

### Bash Commands

date	Show system date
uptime	Show uptime
uname -a	Show system and kernel
whoami	Show your username
finger <i>user</i>	Display information about user
cat /proc/cpuinfo	Cpu information
cat /proc/meminfo	Memory information
head -n1 /etc/issue	Show distribution
mount	Show mounted filesystems
man <i>command</i>	Show manual for command
export NAME=value	Set \$NAME to value
\$PATH	Executable search path
\$HOME	Home Directory
\$SHELL	Current Shell

### ls Options

-a	Show all (including hidden)
-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

### SSH

ssh <i>user@host</i>	Connect to host as user
ssh -p port <i>user@host</i>	Connect to host on port as user
ssh-copy-id <i>user@host</i>	Add your key to host for user to enable a keyed or passwordless login

### Process Management

ps	Show snapshot of processes
top	Show real time processes
kill <i>pid</i>	Kill process with id <i>pid</i>
pkill <i>name</i>	Kill process with name <i>name</i>
killall <i>name</i>	Kill all processes with names beginning with <i>name</i>
fg	Brings the most recent job to foreground
fg -n	Brings job n to the foreground

### IO Redirection

<i>cmd</i> < <i>file</i>	Input of <i>cmd</i> from <i>file</i>
<i>cmd</i> < ( <i>cmd2</i> )	Output of <i>cmd2</i> as file input to <i>cmd1</i>
<i>cmd</i> > <i>file</i>	Standard output (stdout) of <i>cmd</i> to <i>file</i>
<i>cmd</i> > /dev/null	Discard stdout of <i>cmd</i>
<i>cmd</i> >> <i>file</i>	Append stdout to <i>file</i>
<i>cmd2</i> > <i>file</i>	Error output (stderr) of <i>cmd</i> to <i>file</i>
<i>cmd1</i> > &2	stdout to same place as stderr
<i>cmd2</i> > &1	stderr to same place as stdout
<i>cmd</i> &> <i>file</i>	Every output of <i>cmd</i> to <i>file</i>

### Bash Shortcuts

CTRL-c	Stop current command
CTRL-z	Sleep program
CTRL-a	Go to start of line
CTRL-e	Go to end of line
CTRL-u	Cut from start of line
CTRL-k	Cut to end of line
CTRL-r	Search history
!!	Repeat last command
!abc	Run last command starting with <i>abc</i>
!abcp	Print last command starting with <i>abc</i>
!\$	Last argument of previous command
ALT-.	Last argument of previous command
!*	All arguments of previous command
abc_123	Run previous command, replacing <i>abc</i> with <i>123</i>

### Directory Commands

<code>pwd</code>	Show current directory
<code>mkdir</code> <code>dir</code>	Make directory <code>dir</code>
<code>cd dir</code>	Change directory to <code>dir</code>
<code>cd ..</code>	Go up a directory
<code>ls</code>	List files
<code>ls -al</code>	Formatted listing with hidden files
<code>rm file</code>	Delete file
<code>cp file1</code> <code>file2</code>	Copy file1 to file2
<code>cp -r</code> <code>dir1</code> <code>dir2</code>	Copy dir1 to dir2; create dir2 if it doesn't exist
<code>mv file1</code> <code>file2</code>	Rename or move file1 to file2 if file2 is an existing directory, moves file1 into directory file2
<code>touch</code>	Create or update file
<code>cat</code>	View file contents
<code>more</code>	Output the contents of file
<code>head</code>	Output the first 10 lines of file



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### Directory Commands (cont)

tail	Output the last 10 lines of file
tail -f	Output the contents of file as it grows, starting with the last 10 lines

### Searching

grep <i>pattern files</i>	Search for pattern in files
grep -r <i>pattern dir</i>	Search recursively for pattern in dir
grep -i	Case insensitive search
grep -r	Recursive search
grep -v	Inverted search
grep -o	Show matched part of file only
locate <i>file</i>	Find all instances of file
find /dir/ -user <i>name</i>	Find files owned by name in dir
find /dir/ -mmin <i>num</i>	Find files modified less than num minutes ago in dir
whereis <i>command</i>	Find binary / source / manual for command

### File Permissions

chmod 775 <i>file</i>	Change mode of <i>file</i> to 775
chmod -R 600 <i>folder</i>	Recursively chmod <i>folder</i> to 600
chown <i>user.group file</i>	Change <i>file</i> owner to <i>user</i> and group to <i>group</i>
First digit is owner permission, second is group and third is everyone.	
Calculate permission digits by adding numbers below.	
4	read (r)
2	write (w)
1	execute (x)

### Network

ping <i>host</i>	Ping host and output results
whois <i>domain</i>	Get whois information for domain
dig <i>domain</i>	Get DNS information for domain
dig -x <i>host</i>	Reverse lookup host
wget <i>file</i>	Download file
wget -c <i>file</i>	Continue a stopped download

### NANO Shortcuts

#### Files

CTRL-R	Read file
CTRL-O	Save file
CTRL-X	Close file

#### Cut and Paste

ALT-A	Start marking text
CTRL-K	Cut marked text or line
CTRL-U	Paste text

#### Navigate File

ALT-/	End of file
CTRL-A	Beginning of line
CTRL-E	End of line
CTRL-C	Show line number
CTRL_	Go to line number

#### Search File

CTRL-W	Find
ALT-W	Find next
CTRL-\	Search and replace



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