

RedHat System Administration I - QA

1. Accessing the Command Line:

- Question: How do you open a terminal on a Red Hat Enterprise Linux system?

- Answer: You can open a terminal by either using the keyboard shortcut ``Ctrl + Alt + T`` or by searching for "Terminal" in the application menu.

- Explanation: Opening a terminal is the first step to access the command line in Linux. The keyboard shortcut or application menu method may vary depending on the desktop environment used.

2. Managing Files from the Command Line:

- Question: What command is used to copy a file from one directory to another?

- Answer: The ``cp`` command is used to copy files in the command line. For example, ``cp file.txt /destination/directory/``.

- Explanation: The ``cp`` command stands for copy. It is followed by the name of the file you want to copy and the destination directory where you want to place the copy.

3. Getting Help in Red Hat Enterprise Linux:

- Question: How can you access the manual page for the 'ls' command?

- Answer: You can access the manual page for the 'ls' command by typing ``man ls`` in the terminal.

- Explanation: The ``man`` command is used to display the manual page for a given command. It provides detailed information about the command's usage, options, and arguments.

4. Creating, Viewing, and Editing Text Files:

- Question: What command is used to create a new empty text file?

- Answer: The ``touch`` command is used to create a new empty text file. For example, ``touch newfile.txt``.

- Explanation: The ``touch`` command is versatile and can be used for various purposes, including creating new empty files or updating the timestamp of existing files.

5. Managing Local Linux Users and Groups:

- Question: How do you add a user to a specific group in Linux?

- Answer: The ``usermod`` command is used to add a user to a specific group. For example, ``sudo usermod -aG groupName username``.

- Explanation: The ``usermod`` command modifies user account settings. The ``-aG`` option adds the user to the specified group without removing them from other groups.

6. Controlling Access to Files:

- Question: What does the command `'chmod 755 file.txt'` do?

- Answer: The command sets the file permissions to allow the owner to read, write, and execute, and others to read and execute.

- Explanation: In the 'chmod' command, the three-digit code (755) represents the permission settings for the owner, group, and others. Each digit is a sum of read (4), write (2), and execute (1) permissions.

7. Monitoring and Managing Linux Processes:

- Question: How can you terminate a running process in Linux?

- Answer: The `kill` command is used to terminate a process. For example, `kill -9 processID`.

- Explanation: The `kill` command sends a signal to a process, and the `-9` option indicates a forceful termination. The 'processID' is obtained from the 'ps' command or other process listing tools.

8. Controlling Services and Daemons:

- Question: How do you start a service in Linux?

- Answer: The `systemctl start serviceName` command is used to start a service. For example, `sudo systemctl start apache2`.

- Explanation: The `systemctl` command is used to control the systemd system and service manager. The `start` option initiates the specified service.

9. Configuring and Securing OpenSSH Service:

- Question: How can you disable password-based authentication in the OpenSSH server?

- Answer: Edit the `sshd_config` file and set `PasswordAuthentication no`, then restart the OpenSSH service.

- Explanation: Changing the `PasswordAuthentication` option in the `sshd_config` file to `no` ensures that only key-based authentication is allowed, enhancing security.

10. Analyzing and Storing Logs:

- Question: How can you view the system logs using the `journalctl` command?

- Answer: Type `journalctl` in the terminal to display the system logs.

- Explanation: 'journalctl' is a command to query and display messages from the journal, which stores log data on modern Linux systems.

11. Managing Red Hat Enterprise Linux Networking:

- Question: What command displays the IP address configuration of all network interfaces?

- Answer: The ``ifconfig`` command or ``ip addr show`` command displays the IP address configuration of network interfaces.

- Explanation: 'ifconfig' is a traditional command, while 'ip addr show' is part of the newer iproute2 utilities.

12. Archiving and Copying Files Between Systems:

- Question: How do you create a compressed archive of a directory in Linux?

- Answer: The ``tar`` command is used to create a compressed archive. For example, ``tar -czvf archive.tar.gz directory``.

- Explanation: The ``-czvf`` options in the 'tar' command stand for compression (c), gzip (z), verbose (v), and specify the filename (f) of the archive.

13. Installing and Updating Software Packages:

- Question: How do you update all installed packages on a Red Hat system using the 'yum' package manager?

- Answer: The command is ``sudo yum update``.

- Explanation: The 'yum update' command updates all installed packages to their latest versions. 'sudo' is used to run the command with administrative privileges.

14. Accessing Linux File Systems:

- Question: What is the purpose of the 'mount' command in Linux?

- Answer: The 'mount' command is used to attach a filesystem to the directory tree.

- Explanation: 'mount' is crucial for incorporating external storage devices, network shares, or other filesystems into the Linux directory structure.

15. Analyzing Servers and Getting Support:

- Question: How can you generate a system report using the 'sosreport' command?

- Answer: Run the command `sosreport` in the terminal, and it will generate a comprehensive system report.

- Explanation: 'sosreport' collects essential system information, logs, and configuration files to aid in troubleshooting and support.