XK0-005$^{Q\&As}$

CompTIA Linux+ Certification Exam

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QUESTION 1

A non-privileged user is attempting to use commands that require elevated account permissions, but the commands are not successful. Which of the following most likely needs to be updated?

A. /etc/passwd

B. /etc/shadow

C. /etc/sudoers

D. /etc/bashrc

Correct Answer: C

The /etc/sudoers file is used to configure the sudo command, which allows non-privileged users to execute commands that require elevated account permissions1. The file contains a list of users and groups that are allowed to use sudo, and

the commands they can run with it. The file also defines the security policy for sudo, such as whether a password is required, how long the sudo session lasts, and what environment variables are preserved or reset.

The /etc/passwd file is used to store information about the user accounts on the system, such as their username, user ID, home directory, and login shell. The /etc/shadow file is used to store the encrypted passwords for the user accounts,

along with other information such as password expiration and aging. These files are not directly related to the sudo command, and updating them will not grant a user elevated account permissions. The /etc/bashrc file is used to set up the

environment for the bash shell, such as aliases, functions, variables, and options. This file is executed whenever a new bash shell is started, and it affects all users on the system. However, this file does not control the sudo command or its

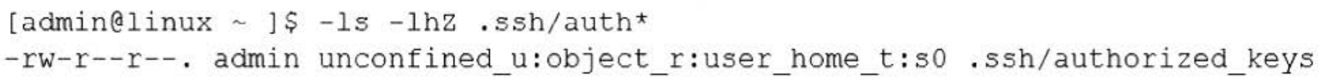
configuration, and updating it will not allow a user to use commands that require elevated account permissions.

QUESTION 2

An administrator transferred a key for SSH authentication to a home directory on a remote server. The key file was moved to .ssh/authorized_keys location in order to establish SSH connection without a password. However, the SSH

command still asked for the password.

Given the following output:



```
[admin@linux ~ ]$ -ls -lhZ .ssh/auth*
-rw-r--r--. admin unconfined_u:object_r:user_home_t:s0 .ssh/authorized_keys
```

Which of the following commands would resolve the issue?

A. restorecon .ssh/authorized_keys

B. ssh_keygen -t rsa -o .ssh/authorized_keys

C. chown root:root .ssh/authorized_keys

D. chmod 600 .ssh/authorized_keys

Correct Answer: D

Explanation: The command that would resolve the issue is chmod 600 .ssh/authorized_keys. This command will change the permissions of the .ssh/authorized_keys file to 600, which means that only the owner of the file can read and write it. This is necessary for SSH key authentication to work properly, as SSH will refuse to use a key file that is accessible by other users or groups for security reasons. The output of ls -l shows that currently the .ssh/authorized_keys file has permissions of 664, which means that both the owner and group can read and write it, and others can read it. The other options are not correct commands for resolving the issue. The restorecon .ssh/authorized_keys command will restore the default SELinux security context for the .ssh/authorized_keys file, but this will not change its permissions or ownership. The ssh_keygen -t rsa -o .ssh/authorized_keys command is invalid because ssh_keygen is not a valid command (the correct command is ssh-keygen), and the -o option is used to specify a new output format for the key file, not the output file name. The chown root:root .ssh/authorized_keys command will change the owner and group of the .ssh/ authorized_keys file to root, but this will not change its permissions or make it accessible by the user who wants to log in with SSH key authentication. References: How to Use Public Key Authentication with SSH; chmod(1) - Linux manual page

QUESTION 3

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

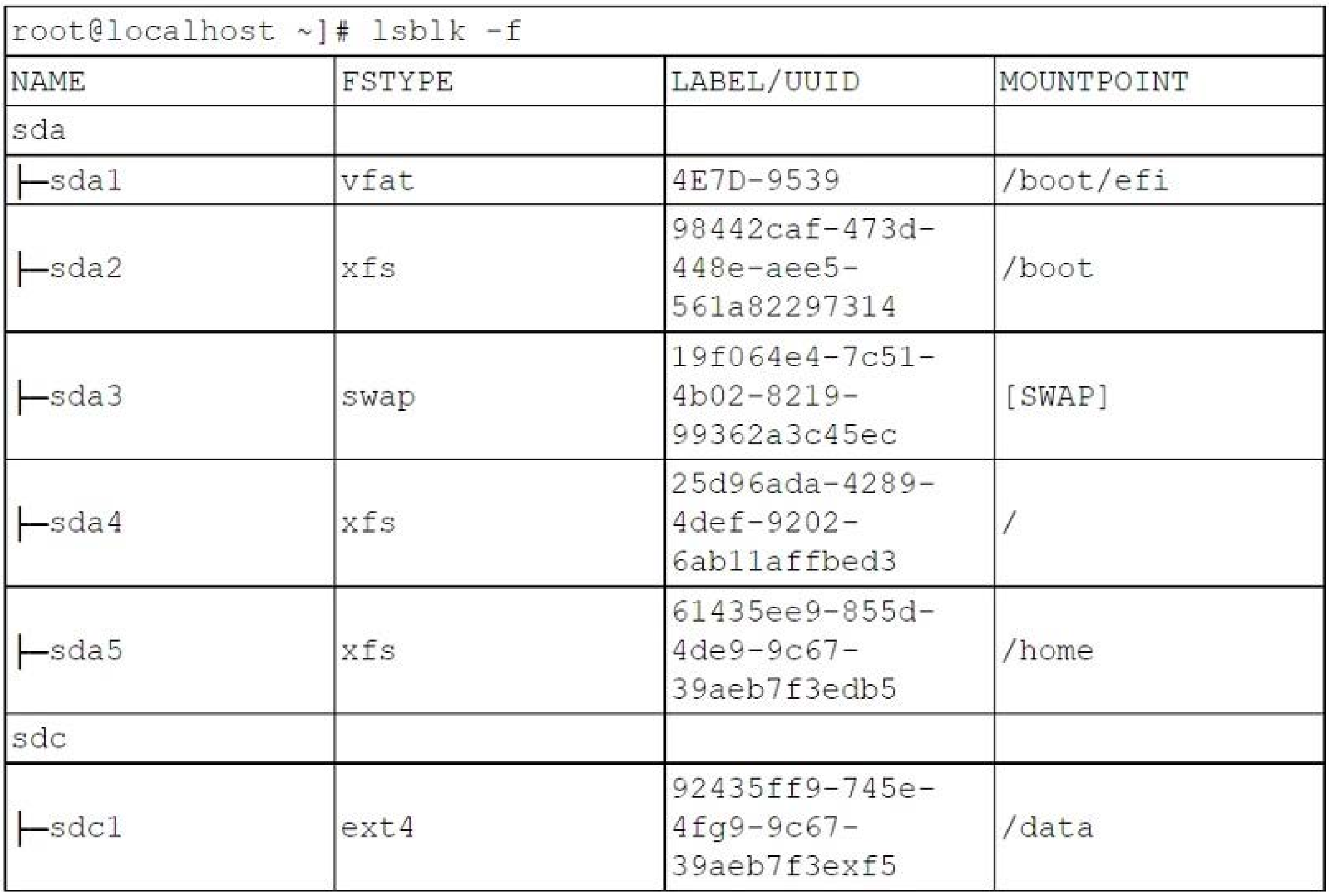
D. ssh-copy-id user@server

Correct 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.

QUESTION 4

A systems administrator detected corruption in the /data filesystem. Given the following output: Which of the following commands can the administrator use to best address this issue?



```
root@localhost ~]# lsblk -f
```

NAME	FSTYPE	LABEL/UUID	MOUNTPOINT
sda			
├─sda1	vfat	4E7D-9539	/boot/efi
├─sda2	xfs	98442caf-473d-448e-aee5-561a82297314	/boot
├─sda3	swap	19f064e4-7c51-4b02-8219-99362a3c45ec	[SWAP]
├─sda4	xfs	25d96ada-4289-4def-9202-6ab11affbed3	/
├─sda5	xfs	61435ee9-855d-4de9-9c67-39aeb7f3edb5	/home
sdc			
├─sdc1	ext4	92435ff9-745e-4fg9-9c67-39aeb7f3exf5	/data

A. umount /data mkfs . xfs /dev/sclcl mount /data

B. umount /data xfs repair /dev/ sdcl mount /data

C. umount /data fsck /dev/ sdcl mount / data

D. umount /data pvs /dev/sdcl mount /data

Correct Answer: B

The xfs repair command is used to check and repair an XFS filesystem, which is the type of filesystem used for the /data partition, as shown in the output. The administrator needs to unmount the /data partition before running the xfs repair command on it, and then mount it back after the repair is done. For example: umount /data; xfs_repair /dev/sdcl; mount /data. The mkfs.xfs command is used to create a new XFS filesystem, which would erase all the data on the partition. The fsck command is used to check and repair other types of filesystems, such as ext4, but not XFS. The pvs command is used to display information about physical volumes in a logical volume manager (LVM) setup, which is not relevant for this issue.

QUESTION 5

A Linux system is failing to boot. The following error is displayed in the serial console:

[[1;33mDEPEND[Om] Dependency failed for /data.

[[1;33mDEPEND[Om] Dependency failed for Local File Systems

...

Welcome to emergency mode! After logging in, type "journalctl -xb" to viewsystem logs, "systemct1 reboot" to reboot, "systemct1 default" to try again to boot into default mode.

Give root password for maintenance

(or type Control-D to continue}

Which of the following files will need to be modified for this server to be able to boot again?

A. /etc/mtab

B. /dev/sda

C. /etc/fstab

D. /ete/grub.conf

Correct Answer: C

Explanation: The file that will need to be modified for the server to be able to boot again is /etc/fstab. The /etc/fstab file is a file that contains the information about the file systems that are mounted at boot time on Linux systems. The file specifies the device name, mount point, file system type, mount options, dump frequency, and pass number for each file system. The error message indicates that the dependency failed for /data, which is a mount point for a file system. This means that the system could not mount the /data file system at boot time, which caused the system to enter the emergency mode. The emergency mode is a mode that allows the administrator to log in as the root user and perform basic tasks such as repairing the system. The administrator should modify the /etc/fstab file and check the entry for the /data file system. The administrator should look for any errors or inconsistencies in the device name, file system type, or mount options, and correct them. The administrator should also verify that the device and the file system are intact and functional by using commands such as blkid, fdisk, fsck, or mount. The administrator should then reboot the system and see if the issue is resolved. The file that will need to be modified for the server to be able to boot again is /etc/fstab. This is the correct answer to the question. The other options are incorrect because they are not related to the file systems that are mounted at boot time (/etc/mtab, /dev/sda, or /etc/grub.conf). References: CompTIA Linux+ (XK0-005) Certification Study Guide, Chapter 10: Managing Storage, page 321.