



Spack Progress

Stephen White, Marc Mengel

September 2020



Project Status

- CosmoSIS
 - Now in maintenance mode, managed by Marc Paterno
 - Outstanding Issues
 - We have made a local recipe change in how we build.
 - We are working to feed this back to Spack development team. Trying to avoid a local patch.
- Icarus for Theta Cluster
 - Sophie was able to build code on the off-site Ubuntu system. Compilation at UOregon is completed
 - Issues were identified with the installation recipes, they were related to non-FNAL configuration (non-SLF OS, no cvmfs)
 - Discussed with Spack team and corrected.
 - Current focus is on being able to test jobs with this configuration
 - Currently investigating issues related to fcl file lookup.
 - Other issues are related to style of packages.yaml/compilers.yaml to match cray vs. other operating systems. This is under investigation.
 - Recently started compiling Icarus code on Theta!
 - Plan to get in touch with ALCF contacts to address Theta-specific issues

Project Status

- DUNE
 - We have met with DUNE twice in the last month, first answering experiment concerns and then planning a path to Spack.
 - DUNE has provided usage cases to work towards.
 - We will be using the approach of ups_to_spack tools for the majority of Dune packages, and building one-of packages to start
 - Dealing with issues that SpackDev would have done.
 - Creating a {packName}Config.cmake, etc.
 - If built with the CET Modules this would have already existed.
 - Tuning up ups_to_spack to produce a clean migration of the dunetpc stack.
 - Writing up documentation to allow experimenters to perform conversions.
 - Building area in duneapp for conversions, these converted products will be added to CVMFS

Misc

- SpackDev is expected to be the nicer toolset and preferred by users. We are looking for it being completed.
 - Has not seen progress for quite some time as Chris Green has competing priorities.
- Spack builds can be made to work without SpackDev, if we use patches, this will be more difficult for the users and not as friendly.
 - Do we are pushing ahead using patches
- We plan to push Spack to others after DUNE is completed or near-complete.
 - Icarus is still on the list and will be approached, after Theta conversion is finished.
 - Other experiments have not been discussed.
- Waiting on concretizer.

