How to Apply tmux on Andromeda

1. Introduction

For the most part, your primary window into Andromeda will be through the terminal. Therefore, it is important to become comfortable with the tools available in the terminal environment. One such tool is tmux; tmux is a "terminal multiplexer", allowing you to manage multiple terminal sessions at once, save sessions when signing off of a remote connection, and more. Here, we will give a brief introduction to using tmux.

2. Managing panes

To start, just run tmux from the terminal after ssh to the cluster. This will begin a tmux session:

```
[johnchris@a002 ~]$
```

```
[0] 0:bash*                                    "a002.m31.bc.edu" 13:47 10-Nov-25
```

Notice in the bottom left corner the [0]. This is the session id, which is automatically assigned to 0, since we did not explicitly specify it. We can designate a specific name to our session with tmux new -s session_name:

```
[johnchris@a002 ~]$
```

You can split the window horizontally into two terminal sessions by first typing Ctrl and b (denoted C-b), then type Shift and 5 ("%") **after releasing** C-b. As a shorthand, we write this type of keybindings as C-b %. Similarly, C-b " (Ctrl and b, then Shift and ') splits the window vertically.

```
[johnchris@a002 ~]$              [johnchris@a002 ~]$
```

The new terminal session on the right will now be active. You can switch between active terminal sessions with C-b <arrow keys>, so to get from the left terminal to the right, type C-b <left arrow>. A pane can also be closed with C-d.

Special notes for Mac users: Do not use Command (⌘) key for all the keybindings introduced above; use Control (⌃) key instead. If you accidentally type ⌘-d when trying to close a pane, type Shift (⇧)-⌘-d to close the extra split pane.

3. **Managing windows**

    You can also create and cycle through multiple windows within the same tmux session. Open a new window with C-b c. You will see a numbered list of windows at the bottom of your tmux session:

```
[johnchris@a002 ~]$
```

```
[0] 0:bash- 1:bash*                    "a002.m31.bc.edu" 13:52 10-Nov-25
```

The window name followed by a * is your current window, and the one followed by a - is the previous window you were in. You can cycle through the open windows with C-b n and C-b p to open the next and previous windows, or C-b <number> to open the corresponding window.

4. **Ending a session**

    You can end a tmux session by simply closing all of the panes inside it by typing "exit". You can also "detach" your tmux session, with C-b d. Once a session is detached, you will be returned to your regular terminal environment but the tmux session will remain available for later. You can view detached tmux sessions with tmux ls:

```
[[johnchris@a002 ~]$tmux ls                                              ]
 session_name: 2 windows (created Mon Nov 10 13:56:33 2025)
[johnchris@a002 ~]$
```

You can reattach to the tmux session, returning to your previous workspace, with tmux attach -t <session id>. In this case, the session id is session_name. To terminate a tmux session after detaching from it, type tmux kill-session -t <session id>. To terminate all detached tmux sessions, type tmux kill-server.

The ability to detach and reattach to sessions is especially useful when working on a remote machine, as is the case with Andromeda and other high performance computing environments. When you finish your work session, your remote connection will be closed along with your terminal session. However, with tmux, you can save your session before signing off and when you return later, simply reattach to your session and resume where you left off.

5.   **Other resources**

Typing C-b ? in a tmux session will display a list of available commands. You can also visit the tmux wiki page, which provides links to documentation, guides, and other resources.