Rucio & Globus Online

Martin Barisits

on behalf of the Rucio team
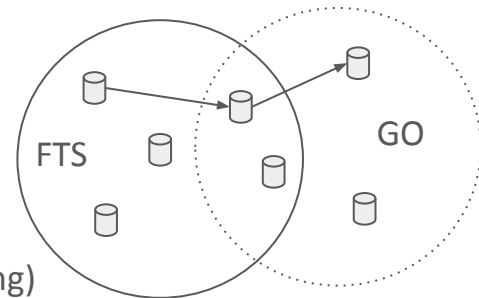
RUCIO

SCIENTIFIC DATA MANAGEMENT

GO & Rucio history

- Globus Online functionality was added to Rucio 1.21 release (Nov 2019)
  - Development done by M. Snyder (BNL)
  - Added support for transfers in between GO RSEs using the GO transfer service
    - Rucio abstracts this within a transfertool interface
      - Current transfertools: FTS, GO
  - Added support for deletion on GO storages
  - Successfully tested within ATLAS
- Findings/Shortcomings
  - Works as expected, but…
  - Difficult to deploy in a mixed (FTS + GO) environment due to transfertool workflow in Rucio
  - Difficult to isolate transfertools from each other (Very late binding of transfertool)
    - Problems with GO transfers could impact FTS transfers and vice-versa
  - → New development initiative started end of 2020 with M. Snyder (BNL) and B. Ziemons (CERN)

GO & Rucio now

- Idea was to re-use the Rucio GO transfertool but address the workflow issues
- New component (conveyor-preparer) selects transfertool early in the workflow (Early binding)
  - Later steps (submission, polling/notification) are fully isolated
  - RSEs can support one or multiple transfertools (GO, FTS, FTS+GO)
  - Selection strategy can be adapted
    - If src and dest support both, or replicas exist in both ecosystems
  - Preparer development has additional advantages in Rucio (QoS, throttling)
- Will come with Rucio 1.25 release (Next week)
- Possible future developments
  - Deletion optimization
  - Transparent multi-hopping between FTS + GO

More information

Website		http://rucio.cern.ch
Documentation		https://rucio.readthedocs.io
Repository		https://github.com/rucio/
Images		https://hub.docker.com/r/rucio/
Online support		https://rucio.slack.com/messages/#support/
Developer contact		rucio-dev@cern.ch
Publications		https://rucio.cern.ch/publications.html
Twitter		https://twitter.com/RucioData