

Notes from discussion at LArSoft Coordination Meeting, Dec 10, 2024

Release and project report (Erica)

- Herb. Will disabling of Legacy LArG4 be true of all v10 releases?
 - No. Only after the migration to Geant4, v11+.
 - Expts can try to port, but SciSoft will not
 - Lynn noted that porting Legacy LArG4 forward to newer Geant4 versions will not be easy

Developing under Spack: Recent changes to MPD (Kyle Knoepfel)

- Q: is spack-dev still a thing? A: No. Treat mpd as replacement
- Herb: are developers expected to touch spack recipes?
 - In general no. not for LArSoft development. If you don't need to add a new dependency, and are just adjusting functionality, then probably don't need to touch recipe at all
 - HG: But if we know that deps will change, then what should I do? Say developing two packages and both need to change simultaneously [not sure I captured that correctly...]
 - A: in UPS, if a lower-level package needed to be updated, then would need to change the versions in concert throughout the software stack. In spack, this is not necessary.
 - Say developing LArCore, want to build with a diff version of root. With spack, can just change the version of root w/o changing the version of LArCore. The recipe needs to be flexible enough to do this. Takes some care, but not hard to write sensible recipes like this.
 - Noted that recipes do not look like UPS table files
 - Typ would just say larcore depends on <product X> w/o specifying the version.
 - Only time that version comes in is when interface changes. Then would turn the dependency statement to say something like: for this version or greater, use this, otherwise use that. So generally do not hardcode versions in recipes
 - This is how LArSoft recipes are written
- Can you add a package to be developed after setting up the project?
 - Yes. Just clone the new repository, then 'spack mpd refresh'

- Steven: will there be a tutorial?
 - Erica: I think it would be useful to have new user tutorial, so have been assuming it will be part of the education campaign in the migration plan
 - Kyle: This is almost a tutorial, except for the gcc env used. That makes this not a tutorial. But making into tutorial would be relatively easy, and helpful.

Proposal for standard builds of LArSoft under Spack (Marc Paterno)

- Marc: approval process? A: offline leads. Make materials available to community
- Giuseppe: Proposal seems good. Can we get help with Spack recipes for expts wanting to start fresh?
 - A: Will be part of the transition plan to Spack. Will help with that.
- Lynn:
 - Comment: alluded to removing expts if CI is not up to date. This might [technically] function in spack world. Under UPS model, experiments fall behind because the LArSoft version number in experiment code is not updated. So could not consider running CI on experiment code. That said, experiments do fall behind regularly, and then catch up, so [removing from CI] might result in a lot of thrashing. So [removing expt CIs that are behind] might not be as effective as hoped
 - Marc: appreciate cautions. Will need to build some time buffering into the system to allow expts to catch up. And this is a proposal. May need some course corrections as we move forward.