



Computing Resources Review Board

10th May 2007

Minutes of the 11th Resources Review Board Meeting Held at CERN on 24th April 2007

Present:

Europe:

C. Wulz (bm:bwk, Austria) (*Observer*);
 J. Lemonne (FWO, Belgium) ; G. Wilquet (FNRS, Belgium);
 M. Lokajicek (MSMT CR, Czech Rep.), J. Niederle, M. Sumbera;
 J.D. Hansen (National Science Research Council, Denmark);
 M. Raidal (NICPB, Estonia), M. Kadastik (*Observer*);
 D.O. Riska (HIP, Finland), J. Rak, T. Tuominiemi;
 J. Zinn-Justin (CEA/DSM/DAPNIA, France), J-P. Meyer;
 F. Le Diberder (CNRS/IN2P3, France), F. Malek, C. Diaconu;
 K. Ehret (BMBF and DESY, Germany), T. Hebbeker ; S. Bethke (MPG, Germany) ; K.P Mickel (FZK, Germany);
 P. Malzacher (GSI, Germany), J. Reinhard;
 E. N. Gazis (National Technical University of Athens, Greece) (*Observer*);
 G. Vesztegombi (KFKI/RMKI, Hungary);
 E. Rabinovici (Hebrew University Jerusalem) (*Observer*);
 F. Ferroni (INFN, Italy) ; F. Ferrini;
 A. J. Van Rijn (NIKHEF, The Netherlands);
 B. Jacobsen (Norwegian Research Council, Norway), F. Ould-Saada;
 M. Turala (Ministry of Science & Education, Poland), G. Polok;
 G. Barreira (GRICES/FCT/UMIC, Portugal);
 F-D. Buzatu (Nat. Authority for Scientific Research, Romania), L. Puscaragiu;
 V. Savrin (Federal Agency of Science and Innovation, Russia);
 R. Lednicky (JINR, Dubna);
 N. Colino (MEC, Spain);
 T. Ekelöf (Research Council, Sweden);
 A. Rubbia (SER/SNF/ETH/CSCS, Switzerland);
 G. Zinovjev (National Academy of Sciences of Ukraine);
 J. Seed STFC, United Kingdom) ; G. Lafferty (Chairman of the M&O Scrutiny Group);

N. America:

W. Davidson (NSERC, Canada), R. Orr;
 M. Pripstein (NSF, U.S.A.), R. Cousins;
 J. O'Fallon (DOE, U.S.A.), T. Ferbel, S. Gonzalez ; H. Gordon; J. Shank; M. Tuts; J. Butler; L. Bauerdick;

Asia:

Q. Chang (NSFC, China) ; X. Fu (Ministry of Science), S. Hu ; C. Jiang (IHEP);
 C. Ananda Bose (DAE, India), A. Gurtu;
 R. Mukhtar (PAEC/NCP, Pakistan);
 K. Saito (University of Tokyo, Japan), T. Kawamoto;
 Y-I Choi (Ministry of Science and Technology, Korea), N-J. Cho, S. Kim (*Observer*);
 S.C. Lin (Academia Sinica, Taipei);

Australia:

S. Tovey (AusHEP, Australia);

CERN:

J. Engelen (Chairman), C. Jones (Secretary), S. Lettow, P. Geeraert, D. Jacobs, E. Tsesmelis, W. Von Rueden,
 J-J. Blaising, J. Salicio Diez;

LCG:

L. Robertson, C. Eck, S. Foffano;

ALICE:

J. Schukraft, Y. Schutz;

ATLAS:

P. Jenni, D. Barberis, F. Gianotti;

CMS:

J. Virdee, L. Foa, P. McBride, M. Kasemann;

LHCb:

T. Nakada.

1. Introduction

J. Engelen, Chief Scientific Officer

J. Engelen welcomed RRB delegates to this 11th meeting of the Computing Resources Review Board. Clearly this was the most popular of the RRBs and he trusted that everyone could find a seat. The aim was to gain an understanding of the current status of the project, and to be aware of how the resources were coming together.

2. Approval of the Minutes of the 10th Meeting (CERN-RRB-2006-129)

The minutes of the 10th meeting, CERN-C-RRB-2006-129, were **approved** with no corrections. J. Engelen thanked C. Jones for having taken these minutes. There were no matters arising.

3. Status of the LCG Project

L. Robertson, Project Leader

Paper CERN-RRB-2007-049

Presentation CERN-RRB-2007-051

L. Robertson reported on the status of the LCG Project. The details are reported both in his paper and his presentation, which are both referenced above, and are not further abbreviated in these minutes.

He summarized the current status as follows:

- Applications support was in good shape.
- The WLCG service was in operation, with continuously increasing workload, but facing a steep ramp-up ahead to the capacity needed for the 2008 run.
- Testing by the experiments was progressing. It was involving more sites and becoming increasingly realistic.
- This was uncovering new problems to be understood and addressed.
- Data and storage, along with general site reliability were major concerns.
- Sites and experiments were working well together to tackle the problems.

Discussion

J. Engelen thanked L. Robertson for his presentation. In inviting questions he requested delegates to take into account the LHCC Deliberations, which had been provided in a paper by the scientific secretary of the LHCC, E. Tsesmelis.

M. Pripstein noted that it was good to see the progress made but a steep ramp up was required. A factor of five increase in GRID activity was needed by 2008, requiring CPUs and disks to grow substantially. Was this required ramp up just a question of money or were there other problems? If such problems existed, what workarounds did one have? L. Robertson replied that the money was certainly needed to buy the capacity needed. However, one needed much more than just the capacity since one had to learn to operate these services without problems. CERN, the remote sites and the experiments had to work together to learn how to fix any problems and to make the whole system function together.

J. Engelen returned to the question of the reliability and the fact that “7*24” support had not been realised at all sites. L. Robertson replied that reliability in operations required a lot of manpower to set up, but less manpower was needed once things were understood and working. The “7*24” support was one of several issues involved in several sites where extended operations were needed. Many sites were hard pressed for human resources.

4. LHCC Deliberations

E. Tsesmelis, LHCC Scientific Secretary

Paper CERN-RRB-2007-042

Delegates had no further comments to make and the RRB took note of the report of E. Tsemelis.

Turning to the LCG Budget Estimates for 2009-2011, the next slide (slide 9) showed the funding and planned expenditure for the first three years of M&O of WLCG at CERN in MCHF. In 2010, a negative materials balance would lead to a small (~6%) cut in CERN's resource pledges. The overall materials balance from 2009 to 2011 was expected to be around -8% of the materials requirements in this period. It should be noted again that the LCG personnel planning at CERN assumed that external funding of ~14 FTEs for Grid Deployment would be obtained. The current assumption was that this would be contributed by the European Grid Initiative.

6.4 Resource usage accounting for external Tier-1s and CERN

C. Eck then showed graphs giving a summary of the CPU Time, Disk and Tape Storage accounting from April 2006 to February 2007 obtained by summing up all external Tier-1s and CERN. Tier-2 accounting was planned to be reported for the first time to the October 2007 C-RRB. The graphs showed the installed capacity, the pledged capacity and the resources usage.

He concluded that people had finally installed the capacity that they had pledged. There was a steady growth of usage approaching 70/75 % of the capacity installed. The dip in installed capacity for CPU and Disk in November 2006 was due to the allocation of a large portion of CERN resources to an ATLAS on-line test for this month. He considered this as a fairly positive picture of the resources.

6.5 Summary of the revised computing capacity pledges

The figures of the last slide give a clear message: A large majority of the Funding Agencies had opted not to reduce their overall pledges, and had shifted that which had been reduced in the years 2007 and 2008 into increases in the years 2009 and 2010. A large number of centres had provided no new figures for 2011 as most experiments had not given new requirements numbers for 2011 by last October, making it difficult to quote new figures for this year. Slide 17 showed the effect, for the reference year 2008, of changing from old requirements and pledges to the new ones. The overall improvement was very encouraging, but it is also obvious that not all experiments were now without resource problems.

He requested Funding Agencies to be aware that they expected updated requirements from the experiments by 1 July 2007. These, and the "normal" necessity to shift the WLCG pledges forward by one year (firm pledges for 2008, planned pledges until 2012) before the C-RRB of October 2007, would require them to restart a new campaign of pledge updates in late summer 2007.

Discussion

J. Engelen thanked C. Eck for this clear presentation He asked whether there were any comments or questions.

F. Ferroni asked when the next round of pledges would take place. C. Eck replied that the next round would fall back into the normal pattern as described in the MoU and hence at the October CRRB they would agree the firm pledges for 2008 and the planned pledges until 2012. Currently they were half a year out of phase, since they had been unable to carry out this exercise in the previous October because the new requirements of the experiments had become available too shortly before that RRB.

S. Tovey commented that Australia had now signed the MoU. It had taken some time whilst it was decided who exactly should sign it.

E. Rabinovici announced that in the next few days Israel would also sign the MoU.

J. Seed enquired if there was progress towards the next phase of EGEE. W. Von Rueden replied that he remained confident that the next round would be funded. The call would come in

September and the money involved (which they had unofficially discussed with Brussels) was very similar to that which they were currently receiving. However the funding model would change and, effectively, the number of people they would receive for the same sum would be lower. This would cover the period until March 2010. In parallel with this activity, it was planned to work on an European GRID Initiative, which would aim at a long term sustainable GRID infrastructure. This project for a design study was being submitted by the end of this month for the first call. There was a small consortium preparing this now, and the aim would be to take over from EGEE phase 3 if all went well. They were counting on having the 14 FTEs to which C. Eck had referred starting in 2010 and beyond.

T. Ekelöf reported that the Swedish Research Council had scheduled meetings for the end of May and it was foreseen, at that meeting, to take the decision to sign the MoU.

J. Engelen asked the experiments to comment briefly on the update of resources required insofar as they could say something at this time.

D. Barberis for ATLAS noted that they could possibly have a surplus next year, but there remained a major uncertainty in the amount of data they would take.

M. Kasemann for CMS reported that they were working with a model which they believed to be realistic. They had gained experience in using the resources and in fulfilling the needs of the experiment. There was still a deficit for next year, mainly in the tape pledges which worried them and they were still working on this. They did not expect a drastic change in the computing model.

Y. Schutz for ALICE reported that their computing model had not changed. They were changing the basic parameters entering into the model to reflect more realistic conditions as they continued to learn. They still had a large deficit, although they had been able to reduce this by obtaining more pledges, especially from Funding Agencies which had not yet signed the MoU.

T. Nakada for LHCb noted that 2008 would see less data than anticipated and that was all that had changed.

J. Engelen noted that these new requirements would be scrutinized in the usual manner by the LHCC in July, and reported to the RRB. The MoU also foresaw a dedicated Scrutiny Group looking into this on behalf of the RRB and he felt that, in the course of the next year, they should start this process moving.

7. Summary, Future Activities & A. O. B. J. Engelen

J. Engelen noted that the project as presented, although there were some difficulties in certain areas, was developing very well into one of the largest organizations that CERN was dealing with at this moment. The resources that go into the project were being understood better all the time, and all those who had promised to contribute to the project were clearly doing so and he thanked them all for that.

<p>The next RRB meetings in 2007 will take place at CERN on Monday 22nd, Tuesday 23rd and Wednesday 24th October 2007</p>

There being no questions and no further business, the Chairman thanked the participants and closed the meeting.

C. Jones
May 2007