

Computing Issues for TileCal/Valencia

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TileCal and the Tier2

- ✚ Despite existence of ATLAS-wide distributed analysis system (by means of Ganga/Pathena, with the use of resource across the grids) it is mandatory that the group has local resource for data analysis
- ✚ Santiago proposes a very reasonable model for an analysis center: Extension of existing Tier2 facility with local resources with combined efforts of the various research groups in Valencia
 - This model is also followed in the US ATLAS. Take for instance plans for analysis center in the US ATLAS Tier1 at Brookhaven
 - In Madison the ATLAS and CMS groups share computing resource and strive for a homogeneous system (both hardware and software wise)

TileCal and the Tier2

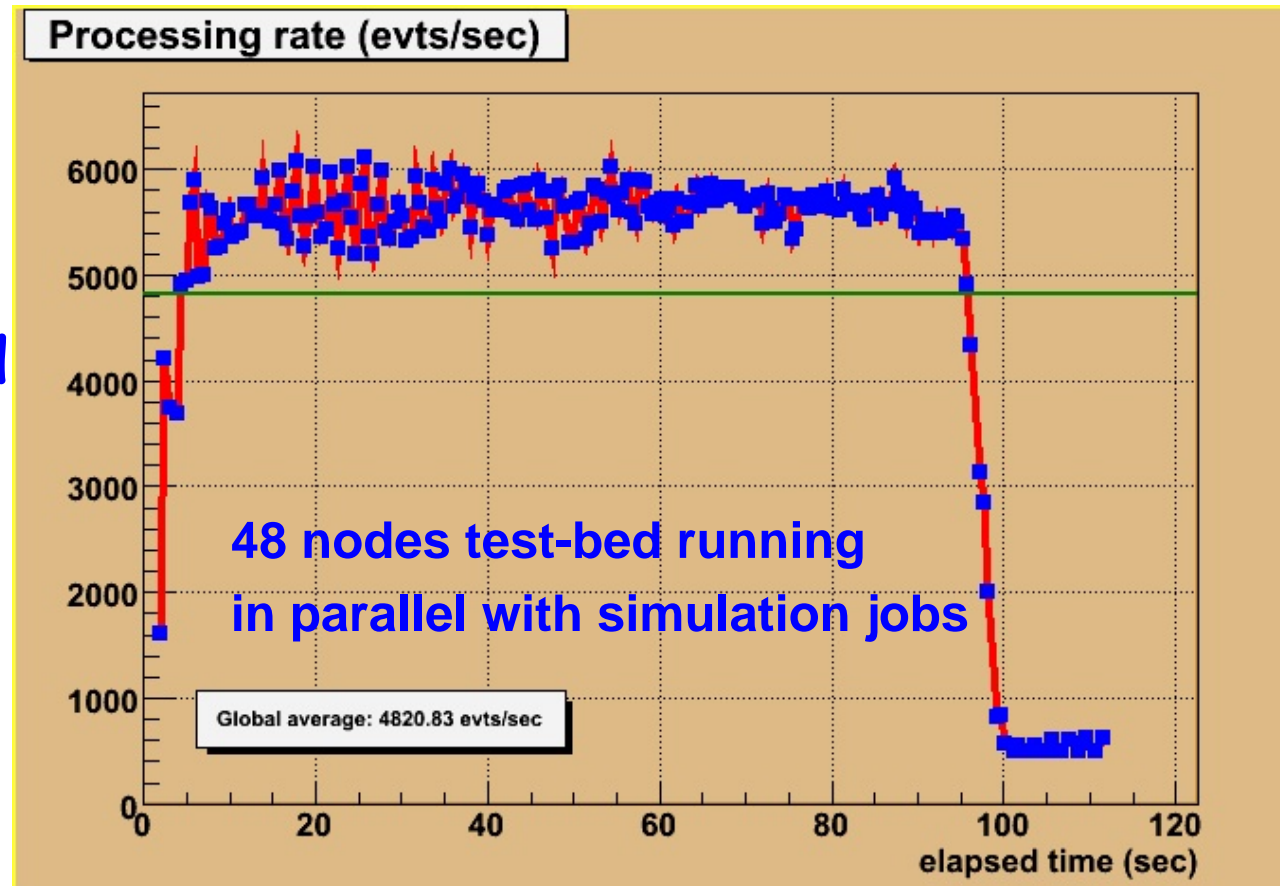
- ✚ When data comes it will not be possible for the physicist to do analysis with ROOT in one node due to large data volumes
- ✚ As far as software for distributed analysis goes US ATLAS (including Madison) is going for the xrootd/PROOF system
 - Xrootd is a distributed file system, maintained by SLAC which is proven to support up to 1000 nodes with no scalability problems within this range
 - PROOF (the Parallel ROOT Facility) is an extension of ROOT allowing transparent analysis of large sets of ROOT files in parallel on compute clusters or multi-core computers.

TileCal and Tier2

- ✚ The symbiosis xrootd/PROOF is being optimized in ATLAS by BNL/Wisconsin
 - Just started regular meetings. Perhaps Valencia T2 wants to join?

✚ Have proven scalability with up to 100 nodes. Excellent performance for standard ROOT-based analysis codes

✚ Panda is also working on accommodating xrootd/PROOF for analysis jobs



TileCal and Tier1-2

- ✚ Spain is participating in the M4 data distribution. This is excellent practice for data taking.
- ✚ Need to define what calibration and express streams the group would like to have replicated in Spain
 - On the one hand, as TileCal experts the groups needs calibration streams. Need Spain to allocate corresponding resources
 - At the same time, due to physics interests and for the sake of competitiveness, the group also needs access to express streams. This is an effort that needs to be coordinated with the rest of the Valencia groups, and possibly other Spanish institutes, since the Tier1 needs to be involved