RC Account Registration

tmux: Tools to enhance your terminal

View the Slides

https://github.com/ResearchComputing/rmacc_2025

Session Outline

- Overview of tmux
- Basics of tmux Usage
- Tools to simplify tmux
- Best practices on CU Research Computing

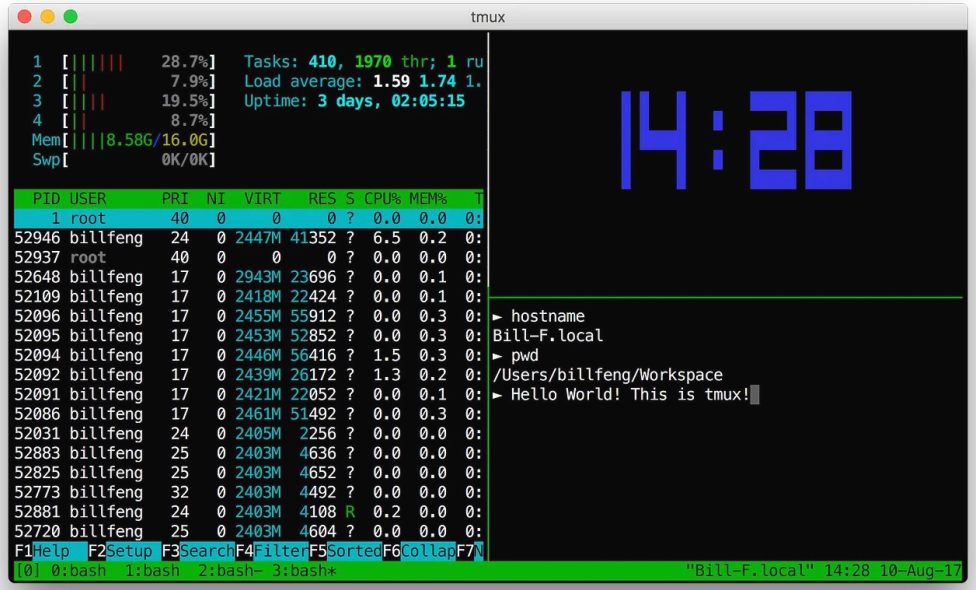
Ask Questions

Discuss Ideas

Overview

What is *tmux*?

- *tmux* = terminal multiplexor
- Allows you to split your terminal into multiple “panes”, as well as keep terminal sessions alive



Basics of tmux Usage

Logging into CU Research Computing

login to CURC via your terminal (CU Boulder or CSU users):

```
$ ssh monaghaa@login.rc.colorado.edu
```

...or login to CURC via your browser (all users):

https://ondemand-rmacc.rc.colorado.edu

(once logged in, navigate to **Clusters -> Alpine shell**)

Getting Started

- Once logged in, attach to a tmux session:

```
$ tmux (#first time you start session)
$ tmux attach (# when reconnecting to session)
```

Prefix and Command Keys

- *tmux* uses a set of **prefix** and **command** keys to:
  - *Attach and detach sessions*
  - *Split the terminal into panes*
  - *Move between terminal panes*
  - *Create and switch between new windows*
  - *Close panes and windows*
- *tmux* always uses Ctrl-B (denoted as C-b) for its prefix, followed by another character for the command
  - Even on Macs!
- Press the prefix keys at the same time, then let go, and press the command key!

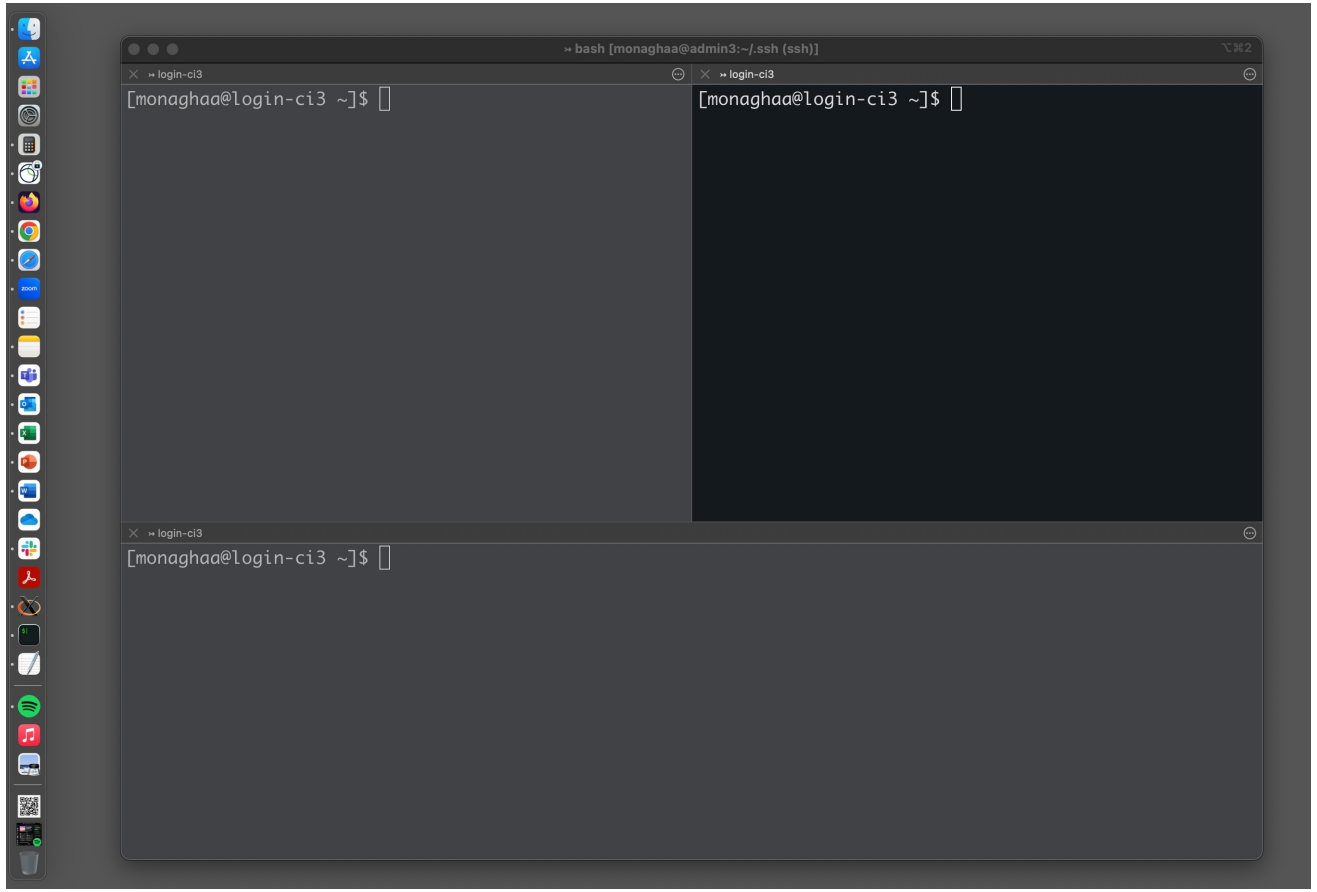
Basic Commands

- Split terminal left/right: **C-b %**
- Split terminal top/bottom: **C-b “**
- Move to a different pane: **C-b <arrow key pointing to pane>**
- Close a pane: **Ctrl-d** or type **exit**
- Create new window: **C-b c**
- Switch between windows: **C-b n** (next) or **C-b p** (previous)
- Detach from session: **C-b d**
- List sessions: **tmux ls**
- Attach to specific session: **tmux attach *n***, where n is the session number

Demo

Tools to simplify tmux

Integration of tmux for Mac: *iTerm2*



Using *iTerm2*

- From your laptop, ssh to a specific CURC login node (login-ci[3,4,5]):

  $ ssh ralphie@xsede.org@login-ci4.rc.colorado.edu

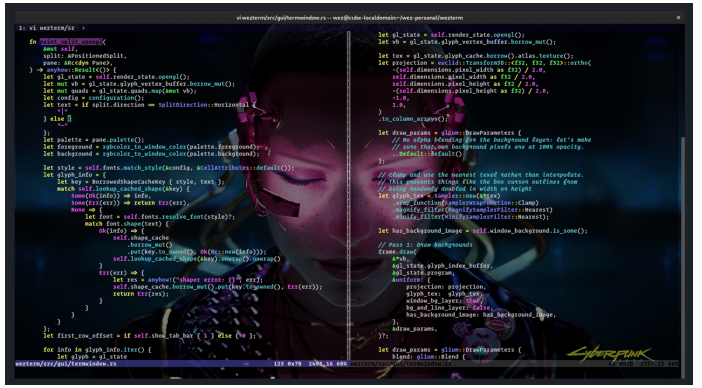
- Once logged in, attach to a tmux session with the `**-CC**` option

  $ tmux -CC *(#first time you start session)*
  $ tmux -CC attach *(# when reconnecting to session)*

- Now use tmux in the *iTerm2* terminal with all tmux syntax abstracted!
  - Demo….

Similar tmux integration options for Windows:

- Terminal emulators that support tmux's control (`-CC`) mode, which enables abstraction of tmux syntax:
  - Native option: Windows Terminal w/ WSL
    - additional docs on –CC option
  - iTerm-like option: Wezterm →



Best Practices

Best Practices for using tmux on CURC

- Run on specific login nodes
  - Reason: these are rarely rebooted so sessions will persist for weeks or months
- Do not run on compute nodes
  - Reason: sessions will end when job ends
- Keep it simple – i.e., no plugins or special features
  - Reason: plugins often consume more resources than are available on login nodes
- When in doubt, ask rc-help@colorado.edu