

A Uniform Access to Metacomputing File System

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Problem statement

1. Two different file systems are available in SORCER (FileStorer and FederatedFileStorer - SILENUS);
2. Four different user agents are available: Web-based document manager to FileStorer, SILENUS Service UI, SILENUS MIDP user agent, SILENUS NFS adapter;
3. Programmatic API for FileStorer and SILENUS;
4. No single direct access point and friendly user interface to the both files systems.

A uniform access to shared file systems in the SORCER metacomputing environment is needed.

Objective/Approach

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Uniform user agents for SORCER metacomputing file system

Approach

1. Review and analyze Jini Network Technology, service UI, WebDAV, SILENUS FederatedFileStorer, and SORCER FileStorer methodology;
2. Develop uniform access methodology and relevant use cases for accessing metacomputing file system;
3. Build a prototype to verify the concept of uniform access methodology;
4. Develop an HTTP file store adapter and service UI agents to access FileStorer and FederatedFileStorer;
5. Deploy the implementation in SORCER

Schedule

Proposal Presentation	11/16/06
Review & analyze related technology	11/30/06
Requirements and use cases	12/10/06
Prototype building & concept verification	01/15/07
Design of HTTP adapter	01/25/07
Design of Service UI	02/05/07
Implementation	03/05/07
Validation of the use cases	03/15/07
Deploy in SORCER	03/22/07
Thesis Defense	03/29/07

Supporting Data

Benefits

1. Friendly and intuitive graphical user interface to metacomputing file system;
2. Non confusing single access point to both file systems;
3. Reduction of effort-time-cost through work simplification;
4. Improved file access quality through work simplification.