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Exploring Linux Practicum, Part 1

Linux Fundamentals

Presented by CSCNSI

The Sections

- Part 1: Access & adding users
- Part 2: Yum, RPM & repos
- Part 3: Sharing a session with tmux
- Part 4: files and permissions
- Part 5: Shell tricks

Goals

- Setup some basic configuration on your master:
 - Individual user accounts with sudo access
 - Local Yum repo mirrors
 - A local share directory
- Additionally
 - Learn to collaborate using tmux
 - Learn some basic bash tips and tricks

Part 1: Access & adding users

- First we need to make sure you can ssh to your master nodes
- At the end of this part, you should have your own user that has sudo privileges
- Once this is created, you shouldn't need the "admin" account anymore

Part 2: Yum, RPM & repos

- We have a local mirror of yum repos just for the cluster school
 - You want to use these because they're fast and local
- Learn to ask questions like:
 - What package did this file come from?
 - Where can I find the package that gives me <insert_program_here>?

Part 3: Sharing a session with tmux

- There are only a couple of steps here, but it's worth spending some time with the cheatsheet to explore your options
- Tmux has a concept of windows and panes
 - Windows are what happen when you do `<Ctrl-b-c>`
 - Panes are what happen when you do `<Ctrl-b-"`
- You can do a lot of re-arranging of windows and panes
- There are lots of ways to identify (e.g. name) windows and panes for easy access
- If you do `<Ctrl-b-d>` you will be disconnected from your tmux session
 - But it's still running, and you can re-attach at any time with ``tmux at``

Part 4: files and permissions

- Navigating the filesystem efficiently is crucial to using linux
 - Even many of the non-file access things you do in linux are accomplished through file interfaces
- Take a look at ``man chmod`` to see what the other special permissions like ``sticky`` do to files and directories

Part 5: Shell tricks

- This section doesn't follow a path to accomplishing anything we need, but it introduces some necessary shell concepts
- There are other useful redirections like:
 - `<`
 - `<<EOF`
 - `>` vs. `>>`
 - ``tee``
- To get help with bash internals, try ``help`` instead of `man`
 - E.g. ``help for`` for info on for loops

Questions?