

Linux *QuickRef* Linux

version 1.6.0

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Mounting Filesystems

<code>mount -t msdos /dev/fd0H1440 /mnt/floppy</code>	Mount an MS-DOS formatted floppy disk at /mnt/floppy.
<code>mount -t iso9660 /dev/cdrom /mnt/cdrom</code>	Mount a CD-ROM drive at /mnt/cdrom.
<code>mount -t vfat /dev/hda1 /mnt/win</code>	Mount a VFAT hard drive partition hda1 at /mnt/win.
<code>mount -t ext2 /dev/pda /mnt/ezdrive</code>	Mount a Linux filesystem formatted EZ-Drive cartridge at /mnt/ezdrive.
<code>umount /mnt/cdrom</code>	Unmount the CD-ROM.
<code>usermount</code>	Executes graphical utility for mounting and unmounting filesystems.

Finding Files and Text Within Files

<code>find / -name filename</code>	Starting at the / directory, find the file "filename".
<code>find / -name "*string*"</code>	Starting at the / directory, find the file containing the word "string".
<code>grep -r textstring /dir</code>	Starting with the directory "/dir", recursively find and list all files containing the string "textstring".
<code>locate filename</code>	Locate a file "filename" using the updatedb database (see next).
<code>updatedb</code>	Create or update the database used by the locate command.
<code>apropos subject</code>	List man pages for "subject".
<code>makewhatis</code>	Create or update the database used by whatis and apropos commands.
<code>which filename</code>	Show the subdirectory containing the executable file "filename".
<code>info</code>	Lists the commands and utilities installed with brief description as to what they are used for or do.

Move Copy, Delete and View Files

<code>mv filename /home/dirname</code>	Move the file "filename" to the directory /home/dirname.
<code>cp filename /home/dirname</code>	Copy the file "filename" to the directory /home/dirname.
<code>rm name</code>	Remove the file or directory "name".

<code>rm -rf dir</code>	Remove the entire directory "dir", forcing the removal of included files and subdirectories recursively as well.
<code>ls -l</code>	List files in current directory in long format.
<code>ls -F</code>	List files in current directory and indicate the file types.
<code>ls -laC</code>	List all files in current directory in long format and display in columns.
<code>cat filename</code>	Display the file "filename".
<code>more filename</code>	Display the file "filename" one page at a time. Advance pages by pressing the spacebar.
<code>less filename</code>	Display the file "filename" one page at a time. Advance pages by pressing the spacebar, backup with the "b" key.
<code>head filename</code>	Display the first 10 lines of the file "filename".
<code>head -25 filename</code>	Display the first 25 lines of the file "filename".
<code>tail filename</code>	Display the last 10 lines of the file "filename".
<code>tail -25 filename</code>	Display the last 25 lines of the file "filename".

Meta Characters

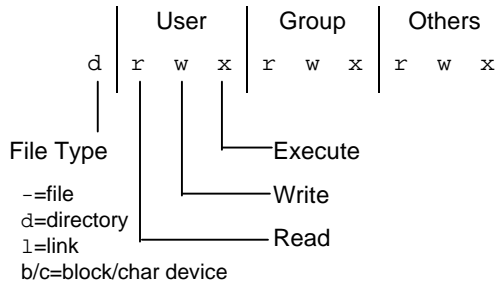
<code>*</code>	Multiple-character wildcard.
<code>?</code>	Single-character wildcard.
<code>[a-z0-9]</code>	Single-character character range ("a" through "z" or "0" through "9").
<code>[abc123]</code>	Single-character choice ("a", "b", "c", "1", "2" or "3").

Symbolic Links

<code>symlink -r /</code>	List all the symbolic links on the system.
<code>symlink -rv / fgrep "dangling"</code>	Find all symbolic links that are "dangling", excluding other mounted filesystems.
<code>ln -l linkname</code>	Display the link-path for a link.
<code>find . -type l -exec ls -l {} \;</code>	Find all symbolic links and show what they point to.

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File Permissions



When the command "ls -l" is used, a list of file names is displayed. The first column in this list details the file type and the permissions applied to the file. If a permission is denied for a set, User (Owner), Group and Others, it is represented by a -.

Read = 4 Write = 2 Execute = 1	File permissions are altered by giving the "chmod" command and the appropriate octal code for each set. Ex.: <pre>chmod 764 filename</pre> will make the file "filename" r-w-x for the user, r-w for the group, and r for any others.
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chmod Commands

<code>chmod 600</code>	Read and write permissions for user only.
<code>chmod 700</code>	Read, write and execute permissions for user only.
<code>chmod 755</code>	Full permission for user, read and execute for group and others.
<code>chmod 711</code>	Full permission for user, execute for group and others.
<code>chmod 444</code>	Read permissions only for everybody.
<code>chmod +x filename</code>	Make the file "filename" executable for everybody; user, group and others.
<code>chmod go-w filename</code>	Revoke write permissions for group and others on the file "filename".
<code>chmod ug=r filename</code>	Set the permissions to readable only for user and group on the file "filename".
<code>chmod a=r,u+w filename</code>	Set the permissions to readable only for all (everybody) and add write-able for user on the file "filename".

Printing

<code>/etc/rc.d/init.d/lpd start</code>	Start the print daemon.
<code>/etc/rc.d/init.d/lpd stop</code>	Stop the print daemon.
<code>/etc/rc.d/init.d/lpd status</code>	Display the status of the print daemon.

<code>lpq</code>	Query and display jobs in print queue.
<code>lprm</code>	Remove jobs from print queue.
<code>lpr</code>	Print a file.
<code>lpc</code>	Printer control tool.
<code>printtool</code>	Run the X Windows printer setup utility.

man Pages

<code>man -k word</code>	Display man pages containing "word".
<code>man subject col -b lpr</code>	Print the man page "subject" as plain text.
<code>man -t subject col -b lpr</code>	Print the man page "subject" as Proscript.

Manual pages are organized into topics:

<code>/usr/man/man1</code>	Commands - Commands you run from within a shell.
<code>/usr/man/man2</code>	System Calls - Documentation for kernel functions.
<code>/usr/man/man3</code>	Library Calls - Manual pages for libc functions.
<code>/usr/man/man4</code>	Special Files - Information about files in the /dev/ directory.
<code>/usr/man/man5</code>	File Formats - Details of formats for /etc/passwd and other files.
<code>/usr/man/man6</code>	Games .
<code>/usr/man/man7</code>	Macro Packages - Descriptions of the Linux file system, manual pages, and others.
<code>/usr/man/man8</code>	System Management - Manual pages for root operator utilities.
<code>/usr/man/man9</code>	Kernel Routines - Documentation on Linux kernel source routines or kernel module specifications.

And each man page is organized into sections:

Name	The name of the command and a brief description.
Synopsis	How to use the command and command-line options.
Description	An explanation of the program and its options.
Files	A list of files used by the command and their location.
See Also	A list of related man pages.
Diagnostics	A description of unusual output.
Bugs	Known problems.
Author	The program's main author and other contributors.

User Administration

<code>adduser username</code>	Create a new user account named "username".
<code>passwd username</code>	Assign a password to "username".
<code>su</code> or <code>su -</code>	Switch user to root, or root and to include root's set environment (must know root password to use).
<code>su username</code>	Switch user to "username" (root only).
<code>exit</code>	Exit, logoff or logout of account.

Shutdown & Reboot

<code>shutdown -h now -or-init 0</code>	Shutdown the system now and halt (no reboot).
<code>shutdown -r now -or-init 6</code>	Shutdown the system now and reboot.
<code>shutdown -r 5</code>	Shutdown the system in 5 minutes and reboot.
<code>halt</code>	Stop all processes and shutdown.
<code>reboot</code>	Stop all processes and reboot.

Installing Software for Linux

<code>rpm -ivh name.rpm</code>	Install the RPM package "name.rpm".
<code>rpm -Uvh name.rpm</code>	Upgrade or install RPM package "name.rpm".
<code>rpm -Fvh name.rpm</code>	Upgrade only previously installed RPM package "name.rpm".
<code>rpm -e name</code>	Delete the RPM package "name" (do not include ".rpm" extension).
<code>rpm -l name</code>	List the files in the RPM package "name".
<code>rpm -ql name</code>	Query for the installed version and list the files in the RPM package "name".
<code>rpm -Va</code>	Verify the integrity of all currently installed packages.
<code>rpm -qai</code>	Query all installed packages, displaying details on each package.
<code>rpm -i --force name</code>	Reinstall package "name", forcing the installation of all files included.
<code>tar -xvf archive.tar</code>	Decompress the files archived in the tarred file "archive.tar.gz", listing the contents to the console.
<code>tar -xzvf archive.tar.gz</code>	Decompress the files archived in the gzipped and tarred file "archive.tar.gz".
<code>tar -tvf archive.tar</code>	Display list of contents in file "archive.tar".
<code>./configure ; make ; make install</code>	Execute the scripts preparing the source files for compiling and installation on the system.

Configuration Files

<code>/etc/inittab</code>	Specifies the runlevel that the system should boot into.
<code>/etc/fstab</code>	List of devices, mount points and mount options (read, write, etc.).
<code>/etc/motd</code>	Message Of The Day; displayed to all users at login.
<code>/etc/rc.d/rc.local</code>	Shell script that is executed at the end of boot process.
<code>/etc/profile</code>	Global environment variables.
<code>/etc/cron.*</code>	Directories that automatically execute scripts stored within at timed intervals.
<code>/etc/HOSTNAME</code>	Contains full hostname including domain.
<code>/etc/hosts</code>	A list of known host names and IP addresses on the network.
<code>/etc/resolv.conf</code>	Defines IP addresses of DNS servers.
<code>/etc/samba/smb.conf</code>	Configuration file for the Samba server, allowing file/print sharing with MS Windows clients.
<code>/etc/httpd/conf/httpd.conf</code>	Configuration file for the Apache web server.
<code>/etc/X11/XF86Config</code>	Configuration file for X Windows.
<code>/usr/X11R6/lib/X11/app-defaults</code>	X Window application defaults.
<code>~/Xdefaults</code>	Configuration file for some X Window applications.
<code>~/xinitrc</code>	Defines the window manager loaded by X Windows.
<code>~/Xclients</code>	Defines the window manager loaded by X Windows (Red Hat).

System Services

<code>chkconfig --list</code>	Reports whether an xinetd system service has been started or stopped.
<code>chkconfig --list <daemon></code>	Checks the status of a particular service.
<code>chkconfig --level 345 nsd off</code>	Turns "nsd" service off in runlevels 3, 4, and 5.
<code>service <daemon> stop [or start]</code>	Stop or start the individual service <daemon>.
<code>service xinetd restart</code>	To start or stop a service which is managed by xinetd.

<i>Linux Runlevels</i>			
0	Halt	3	Multiuser mode (console)
		4	unused
1	Single-user mode	5	Multiuser mode (X Windows)
2	Multiuser, without NFS	6	Reboot

Tips & Tricks

<code>ifconfig -a</code>	List IP address for all devices on system.
<code>/sbin/e2fsck hda5</code>	Execute the filesystem check utility on the hard drive partition hda5 (unmount hda5 first!).
<code>mkbootdisk --device /dev/fd0 -2.4-12</code>	Creates a boot disk on the floppy drive with version 2.4-12 of the kernel.
<code>fdformat /dev/fd0H1440</code>	Format a floppy disk in device fd0 as high-density 1.44 MB.
<code>/sbin/mke2fs -c /dev/fd0</code>	Format a floppy disk with the Linux ext2 filesystem, checking for bad blocks.
<code>tar -cMf /dev/fd0</code>	Backup the contents of the current directory, including subdirectories, to multiple floppy disks.
<code>cat /var/log/messages less</code>	Display the system log with paging.
<code>cat /var/log/dmesg less</code>	Display the boot messages log with paging; useful for troubleshooting.
<code>dmesg less</code>	Same as above.
<code>linux single</code>	Issued at LILO prompt, will boot into single-user mode (if root password is lost, boot "linux single" and change password).
<code>ps</code>	List current running processes for logged user.
<code>ps -aux</code>	List all current running processes for all users and daemons.
<code>kill 1234</code>	Kill (stop) a process with job ID of "1234".
<code>sysreport</code>	Red Hat utility collects detailed info on the system's hardware and setup, creating a compressed tar file in the /tmp directory by that name and can be used by SysAdmins to back up most of the system's configuration.
<code>ulimit -c</code>	Displays current limit on core file size.
<code>ulimit -c 1000</code>	Sets allowable size limit on core files to 512K (1000 x 512-byte blocks).
<code>uname -a</code>	Displays system info (OS, host name, kernel version, date, time, time zone, year, processor type and label).

Bash Shell

<code>history</code>	Search through the history file.
<code>history 20</code>	List the last 20 commands entered.

<code>history grep variable</code>	Pipe the output of history through the grep command, searching for "variable".
<code>!!</code>	Executes the last command entered in the history file.
<code>!#</code>	Executes the command numbered "#" in the history file.
<code>!string</code>	Executes the command with the most recent matching string "string".
<code>efunnv</code>	Display the shell environment variables.
<code>printenv</code>	Display the environment variables in use.

vi Editor

<code>:q</code>	Quit, saving changes.
<code>:q!</code>	Absolute quit (no prompt).
<code>:wq</code>	Write file, then quit.
<code>x</code>	Delete character at cursor.
<code>dw or dd</code>	Delete word or delete line.
<code>D</code>	Delete from cursor to EOL.
<code>u</code>	Undo.
<code>.</code>	Repeat last edit command.

X Windows

<code>startx</code>	Start X Windows.
<code>XF86Setup</code>	An X configuration utility with automatic probing of graphics cards.
<code>Xconfigurator</code>	Another X configuration utility with automatic probing of graphics cards.
<code>xf86config</code>	A text-based X configuration menu.
<code>xvidtune</code>	An X graphics tuning utility.
<code>gnome-session</code>	Starts GNOME in .xinitrc or .Xclients.
<code>startkde</code>	Starts KDE in .xinitrc or .Xclients.
<code>fvwm95</code>	Starts fvwm95 in .xinitrc or .Xclients.
<code>Ctrl-Alt+ -or- Ctrl-Alt-</code>	Increase or decrease screen resolution.
<code>Alt-Esc</code>	Display a list of active windows.
<code>Shift-Ctrl-F8</code>	Resize the selected window.
<code>Shift-Ctrl-r</code>	Refresh the screen.
<code>Shift-Ctrl-x</code>	Start an xterm session.
<code>Ctrl-Alt-Esc</code>	Invoke the xkill cursor.
<code>Ctrl-Alt-BkSpace</code>	Kill the X-server.