

# Distributed analysis with PROOF in ATLAS Collaboration

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The Parallel ROOT Facility - PROOF is a distributed analysis system which allows to exploit inherent event level parallelism of high energy physics data.

PROOF can be configured to work with centralized storage systems, but it is especially effective together with distributed local storage systems - like Xrootd, when data are distributed over computing nodes.

It works efficiently on different types of hardware and scales well from a multi-core laptop to large computing farms.

From that point of view it is well suited for both large central analysis facilities and Tier 3 type analysis farms. PROOF can be used in interactive or batch like regimes. The interactive regime allows user to work with typically distributed data from ROOT command prompt and get a real time feedback on analysis progress and intermediate results.

We will discuss our experience with PROOF in the context of ATLAS Collaboration distributed analysis.

In particular we will discuss PROOF performance in various analysis scenarios and in multi-user, multi-session environment. We will also describe PROOF integration with ATLAS distributed data management system and prospects of running PROOF on geographically distributed analysis farms.

## Presentation type (oral | poster)

oral

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