OGSA-DAI TWO (DAIT)

Project Proposal

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OGSA-DAI Partners

18 months, started February 2002
Infrastructure Architecture

Data Intensive X Scientists

Data Intensive Applications for Science X

Simulation, Analysis & Integration Technology for Science X

Generic Virtual Data Access and Integration Layer

Monitoring     Diagnosis     Authorisation
Scheduling     Accounting    Transformation
Transport      Naming       Caching

Structured Data Integration
Structured Data Access

OGSA

OGSI

Grid Infrastructure

Compute, Data & Storage Resources

Distributed

Virtual Integration Architecture

Structured Data Access
Relational
XML
Semi-structured
DAI basic Services

1a. Request to Registry for sources of data about “x”

1b. Registry responds with Factory handle

2a. Request to Factory for access to database

2b. Factory creates GridDataService to manage access

2c. Factory returns handle of GDS to client

3a. Client queries GDS with XPath, SQL, etc

3b. GDS interacts with database

3c. Results of query returned to client as XML

SOAP/HTTP

service creation

API interactions

XML / Relational database
1a. Request to Registry for Factories with required capability

1b. Registry responds with Factory handle

2a. Requests to each Factory for a GridDataService

2b. Factory creates GridDataService to manage access

2c. Factories return handles of GDSs to client

3a. Client queries GDS with XPath, SQL, etc

3b. GDSs interact with databases

3c. Results of query returned to client as XML

SOAP/HTTP

service creation

API interactions

Registry

Factory

Grid Data Service

Relational database

Grid Data Translation Service

Both XML or Both Relational

Analyst

Client

Both XML or Both Relational

Relational database
1a. Request to Registry for sources of data about “x” & “y”

1b. Registry responds with Factory handle

2a. Request to Factory for access and integration from resources Sx and Sy

2b. Factory creates GridDataServices network

2c. Factory returns handle of GDS to client

3a. Client submits sequence of scripts each has a set of queries to GDS with XPath, SQL, etc

3b. Client tells analyst

3c. Sequences of result sets returned to analyst as formatted binary described in a standard XML notation