

Building and Commissioning of the CMS CERN Analysis Facility (CAF)

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The CMS CERN Analysis Facility (CAF) was primarily designed to host a large variety of latency-critical workflows. These break down into alignment and calibration, detector commissioning and diagnosis, and high-interest physics analysis requiring fast-turnaround. In addition to the low latency requirement on the batch farm, another mandatory condition is the efficient access to the RAW detector data stored at the CERN Tier-0 facility. The CMS CAF also foresees resources for interactive login by a large number of CMS collaborators located at CERN, as an entry point for their day-by-day analysis. These resources will run on a separate partition in order to protect the high-priority use-cases described above. While the CMS CAF represents only a modest fraction of the overall CMS resources on the WLCG GRID, an appropriately sized user-support service needs to be provided.

In this presentation we will describe the building, commissioning and operation of the CMS CAF during the year 2008. The facility was heavily and routinely used by almost 250 users during multiple commissioning and data challenge periods. It reached a CPU capacity of 1.4MSI2K and a disk capacity at the Petabyte scale. In particular, we will focus on the performances in terms of networking, disk access and job efficiency and extrapolate prospects for the upcoming LHC first year data taking. We will also present the experience gained and the limitations observed in operating such a large facility, in which well controlled workflows are combined with chaotic type analysis by a large number of physicists.

Presentation type (oral | poster)

oral

Primary authors: Mr SANCHES, Jose Afonso (Univ. Estado do Rio De Janeiro); Dr KREUZER, Peter (RWTH Aachen IIIA); Dr GOWDY, Stephen (CERN)

Co-authors: Dr PANZER-STEINDEL, Bernd (CERN); Dr BONACORSI, Daniele (Univ. & INFN Bologna); Dr SPIGA, Daniele (CERN + Univ. & INFN Perugia); Mr TEODORO, Douglas (Univ. Estado do Rio De Janeiro); Dr FANZAGO, Federica (CERN); Dr MALGERI, Luca (CERN); Dr BUCHMÜLLER, Oliver (CERN); Dr MANKEL, Rainer (Deutsches Elektronen-Synchrotron (DESY)); Dr TOEBBICKE, Rainer (CERN); Dr METSON, Simon (Univ. of Bristol); Dr SCHWICKERATH, Ulrich (CERN)

Presenter: Dr KREUZER, Peter (RWTH Aachen IIIA)

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