RC Account Registration

tmux: Tools to enhance your terminal

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View the Slides

https://github.com/ResearchComputing/rmacc_2025

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Session Outline

- Overview of tmux

- Basics of tmux Usage

- Tools to simplify tmux

- Best practices on CU Research Computing

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Ask Questions

Discuss Ideas

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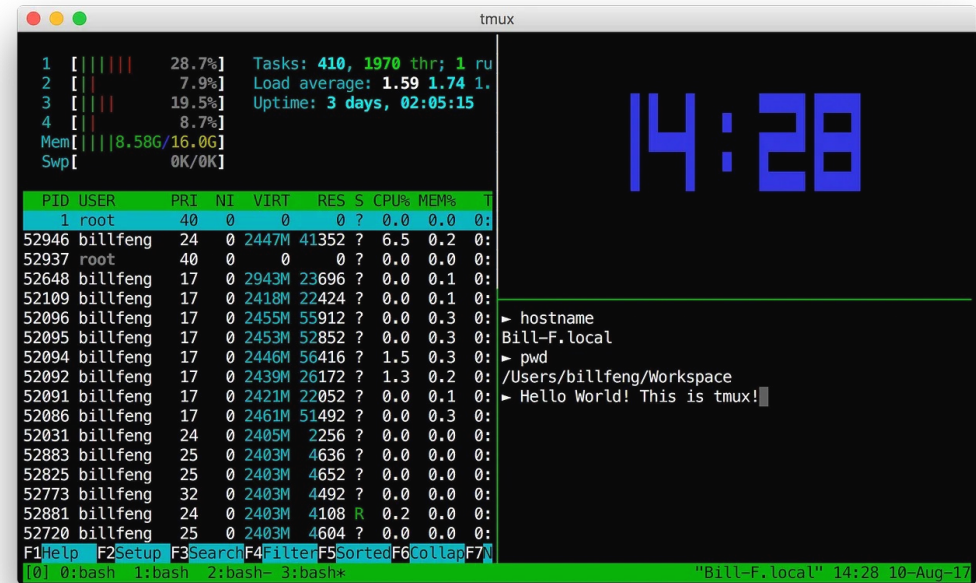UNIVERSITY OF COLORADO **BOULDER**

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Overview

What is *tmux*?

- *tmux* = <u>t</u>erminal <u>m</u>ultiplexor
- Allows you to split your terminal into multiple "panes", as well as keep terminal sessions alive

Basics of tmux Usage

Getting Started

- 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:

    $ tmux *(#first time you start session)*

    $ tmux attach *(# when reconnecting to session)*

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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!

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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

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Demo

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Tools to simplify tmux

Integration of tmux for Mac: *iTerm2*
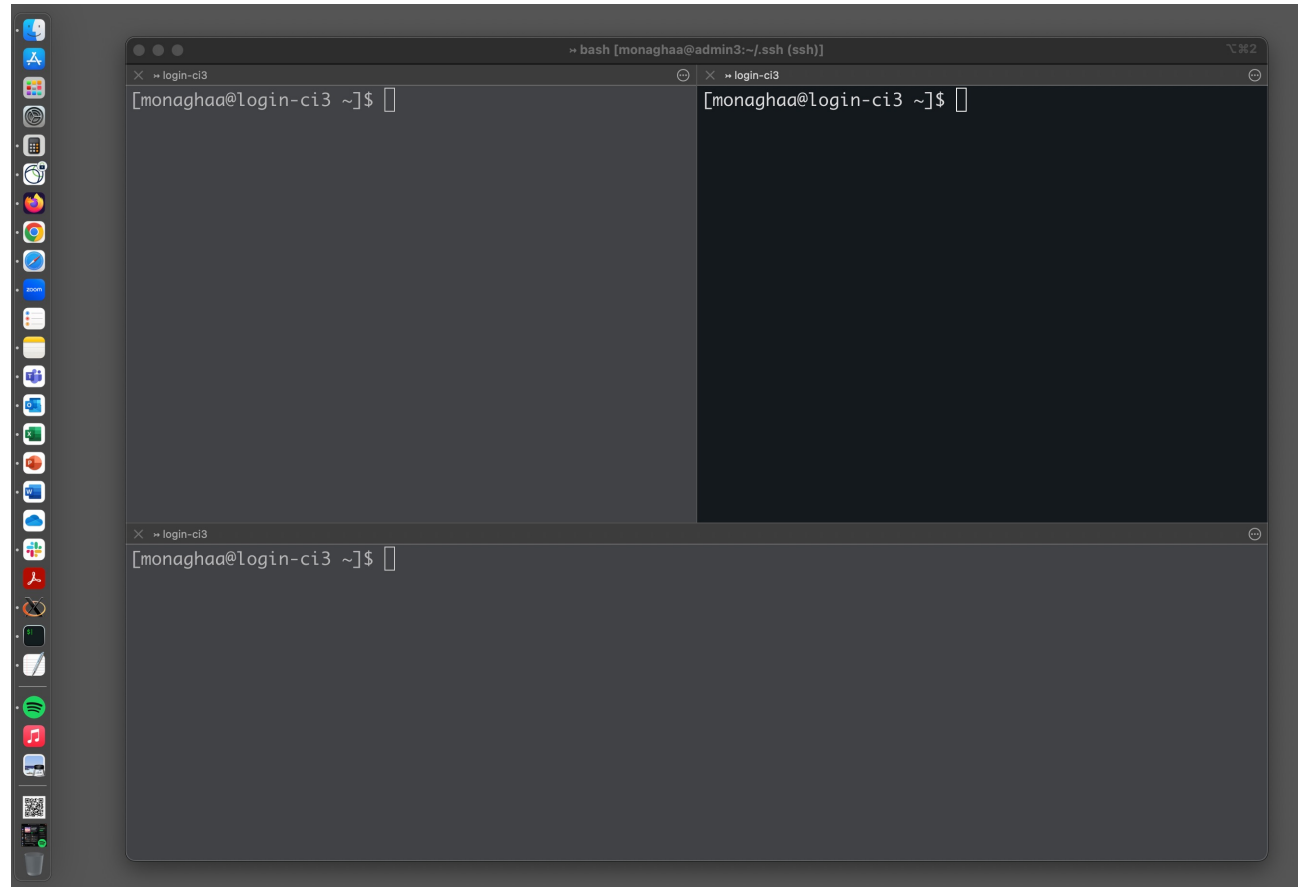
Using *iTerm2*

- 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)*

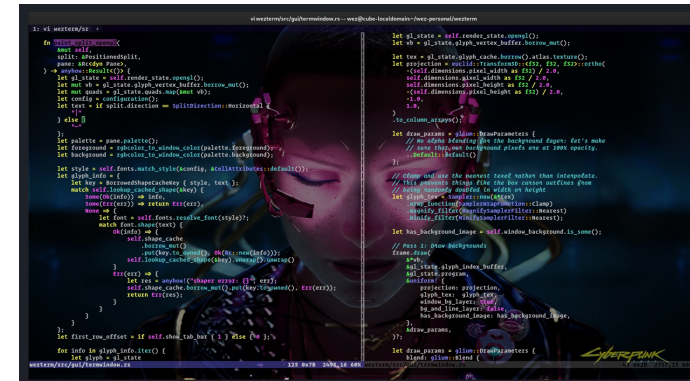 $ tmux -CC attach *(# when reconnecting to session)*

- 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: <u>Windows Terminal w/ WSL</u>
    - <u>additional docs on –CC option</u>

  - iTerm-like option: <u>Wezterm</u> →

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Best Practices

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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

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