

About DB access Hammer Cloud tests on FR-cloud

Test 663 ORACLE access to cosmic DPDs over all sites of FR-cloud

<http://gangerobot.cern.ch/hc/663/test/>

Start and End time (CET) :

2009-10-08 10:00:00 2009-10-08 20:01:38

Number of Jobs : 7760

Number of files

site	processed	expected
ANALY_LPC	3684	3684
ANALY_LAPP	23517	23517
ANALY_BEIJING	6143	6143
ANALY_TOKYO	5950	5950
ANALY_GRIF-IRFU	20133	20133
ANALY_GRIF-LPNHE	21150	21150
ANALY_CPPM	10481	10481
ANALY_LPSC	4703	4703
Total	95761	95761

Number of events

site	number of events
ANALY_LPC	2280609
ANALY_LAPP	12332543
ANALY_BEIJING	3616473
ANALY_TOKYO	2876712
ANALY_GRIF-IRFU	15138116
ANALY_GRIF-LPNHE	14655817
ANALY_CPPM	7568936
ANALY_LPSC	1841517
Total	60310723

Note : Lyon was not used due to missing ATHENA version.

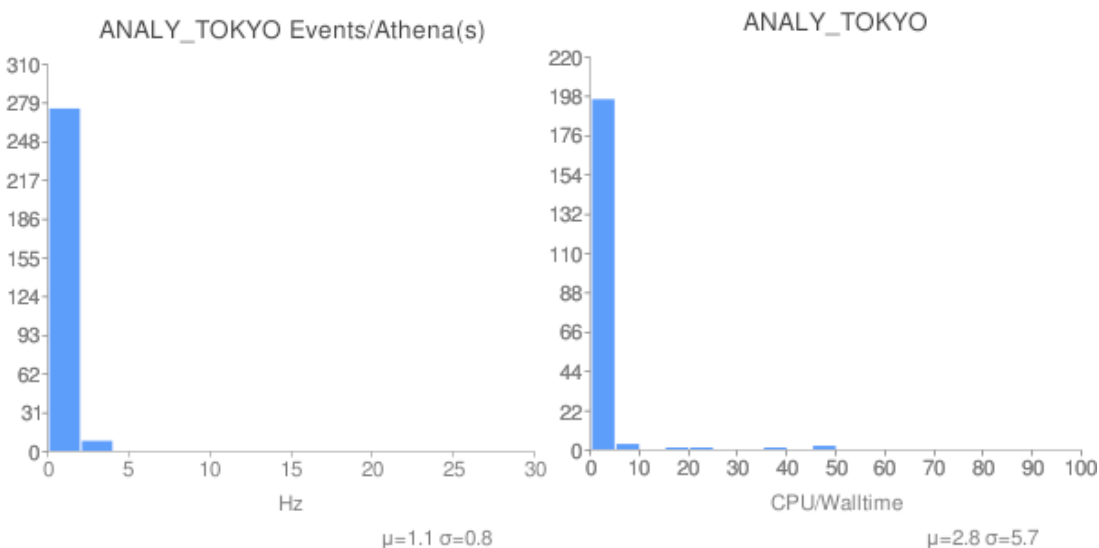
I. Tokyo Results:

2876712 events

5950 files

Event/Athena(s) : 1.1

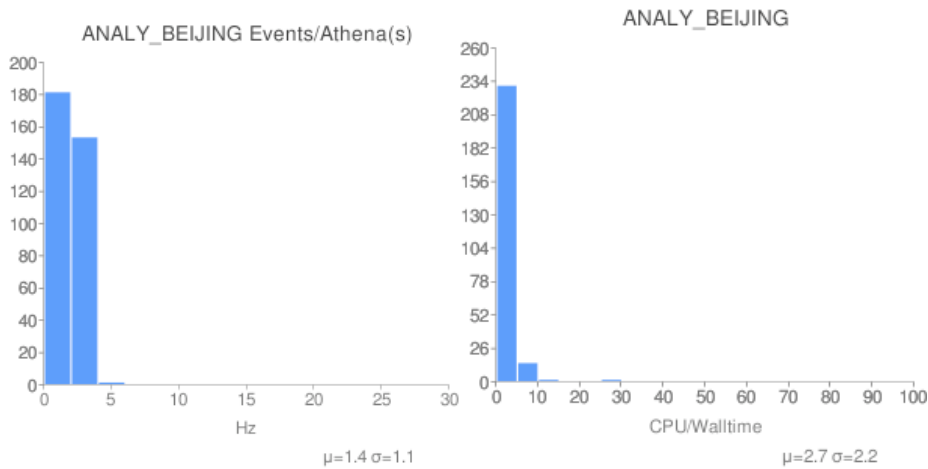
CPU/Walltime : 2.8



Wednesday, 28 October, 2009

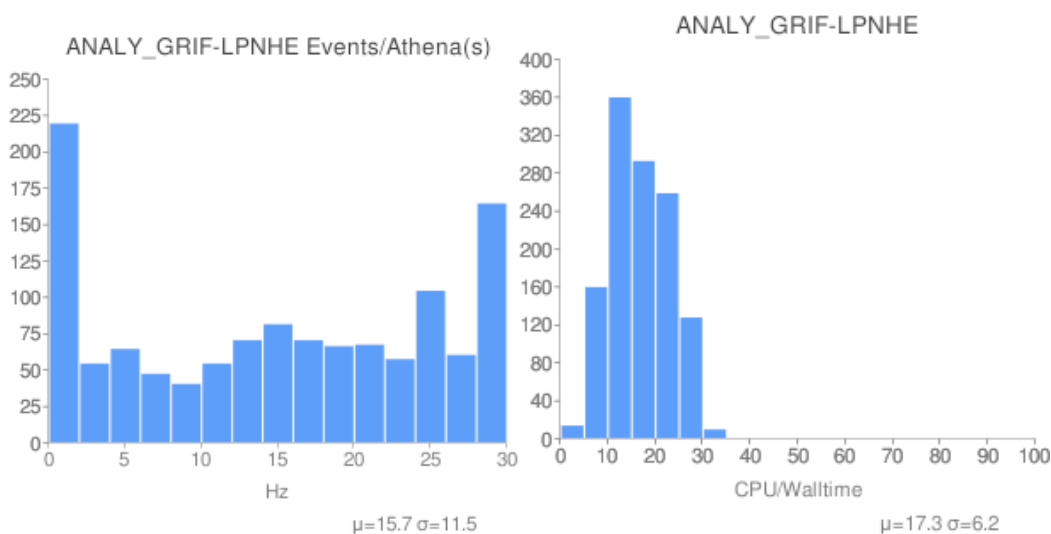
II. Beijing Results

3616473 events
6143 files
Event/Athena(s) : 1.4
CPU/Walltime : 2.7



III. Typical French T2 (LPNHE)

14655817 events
21150 files
Event/Athena(s) : 15.7
CPU/Walltime : 17.3



Clear evidence of a penalty for long-distance ORACLE access for cosmic DPD analysis is observed.

Test 720 dedicated test at Tokyo (and Beijing) with cosmic DPDs and Squid access

<http://gangarobot.cern.ch/hc/720/test/>

Start and End time (CET)

2009-10-21 14:00:00 2009-10-22 14:00:06

Number of jobs

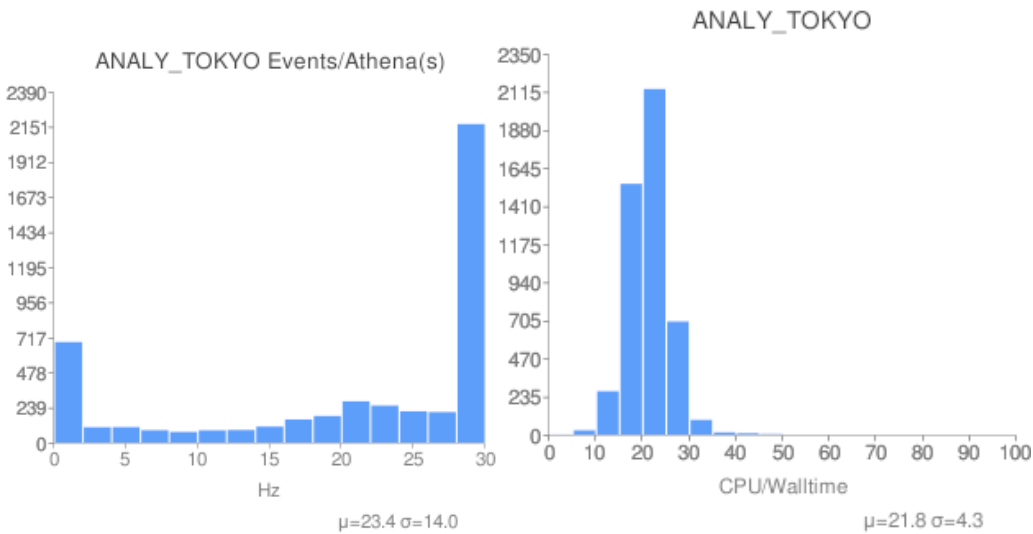
5562

I. Tokyo Results:

2/4

Wednesday, 28 October, 2009

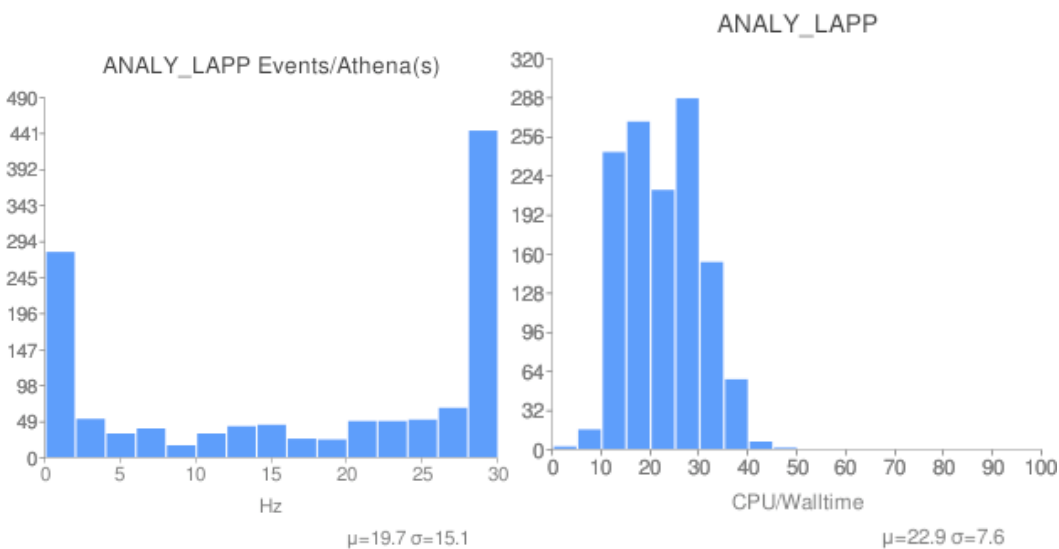
57331195 events
81787 files
Event/Athena(s) : 23.4
CPU/Walltime : 21.8



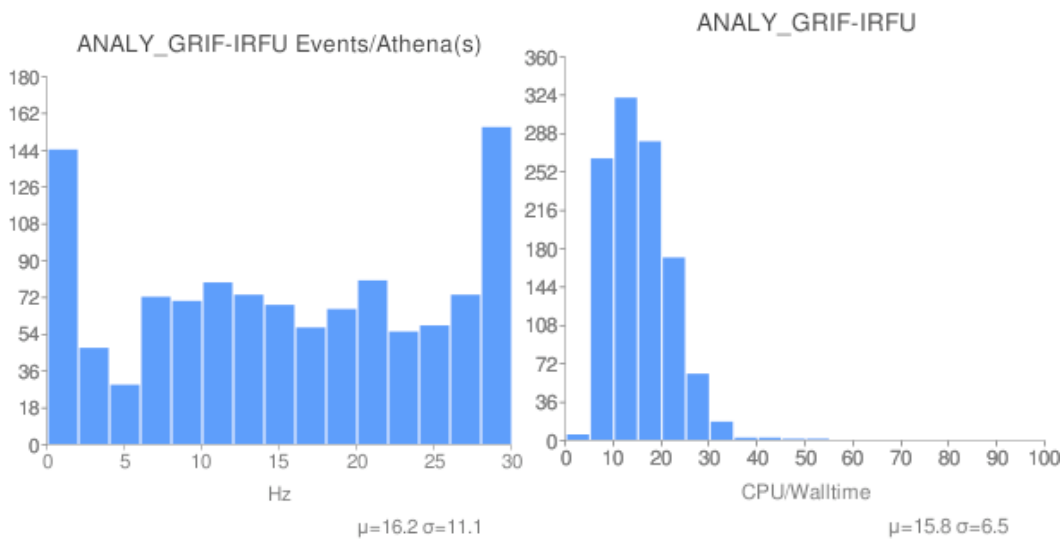
Based on the big differences (improvements) observed between the 2 tests on the metrics : Nb of events processed within ATHENA per sec. (I/O is not considered) and CPU/Walltime, it was concluded that the usage of FroNTier was successful.

However, a simple conclusion as: the peak at very low value for Nb events/Athena(s) for test 663 is due to DB access penalty, is not correct. There is indication of a 2 peak structure on the same plot for test 720 (see above).

This 2 peak structure is also seen for test 663 (ORACLE access) on most of the French sites. For example at LAPP it is observed :



For IRFU, distributions are :



For both sites, a peak at 0 and a long continuum is observed on the Events/Athena(s) distribution.

Those feature are certainly related to the very different kind of DPDs (MUONCOMM, IDCOMM, PIXELCOMM, CALOCOMM, TILECOMM) and trigger conditions used for the test analysis. For some datasets, only a few events are analyzed.

To draw a quantitative conclusions on

- the performance of FroNTier/Squid vs ORACLE access for distant sites (Beijing, Tokyo) and on
- the relative performance between sites:

Dedicated tests have to be setup with identical datasets for the various measurements.