

Relational and XML Realizations

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DAIS F2F

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Topics

- Review Issues From Dec 2003 DAIS F2F
- Review Related Data Standards Activities
- Major New Topic:
 - Review OGSI evolution and possible WSRF relationship with:
 - OGSA Data Services
 - Grid Data Service
 - The Relational Realization
 - The XML Realization
- The Way Forward
 - Options
 - Discussion

Relational Issues and Observations (1)

- Define the DataManagement portTypes
 - **Consider handling separately as part of CGS-DMTF collaboration**
- Represent SQL and SQL/XML requests in XML
 - **Consider handing in DAIS and proposing to SQL ANSI ISO group - no interest currently in SQL ANSI ISO group**
 - **Proceed in DAIS**
- Improve the DBOperation descriptions
 - **Proceed in DAIS**
- Improve the DataDescription Port Types
 - **Consider handling as part of WSRF review**
 - **With WSRF there is the possibility of using resource properties**
- Review exposing metadata in multiple ways
 - **Consider handling as part of WSRF review or CGS DMTF collaboration**
 - **Could proceed in DAIS for necessary items**

Relational Issues and Observations (2)

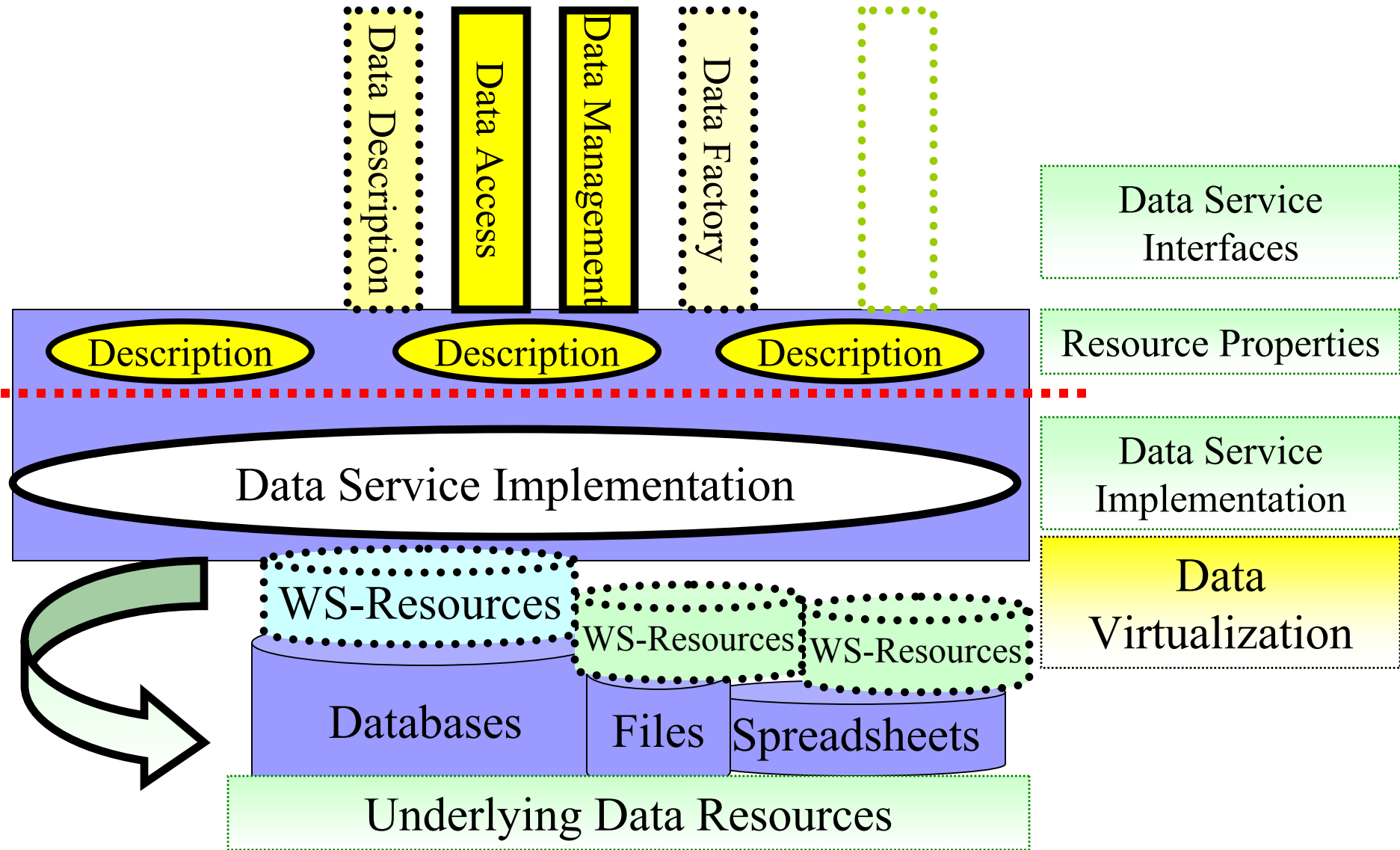
- Review the Relationship with:
 - Data Distribution
 - **Consider after GGF10 Data Distribution BOF**
 - Transformations
 - **Consider after GGF10 Data Distribution BOF**
 - Transactions
 - **Consider after BOF - Group of German Universities are considering running transactions BOF at GGF10**
 - XML Realization
 - **Proceed with keeping in step**
- Remove WS-Agreement references
 - **Proceed with removal**
- **Consider the role of DDL in management scenarios and access scenarios**

Proposal For Relational Realization for GGF10

- Continue supporting the CGS DMTF Collaboration for Data
 - Work on the scenarios document
- Improve the DBOperation descriptions
- Improve the DataDescription portion
- Propose XML representation for SQL (DDL and DML)
 - Consider whether DDL part of management only
- Should the Relational Realization document be re-issued for GGF10?

Review Related Data Standards Activities (Dependencies)

Data Services



Overview

JDBC Webrowset (JSR 114)

XQJ (JSR 225)

SQL 2003
(SQL/XML, XPath, XQuery)

XPath
XQuery

Relational
Database
(Tables)

XML
Database
(Collections)

DMTF CIM 2.9

W3C (XML)

- XPath 2.0:
 - <http://www.w3.org/TR/xpath20/>
 - Last call draft produced in November 2003. Comment period ends 15 Feb 2004. Resolving comments.
- ***Query Language: XQuery 1.0:***
 - Last call draft produced in November 2003. Comment period ends 15 Feb 2004. Resolving comments.
 - Incorporates XPath 2.0
 - XML update?
- ***XML Representation of Query Language: XQueryX 1.0*** (XQuery in an XML format)
 - <http://www.w3.org/TR/xqueryx/>
 - Not yet in last call
- ***XML Representation of Query Response: XSLT 2.0 and XQuery 1.0 Serialization***
 - <http://www.w3.org/TR/xslt-xquery-serialization/>
 - Last call draft produced in November 2003. Comment period ends 15 Feb 2004. Resolving comments.

ANSI / ISO

- SQL 2003: Completed
 - SQL/XML:
 - *XML Representation of Query Language*: No SQL XML format – nothing in plan
 - DDL discussion paper
 - *XML Representation of Query Response* : SQL XML defined format
 - XML formatted output done
 - JSR 114 Webrowset and Microsoft DataSet
 - SQL/XML in 2003: publishing, serialize, XMParse from varchar – clob
 - Unicode assumed in type
 - Infoset data model
 - SQL/XML evolution: Moving to Xquery data model – areas of current discussion
 - Handling sequences, Invoking XQuery
 - Ifvalid, Validation operator
 - ASIDE: Data Mining

Review WSRF

From OGSi to WSRF:

Refactoring and Evolution**

(From Ian Foster GlobusWorld Presentation)

OGSI	WSRF
Grid Service Reference	<i>WS-Addressing</i> Endpoint Reference
Grid Service Handle	<i>WS-Addressing</i> Endpoint Reference
HandleResolver portType	WS-RenewableReferences
Service data defn & access	WS-ResourceProperties
GridService lifetime mgmt	WS-ResourceLifeCycle
Notification portTypes	WS-Notification
Factory portType	Treated as a pattern
ServiceGroup portTypes	WS-ServiceGroup
Base fault type	WS-BaseFaults

**Draft document at www.globus.org/wsrf this week

Points Raised on WSRF

- How does a WS-Resource fit with other technologies and specifications?
- Are there any worked examples of a WS-Resource, along with its EPR, resource properties and reference properties?
- Can a single WS-Resource be
 - Modeled through different resource properties?
 - Accessed through different reference propertiesWhen and Why would this be a good thing?

Points raised on WSRF

- Should all data in tables and collections be exposed as resource properties?
- What should be modeled as a WS-Resource?
 - DBMS, Database, Table, Session, DBOperation?
- Scope of names for DAIS WS-Resources?
- How does Resource Life Cycle relate to a:
 - DBMS, Database, Table, Session, DBOperation?
- Will the DataDescription port type remain?
- Can WS-Notification be applied to database triggers?
- Can WS-Notification be applied to third party delivery
- Can WS-Notification and WS-Resource factory pattern be used together? Service composition?

Main Points Raised on WSRF

- How should DAIS operations be linked together?
- How does the query interface on resource properties relate to regular database query interfaces? And to other existing query interfaces?
- Will there be a single mapping? (We'll have to choose one?)
- ASIDE: What happens to the data virtualization term?

The Way Forward

GGF 10 Documents (20 Feb Deadline)

- 0. UML specification - Semantics
- 1. Updated "OGSA Data Services" Document (Ian Foster)
- 2. Updated "Grid Data Service Specification" (Simon Laws)
- 3. Updated "Grid Data Service Specification: The Relational Realisation"
- 4. Updated "Grid Data Service Specification: The XML Realisation" (Amy Krause)
- 5. Updated "Data Distribution in the Grid Environment" (Dieter Gawlick)

New Document?

- Create proposal outlining changes to Relational and XML specifications
 - **Factory Pattern (replacing factory)**
 - **WS-ResourceProperties (replacing SDEs)**
 - **WS-ReferenceProperties**
 - **For Collections?, Tables?, Result Sets?**

Possible GGF 10 Sessions?

- Session 1: Grid Data Services Specification [Dave Pearson to Chair]:
- Session 2: Specification Realisations [Norman Paton to Chair]:
- Session 3: Discussion of Topics [Dave Pearson to Chair]:
- Session 4: Discussion of WSRF and Alternative Proposals
- CGS Working Group Support
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