EO Applications Session

DataGrid WP9

Final DataGrid Conference
Heidelberg
September 26-October 1st 2003

Outline

- Status Report
- Overview of Objectives & Achievements
- Work plan for Sep-Dec 2003

Status Report - Tasks

- Task 9.1 EO requirements definition
  - Completed
- Task 9.2 EO related middleware components (pm1 - pm18)
  - Completed
- Task 9.3 EO Platform Interface Development (pm7 - pm30)
  - Completed
- Task 9.4 EO Ozone/Climate application (pm13 - pm36)
  - Evaluation of TB 2.0 by running the EO GOME Usecase
  - D9.5 (Demonstration & Report) due December
- Task 9.5 Full scale Earth Science application (pm7 - pm18)
  - Completed

Status Report - Deliverables

- Delivered to EU
  - D9.1 EO Requirements Specification
  - D9.2 Report on Grid Testbeds State-of-art
  - D9.6 Report on the EO application scaling study
  - D9.3 Demonstration /report of second software components release
  - D9.4 Report on EO application platform interface
- In preparation
  - D9.5 EO application processing test-bed (Demonstration and report)

Status Report – Effort (pm)

Partner	Allocated effort	Accumulated effort	Available (Allocated - Accumulated)	Estimated to complete	Deviation (Available - Estimated)
ESA	94.0	145.40	-51.40	3.0	-43.8
KNMI	24.0	23.64	0.36	4.0	-3.6
ENEA	0.0	3.10	-3.10	0.0	-3.1
RAL	0.0	1.00	-1.00	0.0	-1.0
IPSL	36.0	47.50	-11.50	5.0	-14.2
Total	154.0	220.64	-66.64	12.0	-65.7

Overview of Objectives & Achievements

- EO Application environment and components
  - EO Requirements for Grid (D9.1, AWG)
  - GOME product processing & validation usecase deployed on Grid
  - Application Interfacing to Grid : EO Grid Portal, EO GridEngine & GridSurfer (D 9.4)
  - Low-level interfacing components, scripts, testing tools etc.
- EO infrastructure deployment
  - EO Resources on the Grid - UI, CE, SE at partners sites
  - Access to several infrastructures : EDG, Globus GT2 (local resources) & AFS/LSF (ENEA)
  - Integration of non-grid systems (e.g. EO catalogues, OpenGIS services, ESA archive)
- Increasing GRID awareness in EO
  - New applications under way : GREASE, GOMOS, MERIS
  - Cross-fertilization of associate organizations & projects : CEOS-GRID, Space GRID, Oxygen
- Collaboration in EDG working groups
  - Collaborations with MW, ATF, SCG, AWG, QAG
- EDG Testbed evaluation
  - Generate feedback to MW developers, ATF & AWG (D9.3, D9.6)
  - Evaluation of EDG 2.0 Sep-Dec, EO Demo porting to run on EDG 2.0 (D9.5)

Work plan Sep-Dec : Tasks & Deliverables

- Task 9.4 – Ozone / Climate Application
  - GOME processing / validation deployment on EDG 2.0
    - in stand-alone mode (UI / command-line tools)
    - access via WebMap Portal / EO GridEngine
    - access via GridSurfer / EO GridEngine
  - GOMOS deployment – development of validation procedure
  - Further development of EO Use Cases / Requirements
    - (AWG / ATF / QAG)
  - D9.5 : Final Evaluation (Prototype demonstration and report)

Workplan Sep-Dec : Evaluation of EDG 2.0

- New features of EDG 2.0 to be evaluated :
  - information system (R-GMA), GLUE schema
  - improved JSS capacity & reliability
    - job partitioning, check pointing
  - Replica Location Service
    - new metadata capabilities
  - Storage Element
    - disk cache interfaced to Archive system
  - BrokerInfo interface
  - improved security & data access control
  - MPI
  - others ?
- Re-run EO GOME data challenge :
  - run several hundred jobs simultaneously
  - replicate, locate, retrieve & access tens of thousands of files
  - process up to 7 years of global observations

Workplan Sep-Dec : EDG Activities

- Meetings planned, key topics, documents, inputs etc.
- AWG
  - Joint recommendations, prioritized requirements, usecases WP8/9/10
  - Definition of application interface layer
  - Evaluation of GAT toolkit (Grid Lab)
  - Features required in EDG 2.1
- ATF
  - EO Requirements
  - ...
- QAG
  - Quality metrics
  - ...

Workplan Sep-Dec : Next demonstrations

- EO Grid-on-demand Portal
  - deployment on new Grid Engine + infrastructure
  - processing multiple orbits
    - submit & monitor multiple processing/validation jobs on multiple grids
  - data transfer from (to ?) AMS
  - metadata handling by RLS ?
  - interfacing to new EDG security
- OPERA
  - ...
- GOMOS
  - development of validation procedure
- Other ?
  - ...