

Lmod: A Modern Environment Module System

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November 19, 2014



My Passions

- Make life easier for all w/o getting in the way.
- Automate when possible to eliminate repeat tickets.
- Manage TACC's Software Hierarchy.
 - Match libraries and apps to compiler and MPI stacks.
 - End the bleeding when users swap compiler or MPI modules!!
- Lmod was first installed on TACC systems in 2009.

Lmod Features (I)

- A modern replacement for a tried and true solution.
- Especially useful w/ software hierarchy \Rightarrow Can't load mismatched modules.
- Automatically swaps in the libraries (e.g. Boost, fftw, PETSc) compatible with the current compiler/MPI stack.

Lmod Features (II)

- Allow only one module of a given “name” at a time.
- Prevents loading more than one compiler or MPI Stack (expert can override!).
- Users can save default set of modules and their owned named collections.
- Active development and user community.
- Robust regression testing allows for easy refactoring.

What's new in Lmod

- Full support for reading Cray module files.
- Better support for running Lmod on shared home file systems.
- Priority Path: Some paths are more equal than others.
- **sh_to_modulefile** converts shell scripts into modulefiles.
- Support for **load(atleast("gcc","4.8"))**

Auto swap

- An improvement suggested by Maxime Boissonneault.
- Replace **module load gcc; module swap gcc intel**
- With **module load gcc; module load intel**
- Let Lmod figure out that a swap is required and do it for you!

Thanks for your attention!

- Job Level Analytics BoF Thursday 11/21 @ 12:15 to 1:15pm
- Lmod BoF (TACC Booth: Tuesday 11/18 @ 11:00 to 12:00pm)
- lmod.sf.net, www.tacc.utexas.edu/tacc-projects/lmod
- lmod-users@lists.sourceforge.net