



Towards a Standards Based Interface for EUDAT

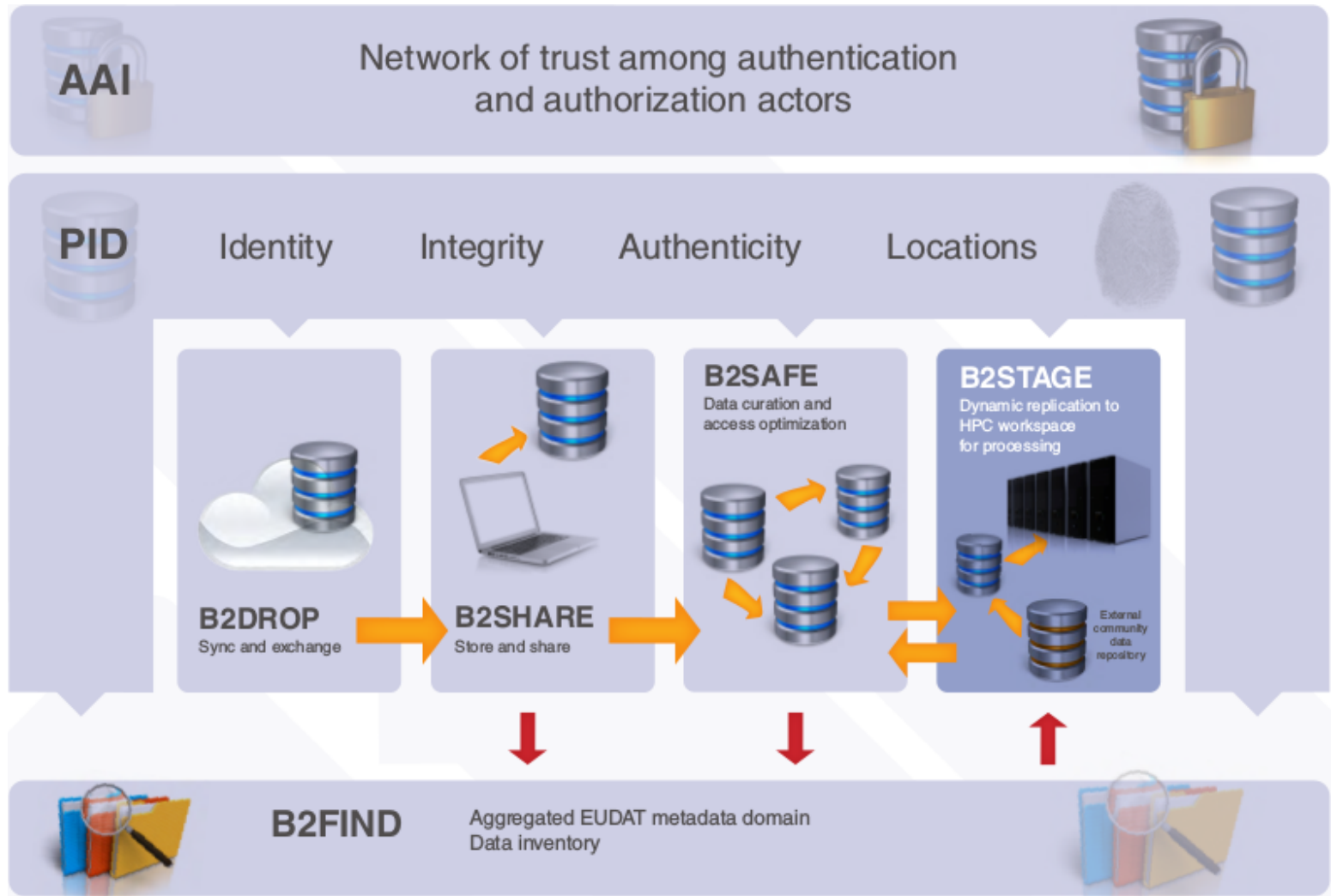
Shaun de Witt, STFC



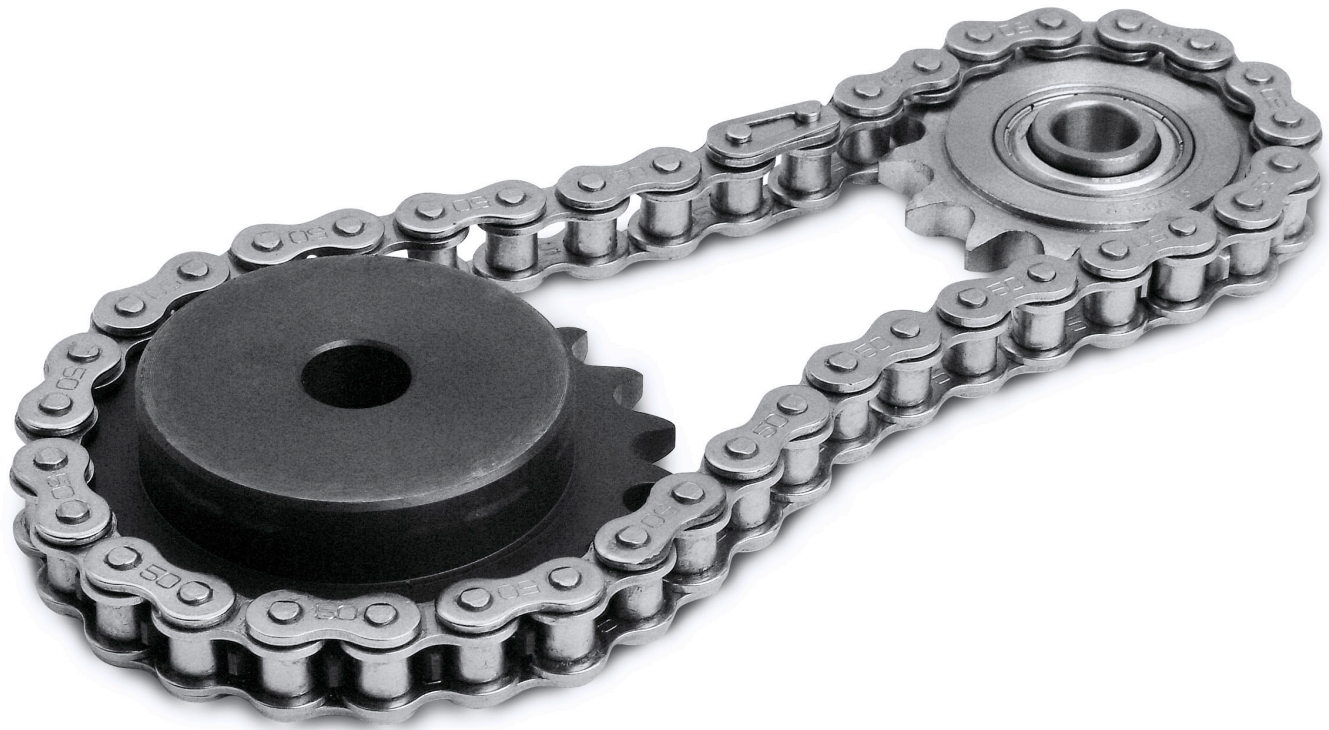
Introduction

- The current situation and the rationale for it
- The importance of a standards based interface
- The plan to provide such an interface
- Demonstration
- Plans

Background



How do EUDAT Services Link Together?





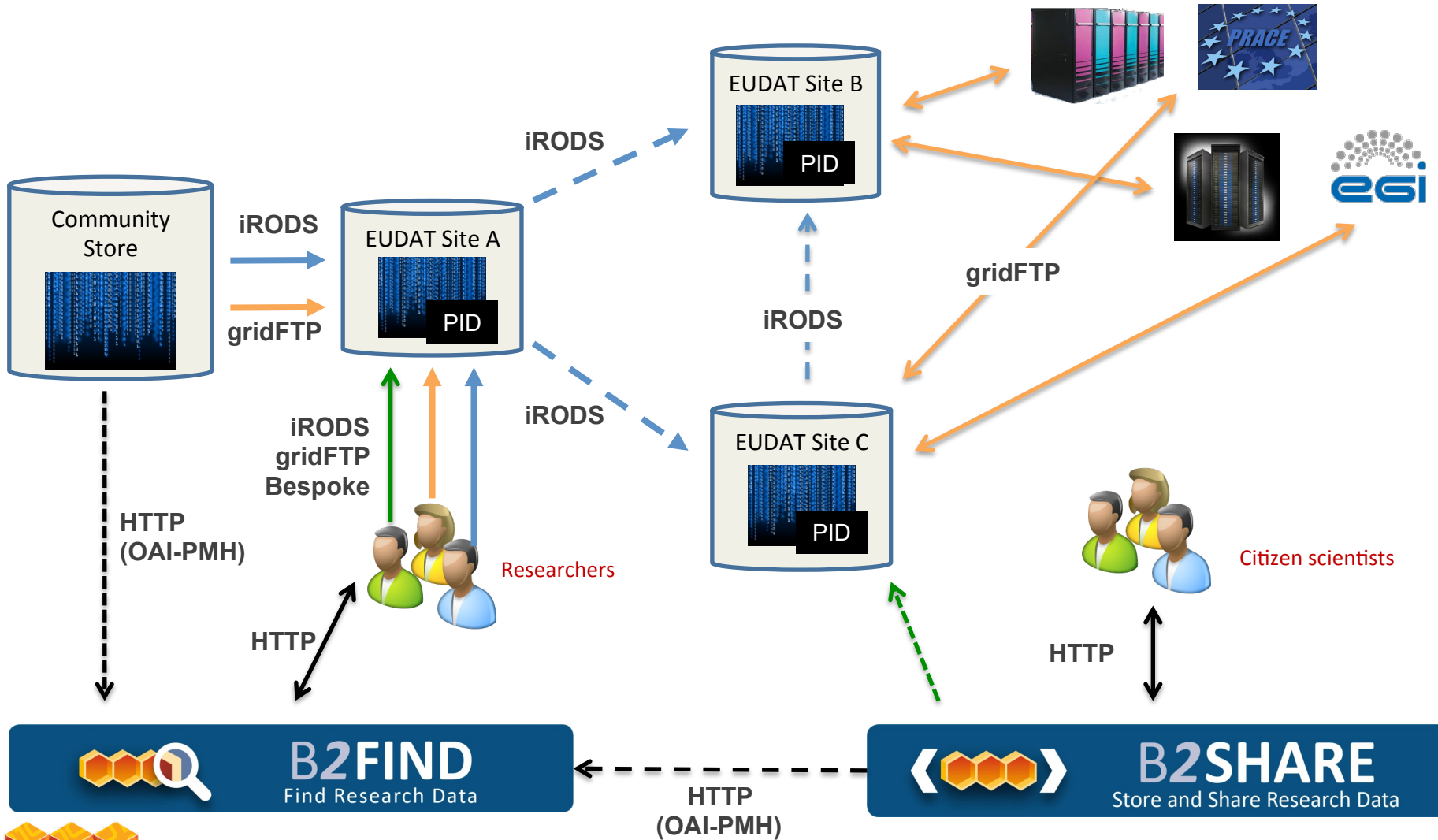
B2SAFE

Replicate Research Data Safely



B2STAGE

Get Data to Computation



Why so many Interfaces?

- Actually many good reasons!
 - Mandated protocol
 - OAI PMH based on REST interface needing HTTP
 - Optimum protocol for some services
 - gridFTP for B2Stage
 - Rapid Service Deployment
 - Use of iCommands
- BUT...
 - It makes interfacing to EUDAT services **seem** complicated

Long Term Issues

- Reliance on iCommands reduces flexibility
 - Locks EUDAT into specific technology
 - Proprietary (though open source) interface commands
 - Subject to change
- Reliance on non standards based protocols has its own problems
 - Durability
 - Sustainability
 - Controlled evolution

Why Use a Standard?

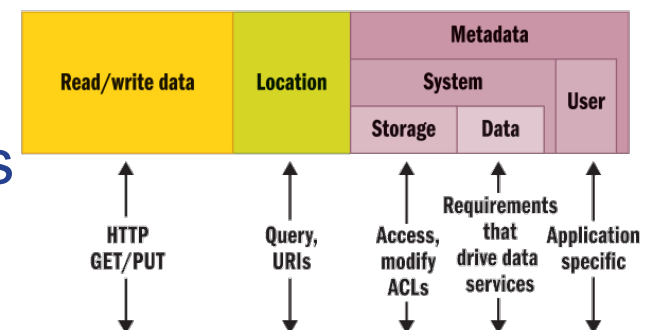
- Would be much better to use a well standardised, widely deployed, simple to use interface
 - Easier integration for new communities
 - Common protocol for all services
 - But maybe not unique – gridFTP will probably continue
 - Easier to improve EUDAT internal services without impacting user
 - EUDAT can contribute to the evolution of the standard

HTTP/CDMI as a standard

- HTTP
 - Proven scalability
 - Many clients available
 - Well defined and well governed standard (W3C)
 - Active development status
- CDMI (Cloud Data Management Interface)
 - Extends HTTP to allow arbitrary queries
 - Amongst other things
 - Well defined standard (SNIA)
 - Several client development kits



Data storage interface for clouds





B2SAFE

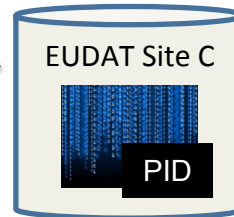
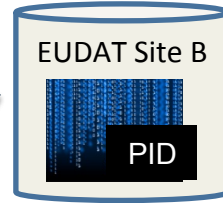
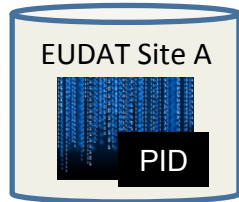
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B2STAGE

Get Data to Computation

- iCommands
- gridFTP
- HTTP
- Bespoke



Researchers



Citizen scientists



B2FIND

Find Research Data



B2SHARE

Store and Share Research



Road Map

- This is a new development for EUDAT
 - Phased roll-out
 - Planned to allow clients such as curl or wget to interface to EUDAT
- Start with B2Stage and B2Share
 - EPOS will be starting testing soon
- Develop for B2Safe (user-facing)
- Develop as internal protocol
- EUDAT AAI Integration

demo

- If network is OK and time allows....

Questions

- Questions
- If you want to try out the service contact the HTTP task force (eudat-tf-http@postit.csc.fi) or me directly (shaun.de-witt@stfc.ac.uk)