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The University of Texas at Austin

SyncMe and Git Worktrees

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Outline

- ▶ This talk is in two parts: SyncMe and Git Worktrees
- ▶ Part 1: Help when you have too-many git repos
- ▶ Part 2: Help when you have more than one active branch

Motivation for the syncMe tool

- ▶ Too many repos: 28 on laptop and 22 on Frontera
- ▶ Examples: my dotfiles (.up), Lmod and XALT
- ▶ Hard to keep them all up-to-date
- ▶ Result: syncMe in the SyncMeTool repo
- ▶ <https://github.com/TACC/SyncMeTool.git>

What does syncMe do?

1. Uses \$SyncDirPath for where to look for git repos
2. Can report the git status for all those directories
3. Can do a git pull on those directories.

Install

- ▶ See <https://github.com/TACC/SyncMeTool.git> for complete details
- ▶ TLDR:
- ▶ Install lua and luaposix if necessary
- ▶ clone repo
- ▶ Put SyncMeTool/bin in your \$PATH

Usage: Specify where to look: `$SyncDirPath`

- ▶ Set `$SyncDirPath` to be a list of directories to search for “.git“
- ▶ Paths w/o a leading `'/'` are relative to `$HOME`

Usage: syncMe status or syncMe st

- ▶ Loop over directories, search for “.git” directory or file
- ▶ Runs **git status** in those directories
- ▶ Removes unnecessary output
- ▶ Those repos with necessary output are buffered and printed at the end.

Usage: syncMe pull or syncMe up

- ▶ Loop over directories, search for “.git” directory or file
- ▶ Runs **git pull** in those directories on origin
- ▶ Removes unnecessary output
- ▶ Those repos with necessary output are buffered and printed at the end.

Demo

- ▶ Show this in practice.

Part 2: Git Worktrees

- ▶ Two projects: Lmod and XALT have more than one active branch
- ▶ Switching branches in same directory tree usually unhelpful
- ▶ Especially running tests in two different branches
- ▶ Could use multiple clones, but I have lost track of them.

What are git worktree?

- ▶ They are part of git but not well known.
- ▶ They allow for multiple source directories from one clone
- ▶ You can leave branches in incomplete state and switch to a different branch
- ▶ No need to use “git stash”

What are git worktree? (II)

- ▶ Search Youtube for “git worktree” for other tutorials
- ▶ So why am I giving this talk: Good Question !!?
- ▶ There are many ways to layout the worktree directories
- ▶ I am going show the one way that works with “syncMe”

Demo

- ▶ Show this in practice.