

AI/Virtual Machine Resources

The Essential Tmux Commands Cheat Sheet

| Shortcut | Action |
|---|--|
| General | |
| ¹ To activate a shortcut, you must first press and release the prefix key, then press the shortcut key | |
| ¹ Ctrl + b | Default prefix key |
| t | Show time (ESC returns to the terminal) |
| : | Enter a command (Example: ":new-session") |
| list-commands | List all commands that tmux supports |
| Tmux Terms | |
| Pane | An open command prompt (or pseudo-terminal). Panes may appear side by side or vertically stacked inside a window. |
| Window | Your view of open panes |
| Session | A set of open windows |
| Client | The background process that displays your session |
| Server | A single server manages all open sessions (Servers and clients are separate processes that each communicate through a socket in /tmp.) |
| Creating and Managing Panes | |
| % | Split screen or pane in half vertically, creating a new pane on the right |
| " | Split screen or pane in half horizontally, creating a new pane at the bottom |
| Arrow key | Switch to the adjacent pane |
| o | Switch to the next pane |
| q | Show pane numbers (when numbers appear, press number to switch to that pane) |
| { | Move current pane to the left |
| } | Move current pane to the right |
| x | Close the current pane |
| Ctrl + Arrow key | Resize pane in steps of one cell |
| Alt + Arrow key | Resize pane in steps of five cells |

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| Alt + 1 | Arrange panes in the even-horizontal preset layout |
| Alt + 2 | Arrange panes in the even-vertical preset layout |
| Alt + 3 | Arrange panes in the main-horizontal preset layout |
| Alt + 4 | Arrange panes in the main-vertical preset layout |
| Alt + 5 | Arrange panes in the tiled preset layout |
| Creating and Managing Windows | |
| c | Create a new window |
| ! | Detach pane into a new window |
| n | Switch to the previous window (in order of creation) |
| p | Switch to the next window (in order of creation) |
| l | Switch to the window used most recently |
| w | List all windows and their corresponding numbers |
| Window number | Switch to the corresponding window |
| , | Rename current window |
| i | Display info about the current window |
| f | Search for text in open windows (ESC exits the search) |
| Creating and Managing Sessions | |
| new-session | Create a new session |
| \$ | Rename current session |
| list-sessions | List open sessions |
| attach-session | Create a new client and attach it to the specified session (-t target-session) |
| detach-client -s target-session | Detach clients attached to the current session |
| kill-session | Destroy the current or specified session |
| *To activate a shortcut, you must first press and release the prefix key, then press the shortcut key. | |

The Essential Nano Commands Cheat Sheet

| Shortcut | Action |
|----------------------|---------------------------------|
| File Handling | |
| Ctrl+S | Save current file |
| Ctrl+O | Offer to write file ("Save as") |
| Ctrl+R | Insert a file into current one |
| Ctrl+X | Close buffer, exit from nano |

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| Editing | |
| Ctrl+K | Cut current line into cutbuffer |
| Alt+6 | Copy current line into cutbuffer |
| Ctrl+U | Paste contents of cutbuffer |
| Alt+T | Cut until end of buffer |
| Ctrl+] | Complete current word |
| Alt+3 | Comment/uncomment line/region |
| Alt+U | Undo last action |
| Alt+E | Redo last undone action |
| Search and replace | |
| Ctrl+Q | Start backward search |
| Ctrl+W | Start forward search |
| Alt+Q | Find next occurrence backward |
| Alt+W | Find next occurrence forward |
| Alt+R | Start a replacing session |
| Deletion | |
| Ctrl+H | Delete character before cursor |
| Ctrl+D | Delete character under cursor |
| Alt+Bsp | Delete word to the left |
| Ctrl+Del | Delete word to the right |
| Alt+Del | Delete current line |
| Operations | |
| Ctrl+T | Execute some command |
| Ctrl+J | Justify paragraph or region |
| Alt+J | Justify entire buffer |
| Alt+B | Run a syntax check |
| Alt+F | Run a formatter/fixer/arranger |
| Alt+: | Start/stop recording of macro |
| Alt+; | Replay macro |
| Moving around | |
| Ctrl+B | One character backward |
| Ctrl+F | One character forward |

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|-------------------------|--------------------------------|
| Ctrl+ | One word backward |
| Ctrl+ | One word forward |
| Ctrl+A | To start of line |
| Ctrl+E | To end of line |
| Ctrl+P | One line up |
| Ctrl+N | One line down |
| Ctrl+ | To previous block |
| Ctrl+ | To next block |
| Ctrl+Y | One page up |
| Ctrl+V | One page down |
| Alt+\ | To top of buffer |
| Alt+/ | To end of buffer |
| Special movement | |
| Alt+G | Go to specified line |
| Alt+] | Go to complementary bracket |
| Alt+ | Scroll viewport up |
| Alt+ | Scroll viewport down |
| Alt+< | Switch to preceding buffer |
| Alt+> | Switch to succeeding buffer |
| Information | |
| Ctrl+C | Report cursor position |
| Alt+D | Report word/line/char count |
| Ctrl+G | Display help text |
| Various | |
| Alt+A | Turn the mark on/off |
| Tab | Indent marked region |
| Shift+Tab | Unindent marked region |
| Alt+N | Turn line numbers on/off |
| Alt+P | Turn visible whitespace on/off |
| Alt+V | Enter next keystroke verbatim |
| Ctrl+L | Refresh the screen |
| Ctrl+Z | Suspend nano |

The Essential Nvidia-SMI Commands Cheat Sheet

| Shortcut | Action |
|---------------|--|
| nvidia-smi | Outputs a summary table: <ul style="list-style-type: none">• Version of driver.• Names of the GPUs.• Index of the GPUs, based on PCI Bus Order. This is different from the CUDA order.• Amount of memory each of the GPUs has.• Whether persistence mode is enabled on each of the GPUs• Utilization of each of the GPUs (if I'm running something on them).• List of processes executing on the GPUs. |
| nvidia-smi -q | Query Parameters of GPUs <ul style="list-style-type: none">• Default clocks (listed under Default Application Clocks).<ul style="list-style-type: none">• These are a stable pair of graphics (or SM) and memory clock values I can lock this GPU to.• Current clocks (listed under Application Clocks).<ul style="list-style-type: none">• These values might vary when you are running a workload on the GPU. |
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The Essential htop Commands Cheat Sheet

| Label | Meaning |
|---|--|
| Enter 'htop' to open the interace to track CPU usage. | |
| PID | The Process ID |
| USER | Username of Process owner |
| PRI | Internal priority for the process |
| NI | The allowance of this process to allow priority of other processes, from 19 (low priority) to -20 (high priority). |
| VIRT | Size of memory of the total program size |
| RES | Size of set, size of text, data sections, and stack usage |
| SHR | Size of processe's shared pages. |

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| S | <p>State of the Process</p> <ul style="list-style-type: none"> • S: Sleeping (idle) • R: Running • D: Disk Sleep (uninterruptible) • Z: Zombie (waiting for parent to read its exist status) • T: Traced or suspended • W Paging |
| CPU% | Percentage of the CPU time that the process is currently using |
| MEM% | Percentage of memory the process is currently using. |
| TIME+ | Time, measured in clock ticks, that the process has spent in user and system time. |
| Command | Full path of the command |