Linux Commands

Introduction:

In AWS, especially when working with EC2 Linux instances, Linux commands are essential for managing and interacting with the virtual server environment. After connecting to a Linux instance via SSH, users use Linux commands to perform tasks like:

- Navigating directories (cd, ls)

- Managing files (cp, mv, rm, nano, vim)

- Installing software (yum, apt-get)

- Monitoring system performance (top, htop, df, free)

- Managing permissions and users (chmod, chown, adduser)

- Starting and stopping services (systemctl, service)

- Transferring files (scp, rsync)

- Running scripts and automating tasks (bash, cron)

These commands enable users to configure servers, deploy applications, manage storage, and handle system operations—all directly within the cloud environment.
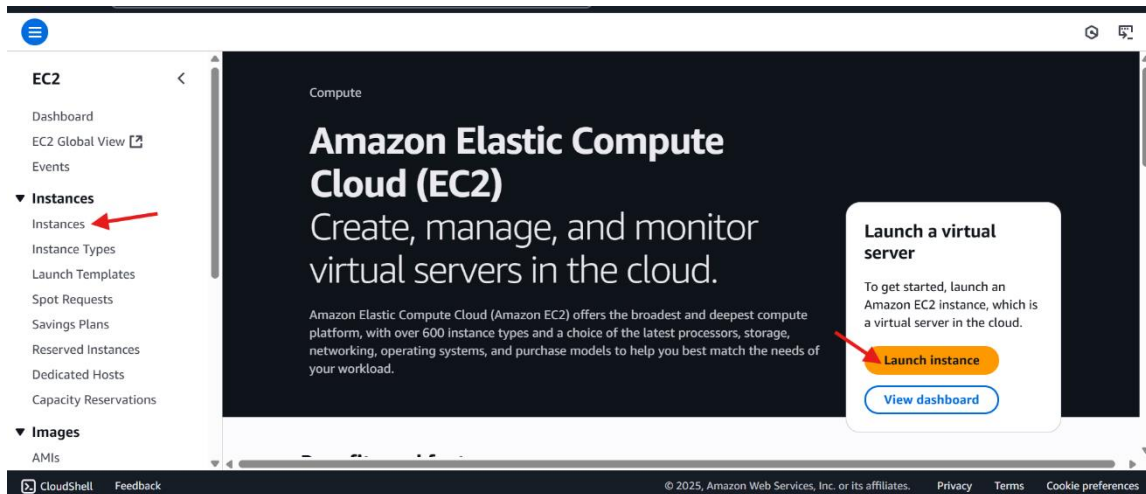
Step by Step Instructions:

Step 1:

- Go to "AWS Management Console" and search "EC2".
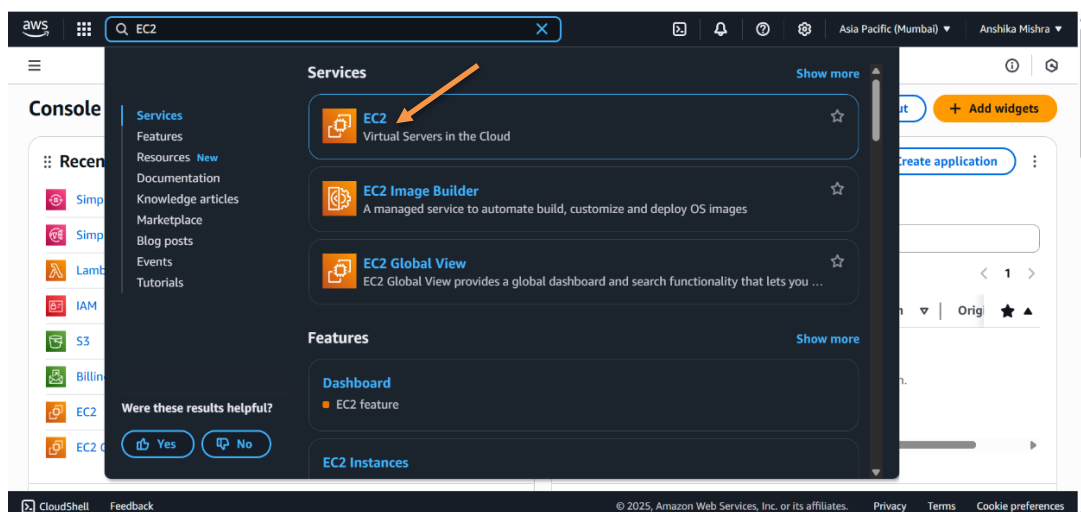
- The "EC2 Dashboard" will open.

- Go to "Instance".
- Click on "Launch Instance".

- Type Server name.

- Select "Amazon Linux aws".

- Select "t2.micro" instance type.
- Select key pair.

- In Network Setting, Allow https and https.

- Click on "Launch Instance".

-
- Wait until the instance state goes from "Pending" to "Running".

- Now, Select the server and then click on "Connect".

- Then click on connect.

- Change user with the help of "sudo su" command.
- Then for check update type "yum update -y".

- For installation type "yum install httpd -y"

- Whether package is start or stop you have to type command "systemctl status httpd".

- It shows that "inactive(dead)".
- For Starting package, type "systemctl start httpd".

```
Docs: man:httpd.service(8)
[root@ip-172-31-1-172 ec2-user]# systemctl start httpd  ←
```

- For html, type command "cd /var/www/html".

```
[root@ip-172-31-1-172 ec2-user]# cd /var/www/html
```

- For typing the text, type "cat >index.html" and then type the message, after this press "Ctrl+ D" for exit.

```
[root@ip-172-31-1-172 html]# cat > index.html
this is html file...
[root@ip-172-31-1-172 html]#
```

- For Creating file, "cat file1" or "cat > file1" and type something after this type "Ctrl+ D".

```
[root@ip-172-31-1-172 ec2-user]# cat >file1  ←
this is file1!
```

- For read, type "cat file1" command.

```
[root@ip-172-31-1-172 ec2-user]# cat file1  ←
this is file1!
[root@ip-172-31-1-172 ec2-user]#
```

- For edit more line type "cat >> file1" command.

```
this is file1!
[root@ip-172-31-1-172 ec2-user]# cat >> file1  ←
this is updation
[root@ip-172-31-1-172 ec2-user]# cat file1  ←
this is file1!
this is updation
[root@ip-172-31-1-172 ec2-user]#
```

- For creating multiples files, type "touch file{2..5}" command.
- For check file, type "ls" command.

```
[root@ip-172-31-1-172 ec2-user]# touch file{2..5}  ←
[root@ip-172-31-1-172 ec2-user]# ls  ←
2  3  4  5  file1  file2  file3  file4  file5
[root@ip-172-31-1-172 ec2-user]#
```

- For hidden file or dot file, type "ls-a" command. It stand for list all.

```
[root@ip-172-31-1-172 ec2-user]# ls -a
.  ..  .bash_history  .bash_logout  .bash_profile  .bashrc  .ssh  2  3  4  5  file1  file2  file3  file4  file5
[root@ip-172-31-1-172 ec2-user]#
```

- For long list, type "ll" command.

```
[root@ip-172-31-1-172 ec2-user]# ll
total 4
-rw-r--r--. 1 root root  0 Jul 20 09:45 2
-rw-r--r--. 1 root root  0 Jul 20 09:45 3
-rw-r--r--. 1 root root  0 Jul 20 09:45 4
-rw-r--r--. 1 root root  0 Jul 20 09:45 5
-rw-r--r--. 1 root root 32 Jul 20 09:42 file1
-rw-r--r--. 1 root root  0 Jul 20 09:45 file2
-rw-r--r--. 1 root root  0 Jul 20 09:45 file3
-rw-r--r--. 1 root root  0 Jul 20 09:45 file4
-rw-r--r--. 1 root root  0 Jul 20 09:45 file5
[root@ip-172-31-1-172 ec2-user]#
```

CloudShell   Feedback

- In long list, for check hidden or dot file type "ll -a" command.

```
[root@ip-172-31-1-172 ec2-user]# ll -a
total 36
drwx------. 3 ec2-user ec2-user 16384 Jul 20 09:45 .
drwxr-xr-x. 3 root     root        22 Jul 20 08:02 ..
-rw-------. 1 ec2-user ec2-user      8 Jul 20 08:13 .bash_history
-rw-r--r--. 1 ec2-user ec2-user     18 Jan 28  2023 .bash_logout
-rw-r--r--. 1 ec2-user ec2-user    141 Jan 28  2023 .bash_profile
-rw-r--r--. 1 ec2-user ec2-user    492 Jan 28  2023 .bashrc
drwx------. 2 ec2-user ec2-user     29 Jul 20 08:02 .ssh
-rw-r--r--. 1 root     root          0 Jul 20 09:45 2
-rw-r--r--. 1 root     root          0 Jul 20 09:45 3
-rw-r--r--. 1 root     root          0 Jul 20 09:45 4
-rw-r--r--. 1 root     root          0 Jul 20 09:45 5
-rw-r--r--. 1 root     root         32 Jul 20 09:42 file1
-rw-r--r--. 1 root     root          0 Jul 20 09:45 file2
-rw-r--r--. 1 root     root          0 Jul 20 09:45 file3
-rw-r--r--. 1 root     root          0 Jul 20 09:45 file4
-rw-r--r--. 1 root     root          0 Jul 20 09:45 file5
[root@ip-172-31-1-172 ec2-user]#
```

- For remove file, type "rm file2" command. It asks permission "remove regular empty file 'file2'?" type "y".

```
-rw-r--r--. 1 root        root              0 Jul 20 0
[root@ip-172-31-1-172 ec2-user]# rm file2
rm: remove regular empty file 'file2'? y
[root@ip-172-31-1-172 ec2-user]#
```

CloudShell   Feedback

- If you don't want permission to remove file type "rm -f file3" command. f stands for forcefully.

```
[root@ip-172-31-1-172 ec2-user]# rm -f file3
[root@ip-172-31-1-172 ec2-user]# ls
2  3  4  5  file1  file4  file5
[root@ip-172-31-1-172 ec2-user]#
```

- For deleting internal files, type "rm -rvf file4" command. rvf stands for "recursive verbose forcefully" and it shows "removed".

```
[root@ip-172-31-1-172 ec2-user]# rm -rvf file4
removed 'file4'
[root@ip-172-31-1-172 ec2-user]#
```

- For removing all files with the name of 'file', type "rm -rvf file*".

```
[root@ip-172-31-1-172 ec2-user]# rm -rvf file*
removed 'file1'
removed 'file5'
[root@ip-172-31-1-172 ec2-user]#
```

- For creating directory, type "mkdir my" command and then "my" name directory created.

```
[root@ip-172-31-1-172 ec2-user]# mkdir my
[root@ip-172-31-1-172 ec2-user]# ls
2  3  4  5  my
[root@ip-172-31-1-172 ec2-user]#
```

- For creating internal file in "my" type "mkdir my/abc" command.

```
[root@ip-172-31-1-172 ec2-user]# mkdir my/abc
```

```
[root@ip-172-31-1-172 ec2-user]# ls my/
abc
[root@ip-172-31-1-172 ec2-user]#
```

- For go to internal file of my, type "cd my/" command.

```
[root@ip-172-31-1-172 ec2-user]# cd my/
[root@ip-172-31-1-172 my]#
```

- For typing internal file type "cat > ql" command where ql is file.

```
[root@ip-172-31-1-172 my]# cat > ql
this is ql file
[root@ip-172-31-1-172 my]# cat ql
this is ql file
[root@ip-172-31-1-172 my]#
```

- For going one step back, type "cd .." command.

```
[root@ip-172-31-1-172 my]# cd ..
[root@ip-172-31-1-172 ec2-user]#
```

- Type "ll -a" command where you see those files which start from 'd' means 'directory' and 'l' means 'list' and '-' means 'file'.

```
[root@ip-172-31-1-172 ec2-user]# ll -a
total 16
drwx------. 4 ec2-user ec2-user 141 Jul 20 10:05 .
drwxr-xr-x. 3 root     root      22 Jul 20 08:02 ..
-rw-------. 1 ec2-user ec2-user   8 Jul 20 08:13 .bash_history
-rw-r--r--. 1 ec2-user ec2-user  18 Jan 28  2023 .bash_logout
-rw-r--r--. 1 ec2-user ec2-user 141 Jan 28  2023 .bash_profile
-rw-r--r--. 1 ec2-user ec2-user 492 Jan 28  2023 .bashrc
drwx------. 2 ec2-user ec2-user  29 Jul 20 08:02 .ssh
-rw-r--r--. 1 root     root       0 Jul 20 09:45 2
-rw-r--r--. 1 root     root       0 Jul 20 09:45 3
-rw-r--r--. 1 root     root       0 Jul 20 09:45 4
-rw-r--r--. 1 root     root       0 Jul 20 09:45 5
drwxr-xr-x. 3 root     root      27 Jul 20 10:11 my
[root@ip-172-31-1-172 ec2-user]#
```

- For going to 'block', type "cd /dev/block" command.

```
[root@ip-172-31-1-172 ec2-user]# cd /dev/block
[root@ip-172-31-1-172 block]#
```

- For going to 'bin', type "cd ../../bin".

```
[root@ip-172-31-1-172 block]# cd ../../bin
[root@ip-172-31-1-172 bin]#
```

- If you forget your current location, type "pwd" command.

```
[root@ip-172-31-1-172 bin]# pwd
/bin
[root@ip-172-31-1-172 bin]#
```

- For check list in, type "ls /bin" command.

```
cifsiostat          id                  passwd              sha256sum           vlock
cksum               info                paste               sha384hmac          vmstat
clear               infocmp             pathchk             sha384sum           w
ryzcruhh            infotocap           peekfd              sha512hmac          wait
cloud-id            install             perl                sha512sum           wall
cloud-init          ionice              perl5.32.1          showconsolefont     watch
cloud-init-per      iostat              perldoc             showkey             wc
cmp                 ipcmk               pgrep               shred               wcurl
col                 ipcrm               pic                 shuf                wdctl
colcrt              ipcs                piconv              sim_lsmplugin       wget
colrm               irqtop              pidof               simc_lsmplugin      whatis
column              isosize             pidstat             size                whatis.man-db
comm                jemalloc.sh         pidwait             skill               whereis
command             jobs                ping                slabtop             which
coredumpctl         join                pinky               sleep               whiptail
cp                  journalctl          pkg-config          sm3hmac             who
cpio                jp.py               pkgconf             snice               whoami
cpupower            jq                  pkill               soelim              write
csh                 jsondiff            pldd                soelim.groff        x86_64
csplit              jsondiff-3          pmap                sort                x86_64-amazon-linux-gnu-pkg-config
curl                jsondiff-3.9        pod2man             sotruss             x86_energy_perf_policy
cut                 jsonpatch           pod2text            split               xargs
cvtsudoers          jsonpatch-3         pod2usage           sprof               xgettext
cyrusdb2current     jsonpatch-3.9       portablectl         ssh                 xmlcatalog
date                jsonpointer         post-grohtml        ssh-add             xmllint
dbus-broker         jsonpointer-3       powernow-k8-decode  ssh-agent           xmlwf
dbus-broker-launch  jsonpointer-3.9     pr                  ssh-copy-id         xxd
dc                  jsonschema          pre-grohtml         ssh-keygen          xz
dd                  kbd_mode            preconv             ssh-keyscan         xzcat
deallocvt           kbdinfo             printenv            ssm-agent-worker    xzcmp
debuginfo-install   kbdrate             printf              ssm-cli             xzdec
debuginfod-find     kernel-install      prlimit             ssm-document-worker xzdiff
delv                keyctl              prtstat             ssm-session-logger  xzegrep
df                  kill                ps                  ssm-session-worker  xzfgrep
diff                killall             psfaddtable         sss_ssh_authorizedkeys xzgrep
diff3               kmod                psfgettable         sss_ssh_knownhostsproxy xzless
dig                 last                psfstriptable       stap-merge          xzmore
```

- For adding user, type "useradd user1" command where 'user1' is user name.

```
[root@ip-172-31-1-172 /]# cat > q1
[root@ip-172-31-1-172 /]# useradd user1
```

- For switching user, type "su user1" command.

```
[root@ip-172-31-1-172 /]# su user1
[user1@ip-172-31-1-172 /]$
```

- **For update using vim:**
- Create file type "touch file1" command.
- For typing, type "cat >file1" command.
- For check, type "cat file1" command.
- For update, type "vim file1" command.

```
[root@ip-172-31-1-172 ec2-user]# cat > file1
this is file1!
[root@ip-172-31-1-172 ec2-user]# cat file1
this is file1!
[root@ip-172-31-1-172 ec2-user]# vim file1
[root@ip-172-31-1-172 ec2-user]# █
```

- For insert, type 'i' from keyboard.

```
this is file1!█
this is updation.
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
-- INSERT --
1
```

- For exit, click on 'esc' from keyboard.

- For save, type ':'.
- For write, type 'w' from keyboard.
- For quit, type 'q' from keyboard.

- Then see updated version.

For changing file permission:

- Only execution permission, type "chmod 111 file1" command. 'x' stands for 'execute'.

- Only write permission, type "chmod 222 file1" command. 'w' stands for 'write'.

- Only read permission, type "chmod 444 file1" command. 'r' stands for 'read'.

- Only all permission, type "chmod 777 file1" command. 'rwx' stands for 'read write execution'.

```
[root@ip-172-31-1-172 ec2-user]# chmod 777 file1  ⟵
[root@ip-172-31-1-172 ec2-user]# ll -a
total 20
drwx------. 4 ec2-user ec2-user 154 Jul 20 17:48 .
drwxr-xr-x. 4 root     root      35 Jul 20 10:31 ..
-rw-------. 1 ec2-user ec2-user   8 Jul 20 08:13 .bash_history
-rw-r--r--. 1 ec2-user ec2-user  18 Jan 28  2023 .bash_logout
-rw-r--r--. 1 ec2-user ec2-user 141 Jan 28  2023 .bash_profile
-rw-r--r--. 1 ec2-user ec2-user 492 Jan 28  2023 .bashrc
drwx------. 2 ec2-user ec2-user  29 Jul 20 08:02 .ssh
-rw-r--r--. 1 root     root       0 Jul 20 09:45 2
-rw-r--r--. 1 root     root       0 Jul 20 09:45 3
-rw-r--r--. 1 root     root       0 Jul 20 09:45 4
-rw-r--r--. 1 root     root       0 Jul 20 09:45 5
⟶ -rwxrwxrwx. 1 root    root      33 Jul 20 17:48 file1
drwxr-xr-x. 3 root     root      27 Jul 20 10:11 my
[root@ip-172-31-1-172 ec2-user]#
```

- For copy, type file name with "cp".
- For move, type file name with "mv".