LIM, 30 October 2018

Present: I Goulas, C Delort, J Heinz, J Cervantes, G Folger, A Krasznahorkay, S Mosciatti, M Clemencic, E Obreshkov, G Ganis, P Mato, G Eulisse, I Razumov, W Lampl, S Muzaffar
Remote: G Amadio, E Moises
Agenda: https://indico.cern.ch/event/769302/
Next meeting: 13 Nov 2018

Status of Things

Report about the meeting with SWAN team

The main subject of the meeting was the coordination of the provision of new packages on SWAN via the LCG stack, in particular when these packages are already available either form other distributions or cvmfs repository. This was triggered by recent requests (Ganga, HTCondor) and also the recent reorganisation of the SPI area in SFT.

We agreed that we should (continue) to be positively open to new requests and carefully evaluate the pros and cons of adding a package in the LCG stack or taking from an alternative source. In the particular, for the case mentioned above, we agreed that:

- it should be investigated if and how Ganga can be taken from 'ganga.cern.ch' (after the meeting M Clemencic provided access to the LHCb ganga wrapper which may help this investigation).
- it should be investigated if the HTCondor client available from the CERN linux repositories can be added to the base container image(s) used by SWAN

The SWAN team will (continue to) filter the requests from the users and make sure that only those potentially interesting for a significantly large community are proposed for the LCG stack. The positive example of TensorFlow was brought up, now used by a lot of people, also from the experiments. The example of Octave was also given: this was a promising addition which turned out not to be every used (ndr: this may also bring the need for a package retirement policy).

It was mentioned that HepOSLib may bring in packages not necessarily required and potentially problematic; this could be addressed by specifying the list of the needed packages in the docker file.

There was a discussion about the availability of GPU ready builds of the release, for example for TensorFlow, which may become relevant if SWAN is run on GPU enabled hardware. This needs to be investigated and tried with the GPU enabled node we have in Jenkins.

Status of release LCG_94

ATLAS and LHCb did not report any new issue with respect to the last meeting. FCC did not yet started to test the new releases.

The optimized build for Ubuntu 16.04 (native gcc 5.4) is available on CernVM-FS since today. The build for Ubuntu 18.04 (native gcc 7.3) is on the way; this build is missing the following packages:

> *COOL CORAL Frontier_Client hadoop imagemagick libxkbcommon p2crypto prctl pygsi*

A discussion took place about the target audience of these builds, which have been requested by O Freyermuth (see SPI-1084). E Obreshkov said that some ATLAS users will use the builds. M Clemencic said that he will not use these builds (but historically there are LHCb users of Ubuntu builds; ndr). M Clemenic also said that, for Gaudi, it would be more interesting to have builds with gcc 8, which is available for Ubuntu 18.04 from the official repositories. The possibility to have those builds will be investigated.

The clang60 builds are still not available for LCG_94; a few remaining issues with RPMs are being sorted out. They are available for dev4 and dev3 (though there is currently a problem with ROOT-head on dev3 being followed by the ROOT team).

Issues addressed since last meeting

The problems with fmtlib and spdlog have been fixed.

For pyTorch (a pending request from SWAN; see JIRA SPI-1119), J Heinz has evaluated the dependencies and the amount of work required. The only viable solution is to install libraries from existing repositories; this means that only centos7 would be supported (no slc6). There was some discussion whether this package needs to be included in the stack. It was decided to discuss this with the SWAN team at the light of the new findings (no SWAN representative was unfortunately present).

The issue with pylint (see SPI-1034) was followed by J Heinz and a solution worked out. A discussion followed on the way of supporting python 2 and python 3. Currently we have two separated set of builds. M Clemencic asked whether we could have a single build with versions. It was mentioned that some packages, including ROOT, are not ready. It should be investigated how many packages are not ready and evaluate a possible solution and the amount of work required.

Support for python 3 was added in CORAL, which should be put back in dev3_python3 . Next will be COOL.

Updates on ergonomics for “thin docker images”

S Mosciatti gave an update on the integration between CernVM-FS and Docker. There is now a dedicated CernVM-FS repository - *unpacked.cern.ch* - which can be used to deploy unpacked images. A discussion took place about a few nice-to-have, such as the possibility to flatten the images, by squashing the layers; or the possibility to use the same unpacked directories both for Singularity and Docker. It was also suggested to use less generic names for the relevant applications, such as the docker3cvmfs daemon, currently called just ‘daemon’.