

### File Access in OGSA-DAI

Dr Martin Westhead Architect, EPCC/Globus Alliance

Telephone: +44 131 650 5958 Fax: +44 131 650 6555

Email: M.Westhead@epcc.ed.ac.uk

- Status
- Review of requirements
- Review of issues and questions
- Way forward
- Conclusion

- Initial discussions
  - Chicago F2F
  - Globus world
- Exploring design space
- Collecting requirements

## Requirements

## epcc

#### Files

- File name, properties, permissions
- Get and put
- WROC (POSIX-style interface)
- Query string
  - · Structured e.g. BinX, CSV
  - · Semi-structured e.g. grep
- Specialised operations e.g. JPEG header enquiry

#### Directories

- List files, properties etc.
- List subsets of files
- Get/put files
- Create file service

### File system

- Mount/unmount
- Create directory service

#### General

OS independent

### Questions

## epcc

#### Files

- Does a file know its own name?
- Does a file know what directory its in?

#### Directories

- Directory as a special file
- Directory as a collection of files
  - Not necessarily (just) hierarchy
- Changing directory (factory and state change)

### Filesystems

- Filesystem as a special kind of file (?) [loopback filesystem]
- Do we need a filesystem representation?

### General

- Inheritance structure (single root?)
- Functional division into description, factory, management, access

- Aim to provide (example) realisations for
  - Basic get/put/management
  - Access to bytes WROC
  - Query string
  - Specialist interface
- First drafts for GGF 11

## Conclusion

- Many similar problems to other parts of DAIS
- What are the correct abstractions?
- Need to produce prototype(s) for discussion