

Linux Assignment

1 – SYSTEM INFORMATION

Task 1: Display Linux system information Solution: `uname -a`

Task 2: Show which version of Red Hat is installed Solution: `cat /etc/redhat-release`

2 – HARDWARE INFORMATION

Task 1: Display messages in the kernel ring buffer Solution: `dmesg`

Task 2: Display CPU information Solution: `cat /proc/cpuinfo`

3 – PERFORMANCE MONITORING AND STATISTICS

Task 1: Display and manage the top processes Solution: `top`

Task 2: Display virtual memory statistics Solution: `vmstat 1`

4 – USER INFORMATION AND MANAGEMENT

Task 1: Display the user and group IDs of your current user Solution: `id`

Task 2: Display the last users who have logged onto the system Solution: `last`

5 – FILE AND DIRECTORY COMMANDS

Task 1: List all files in a long listing (detailed) format Solution: `ls -al`

Task 2: Display the present working directory Solution: `pwd`

6 – PROCESS MANAGEMENT

Task 1: Display your currently running processes Solution: `ps`

Task 2: Display all the currently running processes on the system Solution: `ps -ef`

7 – FILE PERMISSIONS

Task 1: Change file permissions to read, write, and execute for user, group, and world Solution: `chmod 777 filename`

Task 2: Change file permissions to read, write, and execute for user and group, and read-only for world Solution: `chmod 755 filename`

8 – NETWORKING

Task 1: Display all network interfaces and IP addresses Solution: `ifconfig -a`

Task 2: Query or control network driver and hardware settings for eth0 Solution: `ethtool eth0`

9 – ARCHIVES (TAR FILES)

Task 1: Create a tar file containing a directory Solution: `tar cf archive.tar directory`

Task 2: Extract the contents from a tar file Solution: `tar xf archive.tar`

10 – INSTALLING PACKAGES

Task 1: Search for a package by keyword Solution: `yum search keyword`

Task 2: Install a package Solution: `yum install package`

11 – SEARCH

Task 1: Search for a pattern in a file Solution: `grep pattern file`

Task 2: Search recursively for a pattern in a directory Solution: `grep -r pattern directory`

12 – SSH LOGINS

Task 1: Connect to a host as your local username Solution: `ssh host`

Task 2: Connect to a host as a specific user Solution: `ssh user@host`

13 – FILE TRANSFERS

Task 1: Securely copy a file to a remote server Solution: `scp file.txt server:/tmp`

Task 2: Copy files and directories recursively from a remote server to the local system Solution: `scp -r server:/var/www /tmp`

14 – DISK USAGE

Task 1: Show free and used space on mounted filesystems Solution: `df -h`

Task 2: Display total disk usage of the current directory Solution: `du -sh`

15 – DIRECTORY NAVIGATION

Task 1: Go up one level in the directory tree Solution: `cd ..`

Task 2: Change to the `/etc` directory Solution: `cd /etc`