



WLCG RRB

November 2018

Minutes of the 34th WLCG Resources Review Board Meeting CERN, Geneva, 30th October 2018

Documents can be found in the RRB indico pages; accessible via the LHC-RRB home page <http://cern.ch/committees/LHCRRB>. The attendance list is attached at the end of this document.

E. Elsen, Director for Research and Computing, welcomed the delegates to the meeting. The minutes of the last Computing RRB meeting, CERN-RRB-2018-070, were approved without comments.

Status of the WLCG project and financial status report. I Bird, WLCG project leader

Reviewing 2018, I. Bird mentioned that 67 PB of data had been taken during the proton-proton run in 2018, with the heavy-ion run still to come. The latter had been well prepared in particular to ensure the required bandwidth. CPU usage had exceeded the pledges. Issues such as the change of OSG funding model, the introduction of GDPR, and security vulnerabilities of x86 processors had been dealt with without significant impact on the services. The requirements for Run 3 remain somewhat uncertain; 2021 is still assumed to be a 'light' year with 20-30% more capacity need than 2018, while for 2022 and 2023 a 50% increase over 2018 is probably needed. CERN plans to purchase equipment late so as to profit from "Moore's law" and market developments; however gains of 15...20% per year can no longer be tacitly assumed. In preparation for Run 4 and beyond, the WLCG strategy has been documented based on the published HSF Community White Paper, the recommendations of which the strategy document prioritises around software performance, algorithmic improvements, reduction of data volume, containing operational costs and optimising hardware investments. LHCC will conduct a review of the strategy document, leading to a Technical Design Report in 2022. Collaborations with major astrophysics and astroparticle physics experiments have been established, for example in the context of the EU-funded ESCAPE project. Data preservation and Open Access are becoming increasingly important and demanding on resources; clarification is needed on how to fund these activities.

E. Elsen thanked I. Bird for the presentation and invited comments.

Several delegates supported the importance of Data Preservation and Open Access, welcomed the intended clarification on the policy and funding, and encouraged WLCG to include the topic into the strategy document.

Responding to a delegate's question, I. Bird clarified that while CERN is not formally subjected to GDPR, it is striving for compliance; in principle GDPR concerns all data taken by the experiments, CERN and the WLCG sites.

LHCC Deliberations T. Wengler, LHCC Scientific Secretary

T. Wengler presented the LHCC deliberations. The meeting took note of LHCC's assessment that WLCG continues to operate very well, that resource requirements for Run 3 seem to be well under control with the possible exception of LHCb, who continue to optimise, that collaboration across experiments and with other science domains in particular on software and data models and management was essential to address the Run 4 challenges, that even after optimisation resources

may be required that exceed the flat-budget assumptions, and that a mechanism for prioritising resource requests at CERN should be established.

Status of Common Projects accounts. G. Cavallo, Finance and Administrative Processes Department

G. Cavallo pointed to the drop of material expenses in 2018 as compared with previous years, which was due to the strategy mentioned by I. Bird earlier, and the healthy status of the WLCG and the WLCG-India team accounts.

Report from the Computing Resources Scrutiny Group. D. Lucchesi, Computing Resources Scrutiny Group Chairperson

D. Lucchesi reported that J. Hernandez and P. Christakoglou had recently joined the group replacing M. Delfino and J. Templon as representative of Spain and The Netherlands, respectively. Usage figures are looking good, but are still suffering from accounting issues at some sites. ALICE had requested that C-RSG adapt its recommendations as a function of the capacity sites are willing to pledge; D. Lucchesi explained that C-RSG did not consider this request, as it fell outside the mandate of the group. The group is still concerned about ALICE's request for disk in 2020, and encourages ALICE to implement more aggressive mechanisms for migrating inactive data to tape. Requests by ATLAS and CMS for 2019 and 2020 are very moderate; the under-pledging of CMS with respect to CRSG's previous recommendation had been reduced to a few percent. ATLAS is encouraged to further work on reducing disk space requirements surpassing CMS' by one third, and to continue optimising the CPU requirements for simulation. The LHCb request for increased capacity in 2020 is justified in view of the approved physics priorities. The group encourages CERN to document the strategy for Run 3 purchases at the Tier-0, expects experiments to henceforth respond to the recommendations made by C-RSG, and requests more monitoring of disk space at the Tier-2s. Finally D. Lucchesi explained that her mandate ended at the end of 2018, thanked the colleagues in the group as well as the experiments, CERN, WLCG and the funding agencies, and presented best wishes to P Sinervo replacing her as C-RSG chair person as of January 2019.

The meeting took note and approved J. Hernandez' and P. Christakoglou's nominations.

In the name of all delegates, E. Elsen thanked D. Lucchesi for her services as C-RSG chairperson. He commented that while CERN as Tier-0 has an obligation as custodian for raw data, it cannot possibly provide services for all processing steps of all data due to technical as well as financial constraints. He agreed with D. Lucchesi that more work was needed to fully understand the requirements of ALICE and LHCb for Run 3, and concluded that apart from detailed discussions how resources are distributed over tiers, there did not seem to be any overall issue with the resources for 2019 and 2020.

Report from Scientific Computing Forum. E. Elsen

E. Elsen reported that the SCF is a loose and informal framework for discussions in view of developments in the countries with a view not limited to HEP, but considering other large-scale sciences as well. Many discussions have focused on software and specifically on how to adopt software more rapidly to take advantage of new architectures. The SCF has warmly welcomed the IRIS-HEP initiative and its funding by NSF. In his view similar initiatives, potentially via an advanced school on scientific computing, should be launched in Europe.

Summary

E. Elsen thanked the delegates for their support and closed the meeting.

Present:

G. Taylor (University of Melbourne, Australia)
C. De Clercq (FWO), Belgium)
E. Cortina Gil (FNRS, Belgium)
R. Cesar (FAPESP, Brazil)
A. Benoit (NSERC, Canada)
P. Krieger (University of Toronto, Canada)
O. Novak (Ministry of Education, Youth and Sports, Czech Republic)
A. Kupčo, M. Lokajicek (Institute of Physics AS CR, Czech Republic)
P. Hansen (Niels Bohr Institute, Denmark)
K. Huitu, K. Osterberg (Helsinki Institute of Physics, Finland)
G. Hamel de Monchenault (CEA/IRFU, France)
P. Verdier, V. Beckmann, (IN2P3, France)
M. Gast (BMBF, Germany)
M. Fleischer, (DESY, Germany)
W. Ehrenfeld (BMBF/PT-DESY, Germany)
S. Bethke (MPI, Germany)
A. Petzold (KIT, Germany)
K. Borras (DESY/RWTH Aachen University, Germany)
F. Siklér (Wigner RCP, Hungary)
K. Mazumdar (BARC, Mumbai, India)
L. Levinson (Weizmann Institute of Science, Israel)
N. Pastrone (INFN, Italy)
M. Taiuti (INFN and University of Genoa, Italy)
M. Cobar (INFN and University Trieste, Italy)
M. Palutan (INFN and Laboratori Nazionali di Frascati, Italy)
V. Manzari (INFN Bari, Italy)
S. Asai (University of Tokyo, Japan)
Su Il Chae (National Research Foundation of Korea)
S. Noh, K. Cho (Korea Institute of Science & Technology Information (KISTI), Korea)
F. Ould-Saada (University of Oslo, Norway)
J. Kitowski (AGH University of Science and Technology, Poland)
A. Fazacas (Institute of Atomic Physics, Romania)
M. Dulea (IFIN-HH, Romania)
V. Savrin (JINR, Dubna, Russia)
P. Strizenec (Slovak Academy of Sciences, Slovakia)
D. Adams (Department of Science and Technology, Pretoria, South Africa)
B. Singh (National Research Foundation, South Africa)
V. Spannenberg (iThemba Labs, South Africa)
M Garcia Borge (CSIC, Spain)
J. Salt (IFIC, Valencia, Spain)
N. Ottosson (Swedish Research Council, Sweden)
M. Rännar (Umeå University, Sweden)
C. Grab (ETH Zurich, Switzerland)
C. Y. Lin (National Center for High-Performance Computing, Taipei)
G. Blair, T. Medland (STFC, United Kingdom)
A. Patwa, S. Rolli, M. Procaro, T. LeCompte (Department of Energy, United States of America)
M. Coles, S. Gonzalez (National Science Foundation, United States of America)
J. Cochran (Iowa State University, United States of America)
L. Bauerdick (Fermilab, United States of America)
A. Markovitz (Observer, Fermilab, United States of America)

WLCG: I. Bird, S. Campana

CERN: G. Cavallo, E. Elsen (Chairperson), F. Gianotti, F. Hemmer, H. Meinhard (Scientific Secretary), M. Steinacher, E. van Herwijnen, T. Wengler

Computing Resources Scrutiny Group: D. Lucchesi

LHC Resources Scrutiny Group: F. Simon, P. Lubrano

ALICE: F. Antinori, P. Buncic, M. van Leeuwen, B. Hippolyte

ATLAS: D. Costanzo, K. Jacobs, A. Hoecker

CMS: T. Boccali, M. Kasemann, P. McBride

LHCb: G. Passaleva, S. Roiser, C. Bozzi

Excused: M. Türler (Swiss National Science Foundation, Switzerland)