LIM, 3 Dec 2019

Present: R Hauser, M Clemencic, S Mosciatti, W Lampl, G Eulisse, B Hegner, G Folger, R Bachmann, C Delort, A Kazarov, M Nowak, I Razumov, G Ganis (chair), P Mato, G Stewart, B Couturier, S Muzaffar, I Goulas
Remote: A Marcinek
Agenda: https://indico.cern.ch/event/868489/
Next meeting: 17 December 2019

Status of things

- Nightlies
  - New/upgrade packages
    - Starlight 307, Rivet 3.0.2, rangev3 0.9.1
      - For ARM, range v3 still on 0.5.0 because S Rosier still uses old version of LHCb software for tests
  - On-going: MySQL upgrade to 10.4.10, recola-collier 2.2.0
  - Arrow problem fixed by disabling jemalloc, as suggested during last meeting
  - Gaudi related failures investigated by ROOT
- LCG_96b
  - ATLAS reported problem in building gcc extensions due to missing GMP, not present with LCG_96
  - This is due ot a difference between gcc8.2 (used for LCG_96) and (gcc8.3 used for LCG_96b).
  - This will be followed offline: SPI-1498 .
- LCG_97 plans
  - First RC after ROOT will branch v6-20-patches (ETA: end of January)
  - JIRA Epic available for desiderata, etc

Layered stacks plans

Need more information to decide what to do. Agreed to have a dedicated release, e.g. LCG_96b_ls, to exercise machinery, in particular for RPMs. (After the meeting it was decided to tag the current dev4, so a more appropriate name is LCG_dev4_ls). This release will only be built for one or two platforms: x86-64-centos7-gcc8-opt and x86-64-centos7-gcc9-opt . The latter is because LHCb will use only gcc9 from next release on, although there are still some issues to cross-check with ROOT, related to ambiguities in string constructors. Some, but not all, are expected to be fixed in ROOT v6.20.

Spack investigations

Ivan presented the status of his tests with Spack as a replacement of LCGCmake. The work was generally well received. In the discussion that followed several aspects have been touched:

- Potential database related issues when publishing on CernVM-FS
    - Workaround is to use CernVM-FS as target installation, not as repository
- Spack aggressive hashing approach
    - This is felt as a potential issue. Felt so by the developers. No real workaround for now. Need more experience to understand the real extension of the problem.
- System packages handle by Spack
    - General fear that could trigger huge rebuilds
    - LHCb is ok with rebuilding also the ‘fundaments’ but only if stable and not maintained by SFT (huge work)
    - Seen as a possible way to get rid of HepOSLibs
- Question raised for which we need further information / investigation
    - HEP recipes uploaded upstream
        - Need solution for experiment specific recipes/packages (there will always be a need for that, e.g. Geant4 for LHCb)
        - In general no agreement, need more information
    - Need a workflow for developers
        - Spack-dev not consider the solution
    - If we go with Spack we need a forum were to discuss our issues
        - Spack developers invited at LIM or the other way around
    - We need a solution for Spack / Yum interplay
        - ATLAS DAQ (and ALICE Online) will never give up completely ROM repositories
        - Metapackage as glue could be a solution

AoB

- MacOS Catalina and cvmfs
    - Solution with firmlinks, suggested during last meeting, seems to work
- Need to provide m32 support in the compilers (see SPI-1434).