Cheat sheet

Intermediate Linux commands

This cheat sheet presents a collection of Linux commands and executables typically used by developers who want to move beyond the basics of working with the Linux operating system. For the purpose of this cheat sheet, *intermediate* use involves managing processes, users, and groups on a particular machine running under Linux, as well as monitoring disk and network usage. Commands in this cheat sheet are organized by category.

Console and output management commands

Commands in this section apply to working in a terminal window console and illustrate output from a computer or virtual machine running the Linux operating system.

history

```
history [options]
```

Displays a list of commands executed on the system. The `history` command can also be used to manipulate the history list and the way that history information is displayed.

Example:

The following example uses the `history` command to show a list of commands that have been executed on the system. The example pipes the result to the `more` command, which shows the first 15 lines of output using the `-15` option:

```
$ history | more -15
   24  diag
   25  ss
   26  uname
   27  lscpu
   28  timedatectl
   29  date
   30  chronyc
   31  lshw
   32  sosreport
   33  sos
   34  tlog
   35  fsck
   36  fsck --help
   37  fsck -A
   38  sudo fsck -A
--More--
```

more

```
more [options] </path/to/filename or stdout>
```

Allows a user to view and traverse the contents of a file or stdout. The `more` command runs within its own command-line user interface. To exit the process, press the `q` key.

Example:

This example uses the `more` command to display the first four lines of the file `/etc/passwd`. Users can then traverse the remainder of the file one line at a time by striking the `<ENTER>` key:

```
$ more -4 /etc/passwd
root:x:0:0:root:/root:/bin/bash
bin:x:1:1:bin:/bin:/sbin/nologin
daemon:x:2:2:daemon:/sbin:/sbin/nologin
adm:x:3:4:adm:/var/adm:/sbin/nologin
--More--(5%)
```

top

```
top [options]
```

Displays information about the running Linux processes.

Example:

The following command displays the `top` command with the result piped to the `more` command in order to view the first portion of the output:

```
$ top | more
top - 12:02:29 up 5 days, 20:20,  2 users,  load average: 0.01, 0.02, 0.00
Tasks: 201 total,   2 running, 199 sleeping,   0 stopped,   0 zombie
%Cpu(s):  0.0 us,  6.2 sy,  0.0 ni,93.8 id,  0.0 wa,  0.0 hi,  0.0 si,  0.0
st
MiB Mem :   7770.8 total,   5409.8 free,   1240.8 used,   1120.2 buff/cache
MiB Swap:   8092.0 total,   8092.0 free,      0.0 used.   6205.6 avail Mem
    PID USER      PR  NI    VIRT    RES    SHR S  %CPU  %MEM     TIME+
COMMAND
  82399 guest  20   0   65584   5120   4212 R   5.9   0.1   0:00.02 top
      1 root      20   0  175932  14212   8924 S   0.0   0.2   0:06.21
systemd
      2 root      20   0       0      0      0 S   0.0   0.0   0:00.13
kthreadd
      3 root       0 -20       0      0      0 I   0.0   0.0   0:00.00
rcu_gp
      4 root       0 -20       0      0      0 I   0.0   0.0   0:00.00
rcu_par_gp
      6 root       0 -20       0      0      0 I   0.0   0.0   0:00.00
kworker/0:0H-events_highpri
      9 root       0 -20       0      0      0 I   0.0   0.0   0:00.00
mm_percpu_wq
     10 root      20   0       0      0      0 S   0.0   0.0   0:02.73
ksoftirqd/0
     11 root      20   0       0      0      0 R   0.0   0.0   0:01.10
rcu_sched
     12 root      rt   0       0      0      0 S   0.0   0.0   0:00.00
migration/0
     13 root      rt   0       0      0      0 S   0.0   0.0   0:00.04
watchdog/0
```

```
     14 root      20   0       0      0      0 S   0.0   0.0   0:00.00
cpuhp/0
     16 root      20   0       0      0      0 S   0.0   0.0   0:00.00
kdevtmpfs

--More--
```

Disk management commands

Commands in this section apply to working with disks, devices, and volumes on a computer running the Linux operating system.

df

```
df [options] <file name>
```

Shows the amount of disk space used and available according to the file system that represents a particular disk device mount. If no file name is given, the space available on all mounted file systems is displayed.

Example:

The following example shows the invocation and result of `df` displaying all mounted file systems. Disk space is shown in 1K blocks (note that `$` is the command-line prompt symbol):

```
$ df
Filesystem            1K-blocks    Used Available Use% Mounted on
devtmpfs                3949180       0   3949180   0% /dev
tmpfs                   3978636       0   3978636   0% /dev/shm
tmpfs                   3978636    9464   3969172   1% /run
tmpfs                   3978636       0   3978636   0% /sys/fs/cgroup
/dev/mapper/rhel-root  50065528 5588744  44476784  12% /
/dev/mapper/rhel-home  24445276  228104  24217172   1% /home
/dev/sda1               1038336  262796    775540  26% /boot
tmpfs                    795724      64    795660   1% /run/user/1000
```

du

```
du [options] <starting directory or file>
```

Reports information about disk usage on the local computer or virtual machine.

Example:

The following example uses the command `du` to report the amount of disk space used by the files in the directory `/etc/bin`: