

Architects Forum - Minutes

Date / Time:	4 April 2019 - 14h
Agenda:	https://indico.cern.ch/event/766423/
Present:	P Mato, G Ganis (chair, notes), 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, D Castro (invited)
Next meeting:	9 May 2019 - 14h

Introduction (G Ganis)

G Ganis reminded the topic of the day, a status report on the SWAN project, developed jointly by EP-SFT and IT, and currently a IT (pilot) service.

He also reminded about the AFS phase-out of /afs/cern.ch/sw/lcg, which, as foreseen, entered the second phase on April 3rd, 2019, when external access to the CERN AFS cell has been removed for a week with the goal of finding out remaining deep usage.

SFT line management (P Mato)

Personnel movement:

- A new LD (high-performance software developer) has been selected (Guilherme Amadio) starting in October 1st after his current fellowship contract
- Predrag Buncic will be coming back to the group soon after being computing coordinator of ALICE for the last 6 years.
- Summer students are being selected (second round now)

Knowledge Transfer

- Achieved collaboration agreement with Israeli company (All In Image Ltd.) for development of ML services for medical applications is starting. A fellow will be hired on external funds to work on the project starting from June 2019.

The SWAN project (D Castro)

The [presentation](#) was given by D Castro (IT) on behalf of the SWAN team. He reminded the goals and ideas behind the project, focusing on service integration features, storage synchronization and software distribution, and usability aspects. He outlined some of the main uses cases: final step of analysis, exploration and teaching. An effort has been done to package SWAN as a self-contained service, so that SWAN instances can and have been created in several places, including AARNet, the Australia's Academic and Research Network. Among the

foreseen future developments, moving to the new JupiterLab interface will bring concurrent editing functionality and further foster SWAN as analysis collaboration tool.

The final part of the presentation focused on usage numbers; currently there are, on average, about 200 users per day, with peaks close to 300 correlated with courses; there have been about 1700 unique users during the last 7 months; about 20% of these use SWAN as entry point for SPARK clusters.

During the last month, out of about 650 users, about 170 were identified as ATLAS, about 160 as CMS, 40 as LHCb and 30 as ALICE (the remaining 250 as no-experiment, which means that were not clearly identifiable).

The project suffers from the lack of dedicated manpower which makes difficult to ensure sustainability and to follow the development plan. The figures clearly show interest from the users of the larger experiments. However, to go beyond the status of pilot project and ensure more appropriate support, IT needs a clear signal from the experiments that this service is wanted. There was consensus that a more detailed survey is required within each experiment to better understand the type of effective usage and to come up with an answer.

Report from the SFT Projects

ROOT

- Feature freeze for 6.18 scheduled for end of April
- Will soon request dedicated builds for pyROOT and modules in LCG context
- Looking at GCC 9 (expected to be released with Fedora 30)
 - Expect 10% improvement for vectors of single type
- Organising a training of trainees day on June 14th (TBC)
 - Should be proposed/advertised to HSF
- Still waiting for Davix to move to libcurl (required for more - e.g. Windows - portability)

Simulation

- New development release deployed last week including fixes and developments collected in the last month
- A Technical Forum has taken place last Friday at CERN, focussing on the 2019 work-plan of Geant4. Received also a report from ATLAS on their latest validation tests on the last Geant4 releases
- Advanced course on Geant4, part of CERN Technical Training successfully held last week, ~40 people attended.

CernVM

- CernVM-FS
 - v2.6 out; looks in good shape
 - Got one Openlab and one standard summer students to work on CernVM-FS
 - Started to define the plan of work for v2.7
 - Main highlights
 - Get rid of dedicated publisher nodes
 - Rootless clients exploiting the new features available in Fuse 3
- Workshop
 - Well advanced with an interesting line-up of invited speakers
 - See <https://indico.cern.ch/event/757415/> .

SPI

- The release LCG_95a, based on ROOT v6.16, was completed beginning of April for the standard platforms and deliverables. Started to prepare the list of wishes for next release.
- Work was done to consolidate the RPM preparation and the test infrastructure
- After the AFS phase out the NA61/SHINE started using the LCG builds, although with some caveats; they are following the LIMs.
- There has been a request from R&D groups to include GARFIELD++ in the LCG stacks, with the goal to provide regular builds for the most common platforms. Maintenance will still be provided by the authors. First builds are now available.
- There is a requirement to have the latest builds of CERNLIB available in CernVM-FS; this includes builds for CentOS7, provided in the context of the DELPHI data preservation.

Report from related Projects

XRootD (M K Simon)

- Patch version 4.9.1 released
- An XRootD workshop will take place in Lyon on 11-12 June 2019
 - <https://indico.cern.ch/event/727208/>

EOS (A Peters)

- Migration of experiment and project areas to 'citrine + new namespace + FuseX' on going
- Investigating Samba gateway for Windows integration

Stakeholders feedback

There was not time left for the stakeholders roundtable. No urgent item was brought up.

G Ganis, 10 April 2019