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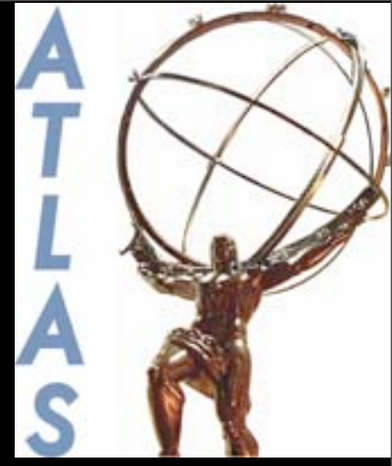

Software Validation Overview

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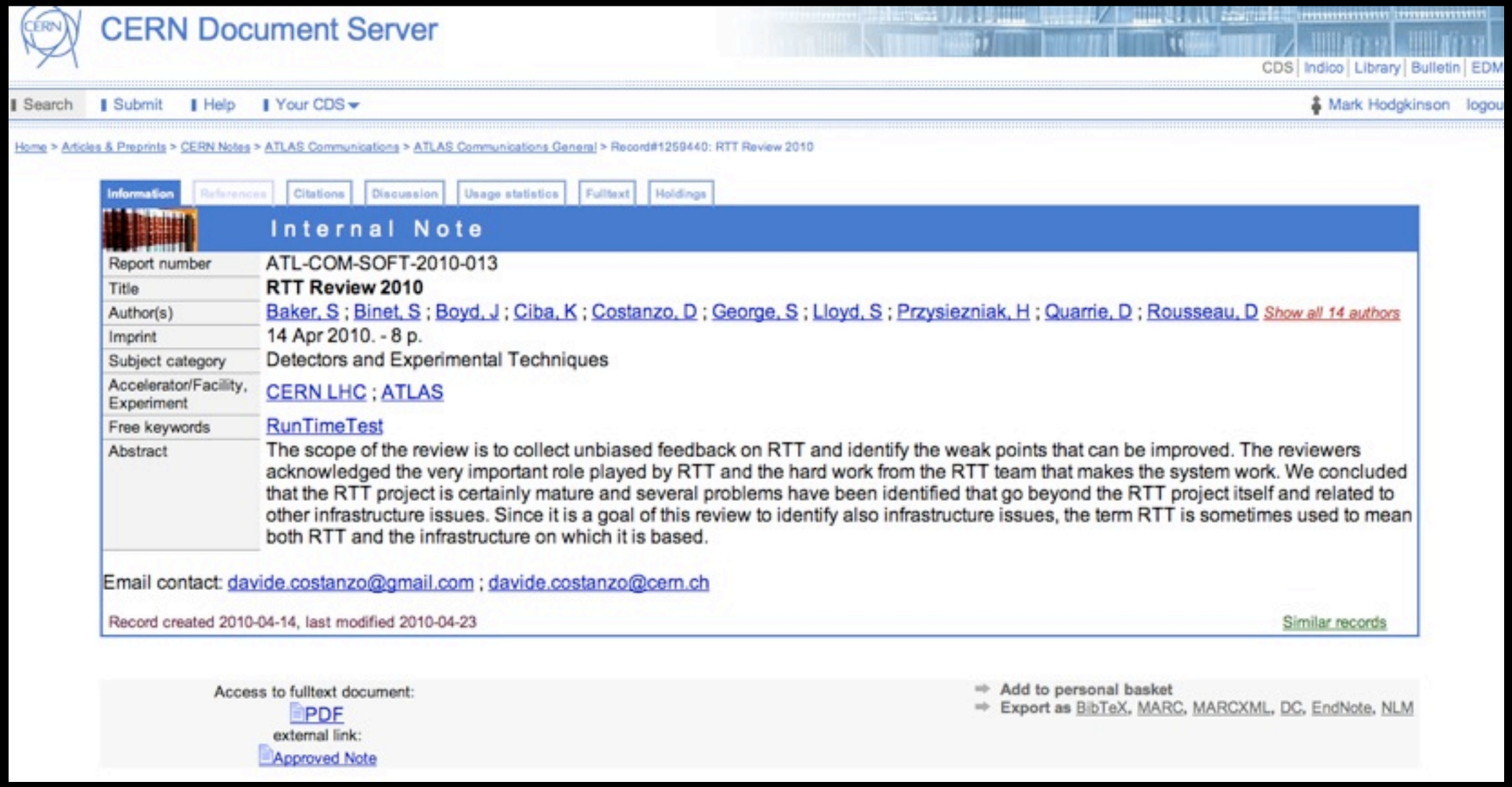
December 2 2010

Contents

- RTT Review
- Other Activities - tests for BCT, 64-bit builds and simulation software shifts

RTT Review



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Information | References | Citations | Discussion | Usage statistics | Fulltext | Holdings

Internal Note

Report number	ATL-COM-SOFT-2010-013
Title	**RTT Review 2010**
Author(s)	Baker, S ; Binet, S ; Boyd, J ; Ciba, K ; Costanzo, D ; George, S ; Lloyd, S ; Przysiezniak, H ; Quarrie, D ; Rousseau, D *Show all 14 authors*
Imprint	14 Apr 2010. - 8 p.
Subject category	Detectors and Experimental Techniques
Accelerator/Facility, Experiment	CERN LHC ; ATLAS
Free keywords	RunTimeTest
Abstract	The scope of the review is to collect unbiased feedback on RTT and identify the weak points that can be improved. The reviewers acknowledged the very important role played by RTT and the hard work from the RTT team that makes the system work. We concluded that the RTT project is certainly mature and several problems have been identified that go beyond the RTT project itself and related to other infrastructure issues. Since it is a goal of this review to identify also infrastructure issues, the term RTT is sometimes used to mean both RTT and the infrastructure on which it is based.

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http://cdsweb.cern.ch/record/1259440/files/ATL-COM-SOFT-2010-013.pdf

- Create team of RTT experts on duty - in place and being tested
- Monitoring tool to track - cpu usage, disk space used, castor space used etc - done see RTT talk
- Disk space issues - see RTT talk
- Check validity of xml files defining RTT tests at release build time + send automatic email via NICOS if problems occur - under discussion with experts on how to implement.

- Information about operating system and compiler to be made available - not yet done (currently we think same compiler and OS are used everywhere)
- Time spent by RTT polling status of jobs should be minimised - done by time review published
- The SPMB through the software validation coordinator should ask top package managers to review the test content and optimise use of RTT within their domain - in general RTT is slowly being cleaned of old tests (removed or replaced with more relevant tests), but no-one specifically asked to go through all their domains tests.
- We recommend the creation of four supergroups of test packages and that each RTT run is defined as a list of supergroups enabled for that test - see next slide

Supergroups Proposal

- 1. Integration - any test running full chain of tests (e.g. TCT)
- 2. Overall performance - any test running specific part of e.g. reco to verify it runs and also might be checking performance via e.g. histogram output vs reference
- 3. Detailed performance - as above, but using e.g. --leak-check-execute, running valgrind, PerfMon etc
- 4. All other tests
- Need to discuss further with RTT people how/ when the functionality can be added.

- A priority system is implemented, so that critical tests can run if and when fewer resources available - not done, discussion needs to be initiated between community and RTT developers - on my todo list.
- RTT tests are run for each numbered release for the relevant supergroups and results archived on castor for 6 months - supergroups not implemented yet.
- The Software and Computing Management should identify 4-5 people who can act as RTT experts duty and create the corresponding tasks in OTP - see Brinick's talk.
- It is recommended that RTT allows package developers to request the maximum amount of resources that a test can use - not done, RTT developers noted would need to be careful such power is not abused by users.
- A test package to monitor RTT is implemented - not done, but new RTT monitoring tools cover this.

- It is therefore recommended that the local RTT running tool is put back into operation - on RT T developer todo, ~first quarter 2011, tool does exist to check syntax in xml file locally
- We recommend that a technical follow-up is arranged to review the tools used to analyse the RTT results leading to detailed design recommendation - related to issue of users creating private tools using hardcoded afs paths.
- We recommend that a mechanism to chain jobs from different packages is implemented - not done yet
- We recommend that the RTT web interface is improved - done, new google based search tool.

BCT Tests

- Runs larger statistics samples on grid
- We saw last time "scout jobs" would fail due to job configuration errors….
- ...we know what this config is 2-3 days prior to sending scouts
- Putting in extra layer - automated RTT tests using new qxyz tag(s) -> Gives extra 2-3 iterations.
- Written Reco test, need to add sim + digi step tests -> then add to nightly and test they run.

64 Bit Builds

- Enabled suite of RTT tests for 64-bit dev branch
- Added third shift C to monitor these tests for problems *not* seen in 32 bit builds.

Simulation Validation Shifts

- Adele Rimoldi has set up shifts to monitor GEANT simulation
- Similar types of tasks to software/reco shifts

Conclusions

- Many RTT review recommendations implmented (7) or making progress (4).
- Some (4) considered lower priority not yet done (allows other more important ones to be done).

- Adding some extra tests to help validation of BCT.
- Monitoring of 64 bit builds has started.
- New simulation monitoring shifts have been setup.