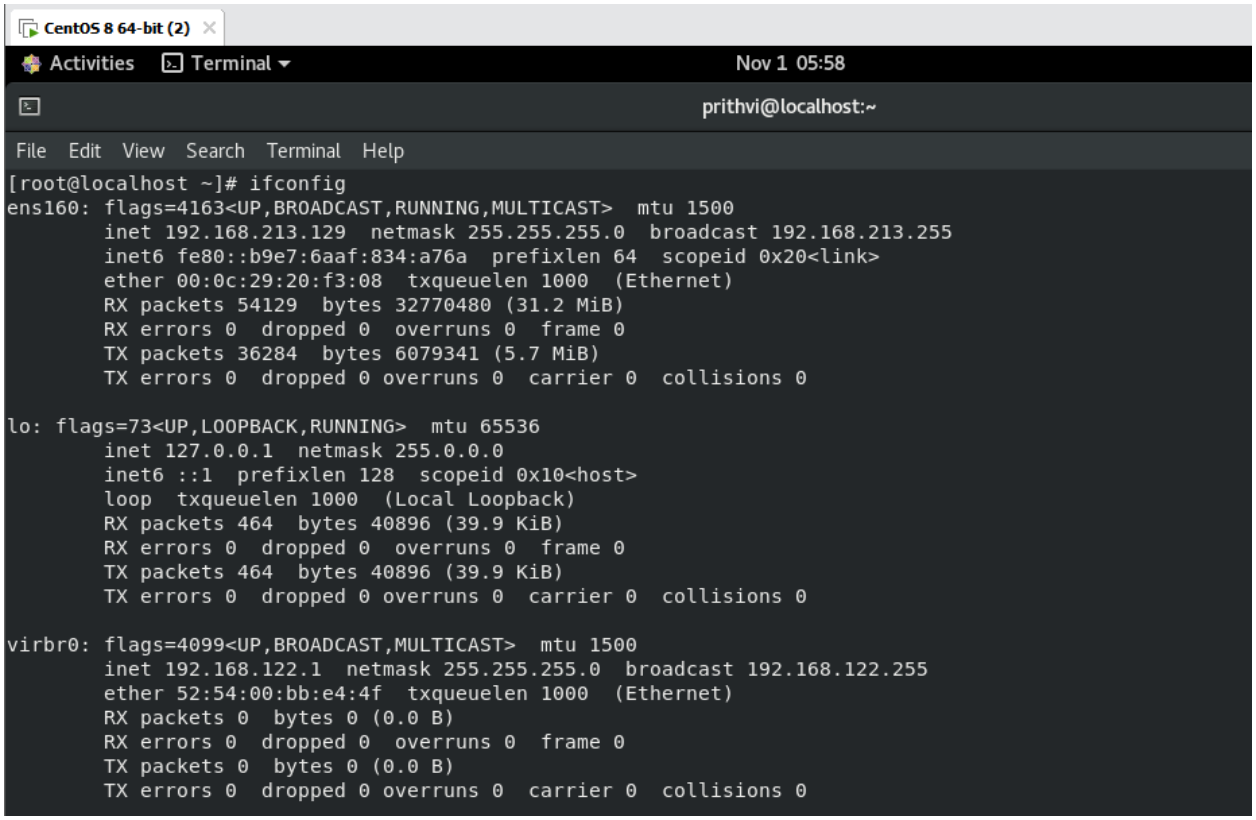
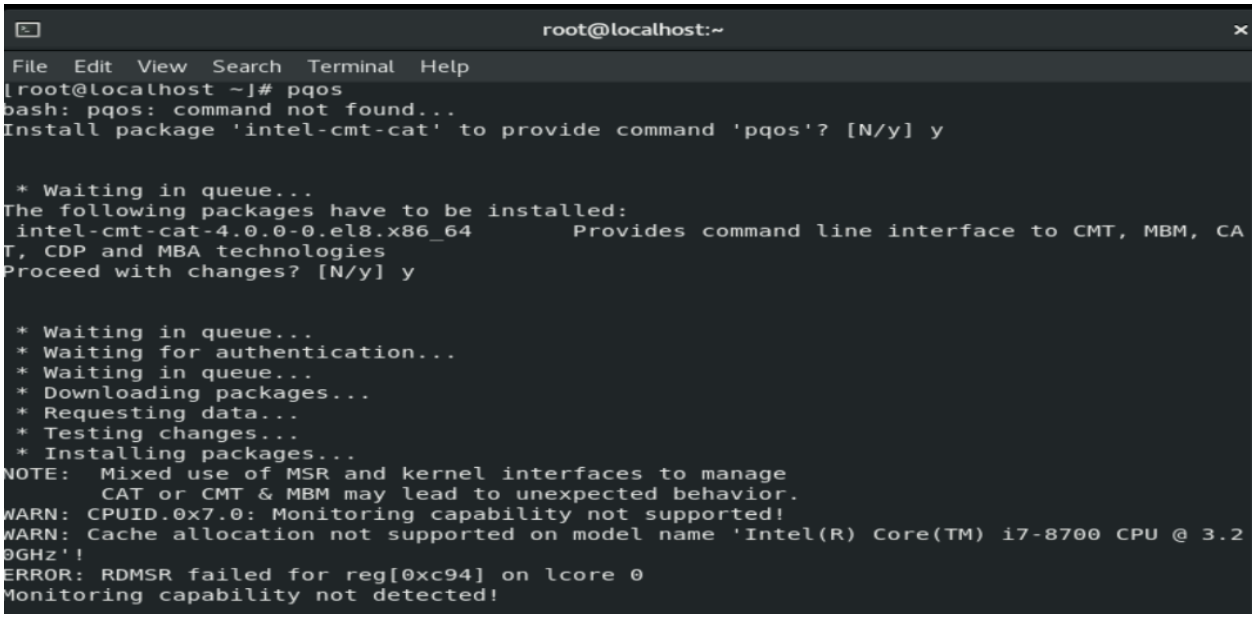
Module:-COSA(Concept Of Operating System And Administration)
Date:- 31/10/2022

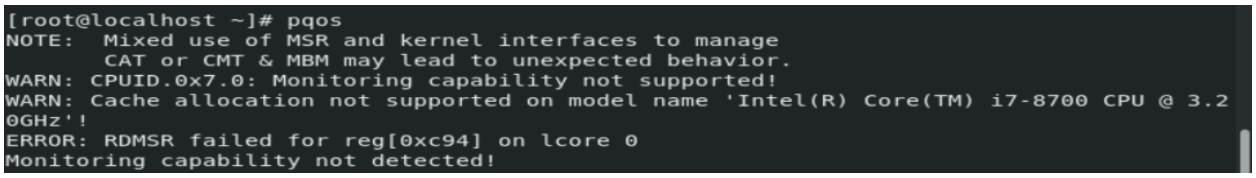
Assignment :- 05 **Name:- Prauthviraj Nikam**

16.ifconfig :- Ifconfig is used to configure the kernel-resident network interfaces.It is used at boot time to set up interfacesas necessary.After that, it is usually only needed when debugging or when system tuning is needed.If no arguments are given, ifconfig displays the status of the currently active interfaces.If a single interface argument is given, it displays the status of the given interface only; if a single -a argument is given, it displays .the status of all interfaces, even those that are down. Otherwise, it configures an interface.

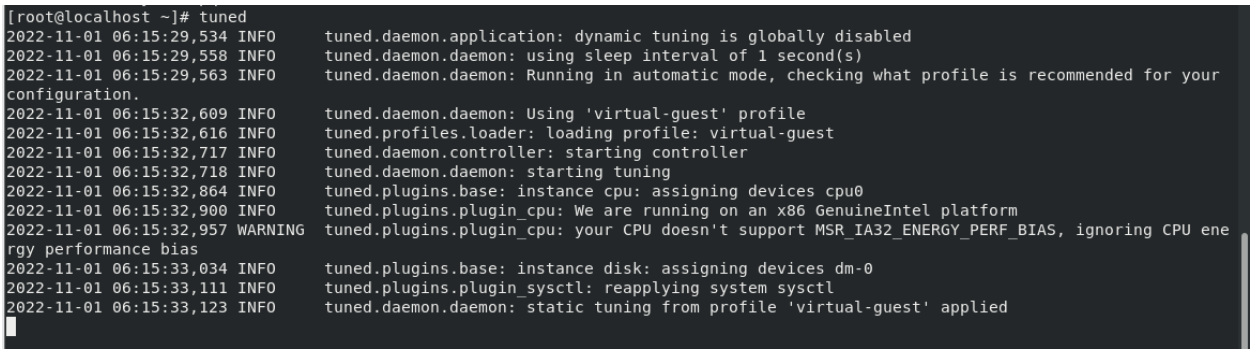


17.pqos:-





18. tune:- tuned is a dynamic adaptive system tuning daemon that tunes system settings dynamically depending on usage.



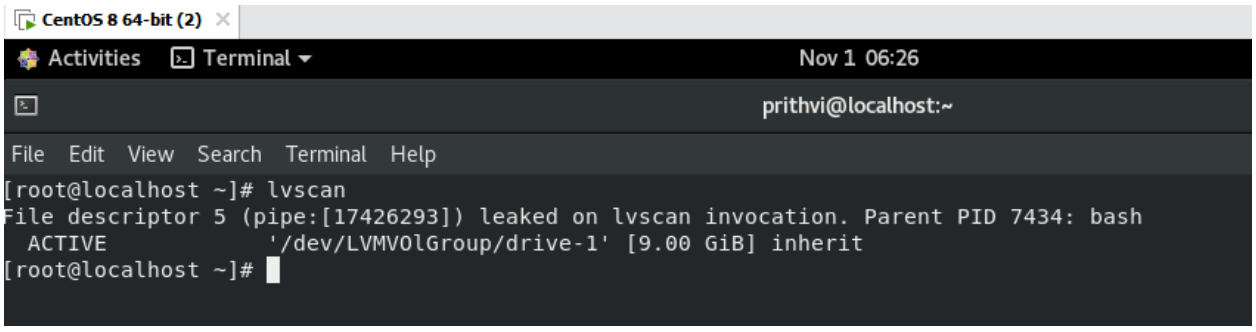
19. /proc/net/snmp:-

```
[root@localhost ~]# cat /proc/net/snmp
Ip: Forwarding DefaultTTL InReceives InHdrErrors InAddrErrors ForwDatagrams InUnknownProtos InDiscards InDelivers OutRequests O
utDiscards OutNoRoutes ReasmTimeout ReasmReqds ReasmOKs ReasmFails FragOKs FragFails FragCreates
Ip: 1 64 40121 0 1 0 0 0 38463 37113 127 247 0 0 0 0 0 0 0
Icmp: InMsgs InErrors InCsumErrors InDestUnreachs InTimeExcds InParmProbs InSrcQuenchs InRedirects InEchos InEchoReps InTimesta
mps InTimestampReps InAddrMasks InAddrMaskReps OutMsgs OutErrors OutDestUnreachs OutTimeExcds OutParmProbs OutSrcQuenchs OutRed
irects OutEchos OutEchoReps OutTimestamps OutTimestampReps OutAddrMasks OutAddrMaskReps
Icmp: 2946 132 0 2946 0 0 0 0 0 0 0 0 0 265 0 265 0 0 0 0 0 0 0 0 0 0
IcmpMsg: InType3 OutType3
IcmpMsg: 2946 265
Tcp: RtoAlgorithm RtoMin RtoMax MaxConn ActiveOpens PassiveOpens AttemptFails EstabResets CurrEstab InSegs OutSegs RetransSegs
InErrs OutRsts InCsumErrors
Tcp: 1 200 120000 -1 624 0 13 10 5 31233 26875 26 0 77 0
Udp: InDatagrams NoPorts InErrors OutDatagrams RcvbufErrors SndbufErrors InCsumErrors IgnoredMulti
Udp: 3688 454 0 10991 0 0 0 0
UdpLite: InDatagrams NoPorts InErrors OutDatagrams RcvbufErrors SndbufErrors InCsumErrors IgnoredMulti
UdpLite: 0 0 0 0 0 0 0 0
```

20.watch:-watch runs command repeatedly, displaying its output and errors (the first screenfull). This allows you to watch the program output change over time. By default, command is run every 2 seconds and watch will run until inter - rupted.

```
[root@localhost ~]# watch

Usage:
 watch [options] command

Options:
  -b, --beep             beep if command has a non-zero exit
  -c, --color            interpret ANSI color and style sequences
  -d, --differences[=<permanent>]
                         highlight changes between updates
  -e, --errexit          exit if command has a non-zero exit
  -g, --chgexit          exit when output from command changes
  -n, --interval <secs>  seconds to wait between updates
  -p, --precise          attempt run command in precise intervals
  -t, --no-title         turn off header
  -x, --exec             pass command to exec instead of "sh -c"

 -h, --help     display this help and exit
 -v, --version  output version information and exit

For more details see watch(1).
```

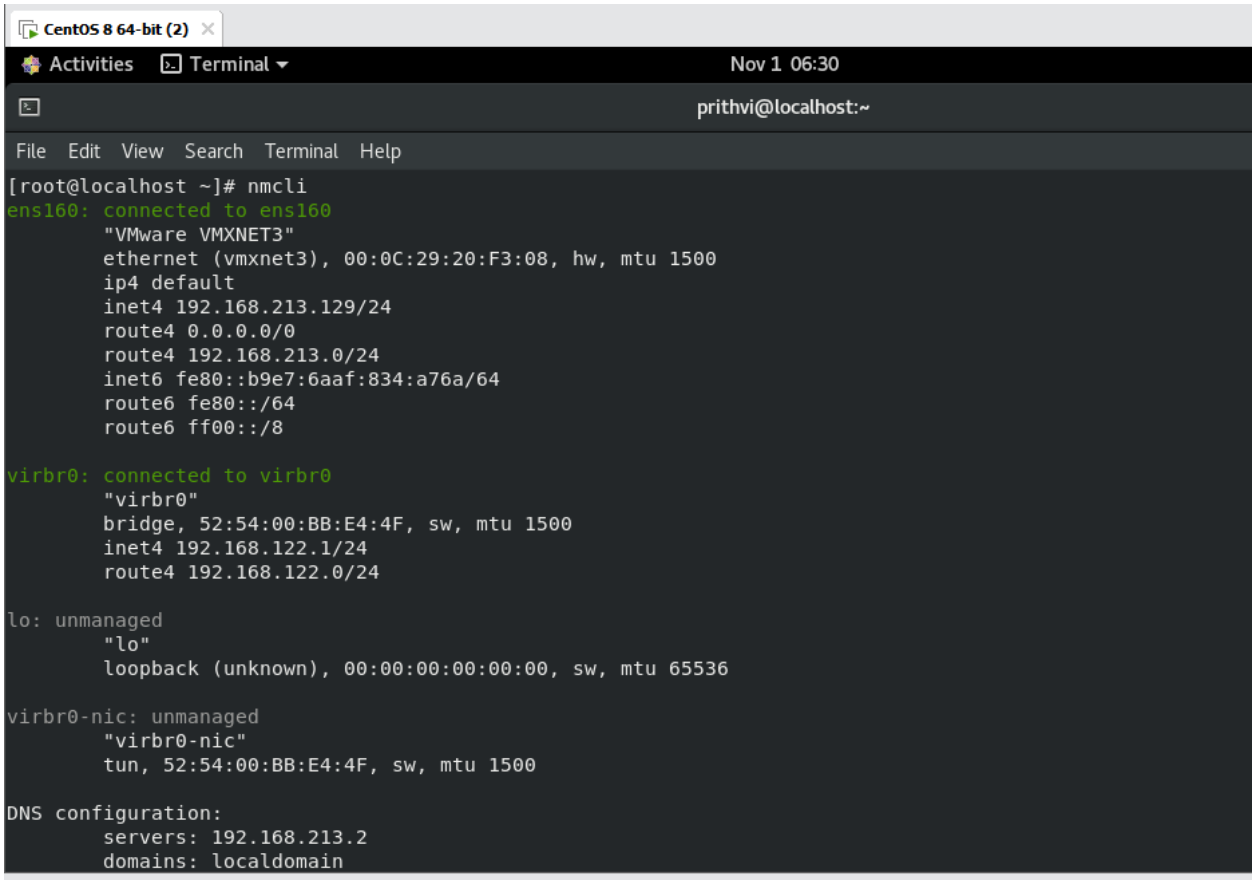
21.lvscan:-lvscan scans all VGs or all supported LVM block devices in the system for LVs. The output consists of one line for each LV indicating whether or not it is active, a snapshot or origin, the size of the device and its allocation policy.Use lvs(8) or lvdisplay(8) to obtain more comprehensive information about LVs.



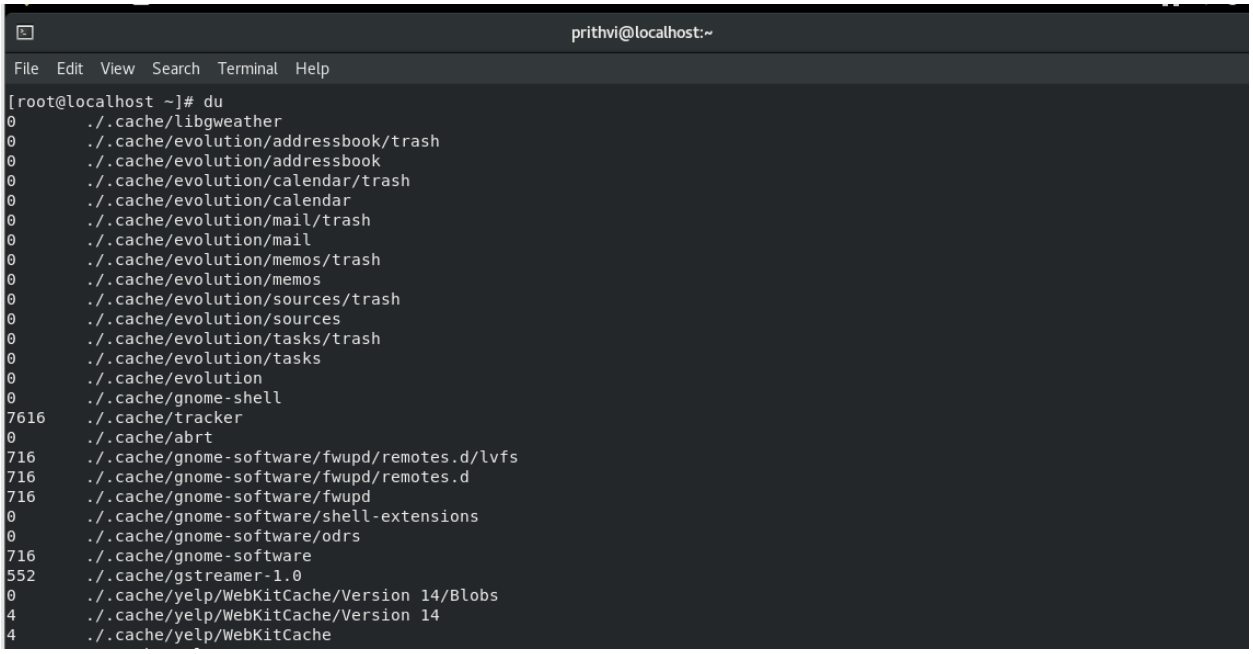
22.nmcli:- nmcli is a command-line tool for controlling NetworkManager and reporting network status. It can be utilized as a replacement for nm-applet or other graphical clients. nmcli is used to create, display, edit, delete, activate, and deactivate network connections, as well as control and display network device status.

Typical uses include:

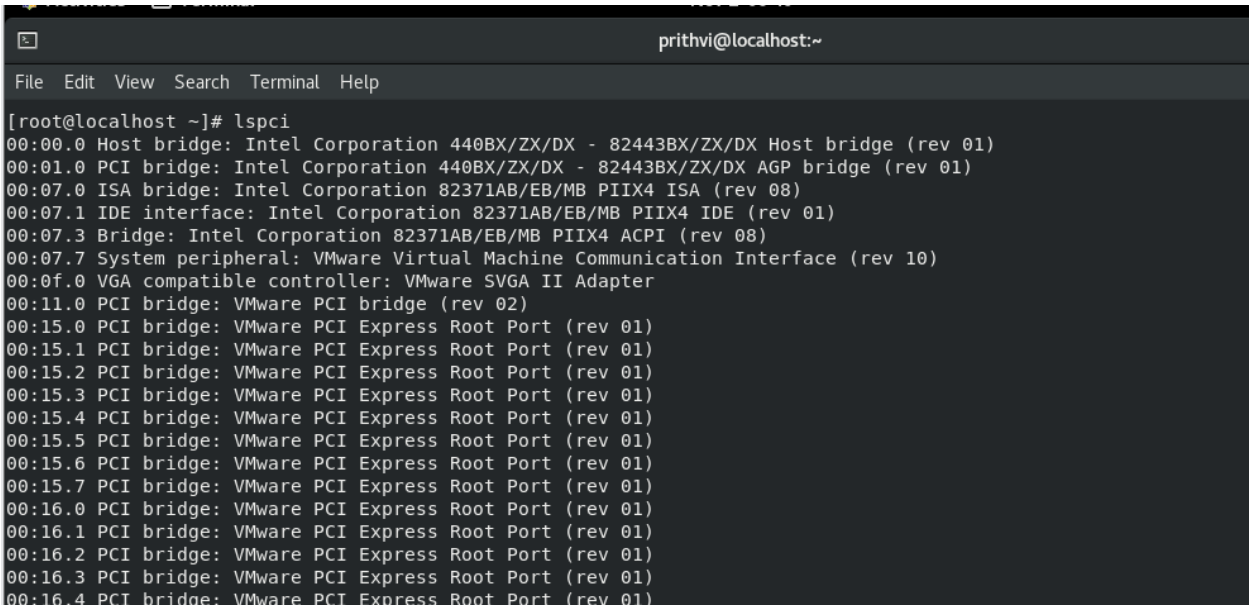
- Scripts: Utilize NetworkManager via nmcli instead of managing network connections manually. nmcli supports a terse output format which is better suited for script processing. Note that NetworkManager can also execute scripts, called "dispatcher scripts", in response to network events.
- Servers, headless machines, and terminals: nmcli can be used to control NetworkManager without a GUI, including creating, editing, starting and stopping network connections and viewing network status.



23.du:- Summarize disk usage of the set of FILEs, recursively for directories.



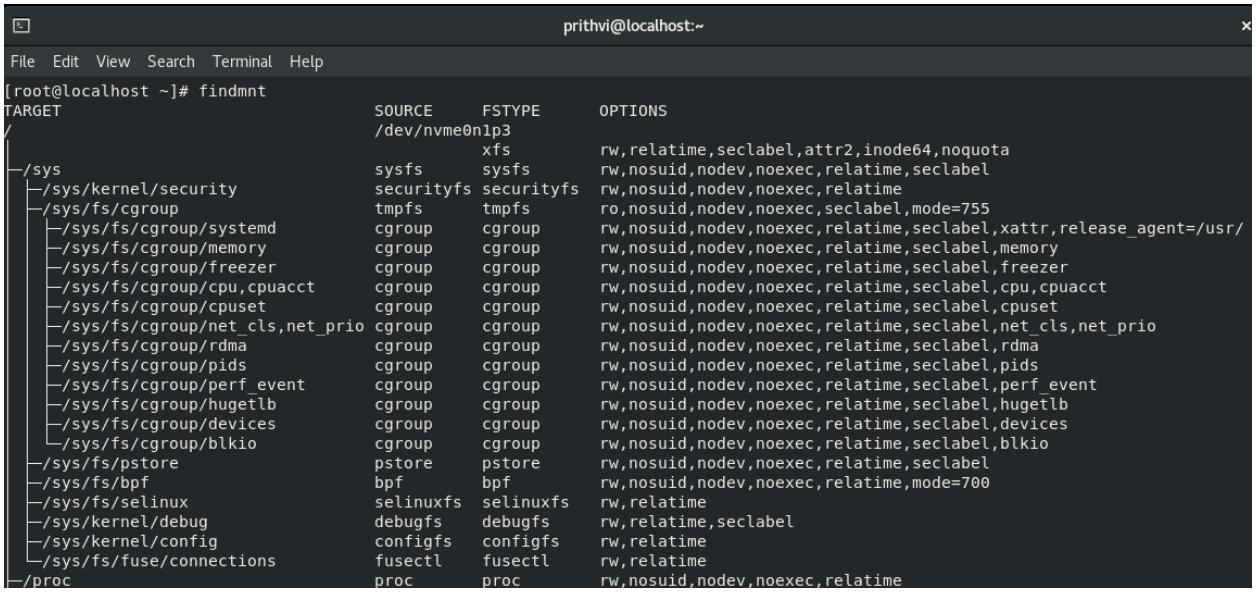
24.lspci:- lspci is a utility for displaying information about PCI buses in the system and devices connected to them. By default, it shows a brief list of devices. Use the options described below to request either a more verbose out- put or output intended for parsing by other programs.



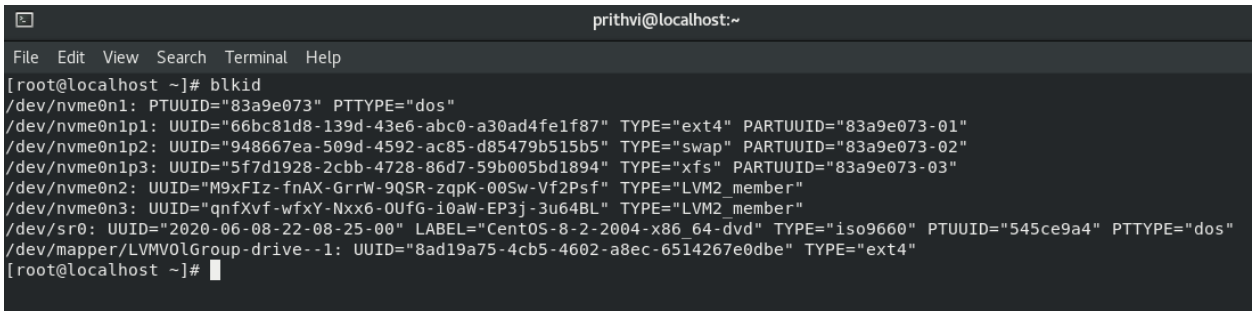
25.findmnt:-

findmnt will list all mounted filesystems or search for a filesystem. The findmnt command is able to search in /etc/fstab, /etc/mtab or /proc/self/mountinfo.If device or mountpoint is not given, all filesystems are shown.The device may be specified by device name, major:minor

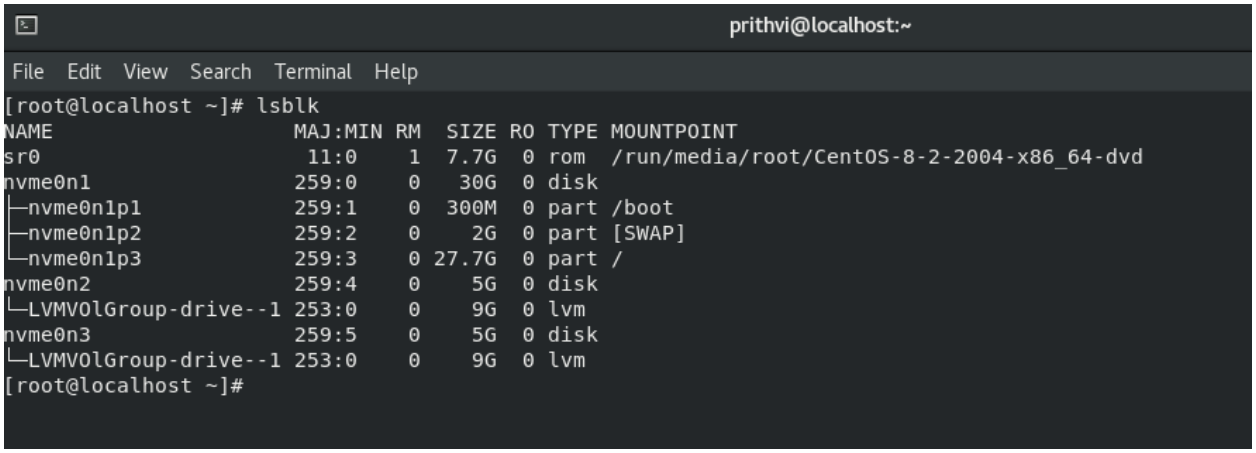
numbers, filesystem label or UUID,or partition label or UUID.The command prints all mounted filesystems in the tree-like format by default.



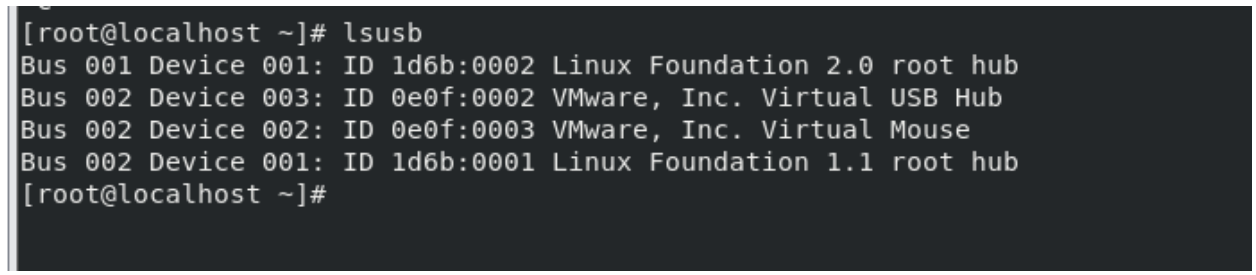
26.blkid:- The blkid program is the command-line interface to working with the libblkid(3) library.It can determine the type of content (e.g. filesystem or swap) that a block device holds, and also the attributes (tokens, NAME=value pairs)from the content metadata (e.g. LABEL or UUID fields).



27.lsblk:- lsblk lists information about all available or the specified block devices.The lsblk command reads the sysfs filesystem and udev db to gather information. If the udev db is not available or lsblk is compiled without udev support than it tries to read LABELs, UUIDs and filesystem types from the block device. In this case root permission are necessary.The command prints all block devices (except RAM disks) in a tree-like format by default.



28.lsusb:-lsusb is a utility for displaying information about USB buses in the system and the devices connected to them.



29.lscpu:-scpu gathers CPU architecture information from sysfs, /proc/cpuinfo and any applicable architecture-specificlibraries (e.g. librtas on Powerpc).The command output can be optimized for parsing or for easy readability by humans.The information includes, for example, the number of CPUs, threads, cores, sockets, and Non-Uniform Memory Access (NUMA) nodes.There is also information about the CPU caches and cache sharing, family, model, bogoMIPS, byte order, and stepping.

30.lsof:-Lsof revision 4.91 lists on its standard output file information about files opened by processes for the following

UNIX dialects:

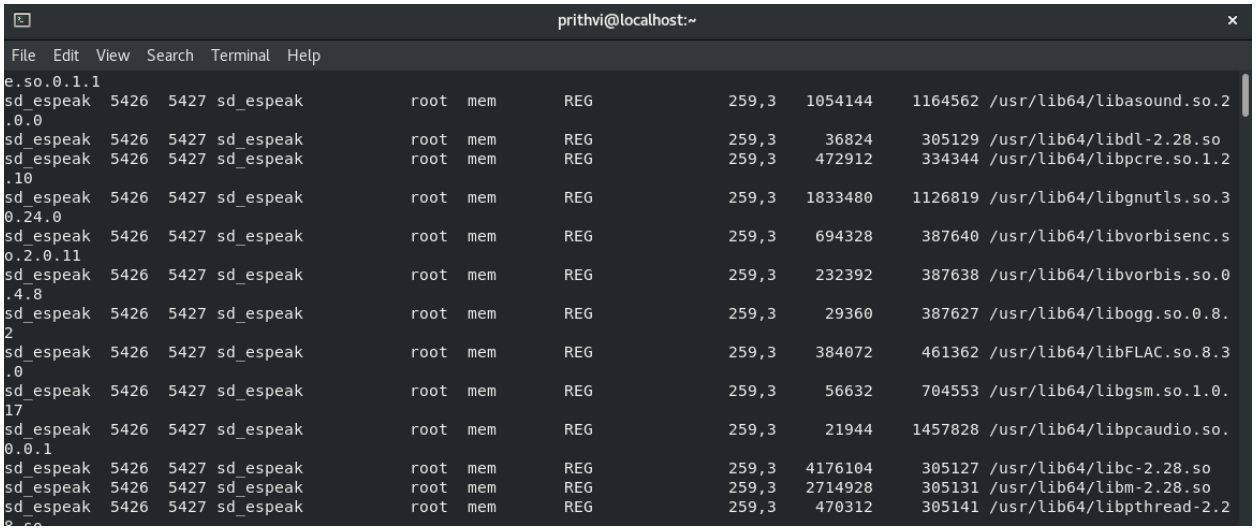
Apple Darwin 9 and Mac OS X 10.[567]

FreeBSD 8.[234], 9.0 and 1[012].0 for AMD64-based systems

Linux 2.1.72 and above for x86-based systems

Solaris 9, 10 and 1

(See the DISTRIBUTION section of this manual page for information on how to obtain the latest lsof revision.)



31.fuser:-fuser displays the PIDs of processes using the specified files or file systems. In the default display mode, each file name is followed by a letter denoting the type of access:

c current directory.

e executable being run.

f open file. f is omitted in default display mode.

F open file for writing. F is omitted in default display mode.

r root directory.

m mmap'ed file or shared library.

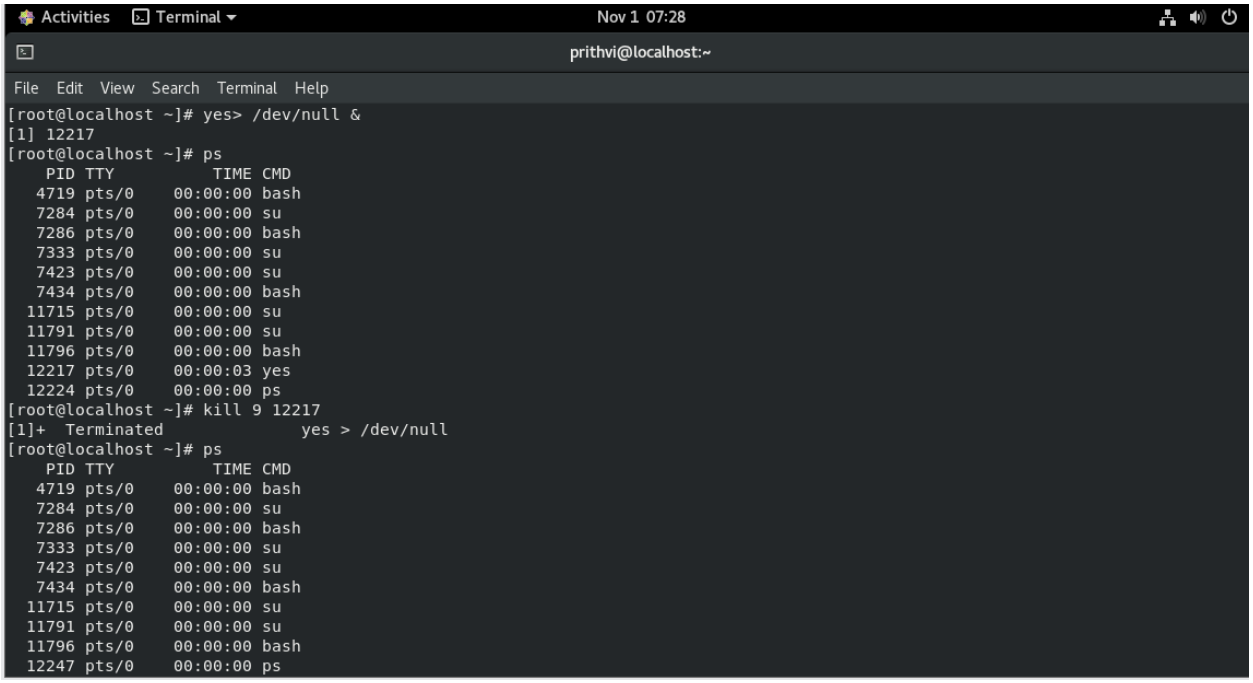
. Placeholder, omitted in default display mode.

fuser returns a non-zero return code if none of the specified files is accessed or in case of a fatal error. If at least one access has been found, fuser returns zero.

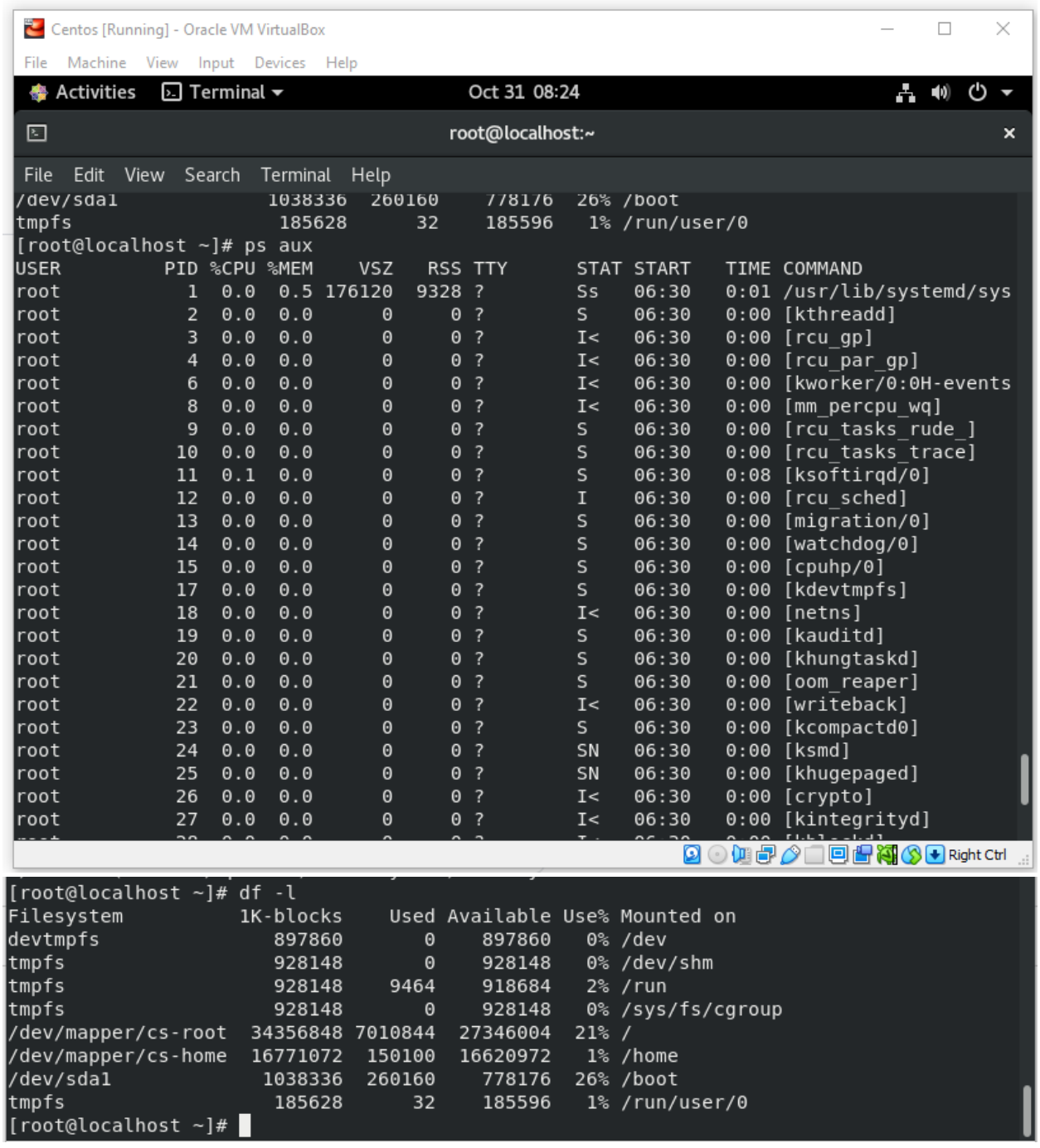
32. chroot :- Run COMMAND with root directory set to NEWROOT.

33.kill:- The command kill sends the specified signal to the specified processes or process groups.

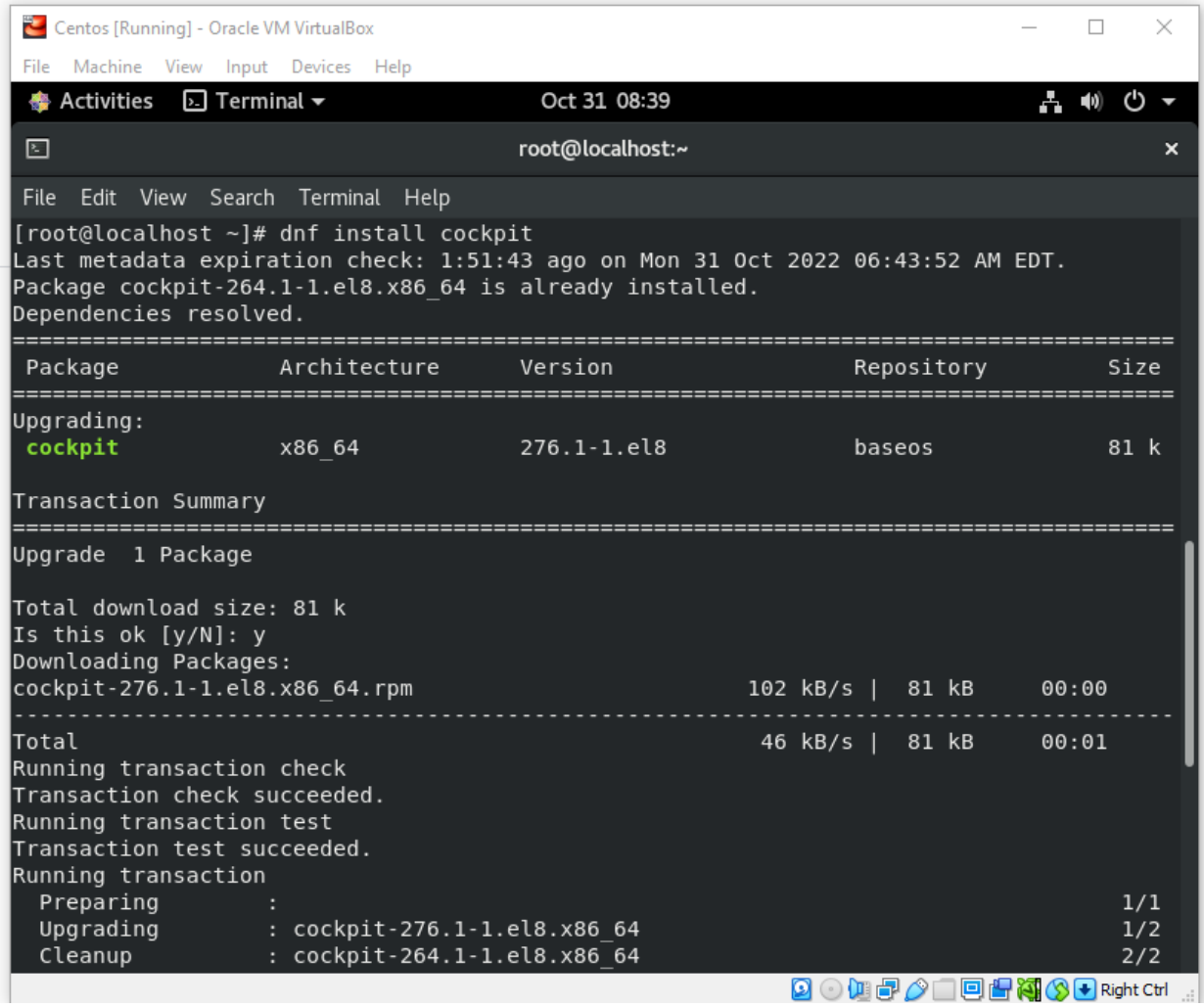
```
[root@localhost ~]# ps
    PID TTY          TIME CMD
   2684 pts/0    00:00:00 bash
   5979 pts/0    00:00:00 ps
[root@localhost ~]# kill -L
 1) SIGHUP       2) SIGINT       3) SIGQUIT      4) SIGILL       5) SIGTRAP
 6) SIGABRT      7) SIGBUS       8) SIGFPE       9) SIGKILL     10) SIGUSR1
11) SIGSEGV     12) SIGUSR2     13) SIGPIPE     14) SIGALRM     15) SIGTERM
16) SIGSTKFLT   17) SIGCHLD     18) SIGCONT     19) SIGSTOP     20) SIGTSTP
21) SIGTTIN     22) SIGTTOU     23) SIGURG      24) SIGXCPU     25) SIGXFSZ
26) SIGVTALRM   27) SIGPROF     28) SIGWINCH    29) SIGIO       30) SIGPWR
31) SIGSYS      34) SIGRTMIN    35) SIGRTMIN+1  36) SIGRTMIN+2  37) SIGRTMIN+3
38) SIGRTMIN+4  39) SIGRTMIN+5  40) SIGRTMIN+6  41) SIGRTMIN+7  42) SIGRTMIN+8
43) SIGRTMIN+9  44) SIGRTMIN+10 45) SIGRTMIN+11 46) SIGRTMIN+12 47) SIGRTMIN+13
48) SIGRTMIN+14 49) SIGRTMIN+15 50) SIGRTMAX-14 51) SIGRTMAX-13 52) SIGRTMAX-12
53) SIGRTMAX-11 54) SIGRTMAX-10 55) SIGRTMAX-9  56) SIGRTMAX-8  57) SIGRTMAX-7
58) SIGRTMAX-6  59) SIGRTMAX-5  60) SIGRTMAX-4  61) SIGRTMAX-3  62) SIGRTMAX-2
63) SIGRTMAX-1  64) SIGRTMAX
[root@localhost ~]#
```

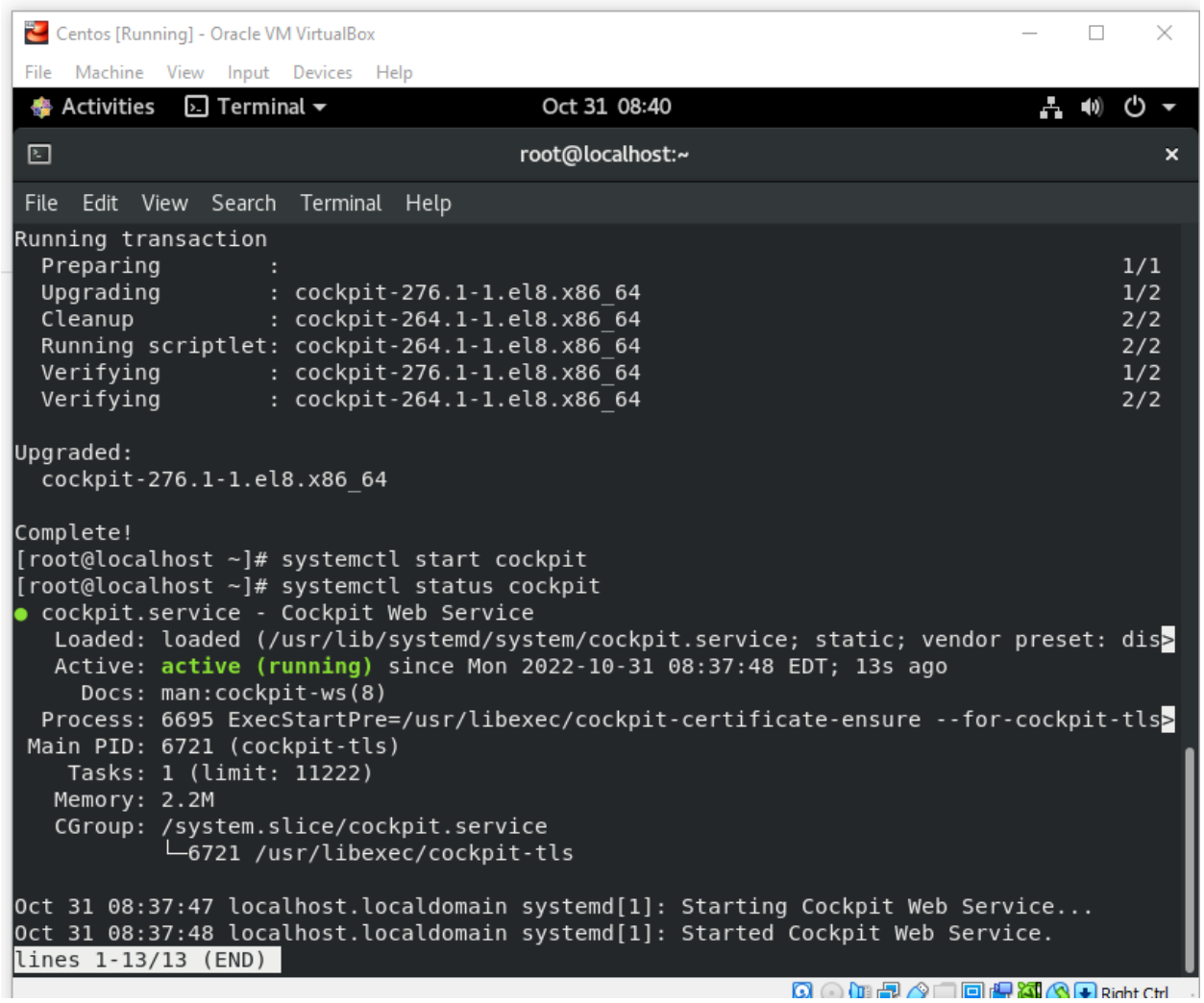


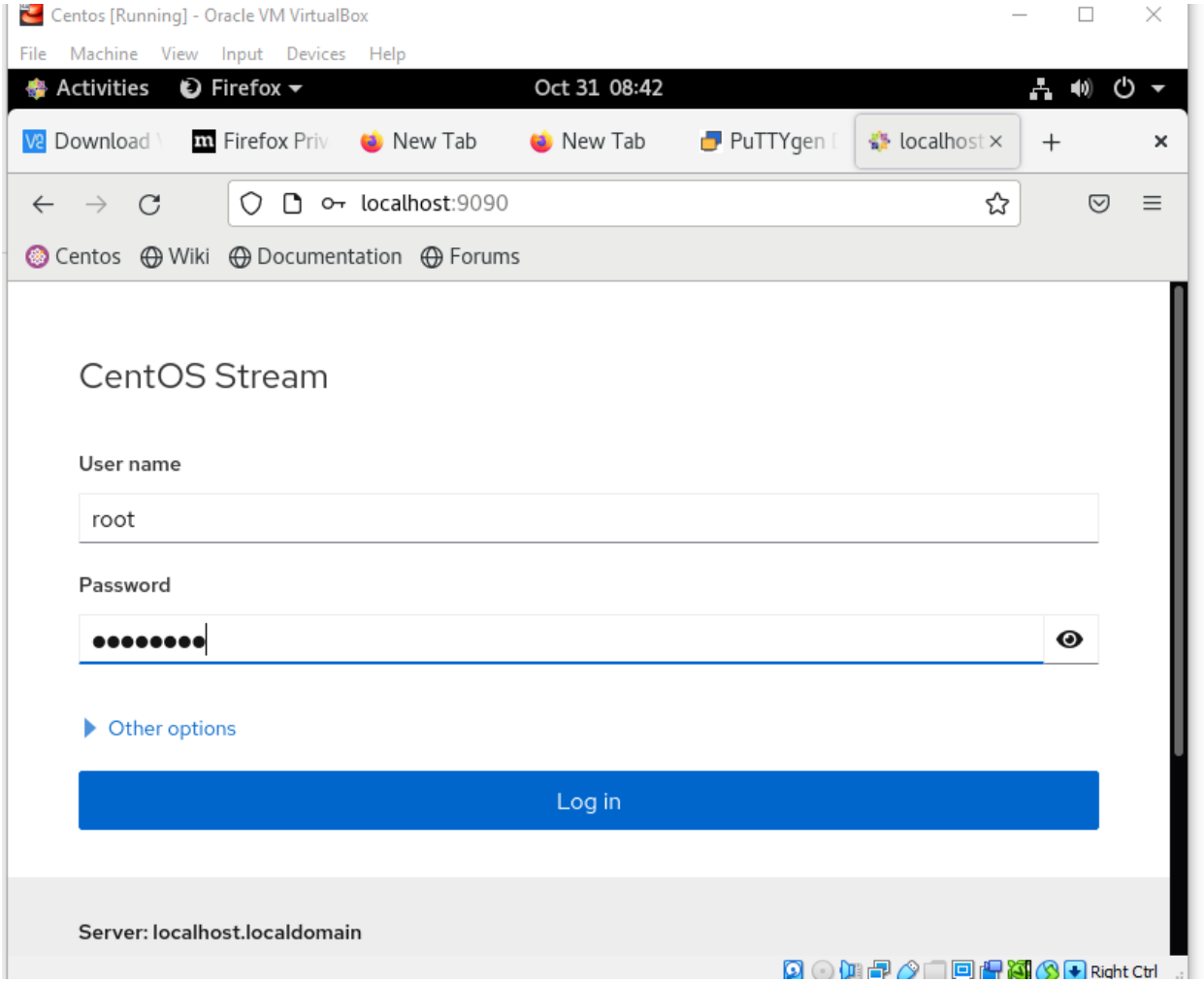
34.df :-This manual page documents the GNU version of df.df displays the amount of disk space available on the file system containing each file name argument.If no file name is given, the space available on all currently mounted file systems is shown.Disk space is shown in 1K blocks by default, unless the environment variable POSIXLY_CORRECT is set, in which case 512-byte blocks are used.

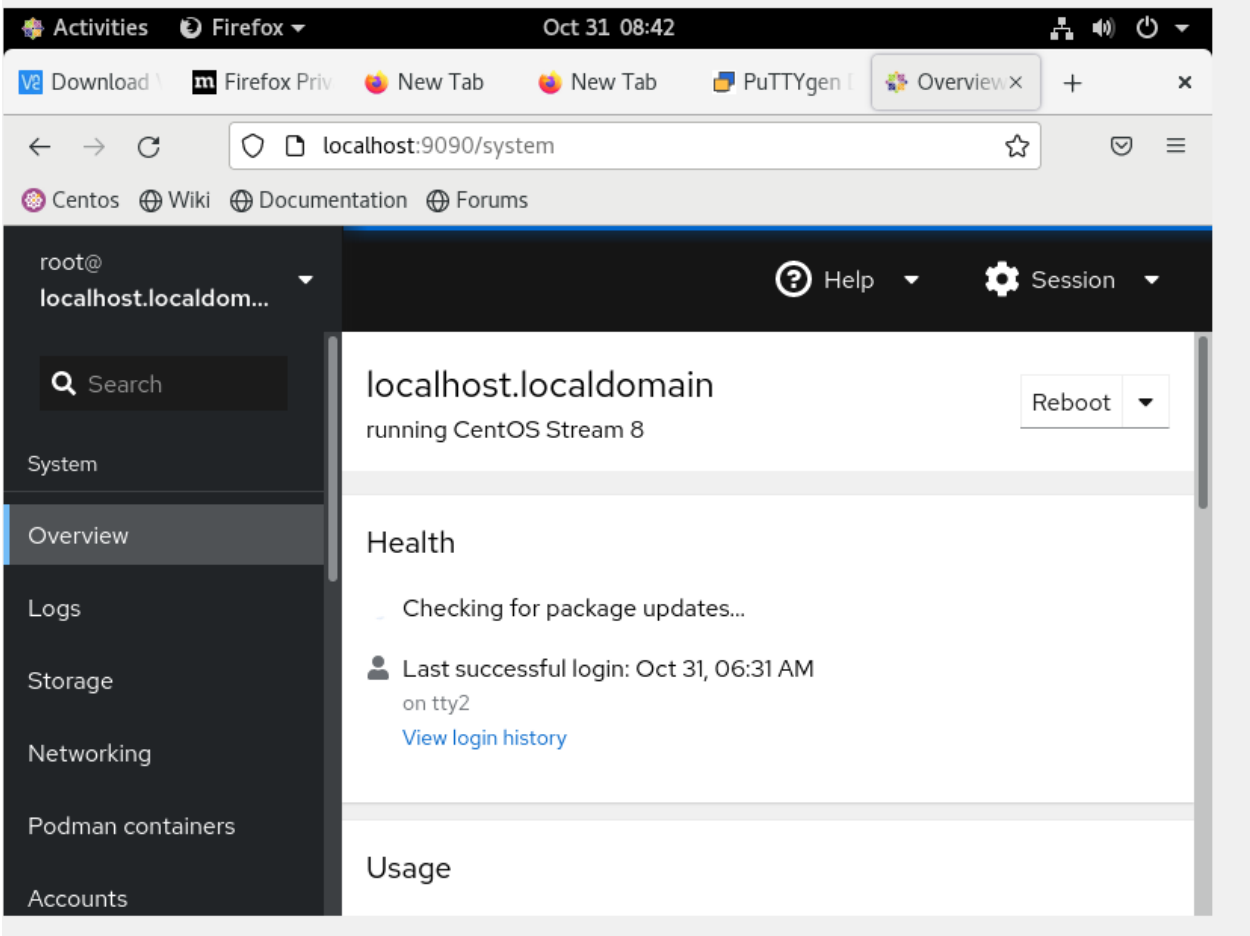


35.cockpit:- Cockpit is a web accessible interactive admin interface for Linux machines. Cockpit can usually be accessed on port 9090 of the machine it's installed on. Cockpit starts on demand. Use your system credentials to log in.


Centos [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal Oct 31 08:39
root@localhost:~
File Edit View Search Terminal Help
[root@localhost ~]# dnf install cockpit
Last metadata expiration check: 1:51:43 ago on Mon 31 Oct 2022 06:43:52 AM EDT.
Package cockpit-264.1-1.el8.x86_64 is already installed.
Dependencies resolved.
Package Architecture Version Repository Size
Upgrading:
cockpit x86_64 276.1-1.el8 baseos 81 k
Transaction Summary
Upgrade 1 Package
Total download size: 81 k
Is this ok [y/N]: y
Downloading Packages:
cockpit-276.1-1.el8.x86_64.rpm 102 kB/s | 81 kB 00:00
Total 46 kB/s | 81 kB 00:01
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
Preparing : 1/1
Upgrading : cockpit-276.1-1.el8.x86_64 1/2
Cleanup : cockpit-264.1-1.el8.x86_64 2/2
Right Ctrl


Centos [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal Oct 31 08:40
root@localhost:~
File Edit View Search Terminal Help
Running transaction
Preparing : 1/1
Upgrading : cockpit-276.1-1.el8.x86_64 1/2
Cleanup : cockpit-264.1-1.el8.x86_64 2/2
Running scriptlet: cockpit-264.1-1.el8.x86_64 2/2
Verifying : cockpit-276.1-1.el8.x86_64 1/2
Verifying : cockpit-264.1-1.el8.x86_64 2/2
Upgraded:
cockpit-276.1-1.el8.x86_64
Complete!
[root@localhost ~]# systemctl start cockpit
[root@localhost ~]# systemctl status cockpit
cockpit.service - Cockpit Web Service
Loaded: loaded (/usr/lib/systemd/system/cockpit.service; static; vendor preset: dis
Active: active (running) since Mon 2022-10-31 08:37:48 EDT; 13s ago
Docs: man:cockpit-ws(8)
Process: 6695 ExecStartPre=/usr/libexec/cockpit-certificate-ensure --for-cockpit-tls
Main PID: 6721 (cockpit-tls)
Tasks: 1 (limit: 11222)
Memory: 2.2M
CGroup: /system.slice/cockpit.service
└6721 /usr/libexec/cockpit-tls
Oct 31 08:37:47 localhost.localdomain systemd[1]: Starting Cockpit Web Service...
Oct 31 08:37:48 localhost.localdomain systemd[1]: Started Cockpit Web Service.
lines 1-13/13 (END)
Right Ctrl


Centos [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities
Firefox
Oct 31 08:42
Download
Firefox Priv
New Tab
New Tab
PuTTYgen
localhost
localhost:9090
Centos
Wiki
Documentation
Forums
CentOS Stream
User name
root
Password
Other options
Log in
Server: localhost.localdomain
Right Ctrl


Activities
Firefox
Oct 31 08:42
Download
Firefox Priv
New Tab
New Tab
PuTTYgen
Overview
localhost:9090/system
Centos
Wiki
Documentation
Forums
root@
localhost.localdom...
Help
Session
Search
System
Overview
Logs
Storage
Networking
Podman containers
Accounts
localhost.localdomain
running CentOS Stream 8
Reboot
Health
Checking for package updates...
Last successful login: Oct 31, 06:31 AM
on tty2
View login history
Usage