

The Development of SRM interface for SRB

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The standard SRM services for SRB were developed to make the popular SRB data grid system interoperable with the gLite e-infrastructure. AMGA is used to implement the File catalog and to provide uniform interface for replication and to the backend database. Currently the development is under standard SRM functional testing and validation, and establishment of full SRM 2.2 functionalities will be finished by early 2008. In the first phase, targeted use cases are to: 1) Make SRB an archival system of gLite-based e-Infrastructure, 2) Support Lifetime policy for files - volatile, durable, and permanent, and 3) Impose the same VO and security control to SRB as the Grid infrastructure. Other than the basic directory, permission and data access functions, user authorization, web service interface, gridftp deployment, and SRB-DSI had been supplemented and demonstrated at the SC07 in Nov. 2007 as well. Next, the interoperation between SRB and DPM, dCache, Castor, etc.

3. Impact

File exchange between gLite and SRB is enabled. The core middleware position of gLite is enforced by the uniform SRM interfaces to major mass storage systems and even a data grid system like SRB. The specification of SRM is further endorsed and outreached. Dynamic space reservation and VO support capabilities are imposed onto SRB to furnish standard storage services to it. On the other hand, the gLite is able to take advantage of SRB federation among different administrative zones.

4. Conclusions / Future plans

SRM services of SRB were established by this work, and made the interoperation among grid systems that benefit from and is made of SRB. In the future, SRM client could access to any of the storage systems with SRM services and the search and brokering among those SRM-enabled storage would be possible.

Provide a set of generic keywords that define your contribution (e.g. Data Management, Workflows, High Energy Physics)

data grid, data management, storage resource management, SRM, SRB, storage resource broker

1. Short overview

Storage Resource Manager (SRM) is a widely adopted interface to the storage management system of production grids currently. With the heterogeneity of Grid, the best way to share data is to integrate data sources through SRM, a uniform interface with dynamic space and file management. In this project, the SRM for SRB is developed, to make the popular SRB data grid system interoperable with the EGEE infrastructure and support the SRM services for SRB, such as space reservation and VO support etc,

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