

Bash Commands

| | |
|----------------------------------|--------------------------------|
| <code>uname -a</code> | Show system and kernel |
| <code>head -n1 /etc/issue</code> | Show distribution |
| <code>mount</code> | Show mounted filesystems |
| <code>date</code> | Show system date |
| <code>uptime</code> | Show uptime |
| <code>whoami</code> | Show your username |
| <code>man <i>command</i></code> | Show manual for <i>command</i> |

Bash Shortcuts

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

Bash Variables

| | |
|---------------------------------|--------------------------------------|
| <code>env</code> | Show environment variables |
| <code>echo \$<i>NAME</i></code> | Output value of <i>NAME</i> variable |

Bash Variables (cont)

| | |
|---------------------------------------|---------------------------------|
| <code>export <i>NAME=value</i></code> | Set <i>NAME</i> to <i>value</i> |
| <code>\$PATH</code> | Executable search path |
| <code>\$HOME</code> | Home directory |
| <code>\$SHELL</code> | Current shell |

IO Redirection

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

Pipes

| | |
|---|--------------------------------------|
| <code><i>cmd1</i> <i>cmd2</i></code> | stdout of <i>cmd1</i> to <i>cmd2</i> |
| <code><i>cmd1</i> & <i>cmd2</i></code> | stderr of <i>cmd1</i> to <i>cmd2</i> |

Command Lists

| | |
|---|--|
| <code><i>cmd1</i> ; <i>cmd2</i></code> | Run <i>cmd1</i> then <i>cmd2</i> |
| <code><i>cmd1</i> && <i>cmd2</i></code> | Run <i>cmd2</i> if <i>cmd1</i> is successful |
| <code><i>cmd1</i> <i>cmd2</i></code> | Run <i>cmd2</i> if <i>cmd1</i> is not successful |
| <code><i>cmd</i> &</code> | Run <i>cmd</i> in a subshell |

Directory Operations

| | |
|-------------------------------|--------------------------------|
| <code>pwd</code> | Show current directory |
| <code>mkdir <i>dir</i></code> | Make directory <i>dir</i> |
| <code>cd <i>dir</i></code> | Change directory to <i>dir</i> |
| <code>cd ..</code> | Go up a directory |
| <code>ls</code> | List files |

Is Options

| | |
|-----------------|-----------------------------|
| <code>-a</code> | Show all (including hidden) |
| <code>-R</code> | Recursive list |
| <code>-r</code> | Reverse order |
| <code>-t</code> | Sort by last modified |
| <code>-S</code> | Sort by file size |
| <code>-l</code> | Long listing format |
| <code>-1</code> | One file per line |
| <code>-m</code> | Comma-separated output |
| <code>-Q</code> | Quoted output |

Search Files

| | |
|--|--|
| <code>grep <i>pattern files</i></code> | Search for <i>pattern</i> in <i>files</i> |
| <code>grep -i</code> | Case insensitive search |
| <code>grep -r</code> | Recursive search |
| <code>grep -v</code> | Inverted search |
| <code>grep -o</code> | Show matched part of file only |
| <code>find /<i>dir</i>/-name <i>name</i>*</code> | Find files starting with <i>name</i> in <i>dir</i> |



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Search Files (cont)

`find /dir/-user name` Find files owned by *name* in *dir*

`find /dir/-mmin num` Find files modified less than *num* minutes ago in *dir*

`whereis command` Find binary / source / manual for *command*

`locate file` Find *file* (quick search of system index)

File Operations

`touch file1`
Create *file1*

`cat file1 file2`
Concatenate files and output

`less file1`
View and paginate *file1*

`file file1`
Get type of *file1*

`cp file1 file2`
Copy *file1* to *file2*

`mv file1 file2`
Move *file1* to *file2*

`rm file1`
Delete *file1*

`head file1`
Show first 10 lines of *file1*

`tail file1`
Show last 10 lines of *file1*

`tail -F file1`
Output last lines of *file1* as it changes

Watch a Command

`watch -n 5 'ntpq -p'`
Issue the 'ntpq -p' command every 5 seconds and display output

Process Management

`ps` Show snapshot of processes

`top` Show real time processes

`kill pid` Kill process with id *pid*

`pkill name` Kill process with name *name*

`killall name` Kill all processes with names beginning *name*

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

More nano info at:
<http://www.nano-editor.org/docs.php>

Screen Shortcuts

`screen`
Start a screen session.

`screen -r`
Resume a screen session.

Screen Shortcuts (cont)

`screen -list`
Show your current screen sessions.

CTRL-A
Activate commands for screen.

CTRL-A c
Create a new instance of terminal.

CTRL-A n
Go to the next instance of terminal.

CTRL-A p
Go to the previous instance of terminal.

CTRL-A "
Show current instances of terminals.

CTRL-A A
Rename the current instance.

More screen info at:
<http://www.gnu.org/software/screen/>

File Permissions

`chmod 775 file`
Change mode of *file* to 775

`chmod -R 600 folder`
Recursively chmod *folder* to 600

`chown user.group file`
Change *file* owner to *user* and group to *group*

File Permission Numbers

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)



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