

Boot, reboot, and shut down a system safely :

```
saurabh@LenovoLegion5: ~/home
(saurabh@ LenovoLegion5)-[/home]
$ sudo reboot
System has not been booted with systemd as init system (PID 1). Can't operate.
Failed to connect to bus: Host is down
System has not been booted with systemd as init system (PID 1). Can't operate.
Failed to connect to bus: Host is down
Failed to talk to init daemon: Host is down

(saurabh@ LenovoLegion5)-[/home]
$ sudo shutdown -h now
System has not been booted with systemd as init system (PID 1). Can't operate.
Failed to connect to bus: Host is down
System has not been booted with systemd as init system (PID 1). Can't operate.
Failed to connect to bus: Host is down
Failed to talk to init daemon: Host is down

(saurabh@ LenovoLegion5)-[/home]
$ man shutdown

(saurabh@ LenovoLegion5)-[/home]
$ man reboot

(saurabh@ LenovoLegion5)-[/home]
$
```

Diagnose and manage processes :

```
saurabh@LenovoLegion5: ~/home
(saurabh@ LenovoLegion5)-[/home]
$ ps
  PID TTY          TIME CMD
 129 pts/0    00:00:00 bash
 434 pts/0    00:00:00 ps

(saurabh@ LenovoLegion5)-[/home]
$ ps aux
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.0  0.0   1804  1188 ?        Sl   07:30   0:00 /init
root      127  0.0  0.0   1812    88 ?        Ss   07:43   0:00 /init
root      128  0.0  0.0   1812    96 ?        S    07:43   0:00 /init
saurabh   129  0.0  0.1  7244  4004 pts/0    Ss   07:43   0:00 -bash
saurabh   435  0.0  0.1  11048  4260 pts/0    R+   08:42   0:00 ps aux

(saurabh@ LenovoLegion5)-[/home]
$ top
```

```
top - 08:42:56 up 1:12, 0 user, load average: 0.00, 0.00, 0.00
Tasks: 5 total, 1 running, 4 sleeping, 0 stopped, 0 zombie
```

```
saaurabh@LenovoLegion5: /home
top - 08:42:56 up 1:12, 0 user, load average: 0.00, 0.00, 0.00
Tasks: 5 total, 1 running, 4 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.0 us, 0.0 sy, 0.0 ni, 100.0 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
MiB Mem : 3611.7 total, 3442.9 free, 214.2 used, 69.4 buff/cache
MiB Swap: 1024.0 total, 1024.0 free, 0.0 used. 3397.5 avail Mem

  PID USER      PR  NI   VIRT   RES   SHR  S  %CPU  %MEM    TIME+  COMMAND
    1 root        20   0   1804    188   1104  S   0.0   0.0   0:00.02 init
   127 root        20   0   1812     88     0  S   0.0   0.0   0:00.00 init
   128 root        20   0   1812     96     0  S   0.0   0.0   0:00.46 init
   129 saurabh     20   0   7244   4004   3292  S   0.0   0.1   0:00.38 bash
   436 saurabh     20   0  11588   5304   3156  R   0.0   0.1   0:00.00 top
```

Locate and analyse system log files :

```
Select saurabh@LenovoLegion5: /var/log/apt
(saurabh@ LenovoLegion5) ~ [ ]
$ cd /var/log

(saurabh@ LenovoLegion5) ~ [ /var/log ]
$ ls
alternatives.log  bootstrap.log  dpkg.log      fontconfig.log  lastlog       openvpn        README        speech-dispatcher  wtmp          xrdp-sesman.log
apt              btmp          faillog       journal         nginx         private        runit         sysstat          xrdp.log

(saurabh@ LenovoLegion5) ~ [ /var/log ]
$ cd apt

(saurabh@ LenovoLegion5) ~ [ /var/log/apt ]
$ ls
eipp.log.xz  history.log  term.log

(saurabh@ LenovoLegion5) ~ [ /var/log/apt ]
$ tail -n 15 history.log
Commandline: apt-get install docker
Requested-By: saurabh (1000)
Install: wmdocker:amd64 (1.5-2, automatic), docker:amd64 (1.5-2)
End-Date: 2023-04-15 07:42:34

Start-Date: 2023-04-16 16:37:08
Commandline: apt-get install vim
Install: vim:amd64 (2:9.0.1378-1), vim-runtime:amd64 (2:9.0.1378-1, automatic)
End-Date: 2023-04-16 16:37:13

Start-Date: 2023-04-17 11:44:43
Commandline: apt-get install nginx -y
Requested-By: saurabh (1000)
Install: nginx:amd64 (1.22.1-9), nginx-common:amd64 (1.22.1-9, automatic)
End-Date: 2023-04-17 11:44:46

(saurabh@ LenovoLegion5) ~ [ /var/log/apt ]
$
```

Schedule tasks to run at a set date and time :
Verify completion of scheduled jobs :

```
Select saurabh@LenovoLegion5: ~/Saurabh/newfolder

(saurabh@ LenovoLegion5)-[~/Saurabh/newfolder]
$ date
Tue Apr 18 09:28:36 AM IST 2023

(saurabh@ LenovoLegion5)-[~/Saurabh/newfolder]
$ at 09:30
warning: commands will be executed using /bin/sh
at Tue Apr 18 09:30:00 2023
at> echo "hello world" > hello.txt
at> <EOT>
job 4 at Tue Apr 18 09:30:00 2023

(saurabh@ LenovoLegion5)-[~/Saurabh/newfolder]
$ atq
4          Tue Apr 18 09:30:00 2023 a saurabh

(saurabh@ LenovoLegion5)-[~/Saurabh/newfolder]
$ ls
hello.txt  make_file.sh

(saurabh@ LenovoLegion5)-[~/Saurabh/newfolder]
$ ls -l
total 8
-rw-r--r-- 1 saurabh saurabh 12 Apr 18 09:30 hello.txt
-rwxr-xr-x 1 saurabh saurabh 25 Apr 18 09:22 make_file.sh

(saurabh@ LenovoLegion5)-[~/Saurabh/newfolder]
$
```

Update software to provide required functionality and security :
Manage Software (install and uninstall packages) :

```
saurabh@LenovoLegion5: ~/Saurabh/newfolder

(saurabh@ LenovoLegion5)-[~/Saurabh/newfolder]
$ sudo apt update
Get:1 http://kali.download/kali kali-rolling InRelease [41.2 kB]
Get:2 http://kali.download/kali kali-rolling/main amd64 Packages [19.3 MB]
Get:3 http://kali.download/kali kali-rolling/non-free amd64 Packages [217 kB]
Get:4 http://kali.download/kali kali-rolling/contrib amd64 Packages [116 kB]
Fetched 19.6 MB in 5s (4,341 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
9 packages can be upgraded. Run 'apt list --upgradable' to see them.

(saurabh@ LenovoLegion5)-[~/Saurabh/newfolder]
$ apt list --upgradable
Listing... Done
libbrlapi0.8/kali-rolling 6.5-7 amd64 [upgradable from: 6.5-6+b1]
libcups2/kali-rolling 2.4.2-3 amd64 [upgradable from: 2.4.2-2]
libmbedcrypto7/kali-rolling 2.28.3-1 amd64 [upgradable from: 2.28.2-1]
libunbound8/kali-rolling 1.17.1-2 amd64 [upgradable from: 1.17.1-1]
openvpn/kali-rolling 2.6.1-1 amd64 [upgradable from: 2.6.0-1]
python3-brlapi/kali-rolling 6.5-7 amd64 [upgradable from: 6.5-6+b1]
sysvinit-utils/kali-rolling 3.06-4 amd64 [upgradable from: 3.06-2]
tar/kali-rolling 1.34+dfsg-1.2 amd64 [upgradable from: 1.34+dfsg-1]
xbrlapi/kali-rolling 6.5-7 amd64 [upgradable from: 6.5-6+b1]

(saurabh@ LenovoLegion5)-[~/Saurabh/newfolder]
$ sudo apt upgrade
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Calculating upgrade... Done
The following packages were automatically installed and are no longer required:
  liblinear4 lua-lpeg nmap-common
Use 'sudo apt autoremove' to remove them.
The following packages will be upgraded:
  libbrlapi0.8 libcups2 libmbedcrypto7 libunbound8 openvpn python3-brlapi sysvinit-utils tar xbrlapi
9 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
Need to get 2,958 kB of archives.
Processing triggers for kali-menu (2023.1.7)...
```