EMI Registry (EMIR)

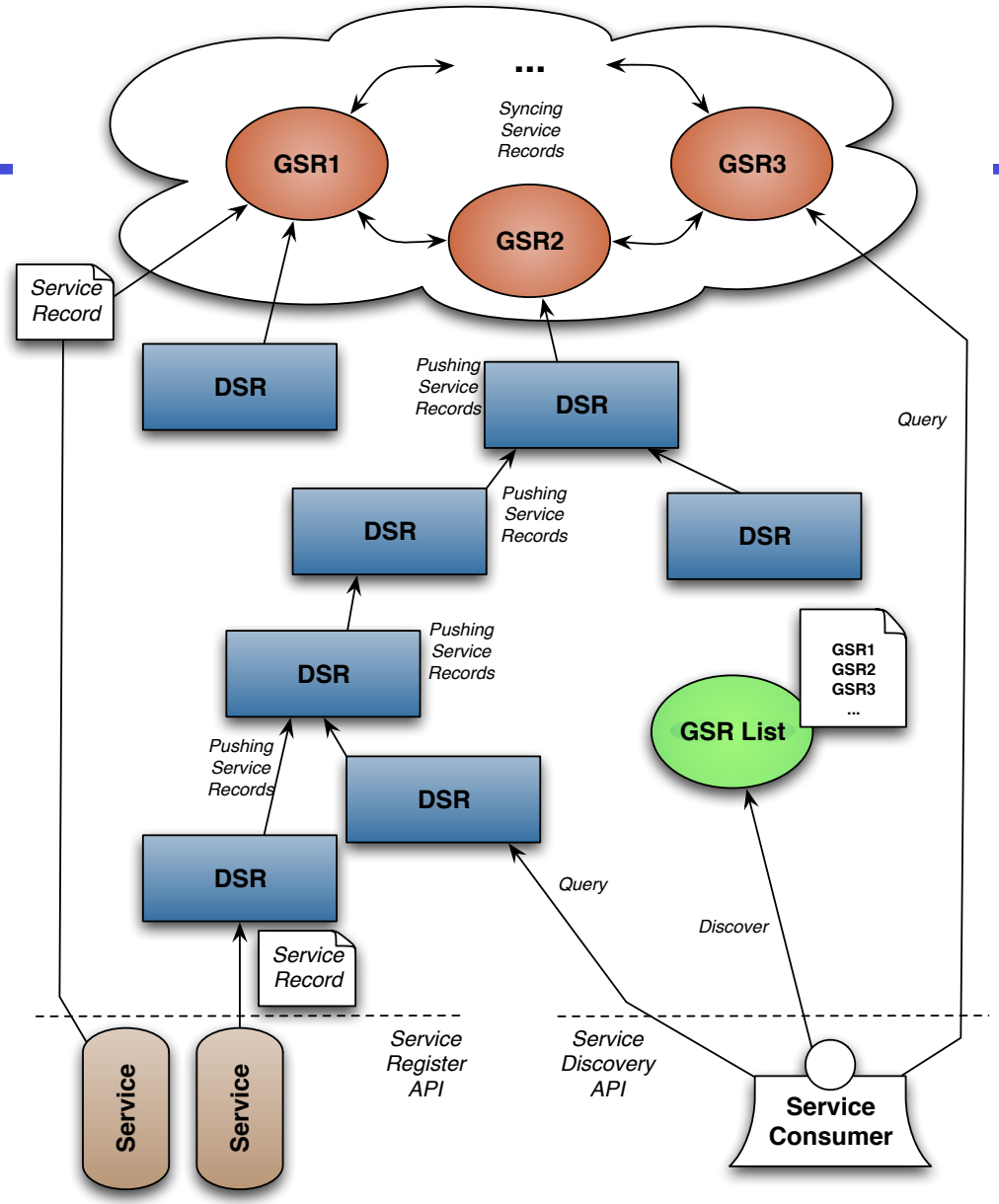
Ivan Marton

NIIF Institute

martoni@niif.hu

EMI Registry

- EMI Service (new development)
- Goal: service discovery
- Requirements:
  - Federated infrastructure
  - Scalable, Rubust, (Reliable, Up-to-date, etc.)
- Easy to implement/adapt, well documented, standardized interface
- Security
  - support more (x509 certificate based) method
  - local store, ARGUS, VOMS support, etc.


...
Syncing
Service
Records
GSR1
GSR2
GSR3
Service
Record
DSR
Pushing
Service
Records
DSR
Query
DSR
Pushing
Service
Records
DSR
DSR
Pushing
Service
Records
GSR1
GSR2
GSR3
...
GSR List
Pushing
Service
Records
DSR
DSR
Query
Discover
Service
Record
Service
Register
API
Service
Discovery
API
Service
Service
Consumer

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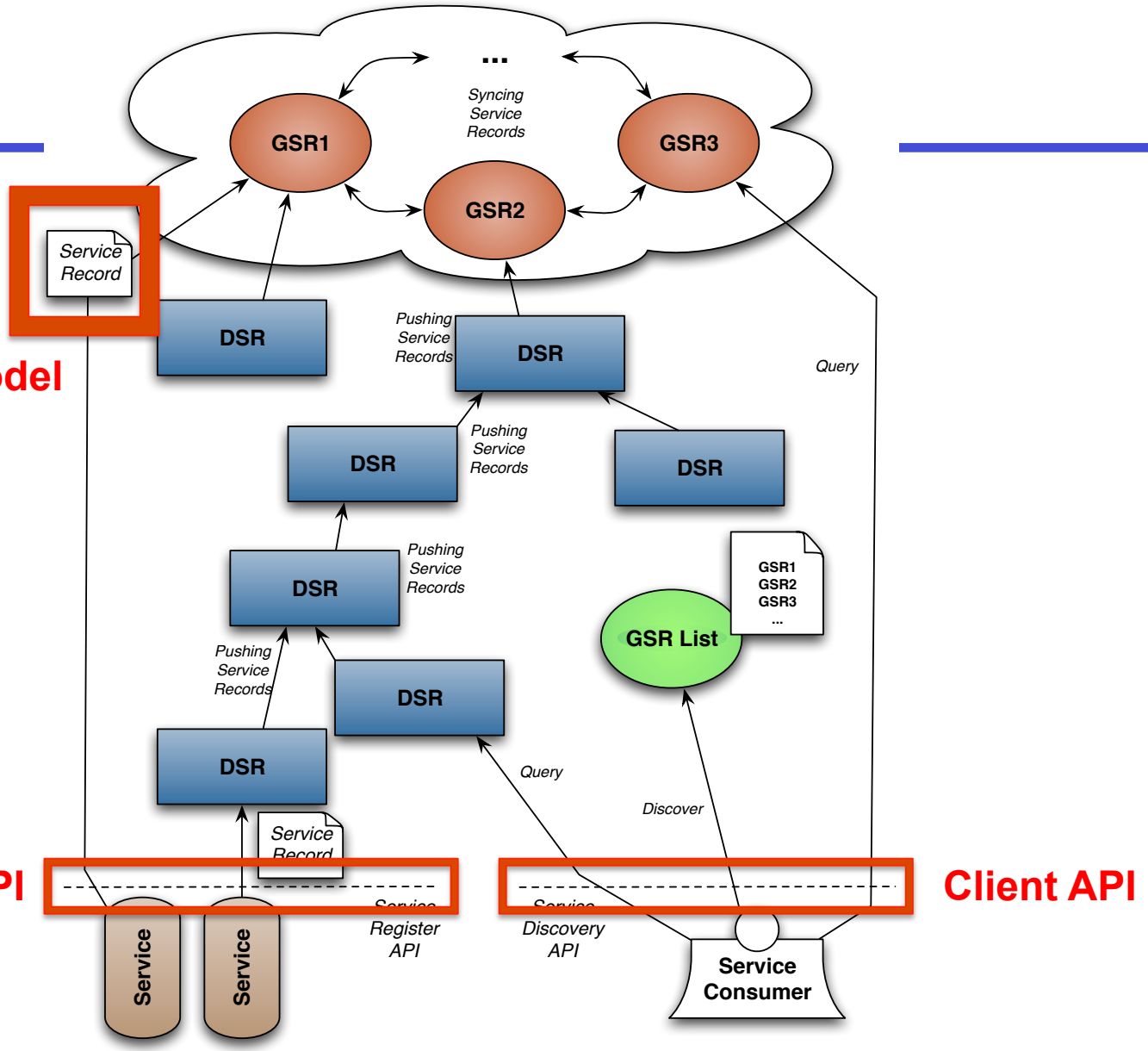
Information model



Service Register (Service) API

- Strongly uses security (service entry owner, etc.)
- Supported features:
  - Add one or more new service entries
  - Update one or more existing service entries
  - Delete one existing service entry
  - Get the supported information model
  - Ping to service to check whether it's online

Service Discovery (Client) API

- By design is open for every grid entity
- Supported features:
  - Querying the EMIR database
  - Querying the EMIR database for GLUE 2.0 XML documents
  - Get children/parent/neighbor EMIR nodes

Service Record (Information model)

- Information model
  - Highly based on GLUE2
  - Static information (depends on the point of view) – during the lifetime of a service
    - designed for this, but can be changed later
  - Model provided by the service itself
    - http://emiregistry1.grid.niif.hu:54321/model
- Supporting multiple output format
  - JSON: http://emiregistry1.grid.niif.hu:54321/services/query
  - XML: http://emiregistry1.grid.niif.hu:54321/services/query.xml

Further reading / Documentation

- Source is in an own repository:
  - https://github.com/eu-emi/emiregistry
- Wikis about testbed, technical/development details
  - https://github.com/eu-emi/emiregistry/wiki
  - https://twiki.cern.ch/twiki/bin/view/EMI/EMIRegistry
  - Design document is on the wiki
- Developer manual (with API reference):
  - http://eu-emi.github.com/emiregistry/documentation/registry-1.0-SNAPSHOT/registry-manual.html
- Comprehensive technical documentation on the way
- Reference implementation: in the NorduGrid SVN or even in your recently updated (at least) v1.1.0 ARC deployment

EMIR support in HED

- HED provides service registration:
  - automatic, (almost) transparent
  - periodical
  - aggregated if possible
- Not a new feature – was implemented for ISIS
- Provides GLUE2 compatible information
- Can be easily configured
- Adapted for EMIR, implements EMIR Service API as well

EMIR configuration in HED

- If you use XML configuration it means:
  - Have to define an `InfoRegister` element with `Registrar` that has the `URL` prefixed with `EMIREG`
  - Also add the mandatory element under this XML node

- If you use INI configuration it's easier. Just add:

```
[register]
expiration=PT1M
period=PT30S
registrar=EMIREG:http://emiregistry1.grid.niif.hu:54321
```

EMIR in ARCLIB and ARC client

- New ARC Client Component (ACC) has been developed
- Can be used everywhere where ISIS, LDAP infosys, etc. could be used:
  - CLI, Rich clients, Services (act as clients), etc.
- Easy to use even in client.conf or command line option (just don't forget to add the `EMIREG` prefix where the plugin is defined)

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Finally

Demo?
Questions?