Assignment : Linux

Module 1: Linux server-understand and use essential tools

1. What is the minimum number of partitions you need to install Linux?

   Three minimum partition is required to the install of linux.

2. Explain About Chmod Command

   The chmod command in Linux systems is used to change the file mode bits, which control the read, write, and execute permissions of files and directories. These permissions determine who can read, modify, or execute a file.

3. How to check Linux memory utilization

   To check Linux memory utilization, use the following commands:

I. **free -h**: Displays memory usage in a human-readable format.

II. **top or htop**: Shows real-time memory and CPU usage.

III. **vmstat**: Provides detailed memory and system statistics.

IV. **cat /proc/meminfo**: Displays detailed memory information from the /proc filesystem.

4. Use grep to search for specific patterns in files.

   Done

5. Get Connecting on a linux server by ssh

   Done

6. Create 5 files in the /tmp directory, and then use tar and gzip to bundle and compress the files.

   Done

7. Describe the root account

   The root account in a Linux system is the most powerful user account, with full administrative privileges. It has unrestricted access to all files, commands, and resources on the system. The root user can install or remove software, modify system configurations, manage other user accounts, and perform any action that affects the entire system. Due to its power, it's advised to use the root account sparingly to avoid accidental system changes or security risks. Tasks requiring elevated privileges are typically performed using the sudo command.

8. What is shell?

   A shell in Linux is a command-line interface that allows users to interact with the operating system.

9. What is Linux?

   Linux is an open-source, Unix-like operating system that serves as the foundation for a wide variety of software environments. It is widely used on servers, desktops, mobile devices, and embedded systems. Linux is known for its stability, security, and flexibility, allowing users to customize the system to their needs. The core component of Linux is the kernel, which manages hardware resources and enables software to interact with the hardware. Many distributions, or "distros," like Ubuntu, Fedora, and CentOS, are built on the Linux kernel, each offering different features and tools.

10. What is Bash?

    Bash (Bourne Again Shell) is a widely used command-line shell and scripting language in Linux and other Unix-like operating systems. It serves as the default shell in many Linux distributions. Bash allows users to execute commands, run scripts, and automate tasks by writing sequences of commands in shell scripts. It provides features like command history, tab completion, and scripting capabilities, making it a powerful tool for interacting with the operating system and managing system tasks. Bash is named "Bourne Again Shell" because it is an enhanced version of the original Unix shell, the Bourne shell (sh).

11. You have a new empty hard drive that you will use for Linux. What is the first step you use.

    The first step I will use is to give a storage to the root the I will give to home and at the end I will give the storage to the smash.

12. Write the Linux command to show the current working directory.

    The Linux command to show the current working directory is a **“pwd”**

13. write the Linux command to get help with various options.

    “--help”

14. Write the Linux command to display what all users are currently doing.

    “w”

15. write the Linux command to get information about the operating system.

    “uname -a”

    “lsb_release -a”

    “cat/etc/os-release”

16. Write the Linux command to create a hard link of a file.

    “ln original_file.txt link_to_file.txt”

17. Write the Linux command to create a soft link of a file as well as Directory.

    “ln -s original_file.txt my_link”

18. Write the Linux command to search for specific pattern in a file.

“grep 'pattern' filename”

19. Write the Linux command to show the use of basic regular expressions using grep command.

    “grep '^Error\|Failed$' logfile.txt”