



iRODS national distributed instance

G.Mathieu on behalf of the FG-iRODS team
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First things first...

- Why should this talk be interesting for you ?
 - You have users with complex data management needs
 - and maybe you don't know what to do with them
 - You have iRODS experts in your NGI
 - and, er... maybe you don't know what to do with them
 - You're clever and you've figured out iRODS could help building bridges between grid/cloud and big data
 - ... or you don't really care but you're naturally curious

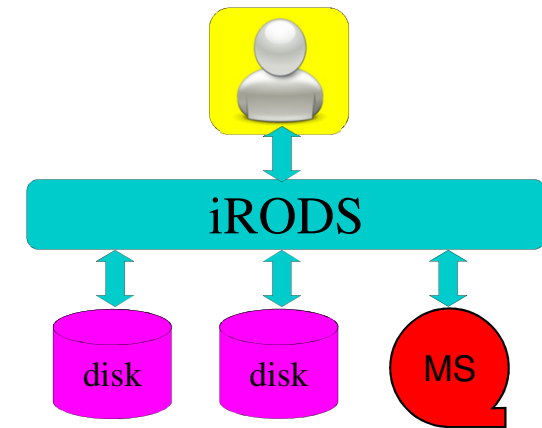
OK, now you are interested :

- 10 minutes to tell you :
 - What is iRODS (in case you don't know yet)
 - Why we chose it
 - Why a national instance
 - How we organised it
 - Where we are now
 - What are the perspectives

iRODS in a nutshell

- **iRules Oriented Data Systems**

- Born in 2006 as a successor of SRB
- Open Source under BSD license
- <http://www.irods.org>

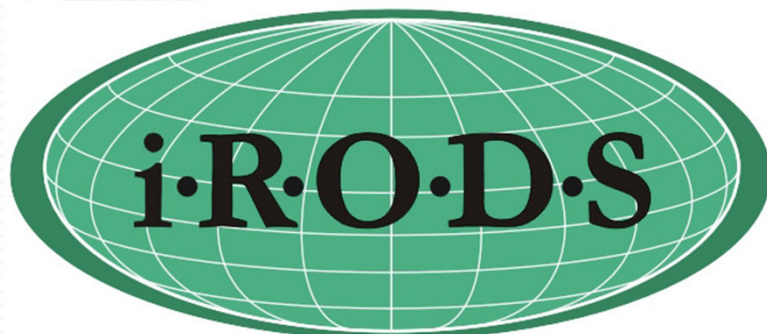
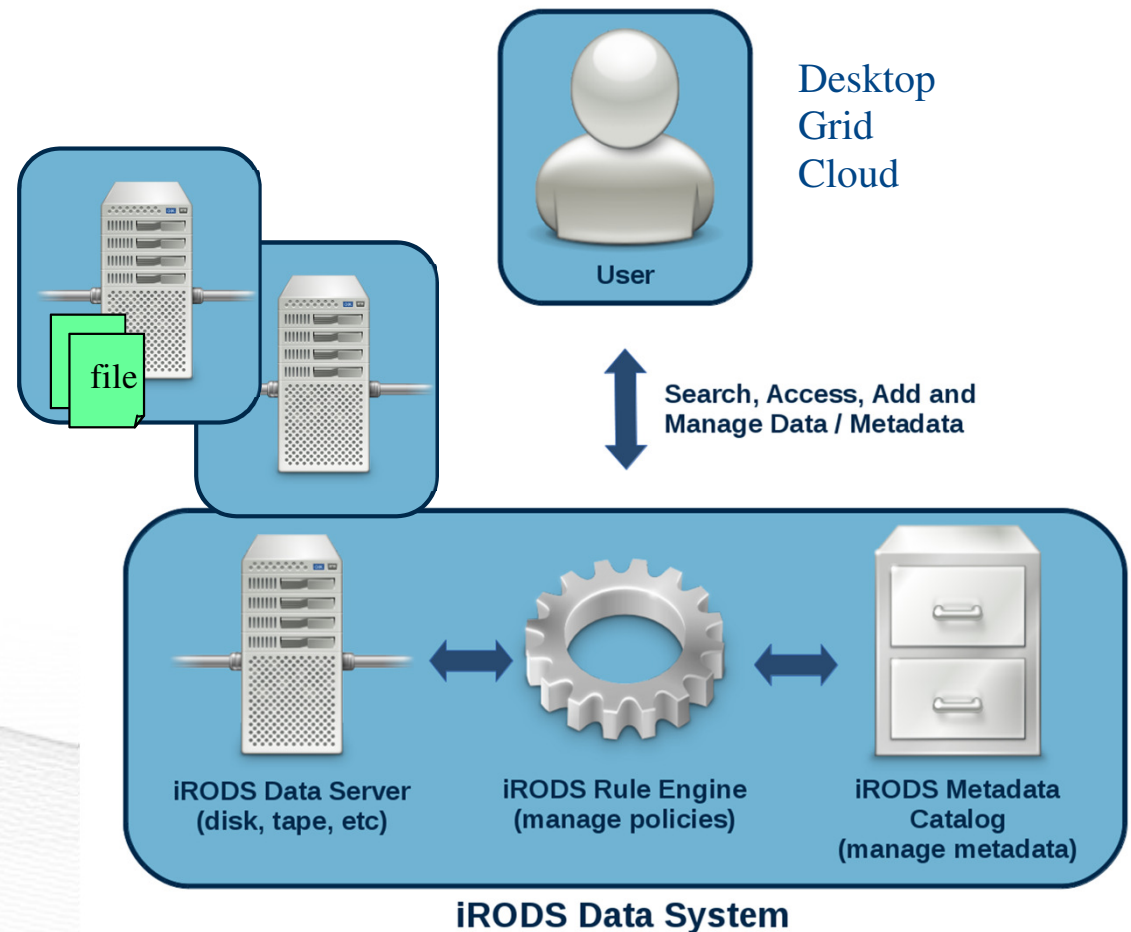


- **Grid-like storage system**

- Transparent access to data and use of metadata
- Can federate distributed heterogeneous resources
- Logical file organisation
- Integrates data handling policies (user defined)

iRODS in another nutshell

- Logical components
 - DB/catalogue (iCAT)
 - Rule engine
 - Storage ressources



Integrated Rule-Oriented Data System

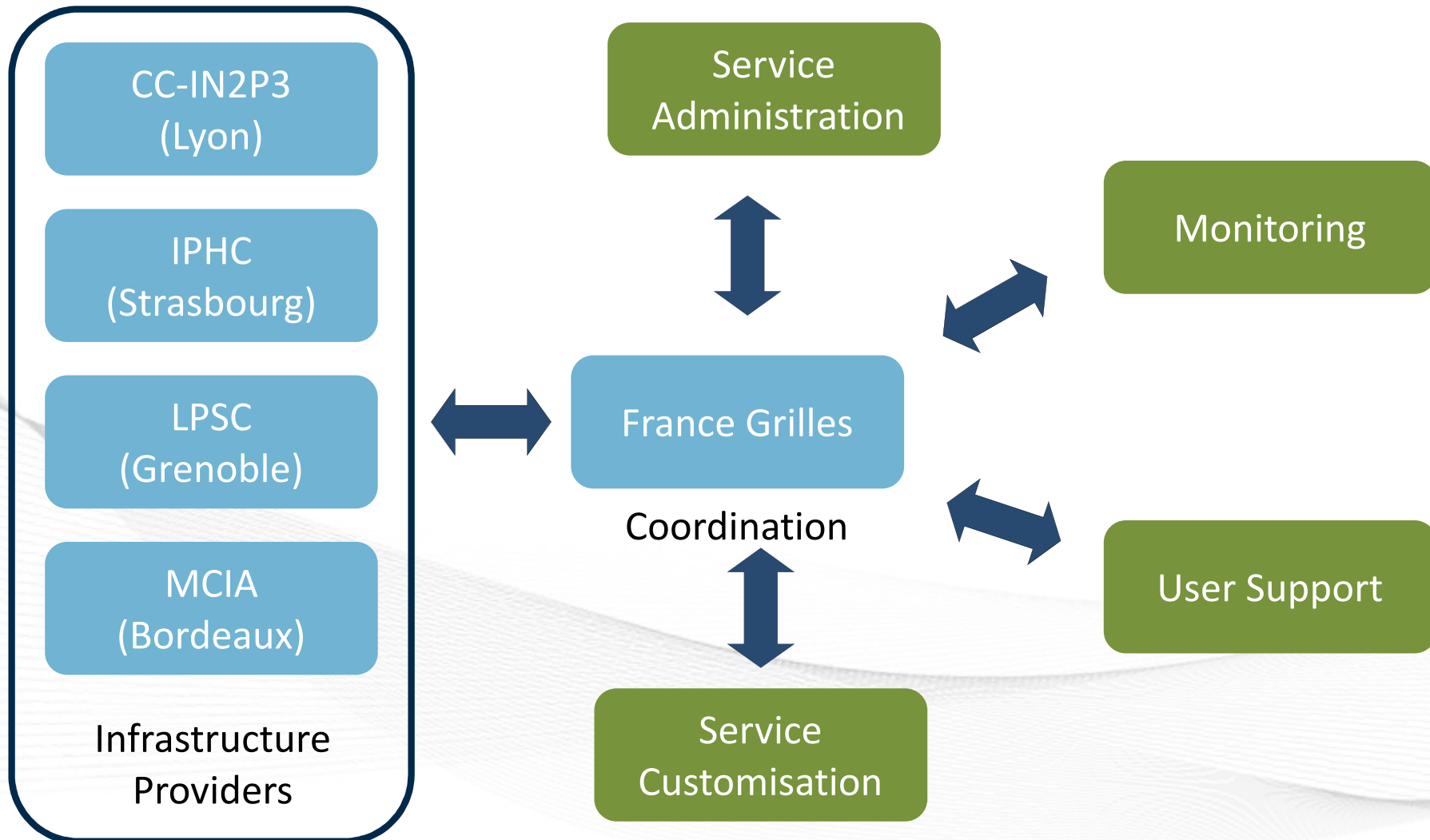
Why iRODS

- Suitable solution to answer our users' needs :
 - Analysis of large data volumes
 - High availability by data distribution or replication
 - Physical organisation of data transparent to users
 - Automatic data annotation
 - Data findable by metadata search
 - Fine-grained access control
 - Data available from desktops, grids and clouds

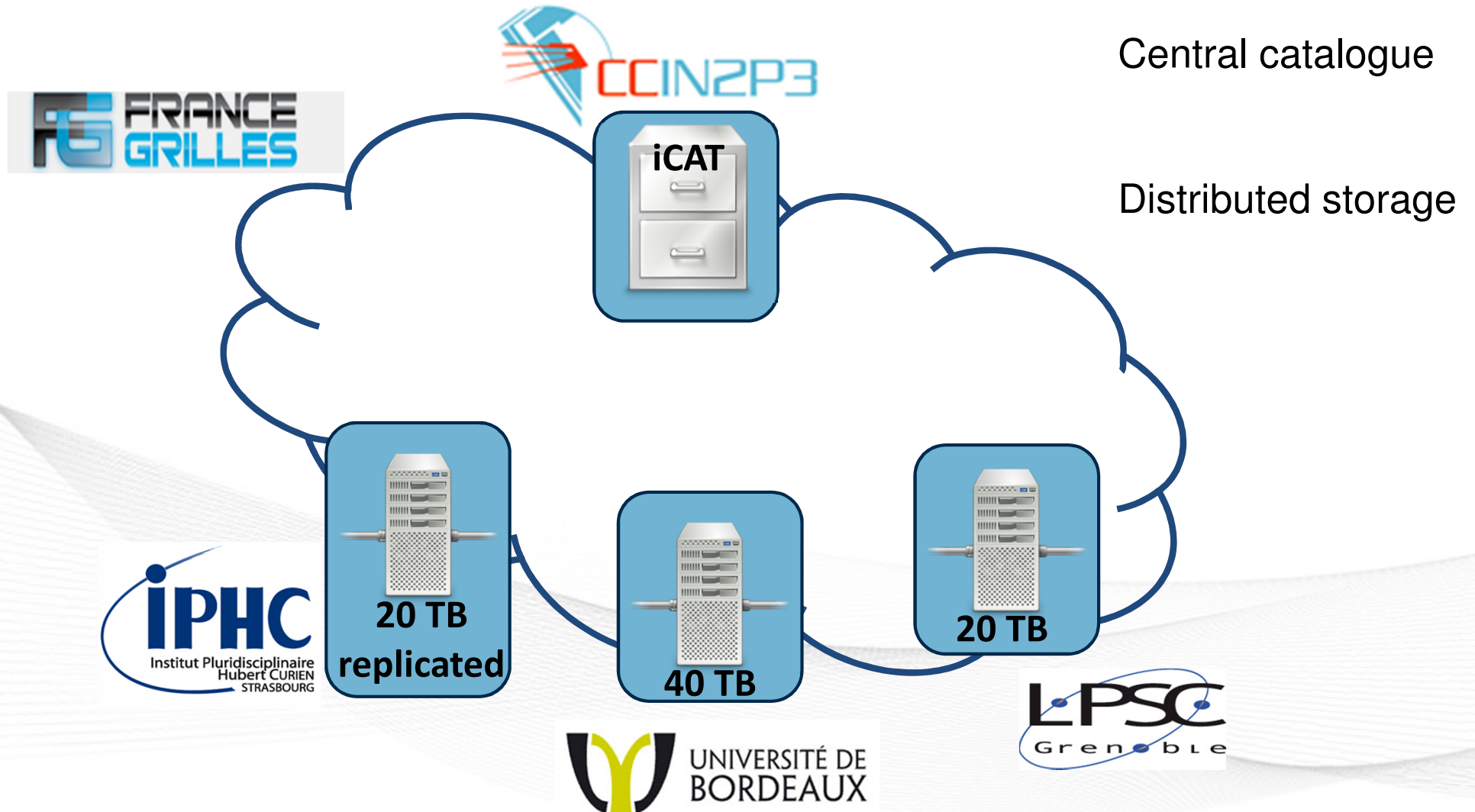
Why a national instance

- For our users
 - Provide a data management solution to our user communities
 - Help small communities benefit from the service
- For us as an NGI
 - Provide a scalable, reliable infrastructure
 - Minimise costs by sharing resources and effort
 - Share, expend and disseminate expertise

Organisation

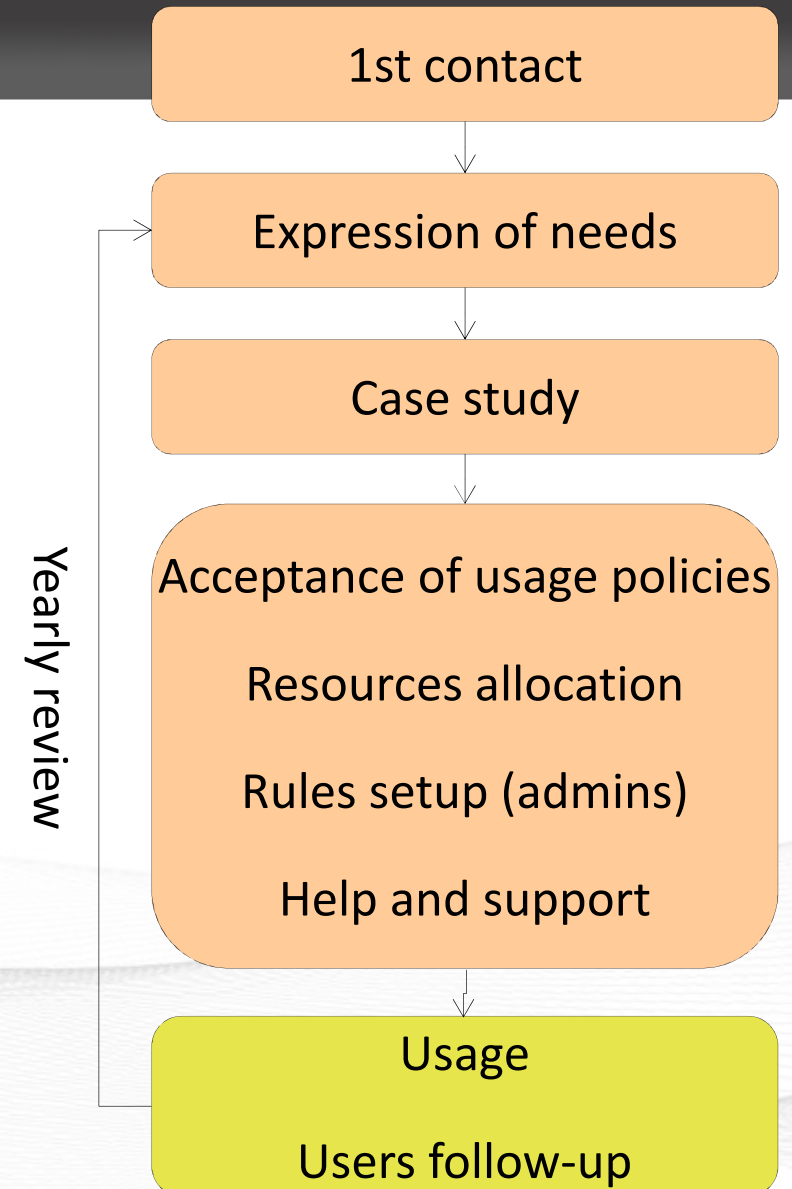


Infrastructure



Resource allocation process

- **Profile**
 - Scientific data, all domains
- **Needs**
 - Data storage and distribution
 - Complex data flow usage
 - iRODS system evaluation
- **Usage**
 - Metadata creation, replication
 - Access control
 - Access from grid nodes



Status

- Done
 - Partners identified
 - Storage resources (80TB) available
 - iCAT in production
 - Resource allocation process defined
 - iRODS client available for grid sites
 - 1st user identified (Eurofidai/BEDOFIH)

Perspectives

- **Well defined roadmap for 2014**
 - User training and beta access in February 2014
 - Finalised organisation (MoUs) between partners
 - Open test access to users by April 2014
 - Full structure (incl. support & doc) ready by summer 2014
 - Production service in september 2014
- **Long term**
 - Stable operations of a production service
 - Extend infrastructure (e.g. users bringing resources)
 - Continuous improvement wrt training and support

Acknowledgements

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Questions

- <http://www.france-grilles.fr/Pour-les-chercheurs-ou-ingenieurs?lang=en>

