The dashboard Grid monitoring framework

Benjamin Gaidioz on behalf of the ARDA dashboard team (CERN/EGEE)

ISGC 2007 conference

introduction/outline

- goals of the project,
- the team,
- the framework,
- some monitoring applications:
  - job monitoring,
  - site monitoring,
  - data management monitoring.

the project (EGEE/ARDA)

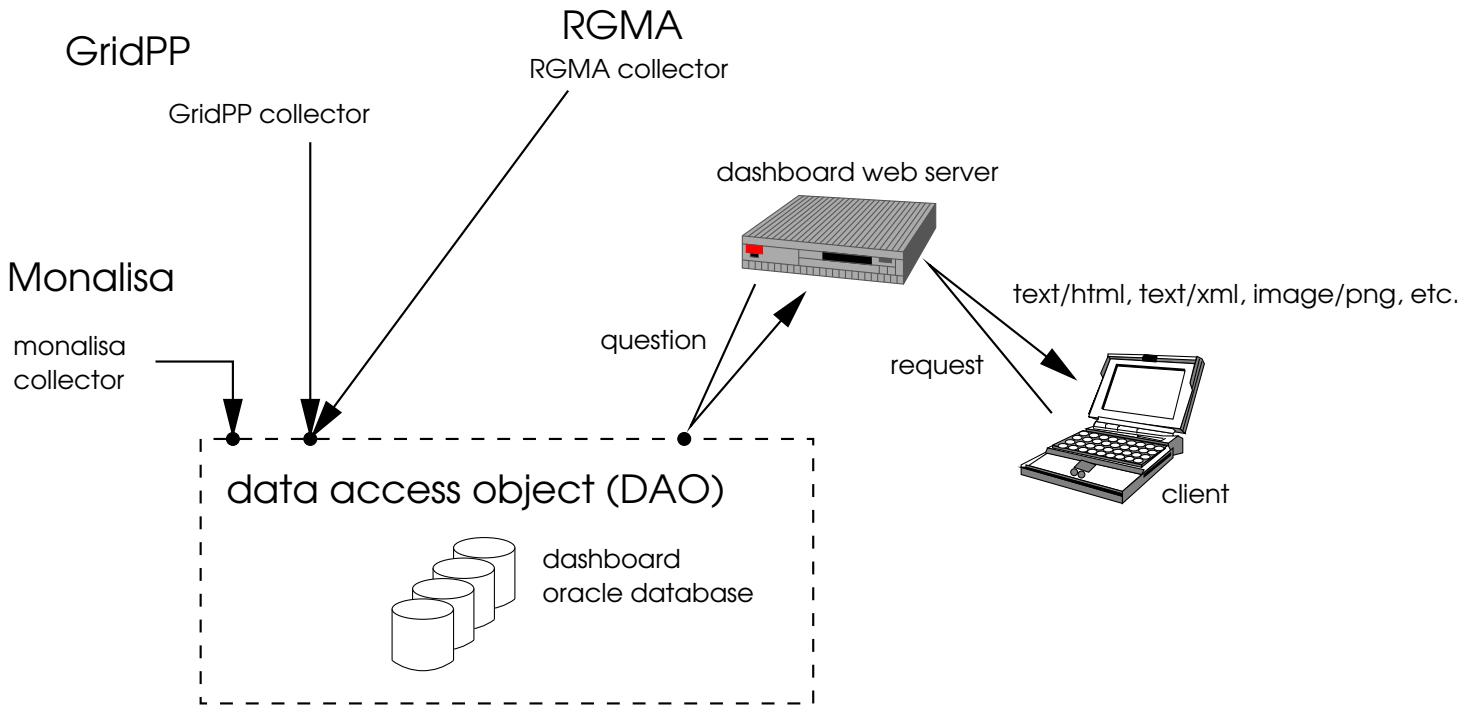
- another monitoring tool,
- a VO specific monitoring service,
  - showing Grid usage from a VO point of view (cross Grid, cross application, submission tool, etc.),
  - merging Grid information and VO information.
- implemented in close contact with the VOs.

the team

- Julia Andreeva (lead, CMS) and Juha Herrala (former member, CMS),
- Benjamin Gaidioz and Ricardo Rocha (ATLAS),
- Pablo Saiz (ALICE),
- Gerhild Maier,
- collaborators and visitors:
  - Taipei: Fu-Ming Tsai (daily summaries), Tao-Sheng Chen (Postgresql and Oracle), Shih-Chun Chiu (user web interface, PHP), etc.,
  - Moscow State University,
  - our contacts in all the VOs and Grids.
- contact: dashboard-support@cern.ch

the framework

- a python framework for collecting and publishing monitoring information



- developer guide, savannah project.

a set of applications

applications

1. job monitoring,
2. site monitoring,
3. data management monitoring.

see the links in the last slide for accessing them all.

job monitoring

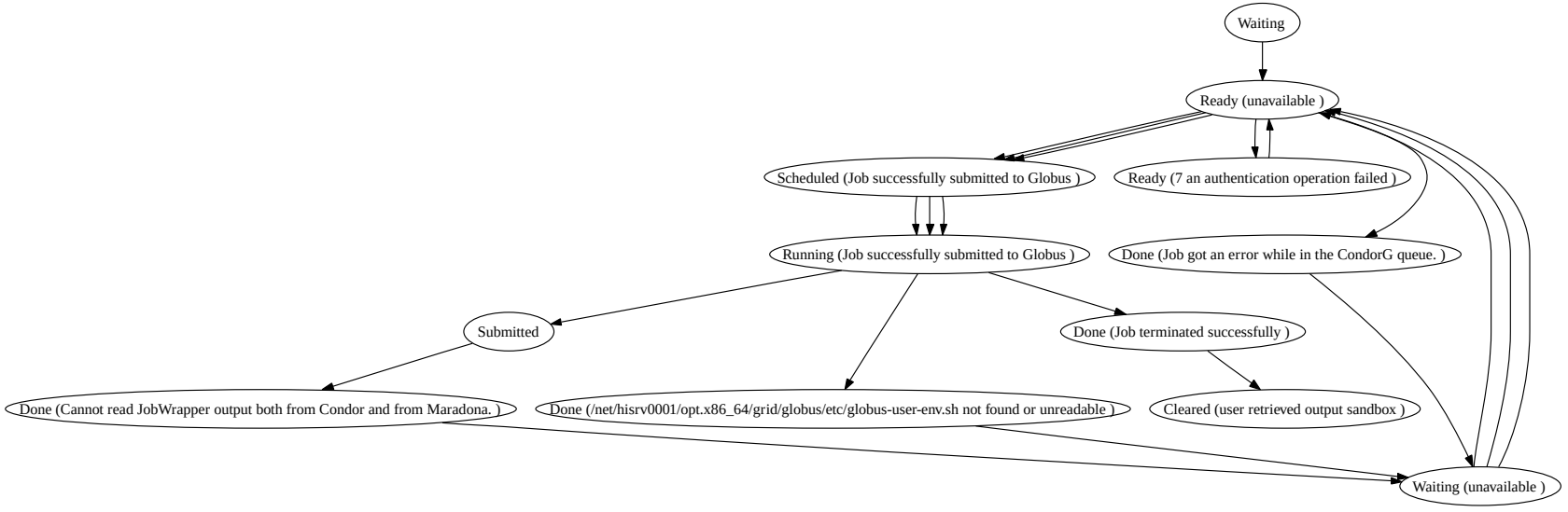
- real-time view of Grid jobs for a VO, summary views,
- various grid information systems used (EGEE RGMA, GridPP XML files, LCG BDII),
- VO info: job instrumentation (Monalisa's ApMon), ATLAS prodsys database, panda monitoring, GangaAtlas monitoring, Dirac database, etc.
- consistent merging (Grid info + VO info).
- powerful filtering for serving different use cases (managers, site admins, users),
- examples: ATLAS activities today, ATLAS jobs in Taiwan, CMS daily views.

job monitoring summary

- installed for ALICE, ATLAS, CMS, LHCb.
- latest/next developments:
  - open HTTP API for a VO to publish job information to the dashboard (in progress),
  - user task monitoring (in progress),
  - alerts (with failure pattern recognition),
  - link with the SAM tests (site functionality tests).
  - RSS feeds.

site monitoring

- linked to job monitoring,
- identify reason of failure of jobs in sites, using RGMA (which reports Grid error messages),
- examples: ALICE site info.



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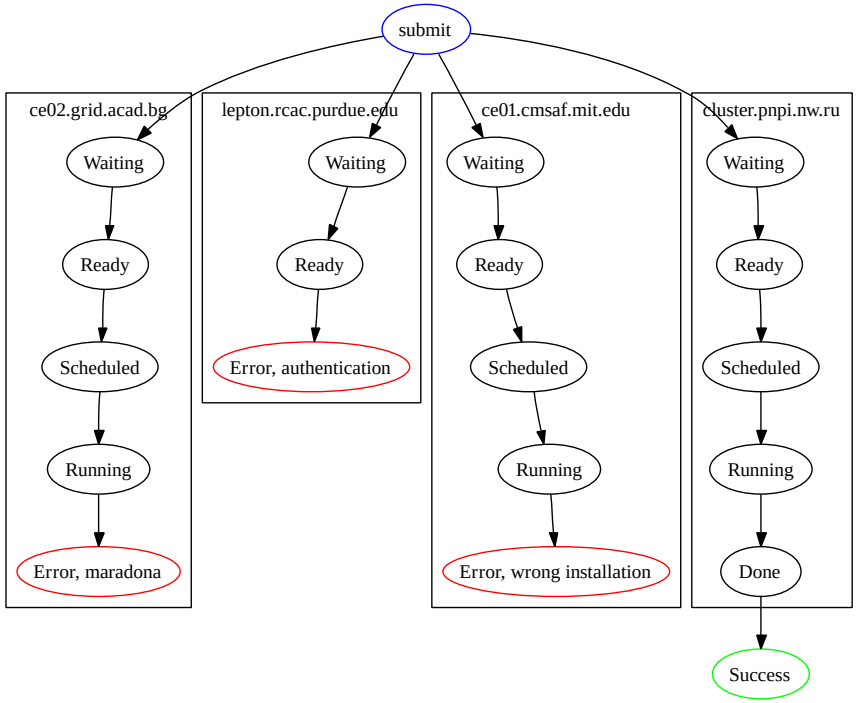

site monitoring summary

- installed for ALICE, ATLAS, CMS, LHCb.
- latest/next developments:
  - merging of all information of a site (not per VO), in order to see if failures are similar for all VOs (in progress).

data management

- an ATLAS specific application,
- monitoring the ATLAS DDM tool,
- events directly reported by ATLAS software to the dashboard,
- current performance, details,
- developed in close contact with ATLAS DDM admins and developers,
- daily summary sent by mail.

data management: summary

- installed for ATLAS,
- critical component of ATLAS DDM (now official monitoring system),
- latest/next developments:
  - text summary sent by e-mail to site admins,
  - correlation with the SAM tests (site functionality tests).

conclusion

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- goal: grid monitoring from a VO point of view:
  - merging VO infos and Grid information,
  - feeting the various use cases (managers, users, site admins),
- several applications already implemented using a flexible python framework,
- future work:
  - new applications, new information sources (GridICE, APEL, SAM),
  - new functionalities: alerts, assistance in error tracking.

links

- Savannah project
- dashboard main page
- CMS dashboard main page
- ATLAS dashboard main page
- LHCb dashboard main page
- ALICE dashboard main page
- site reliability
- dashboard-support@cern.ch