



Calcul Québec

Colosse & Helios

TCL Modules to Lmod journey

Maxime Boissonneault <maxime.boissonneault@calculquebec.ca>
SuperComputing 2014

Colosse and Helios

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- Université Laval (Québec City)
 - Part of Calcul Québec, Compute Canada

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 - 237 different builds of various softwares/libraries

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Challenges

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- Challenges are not with using Lmod
- Challenges are with changing philosophy/
organisation of modules
- #1 : Hierarchies
- #2 : module avail does not show all modules
- #3 : Frequent updates/bug fixes

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- #2 : module avail
 - Hiding «useless» (with your current compiler/MPI) modules is good
- #3 : Frequent updates
 - They come with new and useful features!

Lmod enables...

- Share part of module tree with Colosse/Helios
 - Core, Core-colosse, Core-helios
 - Compilers, Compilers-colosse, Compilers-helios
 - MPI, MPI-colosse, MPI-helios
 - Cuda (Helios only)
 - Yet, users only see «Core modules», «Compiler-dependent modules», «MPI-dependent modules», «Cuda-dependent modules»

Lmod enables...

- Module tree caching
 - Our modules and softwares are on Lustre. Caching improves speed a lot!
- Coloring (categories)
- Customization of display (module avail)
- Easy logging through load hooks
- «Easy» customization of Lmod behavior in a sane language (Lua vs Tcl)
- Output in «stdout» rather than «stderr» (configuration option)
- Auto swap

User feedback

- Many got confused by renaming of modules
- Once confusion is gone, people find it easier to use.