

CompTIA.XK0-006.v2026-10-24.q87

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NEW QUESTION: 1

A systems administrator manages multiple Linux servers and needs to set up a reliable and secure way to handle the complexity of managing event records on the OS and application levels. Which of the following should the administrator do?

- A. Configure daily automatic backups of logs to remote storage.
- B. Deploy log rotation procedures to manage the records.
- C. Create an automated process to retrieve logs from the server by demand.
- D. Implement a centralized log aggregation solution.

Answer: (SHOW ANSWER)

NEW QUESTION: 2

A systems administrator attempts to edit a file as root, but receives the following error:

```
E212: Cannot open file for writing

# ls -l /etc/resolv.conf
-rw-----. 1 root admin 141 May 30 11:00 /etc/resolv.conf

# lsattr /etc/resolv.conf
----i----- /etc/resolv.conf
```

Which of the following commands allows the administrator to edit the file?

- A. chown root /etc/resolv.conf
- B. chattr -i /etc/resolv.conf
- C. chmod 750 /etc/resolv.conf
- D. chgrp root /etc/resolv.conf

Answer: (SHOW ANSWER)

The lsattr output shows the immutable (i) attribute set on /etc/resolv.conf. This prevents any modifications, even by root. Running chattr -i removes the immutable flag, allowing the administrator to edit the file.

NEW QUESTION: 3

Which of the following can reduce the attack surface area in relation to Linux hardening?

- A. Customizing the log-in banner
- B. Reducing the number of directories created
- C. Extending the SSH startup timeout period
- D. Enforcing password strength and complexity

Answer: ([SHOW ANSWER](#))

Reducing the attack surface area in Linux hardening refers to limiting possible points of unauthorized access. According to the CompTIA Linux+ Official Study Guide (Exam XK0-006), enforcing strong password policies is a critical aspect of security hardening. This practice ensures that user accounts are protected by passwords that are difficult to guess or crack, thus minimizing the risk of successful brute-force attacks. Implementing password complexity requirements (such as minimum length, use of uppercase, lowercase, numbers, and special characters) directly addresses one of the primary vectors for unauthorized access.

NEW QUESTION: 4

A Linux user needs to authenticate to a Windows Active Directory domain. Which of the following configuration files contains the domain configuration details?

- A. sssd.conf
- B. krb5.conf
- C. pam.conf
- D. smb.conf

Answer: ([SHOW ANSWER](#))

In modern Linux enterprise environments, integrating with Windows Active Directory (AD) is a common requirement for centralized identity management. According to CompTIA Linux+ V8, the System Security Services Daemon (SSSD) is the recommended way to handle authentication and authorization against remote providers like AD or LDAP.

The sssd.conf file (typically located in /etc/sss/) is the primary configuration file for this service. It contains the essential "domain configuration details," including:

The AD domain name.

The authentication provider (e.g., id_provider = ad).

The URI of the domain controllers.

Caching settings for offline login.

SSSD provides a unified interface that manages the communication between the Linux system and the AD domain, simplifying the authentication stack.

NEW QUESTION: 5

Which of the following does dmesgdisplay?

- A. Incorrect login attempts
- B. "Session closed" messages
- C. Window manager warnings
- D. USB device connections

Answer: ([SHOW ANSWER](#))

This command displays kernel ring buffer messages, which include hardware-related events such as device initialization and USB device connections.

NEW QUESTION: 6

Which of the following allows modules to be used in Python scripts?

- A. __init__
- B. import
- C. __name__

D. det

Answer: ([SHOW ANSWER](#))

This statement makes functions, classes, and variables from a module available for use within a Python script, enabling modular and reusable code.

NEW QUESTION: 7

An administrator has generated an RSA SSH key pair to log in to a remote server. After copying the public key and attempting to log in, the administrator sees the following message:

admin@192.168.10.50: Permission denied (publickey,password)

After seeing the message, the administrator attempts to connect using `ssh -v admin@192.168.10.50` and notices the following debug output:

debug1: send_pubkey_test: no mutual signature algorithm

Which of the following actions should the administrator take first to remediate this issue?

A. Issue `systemctl restart sshd` on the local server.

B. Set `PermitRootLogin yes` in the `/etc/ssh/sshd_config` file.

C. Update permissions on the `/home/admin/.ssh` directory to 700 on the remote server.

D. Create a new key pair by running `ssh-keygen -t ecdsa`.

Answer: ([SHOW ANSWER](#))

NEW QUESTION: 8

An administrator thinks that the user Joe may be running an unauthorized process on a Linux server. Which of the following commands should the administrator run to confirm this idea?

A. `lsf -p 'Joe'`

B. `top -u 'Joe'`

C. `jobs -n 'Joe'`

D. `ps -ax 'Joe'`

Answer: ([SHOW ANSWER](#))

`top -u Joe` filters the process display to only show processes owned by user Joe, allowing the administrator to see if Joe is running any unauthorized processes.

NEW QUESTION: 9

An administrator receives reports that a web service is not responding. The administrator reviews the following outputs:

```

echo $PWD
/etc/pki/nginx

ls -lRt
:
total 8
lrwxr-xr-x. 2 root root 6 Jul 10 10:57 private
-rw-r--r--. 1 root root 895 Jul 10 10:56 server.crt
-rw-----. 1 root root 227 Jul 10 10:56 server.key
/private:
total 0

sudo systemctl status nginx
nginx.service - The nginx HTTP and reverse proxy server
  Loaded: loaded (/usr/lib/systemd/system/nginx.service; disabled; preset: disabled)
  Active: failed (Result: exit-code) since Wed 2023-11-01 06:56:51 EDT; 6s ago
  Process: 110551 ExecStartPre=/usr/bin/rm -f /run/nginx.pid (code=exited, status=0/SUCCESS)
  Process: 110552 ExecStartPre=/usr/sbin/nginx -t (code=exited, status=1/FAILURE)
  CPU: 144ms

Nov 01 06:56:51 webserver systemd[1]: Starting nginx.service - The nginx HTTP and reverse proxy server...
Nov 01 06:56:51 webserver nginx[110552]: nginx: [emerg] cannot load certificate key "/etc/pki/nginx/private/server.key": BIO_new_file() failed (SSL: error:80000002:system
library::No such file or directory:calli>
Nov 01 06:56:51 webserver nginx[110552]: nginx: configuration file /etc/nginx/nginx.conf test failed
Nov 01 06:56:51 webserver systemd[1]: nginx.service: Control process exited, code=exited, status=1/FAILURE
Nov 01 06:56:51 webserver systemd[1]: nginx.service: Failed with result 'exit-code'.
Nov 01 06:56:51 webserver systemd[1]: Failed to start nginx.service - The nginx HTTP and reverse proxy server.

```

Which of the following is the reason the web service is not responding?

- A. The private key needs to be renamed from server.crt to server.key so the service can find it.
- B. The private key does not match the public key, and both keys should be replaced.
- C. The private key is not in the correct location and needs to be moved to the correct directory.
- D. The private key has the incorrect permissions and should be changed to 0755 for the service.

Answer: ([SHOW ANSWER](#))

The error log shows "cannot load certificate key /etc/pki/nginx/private/server.key", but the listing reveals that server.key is located in /etc/pki/nginx/ rather than the expected /etc/pki/nginx/private/ directory. Since the file exists but not where Nginx is configured to look, moving it to the correct directory resolves the issue.

NEW QUESTION: 10

A systems administrator is developing a script to copy a file if it exists and return an error if it does not. Given the following incomplete script:

```

#!/bin/bash
if [ -f /home/user1/file.txt ]
then
    cp /home/user1/file.txt /var/log/
    echo "File not found"
fi

```

Which of the following statements is missing from the script?

- A. while
- B. done
- C. else
- D. for

Answer: ([SHOW ANSWER](#))

An else statement is required to handle the condition when the file does not exist so the script can return the error message instead of attempting the copy operation.

NEW QUESTION: 11

A Linux systems administrator is running an important maintenance task that consumes a large amount of CPU, causing other applications to slow. Which of the following actions should the administrator take to help alleviate the issue?

- A.** Increase the available CPU time with `pidstat`.
- B.** Lower the priority of the maintenance task with `renice`.
- C.** Run the maintenance task with `nohup`.
- D.** Execute the other applications with the `bg` utility.

Answer: ([SHOW ANSWER](#))

The `renice` command adjusts the priority of a running process. By lowering the maintenance task's priority, the scheduler allocates more CPU time to other applications, reducing their slowdown.

NEW QUESTION: 12

Due to application compatibility issues, the Python 3 OpenSSL library should not be upgraded.

Which of the following commands should the systems administrator use to ensure the package stays at the current version?

- A.** `dpkg --hold python3-openssl`
- B.** `apt set-selections python3-openssl`
- C.** `apt-mark hold python3-openssl`
- D.** `echo "python3-openssl > hold" | apt set-selections`

Answer: ([SHOW ANSWER](#))

This command places the specified package on hold, preventing it from being upgraded during system updates while allowing other packages to be updated normally.

NEW QUESTION: 13

A systems administrator is deploying a new secure web server but is having issues starting it.

The administrator reviews the following outputs:

```
systemctl status --no-pager httpd
httpd.service - The Apache HTTP Server
Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; vendor preset: disabled)
Active: failed (Result: exit-code) since Tue 2024-07-09 12:30:05 EDT; 2min 30s ago
Main PID: 12233 (httpd)
Process: 12233 ExecReload=/usr/sbin/httpd $OPTIONS -k graceful (code=exited, status=0/SUCCESS)
...
Jul 09 12:30:05 node.comptia.com systemd[1]: httpd.service: Succeeded.
Jul 09 12:30:05 node.comptia.com systemd[1]: Stopped The Apache HTTP Server.
Jul 09 12:30:05 node.comptia.com systemd[1]: Starting The Apache HTTP Server...
Jul 09 12:30:05 node.comptia.com httpd[12233]: (13)Permission denied: AH00072: make_sock: could not bind to address
::]:1234

setenforce
enforcing

semanage port -l
...
http_port_t tcp 80, 81, 443, 488, 8008, 8009, 8443, 9000
egadus_http_port_t tcp 5988

getsebool -a
...
httpd_can_network_connect --> on
httpd_can_network_connect_cobbler --> off
httpd_can_network_connect_db --> on
```

Which of the following commands fixes this issue while following security best practices?

- A. setsebool -P http_port_t 1234
- B. setenforce 0
- C. semanage -a -t http_port_t -p tcp 1234
- D. systemctl unmask httpd

Answer: (SHOW ANSWER)

The web server is running with SELinux in enforcing mode, and Apache is denied permission to bind to TCP port 1234 because that port is not labeled for HTTP services. Adding port 1234 to the http_port_t SELinux type allows Apache to bind to the port while keeping SELinux enforcing, which follows security best practices.

NEW QUESTION: 14

While reviewing local accounts on a server, a Linux administrator discovers that multiple users have not changed their passwords in more than a year. Which of the following commands should the administrator execute to bring the users' accounts into compliance with the 90-day guideline?

- A. chage -M 90
- B. usermod -aG 90
- C. passwd -d 90
- D. loginctl -H 90

Answer: (SHOW ANSWER)

The chage command is used to manage password aging policies, and setting the maximum password age to 90 days enforces the required password change interval for user accounts.

NEW QUESTION: 15

A systems administrator needs to restore a backup to the /usr/app/data directory. Which of the following commands should the administrator use for this task?

- A. tar -xvzf /tmp/backup.tar.gz -C /usr/app/data
- B. tar -xvf /tmp/backup.tar.gz /usr/app/data
- C. tar -xvzf /usr/app/data /tmp/backup.tar.gz
- D. tar -xvzf /tmp/backup.tar.gz > /usr/app/data

Answer: (SHOW ANSWER)

The tar (tape archive) utility is the standard tool for archiving and compressing files in Linux.

According to CompTIA Linux+ V8 objectives, administrators must be proficient in extracting data into specific target locations. The command tar -xvzf /tmp/backup.tar.gz -C /usr/app/data is the correct syntax for this operation.

The flags used in the command provide the following functionality:

- x: Instructs tar to extract the contents of the archive.
- v: Enables verbose output, showing the files as they are being extracted.
- z: Tells tar to filter the archive through gzip for decompression (required for .tar.gz files).
- f: Specifies the filename of the archive to be processed (/tmp/backup.tar.gz).
- C: Changes the directory to the specified path (/usr/app/data) before performing the extraction.

Using the -C flag is the most efficient and recommended way to restore a backup to a directory other than the current working directory. Without this flag, tar would extract the files into the current directory, which might not be the intended destination and could clutter the filesystem.

NEW QUESTION: 16

After receiving a monitoring call, an administrator checks the Linux server for processes that have completed execution but have not been removed yet from the process table. Which of the following represents the process state for which the administrator should search?

- A. Z
- B. S
- C. D
- D. T

Answer: A (LEAVE A REPLY)

This process state represents zombie processes, which have finished execution but still remain in the process table because their parent process has not yet read their exit status.

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NEW QUESTION: 17

A systems administrator is experiencing local network connectivity issues. The administrator gathers the following outputs:

```
# ping 192.168.15.25
PING 192.168.15.25 (192.168.15.25) 56(84) bytes of data.
^C
--- 192.168.15.25 ping statistics ---
62 packets transmitted, 0 received, 100% packet loss, time 62475ms

# curl -I http://192.168.15.25/test.txt
HTTP/2.0 403
```

Which of the following conclusions can the systems administrator make?

- A. The remote server is denying TCP traffic on port 8.
- B. The web server must be restarted
- C. The remote server is blocking ICMP requests.
- D. The remote server is configured to only use IPv6.

Answer: ([SHOW ANSWER](#))

The ping test shows 100% packet loss, indicating that ICMP echo requests are not being answered, while the HTTP request successfully reaches the server and returns a response. This confirms that the remote server is reachable but is configured to block ICMP requests.

NEW QUESTION: 18

A systems administrator is configuring new Linux systems and needs to enable passwordless authentication between two of the servers. Which of the following commands should the administrator use?

- A. `ssh-keygen -t rsa && ssh-copy-id -i ~/.ssh/id_rsa.pub john@server2`
- B. `ssh-keyscan -t rsa && ssh-copy-id john@server2 -i ~/.ssh/key`
- C. `ssh-agent -i rsa && ssh-copy-id ~/.ssh/key john@server2`
- D. `ssh-add -t rsa && scp -rp ~/.ssh john@server2`

Answer: ([SHOW ANSWER](#))

This command generates an SSH key pair and securely copies the public key to the remote server, enabling passwordless authentication by allowing key-based SSH login between the systems.

NEW QUESTION: 19

A systems administrator is working on an SFTP server configuration. Which of the following commands will best enable the connectivity to that service from the 10.10.0.0/24 network?

- A. `sudo ufw allow from 10.10.0.0/24 to any port 22`
- B. `sudo ufw allow in on eth0 to any port 22`
- C. `sudo ufw allow from 10.10.0.0/24`
- D. `sudo ufw allow 0:22/tcp from 10.10.0.0`

Answer: ([SHOW ANSWER](#))

The command `sudo ufw allow from 10.10.0.0/24 to any port 22` explicitly opens TCP port 22 (used by SFTP/SSH) only for hosts in the 10.10.0.0/24 network.

NEW QUESTION: 20

An administrator is testing whether an application on a server is available remotely under the IP address 192.168.88.188 on port 5000. Which of the following commands should the administrator use to verify the connectivity?

- A. `nc -v 192.168.88.188 5000`
- B. `ssh 192.168.88.188 -P 5000`
- C. `tcpdump 'host 192.168.88.188 and port 5000'`

D. traceroute 192.168.88.188:5000

Answer: ([SHOW ANSWER](#))

The netcat command can actively attempt a TCP connection to a specific IP address and port, making it suitable for verifying whether the application is reachable and listening on port 5000 from a remote system.

NEW QUESTION: 21

On a Kubernetes cluster, which of the following resources should be created in order to expose a port so it is publicly accessible on the internet?

A. Deployment

B. Network

C. Service

D. Pod

Answer: ([SHOW ANSWER](#))

Container orchestration concepts are part of the Automation and Orchestration domain in Linux+ V8. In Kubernetes, workloads run inside Pods, but Pods are not directly accessible from outside the cluster.

To expose an application externally, a Service resource must be created. Services provide a stable network endpoint and can be configured as NodePort, LoadBalancer, or ClusterIP. Public exposure is typically achieved using NodePort or LoadBalancer types.

Option C, Service, is correct. Deployments manage Pods, but they do not handle networking exposure. Pods represent running containers but lack external accessibility by default. "Network" is not a valid Kubernetes resource type.

Linux+ V8 documentation highlights Services as the mechanism for exposing containerized applications. Therefore, the correct answer is C.

NEW QUESTION: 22

Which of the following is the best way to create a non-interactive account in a Linux system?

A. With no elevated privileges

B. By using adduser with no password

C. With no home directory

D. With the shell set to /sbin/nologin

Answer: ([SHOW ANSWER](#))

Setting the user's shell to /sbin/nologin prevents interactive logins while still allowing the account to exist for services or background processes, which is the standard method for creating non- interactive accounts.

NEW QUESTION: 23

An administrator receives a report that a user is unable to execute the run report utility that is used to generate weekly reports. The administrator logs in as the user to verify the issue, runs the following commands, and receives the following output:

```
joe@exd-ubuntu:~$ runreports
runreports: command not found

joe@exd-ubuntu:~$ ls -l /usr/local/bin
total 4
-rwxr-xr-x 1 root root 29 May 10 11:31 runreports

joe@exd-ubuntu:~$ echo $PATH
/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin

joe@exd-ubuntu:~$ ls -l /usr/local/bin/runreports
-rwxr-xr-x 1 root root ? 29 May 10 11:31 /usr/local/bin/runreports

joe@exd-ubuntu:~$ file /usr/local/bin/runreports
/usr/local/bin/runreports: POSIX shell script, ASCII text executable

joe@exd-ubuntu:~$ stat /usr/local/bin/runreports
File: /usr/local/bin/runreports
Size: 29 Blocks: 8 IO Block: 4096 regular file
Device: 8,2 Inode: 952513 Links: 1
Access: (0755/-rwxr-xr-x) Uid: ( 0/ root) Gid: ( 0/ root)
Access: 2024-05-10 11:31:24.093819400 -0500
Modify: 2024-05-10 11:31:10.525819400 -0500
Change: 2024-05-10 11:31:20.534819400 -0500
Birth: 2024-05-10 11:31:10.524819400 -0500
```

Which of the following best describes the issue and how to resolve it?

- A. The runreports utility is not in the user's PATH. The administrator should modify the .bash_profile file.
- B. The runreports utility is a shell script, but not owned by the user, and is therefore unable to be run. The administrator should use the chown command.
- C. The user does not have the correct SELinux context to use the runreports utility. The administrator should modify the SELinux template.
- D. The runreports utility does not have execute permissions for the user. The administrator should add execute permissions for the user.

Answer: (SHOW ANSWER)

The runreports script exists in /usr/local/bin and has execute permissions, but /usr/local/bin is missing from the user's PATH. Because the shell cannot find the command by name, adding /usr/local/bin to the user's shell startup configuration resolves the issue.

NEW QUESTION: 24

Which of the following technologies is used to authenticate users on a Linux server when working in a Windows domain?

- A. SSH Daemon
- B. Kerberos

- C. PAM
- D. Samba

Answer: ([SHOW ANSWER](#))

Kerberos provides centralized, ticket-based authentication and is the core authentication mechanism used by Windows Active Directory, allowing Linux systems joined to a Windows domain to authenticate users securely.

NEW QUESTION: 25

Which of the following describes what Ansible is used for in the context of IT Infrastructure?

- A. Database management
- B. Configuration management
- C. Process management
- D. Asset management

Answer: ([SHOW ANSWER](#))

Ansible is used for configuration management, allowing administrators to automate the provisioning, configuration, and management of systems and services across an IT infrastructure.

NEW QUESTION: 26

A user sends a request to access a virtual server via SSH. Which of the following commands is used to open the SSH standard port?

- A. firewall-cmd --permanent --add-port=22/tcp
- B. iptables-save | grep dport-22/tcp
- C. iptables -A INPUT -p tcp --dport sshd -j ACCEPT
- D. firewall-cmd --remove-service=ssh --permanent

Answer: ([SHOW ANSWER](#))

The firewall-cmd --permanent --add-port=22/tcp command (commonly firewall-cmd) opens TCP port 22 in the permanent firewall ruleset so that SSH traffic is allowed. After running it, you'd issue firewall-cmd --reload to apply the change.

NEW QUESTION: 27

A Linux administrator wants to make the ENABLE_AUTH variable set to 1 and available to the environment of subsequently executed commands. Which of the following should the administrator use for this task?

- A. let ENABLE_AUTH=1
- B. ENABLE_AUTH=1
- C. ENABLE_AUTH=\$(echo \$ENABLE_AUTH)
- D. export ENABLE_AUTH=1

Answer: ([SHOW ANSWER](#))

The export command sets an environment variable and makes it available to subsequently executed commands and child processes, ensuring ENABLE_AUTH=1 is recognized system-wide in that shell session.

NEW QUESTION: 28

A systems administrator receives reports about connection issues to a secure web server. Given the following firewall and web server outputs:

Firewall output:

```
Status: active
To Action From
--
443/tcp DENY Anywhere
443/tcp (v6) DENY Anywhere (v6)
```

Web server output:

```
tcp LISTEN 0 4096 *:443 *:*
```

Which of the following commands best resolves this issue?

- A. ufw disable
- B. ufw allow 80/tcp
- C. ufw delete deny https/tcp
- D. ufw allow 4096/tcp

Answer: ([SHOW ANSWER](#))

The firewall output shows that port 443/tcp (HTTPS) is explicitly denied, even though the web server is correctly listening on it. Removing the deny rule for HTTPS (ufw delete deny https/tcp) resolves the issue while still keeping the firewall active and secure.

NEW QUESTION: 29

Which of the following describes PEP 8?

- A. The style guide for Python code
- B. Python virtual environments
- C. A package installer for Python
- D. A Python variable holding octal values

Answer: ([SHOW ANSWER](#))

PEP 8 is the official Python Enhancement Proposal that provides coding style guidelines for writing clean, consistent, and readable Python code.

NEW QUESTION: 30

An administrator is investigating the reason a Linux workstation is not resolving the website

http://www.comptia.org. The administrator executes some commands and receives the following output:

```
$ dig @8.8.8.8 www.comptia.org +short
104.18.16.29

$ nslookup -querytype=A www.comptia.org
...
Name: www.comptia.org
Address: 104.18.16.29

$ nslookup -querytype=AAAA www.comptia.org
...
*** Can't find www.comptia.org: No answer

$ ping -4 www.comptia.org
PING www.comptia.org (104.18.99.101)
From somehost (192.168.1.192) icmp_seq=3 Destination Host Unreachable
...

$ cat /etc/hosts
127.0.0.1 localhost localhost.localdomain
104.18.99.101 www.comptia.org
```

Which of the following is the most likely cause?

- A. The static entry needs to be removed from /etc/hosts.
- B. The remote website does not support IPv6, and the workstation requires it.
- C. The firewall needs to be modified to allow outbound HTTP and HTTPS.
- D. The nameserver in /etc/resolv.conf needs to be updated to 8.8.8.8

Answer: A (LEAVE A REPLY)

When troubleshooting name resolution issues in Linux, /etc/hosts entries take precedence over DNS lookups. The workstation's /etc/hosts file contains the line:

CopyEdit

```
104.18.99.101 www.comptia.org
```

This means any attempt to access www.comptia.org will resolve to 104.18.99.101, regardless of the real DNS response. However, both dig and nslookup show the correct IP as 104.18.16.29.

Because the local /etc/hosts entry overrides DNS, and the hardcoded IP is either incorrect or unreachable, all network traffic to www.comptia.org will fail or not reach the intended destination, resulting in the observed connectivity issue (Destination Host Unreachable).

NEW QUESTION: 31

A systems administrator needs to enable routing of IP packets between network interfaces.

Which of the following kernel parameters should the administrator change?

- A. net.ipv4.ip_multicast
- B. net.ipv4.ip_route
- C. net.ipv4.ip_local_port_range
- D. net.ipv4.ip_forward

Answer: (SHOW ANSWER)

The net.ipv4.ip_forward kernel parameter controls whether the Linux kernel can forward IP packets between network interfaces, enabling routing functionality when set to 1.

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NEW QUESTION: 32

A Linux administrator needs to add an instruction into a Dockerfile so that the process /sbin/app-01 is executed when a new container starts. Which of the following accomplishes this task?

- A. FROM
- B. ENTRYPOINT
- C. ONBUILD
- D. EXPOSE

Answer: (SHOW ANSWER)

This instruction defines the executable that is run when a container starts, ensuring the specified process is launched automatically each time a new container is created from the image.

NEW QUESTION: 33

Which of the following best describes a benefit of using a Python virtual environment?

- A. To prevent conflicts between projects that require different versions of the same package
- B. To help decrease disk space usage
- C. To make packages installed within the virtual environment available systemwide
- D. To help maintain a consistent environment across all projects

Answer: (SHOW ANSWER)

A Python virtual environment isolates project dependencies, allowing different projects to use different versions of the same package without interfering with each other.

NEW QUESTION: 34

Which of the following commands should a Linux administrator use to determine the version of a kernel module?

- A. modprobe bluetooth
- B. lsmod bluetooth
- C. depmod bluetooth
- D. modinfo bluetooth

Answer: (SHOW ANSWER)

The modinfo command displays detailed information about a kernel module, including its version, author, description, and parameters.

NEW QUESTION: 35

A Linux administrator just finished setting up passwordless SSH authentication between two nodes. However, upon test validation, the remote host prompts for a password. Given the following logs:

```
-rw-----. 1 root root 588 Apr 3 2022 authorized_keys
```

```
avc: denied { read } for pid=xxxx comm="sshd" name="authorized_keys" dev="dm-5" ino=xxxx scontext=system_u:system_r:sshd_t:s0-s0:c0.c1023  
tcontext=unconfined_u:object_r:home_root_t:s0 tclass=file  
[...]
```

```
SELinux status: enabled  
SELinuxfs mount: /sys/fs/selinux  
SELinux root directory: /etc/selinux  
Loaded policy name: targeted  
Current mode: enforcing  
Mode from config file: enforcing  
Policy MLS status: enabled  
Policy deny_unknown status: allowed  
Max kernel policy version: 31
```

Which of the following is the most likely cause of the issue?

- A. The SELinux policy is incorrectly targeting the unconfined_ucontext.
- B. The administrator forgot to restart the SSHD after creating the authorized_keysfile.
- C. The authorized_keysfile has the incorrect root permissions assigned.
- D. The authorized_keysfile does not have the correct security context to match SELinux policy.

Answer: ([SHOW ANSWER](#))

The log shows `avc: denied { read }` caused by SELinux when `sshd` tries to access `authorized_keys`. The file has the wrong SELinux context (`unconfined_u:object_r:home_root_t`) instead of the expected context for SSH. This mismatch blocks SSH key authentication even though file permissions are correct. Adjusting the SELinux context (e.g., with `restorecon`) resolves the issue.

NEW QUESTION: 36

An administrator updates the network configuration on a server but wants to ensure the change will not cause an outage if something goes wrong. Which of the following commands allows the administrator to accomplish this goal?

- A. `netplan try`
- B. `netplan rebind`
- C. `netplan ip`
- D. `netplan apply`

Answer: ([SHOW ANSWER](#))

`netplan try` applies the new network configuration temporarily and waits for user confirmation. If not confirmed, it automatically reverts, preventing outages from misconfigurations.

NEW QUESTION: 37

A Linux administrator needs to create accounts for a list of new users. The user account names have been defined in the `USER_LIST` variable by executing the following:

```
USER_LIST="alice bob charles"
```

Which of the following commands should the administrator use to successfully create the user accounts?

- A. `echo "$USER_LIST" | while username; do useradd -m "$username"; done`
- B. `echo "$USER_LIST" | until username; do useradd -m "$username"; done`
- C. `select username in "$USER_LIST"; do useradd -m $username"; done`
- D. `for username in $USER_LIST; do useradd -m "$username"; done`

Answer: ([SHOW ANSWER](#))

This command iterates over each username stored in the variable and executes the account creation command for each entry, which is the correct and reliable way to create multiple user accounts from a list in a shell script.

NEW QUESTION: 38

An administrator needs to create a new logical volume from sets of provisioned disks. Which of the following shows the correct order of commands the administrator should execute?

- A. 1. pvcreate, 2. vgcreate, 3. lvcreate
- B. 1. vgcreate, 2. pvcreate, 3. lvcreate
- C. 1. vgcreate, 2. lvcreate, 3. pvcreate
- D. 1. lvcreate, 2. pvcreate, 3. vgcreate

Answer: ([SHOW ANSWER](#))

Logical Volume Management (LVM) is a fundamental storage management concept in CompTIA Linux+ V8. LVM provides a layered abstraction between physical storage devices and the filesystems used by the operating system. To successfully provision a new logical volume, an administrator must follow a strict hierarchy of operations:

pvcreate (Physical Volume): This is the first step. The administrator must initialize the raw physical disks or partitions for use by LVM. This command writes LVM metadata to the disk, making it a "Physical Volume" (PV).

vgcreate (Volume Group): In the second step, the administrator combines one or more Physical Volumes into a single storage pool called a "Volume Group" (VG). The VG acts like a virtual disk drive created from the combined capacity of the underlying PVs.

lvcreate (Logical Volume): Finally, the administrator carves out space from the Volume Group to create "Logical Volumes" (LV). These LVs act like partitions and are where the administrator will actually create a filesystem (e.g., mkfs.ext4) and mount it for use.

This order is mandatory because each layer depends on the existence of the one below it. You cannot create a VG without PVs, and you cannot create an LV without a VG.

Therefore, the sequence `pvcreate -> vgcreate -> lvcreate` is the verified and only correct order of execution.

NEW QUESTION: 39

A systems administrator wants to update and apply changes in an existing file in a remote Git repository. Which of the following is the last Git command the administrator should execute to complete this process?

- A. `git commit -m "Updated with new information"`
- B. `git checkout -b update-feature`
- C. `git pull origin main`
- D. `git push origin update-feature`

Answer: ([SHOW ANSWER](#))

The `git push` command sends the committed changes from the local branch to the remote repository, making the updates available remotely and completing the update process.

NEW QUESTION: 40

A Linux administrator is making changes to local files that are part of a Git repository. The administrator needs to retrieve changes from the remote Git repository. Which of the following commands should the administrator use to save the local modifications for later review?

- A. `git stash`
- B. `git pull`
- C. `git merge`
- D. `git fetch`

Answer: ([SHOW ANSWER](#))

The git stash command temporarily saves local modifications without committing them, allowing the administrator to safely run git pull or git fetch later and then reapply the saved changes.

NEW QUESTION: 41

Which of the following best describes the role of initrd?

- A. It is required to connect to the system via SSH.
- B. It contains basic kernel modules and drivers required to start the system.
- C. It contains trusted certificates and secret keys of the system.
- D. It is required to initialize a random device within a Linux system.

Answer: ([SHOW ANSWER](#))

initrd (initial ramdisk) provides essential kernel modules and drivers (e.g., for storage and filesystems) needed during the early boot process before the root filesystem is mounted.

NEW QUESTION: 42

A Linux administrator needs to change the execution frequency of a systemd timer. Which of the following commands should the administrator use after editing the timer file to make the changes effective?

- A. systemctl daemon-reload
- B. timedatectl --adjust-system-clock
- C. systemd-analyze time
- D. sysctl --load

Answer: ([SHOW ANSWER](#))

After modifying a systemd unit file such as a timer, this command reloads systemd's configuration so the updated execution schedule is recognized and applied.

NEW QUESTION: 43

Which of the following commands is used to ensure a service starts automatically at boot on a system using systemd?

- A. systemctl start httpd
- B. systemctl enable httpd
- C. systemctl status httpd
- D. systemctl reload httpd

Answer: ([SHOW ANSWER](#))

The correct answer is B. systemctl enable httpd because it configures a service to start automatically during system boot in systems that use systemd as the init system. The enable command creates the necessary symbolic links between the service unit file and the appropriate target (such as multi-user.target), ensuring the service is launched when the system starts.

NEW QUESTION: 44

Which of the following commands is used to verify whether a port is open on a remote host?

- A. ip
- B. ping
- C. nc
- D. netstat

Answer: ([SHOW ANSWER](#))

The nc command can initiate a connection to a specific port on a remote host, making it useful for verifying whether that port is open and reachable over the network.

NEW QUESTION: 45

An administrator wants to see all logs for the app.servicessystemd process. Which of the following commands should the administrator use to complete this task?

- A. cat /var/log/messages
- B. systemctl status app.service
- C. systemd-analyze unit-files app.service
- D. journalctl -u app.service

Answer: ([SHOW ANSWER](#))

The journalctl command queries the systemd journal, and using -u app.service filters the output to logs generated by that specific systemd unit.

NEW QUESTION: 46

An administrator needs to append the output of a Linux command to an existing file for later analysis. Which of the following command-line strings should the administrator use?

- A. cat ls > file.txt
- B. tcc ls > awk file.txt
- C. echo ls | sed -i file.txt
- D. ls >> file.txt

Answer: ([SHOW ANSWER](#))

This command uses output redirection in append mode, adding the command's output to the end of the existing file without overwriting its current contents.

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NEW QUESTION: 47

A systems administrator needs to open the DNS TCP port on a Linux system from network 10.0.0.0/24. Which of the following commands should the administrator use for this task?

- A. ufw allow dns/tcp to 10.0.0.0/24
- B. ufw enable 53/tcp from 10.0.0.0/24
- C. ufw allow 53/tcp from 10.0.0.0/24
- D. ufw disable from 10.0.0.0/24

Answer: ([SHOW ANSWER](#))

The ufw allow 53/tcp from 10.0.0.0/24 command explicitly opens TCP port 53 (DNS) for connections coming from the 10.0.0.0/24 network, which is the correct way to configure this firewall rule.

NEW QUESTION: 48

A Linux administrator prepares a backup script named testBack.sh. The backup script must be executed at 3:00 p.m. every Sunday. Which of the following crontab configurations will satisfy this requirement?

- A. 0 * * * 15 testBack.sh
- B. */15 * * * 0 testBack.sh
- C. 0 15 * * 0 testBack.sh
- D. * 15 * * 0 testBack.sh

Answer: ([SHOW ANSWER](#))

This cron entry schedules the script to run at minute zero of hour fifteen every Sunday, which corresponds to 3:00 p.m. each week.

NEW QUESTION: 49

Which of the following most accurately describes a webhook?

- A. An authentication method for web-server communication
- B. An SNMP-based API for network device monitoring
- C. A means to transmit sensitive information between systems
- D. An HTTP-based callback function

Answer: ([SHOW ANSWER](#))

A webhook is an HTTP-based callback that allows one system to send real-time data or notifications to another system when an event occurs.

NEW QUESTION: 50

To perform a live migration, which of the following must match on both host servers? (Choose two).

- A. USB ports
- B. Network speed
- C. Available swap
- D. CPU architecture
- E. Available memory
- F. Disk storage path

Answer: ([SHOW ANSWER](#))

CPU architecture must match because live migration requires CPU compatibility to continue running the virtual machine without errors.

Disk storage path must match so the migrated VM can access its virtual disks seamlessly on the destination host.

NEW QUESTION: 51

Which of the following is a characteristic of Python 3?

- A. It is closed source.
- B. It is extensible through modules.
- C. It is fully backwards compatible.
- D. It is binary compatible with Java.

Answer: ([SHOW ANSWER](#))

Python 3 is open source and supports extensibility through modules and packages, allowing developers to add functionality easily. It is not fully backward compatible with Python 2 and has no binary compatibility with Java.

NEW QUESTION: 52

SIMULATION 2

A junior system administrator removed an LVM volume by mistake.

INSTRUCTIONS

Part 1

Review the output and select the appropriate command to begin the recovery process.

Part2

Review the output and select the appropriate command to continue the recovery process.

Part 3

Review the output and select the appropriate command to complete the recovery process and access the underlying data.

If at any time you would like to bring back the initial state of the simulation, please click the Reset All button.

Part 1 ●

Part 2 ●

Part 3 ●

Commands

```
[root@comptiasim ~]# df -h
[root@comptiasim ~]# ls -l /dev | grep -v tty
[root@comptiasim ~]# ls -l /etc/lvm/archive
[root@comptiasim ~]# pvdisplay
[root@comptiasim ~]# pvs
[root@comptiasim ~]# vgcfgrestore --list vg01
[root@comptiasim ~]# vgdisplay
[root@comptiasim ~]# vgs
```

```
[root@comptiasim ~]# vgs
VG   #PV #LV #SN Attr   VSize   VFree
vg01  1   0   0 wz--n- <10.00g <10.00g
```

Select the appropriate command to begin the recovery process.

```
[root@comptiasim ~]#
```

```
Select command
lvchange -a n /dev/vg01/lv01
lvchange -a y /dev/vg01/lv01
vgcfgrestore vg01 -f /etc/lvm/archive/vg01_00002-966141411.vg
pvscan
lvconvert --type mirror lv01
vgcfgrestore vg01 -f /etc/lvm/backup/vg01
vgcfgrestore vg01 -t -M /etc/lvm/archive/vg01_00001-810050352.vg
```

Part 1 ●

Part 2 ●

Part 3 ●

Commands

```
[root@comptiasim ~]# blkid
```

```
[root@comptiasim ~]# dmesg | tail -20
```

```
[root@comptiasim ~]# lsblk
```

```
[root@comptiasim ~]# ls /
```

```
[root@comptiasim ~]# lvdisplay
```

```
[root@comptiasim ~]# lvs
```

```
[root@comptiasim ~]# lvscan
```

```
[root@comptiasim ~]# pvs
```

```
[root@comptiasim ~]# vgs
```

```
[root@comptiasim ~]# blkid
/dev/xvda1: UUID="388a99ed-9486-4a46-aeb6-06eaf6c47675" TYPE="xfs"
/dev/xvdf: UUID="1uyvyk-Ffd0-RrYF-cYba-15zC-EHRZ-UW3Uhm" TYPE="LVM2_member"
```

Select the appropriate command to continue the recovery process.

```
[root@comptiasim ~]#
```

```
Select command
mount /dev/vg01/lv01/ /important_data
pvchange -x y /dev/xvdf
lvchange -a n /dev/vg01/lv01
lvchange -a y /dev/vg01/lv01
lvextend -L +54 vg01/lv01 /dev/xvdf
```

Part 1 ●

Part 2 ●

Part 3 ●

Commands

```
[root@comptiasim ~]# blkid
[root@comptiasim ~]# cat /etc/fstab
[root@comptiasim ~]# ls -l /dev/mapper/
[root@comptiasim ~]# ls -l /
[root@comptiasim ~]# lsblk
[root@comptiasim ~]# lvdisplay
[root@comptiasim ~]# lvscan
[root@comptiasim ~]# tail -f /var/log/messages
[root@comptiasim ~]# xfs repair -n /dev/vg01/lv01
```

```
[root@comptiasim ~]# lsblk
NAME        MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
xvda         202:0    0   8G  0 disk
└─xvda1       202:1    0   8G  0 part /
xvdf         202:80   0  10G  0 disk
└─vg01-lv01  253:0    0   9G  0 lvm
```

Select the appropriate command to complete the recovery process and access the underlying data.

```
[root@comptiasim ~]#
```

```
Select command
mount /important_data /dev/vg01/lv01
xfs_repair /dev/vg01/lv01
mount -a
xfs_mdrestore /dev/vg01 /important_data
lvscan -a
```

Answer:

Part 1 ●

Part 2 ●

Part 3 ●

Commands

```
[root@comptiasim ~]# df -h
[root@comptiasim ~]# ls -l /dev | grep -v tty
[root@comptiasim ~]# ls -l /etc/lvm/archive
[root@comptiasim ~]# pvdisplay
[root@comptiasim ~]# pvs
[root@comptiasim ~]# vgcfgrestore --list vg01
[root@comptiasim ~]# vgdisplay
[root@comptiasim ~]# vgs
```

```
[root@comptiasim ~]# vgs
VG   #PV #LV #SN Attr   VSize   VFree
vg01  1   0   0 wz--n- <10.00g <10.00g
```

Select the appropriate command to begin the recovery process.

```
[root@comptiasim ~]#
```

```
Select command
lvchange -a n /dev/vg01/lv01
lvchange -a y /dev/vg01/lv01
vgcfgrestore vg01 -f /etc/lvm/archive/vg01_00002-966141411.vg
pvscan
lvconvert --type mirror lv01
vgcfgrestore vg01 -f /etc/lvm/backup/vg01
vgcfgrestore vg01 -t -M /etc/lvm/archive/vg01_00001-810050352.vg
```

Restoring the Volume Group (VG) configuration from the LVM archive begins the recovery process after the VG metadata was lost.

Part 1 ●

Part 2 ●

Part 3 ●

Commands

```
[root@comptiasim ~]# blkid
[root@comptiasim ~]# dmesg | tail -20
[root@comptiasim ~]# lsblk
[root@comptiasim ~]# ls /
[root@comptiasim ~]# lvdisplay
[root@comptiasim ~]# lvs
[root@comptiasim ~]# lvscan
[root@comptiasim ~]# pvs
[root@comptiasim ~]# vgs
```

```
[root@comptiasim ~]# blkid
/dev/xvda1: UUID="388a99ed-9486-4a46-aeb6-06eaf6c47675" TYPE="xfs"
/dev/xvdf: UUID="1uyvyk-Ffd0-RrYF-cYba-15zC-EHRZ-UW3UHm" TYPE="LVM2_member"
```

Select the appropriate command to continue the recovery process.

```
[root@comptiasim ~]#
```

```
Select command
mount /dev/vg01/lv01/ /important_data
pvchange -x y /dev/xvdf
lvchange -a n /dev/vg01/lv01
lvchange -a y /dev/vg01/lv01
lvextend -L +54 vg01/lv01 /dev/xvdf
```

After restoring the VG metadata, the logical volume must be reactivated (-ay) so it becomes accessible to the system.

Part 1 ●

Part 2 ●

Part 3 ●

Commands

```
[root@comptiasim ~]# blkid
[root@comptiasim ~]# cat /etc/fstab
[root@comptiasim ~]# ls -l /dev/mapper/
[root@comptiasim ~]# ls -l /
[root@comptiasim ~]# lsblk
[root@comptiasim ~]# lvdisplay
[root@comptiasim ~]# lvscan
[root@comptiasim ~]# tail -f /var/log/messages
[root@comptiasim ~]# xfs repair -n /dev/vg01/lv01
```

```
[root@comptiasim ~]# lsblk
NAME        MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
xvda         202:0    0   8G  0 disk
└─xvda1      202:1    0   8G  0 part /
xvdf         202:80   0  10G  0 disk
└─vg01-lv01 253:0    0   9G  0 lvm
```

Select the appropriate command to complete the recovery process and access the underlying data.

```
[root@comptiasim ~]#
```

```
Select command
mount /important_data /dev/vg01/lv01
xfs_repair /dev/vg01/lv01
mount -a
xfs_mdrestore /dev/vg01 /important_data
lvscan -a
```

Once the LV is active, mounting it to the /important_data directory makes the filesystem accessible, completing the recovery process.

NEW QUESTION: 53

A Linux administrator is creating a symbolic link /home/docs leading to the /usr/share/documents/directory. Which of the following commands allows the administrator to achieve this goal?

- A. `link /usr/share/documents /home/docs`
- B. `ln -s /usr/share/documents /home/docs`
- C. `rsync /usr/share/documents /home/docs`
- D. `ls of /usr/share/documents /home/docs`

Answer: (SHOW ANSWER)

This command creates a symbolic link at the specified path that points to the target directory, allowing access to the target through the new link location.

NEW QUESTION: 54

Which of the following actions is required to establish passwordless SSH authentication?

- A. Copy the private SSH key to the remote server.
- B. Copy the public and private keys to the remote server.
- C. Generate public and private keys on the remote server.
- D. Copy the public SSH key to the remote server.

Answer: (SHOW ANSWER)

Copying the public SSH key to the remote server's authorized_keys file is all that's needed to enable passwordless SSH authentication.

NEW QUESTION: 55

A systems administrator is preparing a Linux system for application setup. The administrator needs to create an environment variable with a persistent value in one of the user accounts.

Which of the following commands should the administrator use for this task?

- A. export "VAR=\$VAR:value" >> ~/.ssh/profile
- B. export VAR=value
- C. VAR=value
- D. echo "export VAR=value" >> ~/.bashrc

Answer: D (LEAVE A REPLY)

Adding export VAR=value to ~/.bashrc ensures the environment variable is set persistently for the user. The variable will load automatically in every new shell session.

NEW QUESTION: 56

A systems administrator is writing a script to analyze the number of files in the directory

/opt/application/home/. Which of the following commands should the administrator use in conjunction with ls -l | to count the files?

- A. less
- B. tail -f
- C. tr -c
- D. wc -l

Answer: (SHOW ANSWER)

wc -l counts the number of lines of input provided to it, which is commonly used to count the number of files when used with ls -l (excluding the header line). For example, ls -l

/opt/application/home/ | wc -l gives the total count of lines, which corresponds to the number of files and directories (including the total line at the top).

NEW QUESTION: 57

A Linux administrator updates the DNS record for the company using:

```
cat /etc/bind/db.abc.com
```

The revised partial zone file is as follows:

```
ns1 IN A 192.168.40.251
```

```
ns2 IN A 192.168.40.252
```

```
www IN A 192.168.30.30
```

When the administrator attempts to resolve www.abc.com to its IP address, the domain name still points to its old IP mapping:

```
nslookup www.abc.com
```

```
Server: 192.168.40.251
```

Address: 192.168.40.251#53

Non-authoritative

Name: www.abc.com

Address: 199.168.20.81

Which of the following should the administrator execute to retrieve the updated IP mapping?

A. systemd-resolve query www.abc.com

B. systemd-resolve status

C. service nslcd reload

D. resolvectl flush-caches

Answer: ([SHOW ANSWER](#))

This scenario represents a classic DNS troubleshooting situation covered in the Troubleshooting domain of the CompTIA Linux+ V8 objectives. Although the DNS zone file has been updated correctly on the BIND server, the system continues to resolve the domain name to an outdated IP address. This behavior strongly indicates DNS caching rather than a configuration error in the zone file itself.

Modern Linux systems that use systemd-resolved cache DNS responses locally to improve performance and reduce external queries. Even after a DNS record is updated on the authoritative server, cached results may persist until the cache expires or is manually cleared.

The nslookup output showing a non-authoritative answer further confirms that the response is being served from a cache rather than directly from the updated zone data.

The correct solution is to flush the local DNS cache so the system can retrieve the updated record from the DNS server. The command resolvectl flush-caches clears all cached DNS entries maintained by systemd-resolved, forcing fresh queries to authoritative name servers. This aligns directly with Linux+ V8 documentation for resolving name resolution inconsistencies caused by stale cache entries.

NEW QUESTION: 58

A Linux server is experiencing slowness. A systems administrator obtains the following output:

top - load average: 2.43, 1.80, 2.32

Tasks: ... 154 zombie

%Cpu(s): 6.2 us, 5.1 sy, 0.0 ni, 79.2 id, 9.1 wa, ...

\$ iostat -m 2

%user %nice %system %iowait %steal %idle

4.30 2.02 0.29 70.38 4.00 19.01

Which of the following explains the issue?

A. The system ran out of swap space.

B. The CPU is overutilized.

C. The storage I/O latency is high.

D. The system needs to be patched.

Answer: ([SHOW ANSWER](#))

Performance troubleshooting in CompTIA Linux+ V8 requires the ability to correlate metrics from tools like top, vmstat, and iostat. In this case, the iostat output provides the most critical data point: %iowait is at 70.38%.

The %iowait metric (also shown as wa in top) represents the percentage of time that the CPU was idle while there were outstanding disk I/O requests. Essentially, the CPU is waiting for the storage subsystem (hard drives or SSDs) to complete read or write operations. A value as high as 70% indicates a severe bottleneck in the storage layer. This "I/O wait" causes the system to feel sluggish or unresponsive because processes are stuck in an uninterruptible sleep state while waiting for data from the disk.

NEW QUESTION: 59

A user reports recurrent issues with an application, which is currently operational. The systems administrator gathers the following outputs to diagnose the issue:

```
[Thu Jul 11 01:10:40 2024] Out of memory: Kill process 43805 (mariadb) score 249 or sacrifice child
[Thu Jul 11 01:10:40 2024] Killed process 43805 (mariadb) total-vm:4446352kB, anon-rss:4053140kB, file-rss:68kB
[Thu Jul 11 02:36:25 2024] mariadb invoked oom-killer: gfp_mask=0x280da, order=0, oom_score_adj=0
[Thu Jul 11 02:36:25 2024] mariadb cpuset=/ mems_allowed=0
[Thu Jul 11 02:36:25 2024] CPU: 2 PID: 88196 Comm: mariadb Not tainted 4.18.0-553.8.1.el8_10.x86_64 #1

$ egrep 'Out of memory:' /var/log/messages
Jul 05 02:40:42 hostname kernel: Out of memory: Kill process 121952 (mariadb) score 72 or sacrifice child
Jul 08 01:10:42 hostname kernel: Out of memory: Kill process 55333 (mariadb) score 79 or sacrifice child
Jul 09 02:35:42 hostname kernel: Out of memory: Kill process 4106 (mariadb) score 90 or sacrifice child
Jul 10 01:20:00 hostname kernel: Out of memory: Kill process 54961 (mariadb) score 130 or sacrifice child
Jul 10 02:10:15 hostname kernel: Out of memory: Kill process 86345 (mariadb) score 196 or sacrifice child
Jul 11 01:10:40 hostname kernel: Out of memory: Kill process 121731 (mariadb) score 260 or sacrifice child
Jul 11 02:36:25 hostname kernel: Out of memory: Kill process 9495 (mariadb) score 261 or sacrifice child

$ free -m
              total        used        free      shared  buff/cache   available
Mem:           15819        10026         5174          92          619        5134
Swap:              0              0              0

$ sar -r 600 7
4:20:01PM kbmemfree kbmemused %memused kbbuffers kbcached kbcommit %commit kbactive kbinact kbdirty
4:30:01PM      5341104    10912068      67.14        208    2529356    11486444      70.67    9601592    861944      228
4:40:01PM      5333916    10919336      67.18        208    2536660    11486548      70.67    9607072    863576      304
4:50:01PM      5326768    10926404      67.23        208    2544192    11486400      70.67    9612740    865216      364
5:00:01PM      5299032    10953420      67.39        208    2559332    11508340      70.81    9632088    874968      524
5:10:01PM      5302428    10950824      67.38        208    2566568    11495836      70.73    9624992    876528      356
5:20:01PM      5297108    10956144      67.41        208    2573408    11495436      70.73    9629096    878168      352
```

Which of the following is a possible cause of this issue?

- A. A backup is consuming all the system memory.
- B. The system is using all the swap
- C. The cached memory is approaching the system's limits.
- D. The process is showing signs of a memory leak.

Answer: ([SHOW ANSWER](#))

The logs show repeated out-of-memory kills involving the mariadb process, and the memory statistics show sustained high memory usage with no swap configured. Since the application is currently running but repeatedly grows until the kernel kills it, the likely cause is a memory leak in the process.

NEW QUESTION: 60

User1 reports "access denied" errors while trying to execute app. Given the following outputs:

```
devops@training data]$ id user1
id=1011(user1) gid=1011(user1) groups=1011(user1)

ls -la app
-rwxrwx---. 1 devops devops 5423 Jan 3 2022 app

getfacl app
file: app
owner: devops
group: devops
ser::rwx
ser:user1:rw
roup::rwx
```

Which of the following options will remediate this issue?

- A. Providing execute permissions to user1 in the ACL
- B. Modifying the permissions for others to grant read, write, and execute
- C. Adding user1 to the wheel group
- D. Moving app to a different folder

Answer: (SHOW ANSWER)

According to the output of getfacl app, user1 has only "rw" (read and write) permissions, but lacks

"x" (execute). Without execute permission, user1 cannot run the file. To allow user1 to execute app, you must update the ACL to add execute permission (e.g., setfacl -m u:user1:rwx app).

Modifying "others" permissions (option B) is not secure or necessary, adding user1 to the wheel group (option C) is unrelated, and moving the file (option D) does not resolve permission issues.

NEW QUESTION: 61

A systems administrator wants to prevent the current contents of a file from being overwritten and wants to allow new additions at the end of the file. Which of the following commands should the administrator use?

- A. setenforce file
- B. setfacl -m m::t file
- C. chattr +a file
- D. chmod +t file

Answer: C (LEAVE A REPLY)

The chattr +a command sets the append-only attribute on a file. This prevents overwriting or deletion of existing contents, while still allowing new data to be appended to the end of the file.

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NEW QUESTION: 62

A systems administrator wants to terminate all the processes owned by testuser on a Linux VM.

Which of the following should the administrator use for this task?

- ```
for proc in $(ps | grep testuser)
do
 kill $proc
done
```
- A.
- ```
while [ $user -eq 'testuser' ]
do
    kill $user
done
```
- B.
- ```
for i in $(ps -ef | grep testuser | awk '{print $2}')
```
- ```
do
    kill -9 $i
done
```
- C.
- D. while true; do killall; done

Answer: ([SHOW ANSWER](#))

This command identifies all processes owned by the specified user by extracting their process IDs and then terminates each one, ensuring that all running processes belonging to that user are stopped.

NEW QUESTION: 63

A Linux administrator is attempting to capture all network traffic coming to the server from the 10.0.6.5 IP address. Which of the following commands should the administrator run on the server to achieve the goal?

- A. tcpdump ip 10.0.6.5
- B. tcpdump net 10.0.6.5
- C. tcpdump host 10.0.6.5
- D. tcpdump addr 10.0.6.5

Answer: ([SHOW ANSWER](#))

tcpdump host 10.0.6.5 applies a Berkeley Packet Filter that matches any packets to or from the IP 10.0.6.5, capturing all traffic involving that host. The netqualifier is for entire subnets, ip isn't a valid filter keyword by itself, and addr is not recognized in tcpdump's filter syntax.

NEW QUESTION: 64

A Linux administrator is configuring a CUPS print service on a Linux machine and needs to allow only connections from a local network. Which of the following commands should the administrator use?

- A. iptables -A OUTPUT -d 192.168.100.0/24 --sport 631 -p tcp -j ACCEPT
- B. iptables -A OUTPUT -s 192.168.100.0/24 --dport 631 -p tcp -j ACCEPT
- C. iptables -A INPUT -s 192.168.100.0/24 --dport 631 -p tcp -j ACCEPT
- D. iptables -D INPUT -d 192.168.100.0/24 --dport 631 -p tcp -j ACCEPT

Answer: ([SHOW ANSWER](#))

Allowing access to the CUPS service requires permitting incoming TCP connections to port 631 from the local network. Adding an INPUT rule with the source network and destination port 631 ensures only hosts on that subnet can connect to the print service.

NEW QUESTION: 65

A DevOps engineer made some changes to files on a local repository. The engineer realizes that the changes broke the application and the changes need to be reverted back. Which of the following commands is the best way to accomplish this task?

- A. git pull

- B. git reset
- C. git rebase
- D. git stash

Answer: ([SHOW ANSWER](#))

The git reset command reverts changes in the local repository to a previous commit, effectively discarding the problematic modifications and restoring the application to a working state.

NEW QUESTION: 66

An administrator wants to start an Ubuntu terminal in a container. Which of the following will allow the administrator to complete the task?

- A. podman pull ubuntu /bin/hash
- B. docker run -it ubuntu
- C. containerd /usr/bin/sh ubuntu
- D. rune exec -i ubuntu

Answer: ([SHOW ANSWER](#))

The docker run command creates and starts a container from the Ubuntu image, and the -it options provide an interactive terminal session inside the container.

NEW QUESTION: 67

A Linux system displays the following error during operation:

Kernel panic - not syncing: Fatal Machine check

Pid: 0, comm: swapper Tainted: G M

Call Trace:

...

mce_panic

do_machine_check

Which of the following is the most likely cause of this issue?

- A. Filesystem corruption
- B. Hardware failure (CPU or memory)
- C. Misconfigured bootloader
- D. Incorrect file permissions

Answer: B ([LEAVE A REPLY](#))

The correct answer is B. Hardware failure (CPU or memory) because the error message explicitly references a "Machine Check Exception (MCE)", which is a hardware-level error detected by the CPU. The line "Kernel panic - not syncing: Fatal Machine check" indicates that the kernel encountered a critical, unrecoverable hardware condition and halted the system to prevent further damage or data corruption.

Machine Check Exceptions are generated by the CPU when it detects internal errors such as cache failures, bus errors, or memory corruption. These errors are typically associated with faulty hardware components like the processor, RAM, motherboard, or even overheating issues. The presence of functions like mce_panic and do_machine_check in the call trace further confirms that the kernel is responding to a hardware-level fault.

NEW QUESTION: 68

Which of the following commands should an administrator run to check for errors during startup?

- A. modinfo
- B. dmesg
- C. dracut
- D. lshw

Answer: (SHOW ANSWER)

The dmesg command displays kernel ring buffer messages, including hardware detection, driver loading, and startup-related errors that occur during boot.

NEW QUESTION: 69

A Linux user runs the following command:

nohup ping comptia.com &

Which of the following commands should the user execute to attach the process to the current terminal?

- A. renice
- B. jobs
- C. exec
- D. fg

Answer: D (LEAVE A REPLY)

The fg command brings a background job to the foreground, attaching it to the current terminal.

Since the ping process was started in the background with &, fg is the correct way to reattach it.

NEW QUESTION: 70

The security manager at a company notifies a systems administrator of open vulnerabilities on the Linux system. The administrator receives the following information while logged in to the server:

date
Thu Jul 11 16:12:42 UTC 2024

getenforce
Enforcing

dnf history
Updating Subscription Management repositories.

ID	Command line	Date and time	Action(s)	Altered
45	update -y	2023-07-09 21:37	C, E, I, U	27 <
46	install httpd	2023-01-11 15:06	Install	9
47	update -y	2023-03-08 14:26	Upgrade	44

Which of the following is the most likely security concern?

- A. The server has not been updated in a year and should be patched.
- B. The system has httpd installed and needs to be removed.
- C. The system is configured to use UTC time and should be set to EDT.
- D. The system has SELinux set to enforcing and needs to be disabled.

Answer: (SHOW ANSWER)

The package management history shows that the last system update occurred over a year ago, which strongly indicates that security patches and vulnerability fixes have not been applied, leaving the system exposed to known vulnerabilities.

NEW QUESTION: 71

SIMULATION 1

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 /.

INSTRUCTIONS

Use the drop-down menus to select the proper objects to complete these tasks.

Some commands are partially complete.

Not all objects will be used, and some may be used more than once.

If at any time you would like to bring back the initial state of the simulation, please click the Reset All button.

>_

parted -s

- Select object
- sdb
- ext4
- mkpart
- /dev/dev1
- secondary
- mklabel
- gpt
- parted
- mkdir
- /dev/sdc1
- /data
- /dev/sdc
- ext2
- ext3
- sdc
- lsblk
- primary

- Select object
- sdb
- ext4
- mkpart
- /dev/dev1
- secondary
- mklabel
- gpt
- parted
- mkdir
- /dev/sdc1
- /data
- /dev/sdc
- ext2
- ext3
- sdc
- lsblk
- primary

gpt

parted -s

- Select object
- sdb
- ext4
- mkpart
- /dev/dev1
- secondary
- mklabel
- gpt

- Select object
- sdb
- ext4
- mkpart
- /dev/dev1
- secondary
- mklabel
- gpt

- Select object
- sdb
- ext4
- mkpart
- /dev/dev1
- secondary
- mklabel
- gpt

- Select object
- sdb
- ext4
- mkpart
- /dev/dev1
- secondary
- mklabel
- gpt

1 10G

parted
mkdir
/dev/sdc1
/data
/dev/sdc
ext2
ext3
sdc
lsblk
primary

parted
mkdir
/dev/sdc1
/data
/dev/sdc
ext2
ext3
sdc
lsblk
primary

parted
mkdir
/dev/sdc1
/data
/dev/sdc
ext2
ext3
sdc
lsblk
primary

parted
mkdir
/dev/sdc1
/data
/dev/sdc
ext2
ext3
sdc
lsblk
primary

mkfs.

Select object
sdb
ext4
mkpart
/dev/dev1
secondary
mklabel
gpt
parted
mkdir
/dev/sdc1
/data
/dev/sdc
ext2
ext3
sdc
lsblk
primary

Select object
sdb
ext4
mkpart
/dev/dev1
secondary
mklabel
gpt
parted
mkdir
/dev/sdc1
/data
/dev/sdc
ext2
ext3
sdc
lsblk
primary

Answer:

parted -s

Select object

sdb

ext4

mkpart

/dev/dev1

secondary

mklabel

gpt

parted

mkdir

/dev/sdc1

/data

/dev/sdc

ext2

ext3

sdc

lsblk

primary

Select object

sdb

ext4

mkpart

/dev/dev1

secondary

mklabel

gpt

parted

mkdir

/dev/sdc1

/data

/dev/sdc

ext2

ext3

sdc

lsblk

primary

gpt

parted -s

Select object

sdb

ext4

mkpart

/dev/dev1

Select object

sdb

ext4

mkpart

/dev/dev1

Select object

sdb

ext4

mkpart

/dev/dev1

Select object

sdb

ext4

mkpart

/dev/dev1

1 10G

secondary	secondary	secondary	secondary
mklabel	mklabel	mklabel	mklabel
gpt	gpt	gpt	gpt
parted	parted	parted	parted
mkdir	mkdir	mkdir	mkdir
/dev/sdc1	/dev/sdc1	/dev/sdc1	/dev/sdc1
/data	/data	/data	/data
/dev/sdc	/dev/sdc	/dev/sdc	/dev/sdc
ext2	ext2	ext2	ext2
ext3	ext3	ext3	ext3
sdc	sdc	sdc	sdc
lsblk	lsblk	lsblk	lsblk
primary	primary	primary	primary

mkfs.

Select object	Select object
sdb	sdb
ext4	ext4
mkpart	mkpart
/dev/dev1	/dev/dev1
secondary	secondary
mklabel	mklabel
gpt	gpt
parted	parted
mkdir	mkdir
/dev/sdc1	/dev/sdc1
/data	/data
/dev/sdc	/dev/sdc
ext2	ext2
ext3	ext3
sdc	sdc

```
lsblk
primary
```

```
lsblk
primary
```

Explanation:

mklabel gpt initializes the new disk /dev/sdc with a GPT partition table.

mkpart primary ext4 1 10G creates a primary partition using the ext4 type between 1MB and 10GB on /dev/sdc.

mkfs.ext4 /dev/sdc1 formats the newly created partition /dev/sdc1 with the ext4 filesystem, completing the setup.

NEW QUESTION: 72

Users are unable to access a server after it is restarted. However, an administrator is able to connect directly to the server through a console in the server room and sees the following:

```
$ nmcli con show
NAME UUID TYPE DEVICE
Wired connection 2 7be16429-86d5-34e2-8153-77cdca5910fd ethernet --
Wired connection 2 7be16429-86d5-34e2-8153-b8ae2afead5b ethernet enx8cae4cf1767d
[...]

$ nmcli con show Wired\ connection\ 2
[...]
ipv4.method: auto
ipv4.dns: --
ipv4.dns-search: --
ipv4.dns-options: --
ipv4.dns-priority: 0
ipv4.addresses: --
ipv4.gateway: --
[...]

$ ip a
[...]
3: enx8cae4cf1767d: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 8c:ae:4c:f1:76:7d brd ff:ff:ff:ff:ff:ff
    inet 169.254.20.5/16 brd 192.168.0.255 scope global dynamic noprefixroute      enx8cae4cf1767d
        valid_lft 63516sec preferred_lft 63516sec
    inet6 fe80::118a:7dbe:ccd7:e6fc/64 scope link noprefixroute
        valid_lft forever preferred_lft forever
[...]
```

Which of the following is the most likely reason for this connectivity issue?

- A. The server has no issue with the network and should be restarted to restore functionality
- B. The server networking cable is plugged into the wrong interface and needs to be moved
- C. The server is not able to obtain an IP address from the DHCP server

D. The server's network card has failed and will need to be replaced with a new networking card

Answer: ([SHOW ANSWER](#))

The interface has a 169.254.x.x address, which is a link-local address typically assigned when DHCP fails. This indicates the server is not receiving a valid IP address from the DHCP server after the restart.

NEW QUESTION: 73

Users cannot access an application that is running inside containers. The administrator wants to validate whether the containers are running. Which of the following commands should the administrator use?

A. docker start

B. docker ps

C. docker run

D. docker images

Answer: ([SHOW ANSWER](#))

The docker ps command lists all running containers, allowing the administrator to verify whether the application's containers are active.

NEW QUESTION: 74

A systems administrator is helping to secure a new web application. During the tests, the administrator obtains the following output to validate the application:

```
* SSL connection using TLSv1.2 / ECDHE-RSA-AES256-GCM-SHA384
* ALPN, server accepted to use http/1.1
* Server certificate:
*   subject: CN=*.newapp.comptia.org
*   start date: Jan 17 00:00:00 2024 GMT
*   expire date: Feb 16 23:59:59 2034 GMT
*   issuer: C=US; O=CompTIA; OU=IT Security; CN=ssl.comptia.org
*   SSL certificate verify result: unable to get local issuer certificate (20), continuing anyway.
> HEAD /artifactory HTTP/1.1
> Host: api.newapp.comptia.org
> User-Agent: curl/7.61.1
> Accept: */*
```

Which of the following explains the validation results?

A. The certificate was not signed by trusted authority, which was forcefully ignored during the tests.

B. The certificate was only issued for one month, is already expired, and needs to be replaced

C. The certificate is a wildcard certificate that is highly insecure and should never be used.

D. The certificate uses an outdated algorithm and should be replaced with a more secure one.

Answer: ([SHOW ANSWER](#))

The validation output indicates that the certificate chain could not be verified because the local system does not trust the issuing certificate authority, and the connection proceeded anyway by ignoring the verification failure during testing.

NEW QUESTION: 75

Which of the following statements best describes Ansible?

A. A tool used for monitoring cloud infrastructure

B. A software configuration tool with its own declarative, Ruby-based language

C. A CI/CD tool that allows automation using pipelines

D. A tool that provides automation using playbooks written in YAML

Answer: (SHOW ANSWER)

Ansible is an automation and configuration management tool that uses human-readable YAML playbooks to define tasks, enabling consistent and agentless automation across systems.

NEW QUESTION: 76

Which of the following commands can be used to display current CPU utilization in real time on a Linux system?

- A. uptime
- B. top
- C. df
- D. lsblk

Answer: (SHOW ANSWER)

The correct answer is B. top because it provides a real-time, continuously updating view of system performance, including CPU utilization. The top command is one of the most widely used monitoring tools in Linux and is essential for system administrators when analyzing performance issues.

When executed, top displays a dynamic interface showing CPU usage percentages, memory consumption, load averages, running processes, and other critical system metrics. The CPU usage section is particularly useful because it breaks down usage into categories such as user space, system (kernel), idle time, and I/O wait. This allows administrators to quickly identify whether the CPU is under heavy load and which processes are consuming the most resources.

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NEW QUESTION: 77

A user states that an NFS share is reporting random disconnections. The systems administrator obtains the following information:

```
#df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/mapper/fedora-root 15G  15G  204K 100% /
devtmpfs        4.0M  0    4.0M  0%   /dev
tmpfs           2.0G  0    2.0G  0%   /dev/shm
tmpfs           783M  816K  782M  1%   /run
tmpfs           2.0G  0    2.0G  0%   /tmp
/dev/vda2       960M  481M  480M  51%  /boot
10.0.0.1:/nfsdata 4T    3.8T  200G  95%  /share

$ ip -s link show
2: enp1s0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP mode DEFAULT group default qlen 1000
link/ether 52:5a:00:f7:27:23 brd ff:ff:ff:ff:ff:ff
RX:  bytes      packets  errors  dropped  missed  mcast
    108487310  149198   9584    40721    0       0
TX:  bytes      packets  errors  dropped  carrier  collsns
    3015941   33656   12780    7854    0       0
```

Which of the following best explains the symptoms that are being reported?

- A.** The mount point is incorrect for the NFS share.
- B.** The IP address of the NFS share is incorrect.
- C.** The filesystem is nearly full and is reporting errors.
- D.** The interface is reporting a high number of errors and dropped packets.

Answer: ([SHOW ANSWER](#))

This issue is best analyzed using a layered troubleshooting approach, as recommended in the Troubleshooting domain of CompTIA Linux+ V8. The reported symptom is intermittent or random disconnections from an NFS share, which commonly indicates a network reliability issue rather than a configuration or filesystem problem.

The most critical evidence comes from the output of `ip -s link show`. The network interface `enp1s0` is reporting significant numbers of errors and dropped packets on both the receive (RX) and transmit (TX) paths. High packet loss at the network interface level directly affects protocols like NFS, which rely on stable, continuous TCP/IP communication. When packets are dropped or corrupted, NFS clients may experience timeouts, retransmissions, and apparent disconnections.

Although the `df -h` output shows that the NFS filesystem is 95% full, this alone does not typically cause random disconnections. A nearly full filesystem may lead to write failures or performance degradation, but it does not explain intermittent connectivity loss. Linux+ V8 documentation notes that filesystem capacity issues usually present as I/O errors, not transport-layer disconnects.

NEW QUESTION: 78

Which of the following utilities can securely delete a Linux directory from a filesystem and ensure it cannot be recovered?

- A.** `dd`
- B.** `shred`
- C.** `unlink`
- D.** `rm`

Answer: ([SHOW ANSWER](#))

This utility securely overwrites data on disk to prevent recovery, making it suitable for securely deleting data from a filesystem in accordance with security best practices.

NEW QUESTION: 79

An administrator set up a new user account called "test". However, the user is unable to change their password. Given the following output:

```

[test@localhost ~]$ passwd
Changing password for user test.
Current password:
passwd: Authentication token manipulation error

[test@localhost ~]$ ls -l /bin/passwd
-rwxr-xr-x. 1 root root 33424 Feb 7 2022 /bin/passwd

[test@localhost ~]$ chage -l test
Last password change : Oct 19, 2023
Password expires : never
Password inactive : never
Account expires : never
Minimum number of days between password change : 0
Maximum number of days between password change : 99999
Number of days of warning before password expires : 7

[root@localhost bin]# passwd test
Changing password for user test.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.

```

Which of the following is the most likely cause of this issue?

- A. The SUID bit is missing on the /bin/passwd file.
- B. The password provided by the user "test" does not meet complexity requirements.
- C. The user "test" already changed the password today.
- D. The password has been disabled for user "test".

Answer: (SHOW ANSWER)

For normal users to change their own password, /bin/passwd must have the SUID bit set (permissions should be -rwsr-xr-x). The SUID bit allows users to run the program with the permissions of the file owner (root), which is required to update /etc/shadow. The provided output shows /bin/passwd does not have the SUID bit (no 's' in the owner's execute field). As a result, user "test" receives an "Authentication token manipulation error". The password can be changed as root, which confirms it's a permissions/SUID issue.

NEW QUESTION: 80

Which of the following references is recognized and used for guiding the configuration of operating systems and applications to ensure compliance with security best practices on Linux servers?

- A. GDPR
- B. ISO 27001
- C. CIS Benchmarks
- D. CVE

Answer: (SHOW ANSWER)

CIS Benchmarks provide detailed, consensus-based configuration guidelines specifically designed to harden operating systems and applications and ensure compliance with recognized security best practices.

NEW QUESTION: 81

A Linux administrator needs to compare two files and provide the output in the following format:

2,3d1

< Line 2

< Line 3

4a3

> Line 5

Which of the following commands should the administrator use to perform the task?

A. compgen

B. awk

C. file

D. diff

Answer: ([SHOW ANSWER](#))

This command compares two files line by line and produces output in the standard ed-style format, showing deletions and additions exactly as required.

NEW QUESTION: 82

Which of the following describes the method of consolidating system events to a single location?

A. Log aggregation

B. Health checks

C. Webhooks

D. Threshold monitoring

Answer: ([SHOW ANSWER](#))

Log aggregation is the process of collecting and consolidating logs from multiple sources into a single location, making it easier to analyze and manage system events.

NEW QUESTION: 83

Users are having issues running applications. A systems administrator thinks it is an SELinux issue. Which of the following commands should the administrator use to determine whether SELinux is enabled on the system?

A. getenforce

B. ls -lZ /

C. semanage -l

D. getsebool -l

Answer: ([SHOW ANSWER](#))

This command reports the current SELinux mode, allowing the administrator to quickly determine whether SELinux is enabled and enforcing, permissive, or disabled.

NEW QUESTION: 84

A Linux software developer wants to use AI to optimize source code used in a commercial product. Which of the following steps should the developer take first?

A. Research which of the available AI chatbots are best at optimizing source code.

B. Verify that the company has a policy governing the use of AI in software development.

C. Install a private LLM to use on the internal network for source code optimization.

D. Use open-source LLMs that undergo regular security reviews by the community.

Answer: ([SHOW ANSWER](#))

Before using AI on commercial source code, the developer must first ensure compliance with company policies, legal requirements, and security standards. This prevents potential intellectual property, licensing, or confidentiality issues.

NEW QUESTION: 85

A systems administrator needs to check access to all company servers. The administrator uses the following script, which does not complete:

```
for i in $(cat /home/user1.file)
do
echo $i
ssh $i uptime
```

Which of the following is missing from the script?

- A. fi
- B. else
- C. while
- D. done

Answer: D ([LEAVE A REPLY](#))

Shell scripting is a primary method for automating repetitive tasks in Linux. According to the CompTIA Linux+ V8 scripting objectives, administrators must understand the syntax for various control structures, including loops.

A for loop in Bash and other POSIX-compliant shells has a specific required structure:

The for statement (to define the iteration).

The do keyword (to start the block of commands).

The loop body (the commands to execute).

The done keyword (to terminate the loop block).

In the script provided, the administrator has correctly initiated the loop with for i in ... and opened the execution block with do. However, the script lacks the concluding done token. Without done, the shell interpreter will continue waiting for more input or return a syntax error because it does not know where the loop ends. This is why the script "does not complete" or run correctly.

NEW QUESTION: 86

A systems administrator needs to report the IP addresses of the users currently connected to the server. Which of the following commands should the administrator use to find the required information?

- A. \$ whois @localhost
- B. \$ w -i
- C. \$ cat /etc/hosts
- D. \$ who -l

Answer: ([SHOW ANSWER](#)**)**

This command displays information about currently logged-in users and includes the IP addresses they are connected from, making it suitable for reporting active user connections.

NEW QUESTION: 87

A Linux engineer needs to record new changes completed on a Git repository. Which of the following commands should the engineer use?

- A. git push
- B. git add
- C. git commit
- D. git clone

Answer: ([SHOW ANSWER](#)**)**

This command records the staged changes in the local repository by creating a new commit, preserving a snapshot of the work and its history.

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