



DataTAG experiment grid integration plan

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PPARC



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UNIVERSITEIT VAN AMSTERDAM

Outline

- ◆ **Goals**
- ◆ **People and HW resources**
- ◆ **Working plan with experiments (ATLAS, CDF, CMS, ALICE, D0)**
- ◆ **Organization and Conclusions**

Goals

Goals:

- ☒ **Interoperability between EU and US Grid services from DataGrid, GriPhyN, PPDG and in collaboration with iVDGL, for the HEP applications.**

Steps:

- ✍ **Produce an assessment of interoperability solutions**
- ✍ **Provide test environment to LHC Applications to extend existing use-cases to test interoperability of the grid components**
- ✍ **Provide input to a common Grid LHC architecture**
- ✍ **Plan EU-US Integrated grid deployment**

General Plan

Plan:

- ✍ Evaluation of existing packaging and distribution tools. Collection of a set of requirements (VDT/PACMAN, EDG/LCFG, etc...). DataTAG experimental software distribution.
- ✍ Evaluation/Deployment of existing services for job scheduling, submission and monitoring (DAGMAN, Condor-G, EDG/RB). Collection of requirements.
- ✍ Evaluation/Deployment of existing DataManagement Tools (Globus/GridFTP, EDG/Replica Manager, MAGDA, SAM, etc). Collection of requirements.
- ✍ Classifications of available services and identification of common requirements for the applications.

The evaluations will be done in the context of the VO infrastructure provided by EDT-WP4 and in particular with the VO services for Authentication, and Authorization and the agreed common schema for Resource Specification/Discovery.

People and HW resources

PEOPLE:

◆ DataTAG/WP4.3-4 people : INFN (7fte), PPARC (1fte)

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◆ Human resources come also from participating experiments.

- Contact points established with experiments.

◆ Contact points established with iVDGL.

HW Resources:

- ✱ Alice in progress (Italy, NiKhef, OCS, BNL)
- ✱ Atlas test layout in Milan, Argonne
- ✱ CDF test layout in Trieste, Bologna, FNAL
- ✱ CMS test layout in Italy, Ecole polytechnique, Russia, ...
- ✱ DataTAG test layout at CNAF for common services.

Working plan with experiments - 2002

- ◆ Plans established with CMS and CDF.
- ◆ Short term plan for ATLAS. A more detailed plan needs to be agreed for future activities. Check with the US counterpart.
- ◆ First meeting with Alice May 2nd 2002. Preliminary plan for Job submission and Data Catalogues.
- ◆ D0 and Virgo/Ligo still to be defined.

Working plan with experiments - 2002

5 working groups:

◆ **Packaging and Distribution Group**

- Study core HW and software to be used.
- Study existing distribution tools. Experimental distribution
- Recommendation for convergence.

◆ *Installation of common tools used in place*

◆ *First PACMAN cache distributing EDG/UserInterface, EDG/RB*

◆ *First written evaluation of requirements*

◆ *Collaboration with the PACMAN developers*

◆ *First attempt to define common installation/configuration requirements.*

◆ *OS requirements.*

Working plan with experiments - 2002

◆ Experiment integration support group

- Following experiment activities outlining special needs
- First EU-US integration tests

- ◆ *CMS IMPALA/BOSS interface to EDG/RB, EDG/RC-BI tests.*
- ◆ *ATLAS GDMP 3.0 experimental installation for MAGDA interface*
- ◆ *CDF test layout with EDG/UserInterface installed on FNAL environment ...*

◆ Job Scheduling and Management Services Group

- Study of middleware used (DAGMAN, Condor-G, EDG/WP1, etc.)
- Experimental integration activities (Alice/AliEn, CDF/SAM)

- ◆ *First Analysis of AliEn requirements for interfacing to EDG/RB*
- ◆ *Evaluation of EDG/JDL and GLUE schema for CDF/SAM stations.*
- ◆ *Atlas GRAPPA.*

Working plan with experiments - 2002

◆ Data Management Group

- Study of middleware used (EDG/WP2, GDMP, GridFTP, etc.)
- Experimental integration activities (ATLAS/Magda, CDF/SAM)

- ◆ *Requirements on EDG-PPDG/GDMP.*
- ◆ *Interface of ATLAS/MAGDA with EDG-PPDG/GDMP.*
- ◆ *Description of CDF/D0-SAM station as Storage Element.*

◆ MetaData Catalogues Group

- Study of requirements and middleware (EDG/Spitfire, PPDG/Virtual Data Catalogue)
- Prototype activities (Alice, CMS)

- ◆ *Help with EDG/Spitfire for a distributed MetaData Catalogue*
- ◆ *Evaluation of the iVDGL Virtual Data Catalogue for CMS.*
- ◆ ...

Working plan with experiments - 2002

Plan:

- A.** Report on packaging and Distribution by June 15. Experimental distribution using PACMAN. Convergence on configuration issues by end of August.
- B.** First functional test layouts for all experiments by end of July (?). First report by the end of September. Demo at SC2002.
- C.** Analysis of the requirements for Job Scheduling and Management by end of July. Requirements on the GLUE schema. Requirements on EDG/iVDGL middleware. First report by the end of September. Functional prototype layouts for Alice and CDF by the end of October.
- D.** Analysis of the requirements for Data Management Services by the end of July, Requirements on the GLUE schema. Requirements on EDG/iVDGL middleware. First report by the end of September. Functional prototype for ATLAS and CDF by the end of October.
- E.** Analysis of the requirements and features provided by the middleware available. First prototypes for a metadata catalogue by end of September. Interoperability among metadata catalogues (?)

Organization and Conclusions

Job organization internally in DataTAG.

-  Meetings: *June 12, 2002*
July 15, 2002
September 3, 2002
October 22, 2002

 **Establish commonalities among test layouts.**

 **Establish a working plan with iVDGL.**

 **Interoperability tests with US.**

 **SC2002 demo ?**