EMI Registry (EMIR)

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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.
Information model

Service API

Client API

GSR List
Query

Service Register API

Discovery API

Service Consumer
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

- Supporting multiple output format
  - JSON: http://emiregistry1.grid.niif.hu:54321/services/query
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):

– 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)
Finally

Demo? Questions?