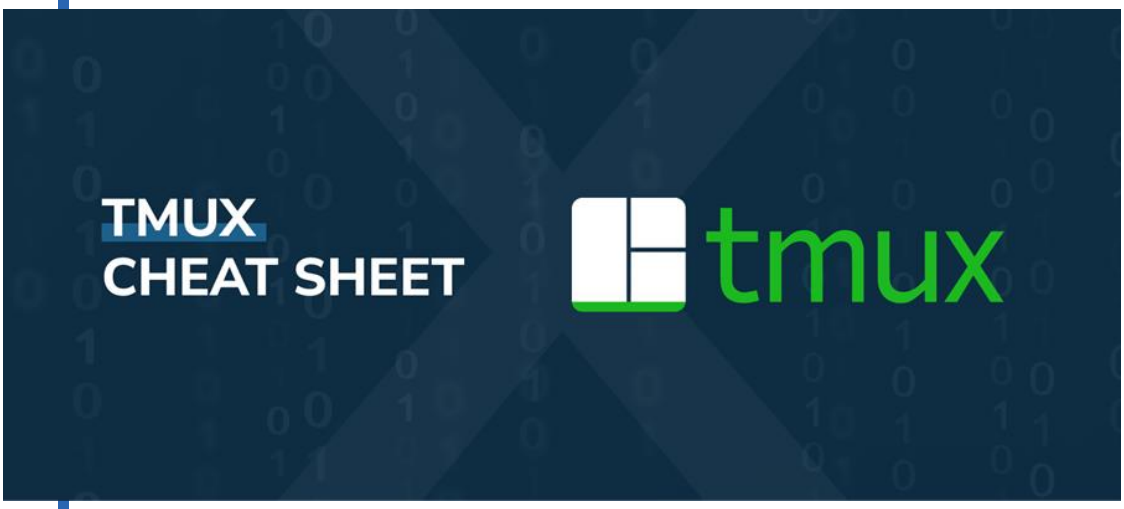
Tmux Cheat Sheet



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Install Tmux

Tmux is available for Linux and macOS. As for Windows, you can run Tmux via the Linux Subsystem feature by following the procedures here if you're using Windows 10 build 14361 or above. This article assumes you are using either Linux or macOS.

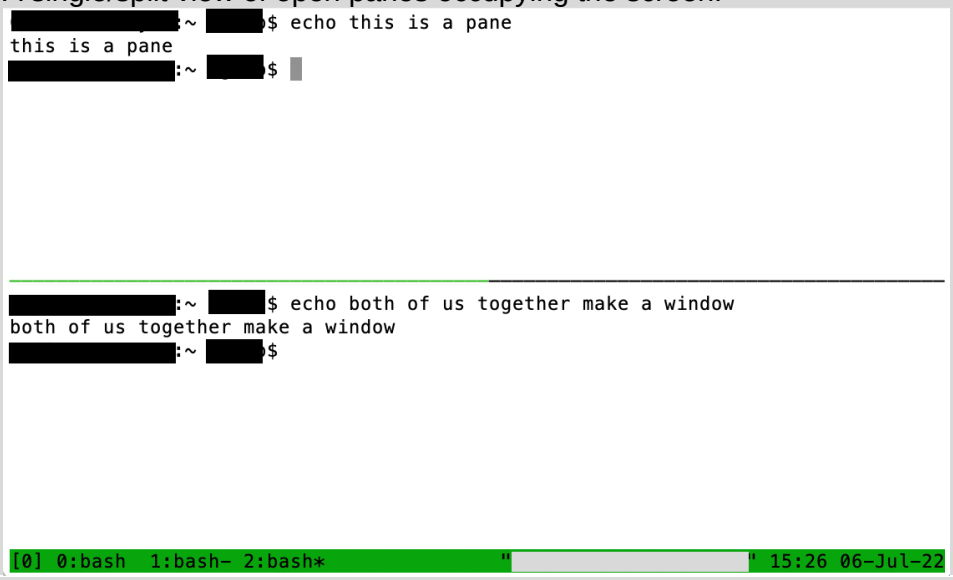
Command	Description
`# Homebrew` `brew install tmux`	Install on macOS

`# Ubuntu / Debian *`
`sudo apt-get update`
`sudo apt-get install tmux`
 	
`# Fedora`
`sudo dnf -y install tmux`
 	
`# CentOS`
`sudo yum -y install tmux`
	Install on Linux
	
	(*Depending on Linux distribution, you may need to replace `apt-get` with `apt`.)

Tmux Terms

Familiarize yourself with them as they often appear in Tmux-related discussions.

Term	Description
Pane	An open command prompt (known as "pseudo-terminal"), which may occupy the entire screen or appear horizontally/vertically stacked

Window	A single/split view of open panes occupying the screen: 
Session	A single collection of pseudo-terminals under the management of Tmux. Once you kill the last session, Tmux exits. Each session is persistent and will survive accidental disconnection (such as SSH connection timeout) or intentional detaching by the user. In the example above, the session comprises panes `0:bash`, `1:bash`, and `2:bash`. The current pane is `2:bash`, marked by an asterisk `*`. Here, the cursor is active, and you can type into the pane. The other pane in the same window is `1:bash`, marked by a hyphen `-`.
Client	The background process displaying your session
Server	A single server manages all open sessions. Servers and clients are separate processes that communicate through a socket in `/tmp`.

Tmux Commands

You may run Tmux commands by name from the CLI, such as `tmux` starts a new session. When you start Tmux, it creates a new single-window session and displays it on the screen.

A status line at the bottom shows current session information and is used to enter interactive commands prefixed by the trigger key combination **Ctrl+b** (Linux) or **control+b** (macOS). This trigger tells Tmux to watch out for keystrokes of interest.

Ctrl+b alone applies to short commands of one or two keys. **Ctrl+b** followed by the colon character **(:)** brings up a prompt for you to issue specific commands, after which you press **Enter** for execution.

A PDF download of this cheat sheet is available here.

Tmux Shortcuts

Run the following from the CLI:

Command	Description
`tmux`	Launch Tmux
`tmux -V`	Check Tmux version
`tmux list-keys | less`	List all commands
`tmux ls`	Show all sessions
`tmux info`	Show every session, window, and pane
`tmux a`	(Re)attach to the most recently created session
`man tmux`	Display full manual of Tmux

Run these commands inside a Tmux session:

Command	Description
`q`	After execution of a command yields a display, close the display. For example, `Ctrl+b+?` brings up a list, and a single `q` keypress closes the list.
Ctrl+b `<command>`	Send `<command>` to Tmux instead of shell CLI. For each of the following items, replace `<command>` with the given key.
Ctrl+l	Clear console contents (the "l" is "L" in small caps)
General `<command>`	
`?` `:list-keys`	List all commands
`:`	Enter command mode (display prompt for detailed Tmux commands)
`t`	Show computer time
Windows `<command>`	
`c`	Create new window
`,`	Rename current window
`p`	Navigate to previous window
`n`	Navigate to next window
`w`	List windows (which you may select and expand / collapse with arrow keys)
Panes `<command>`	
`%`	Split vertically
`"`	Split horizontally
→ (right arrow key)	Switch to right pane
← (left arrow key)	Switch to left pane
↑ (up arrow key)	Switch to upper pane
↓ (down arrow key)	Switch to lower pane

Sessions <command>	
d	Detach from session

Scroll down for specific commands in detail.

Tmux Sessions

Create new session

Command	Description
tmux tmux new tmux new-session	Create new session from CLI
Ctrl+b :new	Create new session from inside Tmux
tmux new -s sess0	Create new session named sess0
Ctrl+b :new sess0	Create new session sess0 from inside Tmux

List all sessions

Command	Description
tmux ls tmux list-sessions	Show all sessions
Ctrl+b s	Show all sessions from inside Tmux

Operations on sessions

Command	Description
tmux a tmux at tmux attach tmux attach-session	Attach to the most recently created session
tmux a -t s0	Attach to session s0
Ctrl+b <command>	
$	Rename session
d	Detach from session
w	Session and window preview
(	Move to previous session
)	Move to next session

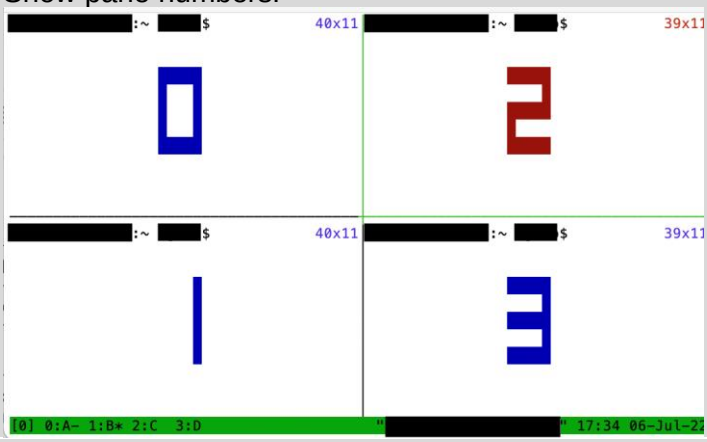
Terminate (kill) sessions

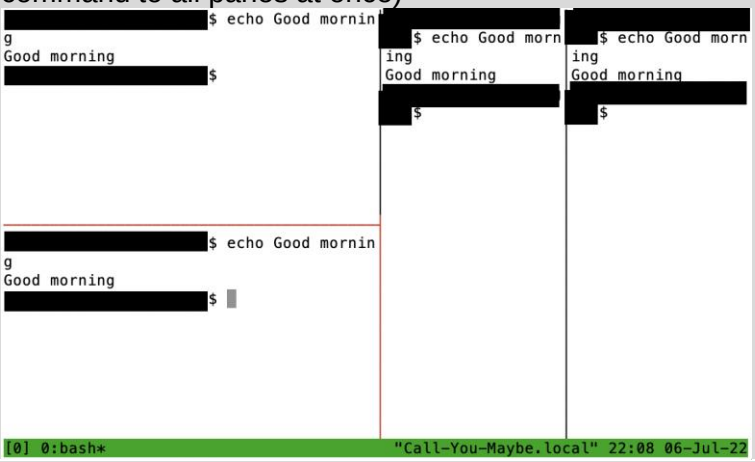
Command	Description
tmux kill-ses tmux kill-session	Kill last active session
tmux kill-ses -t s0	Kill session named s0
tmux kill-ses -a	Kill all sessions except the current one
tmux kill-ses -a -t s0	Kill all sessions except s0

Tmux Windows

Command	Description
`tmux new -s s1 -n w2`	Create new session `s1` and window `w2`
Ctrl+b `<command>`	
`c`	Create new window
`,`	Rename active window
`&`	Close active window (Tmux may prompt you to confirm your action with `y/n`)
`p`	Navigate to previous window
`n`	Navigate to next window
`w`	List windows (which you may select and expand / collapse with arrow keys)
`:swapw -s 0 -t 2`	Swap windows 0 and 2 (`swapw` is short for `swap-window`)
`:swapw -t -1`	Move active window to the left by one position

Tmux Panes

Command	Description
Ctrl+b `<command>`	
`q`	Show pane numbers: 
`q 0 … 9`	Switch to pane by number
`o`	Go to next pane
`z`	Zoom in/out of pane
`!`	Convert pane into new window
`%`	Split vertically
`"`	Split horizontally
→	Switch to right pane
←	Switch to left pane
↑	Switch to upper pane
↓	Switch to lower pane
`;`	Toggle last active pane
`[spacebar]`	Toggle between pane layouts
`{`	Move current pane leftward
`}`	Move current pane rightward

`x`	Close current pane
`:setw synchronize-panes`	Toggle `synchronize-panes` (the ability to send the same command to all panes at once) 
`:resize-pane -L 5`	Move the boundary of the pane leftwards by 5 lines. Direction flags: `-U` upwards `-D` downwards `-L` leftwards `-R` rightwards
M # **M:** meta key; ALT for Linux, ESC for macOS **#: 1, 2, 3, 4, 5**	Splitting panes in a designated form: #=1: uniform vertical split #=2: uniform horizontal split #=3: horizontal split, main pane on top, others on bottom, vertically split, all same width #=4: vertical split, main pane left, others right, horizontally split, all same height #=5: tile, new panes on bottom, same height before same width

Tmux Copy Mode

You can copy and paste text content in Tmux under Copy Mode. The **buffer** in Tmux is its clipboard and `buffer_0`, `buffer_1`, etc. correspond to clipboard items copied from a Tmux session.

Command	Description
Ctrl+b `:setw -g mode-keys vi`	Use vi keys in the buffer (vi: vim editor)
Ctrl+b `[`	Enter copy mode
↑	Scroll up
↓	Scroll down
q	Quit copy mode
0	Go to beginning of line
$	Go to end of line
g	Go to first line
G	Go to last line
h	Move cursor left

j	Move cursor down
k	Move cursor up
l	Move cursor right
b	Traverse text content backward, cursor on first character of each word
e	Traverse text content forward, cursor on last character of each word
w	Traverse text content one word at a time
/	Search forward
?	Search backward
n	Next keyword occurrence
N	Previous keyword occurrence
[Spacebar]	Begin selection
[Enter]	Copy selection
ESC	Clear selection
Ctrl+b `]`	Paste selection
Ctrl+b `:show-buffer`	Display `buffer_0` contents
Ctrl+b `:capture-pane`	Copy whole visible contents of the pane to a buffer
Ctrl+b `:list-buffers`	Show all buffers
Ctrl+b `:choose-buffer`	Show all buffers and paste selected
Ctrl+b `:save-buffer clipboard.txt`	Save buffer contents to buf.txt
Ctrl+b `:delete-buffer -b 1`	Delete `buffer_1`

Tmux Configuration

You can configure Tmux via the `~/.tmux.conf` file. If it doesn't exist, create it:

```
$ touch ~/.tmux.conf
```

To reload Tmux with the new settings:

```
$ tmux source-file ~/.tmux.conf
```

Custom Keystrokes

Add these commands to `~/.tmux.conf` to modify Tmux function keys. Each command spans two lines. The `unbind` command deactivates the default key combination.

Command	Description
`unbind '"'` `bind - split-window -v`	Change key combination to split window into two horizontal panes: Replace default **Ctrl+b** `"` with **Ctrl+b** – (hyphen)
`unbind %` `bind | split-window -h`	Change key combination to split window into two vertical panes: Replace default **Ctrl+b** `%` with **Ctrl+b** `|` (pipe)
`unbind C-b` `set -g prefix C-a`	Replace trigger key combination **Ctrl+b** with **Ctrl+a**

Making Tmux Copy Mode to default to vi keys

Command	Description
`setw -g mode-keys vi`	Use vi keys in the buffer

Customization

The following commands are for customizing the status bar at the bottom of a Tmux window:

Command	Description
`set -g status-justify [left|centre|right]`	Aligns the names of Tmux windows left/center/right
`set -g status-left '...'`	Replaces name of current session with '...' in status bar

`setw -g window-status-format` `` `#[fg=white,bg=black]#I` ``	Formats the window names as follows:
	`[0] 0 1 2:tmux*`
	Default window formatting:
	`[0] 0:bash 1:bash- 2:bash*`
	Variables:
	`#I`: window index
	`#S`: session name
	`#W`: window name

For detailed formatting instructions: `man tmux` > `/STYLES` > keep pressing "n" key until you reach the section titled "STYLES".

STYLES

tmux offers various options to specify the colour and attributes of aspects of the interface, for example **status-style** for the status line. In addition, embedded styles may be specified in format options, such as **status-left**, by enclosing them in `#[' and `]'.

A style may be the single term `default' to specify the default style (which may come from an option, for example **status-style** in the status line) or a space or comma separated list of the following:

fg=colour
Set the foreground colour. The colour is one of: **black**, **red**, **green**, **yellow**, **blue**, **magenta**, **cyan**, **white**; if supported the bright variants **brightred**, **brightgreen**, **brightyellow**; **colour0** to **colour255** from the 256-colour set; **default** for the default colour; **terminal** for the terminal default colour; or a hexadecimal RGB string such as `#ffffff'.

bg=colour
Set the background colour.

none Set no attributes (turn off any active attributes).

:

To reset Tmux to default settings, delete all lines in `~/.tmux.conf` and run `tmux kill-server`. Close any running CLI terminals, reopen the terminal and start Tmux again.