Linux Command Reference

File Commands

ls – directory listing
ls -al – formatted listing with hidden files
cd *dir* - change directory to *dir*
cd – change to home
pwd – show current directory
mkdir *dir* – create a directory *dir*
rm *file* – delete *file*
rm -r *dir* – delete directory *dir*
rm -f *file* – force remove *file*
rm -rf *dir* – force remove directory *dir* *
cp *file1 file2* – copy *file1* to *file2*
cp -r *dir1 dir2* – copy *dir1* to *dir2*; create *dir2* if it doesn't exist
mv *file1 file2* – rename or move *file1* to *file2*
if *file2* is an existing directory, moves *file1* into directory *file2*
ln -s *file link* – create symbolic link *link* to *file*
touch *file* – create or update *file*
cat > *file* – places standard input into *file*
more *file* – output the contents of *file*
head *file* – output the first 10 lines of *file*
tail *file* – output the last 10 lines of *file*
tail -f *file* – output the contents of *file* as it grows, starting with the last 10 lines

Process Management

ps – display your currently active processes
top – display all running processes
kill *pid* – kill process id *pid*
killall *proc* – kill all processes named *proc* *
bg – lists stopped or background jobs; resume a stopped job in the background
fg – brings the most recent job to foreground
fg *n* – brings job *n* to the foreground

File Permissions

chmod *octal file* – change the permissions of *file* to *octal*, which can be found separately for user, group, and world by adding:
- 4 – read (r)
- 2 – write (w)
- 1 – execute (x)

Examples:
chmod 777 – read, write, execute for all
chmod 755 – rwx for owner, rx for group and world
For more options, see **man chmod**.

SSH

ssh *user@host* – connect to *host* as *user*
ssh -p *port user@host* – connect to *host* on port *port* as *user*
ssh-copy-id *user@host* – add your key to *host* for *user* to enable a keyed or passwordless login

Searching

grep *pattern files* – search for *pattern* in *files*
grep -r *pattern dir* – search recursively for *pattern* in *dir*
command | grep *pattern* – search for *pattern* in the output of *command*
locate *file* – find all instances of *file*

System Info

date – show the current date and time
cal – show this month's calendar
uptime – show current uptime
w – display who is online
whoami – who you are logged in as
finger *user* – display information about *user*
uname -a – show kernel information
cat /proc/cpuinfo – cpu information
cat /proc/meminfo – memory information
man *command* – show the manual for *command*
df – show disk usage
du – show directory space usage
free – show memory and swap usage
whereis *app* – show possible locations of *app*
which *app* – show which *app* will be run by default

Compression

tar cf *file.tar files* – create a tar named *file.tar* containing *files*
tar xf *file.tar* – extract the files from *file.tar*
tar czf *file.tar.gz files* – create a tar with Gzip compression
tar xzf *file.tar.gz* – extract a tar using Gzip
tar cjf *file.tar.bz2* – create a tar with Bzip2 compression
tar xjf *file.tar.bz2* – extract a tar using Bzip2
gzip *file* – compresses *file* and renames it to *file.gz*
gzip -d *file.gz* – decompresses *file.gz* back to *file*

Network

ping *host* – ping *host* and output results
whois *domain* – get whois information for *domain*
dig *domain* – get DNS information for *domain*
dig -x *host* – reverse lookup *host*
wget *file* – download *file*
wget -c *file* – continue a stopped download

Installation

Install from source:
./configure
make
make install
dpkg -i *pkg.deb* – install a package (Debian)
rpm -Uvh *pkg.rpm* – install a package (RPM)

Shortcuts

Ctrl+C – halts the current command
Ctrl+Z – stops the current command, resume with **fg** in the foreground or **bg** in the background
Ctrl+D – log out of current session, similar to **exit**
Ctrl+W – erases one word in the current line
Ctrl+U – erases the whole line
Ctrl+R – type to bring up a recent command
!! - repeats the last command
exit – log out of current session

* use with extreme caution.

Ubuntu Reference

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Privileges

sudo *command* – run *command* as root
sudo -s – open a root shell
sudo -s -u *user* – open a shell as *user*
sudo -k – forget sudo passwords
gksudo *command* – visual sudo dialog (GNOME)
kdesudo *command* – visual sudo dialog (KDE)
sudo visudo – edit /etc/sudoers
gksudo nautilus – root file manager (GNOME)
kdesudo konqueror – root file manager (KDE)
passwd – change your password

Display

sudo /etc/init.d/gdm restart – restart X and return to login (GNOME)
sudo /etc/init.d/kdm restart – restart X and return to login (KDE)
(file) **/etc/X11/xorg.conf** – display configuration
sudo dexconf – reset xorg.conf configuration
Ctrl+Alt+Bksp – restart X display if frozen
Ctrl+Alt+F*N* – switch to tty *N*
Ctrl+Alt+F7 – switch back to X display

System Services[1]

start *service* – start job *service* (Upstart)
stop *service* – stop job *service* (Upstart)
status *service* – check if *service* is running (Upstart)
/etc/init.d/*service* start – start *service* (SysV)
/etc/init.d/*service* stop – stop *service* (SysV)
/etc/init.d/*service* status – check *service* (SysV)
/etc/init.d/*service* restart – restart *service* (SysV)
runlevel – get current runlevel

Package Management[1]

apt-get update – refresh available updates
apt-get upgrade – upgrade all packages
apt-get dist-upgrade – upgrade with package replacements; upgrade Ubuntu version
apt-get install *pkg* – install *pkg*
apt-get purge *pkg* – uninstall *pkg*
apt-get autoremove – remove obsolete packages
apt-get -f install – try to fix broken packages
dpkg --configure -a – try to fix broken packages
dpkg -i *pkg.deb* – install file *pkg.deb*
(file) **/etc/apt/sources.list** – APT repository list

Network

ifconfig – show network information
iwconfig – show wireless information
sudo iwlist scan – scan for wireless networks
sudo /etc/init.d/networking restart – reset network for manual configurations
(file) **/etc/network/interfaces** – manual configuration
ifup *interface* – bring *interface* online
ifdown *interface* – disable *interface*

Special Packages

ubuntu-desktop – standard Ubuntu environment
kubuntu-desktop – KDE desktop
xubuntu-desktop – XFCE desktop
ubuntu-minimal – core Ubuntu utilities
ubuntu-standard – standard Ubuntu utilities
ubuntu-restricted-extras – non-free, but useful
kubuntu-restricted-extras – KDE of the above
xubuntu-restricted-extras – XFCE of the above
build-essential – packages used to compile programs
linux-image-generic – latest generic kernel image
linux-headers-generic – latest build headers

Firewall[1]

ufw enable – turn on the firewall
ufw disable – turn off the firewall
ufw default allow – allow all connections by default
ufw default deny – drop all connections by default
ufw status – current status and rules
ufw allow *port* – allow traffic on *port*
ufw deny *port* – block *port*
ufw deny from *ip* – block *ip* adress

Application Names

nautilus – file manager (GNOME)
dolphin – file manager (KDE)
konqueror – web browser (KDE)
kate – text editor (KDE)
gedit – text editor (GNOME)

System

Recovery - Type the phrase "REISUB" while holding down Alt and SysRq (PrintScrn) with about 1 second between each letter. Your system will reboot.
lsb_release -a – get Ubuntu version
uname -r – get kernel version
uname -a – get all kernel information