Architects Forum - Minutes

Date / Time:	17 January 2019 - 14h
Agenda:	https://indico.cern.ch/event/766421/
Present:	G Ganis (chair, notes), A Naumann, G Cosmo, J Blomer, M K Simon, A Peters, G Stewart, G Eulisse, W LAmpl, T Boccali, M Cattaneo, M Clemencic, A Sailer, A Valassi
Next meeting:	28 February 2019 - 14h

Introduction (G Ganis)

G Ganis reminded the series of SFT group meetings dedicated to the project program of work:

- 21 January 2019: CernVM and SPI
- 28 January 2019: Simulation
- 11 February 2019: ROOT

Meetings take place at 9h in 32-1-A24 and are open to interested people.
He also reminded some next events relevant to the community, such the joint HSF, OSG and WLCG workshop at Jlab in March, the Open Symposium on the European Strategy for Particle Physics in Granada in May, and the CernVM Users Workshop at Cern in June.
He finally announced that the topical presentation of today about the CERN OpenLab ongoing projects and collaboration with SFT had to be postponed due to last minute sickness of the speaker A Di Meglio.

SFT line management (G Ganis, for P Mato)

In the absence of P Mato, due to a short notice urgent commitment, the line management was reported by G Ganis.
A staff position for development of High-Performance code was open in the group at the end of year; the deadline of applications ended Tuesday 15 January and about 60 people people have applied. Starting the selection process.
The groups is starting the process for proposing projects for summer students for the three main programs: CERN standard, CERN OpenLab and GSoC.
The FCC-ee workshop software session last week. One outcome of the discussion was to start defining/building the common 'turnkey software stack'. A good opportunity right now to provide a common software stack for FCC and ILC/CLIC; this can and should happen before the approval of the next strategy update.

Report from the SFT Projects

ROOT

The team is working on the finalization of version 6.16 (released on 24 January 2019; ndr).
Started a deprecation campaign to remove unused parts of ROOT; many removal already done in 6.16.

Simulation

Geant4 10.5 was released before Christmas. It includes an updated version of VecGeom, CLHEP; full support for C++17, usage of C++ threads; updates in the hadronic physics with visible effects on some physics observables. The source code has been fully moved to GitLab, with no longer SVN dependencies.Reminders about training courses at CERN: beginners on 23-24 January; advanced on 26-27 March.

CernVM

CernVM appliance 4.2 is under preparation following the upgrade RHEL 7.6 to 7.7 (released on 4 February 2019; ndr).
CernVM-FS v2.6 under finalization; it includes the shrinkwrap utility, support for publication metrics, better integration for file-based distribution of container images. Target release date: Q1/2019 . Working to address typical and useful showcases with new 'HSF' oriented repositories (*sw.hsf.org*) and the CERN container dedicated repository, *unpacked.cern.ch*, following an initiative from CMS.

SPI

Working at the preparation of LCG_95, which will be based on ROOT v6.16; the first release candidate is expected in the coming days. A part from package version updates, this will include improvements in the setup of python packages, and in the compiler RPMs.
The team is continuing to work at the consolidation of the build infrastructure and to extend the integration test coverage.
New nightly builds, *dev3cuda9*, with CUDA enabled packages produced since early December; these are run on two nodes with GPUs got on loan from TechLab.
The Openlab ARM nodes will be replaced with equivalent ones provided by TechLab; a CERN summer student project to port LCG stacks to ARM has been submitted.

Report from related Projects

XRootD (M K Simon)

Release candidates for version 4.9 are being debugged in the attempt to get the release out asap, possibly by end of February. M K Simon inquired the forum about the needs for a direct RDMA interface for XRootD, some time ventilated as possible improvement; this was not considered a priority for the moment.

EOS (A Peters)

Cernbox user migration (EOSHOME) almost completed; next will be the projects. Third EOS workshop at CERN beginning of February.

Stakeholders feedback

Triggered by the ATLAS report, the discussion dealt mostly with two items: licensing issues and static code analysis.

ATLAS finally managed to get ATHENA fully open-source, under (mostly) the Apache 2.0 license. CMS reported that they have done the same for CMSSW (an Apache 2.0 license file was added in the main repository early January). ALICE is using GPL+LGPL. LHCb source code is under GPLv3; the situation with Gaudi is less clear; ATLAS would require Apache 2.0, but since parts are under GPLv3 and CERN copyright and cannot be re-licensed; the CERN legal support have been contacted to solve the issue.
Concerns were raised about the C++17 support of the Coverity static analyser. The new version is expected to improve the situation, though with certain reservations. ALICE mentioned that they are using CODACY, a product using the clang-based cppcheck and providing full support for C++17; it has a interface Coverity-like, including the possibility to store information in a database. It is free for open-source project. There was a general consensus that this product needs to be considered and evaluated.

HSF

G Stewart that three new working groups were formed focusing on analysis, simulation and reconstruction. All these groups will be fully active from end of January/ beginning of February and will organize sessions at the joint HSF/OSG/WLCG workshop at JLab. All relevant informations, including instructions about how to follow the activities of the (new) working groups are available from the HSF web site.

G Ganis, 10 February 2019