

# Transitioning to Lmod

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# Transitioning to Lmod

- What does Lmod offer?
- A transition strategy
- New features

# Why You Might Want To Switch

- Active Development; Frequent Releases; Bug fixes.
- Vibrant Community
- It is used from Norway to Israel to New Zealand from Stanford to MIT to NASA
- Enjoy many capabilities w/o changing a single module file
- Debian and Fedora packages available
- Many more advantages when you're ready

# Features requiring no changes to modulefiles

- Reads TCL modulefiles directly (Cray modules supported)
- User default and named collections of modules
- Module cache system: Faster avail, spider, etc
- Tracking module usage
- A few edge cases where Env. Modules and Lmod differ

# Lmod supports a software hierarchy

- Lmod supports flat layout of modules
- Some really cool features if you have a software hierarchy
  - Protecting users from mismatched modules
  - Auto Swapping of Compiler and MPI dependent modules
- When you are ready, it will be there

# A Transition Strategy

- Install Lua and Lmod in your account
- Staff & Friendly Opt-in Testing
- Deploy to your users with an Opt-out choice
- Some users can run TCL/C modules (a.k.a. Tmod)
- Others can run Lmod
- No single user can run both at the same time!

# Staff & Friendly User Testing

- Install Lmod in system location.
- Install `/etc/profile.d/z00_lmod.sh` to redefine the **module** cmd.
- Load system default modules (if any) after previous step
- Users who have a file named `~/.lmod` use Lmod
- At TACC we did this for 6 months

# Deploy

- When you are ready, change */etc/profile.d/z00\_lmod.sh*
- Users can opt-out
- We supported this for another 6 months
- We broke Env. Module support when we added the family function
- Both transitions generated very few tickets (2 + 2)



# Lmod Features

- Support for a Hierarchical Module layout
- Module spider: find all modules
- Caching system for rapid avail and spider
- Support for Properties
- Module collections, output to stdout, proper version sorting
- Reads TCL modulefiles directly (Cray modules supported)
- And so much more...

# Planned Lmod Projects

- Better Default Handling ( $\sim$ /.modulerc)
- Invisible Modules

## Other Talks

- Lmod Hands on tutorial @ TACC Booth 548: Wed. 2:00-3:30
- XALT BoF 13B 1:30-3:00 Tuesday