Architecture Issues

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Philosophy Implications

The goals or "philosophy" of the DataGrid will impact the architecture.

- Resource Brokering
  - globally optimize use of all available resources?
  - optimizations of subsets of resources?
  - transparent access to resources?
- Information Privacy (e.g. authorized users)
  - public access ➔ resource matching can be done far from resource
  - secure access ➔ matching far away; authorization of brokers
  - private ➔ matching must be done at resource
- Implementations: consistent or flexible.

Tool/Functional View

- What functionality must a tool provide?
  - e.g. "Authorization Service" really a set of authorization tools
- Look for common functionality:
  - Logging & Bookkeeping
  - R-GMA
  - Fabric monitoring
- Databases
  - Postgresql, MySQL, etc.
- XML Parsers

Service View

- Defined by protocol
  - don't confuse service and tool (e.g. Authorization Service ➔ Membership Service)
  - manage protocol (APIs) separately from rest of service code
  - services have a location(s) ➔ "Deployment View"
    - user side of grid
    - site side of grid
    - internal to site
    - grid-wide/regional service
- Testing of Alternate Services
  - Plug-compatible (FTree, MDS, R-GMA)

Summary

- Philosophies
  - DataGrid goals
  - Information Privacy
- Views
  - Tool/Functionality View
  - Service View
  - Deployment View