

Large Scale Disk Pool Demonstrator

T.Bell, S.Campana, K.De, D.Duellmann, A.Klimentov, M.Lamanna, T.Maeno,
P.Nevski, A.Pace, B.Panzer-Steindel, A.J.Peters, D. van der Ster, T.Wenaus

Demonstrator Goals

- Test data handling scenarios implemented using an xrootd-based disk pool setup with functional extensions developed by DSS group (EOS prototype)
- Collect and summarize the performance and operational experience with at the scale of several hundred TB
- If necessary, evaluate alternate implementation options scenarios based on distributed file systems
- ATLAS will be gaining the operational experience for the storage solution under test while running normal ATLAS production and distributed analysis jobs.
- The efficiency of the data analysis tasks will be evaluated and ATLAS software will be further scrutinized and tuned to achieve the best possible performance numbers.
- Special attention will be paid to the new data access features like TTreeCache introduced in the 5.26 version of Root.

LST2010 Organization

- LST2010 will be conducted jointly by IT-DSS and ADC teams
- Test Phases:
 - 1 - Preparation and pre-testing
 - Storage set up and configuration
 - ATLAS queues set-up and configuration. Uploading of test data.
 - HammerCloud test (submission of analysis jobs)
 - Storage configuration tuning
 - 2 - Tuning
 - Set-up ATLAS Grid site
 - Uploading of ATLAS data
 - Run large-scale HammerCloud test for several days
 - Final tuning
 - 3 - Test Running
 - Declare site as 'ATLAS production and analysis' grid site, allow production and analysis jobs brokering to the site

Timescales

- Jul 1 : Kick-off meeting
- Jul 7 : Draft test plan proposed
- Aug 1 : Preparation and pre-testing and tuning of xrootd based setup completed
- Aug 1 onwards : ATLAS Tests running on the xrootd based setup during 3 months
- IT-DSS group is contacting also other experiments which may have interest in similar tests