



GLUE 2.0 WG Report

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gLite Data Management

Outline

- Background
- GLUE 2.0
- Rollout plan
- The WG
- Results
- Future



GLUE

- GLUE attempts to describe the grid infrastructure
 - GLUE: **G**rid **L**aboratory **U**niform **E**nvironment
- Why?
 - Service discovery
 - Monitoring
 - Brokering
 - Accounting
 - ...

GLUE 1.3

- GLUE 1.3 is currently deployed
 - Nordugrid schema, UNICORE
- What's wrong with GLUE 1.3?
 - Protocol architecture – gridftp, gram...
 - cf service architecture
 - Numerous details
 - Eg SE/CE relationships
 - Not easily extensible
- A better description of grid resources will allow optimisation of their use

A view of GLUE 1.3

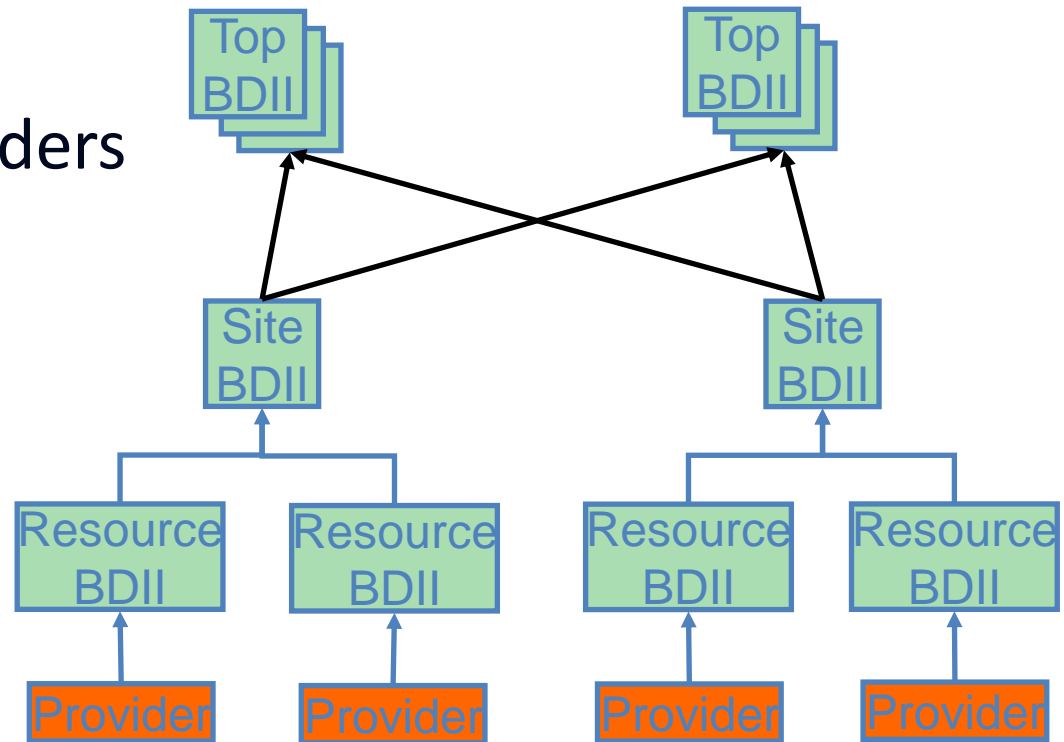
The screenshot displays the GLUE 1.3 web interface. On the left, a directory tree shows the hierarchy: CERN Idap > OSG > CERN-PROD > o=grid > Mds-Vo-name=local,o=grid > Mds-Vo-name=csc,Mds-Vo-name=local,o=grid > GlueSiteUniqueID=CSC,Mds-Vo-name=CSC,Mds-Vo-name=local,o=grid. The selected entry is expanded to show a list of 24 sub-entries, including various GlueSE and GlueService entries.

On the right, the detailed view for the selected entry is shown. The Distinguished Name (DN) is `GlueSiteUniqueID=CSC,Mds-Vo-name=CSC,Mds-Vo-name=local,o=grid`. The object class is `GlueSite`. The `GlueSiteUniqueID` is `CSC`. Other attributes include `GlueSiteDescription` (CSC - IT Center for Science), `GlueSiteName` (CSC), `GlueSiteUserSupportContact` (mailto:egee-support@csc.fi), `GlueSiteSysAdminContact` (mailto:egee-support@csc.fi), `GlueSiteSecurityContact` (mailto:egee-support@csc.fi), `GlueSiteLocation` (Espoo, Finland), `GlueSiteLatitude` (60.10), `GlueSiteLongitude` (24.50), `GlueSiteWeb` (http://www.csc.fi), `GlueSiteSponsor` (none), `GlueSiteOtherInfo` (GRID=EGEE, GRID=WLCG, WLCG_TIER=2), `GlueSchemaVersionMajor` (1), `GlueSchemaVersionMinor` (3), and `GlueForeignKey` (GlueSiteUniqueID=CSC).

At the bottom of the interface, there are buttons for **Apply**, **Add as new**, and **Refresh**. The status bar at the very bottom indicates "8 entries found (finished)".

How is it used?

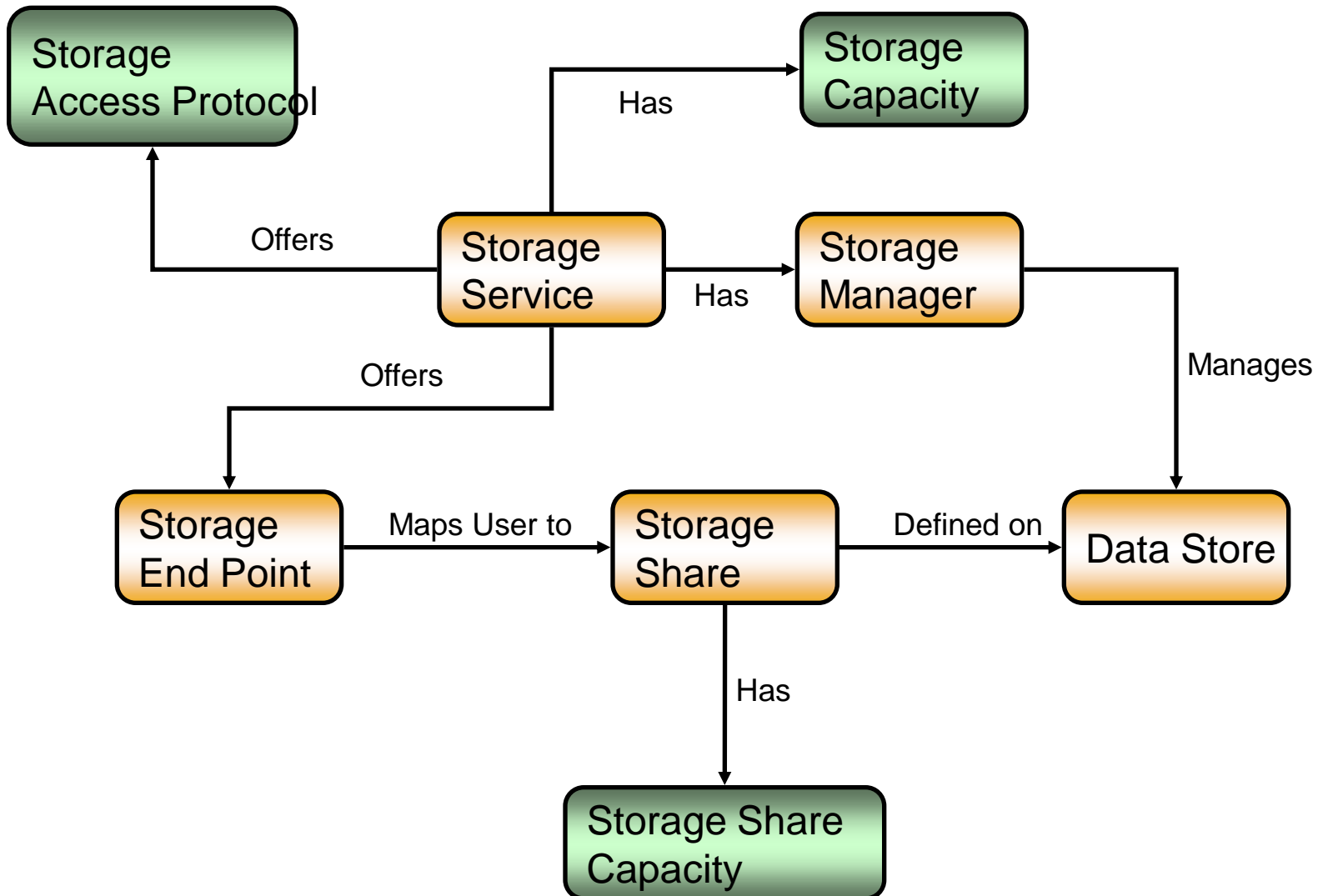
- How is it implemented now?
 - LDAP
 - BDIIs
 - Info providers
 - Clients



GLUE 2.0

- OGF standard
 - Ratified March 2009
- Described as an abstract schema
 - LDAP rendering

GLUE 2.0 storage schema



Rollout Plan

- As described at CHEP 2010 (Stephen Burke)
 - Define the abstract schema
 - Define the LDAP rendering
 - Implement the schema in the BDII and roll out
 - Write and deploy information providers
 - Update client tools to understand GLUE 2
 - (Retire GLUE 1)
- Implemented in parallel
 - “o=glue”

The Working Group

- Purpose
 - Ensure the consistent implementation of GLUE2.0 across the Data Area
- Representation
 - SEs – dCache, DPM, STORM
 - Clients – dCache, gLite, ARC, UNICORE
- The timetable is as follows (from DJRA1.2.1)
 - Common agreement on the interpretation of the GLUE 2.0 schema [PM 6]
 - Publishing GLUE 1.3 data with GLUE 2.0 schema [PM 12]
 - EMI data components fully GLUE 2.0 compatible [PM 24]
- Links
 - <https://twiki.cern.ch/twiki/bin/view/EMI/EmiJra1GLUE20>
 - <https://twiki.cern.ch/twiki/bin/view/EMI/EmiJra1GLUE20FAQ>

WG Decisions

- We are only considering current LDAP InfoSys
- Validation via gstat2
 - Responsibility for probes to be determined
- Optional attributes are optional
 - Exception list :
 - *size attributes

WG Decisions

- How do we ensure unique IDs?
 - Implementer should pick a hostname which is associated with the service and reasonably persistent, and append the string '/data'. They can then append further information as they see fit. Note that this is not intended to be parsed.
- Which Type is my service?
 - `servicetype_t` is an open enumeration. Use a type of `org.emi-eu.`, eg `org.emi-eu.dCache`.
- What do the *Size attributes mean?
 - Where possible, the "Usage of Glue Schema v1.3 for WLCG Installed Capacity information" should be considered authoritative. This may require further discussion.

WG Decisions

- How are the GlueVOInfoLocalID entry to be handled?
 - A StorageShare should be created for each GlueVOInfoLocalID entry, this includes details such as 'Path'
- What should be done with the GlueService entries currently published for SRM?
 - These are no longer required as the relevant information should be in StorageEndpoint

Next steps

- Start work on the info providers
- Make RCs available on the SA2 testbed by the end of January
- Be ready for EMI-I code freeze
- Finish clients
- Extend information content throughout Year 2 according to requirements



Thank you

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