tmuxp Documentation

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Contents

CHAPTER 1

tmux session manager

We need help! tmuxp is a trusted session manager for tmux. If you could lend your time to helping answer issues and QA pull requests, please do! See issue #290!

New to tmux? The Tao of tmux is available on Leanpub and Amazon Kindle. Read and browse the book for free on the web.

1.1 Installation

```
$ pip install --user tmuxp
```

1.2 Load a tmux session

Load tmux sessions via json and YAML, tmuxinator and teamocil style.

```
session_name: 4-pane-split
windows:
- window_name: dev window
  layout: tiled
  shell_command_before:
    - cd ~/                    # run as a first command in all panes
  panes:
    - shell_command:           # pane no. 1
        - cd /var/log          # run multiple commands in this pane
        - ls -al | grep \.log
    - echo second pane         # pane no. 2
    - echo third pane          # pane no. 3
    - echo forth pane          # pane no. 4
```

Save as *mysession.yaml*, and load:

```
$ tmuxp load ./mysession.yaml
```

Sessions in *~/.tmuxp/* can use names:

```
$ tmuxp load mysession
```

Projects with *.tmuxp.yaml* or *.tmuxp.json* load via directory:

```
$ tmuxp load path/to/my/project/
```

Load multiple at once (in bg, offer to attach last):

```
$ tmuxp load mysession ./another/project/
```

simple and very elaborate config examples

Store configs in (*~/.tmuxp*) or include in your project as *~/.tmuxp.{yaml,json}*. See author's tmuxp configs and the the projects' tmuxp.yaml.

Run custom startup scripts (such as installing project dependencies before loading tmux. See the bootstrap_env.py and before_script example

You can also load sessions in the background by passing `-d` flag

1.3 Freeze a tmux session

Snapshot your tmux layout, pane paths, and window/session names.

```
$ tmuxp freeze session-name
```

See more about freezing tmux sessions.

1.4 Docs / Reading material

See the Quickstart.

Documentation homepage (also in)

Want to learn more about tmux itself? Read The Tao of Tmux online.

1.5 Donations

Your donations fund development of new features, testing and support. Your money will go directly to maintenance and development of the project. If you are an individual, feel free to give whatever feels right for the value you get out of the project.

See donation options at https://git-pull.com/support.html.

1.6 Project details

tmux support	1.8, 1.9a, 2.0, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6
python support	2.7, >= 3.3, pypy, pypy3
config support	yaml, json, python dict
Source	https://github.com/tmux-python/tmuxp
Docs	http://tmuxp.git-pull.com
API	http://tmuxp.git-pull.com/en/latest/api.html
Changelog	http://tmuxp.git-pull.com/en/latest/history.html
Issues	https://github.com/tmux-python/tmuxp/issues
Travis	http://travis-ci.org/tmux-python/tmuxp
Test Coverage	https://codecov.io/gh/tmux-python/tmuxp
pypi	https://pypi.python.org/pypi/tmuxp
Open Hub	https://www.openhub.net/p/tmuxp
License	MIT.
git repo	`$ git clone https://github.com/tmux-python/tmuxp.git`
install stable	`$ pip install --user tmuxp`

install dev	`$ git clone https://github.com/tmux-python/tmuxp.git tmuxp`
	`$ cd ./tmuxp`
	`$ virtualenv .venv`
	`$ source .venv/bin/activate`
	`$ pip install -e .`
	See the developing and testing page in the docs for more.

tests	`$ make test`

Explore:

1.6.1 About

tmuxp helps you manage tmux workspaces.

Built on a object relational mapper for tmux. tmux users can reload common workspaces from YAML, JSON and `dict` configurations like tmuxinator and teamocil.

tmuxp is used by developers for tmux automation at great companies like Bugsnag, Pragmatic Coders and many others.

To jump right in, see *Quickstart* and *Example Configurations*.

Interested in some kung-fu or joining the effort? *API Reference* and *Developing and Testing*.

MIT-licensed. Code on github.

Differences from tmuxinator / teamocil

Note: If you use teamocil / tmuxinator and can clarify or add differences, please free to edit this page on github.

Similarities

Load sessions Loads tmux sessions from config

YAML Supports YAML format

Inlining / shorthand configuration All three support short-hand and simplified markup for panes that have one command.

Maturity and stability As of 2016, all three are considered stable, well tested and adopted.

Missing

Version support tmuxp only supports `tmux >= 1.8`. Teamocil and tmuxinator may have support for earlier versions.

Differences

Programming Language python. teamocil and tmuxinator uses ruby.

Workspace building process teamocil and tmuxinator process configs directly shell commands. tmuxp processes configuration via ORM layer.

Additional Features

CLI tmuxp's CLI can attach and kill sessions with tab-completion support. See *Command Line Interface*.

Import config import configs from Teamocil / Tmuxinator[1]. See *Import*.

Session freezing Supports session freezing into YAML and JSON format[1]. See *Freeze sessions*.

JSON config JSON config support. See *Example Configurations*.

ORM-based API via libtmux - Utilitizes tmux >= 1.8's unique ID's for panes, windows and sessions to create an object relational view of the tmux `Server`, its `Session`, `Window`, and `Pane`. See libtmux's internals.

Conversion `$ tmuxp convert <filename>` can convert files to and from JSON and YAML.

Minor tweaks

- Unit tests against live tmux version to test statefulness of tmux sessions, windows and panes. See *Travis CI*.
- Load + switch to new session from inside tmux.
- Resume session if config loaded.
- Pre-commands virtualenv / rvm / any other commands.

[1] While freezing and importing sessions is a great way to save time, tweaking will probably be required - There is no substitute to a config made with love.

- Load config from anywhere `$ tmuxp load /full/file/path.json`.
- Load config `.tmuxp.yaml` or `.tmuxp.json` from current working directory with `$ tmuxp load .`.
- `$ tmuxp -2`, `$ tmuxp -8` for forcing term colors a la *tmux(1)*.
- `$ tmuxp -L<socket-name>`, `$ tmuxp -S<socket-path>` for sockets and `$ tmuxp -f<config-file>` for config file.

1.6.2 Quickstart

Installation

Assure you have at least tmux **>= 1.8** and python **>= 2.6**.

```
$ pip install tmuxp
```

You can upgrade to the latest release with:

```
$ pip install tmuxp -U
```

Then install *Completion*.

CLI

See also:

Example Configurations, *Command Line Interface*, *Completion*.

tmuxp launches workspaces / sessions from JSON and YAML files.

Configuration files can be stored in `$HOME/.tmuxp` or in project directories as `.tmuxp.py`, `.tmuxp.json` or `.tmuxp.yaml`.

Every configuration is required to have:

1. `session_name`
2. list of `windows`
3. list of `panes` for every window in `windows`

Create a file, `~/.tmuxp/example.yaml`:

```
session_name: 2-pane-vertical
windows:
  - window_name: my test window
    panes:
      - echo hello
      - echo hello
```

```
$ tmuxp load example.yaml
```

This creates your tmuxp session.

Load multiple tmux sessions at once:

```
$ tmuxp load example.yaml anothersession.yaml
```

tmuxp will offer to `switch-client` for you if you're already in a session.

You can also have a custom tmuxp config directory by setting the `TMUX_CONFIGDIR` in your environment variables.

```
$ TMUXP_CONFIGDIR=$HOME/.tmuxpmoo tmuxp load cpython
```

Or in your `~/.bashrc` / `~/.zshrc` you can set:

```
export TMUXP_CONFIGDIR=$HOME/.yourconfigdir/tmuxp
```

You can also Import configs teamocil and tmuxinator.

Pythonics

See also:

libtmux python API documentation and *Developing and Testing*, About.

ORM - Object Relational Mapper

AL - Abstraction Layer

python abstraction layer

tmuxp python api	*tmux(1)* equivalent
`libtmux.Server.new_session()`	`$ tmux new-session`
`libtmux.Server.list_sessions()`	`$ tmux list-sessions`
`libtmux.Session.list_windows()`	`$ tmux list-windows`
`libtmux.Session.new_window()`	`$ tmux new-window`
`libtmux.Window.list_panes()`	`$ tmux list-panes`
`libtmux.Window.split_window()`	`$ tmux split-window`
`libtmux.Pane.send_keys()`	`$ tmux send-keys`

1.6.3 Example Configurations

Short hand / inline style

tmuxp has a short-hand syntax to for those who wish to keep their configs punctual.

short hand

```
+--------------------+
| 'did you know'     |
| 'you can inline'   |
+--------------------+
| 'single commands'  |
|                    |
+--------------------+
| 'for panes'        |
|                    |
+--------------------+
```

YAML

```
session_name: shorthands
windows:
  - window_name: long form
    panes:
    - shell_command:
      - echo 'did you know'
      - echo 'you can inline'
    - shell_command: echo 'single commands'
    - echo 'for panes'
```

JSON

```
{
  "windows": [
    {
      "panes": [
        {
          "shell_command": [
            "echo 'did you know'",
            "echo 'you can inline'"
          ]
        },
        {
          "shell_command": "echo 'single commands'"
        },
        "echo 'for panes'"
      ],
      "window_name": "long form"
    }
  ],
  "session_name": "shorthands"
}
```

Blank panes

No need to repeat `pwd` or a dummy command. A `null`, `'blank'`, `'pane'` are valid.

Note `''` counts as an empty carriage return.

YAML

```
session_name: Blank pane test
windows:
  # Emptiness will simply open a blank pane, if no shell_command_before.
  # All these are equivalent
  - window_name: Blank pane test
    panes:
    -
    - pane
    - blank
```

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```yaml
  - window_name: More blank panes
    panes:
    - null
    - shell_command:
    - shell_command:
      -
  # an empty string will be treated as a carriage return
  - window_name: Empty string (return)
    panes:
    - ''
    - shell_command: ''
    - shell_command:
      - ''
  # a pane can have other options but still be blank
  - window_name: Blank with options
    panes:
    - focus: true
    - start_directory: /tmp
```

JSON

```json
{
  "windows": [
    {
      "panes": [
        null,
        "pane",
        "blank"
      ],
      "window_name": "Blank pane test"
    },
    {
      "panes": [
        null,
        {
          "shell_command": null
        },
        {
          "shell_command": [
            null
          ]
        }
      ],
      "window_name": "More blank panes"
    },
    {
      "panes": [
        "",
        {
          "shell_command": ""
        },
        {
          "shell_command": [
            ""
```

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```
            ]
          }
        ],
        "window_name": "Empty string (return)"
      },
      {
        "panes": [
          {
            "focus": true
          },
          {
            "start_directory": "/tmp"
          }
        ],
        "window_name": "Blank with options"
      }
    ],
    "session_name": "Blank pane test"
}
```

2 panes

2 pane

```
+------------------+
| $ pwd            |
|                  |
|                  |
+------------------+
| $ pwd            |
|                  |
|                  |
+------------------+
```

YAML

```
session_name: 2-pane-vertical
windows:
  - window_name: my test window
    panes:
      - echo hello
      - echo hello
```

JSON

```
{
  "windows": [
    {
```

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```
      "panes": [
        "echo hello",
        "echo hello"
      ],
      "window_name": "my test window"
    }
  ],
  "session_name": "2-pane-vertical"
}
```

3 panes

3 panes

```
+------------------+
| $ pwd            |
|                  |
|                  |
+--------+---------+
| $ pwd  | $ pwd   |
|        |         |
|        |         |
+--------+---------+
```

YAML

```
session_name: 3-panes
windows:
- window_name: dev window
  layout: main-vertical
  shell_command_before:
    - cd ~/
  panes:
    - shell_command:
        - cd /var/log
        - ls -al | grep \.log
    - echo hello
    - echo hello
```

JSON

```
{
  "windows": [
    {
      "panes": [
        {
          "shell_command": [
            "cd /var/log",
```

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```
            "ls -al | grep \\.log"
          ]
        },
        "echo hello",
        "echo hello"
      ],
      "shell_command_before": [
        "cd ~/"
      ],
      "layout": "main-vertical",
      "window_name": "dev window"
    }
  ],
  "session_name": "3-panes"
}
```

4 panes

4 panes

```
+--------+--------+
| $ pwd  | $ pwd  |
|        |        |
|        |        |
+--------+--------+
| $ pwd  | $ pwd  |
|        |        |
|        |        |
+--------+--------+
```

YAML

```
session_name: 4-pane-split
windows:
- window_name: dev window
  layout: tiled
  shell_command_before:
    - cd ~/
  panes:
    - shell_command:
        - cd /var/log
        - ls -al | grep \.log
    - echo hello
    - echo hello
    - echo hello
```

JSON

```
{
  "windows": [
    {
      "panes": [
        {
          "shell_command": [
            "cd /var/log",
            "ls -al | grep \\.log"
          ]
        },
        "echo hello",
        "echo hello",
        "echo hello"
      ],
      "shell_command_before": [
        "cd ~/"
      ],
      "layout": "tiled",
      "window_name": "dev window"
    }
  ],
  "session_name": "4-pane-split"
}
```

Start Directory

Equivalent to `tmux new-window -c <start-directory>`.

YAML

```
session_name: start directory
start_directory: /var/
windows:
  - window_name: should be /var/
    panes:
      - shell_command:
        - echo "\033c
        - it trickles down from session-level"
      - echo hello
  - window_name: should be /var/log
    start_directory: log
    panes:
      - shell_command:
        - echo '\033c
        - window start_directory concatenates to session start_directory
        - if it is not absolute'
      - echo hello
  - window_name: should be ~
    start_directory: '~'
    panes:
    - shell_command:
      - 'echo \\033c ~ has precedence. note: remember to quote ~ in YAML'
```

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```
    - echo hello
  - window_name: should be /bin
    start_directory: /bin
    panes:
    - echo '\033c absolute paths also have precedence.'
    - echo hello
  - window_name: should be config's dir
    start_directory: ./
    panes:
      - shell_command:
        - echo '\033c
        - ./ is relative to config file location
        - ../ will be parent of config file
        - ./test will be \"test\" dir inside dir of config file'
      - shell_command:
        - echo '\033c
        - This way you can load up workspaces from projects and maintain
        - relative paths.'
```

JSON

```
{
  "windows": [
    {
      "panes": [
        {
          "shell_command": [
            "echo \"\\033c",
            "it trickles down from session-level\""
          ]
        },
        "echo hello"
      ],
      "window_name": "should be /var/"
    },
    {
      "panes": [
        {
          "shell_command": [
            "echo '\\033c",
            "window start_directory concatenates to session start_directory",
            "if it is not absolute'"
          ]
        },
        "echo hello"
      ],
      "start_directory": "log",
      "window_name": "should be /var/log"
    },
    {
      "panes": [
        {
          "shell_command": [
            "echo \\\\033c ~ has precedence. note: remember to quote ~ in YAML"
```

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```
            ]
          },
          "echo hello"
        ],
        "start_directory": "~",
        "window_name": "should be ~"
      },
      {
        "panes": [
          "echo '\\033c absolute paths also have precedence.'",
          "echo hello"
        ],
        "start_directory": "/bin",
        "window_name": "should be /bin"
      },
      {
        "panes": [
          {
            "shell_command": [
              "echo '\\033c",
              "./ is relative to config file location",
              "../ will be parent of config file",
              "./test will be \\\"test\\\" dir inside dir of config file'"
            ]
          },
          {
            "shell_command": [
              "echo '\\033c",
              "This way you can load up workspaces from projects and maintain",
              "relative paths.'"
            ]
          }
        ],
        "start_directory": "./",
        "window_name": "should be config's dir"
      }
    ],
    "session_name": "start directory",
    "start_directory": "/var/"
}
```

Environment variable replacing

tmuxp will replace environment variables wrapped in curly brackets for values of these settings:

- `start_directory`
- `before_script`
- `session_name`
- `window_name`
- `shell_command_before`
- `global_options`
- `options` in session scope and window scope

tmuxp replaces these variables before-hand with variables in the terminal `tmuxp` invokes in.

In this case of this example, assuming the username "user":

```
$ MY_ENV_VAR=foo tmuxp load examples/env-variables.yaml
```

and your session name will be `session - user (foo)`.

Shell variables in `shell_command` do not support this type of concatenation. `shell_command` and `shell_command_before` both support normal shell variables, since they are sent into panes automatically via `send-key` in `tmux(1)`. See `ls $PWD` in example.

If you have a special case and would like to see behavior changed, please make a ticket on the issue tracker.

YAML

```yaml
start_directory: "${PWD}/test"
shell_command_before: "echo ${PWD}"
before_script: "${MY_ENV_VAR}/test3.sh"
session_name: session - ${USER} (${MY_ENV_VAR})
windows:
- window_name: editor
  panes:
  - shell_command:
    - tail -F /var/log/syslog
  start_directory: /var/log
- window_name: logging for ${USER}
  options:
    automatic-rename: true
  panes:
  - shell_command:
    - htop
    - ls $PWD
```

JSON

```json
{
  "before_script": "${MY_ENV_VAR}/test3.sh",
  "windows": [
    {
      "panes": [
        {
          "shell_command": [
            "tail -F /var/log/syslog"
          ]
        }
      ],
      "start_directory": "/var/log",
      "window_name": "editor"
    },
    {
      "panes": [
        {
          "shell_command": [
            "htop",
```

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```
            "ls $PWD"
          ]
        }
      ],
      "window_name": "logging for ${USER}",
      "options": {
        "automatic-rename": true
      }
    }
  ],
  "shell_command_before": "echo ${PWD}",
  "start_directory": "${PWD}/test",
  "session_name": "session - ${USER} (${MY_ENV_VAR})"
}
```

Environment variables

tmuxp will set session environment variables.

YAML

```
session_name: Environment variables test
environment:
  EDITOR: /usr/bin/vim
  HOME: /tmp/hm
windows:
  # Emptiness will simply open a blank pane, if no shell_command_before.
  # All these are equivalent
  - window_name: Blank pane test
    panes:
    -
```

JSON

```
{
  "environment": {
    "EDITOR": "/usr/bin/vim",
    "HOME": "/tmp/hm",
  },
  "windows": [
    {
      "panes": [
        null,
      ],
      "window_name": "Blank pane test"
    },
  ],
  "session_name": "Environment variables test"
}
```

Focusing

tmuxp allows `focus: true` for assuring windows and panes are attached / selected upon loading.

YAML

```
session_name: focus
windows:
  - window_name: attached window
    focus: true
    panes:
    - shell_command:
      - echo hello
      - echo 'this pane should be selected on load'
      focus: true
    - shell_command:
      - cd /var/log
      - echo hello
  - window_name: second window
    shell_command_before: cd /var/log
    panes:
    - pane
    - shell_command:
      - echo 'this pane should be focused, when window switched to first time'
      focus: true
    - pane
```

JSON

```
{
  "windows": [
    {
      "panes": [
        {
          "shell_command": [
            "echo hello",
            "echo 'this pane should be selected on load'"
          ],
          "focus": true
        },
        {
          "shell_command": [
            "cd /var/log",
            "echo hello"
          ]
        }
      ],
      "window_name": "attached window on load",
      "focus": true
    },
    {
      "panes": [
        "pane",
        {
```

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```
          "shell_command": [
            "echo 'this pane should be focused, when window switched to first time'"
          ],
          "focus": true
        },
        "pane"
      ],
      "shell_command_before": "cd /var/www",
      "window_name": "second window"
    }
  ],
  "session_name": "focus window and pane when loading sessions"
}
```

Terminal History

tmuxp allows `suppress_history: false` to override the default command / suppression when building the workspace. This will add the `shell_command` to the bash history in the pane.

YAML

```
session_name: suppress
suppress_history: false
windows:
- window_name: appended
  focus: true
  suppress_history: false
  panes:
  - echo "window in the history!"

- window_name: suppressed
  suppress_history: true
  panes:
  - echo "window not in the history!"

- window_name: default
  panes:
  - echo "session in the history!"

- window_name: mixed
  suppress_history: false
  panes:
  - shell_command:
    - echo "command in the history!"
    suppress_history: false
  - shell_command:
    - echo "command not in the history!"
    suppress_history: true
  - shell_command:
    - echo "window in the history!"
```

JSON

```
{
  "windows": [
    {
      "panes": [
        "echo 'window in the history!'"
      ],
      "focus": true,
      "suppress_history": false,
      "window_name": "appended"
    },
    {
      "panes": [
        "echo 'window not in the history!'"
      ],
      "suppress_history": true,
      "window_name": "suppressed"
    },
    {
      "panes": [
        "echo 'session in the history!'"
      ],
      "window_name": "default"
    },
    {
      "panes": [
        {
          "shell_command": "echo 'command in the history!'",
          "suppress_history": false
        },
        {
          "shell_command": "echo 'command not in the history!'",
          "suppress_history": true
        },
        {
          "shell_command": "echo 'window not in the history!'"
        }
      ],
      "suppress_history": true,
      "window_name": "mixed"
    }
  ],
  "suppress_history": false,
  "session_name": "suppress"
}
```

Window Index

You can specify a window's index using the `window_index` property. Windows without `window_index` will use the lowest available window index.

YAML

```
session_name: Window index example
windows:
  - window_name: zero
    panes:
      - echo "this window's index will be zero"
  - window_name: five
    panes:
      - echo "this window's index will be five"
    window_index: 5
  - window_name: one
    panes:
      - echo "this window's index will be one"
```

JSON

```
{
  "windows": [
    {
      "panes": [
        "echo \"this window's index will be zero\""
      ],
      "window_name": "zero"
    },
    {
      "panes": [
        "echo \"this window's index will be five\""
      ],
      "window_index": 5,
      "window_name": "five"
    },
    {
      "panes": [
        "echo \"this window's index will be one\""
      ],
      "window_name": "one"
    }
  ],
  "session_name": "Window index example"
}
```

Set tmux options

Works with global (server-wide) options, session options and window options.

Including `automatic-rename`, `default-shell`, `default-command`, etc.

YAML

```
session_name: test window options
start_directory: '~'
```

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```yaml
global_options:
  default-shell: /bin/sh
  default-command: /bin/sh
options:
  main-pane-height: ${MAIN_PANE_HEIGHT}  # works with env variables
windows:
- layout: main-horizontal
  options:
    automatic-rename: on
  panes:
  - shell_command:
    - man echo
    start_directory: '~'
  - shell_command:
    - echo "hey"
  - shell_command:
    - echo "moo"
```

JSON

```json
{
  "windows": [
    {
      "panes": [
        {
          "shell_command": [
            "man echo"
          ],
          "start_directory": "~"
        },
        {
          "shell_command": [
            "echo \"hey\""
          ]
        },
        {
          "shell_command": [
            "echo \"moo\""
          ]
        }
      ],
      "layout": "main-horizontal",
      "options": {
        "automatic-rename": true
      }
    }
  ],
  "session_name": "test window options",
  "start_directory": "~",
  "global_options": {
    "default-shell": "/bin/sh",
    "default-command": "/bin/sh"
  },
  "options": {
```

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```
    "main-pane-height": "${MAIN_PANE_HEIGHT}"
  }
}
```

Set window options after pane creation

Apply window options after panes have been created. Useful for `synchronize-panes` option after executing individual commands in each pane during creation.

YAML

```
session_name: 2-pane-synchronized
windows:
  - window_name: Two synchronized panes
    panes:
    - ssh server1
    - ssh server2
    options_after:
      synchronize-panes: on
```

JSON

```
{
  "session_name": "2-pane-synchronized",
  "windows": [
    {
      "window_name": "Two synchronized panes",
      "panes": [
        "ssh server1",
        "ssh server2"
      ],
      "options_after": {
        "synchronize-panes": true
      }
    }
  ]
}
```

Main pane height

YAML

```
session_name: main-pane-height
start_directory: '~'
windows:
- layout: main-horizontal
  options:
    main-pane-height: 30
```

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```
  panes:
  - shell_command:
    - top
    start_directory: '~'
  - shell_command:
    - echo "hey"
  - shell_command:
    - echo "moo"
  window_name: my window name
```

JSON

```
{
  "windows": [
    {
      "panes": [
        {
          "shell_command": [
            "top"
          ],
          "start_directory": "~"
        },
        {
          "shell_command": [
            "echo \"hey\""
          ]
        },
        {
          "shell_command": [
            "echo \"moo\""
          ]
        }
      ],
      "layout": "main-horizontal",
      "options": {
        "main-pane-height": 30
      },
      "window_name": "editor"
    }
  ],
  "session_name": "main pane height",
  "start_directory": "~"
}
```

Super-advanced dev environment

See also:

tmuxp developer config in the *Developing and Testing* section.

YAML

```yaml
session_name: tmuxp
start_directory: ./ # load session relative to config location (project root).
before_script: pipenv install --dev --skip-lock
shell_command_before:
  - '[ -d `pipenv --venv` ] && source `pipenv --venv`/bin/activate && reset'
windows:
- window_name: tmuxp
  focus: True
  layout: main-horizontal
  options:
    main-pane-height: 35
  panes:
  - focus: true
  - pane
  - make watch_test
- window_name: docs
  layout: main-horizontal
  options:
    main-pane-height: 35
  start_directory: doc/
  panes:
  - focus: true
  - pane
  - make serve
  - make watch
```

JSON

```json
{
  "before_script": "pipenv install --dev --skip-lock",
  "windows": [
    {
      "panes": [
        {
          "focus": true
        },
        "pane",
        "make watch_test"
      ],
      "layout": "main-horizontal",
      "options": {
        "main-pane-height": 35
      },
      "focus": true,
      "window_name": "tmuxp"
    },
    {
      "panes": [
        {
          "focus": true
        },
        "pane",
        "make serve",
```

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```
        "make watch"
      ],
      "start_directory": "doc/",
      "layout": "main-horizontal",
      "window_name": "docs",
      "options": {
        "main-pane-height": 35
      }
    }
  ],
  "session_name": "tmuxp",
  "start_directory": "./",
  "shell_command_before": [
    "[ -d `pipenv --venv` ] && source `pipenv --venv`/bin/activate && reset"
  ]
}
```

Bootstrap project before launch

You can use `before_script` to run a script before the tmux session starts building. This can be used to start a script to create a virtualenv or download a virtualenv/rbenv/package.json's dependency files before tmuxp even begins building the session.

It works by using the Exit Status code returned by a script. Your script can be any type, including bash, python, ruby, etc.

A successful script will exit with a status of `0`.

Important: the script file must be chmod executable `+x` or `755`.

Run a python script (and check for it's return code), the script is *relative to the ''.tmuxp.yaml''s root* (Windows and panes omitted in this example):

```
session_name: my session
before_script: ./bootstrap.py
# ... the rest of your config
```

```
{
    "session_name": "my session",
    "before_script": "./bootstrap.py"
}
```

Run a shell script + check for return code on an absolute path. (Windows and panes omitted in this example)

```
session_name: another example
before_script: /absolute/path/this.sh # abs path to shell script
# ... the rest of your config
```

```
{
    "session_name": "my session",
    "before_script": "/absolute/path/this.sh"
}
```

Per-project tmux config

You can load your software project in tmux by placing a `.tmuxp.yaml` or `.tmuxp.json` in the project's config and loading it.

tmuxp supports loading configs via absolute filename with `tmuxp load` and via `$ tmuxp load .` if config is in directory.

```
$ tmuxp load ~/workspaces/myproject.yaml
```

See examples of `tmuxp` in the wild. Have a project config to show off? Edit this page.

- https://github.com/tony/dockerfiles/blob/master/.tmuxp.yaml
- https://github.com/tony/vcspull/blob/master/.tmuxp.yaml
- https://github.com/tony/sphinxcontrib-github/blob/master/.tmuxp.yaml

You can use `start_directory: ./` to make the directories relative to the config file / project root.

Bonus: pipenv auto-bootstrapping

New in version 1.3.4: `before_script` CWD's into the root (session)-level `start_directory`.

If you use pipenv, you can use a script like this to ensure your packages are installed:

```
# assuming your .tmuxp.yaml is in your project root directory
session_name: my pipenv project
start_directory: ./
before_script: pipenv install --dev --skip-lock # ensure dev deps install
windows:
- window_name: django project
  focus: true
  panes:
  - blank
  - pipenv run ./manage.py runserver
```

You can also source yourself into the virtual environment using `shell_command_before`:

```
# assuming your .tmuxp.yaml is in your project root directory
session_name: my pipenv project
start_directory: ./
before_script: pipenv install --dev --skip-lock # ensure dev deps install
shell_command_before:
- '[ -d `pipenv --venv` ] && source `pipenv --venv`/bin/activate && reset'
windows:
- window_name: django project
  focus: true
  panes:
  - blank
  - ./manage.py runserver
```

Kung fu

Note: tmuxp sessions can be scripted in python. The first way is to use the ORM in the *API Reference*. The second is to pass a `dict` into *`WorkspaceBuilder`* with a correct schema. See: *`tmuxp.config.validate_schema()`*.

Add yours? Submit a pull request to the github site!

1.6.4 Command Line Interface

Completion

In zsh (`~/.zshrc`) or bash (`~/.bashrc`):

```
eval "$(_TMUXP_COMPLETE=source tmuxp)"
```

Freeze sessions

```
tmuxp freeze <session_name>
```

You can save the state of your tmux session by freezing it.

Tmuxp will offer to save your session state to `.json` or `.yaml`.

Load session

You can load your tmuxp file and attach the vim session via a few shorthands:

1. The directory with a `.tmuxp.{yaml,yml,json}` file in it
2. The name of the project file in your *$HOME/.tmuxp* folder
3. The direct path of the tmuxp file you want to load

```
# path to folder with .tmuxp.{yaml,yml,json}
tmuxp load .
tmuxp load ../
tmuxp load path/to/folder/
tmuxp load /path/to/folder/

# name of the config, assume $HOME/.tmuxp/myconfig.yaml
tmuxp load myconfig

# direct path to json/yaml file
tmuxp load ./myfile.yaml
tmuxp load /abs/path/to/myfile.yaml
tmuxp load ~/myfile.yaml
```

Absolute and relative directory paths are supported.

```
$ tmuxp load <filename>
```

Files named `.tmuxp.yaml` or `.tmuxp.json` in the current working directory may be loaded with:

```
$ tmuxp load .
```

Multiple sessions can be loaded at once. The first ones will be created without being attached. The last one will be attached if there is no `-d` flag on the command line.

```
$ tmuxp load <filename1> <filename2> ...
```

Import

From teamocil

```
tmuxp import teamocil /path/to/file.{json,yaml}
```

From tmuxinator

```
tmuxp import tmuxinator /path/to/file.{json,yaml}
```

Convert between YAML and JSON

```
tmuxp convert /path/to/file.{json,yaml}
```

tmuxp automatically will prompt to convert `.yaml` to `.json` and `.json` to `.yaml`.

1.6.5 Developing and Testing

Our tests are inside `tests/`. Tests are implemented using pytest.

`make test` will create a tmux server on a separate `socket_name` using `$ tmux -L test_case`.

Install the latest code from git

Using pip

To begin developing, check out the code from github:

```
$ git clone git@github.com:tmux-python/tmuxp.git
$ cd tmuxp
```

Now create a virtualenv, if you don't know how to, you can create a virtualenv with:

```
$ virtualenv .venv
```

Then activate it to your current tty / terminal session with:

```
$ source .venv/bin/activate
```

Good! Now let's run this:

```
$ pip install -e .
```

This has `pip`, a python package manager install the python package in the current directory. `-e` means `--editable`, which means you can adjust the code and the installed software will reflect the changes.

```
$ tmuxp
```

Using pipenv

To begin developing, check out the code from github:

```
$ git clone git@github.com:tmux-python/tmuxp.git
$ cd tmuxp
```

You can create a virtualenv, and install all of the locked packages as listed in Pipfile.lock:

```
$ pipenv install --ignore-pipfile --dev
```

If you prefer to install updated packages based on Pipfile only, not being bound by Pipfile.lock:

```
$ pipenv install --skip-lock --dev
```

If you ever need to update packages during your development session, the following command can be used to update all packages as per Pipfile settings or individual package (second command):

```
$ pipenv update --dev
$ pipenv update requests
```

Then activate it to your current tty / terminal session with:

```
$ pipenv shell
```

That is it! You are now ready to code!

Test Runner

As you seen above, the `tmuxp` command will now be available to you, since you are in the virtual environment, your *PATH* environment was updated to include a special version of `python` inside your `.venv` folder with its own packages.

```
$ make test
```

You probably didn't see anything but tests scroll by.

If you found a problem or are trying to write a test, you can file an issue on github.

Test runner options

Test only a file:

```
$ py.test tests/test_config.py
```

will test the `tests/test_config.py` tests.

```
$ py.test tests/test_config.py::test_export_json
```

tests `test_export_json` inside of `tests/test_config.py`.

Multiple can be separated by spaces:

```
$ py.test tests/test_{window,pane}.py tests/test_config.py::test_export_json
```

Visual testing

You can watch tmux testsuite build sessions visually by keeping a client open in a separate terminal.

Create two terminals:

- Terminal 1: `$ tmux -L test_case`
- Terminal 2: `$ cd` into the tmuxp project and into the `virtualenv` if you are using one, see details on installing the dev version of tmuxp above. Then:

  ```
  $ py.test tests/test_workspacebuilder.py
  ```

Terminal 1 should have flickered and built the session before your eyes. tmuxp hides this building from normal users.

Run tests on save

You can re-run tests automatically on file edit.

Note: This requires `entr(1)`.

Install entr. Packages are available available on most Linux and BSD variants, including Debian, Ubuntu, FreeBSD, OS X.

To run all tests upon editing any `.py` file:

```
$ make watch_test
```

You can also re-run a specific test file or any other py.test usage argument:

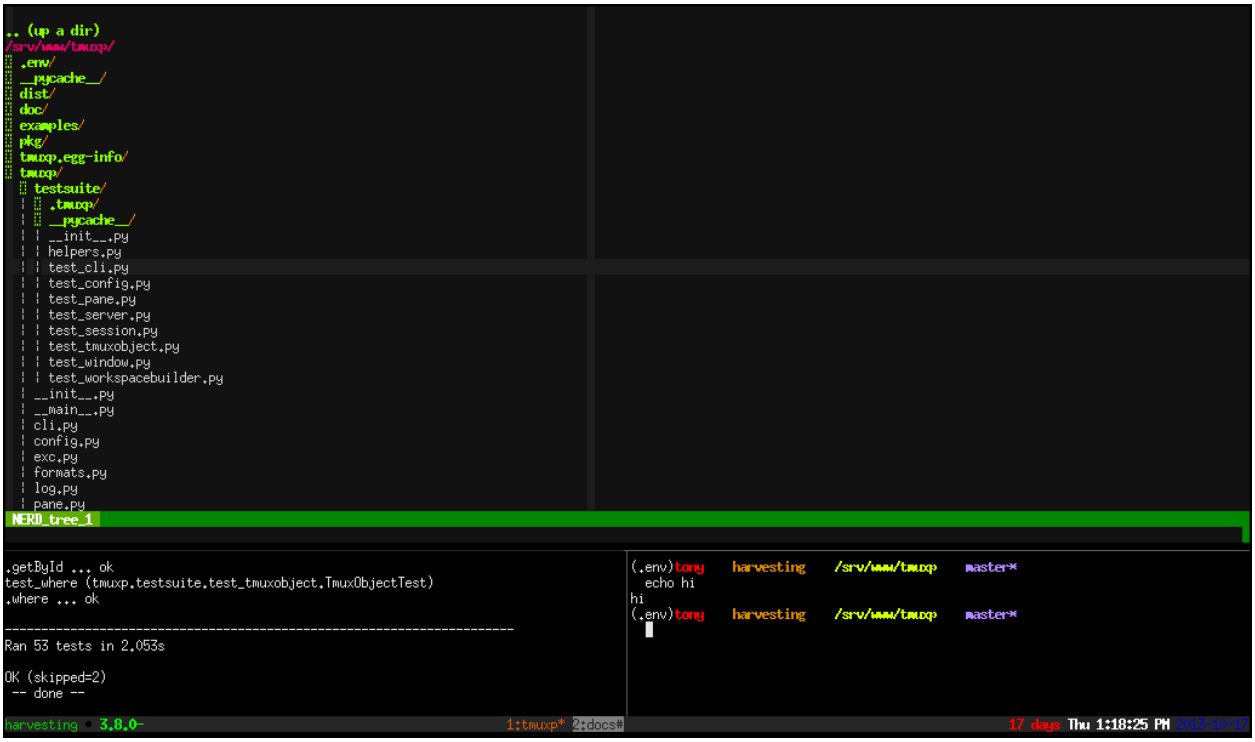
```
$ make watch_test test=tests/test_config.py

$ make watch_test test='-x tests/test_config.py tests/test_util.py'
```

Rebuild sphinx docs on save

Rebuild the documentation when an `.rst` file is edited:

```
$ cd doc
$ make watch
```

tmuxp developer config



After you *Install the latest code from git*, when inside the tmuxp checkout:

```
$ tmuxp load .
```

this will load the `.tmuxp.yaml` in the root of the project.

```
session_name: tmuxp
start_directory: ./ # load session relative to config location (project root).
before_script: pipenv install --dev --skip-lock
shell_command_before:
  - '[ -d `pipenv --venv` ] && source `pipenv --venv`/bin/activate && reset'
windows:
- window_name: tmuxp
  focus: True
  layout: main-horizontal
  options:
    main-pane-height: 35
  panes:
  - focus: true
  - pane
  - make watch_test
- window_name: docs
  layout: main-horizontal
  options:
    main-pane-height: 35
  start_directory: doc/
  panes:
  - focus: true
  - pane
  - make serve
```

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```
  - make watch
```

Travis CI

tmuxp uses travis-ci for continuous integration / automatic unit testing.

tmuxp is tested against tmux 1.8 and the latest git source. Interpretters tested are 2.6, 2.7 and 3.3. The travis build site uses this .travis.yml configuration:

Testing options

`RETRY_TIMEOUT_SECONDS` can be toggled if certain workspace builder tests are being stubborn.

e.g. `RETRY_TIMEOUT_SECONDS=10 py.test`

```
language: python
dist: trusty
sudo: false
python:
  - 2.7
  - 3.6
  - pypy3.5-5.10.1
  - pypy2.7-5.10.0
env:
  global:
    - RETRY_TIMEOUT_SECONDS=15
  matrix:
    - TMUX_VERSION=master
    - TMUX_VERSION=2.6
    - TMUX_VERSION=2.5
    - TMUX_VERSION=2.4
    - TMUX_VERSION=2.3
    - TMUX_VERSION=2.2
    - TMUX_VERSION=2.1
    - TMUX_VERSION=2.0
    - TMUX_VERSION=1.9a
    - TMUX_VERSION=1.8
matrix:
  allow_failures:
  - env: TMUX_VERSION=master

before_install:
  - export PIP_USE_MIRRORS=true
  - pip install --upgrade pytest  # https://github.com/travis-ci/travis-ci/issues/4873
  - pip install --upgrade pip wheel virtualenv setuptools
  - pip install pytest-cov coverage codecov flake8
install:
  - pip install -e .
  - pip install -r requirements/test.txt
before_script:
  - git clone https://github.com/tmux/tmux.git tmux
  - cd tmux
  - git checkout $TMUX_VERSION
  - sh autogen.sh
  - ./configure --prefix=$HOME/tmux && make && make install
```

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```
  - export PATH=$HOME/tmux/bin:$PATH
  - cd ..
  - tmux -V
script:
  - py.test --cov
  - make flake8
addons:
  apt:
    packages:
      - libevent-dev
      - libncurses-dev
after_success:
  - codecov
```

1.6.6 API Reference

See also:

See libtmux's API and Quickstart to see how you can control tmux via python API calls.

Internals

util.**run_before_script**(*cwd=None*)
Function to wrap try/except for subprocess.check_call().

CLI

cli.**_reattach**()
Reattach session (depending on env being inside tmux already or not)

Parameters **session** (libtmux.Session) –

Notes

If TMUX environmental variable exists in the environment this script is running, that means we're in a tmux client. So `tmux switch-client` will load the session.

If not, `tmux attach-session` loads the client to the target session.

cli.**get_config_dir**()
Return tmuxp configuration directory.

TMUXP_CONFIGDIR environmental variable has precedence if set. We also evaluate XDG default directory from XDG_CONFIG_HOME environmental variable if set or its default. Then the old default ~/.tmuxp is returned for compatibility.

Returns absolute path to tmuxp config directory

Return type str

cli.**get_teamocil_dir**()
Return teamocil configuration directory.

Returns absolute path to teamocil config directory

Return type str

See also:

tmuxp.config.import_teamocil()

cli.**get_tmuxinator_dir**()
Return tmuxinator configuration directory.

Checks for TMUXINATOR_CONFIG environmental variable.

Returns absolute path to tmuxinator config directory

Return type str

See also:

tmuxp.config.import_tmuxinator()

cli.**load_workspace**(*socket_name=None*, *socket_path=None*, *colors=None*, *detached=False*, *answer_yes=False*)
Load a tmux "workspace" session via tmuxp file.

Parameters

- **config_file** (*str*) – absolute path to config file
- **socket_name** (*str, optional*) – tmux -L <socket-name>
- **socket_path** (*str, optional*) – tmux -S <socket-path>
- **colors** (*str, optional*) –

  '-2' Force tmux to support 256 colors
- **detached** (*bool*) – Force detached state. default False.
- **answer_yes** (*bool*) – Assume yes when given prompt. default False.

Notes

tmuxp will check and load a configuration file. The file will use kaptan to load a JSON/YAML into a dict. Then *config.expand()* and *config.trickle()* will be used to expand any shorthands, template variables, or file paths relative to where the config/script is executed from.

config.expand() accepts the directory of the config file, so the user's configuration can resolve absolute paths relative to where the config file is. In otherwords, if a config file at */var/moo/hi.yaml* has *./* in its configs, we want to be sure any file path with *./* is relative to */var/moo*, not the user's PWD.

A libtmux.Server object is created. No tmux server is started yet, just the object.

The prepared configuration and the server object is passed into an instance of *WorkspaceBuilder*.

A sanity check against libtmux.common.which() is ran. It will raise an exception if tmux isn't found.

If a tmux session under the same name as session_name in the tmuxp configuration exists, tmuxp offers to attach the session. Currently, tmuxp does not allow appending a workspace / incremental building on top of a current session (pull requests are welcome!).

build() will build the session in the background via using tmux's detached state (-d).

After the session (workspace) is built, unless the user decided to load the session in the background via tmuxp -d (which is in the spirit of tmux's -d), we need to prompt the user to attach the session.

If the user is already inside a tmux client, which we detect via the TMUX environment variable bring present, we will prompt the user to switch their current client to it.

If they're outside of tmux client - in a plain-old PTY - we will automatically `attach`.

If an exception is raised during the building of the workspace, tmuxp will prompt to cleanup (`$ tmux kill-session`) the session on the user's behalf. An exception raised during this process means it's not easy to predict how broken the session is.

Changed in version tmux: 2.6+

In tmux 2.6, the way layout and proportion's work when interfacing with tmux in a detached state (outside of a client) changed. Since tmuxp builds workspaces in a detached state, the WorkspaceBuilder isn't able to rely on functionality requiring awarness of session geometry, e.g. `set-layout`.

Thankfully, tmux is able to defer commands to run after the user performs certain actions, such as loading a client via `attach-session` or `switch-client`.

Upon client switch, `client-session-changed` is triggered[1].

References

`cli.`**`_validate_choices`**`()`
Callback wrapper for validating click.prompt input.

Parameters **`options`** (*`list`*) – List of allowed choices

Returns callback function for value_proc in `click.prompt()`.

Return type `callable()`

Raises **`click.BadParameter`** –

Configuration

Finding

`config.`**`is_config_file`**`(`*`extensions=[u'.yml', u'.yaml', u'.json']`*`)`
Return True if file has a valid config file type.

Parameters

- **`filename`** (*`str`*) – filename to check (e.g. `mysession.json`).
- **`extensions`** (*`str or list`*) – filetypes to check (e.g. `['.yaml', '.json']`).

Returns

Return type bool

`config.`**`in_dir`**`(`*`extensions=[u'.yml', u'.yaml', u'.json']`*`)`
Return a list of configs in `config_dir`.

Parameters

- **`config_dir`** (*`str`*) – directory to search
- **`extensions`** (*`list`*) – filetypes to check (e.g. `['.yaml', '.json']`).

Returns

Return type list

[1] cmd-switch-client.c hook. GitHub repo for tmux. https://github.com/tmux/tmux/blob/2.6/cmd-switch-client.c#L132. Accessed April 8th, 2018.

config.**in_cwd**()
Return list of configs in current working directory.

If filename is `.tmuxp.py`, `.tmuxp.json`, `.tmuxp.yaml`.

Returns configs in current working directory

Return type list

Import and export

config.**validate_schema**()
Return True if config schema is correct.

Parameters **sconf** (*dict*) – session configuration

Returns

Return type bool

config.**expandshell**()
Return expanded path based on user's `$HOME` and `env`.

`os.path.expanduser()` and `os.path.expandvars()`

Parameters **path** (*str*) – path to expand

Returns path with shell variables expanded

Return type str

config.**expand**(*cwd=None*, *parent=None*)
Return config with shorthand and inline properties expanded.

This is necessary to keep the code in the `WorkspaceBuilder` clean and also allow for neat, short-hand configurations.

As a simple example, internally, tmuxp expects that config options like `shell_command` are a list (array):

```
'shell_command': ['htop']
```

tmuxp configs allow for it to be simply a string:

```
'shell_command': 'htop'
```

Kaptan will load JSON/YAML files into python dicts for you.

Parameters

- **sconf** (*dict*) – the configuration for the session
- **cwd** (*str*) – directory to expand relative paths against. should be the dir of the config directory.
- **parent** (*str*) – (used on recursive entries) start_directory of parent window or session object.

Returns

Return type dict

config.**inline**()
Return config in inline form, opposite of *config.expand()*.

Parameters **sconf** (*dict*) –

Returns configuration with optional inlined configs.

Return type dict

config.**trickle**()
Return a dict with "trickled down" / inherited config values.

This will only work if config has been expanded to full form with *config.expand()*.

tmuxp allows certain commands to be default at the session, window level. shell_command_before trickles down and prepends the `shell_command` for the pane.

Parameters **sconf** (*dict*) – the session configuration.

Returns

Return type dict

config.**import_teamocil**()
Return tmuxp config from a teamocil yaml config.

Parameters **sconf** (*dict*) – python dict for session configuration

Notes

Todos:

- change 'root' to a cd or start_directory
- width in pane -> main-pain-width
- with_env_var
- clear
- cmd_separator

config.**import_tmuxinator**()
Return tmuxp config from a tmuxinator yaml config.

Parameters **sconf** (*dict*) – python dict for session configuration.

Returns

Return type dict

Workspace Builder

class tmuxp.workspacebuilder.**WorkspaceBuilder**(*sconf*, *server=None*)
Load workspace from session `dict`.

Build tmux workspace from a configuration. Creates and names windows, sets options, splits windows into panes.

The normal phase of loading is:

1. *kaptan* imports json/yaml/ini. `.get()` returns python `dict`:

```
import kaptan
sconf = kaptan.Kaptan(handler='yaml')
sconf = sconfig.import_config(self.yaml_config).get()
```

or from config file with extension:

```
import kaptan
sconf = kaptan.Kaptan()
sconf = sconfig.import_config('path/to/config.yaml').get()
```

kaptan automatically detects the handler from filenames.

2. `config.expand()` sconf inline shorthand:

```
from tmuxp import config
sconf = config.expand(sconf)
```

3. `config.trickle()` passes down default values from session -> window -> pane if applicable:

```
sconf = config.trickle(sconf)
```

4. (You are here) We will create a `libtmux.Session` (a real `tmux(1)` session) and iterate through the list of windows, and their panes, returning full `libtmux.Window` and `libtmux.Pane` objects each step of the way:

```
workspace = WorkspaceBuilder(sconf=sconf)
```

It handles the magic of cases where the user may want to start a session inside tmux (when *$TMUX* is in the env variables).

build(*session=None*)
Build tmux workspace in session.

Optionally accepts `session` to build with only session object.

Without `session`, it will use `libmtux.Server` at `self.server` passed in on initialization to create a new Session object.

Parameters **session** (`libtmux.Session`) – session to build workspace in

config_after_window(*w*, *wconf*)
Actions to apply to window after window and pane finished.

When building a tmux session, sometimes its easier to postpone things like setting options until after things are already structurally prepared.

Parameters

- **w** (`libtmux.Window`) – window to create panes for
- **wconf** (*dict*) – config section for window

iter_create_panes(*w*, *wconf*)
Return `libtmux.Pane` iterating through window config dict.

Run `shell_command` with `$ tmux send-keys`.

Parameters

- **w** (`libtmux.Window`) – window to create panes for
- **wconf** (*dict*) – config section for window

Returns Newly created pane, and the section from the tmuxp configuration that was used to create the pane.

Return type tuple of (`libtmux.Pane`, `pconf`)

iter_create_windows(*s*)
Return libtmux.Window iterating through session config dict.

Generator yielding libtmux.Window by iterating through sconf['windows'].

Applies window_options to window.

Parameters **session** (libtmux.Session) – session to create windows in

Returns Newly created window, and the section from the tmuxp configuration that was used to create the window.

Return type tuple of (libtmux.Window, wconf)

workspacebuilder.**freeze**()
Freeze live tmux session and Return session config dict.

Parameters **session** (libtmux.Session) – session object

Returns tmuxp compatible workspace config

Return type dict

Exceptions

exception tmuxp.exc.**EmptyConfigException**
Configuration is empty.

exception tmuxp.exc.**ConfigError**
Error parsing tmuxp configuration dict.

exception tmuxp.exc.**BeforeLoadScriptError**(*returncode*, *cmd*, *output=None*)
Exception replacing subprocess.CalledProcessError for *tmuxp.util.run_before_script()*.

exception tmuxp.exc.**BeforeLoadScriptNotExists**(**args*, ***kwargs*)

1.6.7 History

Here you can find the recent changes to tmuxp

- : Update pytest to 3.4.1
- : Update alagitpull (sphinx theme) to 0.0.19. External websites open in new window.
- : Update sphinx to 1.7.1
- : Improve reliability of time-sensitive tests by using while True with a timeout.
- #349: flake8 via continuous integration
- #348: Continuous integration updates and fixes for Travis CI
  - Update builds to use trusty
  - Remove older python 3 versions (before 3.6)
  - Update pypy versions
- : Support Click 7.0
- : Loosen click restraint to <7
- #431: Include tests in source distribution

- : Documentation overhaul.
  - Areas like *tmuxp.cli.load_workspace()* are now documented verbosely. This is so contributors helping on the project can more quickly gain situational awareness in this tricky area of code.
- : Update docstring style to use numpy-style documentation. This enhances readability and plays nicely with sphinx documentation.
- : Sync *requirements/*.txt* dependencies with *Pipfile*.
- : Update sphinx, releases to latest version
- : Assure *requirements/dev.txt* dependencies are in *Pipfile*
- : Add sphinxcontrib-napoleon.
- : Add configuration and make command for isort.
- : Sort imports
- : Remove unused `__future__` imports
- #431: Include tests in source distribution
- : *before_script* now respects *start_directory* in the session root. This makes it easier to run things like *pipenv install* as a *before_script*.
- #308: Fix bug where layouts don't correctly set on tmux 2.6
- #312: Support for tmux 2.6 layout setting (via hooks) in the following scenarios:
  - loading outside tmux
  - loading inside tmux, via switch-client
  - loading inside tmux, with session in background (with -d), and reattaching/switching to after
  - loading session outside tmux in background with -d, and reattaching/switching after
- #252: Fix bug where loading a session with a name matching a subset of current session causes undesired behavior.
- : Remove unneeded doc dependency packages
- : Switch theme to alagitpull (alabaster subtheme)
- : Update libtmux to 0.7.3
- : Updates to pytest and pytest-rerunfailures
- : Update libtmux to 0.7.4
- : Update libtmux to 0.7.5 for tmux 2.6 hotfix
- : Upgrade libtmux to 0.7.7
- : Update pytest to 3.4.1
- : Update alagitpull (sphinx theme) to 0.0.19. External websites open in new window.
- : Update sphinx to 1.7.1
- : Improve reliability of time-sensitive tests by using `while True` with a timeout.
- #349: flake8 via continuous integration
- #348: Continuous integration updates and fixes for Travis CI
  - Update builds to use trusty

  - Remove older python 3 versions (before 3.6)
  - Update pypy versions
- #264: Update license from BSD to MIT
- : Bump libtmux to 0.8.0
- #308: Fix bug where layouts don't correctly set on tmux 2.6
- #312: Support for tmux 2.6 layout setting (via hooks) in the following scenarios:
  - loading outside tmux
  - loading inside tmux, via switch-client
  - loading inside tmux, with session in background (with -d), and reattaching/switching to after
  - loading session outside tmux in background with -d, and reattaching/switching after
- : Upgrade libtmux to 0.7.7
- : *before_script* now respects *start_directory* in the session root. This makes it easier to run things like *pipenv install* as a *before_script*.
- : Update libtmux to 0.7.5 for tmux 2.6 hotfix
- #184: - update libtmux to fix environmental variables in the session scope
- : Updates to pytest and pytest-rerunfailures
- : Update libtmux to 0.7.4
- #252: Fix bug where loading a session with a name matching a subset of current session causes undesired behavior.
- : Remove unneeded doc dependency packages
- : Switch theme to alagitpull (alabaster subtheme)
- : Update libtmux to 0.7.3
- #207: add custom tmuxp config directory via `TMUXP_CONFIGDIR` variable.
- #235: Support for `options_after`, for setting options like `synchronize-panes`. Thanks @sebastianst.
- #236: Support for symlinked directories, thanks @rafi.
- #239: Improve support for formatted options when freezing and using configs with them.
- #198: bump click from 6.6 to 6.7
- : update libtmux from 0.5.0 to 0.6.0
- #186: documentation typo from @joelwallis
- #191: documentation typo from @modille
- #193: improve suppress history test, courtesy of @abeyer.
- : bump libtmux 0.6.0 to 0.6.1
- #195: pin packages for colorama and doc requirements
- : update libtmux from 0.6.2 to 0.6.3.
- #199: support for running tmuxp on tmux `master`.
- #218: Fix pane ordering by running `select-layout` before splits.
- : Support for OpenBSD.

- : Update libtmux from 0.6.4 to 0.6.5.
- #229: More helpful error message on systems missing tmux.
- : Upgrade colorama from 0.3.7 to 0.3.9
- #248: Upgrade libtmux to 0.7.1
- #248: Drop python 2.6 support
- : Update libtmux from 0.6.4 to 0.6.5.
- #229: More helpful error message on systems missing tmux.
- : Support for OpenBSD.
- #218: Fix pane ordering by running `select-layout` before splits.
- #207: add custom tmuxp config directory via `TMUXP_CONFIGDIR` variable.
- : update libtmux from 0.6.2 to 0.6.3.
- #199: support for running tmuxp on tmux `master`.
- #198: bump click from 6.6 to 6.7
- #195: pin packages for colorama and doc requirements
- #186: documentation typo from @joelwallis
- #191: documentation typo from @modille
- #193: improve suppress history test, courtesy of @abeyer.
- : bump libtmux 0.6.0 to 0.6.1
- #181: Support tmux 2.3
- #132: Handle cases with invalid session names
- : update libtmux from 0.5.0 to 0.6.0
- : Add back `tmuxp -V` for version info
- #65: Ability to specify `options` and `global_options` via configuration. Also you can specify environment variables via that.

  Include tests and add example.
- #165: fix typo in error output, thanks @fpietka
- #167: fix attaching multiple sessions
- #166: add new docs on zsh/bash completion
- : Add back `tmuxp -V` for version info
- #165: fix typo in error output, thanks @fpietka
- #167: fix attaching multiple sessions
- #166: add new docs on zsh/bash completion
- #159: improved support for tmuxinator imports, from @fpietka.
- #134: Use `click` for command-line completion, Rewrite command line functionality for importing, config finding, conversion and prompts.
- #160: load tmuxp configs by name
- #158: argparse bug overcome by switch to click

- #157: bump libtmux to 0.4.1
- : switch to readthedocs.io for docs
- #161: readme link fixes from @Omeryl.
- #163: fix issue re-attaching sessions that are already loaded
- : Remove `-l` from `tmuxp import tmuxinator|teamocil`
- #159: improved support for tmuxinator imports, from @fpietka.
- #161: readme link fixes from @Omeryl.
- #163: fix issue re-attaching sessions that are already loaded
- #157: bump libtmux to 0.4.1
- : switch to readthedocs.io for docs
- #146: Optionally disable shell history suppression, @kmactavish
- #145: Add new-window command functionality, @ikirudennis
- : libtmux core split into its own project
- : tests moved to py.test framework
- : overhaul README
- : update .tmuxp.yaml and .tmuxp.json for Makefile change
- : move doc building, tests and watcher to Makefile
- #147: Patching unittest timing for shell history suppression
- : version jump 0.11.1 to 1.0
- : Spelling correction, thanks @sehe.
- #137: Support for environment settings in configs, thanks @*tasdomas*
- #131: #133: README and Documentation fixes
- #135: Load multiple tmux sessions at once, thanks @madprog.
- [compatibility] Support Anaconda Python 2 and 3
- #130: move to entr(1) for file watching in tests. update docs.
- : switch to `.venv` for virtualenv directory to not conflict with `.env` (used by autoenv).
- : change test in workspace builder test to use `top(1)` instead of `man(1)`. `man(1)` caused errors on some systems where `PAGER` is set.
- : use travis container infrastructure for faster tests
- #122: Update to support tmux 2.1, thank you @estin.
- #119: Add fix python 3 for sysutils/pytmuxp on FreeBSD ports. See GH issue 119 and #201564 @ FreeBSD Bugzilla. Thanks Ruslan Makhmatkhanov.
- : You can now use environment variables inside of `start_directory`, `before_script`, `shell_command_before`, `session_name` and `window_name`.
- : update travis to use new tmux git repository.
- #107: Fix Server.attached_sessions return type by @thomasballinger.
- #105: append `.txt` extension to manuals (repo ony) from @yegortimoshenko.

- #109: fix failure of test_pane_order on fedora machines from @marbu
- #110: de-vendorize colorama. Thanks @marbu.
- : [examples]: add example for environmental variables, `examples/env-variables.json` and `examples/env-variables.yaml`.
- : compat 2.7/3.3 wrapper for `EnvironmentVarGuard` for testing.
- : Renamed `config.expandpath` to `config.expandshell`.
- : new animated image demo for RTD and README
- : [testing]: fix sniffer test runner in python 3
- : Refactor `util.tmux` into `util.tmux_cmd()`.
- : Refactor `{Server,Session,Window,Pane}.tmux` into:
  - `Server.cmd()`
  - `Session.cmd()`
  - `Window.cmd()`
  - `Pane.cmd()`

  (See conversation at https://github.com/bitprophet/dotfiles/issues/5)
- : Add `--log-level` argument.
- : Fix documentation for :meth:`Session.switch_client()`.
- : tmux 2.0 support
- : version bump 0.1.13 -> 0.8.0
- : Update about page from teamocil and erb support from @raine.
- : Add documentation on leading space in `send_keys` from @thomasballinger.
- : Add Warning tmux versions less than 1.4 from @techtonik.
- : `make checkbuild` for verifying internal / intersphinx doc references.
- : updates to doc links
- : replace watchingtestrunner with sniffer in examples. `.tmuxp.conf` and `.tmux.json` updated
- : testsuite for cli uses `tempfile.mkdtemp()` instead `TMP_DIR` (which resolved to `.tmuxp` in the testsuite directory.
- : `bootstrap_env.py` will check for linux, darwin (OS X) and windows and install the correct sniffer file watcher plugin.
- : docutils from 0.11 to 0.12
- : `scent.py` for building docs
- : Remove `package_metadata.py` in favor of `__about__.py`.
- [config] `config.expandpath()` for helping resolve paths.
- [config] *`config.expand()`* now resolves directories in configuration via `os.path.expanduser()` and `os.path.expandvars()`.
- : : improved support for loading tmuxp project files from outside current working directory. e.g.

```
$ tmuxp load /path/to/my/project/.tmuxp.yaml
```

Will behave better with relative directories.

- : `before_script` now loads relative to project directory with `./`.
- : Tests for `run_script_before` refactored.
- : `BeforeLoadScriptFailed` and `BeforeLoadScriptNotExists` has moved to the `exc` module.
- : `run_script_before` has moved to `util`.
- : Improvements to *`util.run_before_script()`*, `exc.BeforeLoadScriptFailed` behavior to print `stdout` and return `stderr` is a non-zero exit is returned.
- : Use `bootstrap_env.py` in tmuxp's `.tmuxp.yaml` and `.tmuxp.json` project files.
- #76: Don't require `shell_command` to pass options to panes (like `focus: true`).
- #77: Fix bug where having a `-` in a `shell_command` would cauesd a build error.
- #73: Fix an error caused by spaces in `start_directory`.
- 2 bug fixes and allow panes with no shell commands to accept options, thanks for these 3 patches, @ThiefMaster:
- The `--force` was not with us.
- #56: python_api_quickstart
- : New command, `before_script`, which is a file to be executed with a return code. It can be a bash, perl, python etc. script.
- : New testsuite, `testsuite.test_utils` for testing testsuite tools.
- : New context manager for tests, `temp_session`.
- #72: Create destination directory if it doesn't exist. Thanks @ThiefMaster.
- #55: where tmuxp would crash with letter numbers in version. Write tests.
- #35: Builder will now use `-c start_directory` to create new windows and panes.

  This removes a hack where `default-path` would be set for new pane and window creations. This would bleed into tmux user sessions after creations.
- : `Window.split_window()` now allows `-c start_directory`.
- #49: bug where `package_manifest.py` missing from `MANIFEST.in` would cause error installing.
- : use conventions from tony/cookiecutter-pypackage.
- : tao of tmux section now treated as a chatper. tao of tmux may be split off into its own project.
- : section heading normalization.
- : Fix extra space in PEP 263.
- : Update `_compat` support module.
- : Fix `$ tmuxp freeze` CLI output.
- #48: `$ tmuxp` without option raises an error.
- #48: Fix Python 3 CLI issue.
- : - Add space before send-keys to not populate bash and zsh history.
- #43: Merge `tmuxp -d` for loading in detached mode. Thanks roxit.

- : now using werkzeug / flask style testsuites.
- #32: Fix bug where special characters caused unicode caused unexpected outcomes loading and freezing sessions.
- version to 0.1. No `--pre` needed. Future versions will not use rc.
- : fix duplicate print out of filename with using `tmuxp load .`.
- : Move py2/py3 compliancy code to `_compat`.
- : `unicode_literals`
- #33: Partial rewrite of *`config.expand()`*.
- : tmuxp will exit silently with `Ctrl-c`.
- #31: [examples] from stratoukos add `window_index` option, and example.
- #27: `$ tmuxp freeze` raises unhelpful message if session doesn't exist.
- #26: #29: for OS X tests. Thanks stratoukos.
- #28: shell_command_before in session scope of config causing duplication. New test.
- : fix bug were `focus: true` would not launch sessions when using `$ tmuxp load` in a tmux session.
- #25: `focus: true` not working in panes. Add tests for focusing panes in config.
- : add new example for `focus: true`.
- : `Pane.select_pane()`.
- #23: fix bug where workspace would not build with pane-base-index set to 1. Update tests to fix if `pane-base-index` is not 0.
- : - removed `$ tmuxp load --list` functionality. Update *Quickstart* accordingly.
- Changelog will now be updated on a version basis, use pep440 versioning.
- : pep8 and pep257 in unit tests.
- : `Session.show_options()`, `Session.show_option()` now accept `g` to pass in `-g`.
- #21: Error with unit testing python 2.6 python configuration tests. Use `tempfile` instead.
- #15: Behavioral changes in the WorkspaceBuilder to fix pane ordering.
- : WorkspaceBuilder tests have been improved to use async better.
- : `Window.show_window_options()`, `Window.show_window_option()` now accept `g` to pass in `-g`.
- : fix a bug where missing tmux didn't show correct warning.
- : Travis now tests python 2.6 as requirement and not allowed to fail.
- : ongoing work on *The Tao of tmux*.
- : `cli.SessionCompleter()` no longer allows a duplicate session after one is added.
- #19: accept `-y` argument to answer yes to questions.
- : `Pane.split_window()` for splitting `Window` at `target-pane` location.
- : More work done on the *The Tao of tmux* page.
- : [translation] documentation in Chinese from wrongwaycn.

- : [config] : *config.inline()* will now turn panes with no other attributes and 1 command into a single item value.

```
- panes:
  - shell_command: top

# will now inline to:

- panes
  - top

This will improve ``$ tmuxp freeze``
```

- : [freeze] - `$ tmuxp freeze` will now freeze a window with a `start_directory` when all panes in a window are inside the same directory.
- : support import teamocil `root` to `start_directory`.
- : fix teamocil import.
- : Remove old logger (based on tornado's log.py), replace with new, simpler one.
- : tmuxp freeze will now return a blank pane for panes that would previously return a duplicate shell command, or generic python, node interpreter.
- : tmuxp freeze supports exporting to blank panes.
- : support for blank panes (null, `pane`, `blank`) and panes with empty strings.
- : tagged v0.0.37. Many fixes. Python 2.6 support. Will switch to per-version changelog after 0.1 release.
- pep257, pep8.
- Documentation tweaking to *API Reference*, *The Tao of tmux*.
- : Support for `[-L socket-name]` and `[-S socket-path]` in autocompletion and when loading. Note, switching client into another socket may cause an error.
- tagged version `v0.0.36`.
- : pep257, pep8.
- [config] : support for relative paths of `start_directory`. Add an update config in *Start Directory* on *Example Configurations*.
- : Support for spaces in `$ tmuxp attach-session` and `$ tmuxp kill-session`, and `$ tmuxp freeze`.
- #12: fix for `$ tmuxp freeze` by @finder.
- : move old `Server` methods `__list_panes()`, `__list_windows` and `__list_sessions` into the single underscore.
- : Many documentation, pep257, pep8 fixes
- [config] : Concatenation with `start_directory` via *config.trickle()* if window `start_directory` is alphanumeric / relative (doesn't start with `/`). See *Example Configurations* in *start directory*.
- : Allow saving with ~ in file destination.
- : Improve quality of tmuxinator imports. Especially `session_name` and `start_directory`.
- : Fix bug with import teamocil and tmuxinator
- : `$ tmuxp -2` for forcing 256 colors and `tmuxp -8` for forcing 88.

- : `Server` support for `-2` with `colors=256` and `colors=8`.
- : New servers for `Server` arguments `socket_name`, `socket_path`, `config_file`.
- : major doc overhaul. front page, renamed orm_al.rst to internals.rst.
- : `Window.move_window()` for moving window.
- : fix bug where first and second window would load in mixed order
- : [examples]: Example for `start_directory`.
- : fix :meth:`Window.kill_window()` target to `session_id:window_index` for compatibility and pass tests.
- : get `start_directory` working for configs
- : correctly *`config.trickle()`* the `start_directory`.
- : `util.is_version()`
- : tmuxp now has experimental support for freezing live sessions.
- : support for `start_directory` (work in progress)
- : `Window.kill_window()`
- : `tmuxp freeze <filename>` experimental
- : fix bug where `tmuxp load .` would return an error instead of a notice.
- : fix bug where if inside tmux, loading a workspace via switch_client wouldn't work.
- [config] tmuxp now allows a new shorter form for panes. Panes can just be a string. See the shorthand form in the *Example Configurations* section.
- : [b6c2e84] Fix bug where tmuxp load w/ session already loaded would switch/attach even if no was entered
- : [config] support loading `.yml`.
- : tmux will now use `Session.switch_client()` and `Session.attach_session()` to open new sessions instead of `os.exec`.
- : `WorkspaceBuilder` now has `.session` attribute accessible publicly.
- : tmux 1.8 `set-option` / `set-window-options` command `target-window` fix.
- : when workspace loader crashes, give option to kill session, attach it or detach it.
- : `tmuxp import` for teamocil and tmuxinator now has a wizard and offers to save in JSON or YAML format.
- : enhancements to prompts
- : 3 new *Example Configurations*, 'main-pane-height', 'automatic-rename', and 'shorthands'.
- : support for `automatic-rename` option.
- : `Window.select_pane()` now accepts `-l`, `-U`, `-D`, `-L`, `-R`.
- : fix `tmuxp convert <file>` fixed.
- : fix `tmuxp load .` fixed
- : `Window.tmux()` and `Pane.tmux()` will automatically add their `{window/pane}_id` if one isn't specific.
- : `./run_tests.py --tests` now automatically prepends `tmuxp.testsuite` to names.
- : `Pane` now has `Pane.set_width()` and `Pane.set_height()`.

- : pep257 fixes.
- : `tmuxp load`, `tmuxp convert` and `tmuxp import` now support relative and full filenames in addition to searching the config directory.
- : argcomplete overhaul for CLI bash completion.
- : fix `$ tmuxp load -l` to work correctly alongside `$ tmuxp load filename`.
- : *`config.is_config_file()`* now supports `extensions` argument as a string also.
- : *`config.in_dir()`* supports a list of `extensions` for filetypes to search, i.e. `['.yaml', '.json']`.
- : initial version of tmuxinator and teamocil config importer. it does not support all options and it not guaranteed to fully convert window/pane size and state.
- : test fixtures and inital work for importing tmuxinator and teamocil configs
- : property handle case where no tmux server exists when `attach-session` or `kill-session` is used.
- : fix bug where `-v` and `--version` wouldn't print version.
- [dev] `.tmuxp.json` now exists as a config for tmuxp development and as an example.
- : Fix bug in tab completion for listing sessions with no tmux server is active.
- : Fix bug where `tmuxp kill-session` would give bad output
- : New examples in JSON. Update the *Example Configurations* page in the docs.
- : tmuxp can now `$ tmuxp convert <file>` from JSON <=> YAML, back and forth.
- : check for `oh-my-zsh` when using `$SHELL zsh`. Prompt if `DISABLE_AUTO_TITLE` is unset or set to `true`.
- : clean out old code for `automatic-rename` option. it will be reimplemented fresh.
- : unit test fixes.
- : tmuxp `load` for loading configs.
- : tmuxp `attach-session` with tab-completion. Attach session will `switch-client` for you if you are inside of of a tmux client.
- : tmuxp `kill-session` with tab-completion.
- : zsh/bash/tcsh completion improvements for tab-completion options
- Fix regression causing unexpected build behavior due to unremoved code supporting old tmux versions.
- : `$ tmuxp -v` will print the version info.
- : Examples now have graphics
- : Added 2 new examples to the *Example Configurations* page.
- : Make 1.8 the official minimym version, give warning notice to upgrade tmux if out of date
- : major internal overhaul of `Server`, `Session` , `Window`, and `Pane` continues.
  - `Server` has @property `Server.sessions()`, which is forward to `Server.list_sessions()` (kept to keep tmux commands in serendipty with api), `Server._list_sessions()` returns dict object from `Server.__list_sessions()` tmux command. `Server.__list_sessions()` exists to keep the command layered so it can be tested against in a matrix with travis and compatibility methods can be made.

  - `Session` now has @proprety `Session.windows()` returning a list of `Window` objects via `Session.list_windows()`. @property `Session._windows()` to `Session._list_windows()` to return a list of dicts without making objects.
  - `Window` now has @proprety `Window.panes()` returning a list of `Pane` objects via `Window.list_panes()`. @property `Window._panes()` to `Window._list_panes()` to return a list of dicts without making objects.
- : tmuxp will now give warning and sys.exit() with a message if `tmux` not found in system PATH
- [project] some research into supporting legacy tmux versions. tmux 1.6 and 1.7 support seem likely eventually if there is enough demand.
- : python 3 support
- : major internal overhaul of `Server`, `Session`, `Window`, and `Pane`.
  - `Session`, `Window` and `Pane` now refer to a data object in `Server` internally and always pull the freshest data.
  - A lot of code and complexity regarding setting new data for objects has been reduced since objects use their unique key identifier to filter their objects through the windows and panes in `Server` object.
  - `Server` object is what does the updating now.
- : Support for switching sessions from within tmux. In both cases after the the session is built and if session already exists.
- : - new example `.tmuxp.yaml` file updated to include development workflow. Removed nodemon as the tool for checking files for now.
- : updated README docs with new project details, screenshots
- : `Server`, `Session`, `Window`, `Pane` now explicitly mixin subclasses.
- : tmux object mapping has been split into `util.TmuxMappingObject`. The mapping and the relational has been decoupled to allow `Server` to have children while not being a dict-like object.
- : subclasses of `util.TmuxRelationalObject`, `Server`, `Session`, `Window`, `Pane` now have `util.TmuxRelationalObject.getById()` (similar to .get() in backbone.js collection), `util.TmuxRelationalObject.where()` and `util.TmuxRelationalObject.findWhere()` (.where() and .findWhere() in underscore.js), to easily find child objects.
- : Server is now a subclass of `util.TmuxObject`.
- : add vim modeline for rst to bottom of this page
- : Updates to *The Tao of tmux* page.
- : New page on About.
- : bash / zsh completion.
- : add MANIFEST.in, fix issue where package would not install because missing file
- : use `util.which()` from salt.util to find tmux binary.
- [config] : Support for 1-command pane items.

```
session_name: my session
windows:
  - window_name: hi
    panes:
    - bash
    - htop
```

- : If session name is already exists, prompt to attach.
- : support for `socket-name` (`-L`) and `socket-path` (`socket-path`)
- : support for `$ tmux .` to load `.tmuxp.{yaml/json/py}` in current working directory.
- : initial examples, misc. updates, front page update.
- : new theme
- : *config.in_cwd()*
- : *config.in_dir()*
- : *config.is_config_file()*
- : `cli.startup()`
- : `config.check_consistency()` to verify and diagnose issues with config files.
- : new exceptions
- : tmuxp can now launch configs and build sessions
- : can now -l to list configs in current directory and $HOME/.tmuxp
- documentation fixes and updates
- `Pane.resize_pane()` and tests
- : `Server.find()`, `Session.find()`, `Window.find()`.
- : `Session.refresh()`, `Window.refresh()`, `Pane.refresh()`.
- : *config.inline()* to produce far far better looking config exports and tests.
- : `Session.show_options()`, `Session.show_option()`, `Session.set_option()`
- : `Window.show_window_options()`, `Window.show_window_option()`, `Window.set_window_option()`
- : Builder is now `WorkspaceBuilder` + tests. - WorkspaceBuilder can build panes - WorkspaceBuilder can build windows and set options
- : Test documentation updates
- : move beginnings of cli to `tmuxp.cli`
- : setup.py import __version__ via regex from tmuxp package
- : __future__ imports for future python 3 compatibility
- : Quiet logger down in some areas
- : Travis now tests against tmux 1.8 and latest source. Door open for future testing against python 3 and earlier tmux versions in the future.
- : Documentation for development environment and test runner updated.
- : Major test runner and test suite overhaul.
- : More preparation for builder / session maker utility.
- : Removed dependency sh
- : Removed dependency logutils
- : New logging module
- switch to semver

1.6.8 The Tao of tmux

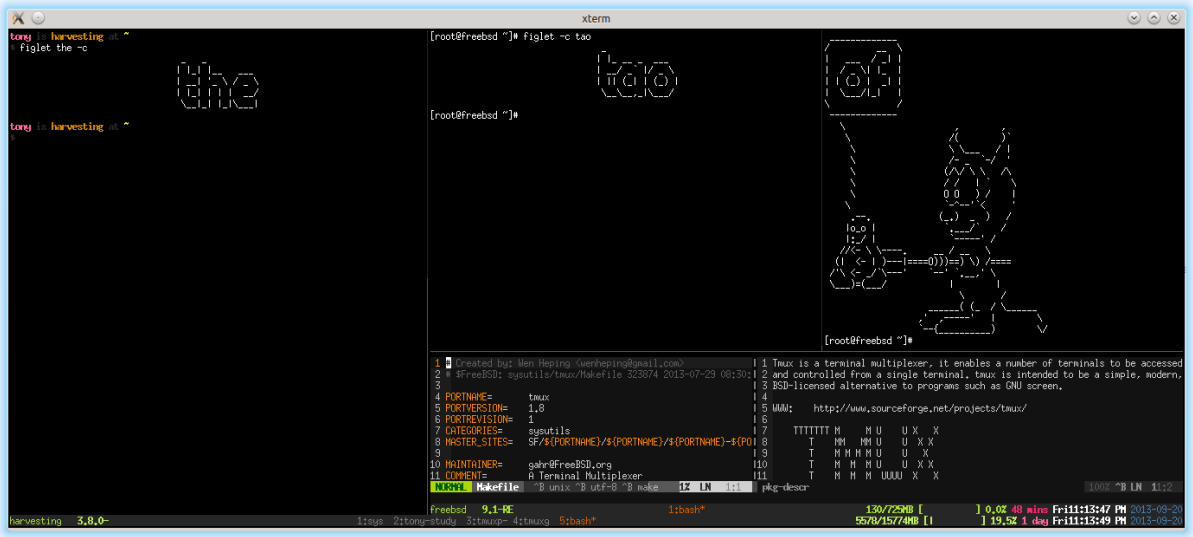


Fig. 1: ISC-licensed terminal multiplexer.

tmux is geared for developers and admins who interact regularly with CLI (text-only interfaces)

In the world of computers, there are 2 realms:

1. The text realm
2. The graphical realm

tmux resides in the text realm. This is about fixed-width fonts and that old fashioned black terminal.

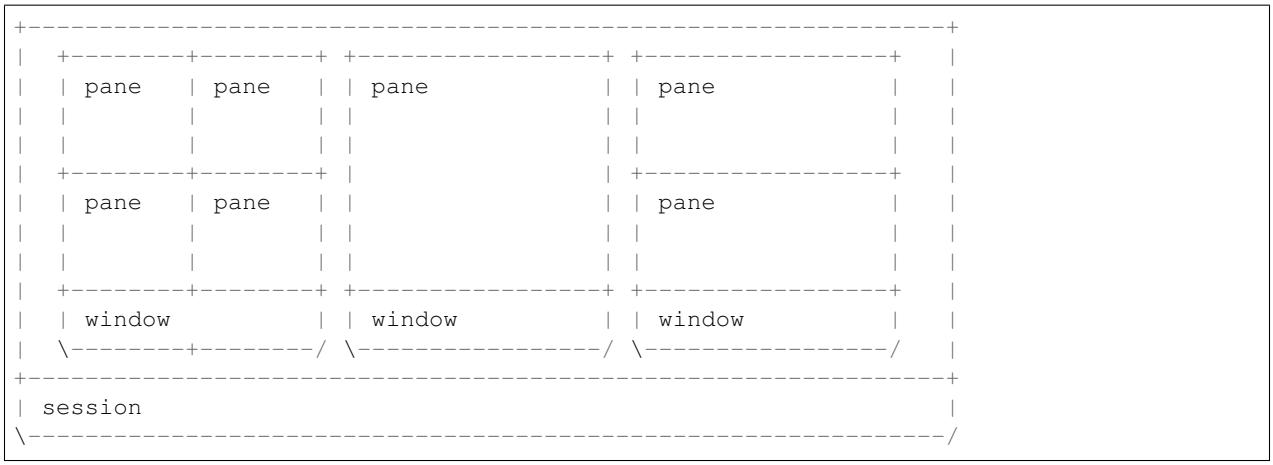
tmux is to the console what a desktop is to gui apps. It's a world inside the text dimension. Inside tmux you can:

- multitask inside the terminal, run multiple applications.
- have multiple command lines (pane) in the same window
- have multiple windows (window) in the workspace (session)
- switch between multiple workspaces, like virtual desktops

Thinking tmux

Text-based window manager

tmux	"Desktop"-Speak	Plain English
Multiplexer	Multi-tasking	Multiple applications simultaneously.
Session	Desktop	Applications are visible here
Window	Virtual Desktop or applications	A desktop that stores it own screen
Pane	Application	Performs operations



- 1 *Server*.
  - has 1 or more *Session*.
    - has 1 or more *Window*.
      - has 1 or more *Pane*.

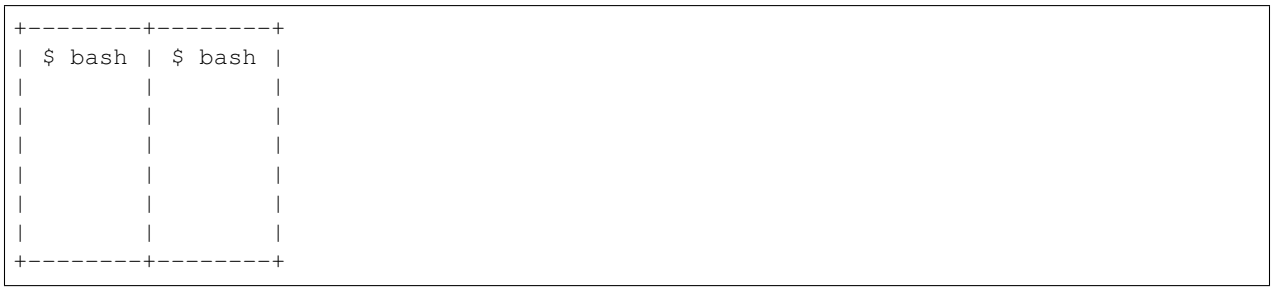
See also:

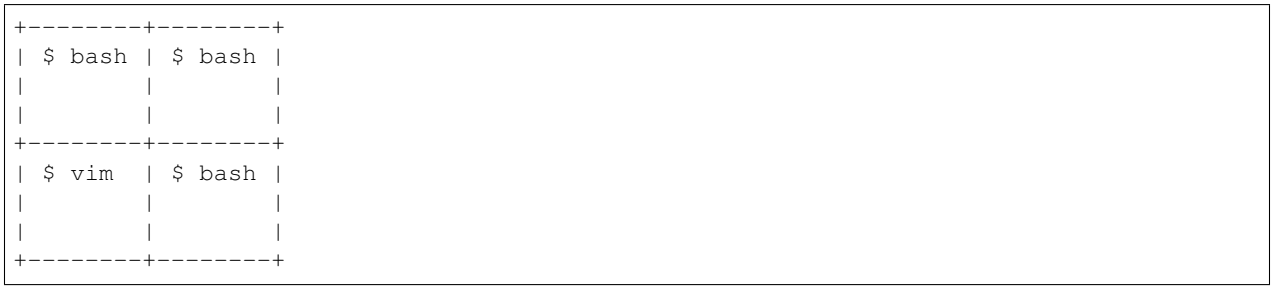
Glossary has a dictionary of tmux words.

CLI Power Tool

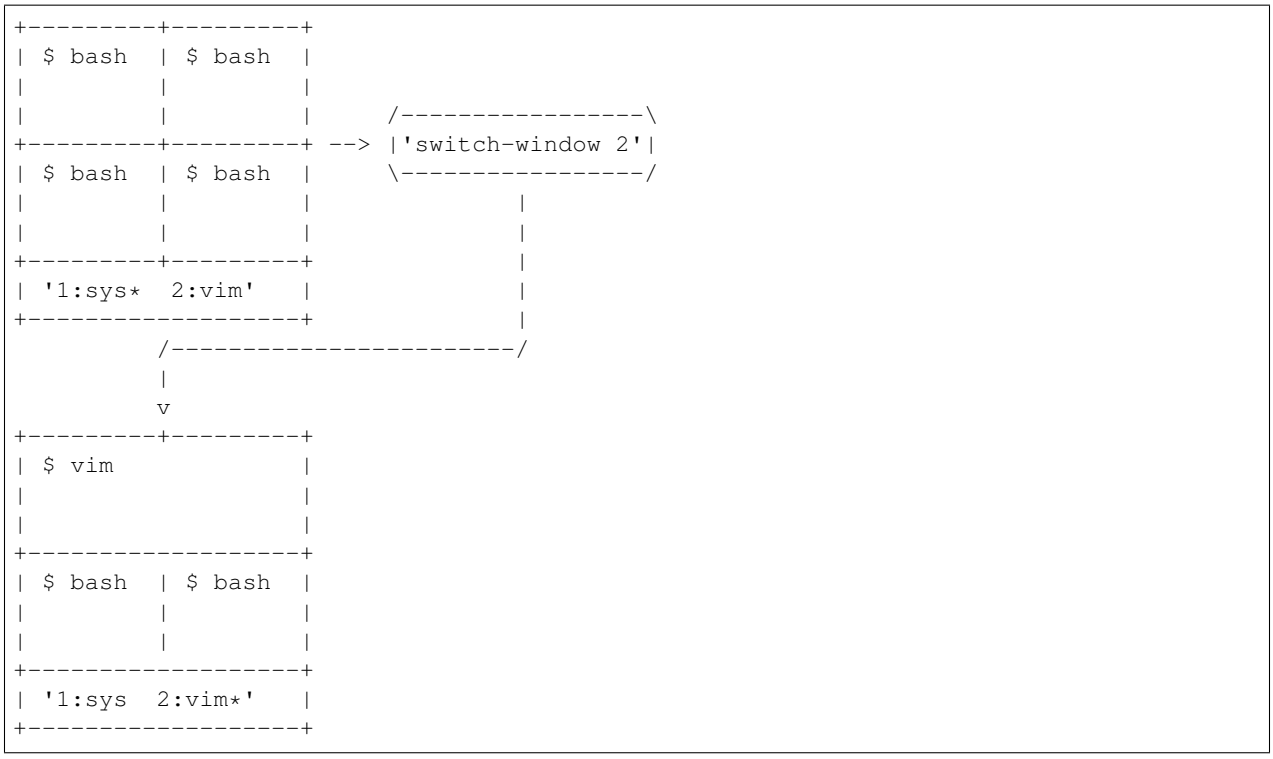
Multiple applications or terminals to run on the same screen by splitting up 1 terminal into multiple.

One screen can be used to edit a file, and another may be used to `$ tail -F` a logfile.





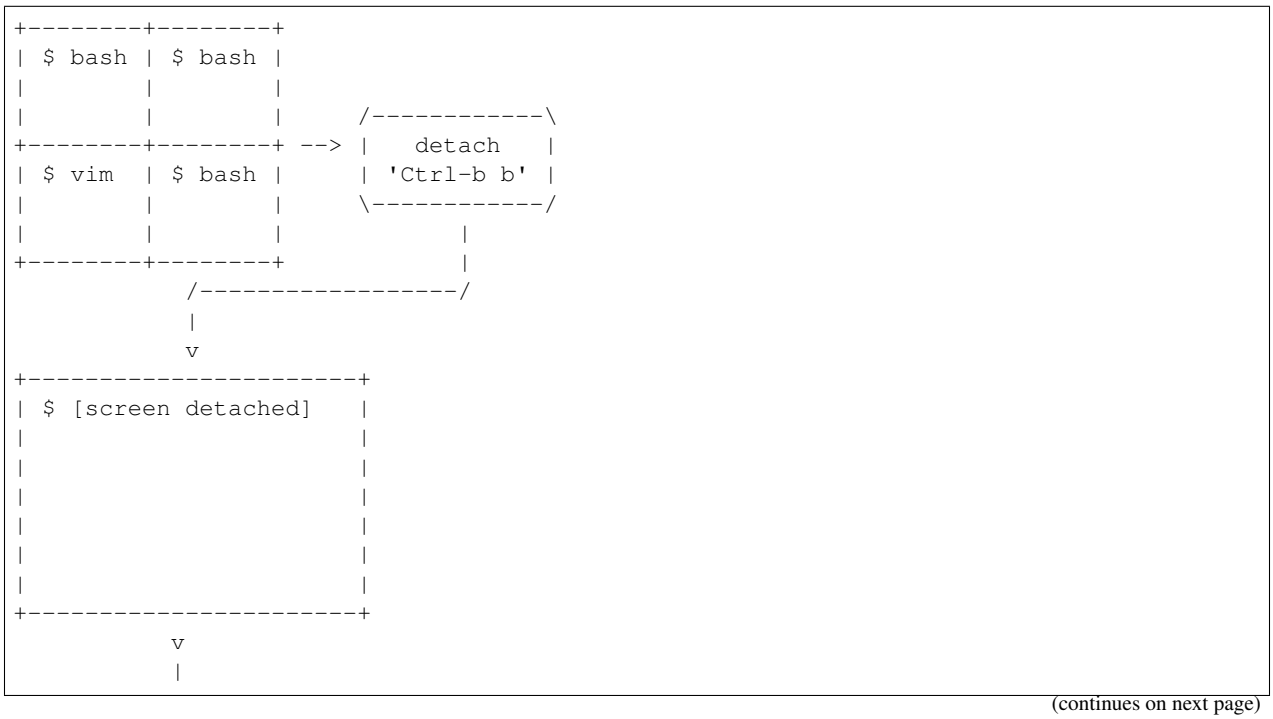
tmux supports as manys terminals as you want.



You can switch between the windows you create.

Resume everything later

You can leave tmux and all applications running (detach), log out, make a sandwich, and re-(attach), all applications are still running!



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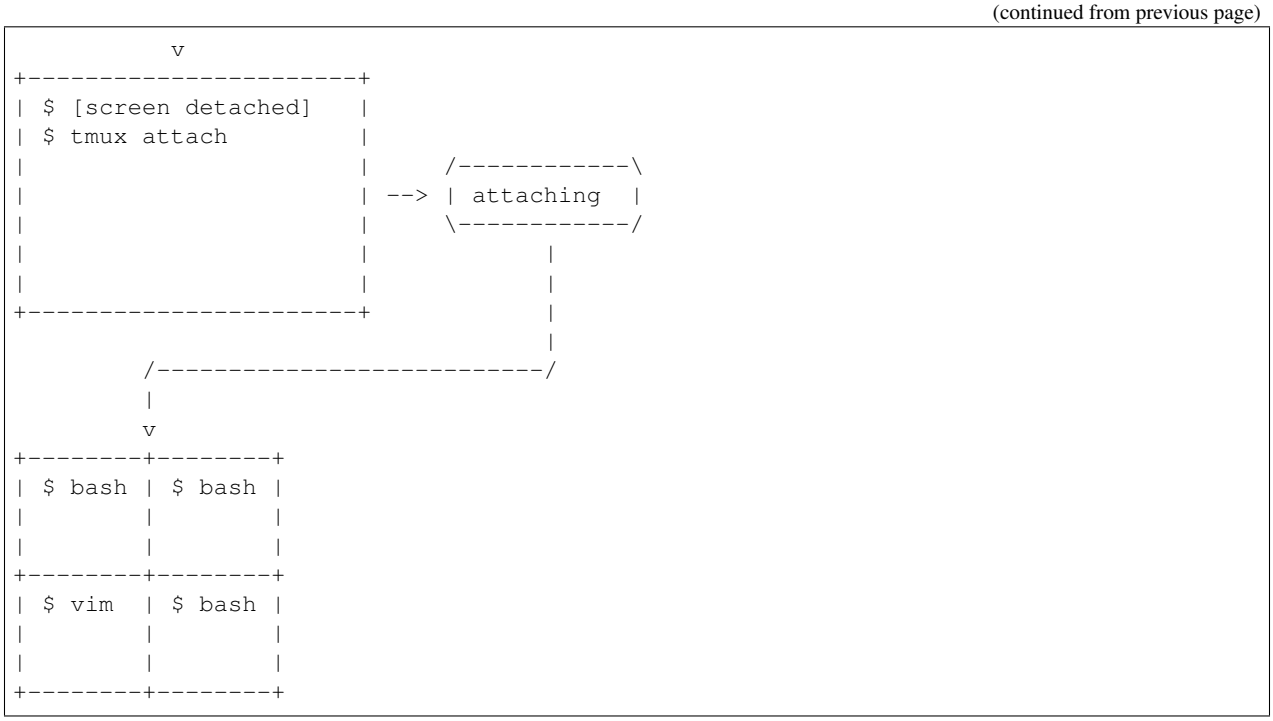

Manage workflow

- System administrators monitor logs and services.
- Programmers like to have an editor open with a CLI nearby.

Applications running on a remote server can be launched inside of a tmux session, detached, and reattached next timeyour "train of thought" and work.

Multitasking. Preserving the thinking you have.

Installing tmux

tmux is packaged on most Linux and BSD systems.

For the freshest results on how to get tmux installed on your system, "How to install tmux on <my distro>" will do, as directions change and are slightly different between distributions.

This documentation is written for version **1.8**. It's important that you have the latest stable release of tmux. The latest stable version is viewable on the tmux homepage.

Mac OS X users may install that latest stable version of tmux through MacPorts, fink or Homebrew (aka brew).

If **compiling from source**, the dependencies are libevent and ncurses.

Using tmux

Start a new session

```
$ tmux
```

That's all it takes to launch yourself into a tmux session.

Common pitfall

Running `$ tmux list-sessions` or any other command for listing tmux entities (such as `$ tmux list-windows` or `$ tmux list-panes`). This can generate the error "failed to connect to server".

This could be because:

- tmux server has killed its' last session, killing the server.
- tmux server has encountered a crash. (tmux is highly stable, this will rarely happen)
- tmux has not be launched yet at all.

The prefix key

Tmux hot keys have to be pressed in a special way. **Read this carefully**, then try it yourself.

First, you press the *prefix* key. This is `C-b` by default.

Release. Then pause. For less than second. Then type what's next.

`C-b o` means: Press `Ctrl` and `b` at the same time. Release, Then press `o`.

Remember, prefix + short cut! `C` is `Ctrl` key.

Session Name

Sessions can be *named upon creation*.

```
$ tmux new-session [-s session-name]
```

Sessions can be *renamed after creation*.

Command	`$ tmux rename-session <session-name>`
Short cut	`Prefix + $`

Window Name

Windows can be *named upon creation*.

```
$ tmux new-window [-n window-name]
```

Windows can be *renamed after creation*.

Command	`$ tmux rename-window <new-name>`
Short cut	`Prefix + ,`

Creating new windows

Command	`$ tmux new-window [-n window-name]`
Short cut	`Prefix + c` You may then rename window.

Traverse windows

By number

```
$ tmux select-window
```

Next

```
$ tmux next-window
```

Previous

```
$ tmux previous-window
```

Last-window

```
$ tmux last-window
```

Short cut	Action
`n`	Change to the next window.
`p`	Change to the previous window.
`w`	Choose the current window interactively.
`0 to 9`	Select windows 0 to 9.
`M-n`	Move to the next window with a bell or activity marker.
`M-p`	Move to the previous window with a bell or activity marker.

Move windows

Move window

```
$ tmux move-window [-t dst-window]
```

Swap the window

```
$ tmux swap-window [-t dst-window]
```

Short cut	Action
.	Prompt for an index to move the current window.

Move panes

```
$ tmux move-pane [-t dst-pane]
```

Short cut	Action
C-o	Rotate the panes in the current window forwards.
{	Swap the current pane with the previous pane.
}	Swap the current pane with the next pane.

Traverse panes

Shortcut to move between panes.

```
$ tmux last-window
```

```
$ tmux next-window
```

Short cut	Action
Up, Down	Change to the pane above, below, to the left, or to
Left, Right	the right of the current pane.

Recipe: tmux conf to `hjkl` commands, add this to your `~/.tmux.conf`:

```
# hjkl pane traversal
bind h select-pane -L
bind j select-pane -D
bind k select-pane -U
bind l select-pane -R
```

Kill window

```
$ tmux kill-window
```

Short cut	Action
&	Kill the current window.

Kill pane

```
$ tmux kill-pane [-t target-pane]
```

Short cut	Action
x	Kill the current pane.

Kill window

```
$ tmux kill-window [-t target-window]
```

Short cut	Action
&	Kill the current window.

Splitting windows into panes

```
$ tmux split-window [-c start-directory] <shell-command>
```

Tmux windows can be split into multiple panes.

Short cut	Action
%	Split the current pane into two, left and right.
"	Split the current pane into two, top and bottom.

Configuring tmux

Tmux can be configured via a configuration at `~/.tmux.conf`.

Depending on your tmux version, there is different options available.

Vi-style copy and paste

```
# Vi copypaste mode
set-window-option -g mode-keys vi
bind-key -t vi-copy 'v' begin-selection
bind-key -t vi-copy 'y' copy-selection
```

Aggressive resizing for clients

```
setw -g aggressive-resize on
```

Reload config

`<Prefix>` + `r`.

```
bind r source-file ~/.tmux.conf \; display-message "Config reloaded."
```

Status lines

Tmux allows configuring a status line that displays system information, window list, and even pipe in the `stdout` of an application.

You can use tmux-mem-cpu-load to get stats (requires compilation) and basic-cpu-and-memory.tmux. You can pipe in a bash command to a tmux status line like:

```
$(shell-command)
```

So if `/usr/local/bin/tmux-mem-cpu-load` outputs stats to `stdout`, then `$(tmux-mem-cpu-load)` is going to output the first line to the status line. The interval is determined by the `status-interval`:

```
set -g status-interval 1
```

Examples

- https://github.com/tony/tmux-config - works with tmux 1.5+. Supports screen's `ctrl-a` *The prefix key*. Support for system cpu, memory, uptime stats.
- Add yours, edit this page on github.

Reference

Short cuts

Tip: *The prefix key* is pressed before a short cut!

Short cut	Action
`C-b`	Send the prefix key (C-b) through to the application.
`C-o`	Rotate the panes in the current window forwards.
`C-z`	Suspend the tmux client.
`!`	Break the current pane out of the window.
`"`	Split the current pane into two, top and bottom.
`#`	List all paste buffers.
`$`	Rename the current session.
`%`	Split the current pane into two, left and right.
`&`	Kill the current window.
`'`	Prompt for a window index to select.
`,`	Rename the current window.
`-`	Delete the most recently copied buffer of text.
`.`	Prompt for an index to move the current window.
`0 to 9`	Select windows 0 to 9.
`:`	Enter the tmux command prompt.
`;`	Move to the previously active pane.

Continued on n

Table 1 – continued from previous page

=	Choose which buffer to paste interactively from a list.
?	List all key bindings.
D	Choose a client to detach.
[	Enter copy mode to copy text or view the history.
]	Paste the most recently copied buffer of text.
c	Create a new window.
d	Detach the current client.
f	Prompt to search for text in open windows.
i	Display some information about the current window.
l	Move to the previously selected window.
n	Change to the next window.
o	Select the next pane in the current window.
p	Change to the previous window.
q	Briefly display pane indexes.
r	Force redraw of the attached client.
s	Select a new session for the attached client interactively.
L	Switch the attached client back to the last session.
t	Show the time.
w	Choose the current window interactively.
x	Kill the current pane.
{	Swap the current pane with the previous pane.
}	Swap the current pane with the next pane.
~	Show previous messages from tmux, if any.
Page Up	Enter copy mode and scroll one page up.
Up, Down	Change to the pane above, below, to the left, or to
Left, Right	the right of the current pane.
M-1 to M-5	Arrange panes in one of the five preset layouts: even-horizontal, even-vertical, main-horizontal, main-vertica
M-n	Move to the next window with a bell or activity marker.
M-o	Rotate the panes in the current window backwards.
M-p	Move to the previous window with a bell or activity marker.
C-Up, C-Down	Resize the current pane in steps of one cell.
C-Left, C-Right	
M-Up, M-Down	Resize the current pane in steps of five cells.
M-Left, M-Right	

Source: tmux manpage[1].

To get the text documentation of a `.1` manual file:

```
$ nroff -mdoc tmux.1|less
```

The Book

The Tao of tmux is available on Leanpub and Kindle (Amazon).

Read and browse the book for free on the web.

[1] https://github.com/tmux/tmux-code/blob/master/tree/tmux.1

License

1.6.9 Glossary

tmuxp A tool to manage workspaces with tmux. A pythonic abstraction of tmux.

tmux(1) The tmux binary. Used internally to distinguish tmuxp is only a layer on top of tmux.

kaptan configuration management library, see kaptan on github.

Server Tmux runs in the background of your system as a process.

The server holds multiple *Session*. By default, tmux automatically starts the server the first time `$ tmux` is ran.

A server contains *session*'s.

tmux starts the server automatically if it's not running.

Advanced cases: multiple can be run by specifying `[-L socket-name]` and `[-S socket-path]`.

Client Attaches to a tmux *server*. When you use tmux through CLI, you are using tmux as a client.

Session Inside a tmux *server*.

The session has 1 or more *Window*. The bottom bar in tmux show a list of windows. Normally they can be navigated with `Ctrl-a [0-9]`, `Ctrl-a n` and `Ctrl-a p`.

Sessions can have a `session_name`.

Uniquely identified by `session_id`.

Window Entity of a *session*.

Can have 1 or more *pane*.

Panes can be organized with a layouts.

Windows can have names.

Pane Linked to a *Window*.

a pseudoterminal.

Target A target, cited in the manual as `[-t target]` can be a session, window or pane.

Python Module Index

t

Index

Symbols

B

C

E

F

G

I

K

L

P

R

S

T

V

W