The Pragmatic Programmers

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Productive Mouse-Free Development

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Copying and Pasting Text

Moving around and looking for things in the output buffer is usually only half the equation. You often need to copy some text so you can do something useful with it. tmux's Copy mode gives us the opportunity to select and copy text to a paste buffer so you can dump that text elsewhere.

To copy text, enter Copy mode and move the cursor to where you want to start selecting text. Then press SPACE and move the cursor to the end of the text. When you press ENTER, the selected text gets copied into a paste buffer.

To paste the contents you just captured, press PREFIX].

Let's look at a few ways to copy and paste text from the main output buffer.

Capturing a Pane

tmux has a handy shortcut that copies the entire visible contents of a pane to a paste buffer. Enter tmux's Command mode with PREFIX : and type the following command:

```
capture-pane
```

The contents of the pane will be in a paste buffer. You can then paste that content into another pane or window by pressing PREFIX].

When you capture a pane, tmux captures the text exactly as it's displayed. If the pane's width is too small, causing text to wrap to the next line, tmux will preserve the line break when you capture the pane by inserting newline characters into the captured text. To avoid this, pass the -J option to capture-pane. The copied text will no longer contain newline characters.

Showing, Saving, and Loading the Buffer

You can display the contents of your paste buffer by using the show-buffer command in Command mode or from a terminal session like this:

```
$ tmux show-buffer
```

By using the save-buffer command, you can save the buffer to a file, which can often be a real time saver.

You can capture the contents of the current pane to a text file. In Command mode, execute the command capture-pane; save-buffer buffer.txt to capture the pane and save it to the file buffer.txt. You could easily map that command to a keystroke if you wanted.

Finally, you can load a file into the buffer with load-buffer. In Command Mode, execute the command load-buffer buffer.txt to load buffer.txt back into the buffer.

Using Multiple Paste Buffers

tmux maintains a stack of paste buffers, which means you can copy text without replacing the buffer's existing content. This is much more flexible than the traditional clipboard offered by the operating system.

Every time you copy some new text, tmux creates a new paste buffer, putting the new buffer at the top of the stack. To demonstrate, fire up a new tmux session and load up a text editor such as Vim or Nano within the session. In the editor, type the following sentences, one per line:

```
First sentence is first.
Next sentence is next.
Last sentence is last.
```

Now copy some text to the paste buffer using tmux. Enter Copy mode with PREFIX [. Move to the start of the first sentence, press SPACE to start selecting text, move to the end of the first sentence, and press ENTER to copy the selection. Repeat this with the second and third sentences.

Each time you copy text, tmux creates a new buffer. You can see these buffers with the list-buffers command. Issue that command through Command mode in tmux and you'll see three buffers, each containing one of the lines you copied:

```
buffer2: 22 bytes: "Last sentence is last."
buffer1: 22 bytes: "Next sentence is next."
buffer0: 25 bytes: "First sentence is first."
```

Pressing PREFIX] always pastes the most recently captured text, but you can issue the command choose-buffer to select a buffer and paste the contents into the focused pane.

Split the current window in half and launch Nano in the second pane, then enter Command mode and type this:

```
choose-buffer
```

You'll be presented with a list that looks like this:

You can select any entry in the list, press ENTER, and the text will be inserted into the selected pane automatically.

This is an excellent way to manage multiple bits of text, especially in text-based environments where you don't have access to an OS-level clipboard.

These buffers are shared across *all* running tmux sessions, too, so you can take content from one session and paste it into another.

Notice that each buffer has a name when you run the list-buffers command:

```
buffer2: 22 bytes: "Last sentence is last."
buffer1: 22 bytes: "Next sentence is next."
buffer0: 25 bytes: "First sentence is first."
```

The paste-buffer command lets you specify the source. Instead of pressing PREFIX-] to paste the most recently copied text, enter Command Mode and use paste-buffer and specify the buffer you want to paste from. For example, to grab the text from buffer1, enter the following command in Command Mode:

```
paste-buffer -b buffer1
```

If you don't like these default buffer names, you can rename a buffer. Enter Command Mode and issue the following command to change buffer2 to something easier to remember:

```
set-buffer -b buffer2 -n last-sentence
```

Now, when you look at the list of buffers, you'll see the buffer's name has changed:

```
last-sentence: 22 bytes: "Last sentence is last."
buffer1: 22 bytes: "Next sentence is next."
buffer0: 25 bytes: "First sentence is first."
```

There is no direct way to use save-buffer to copy text into a buffer and specify the name at the same time. However, you can do this with a custom

keybinding. You will see an example of that in Integrating tmux with System Clipboards, on page ?. However, the `load-buffer` command lets you load text into a named buffer if you pass the `-b` flag. For example, to load the contents of `buffer.txt` into a buffer called `code`, enter Command Mode and use `load-buffer -b code buffer.txt`.

Remapping Copy and Paste Keys

If you use Vim and you'd like to make the copy and paste command keys a little more familiar, you can remap the keys in your configuration. For example, you can use PREFIX ESCAPE to enter Copy mode, then use `v` to start Visual mode to select your text, use `y` to "yank" text into the buffer, and use `p` to paste the text:

buffers/tmux.conf

```
bind Escape copy-mode
bind -T copy-mode-vi v send -X begin-selection
bind -T copy-mode-vi y send -X copy-selection
unbind p
bind p paste-buffer
```

This can be a real productivity boost if you happen to do a lot of copying and pasting between windows and panes and are already comfortable with the keys that Vim uses.

Now that you understand how buffers work, and how to change keys related to copying and pasting text, you can integrate tmux with your operating system's clipboard.

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