

Grid monitoring from the VO/user perspectives

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SDSC

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User Perspective

- Users want to do science
 - Can I submit a job?
 - Access my data?
 - Reasonable performance?
 - What is happened (happening) to my jobs ?
- A single Grid supports many user communities
- A VO focuses on a single user community and utilizes one or more Grids

VO Management Perspective

- Determine users' needs
- Deliver resources to address the important use cases
- Educate and trains the users and the sites
- Understand future needs and patterns to plan and negotiate resources
- VO manager
 - How much resources are we using ?
 - Where ? To do what ?
 - How efficient is the usage ?
 - How can efficiency be improved ?
 - Do we have enough resources ? If not, why ?
- Grid/VO administrators:
 - VO data transfer coordinator: Status of the file transfers? Performance, problems, etc...
 - Production manager: How well is production progressing?
 - Site administrator: Do my resources work? Are they being well utilized? How well is my site serving a given VO?

Session Papers

- The Experiment Dashboard - The Monitoring System for the LHC Experiments
 - Presented by: Ricardo Brito Da Rocha (CERN)
- Monitoring, accounting and automated decision support for the ALICE experiment based on MonAlisa framework
 - Presented by: Catalin Cirstoiu (University of Bucharest)
- User-level Grid monitoring with Inca 2
 - Presented by: Shava Smallen (San Diego Supercomputer Center)
- Overview of the user tasks monitoring by the Job Submission Systems
 - Presented by: Suchandra Thapa (University of Chicago)

Monitored Information

- Categories:
 - Software/services
 - Jobs
 - Data access
 - Network (data transfers)
 - Storage
- Types:
 - Functionality/Reliability
 - Performance
 - Usage
- Scope:
 - Component
 - End-to-end

Data Collection Techniques

- Active
- Instrumented
- Passive
- Monitoring system interface

Centralized Data Storage

Relational database

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Data Display/Notifications

- Views
- Publishing formats
- Tools used
- Notifications

Discussion

1. Best practices?
2. What are the challenges?
3. Effective data display formats?
4. Can we navigate from one tool to another ?

Discussion hints

- Monitor of services vs. monitor of activities
 - Are all services OK, are the various things I can test working
 - How is the grid used ? Are all my users seeing same performance/problems ?
 - How to connect overall patterns of success/failures to monitoring of single services ?
 - How to decouple the failures due to the problems in the user code from the failures due to the problems of the Grid infrastructure?