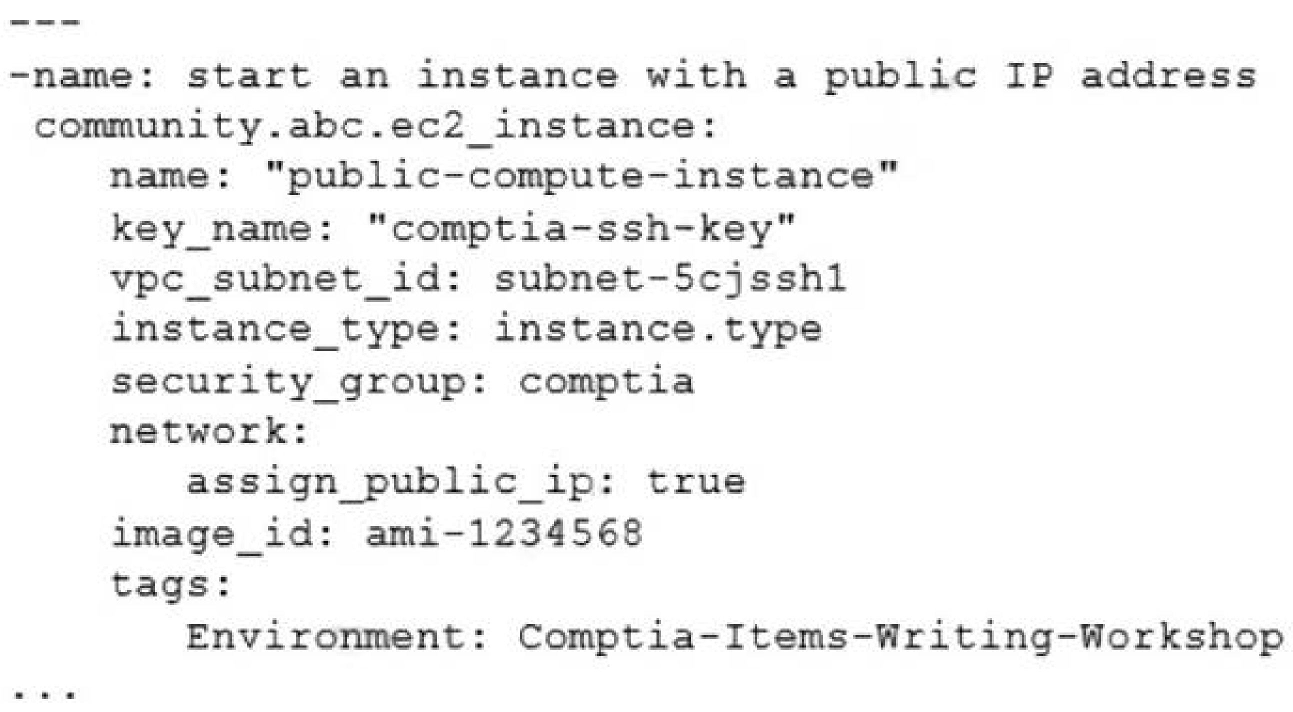
Which of the following commands would permanently fix the access issue while limiting access to IT and finance department employees?

A. chattr +i file
B. chown it:finance file
C. chmod 666 file
D. setfacl -m g:finance:rw file

Answer: D

Explanation:
The command setfacl -m g:finance:rw file will permanently fix the access issue while limiting access to IT and finance department employees. The setfacl command is a tool for modifying the access control lists (ACLs) of files and directories on Linux systems. The ACLs are a mechanism that allows more fine-grained control over the permissions of files and directories than the traditional owner-group-others model. The - m option specifies the modification to the ACL. The g:finance:rw means that the group named finance will have read and write permissions on the file. The file is the name of the file to modify, in this case /opt/work/file. The command setfacl -m g:finance:rw file will add an entry to the ACL of the file that will grant read and write access to the finance group.
This will fix the access issue and allow the finance employees to access the file. The command will also preserve the existing permissions of the file, which means that the IT employees will still have read and write access to the file. This will limit the access to IT and finance department employees and prevent unauthorized access from other users.
This is the correct command to use to accomplish the task. The other options are incorrect because they either do not fix the access issue (chattr +i file or chown it:finance file) or do not limit the access to IT and finance department employees (chmod 666 file). References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 11: Managing File Permissions and Ownership, page 352.

NEW QUESTION 211
A systems administrator is tasked with creating a cloud-based server with a public IP address.



```
---
-name: start an instance with a public IP address
 community.abc.ec2_instance:
    name: "public-compute-instance"
    key_name: "comptia-ssh-key"
    vpc_subnet_id: subnet-5cjssh1
    instance_type: instance.type
    security_group: comptia
    network:
       assign_public_ip: true
    image_id: ami-1234568
    tags:
       Environment: Comptia-Items-Writing-Workshop
...
```

Which of the following technologies did the systems administrator use to complete this task?

A. Puppet
B. Git
C. Ansible
D. Terraform

Answer: D

Explanation:
The systems administrator used Terraform to create a cloud-based server with a public IP address. Terraform is a tool for building, changing, and versioning infrastructure as code. Terraform can create and manage resources on different cloud platforms, such as AWS, Azure, or Google Cloud. Terraform uses a declarative syntax to describe the desired state of the infrastructure and applies the changes accordingly. Terraform can also assign a public IP address to a cloud server by using the appropriate resource attributes. This is the correct technology that the systems administrator used to complete the task. The other options are incorrect because they are either not designed for creating cloud servers (Puppet or Git) or not capable of assigning public IP addresses (Ansible). References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 19: Managing Cloud and Virtualization Technologies, page 559.

NEW QUESTION 214
After listing the properties of a system account, a systems administrator wants to remove the expiration date of a user account. Which of the following commands will accomplish this task?

A. chgrp system accountname
B. passwd –s accountname
C. chmod -G system account name
D. chage -E -1 accountname

Answer: D

Explanation:
The command chage -E -1 accountname will accomplish the task of removing the expiration date of a user account. The chage command is a tool for changing user password aging information on Linux systems. The -E option sets the expiration date of the user account, and the -1 value means that the account will never expire. The command chage -E -1 accountname will remove the expiration date of the user account named accountname. This is the correct command to use to accomplish the task. The
other options are incorrect because they either do not affect the expiration date
(chgrp, passwd, or chmod) or do not exist (chmod -G). References: CompTIA Linux+ (XK0-
005) Certification Study Guide, Chapter 15: Managing Users and Groups, page 467.

NEW QUESTION 216
A DevOps engineer is working on a local copy of a Git repository. The engineer would like to switch from the main branch to the staging branch but notices the staging branch does not exist. Which of the following Git commands should the engineer use to perform this task?

A. git branch —m staging
B. git commit —m staging
C. git status —b staging
D. git checkout —b staging

Answer: D

Explanation:
The correct answer is D. git checkout -b staging
This command will create a new branch named staging and switch to it. The git checkout command is used to switch between branches or restore files from a specific branch. The - b option is used to create a new branch if it does not exist. For example, git checkout -b staging will create and switch to the staging branch.
The other options are incorrect because:
* A. git branch -m staging
This command will rename the current branch to staging, not switch to it. The git branch command is used to list, create, or delete branches. The -m option is used to rename a branch. For example, git branch -m staging will rename the current branch to staging.
* B. git commit -m staging
This command will commit the changes in the working tree to the current branch with a message of staging, not switch to it. The git commit command is used to record changes to the repository. The -m option is used to specify a commit message. For example, git commit -m staging will commit the changes with a message of staging.
* C. git status -b staging
This command will show the status of the working tree and the current branch, not switch to it. The git status command is used to show the state of the working tree and the staged changes. The -b option is used to show the name of the current branch. However, this option does not take an argument, so specifying staging after it will cause an error. References:
? Git - git-checkout Documentation
? Git Tutorial: Create a New Branch With Git Checkout
? Git Branching - Basic Branching and Merging

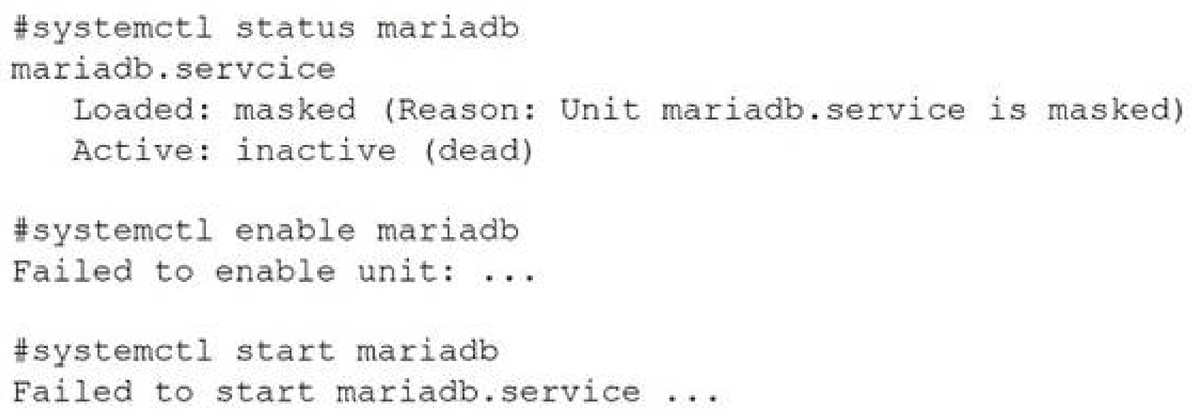
NEW QUESTION 221
A DevOps engineer needs to allow incoming traffic to ports in the range of 4000 to 5000 on a Linux server. Which of the following commands will enforce this rule?

A. iptables -f filter -I INPUT -p tcp --dport 4000:5000 -A ACCEPT
B. iptables -t filter -A INPUT -p tcp --dport 4000:5000 -j ACCEPT
C. iptables filter -A INPUT -p tcp --dport 4000:5000 -D ACCEPT
D. iptables filter -S INPUT -p tcp --dport 4000:5000 -A ACCEPT

Answer: B

Explanation:
The command iptables -t filter -A INPUT -p tcp --dport 4000:5000 -j ACCEPT will enforce the rule of allowing incoming traffic to ports in the range of 4000 to 5000 on a Linux server. The iptables command is a tool for managing firewall rules on Linux systems. The -t option specifies the table to operate on, in this case filter, which is the default table that contains the rules for filtering packets. The -A option appends a new rule to the end of a chain, in this case INPUT, which is the chain that processes the packets that are destined for the local system. The -p option specifies the protocol to match, in this case tcp, which is the transmission control protocol. The --dport option specifies the destination port or port range to match, in this case 4000:5000, which is the range of ports from 4000 to 5000. The -j option specifies the target to jump to if the rule matches, in this case ACCEPT, which is the target that allows the packet to pass through.
The command iptables -t filter -A INPUT -p tcp --dport 4000:5000 -j ACCEPT will add a new rule to the end of the INPUT chain that will accept the incoming TCP packets that have a destination port between 4000 and 5000. This command will enforce the rule and allow the traffic to the specified ports. This is the correct command to use to accomplish the task. The other options are incorrect because they either use the wrong options (-f instead of - t or -D instead of -A) or do not exist (iptables filter -A INPUT -p tcp --dport 4000:5000 -D ACCEPT or iptables filter -S INPUT -p tcp --dport 4000:5000 -A ACCEPT). References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 18: Securing Linux Systems, page 543.

NEW QUESTION 222
A Linux administrator is trying to start the database service on a Linux server but is not able to run it. The administrator executes a few commands and receives the following output:



```
#systemctl status mariadb
mariadb.servcice
   Loaded: masked (Reason: Unit mariadb.service is masked)
   Active: inactive (dead)

#systemctl enable mariadb
Failed to enable unit: ...

#systemctl start mariadb
Failed to start mariadb.service ...
```

Which of the following should the administrator run to resolve this issue? (Select two).

A. systemctl unmask mariadb
B. journalctl —g mariadb
C. dnf reinstall mariadb
D. systemctl start mariadb
E. chkconfig mariadb on
F. service mariadb reload

Answer: AD

Explanation:
These commands will unmask the mariadb service, which is currently prevented from starting, and then start it normally. The other commands are either not relevant, not valid, or not sufficient for this task. For more information on how to manage masked services with systemctl, you can refer to the web search result 1.

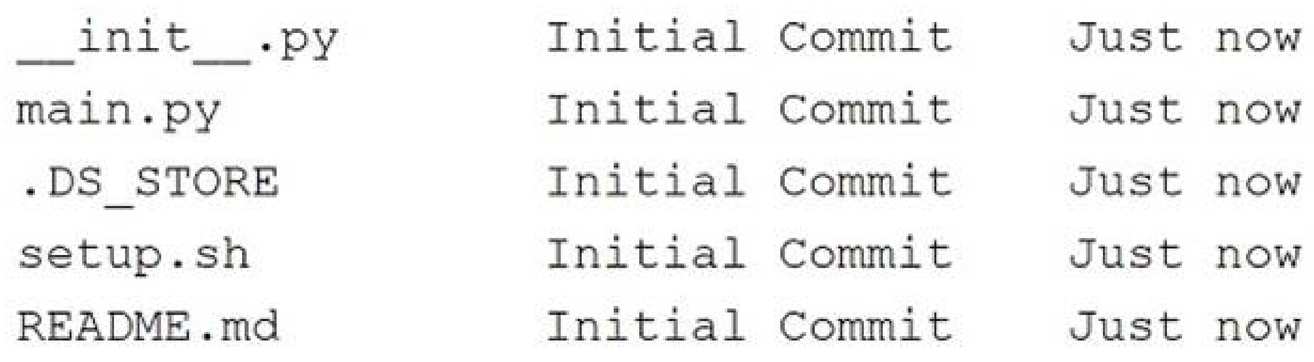
NEW QUESTION 226
A Linux administrator has been tasked with installing the most recent versions of packages on a RPM-based OS. Which of the following commands will accomplish this task?

A. apt-get upgrade
B. rpm -a
C. yum updateinfo
D. dnf update
E. yum check-update

Answer: D

Explanation:
The dnf update command will accomplish the task of installing the most recent versions of packages on a RPM-based OS. This command will check for available updates from the enabled repositories and apply them to the system. The apt-get upgrade command is used to install updates on a Debian-based OS, not a RPM-based OS. The rpm -a command is invalid, as -a is not a valid option for rpm. The yum updateinfo command will display information about available updates, but it will not install them. The yum check- update command will check for available updates, but it will not install them. References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 19: Managing Packages and Software, page 559.

NEW QUESTION 227
An administrator created an initial Git repository and uploaded the first files. The administrator sees the following when listing the repository:



```
__init__.py      Initial Commit    Just now
main.py          Initial Commit    Just now
.DS_STORE        Initial Commit    Just now
setup.sh         Initial Commit    Just now
README.md        Initial Commit    Just now
```

The administrator notices the file . DS STORE should not be included and deletes it from the online repository. Which of the following should the administrator run from the root of the local repository before the next commit to ensure the file is not uploaded again in future commits?

A. rm -f .DS STORE && git push
B. git fetch && git checkout .DS STORE
C. rm -f .DS STORE && git rebase origin main
D. echo .DS STORE >> .gitignore

Answer: D

Explanation:
The correct answer is D. The administrator should run “echo .DS STORE >> .gitignore” from the root of the local repository before the next commit to ensure the file is not uploaded again in future commits.
This command will append the file name .DS STORE to the end of the .gitignore file, which is a special file that tells Git to ignore certain files or directories that should not be tracked or uploaded to the repository. By adding .DS STORE to the .gitignore file, the administrator will prevent Git from staging, committing, or pushing this file in the future.
The other options are incorrect because:
* A. rm -f .DS STORE && git push
This command will delete the file .DS STORE from the local repository and then push the changes to the remote repository. However, this does not prevent the file from being uploaded again in future commits, if it is recreated or copied to the local repository.
* B. git fetch && git checkout .DS STORE
This command will fetch the latest changes from the remote repository and then restore the file .DS STORE from the remote repository to the local repository. This is not what the administrator wants to do, as this will undo the deletion of the file from the online repository.
* C. rm -f .DS STORE && git rebase origin main
This command will delete the file .DS STORE from the local repository and then rebase the local branch onto the main branch of the remote repository. This will rewrite the commit history of the local branch and may cause conflicts or errors. This is not what the administrator wants to do, as this is a risky and unnecessary operation.

NEW QUESTION 228
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