Storage Resource Manager Collaboration

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Storage Resource Manager

- Middleware for managing Site Storage Resources for the Grid
- Provides Uniform access to Heterogeneous Storage Components and simplifies the development of higher level middlware components (Replica Catalog)
- Protocol negotiation and reservation of resources
- 3 Groups of Functions
  - Data transfer functions
  - Space Management
  - Directory Functions

Current State of Storage Resource Manager Project

- Currently implemented SRM V1.1 (Data Transfer functionality only)
- Implementation employs GSI for authentication and authorization
- SRM Access to Enstore/dCache storage at Fermilab by the NeST project at University of Wisconsin (demonstrated in October 2002)
- SRM server is deployed in a production CDF dCache.
- SRM client is integrated in the CDF software.
  - Can be used by CDF users at Rutgers
- SRM srmcp client in Fermilab KITS
- Demonstrated interoperability of SRMs between Fermilab, Jefferson Lab and Lawrence Berkley Lab during SC2002.
- Implemented Mass Storage System (MSS) to MSS transfer capabilities
- Achieved first transfer between CERN Castor and Fermilab.
- Work on development of SRM spec v2.1

Storage Resource Manager Plans

- Implementation of SRM as a General Storage Element Component
  - dFarm integration
- Deployment of MSS to MSS capable SRM
- Implementation of SRM v2.1
  - Space management functionality
  - Namespace discovery and manipulation
- SRM as a solution for the CMS Data Challenge
- SRM monitoring and management
- Security compliance