Spack

Project Update
10/3/2019

Spack Task Statuses

- UPS to Spack convert essentially complete.
  - Cleanup, testing and odd case remain to be completed.
  - Allows a UPS product to appear as a Spack package.
  - Some UPS products simply cannot be rebuilt
- Spack to UPS converter is largely done
  - Allows UPS folks to setup a Spack product
  - This exists only for migration
- Spack Build Cache now exists - 400 GB to start spack-cache-1.fnal.gov
  - Common location to load products - fnkits/scisoft replacement
- Cross package install for installing MAC packages from a Linux host into a shared area (cvmfs).   Largely complete utilize macholib
- Scripts for updating CVMFS Spack areas are in testing

Spack Plans

- Begin actual conversion UPS SCD service
  - POMS, SAM, IFBeam, JobSub(?)
  - We will be dealing in more players for this
  - Pushing to use Spack packages in a Docker container
    - Spack already supports a base docker package so we optimistic about this.
- Package Release Workflow
  - Build binary images on build cluster
  - Transfer to Spack binary cache (spack-cache-1)
  - Install on CVMFS and elsewhere
- Testing Spack use in Grid Jobs
  - TBD

Spack Outstanding Issues

- Update policy for Spack itself
  - Spack changes can cause hashes identifying packages to be modified
  - Changes to the recipe also can change the hashes
- Move the Larsoft builds and distributions into Spack for production
  - Initial proof of concept was MVP1a
  - Required to replace Lynn
  - This automates the mechanics of release builds BUT release coordination is still required.