HSF Packaging Group: Introduction

Graeme Stewart and Ben Morgan
Ideas for Group Plans for 2019

● Main plans to continue with demonstrators and prototypes of packaging solutions in 2019
  ○ We would like these to aim at providing meaningful and testable solutions to the packaging problem for HEP
    ■ Based on the use cases we worked on last year
  ○ It will be good to have updates from each of these projects every few months

● Longer term goals and thoughts
  ○ CHEP2019 paper
    ■ Follow on from successful presentation in Sophia of the group’s work
  ○ Update of the packaging group technical note
    ■ Considerable amount of work done since 2016
Ongoing Projects

- **Building LCG-like software stack with Spack**
  - Graeme and Javier work a small fraction of their time on this
  - Should be useful for ATLAS and FCC as first clients
  - Currently all dependencies for Gaudi are building correctly
  - Want to tidy up HSF `hep-spack` package repository
    - Remove some packages that went into upstream spack repo
    - Provide a place for the community to park recipes that are in a good state, but not yet accepted upstream
  - We will share the configuration for our setup in the HSF `spack-config` repo
  - We hope to get a CERN Summer Student to work on this too
SuperNEMO Stack with Spack

- SuperNEMO migrating to use Spack
  - Homebrew moving away from from-source builds, binaries work well on Linux, except until graphics (hence ROOT) come along

- Out the box, Spack provides all bar one dependency
  - Though await Javier’s ROOT improvements

- Use cases maybe slightly different to those discussed
  - Will still support end users doing the install themselves...
  - ... but already using Docker/Singularity as binary deployment mechanism (no CVMFS yet)

- So far so good, some contributions likely:
  - To spack: “Spack update”, “spack repo add <URL>” (like Homebrew...)
  - To WG: Maybe workflow/scripting for Container +Spack (+CVMFS) as a Developer Environment (e.g. support macOS/Windows for Linux-only software)
Ongoing Projects

- **FNAL Spack / SpackDev**
  - The MVP, last update October

- **LHCb use of Nix**
  - Chris Burr will update us today on that

- **Use of Portage as a ‘base system’ on which we build**
  - Nice tutorial from Guilherme last year

*Are there any other projects or tools that people are aware of?*
Meeting Cadence and Communication

- As the group has entered a phase where we are more working than discussing...
- Baseline schedule would be one meeting a month
  - Of course we can always try to convene extra meetings if needed
  - Stick to this day/time as it seems to work well for most
- **Next meeting, 27 February**

- Mailing list has been very responsive when questions are raised
  - Thanks! So don’t be shy to use it
HOW2019 Workshop

● HSF/OSG/WLCG Workshop is this year in March
  ○ https://indico.cern.ch/event/759388/
  ○ Early registration closes this week

● Wide ranging workshop on the advances needed in software and computing in the next decade
  ○ Opportunity to reach discuss with HEP and non-HEP communities
  ○ Full set of HSF sessions (Reco, Analysis, Sim)
  ○ There is a Software Tools session where we will give an update from the group