Linux Commands In Structured Order with Detailed Reference

April 26, 2013 | By NixSavy (http://linoxide.com/author/bobbin/)

Linux command shelf is a quick reference guide for all linux user who wish to learn linux commands. Commands are divided into 15 categories , which would be more easier to understand what commands to be used in specific requirement. The pdf format of linux command shelf is also available. You could reach Bobbin Zachariah (https://plus.google.com/115113980420145314347/posts) the author of this guide for any comments or corrections.

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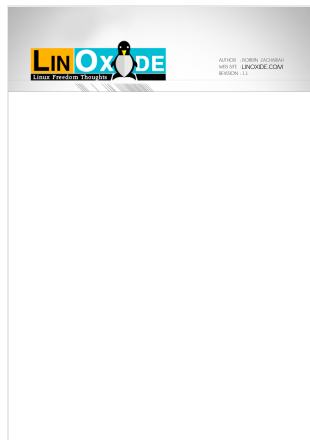
(http://www.linoxide.com/doc/linux_command_shelf_pdf_ver1_1.pdf) in pdf format. Current linux command shelf version is 1.1. This guide can be used by both advanced and new linux users , provided the best efforts to give most relevant linux commands.

You can navigate to each section using the index that is places on the right hand side of this page or just below. If you feel hard to understand any command please let me know on my above profile page.

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1. SYSTEM

```
$ uname -a                     => Display linux system information
$ uname -r                     => Display kernel release information (
refer uname command in detail (http://linoxide.com/linux-command/uname-c
ommand/))
$ cat /etc/redhat_release      => Show which version of redhat install
ed
$ uptime                       => Show how long system running + load
(learn uptime command (http://linoxide.com/linux-command/linux-uptime-co
mmand/))
$ hostname                     => Show system host name
$ hostname -i                  => Display the IP address of the host (
all options hostname (http://linoxide.com/linux-command/display-set-host
name-linux/))
$ last reboot                  => Show system reboot history (more exa
mples last command (http://linoxide.com/linux-command/linux-last-command
/))
$ date                         => Show the current date and time (opti
ons of date command (http://linoxide.com/linux-command/date-command-linu
x/))
$ cal                          => Show this month calendar (what more
in cal (http://linoxide.com/linux-command/cal-ncal-commands-display-cale
nder-linux/))
$ w                            => Display who is online (learn more ab
out w command (http://linoxide.com/linux-command/linux-w-command/))
$ whoami                       => Who you are logged in as (example +
sreenshots (http://linoxide.com/linux-command/linux-whoami-command/))
$ finger user                  => Display information about user (many
 options of finger command (http://linoxide.com/linux-command/finger-com
mand-user-details/))
```

2. HARDWARE

```
$ dmesg                        => Detected hardware and boot messages
(dmesg many more options (http://linoxide.com/linux-command/linux-dmesg-
command/))
$ cat /proc/cpuinfo            => CPU model
$ cat /proc/meminfo            => Hardware memory
$ cat /proc/interrupts         => Lists the number of interrupts per C
PU per I/O device
$ lshw                         => Displays information on hardware con
figuration of the system
$ lsblk                        => Displays block device related inform
ation in Linux (sudo yum install util-linux-ng)
$ free -m                      => Used and free memory (-m for MB) (fr
ee command in detail (http://linoxide.com/linux-command/linux-free-comma
nd/))
$ lspci -tv                    => Show PCI devices (very useful to fin
d vendor ids (http://linoxide.com/how-tos/linux-list-pci-devices/))
$ lsusb -tv                    => Show USB devices (read more lsusb op
tions (http://linoxide.com/linux-command/linux-lsusb-command-print-usb/)
)
$ lshal                        => Show a list of all devices with thei
r properties
$ dmidecode                    => Show hardware info from the BIOS (ve
ndor details (http://linoxide.com/linux-command/how-to-display-system-ha
rdware-information-in-bios/))
$ hdparm -i /dev/sda            # Show info about disk sda
$ hdparm -tT /dev/sda          # Do a read speed test on disk sda
$ badblocks -s /dev/sda        # Test for unreadable blocks on disk sd
a
```

3. STATISTICS

```
$ top                          => Display and update the top cpu pro
cesses (30 example options (http://linoxide.com/linux-command/linux-top-
command-examples-screenshots/))
$ mpstat 1                     => Display processors related statist
ics (learn mpstat command (http://linoxide.com/linux-command/linux-mpsta
t-command/))
$ vmstat 2                     => Display virtual memory statistics
(very useful performance tool (http://linoxide.com/linux-command/linux-v
mstat-command-tool-report-virtual-memory-statistics/))
$ iostat 2                     => Display I/O statistics (2sec Inter
vals) (more examples (http://linoxide.com/linux-command/linux-iostat-com
mand/))
$ tail -n 500 /var/log/messages   => Last 10 kernel/syslog messages (ev
eryday use tail options (http://linoxide.com/linux-command/linux-tail-co
mmand/))
$ tcpdump -i eth1              => Capture all packets flows on inter
face eth1 (useful to sort network issue (http://linoxide.com/linux-how-t
o/network-traffic-capture-tcp-dump-command/))
$ tcpdump -i eth0 'port 80'    => Monitor all traffic on port 80 ( H
TTP )
$ lsof                         => List all open files belonging to a
ll active processes.(sysadmin favorite command (http://linoxide.com/how-
tos/lsof-command-list-process-id-information/))
$ lsof -u testuser             => List files opened by specific user
$ free –m                      => Show amount of RAM (daily usage co
mmand (http://linoxide.com/linux-command/linux-free-command/))
$ watch df –h                  => Watch changeable data continuously
(interesting linux command (http://linoxide.com/linux-command/linux-watc
h-command-disk-usage-seconds/))
```

4. USERS

```
$ id                           => Show the active user id with lo
gin and group(with screenshot (http://linoxide.com/linux-command/linux-i
d-command/))
$ last                         => Show last logins on the system
(few more examples (http://linoxide.com/how-tos/linux-last-command-recor
ds-user-logins-and-last-reboots/))
$ who                          => Show who is logged on the syste
m(real user who logged in (http://linoxide.com/linux-command/linux-who-c
ommand/))
$ groupadd   admin             => Add group "admin" (force add ex
isting group (http://linoxide.com/linux-command/groupadd-command/))
$ useradd -c  "Sam Tomshi" -g admin -m sam  => Create user "sam" and add
 to group "admin"(here read all parameter (http://linoxide.com/linux-com
mand/linux-user-add-command/))
$ userdel sam                  => Delete user sam (force,file rem
oval (http://linoxide.com/linux-command/linux-userdel-command/))
$ adduser sam                  => Add user "sam"
$ usermod                      => Modify user information(mostly
useful for linux system admins (http://linoxide.com/linux-command/linux-
usermod-command-to-modify-user-details/))
```

5. FILE COMMANDS

```
$ ls –al                        => Display all information about
 files/ directories(20 examples (http://linoxide.com/linux-command/linux
-ls-command/))
$ pwd                           => Show current directory path(s
imple but need every day (http://linoxide.com/linux-command/linux-pwd-co
mmand/))
$ mkdir directory-name          => Create a directory(create mut
iple directory (http://linoxide.com/linux-command/linux-mkdir-command/))
$ rm file-name                  => Delete file(be careful of usi
ng rm command (http://linoxide.com/linux-command/linux-rm-command/))
$ rm -r directory-name          => Delete directory recursively
$ rm -f file-name               => Forcefully  remove file
$ rm -rf directory-name         => Forcefully remove directory r
ecursively
$ cp file1 file2                => Copy file1 to file2 (15 cd co
mmand examples (http://linoxide.com/linux-command/linux-cp-command/))
$ cp -r dir1 dir2               => Copy dir1 to dir2, create dir
2 if it doesn't  exist
$ mv file1 file2                => Move files from one place to
another(with 10 examples (http://linoxide.com/linux-command/mv-command-l
inux/))
$ ln –s  /path/to/file-name  link-name  => Create symbolic link to file-
name (examples (http://linoxide.com/linux-how-to/create-soft-link-linux/
))
$ touch file                    => Create or update file (timest
amp change (http://linoxide.com/linux-command/linux-touch-command/))
$ cat > file                    => Place standard input into fil
e (15 cat command examples (http://linoxide.com/linux-command/13-cat-com
mand-examples/))
$ more file                     => Output the contents of file (
help display long tail files (http://linoxide.com/linux-command/linux-mo
re-command/))
$ head file                     => Output the first 10 lines of
file (with different parameters (http://linoxide.com/linux-command/linux
-head-command/))
$ tail file                     => Output the last 10 lines of f
ile (detailed article with tail options (http://linoxide.com/linux-comma
nd/linux-tail-command/))
$ tail -f file                  => Output the contents of file a
s it grows starting with the last 10 lines
$ gpg -c file                   => Encrypt file (how to use gpg
(http://linoxide.com/security/gpg-command-encrypt-decrypt-file/))
$ gpg file.gpg                  => Decrypt file
```

6. PROCESS RELATED

```
$ ps                        # Display your currently active proce
sses (many parameters to learn (http://linoxide.com/monitoring-2/ps-comm
and-memory-use/))
$ ps aux | grep 'telnet'    # Find all process id related to teln
et process
$ pmap                      # Memory map of process (kernel,user
memory etc (http://linoxide.com/linux-command/linux-memory-analysis-with
-free-and-pmap-command/))
$ top                       # Display all running processes (30 e
xamples (http://linoxide.com/linux-command/linux-top-command-examples-sc
reenshots/))
$ kill pid                  # Kill process with mentioned pid id
(types of signals (http://linoxide.com/linux-how-to/linux-signals-part-1
/))
$ killall proc              # Kill all processes named proc
$ pkill processname         # Send signal to a process with its n
ame
$ bg                        # Resumes suspended jobs without brin
ging them to foreground (bg and fg command (http://linoxide.com/linux-co
mmand/fg-bg/))
$ fg                        # Brings the most recent job to foreg
round
$ fg n                      # Brings job n to the foreground
```

7. FILE PERMISSION RELATED

```
$ chmod octal file-name     # Change the permissions of file to octal ,
which can be found separately for user, group and world
octal value   (more examples (http://linoxide.com/linux-command/chmod-c
ommand/))
4 - read
2 – write
1 – execute
Example
$ chmod 777 /data/test.c              # Set rwx permission for owne
r , rwx  permission for group, rwx permission for world
$ chmod 755 /data/test.c              # Set rwx permission for owne
r,rx for group and world
$ chown owner-user file               # Change owner of the file (c
hown more examples (http://linoxide.com/linux-command/chown-command/))
$ chown owner-user:owner-group  file-name  # Change owner and group owne
r of the file
$ chown owner-user:owner-group directory   # Change owner and group owne
r of the directory
Example
$ chown bobbin:linoxide test.txt
$ ls -l test.txt
-rw-r--r-- 1 bobbin linoxide 0 Mar 04 08:56 test.txt
```

8. NETWORK

```
$ ifconfig -a                  # Display all network ports and ip addres
s (set mtu and other all options (http://linoxide.com/how-tos/linux-ifco
nfig/),ifconfig now in deprecated network command)
$ ifconfig eth0                # Display specific  ethernet port ip addr
ess and details
$ ip addr show                 # Display all network interfaces and ip a
ddress(available in iproute2 package,powerful than ifconfig)
$ ip address add 192.168.0.1 dev eth0     # Set ip address
$ ethtool eth0                 # Linux tool to show ethernet status (set
 full duplex , pause parameter (http://linoxide.com/linux-how-to/change-
speed-duplex-settings-ethernet/))
$ mii-tool  eth0               # Linux tool to show  ethernet status (mo
re or like ethtool (http://linoxide.com/linux-how-to/interface_details_m
iitool/))
$ ping host                    # Send echo request to test connection (l
earn sing enhanced ping tool (http://linoxide.com/tools/sing-tool-enhanc
ed-tool-ping/))
$ whois domain                 # Get who is information for domain
$ dig domain                   # Get DNS information for domain (screens
hots with other available parameters (http://linoxide.com/how-tos/useful
-options-dig/))
$ dig  -x host                 # Reverse lookup host
$ host google.com              # Lookup DNS ip address for the name (8 e
xamples of host command (http://linoxide.com/linux-command/learn-host-co
mmand/))
$ hostname -i                  # Lookup local ip address (set hostname t
oo (http://linoxide.com/linux-command/learn-host-command/))
$ wget file                    # Download file (very useful other option
 (http://linoxide.com/linux-command/cool-wget-examples/))
$ netstat  -tupl               # Listing all active listening ports(tcp,
udp,pid) (13 examples (http://linoxide.com/linux-command/netstat-commad-
with-all-variant-outputs/))
```

9. COMPRESSION / ARCHIVES

```
$ tar cf home.tar   home            # Create tar named home.tar contain
ing home/ (11 tar examples (http://linoxide.com/how-tos/linux-tar-comman
d-options-backup/))
$ tar xf file.tar                   # Extract the files from file.tar
$ tar czf  file.tar.gz  files       # Create a tar with gzip compressio
n
$ gzip file                         # Compress file and renames it to f
ile.gz (untar gzip file (http://linoxide.com/ubuntu-how-to/handling-targ
zip-and-tarbzip2-archives-in-ubuntu/))
```

10. INSTALL PACKAGE

```
$ rpm -i pkgname.rpm                     # Install rpm based package
 (Installing, Uninstalling, Updating, Querying ,Verifying (http://linoxi
de.com/how-tos/rpm-installation-linux-close/))
$ rpm -e pkgname                         # Remove package
Install from source
./configure
make
make install (what it is (http://linoxide.com/how-tos/linux-make-command
-examples/))
```

11. SEARCH

```
$ grep pattern files            # Search for pattern in files (you
will this command often (http://linoxide.com/how-tos/linux-grep-command-
find-strings/))
$ grep  -r pattern dir          # Search recursively for pattern i
n dir
$ locate file                   # Find all instances of file
$ find /home/tom -name 'index*'    # Find files names that start with
"index"(10 find examples (http://linoxide.com/linux-command/find-command
-linux/))
$ find /home -size +10000k      # Find files larger than 10000k in
/home
```

12. LOGIN (SSH AND TELNET)

```
$ ssh user@host                    # Connect to host as user (secur
e data communication command (http://linoxide.com/linux-command/learn-ss
h-connection-options/))
$ ssh  -p port user@host           # Connect to host using specific
 port
$ telnet host                      # Connect to the system using  t
elnet port
```

13. FILE TRANSFER

```
scp (http://linoxide.com/how-tos/howto-scp-a-file-directory-in-l
inux/)
$ scp file.txt    server2:/tmp               # Secure copy file.txt t
o remote host  /tmp folder
$ scp nixsavy@server2:/www/*.html   /www/tmp   # Copy *.html files from
 remote host to current system /www/tmp folder
$ scp -r nixsavy@server2:/www   /www/tmp        # Copy all files and fol
ders recursively from remote server to the current system /www/tmp folde
r
rsync (http://linoxide.com/how-tos/rsync-copy/)
$ rsync -a /home/apps /backup/               # Synchronize source to
destination
$ rsync -avz /home/apps linoxide@192.168.10.1:/backup     # Synchronize f
iles/directories between the local and remote system with compression en
abled
```

14. DISK USAGE

```
$ df -h                        # Show free space on mounted filesystems
(commonly used command (http://linoxide.com/linux-command/linux-df-comma
nd/))
$ df -i                        # Show free inodes on mounted filesystem
s
$ fdisk -l                     # Show disks partitions sizes and types(
fdisk command output (http://linoxide.com/linux-command/fdisk-commands-m
anage-partitions-in-linux/))
$ du -ah                       # Display disk usage in human readable f
orm (command variations (http://linoxide.com/linux-command/du-command-va
riations-linux/))
$ du -sh                       # Display total disk usage on the curren
t directory
$ findmnt                       # Displays target mount point for all f
ilesystem (refer type,list,evaluate output (http://linoxide.com/linux-co
mmand/powerful-findmnt-command/))
$ mount device-path mount-point  # Mount a device
```

15. DIRECTORY TRAVERSE

```
$ cd ..                        # To go up one level of the directo
ry tree(simple & most needed (http://linoxide.com/linux-command/linux-cd
-command-examples/))
$ cd                           # Go to $HOME directory
$ cd /test                     # Change to /test directory
```

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