File and Directory Operations

1. **mkdir [directory_name]:**

- This command creates a new directory with the specified name in the current working directory.
- Example: mkdir my_directory

2. **rmdir [directory_name]:**

- This command removes an empty directory with the specified name.
- Example: rmdir empty_directory

3. **cd [directory_path]:**

- Use this command to change your current working directory to the one specified by [directory_path].
- Example: cd /path/to/directory

4. **touch [file_name]:**

- This command creates an empty file with the specified name in the current working directory.
- Example: touch my_file.txt

5. **ls:**

- The ls command lists files and directories in the current directory.
- It provides a basic list of names.
- Example: ls

6. **ls -l:**

- The ls -l command lists files and directories in a long format, displaying detailed information such as permissions, owner, group, size, and modification date.
- Example: ls -l

7. **pwd:**

- The pwd command prints the current working directory, showing you the full path to your current location in the file system.
- Example: ls -l

8. cp [source] [destination]:

- Use this command to copy files or directories. [source] is the source file or directory, and [destination] is where the source will be copied.
- Example: ls -l

9. mv [source] [destination]:

- This command is used to move or rename files and directories. It can also be used to move files/directories to a new location.
- Example: mv old_file.txt new_file.txt

10. rm [file_or_directory]:

- The rm command is used to remove files or directories. Be cautious when using this command as deleted data is typically not recoverable.
- Example: rm unwanted_file.txt

11. find [directory] -name [filename]:

- The find command searches for files and directories within [directory] with names matching [filename].
- It's a powerful tool for searching within the file system.
- Example: find /path/to/search -name my_file.txt

Text Editing

1. nano [file_name]:

- Nano is a simple text editor for the command line.
- This command opens or creates a file for editing using the Nano editor.
  - Example: ls -l

2. vim [file_name]:

- Vim is a more advanced text editor with extensive features for programmers and power users.
- This command opens or creates a file for editing using Vim.
- Example: vim my_document.txt

Package Management

❖ **Ubuntu/Debian:**

1. **sudo apt-get update:**

➢ This command updates the package lists on Ubuntu/Debian-based systems, ensuring you have the latest information about available packages.

2. **sudo apt-get upgrade:**

➢ This command upgrades installed packages to their latest versions.

❖ **Amazon Linux/CentOS:**

1. **sudo yum update:**

➢ On Amazon Linux and CentOS-based systems, this command updates installed packages.

User and Permissions

1. **sudo [command]:**

➢ The sudo command allows you to run another command with superuser privileges.

➢ It's often used for administrative tasks that require elevated permissions.

2. **chmod [permissions] [file]:**

➢ The chmod command changes the permissions (read, write, execute) of a file.

➢ [permissions] can be specified using numeric values (e.g., 755) or symbolic notation (e.g., u+rwx).

3. **chown [user]:[group] [file]:**

➢ The chown command changes the ownership of a file or directory to the specified [user] and [group].

➢ It's often used to transfer ownership between users.

System Management

1. **sudo shutdown -h now:**

- ➢ This command shuts down the EC2 instance immediately.
- ➢ The -h flag stands for "halt."

2. **sudo reboot:**

- ➢ Use this command to reboot the EC2 instance.

3. **top or htop:**

- ➢ These commands provide real-time information about system performance, including CPU and memory usage, and list running processes.

4. **df -h:**

- ➢ The df command displays disk space usage.
- ➢ The -h flag formats sizes in a human-readable format.

5. **free -m:**

- ➢ The free command shows memory (RAM) usage in megabytes.

6. **ps aux:**

- ➢ The ps command lists information about running processes, and aux provides a detailed list with user, CPU usage, and more.

7. **netstat -tuln:**

- ➢ The netstat command displays information about network ports and connections. The flags tuln filter the output to show only listening (-l) TCP (-t) and UDP (-u) ports.

SSH and Remote Access

1. **ssh [user]@[instance_ip]:**
- ➢ SSH (Secure Shell) is used to securely connect to remote systems.
- ➢ Replace [user] with your username and [instance_ip] with your EC2 instance's IP address or hostname.

2. **scp [file] [user]@[instance_ip]:[destination]:**
- ➢ SCP (Secure Copy) is used to securely copy files between your local machine and the EC2 instance or between two EC2 instances.

3. **ssh-keygen:**
- ➢ This command generates SSH key pairs for authentication, which can be used to connect to remote servers without a password.

Service Management(Systemd)

1. **sudo systemctl start [service_name]:**
- ➢ Use this command to start a system service.

2. **sudo systemctl stop [service_name]:**
- ➢ Use this command to stop a system service.

3. **sudo systemctl enable [service_name]:**
- ➢ This command enables a service to start automatically at boot.

4. **sudo systemctl disable [service_name]:**
- ➢ This command disables a service from starting automatically at boot.

5. **sudo systemctl status [service_name]:**
- ➢ This command checks the status of a system service.

Logs and Monitoring

1. **tail -f [log_file]:**

- The tail command displays the last few lines of a text file, and the -f flag allows you to monitor the file for changes in real-time.

2. **journalctl -u [service_name]:**

- The journalctl command is used to view logs for a specific systemd service.

3. **dmesg:**

- This command displays kernel messages, which can be helpful for troubleshooting hardware or driver issues.

4. **htop:**

- htop is an interactive process viewer that provides a real-time overview of system performance and allows you to manage processes.

Package Installation

1. **sudo apt-get install python3:**

- This command installs Python 3 on Ubuntu/Debian-based systems.

2. **sudo yum install python3:**

- This command installs Python 3 on Amazon Linux/CentOS-based systems.

3. **pip install [package_name]:**

- Use the pip command to install Python packages. Replace [package_name] with the name of the package you want to install.

AWS CLI Installation (Example)

- Download and install the AWS CLI (Amazon Web Services Command Line Interface) for AWS management.

- The specific commands for AWS CLI installation may vary depending on your Linux distribution and package manager.

- These commands provide a foundation for managing and interacting with an EC2 instance.

- Please note that some commands may require administrative privileges, which can be granted using sudo.

- Always exercise caution when working with system commands, especially those that can modify or delete data.