

# FT3 and Rucio

ADC Technical Interchange Meeting

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May 15th 2013

# File transfers in Rucio

- In Rucio, the agent that replaces the Site Services is called the Conveyor. Much simpler than the Site Services :
  - Queries the DB to get a list of files to transfer.
  - Identifies the list of sources.
  - Submits to FTS3 the list of sources + destination path.
  - Relies on ActiveMQ messages from FTS to get the state of the transfers + polls FTS jobs if no messages received after some time. Once a FTS jobs is done, put the request state to done.
- Difference with DQ2 : No more internal queue. As soon as a replication rule is sent in the system, a transfer request is generated (No more starvation due to slow fetcher as in DQ2).
- FTS will take care of the share between the transfers.

# FTS3 requirements

- List of requirements sent to FTS developers by Rucio team + meetings to discuss these requirements.
- Main requests :
  - Support multiple protocols and multiple sources.
  - Monitoring.
  - Retrial strategies.
  - Integration with a site downtime service and endpoint health checks, e.g., nagios, AGIS.
  - Should support stagein.
  - REST API.
  - Selector based on VO in ActiveMQ messages.

# FTS3 evaluation

- Small functional tests were done in addition to the one conducted by ADC to test the basic functionalities.
- Right now we use a MOCK FTS3 component to simulate transfers (although we can already use the real FTS3 for transfers). We plan to use it during our Rucio stress test in June.
- At some point we will start using the real FTS to perform real transfers.
  - Timescale : Summer.
  - Will gradually test new functionalities.

# What about multihop ?

- Multihop is not supported by Rucio.
- One possibility is to define the route from the source(s) to the destination w/o intermediate copy → Would be a typical use-case for SDN/virtual circuits.
  - The natural place should be FTS, but it's probably not going to happen on the short/medium term.
  - Reluctant to do it in Rucio...
  - Is multihop really needed at all ??
- If we decide to use virtual circuits, what is needed from the sites ?  
How far we are from a production quality service ?