

Basic Linux Commands

1. pwd (Print Working Directory)

- Explanation: Displays the current directory path.

- Example:

pwd + enter(key)

Output:

/home/user

2. ls (List)

- Explanation: Lists files and directories in the current directory.

- Example:

ls + enter(key)

Output:

file1.txt file2.txt directory1

3. cd (Change Directory)

- Explanation: Changes the current directory.

- Example:

cd /home/user/Documents + enter(key)

4. cp (Copy)

- Explanation: Copies files or directories.

- Example:

cp source.txt destination.txt + enter(key)

5. mv (Move)

- Explanation: Moves or renames files or directories.

- Example: mv oldname.txt newname.txt + enter(key)

6. **rm (Remove)**

- Explanation: Removes files or directories.

- Example:

`rm file.txt + enter(key)`

To remove a directory and its contents:

`rm -r directory + enter(key)`

7. **mkdir (Make Directory)**

- Explanation: Creates a new directory.

- Example:

`mkdir new_directory + enter(key)`

8. **rmdir (Remove Directory)**

- Explanation: Removes an empty directory.

- Example:

`rmdir empty_directory + enter(key)`

9. **touch**

- Explanation: Creates an empty file or updates the timestamp of an existing file.

- Example:

`touch newfile.txt + enter(key)`

10. **echo**

- Explanation: Displays a line of text or a variable value.

- Example:

`echo "Hello, World!" + enter(key)`

File Permissions and Ownership

1. chmod (Change Mode)

- Explanation: Changes the file permissions.

- Example:

`chmod 755 script + enter(key)`

2. chown (Change Owner)

- Explanation: Changes the file owner and group.

- Example:

`chown user:group file.txt + enter(key)`

Viewing and Editing Files

1. cat (Concatenate)

- Explanation: Displays the contents of a file.

- Example:

`cat file.txt + enter(key)`

2. less

- Explanation: Views the content of a file one screen at a time.

- Example:

`less file.txt + enter(key)`

3. head

- Explanation: Displays the first few lines of a file.

- Example:

`head file.txt + enter(key)`

4. **tail**

- Explanation: Displays the last few lines of a file.

- Example:

tail file.txt + enter(key)

5. **nano**

- Explanation: Opens a file in the Nano text editor.

- Example:

nano file.txt + enter(key)

6. **vi or vim**

- Explanation: Opens a file in the Vi or Vim text editor.

- Example:

vim file.txt + enter(key)

Networking

1. **ping**

- Explanation: Tests the reachability of a host.

- Example:

ping google.com + enter(key)

2. **ifconfig**

- Explanation: Displays network configuration (use ip a in newer systems).

- Example:

ifconfig + enter(key)

3. netstat

- Explanation: Displays network connections, routing tables, and interface statistics.
- Example:
netstat -an + enter(key)

4. ssh (Secure ell)

- Explanation: Connects to a remote machine securely.
- Example:
ssh user@hostname + enter(key)

5. scp (Secure Copy)

- Explanation: Copies files between hosts over S.
- Example:
scp file.txt user@hostname:/path/to/destination + enter(key)

System Information

1. uname

- Explanation: Displays system information.
- Example:
uname -a + enter(key)

2. top

- Explanation: Displays real-time system information including tasks and memory usage.
- Example:
top + enter(key)

3. **ps (Process Status)**

- Explanation: Displays information about running processes.

- Example:

ps aux + enter(key)

4. **df (Disk Free)**

- Explanation: Displays disk space usage.

- Example:

df -h + enter(key)

5. **du (Disk Usage)**

- Explanation: Estimates file and directory space usage.

- Example:

du - directory + enter(key)

6. **free**

- Explanation: Displays memory usage.

- Example:

free -h + enter(key)

Package Management

1. **apt-get (Advanced Package Tool)**

- Explanation: Manages packages in Debian-based distributions.

- Example:

sudo apt-get update + enter(key)

sudo apt-get install package_name + enter(key)

2. **yum (Yellowdog Updater Modified)**

- Explanation: Manages packages in RPM-based distributions.

- Example:

`sudo yum install package_name + enter(key)`

3. **dnf (Dandified YUM)**

- Explanation: Manages packages in newer RPM-based distributions.

- Example:

`sudo dnf install package_name + enter(key)`

File Compression

1. **tar (Tape Archive)**

- Explanation: Archives files and directories.

- Example:

To create an archive:

`tar -cvf archive.tar directory + enter(key)`

To extract an archive:

`tar -xvf archive.tar + enter(key)`

2. **gzip**

- Explanation: Compresses files.

- Example:

`gzip file.txt + enter(key)`

3. **gunzip**

- Explanation: Decompresses files.

- Example:

`gunzip file.txt.gz + enter(key)`

4. **zip**

- Explanation: Compresses files into a ZIP archive.

- Example:

zip archive.zip file1 file2 + enter(key)

5. **unzip**

- Explanation: Extracts files from a ZIP archive.

- Example:

unzip archive.zip + enter(key)

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