

General Navigation and Bash Commands

pwd	Show current directory
mkdir	Make directory <i>directory</i>
rmdir	Remove <i>directory</i>
cd	Change to directory <i>directory</i>
cd ..	Go up a directory (the parent directory)
cd	Change to home directory
ls	list files (in current directory)
cat <i>file</i>	Display contents of <i>file</i>
ls <i>directory</i>	list files in specified <i>directory</i>
whoami	Show your username
uname -a	Show system and kernel
head -n1	Show distrobution
/etc/issue	
man	Show manual/information for specified <i>command</i>
uptime	Show uptime
date	Show system date
mount	Show mounted file systems

ls Options

-a	Show all plus hidden files
-R	Recursive list
-r	Reverse order
-t	Sort by last modified
-S	Sort by file size
-l	Long listing format
-1	One file per line
-m	Comma-separated output
-Q	Quoted output

grep

grep option	Search for <i>string</i> in files
<i>string</i> files	
-i	Case insensitive search
-r	Recursive search
-v	Inverted search
-c	Print count of matching lines
-o	Show matched part of file only

More Search Commands

find / <i>dir</i> /-	Find files starting with <i>name</i>
<i>name</i> <i>name</i>	<i>name</i> in <i>dir</i>
find / <i>dir</i> /-	Find files owned by <i>name</i>
<i>user</i> <i>name</i>	in <i>dir</i>
whereis	Find binary source manual for <i>command</i>
locate <i>file</i>	Find <i>file</i> with quick search of system index
which <i>file</i>	Shows path to file
Add 2>/dev/null at the end to discard error messages	

File Manipulation

touch	Create, change, modify timestamps of a file
echo	Print specified text
mv	Move <i>source</i> to directory ; Rename <i>Old</i> to <i>New</i>
rm	Remove files or directories
rm -f	Ignore nonexistent files
rm -i	Prompt before every removal
rm -l	Prompt once before removing more than 3 files
rm -r	Remove directories and their contents recursively

File Manipulation (cont)

cp	Copy <i>file1</i> to <i>file2</i>
<i>file1</i>	
<i>file2</i>	
cp -b	Backup (doesn't support argument)
cp -f	If file cannot be opened remove and try again
cp -l	Hard link files instead of copying
cp -n	Do not overwrite existing file
cp -s	Make symbolic link instead of copying
cp -r	Copy directories recursively
cp -u	Copy only when SOURCE file is newer than destination file or when destination file is missing

Permissions (chmod)

chmod u	Change owner permission of <i>file</i>
chmod g	Change group permission of <i>file</i>
chmod o	Change all others' permission of <i>file</i>
chmod a	Change everyone's permission of <i>file</i>
r	permission to read symbol
w	permission to write symbol
x	permission to execute symbol
chmod o+r <i>file</i>	Adds the "read" ability to "other" users
chmod o-r <i>file</i>	Removes the "read" ability from "other" users



By Tricksyhobbit1

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Permissions (chmod) (cont)

`chmod` Adds `rwX` permissions to all `777 file` users using octal notations

I advise looking up an octal notations table/explanation for any help understanding the numbers and their placement, this is just for a quick reference.

Ownership (chown)

`chown newowner file` Change user owner of `file` to `newowner`

`chown :groupname file.txt` Change group owner of `file.txt` to `groupname`

`chown newowner:groupname file.txt` Change user owner and group owner of `file`

`-f` Suppress most error messages

`-R` Make changes recursively

`-H` If `cmd` argument is symbolic link, traverse it

`-L` Traverse every symbolic link to a directory encountered

`-h` Affect each symbolic link instead of any referenced file

Make note of the :

Processes

`ps` Show snapshot of current processes

`top` Show realtime processes

`kill pid` Kill process with ID `pid`

`pkill name` Kill process with name `name`

Processes (cont)

`killall name` Kill all process with names beginning with `name`

Basic Networking Commands

`ifconfig` Show details of Network settings (IP, version, etc)

`whois` Shows site owner and DNS name server

`nslookup` Shows nameservers and IP Addresses

`traceroute` Shows routing information to host

`nmap` Port scanning (TCP, UDP)

`ping/ping6` Send ICMP pings; Also checks latency

`route` Show/manipulate IP routing table

`arp` Show/manipulate ARP cache

`ip` See ARP cache, neighbor table, add routes

`nc` Show various network info

`tcpdump` Capture network traffic

`dig website` Show various IP information

Netcat (nc)

`nc host port` Connect to remote server(s)

`nc -l IPaddress port` Listen mode; listen for incoming connections

`-p` Specify port number

`-v` Verbose mode

`-z` Scan for open ports

`-q` Specify delay before closing connection

`-g` Source-routing hop point(s) up to 8

Netcat (nc) (cont)

`-n` Numeric-only IP addresses

`-s address` local source address

`-c string` specify shell cmds to execute after connect

`-e filename` Specify filename to execute after connect (if no working /bin/sh)

tcpdump

`-A` Print in ASCII

`-c count` Exit after capturing `count` packets

`-D` Show available interfaces

`-e` Print link-level header on each line

`-F file` Use `file` as filter expression

`-L` List data link types for interface

`-n` Don't convert addresses to names

`-p` Don't capture in promiscuous mode

`-q` Quick Output

`-r file` Read packets from `file`

`-s len` Capture up to `len` bytes per packet

`-S` Print absolute TCP seq numbers

`-t` Don't print timestamps

`-w file` Write captured packets to `file`

`-y type` Specify data-link type

`-Z user` Drop privileges from root to `user`

