

Rucio 1.20.0

“Wonder Donkey”

Release outlook

Feb'19 - Jun'19 plan



14.02.2019, Martin Barisits

# Feature release plan

- Three feature releases in 2019

- **1.19.0** “Fantastic Donkey” February 2019 ✓
- **1.20.0** “Wonder Donkey” June 2019
- **1.21.0** “Donkeys of the Galaxy” October 2019

- Pre Release model for feature releases

- Starting with 1.20.0 we will do one (or multiple) release candidates to verify the release on the ATLAS Rucio pre-production cluster
- ~8 days before the release date: Code freeze
  - Preparation of the build, internal testing, dependency verification, ...
- 7 days before the release date: 1.20.0.rc1 build & deployment on pre-production cluster
  - If necessary: build & deploy of 1.20.0.rc2, rc3, ...
- On release day: 1.20.0 build and deploy on pre-production cluster

## Accounting & Dumps [0 open issues]

@tbeerman

- -

## Authentication [3]

@mlasnig

- Capability based auth
  - Macaroon, scitoken
  - Medium term

### Legend:

- From previous outlook
- From previous outlook - PRIORITY
- From this outlook
- From this outlook - PRIORITY
- — Done

## Clients [24]

@mlasnig, @TomasJavurek, @nikmagini

- ~~ZIP File support #1091~~
  - ~~Extract support missing @Tobi~~
  - ~~Some bugs in replica listing @mlasnig~~
- Rucio mover @TomasJavurek
- ~~Get rid of unnecessary server calls~~
  - ~~#1427, #1415, #1404~~
- Inconsistent messages/comments
  - String exception != Exception @haha
- Raise an exception in case of server timeout #1152
- ~~Possibility to register replica after upload #1599 🏕️~~
- Content-type handling #1730
- Possibility of a master timeout
- Python 2.6 drop
  - To be confirmed at Community Workshop

## Consistency checks [1]

@TomasJavurek, @dchristidis

- Only work for DISK now. Would need it for TAPE too #366
  - With tapes this should not be done automatically
  - Not a priority
- Replica listing via xroot? 🏕️

## Core & Internals [31]

@bari12, @vingar, @mlasnig

- ~~Porting oracle jobs/procedures to non-oracle backends (daemon or PLSQL in postgres) #524~~
  - Medium term also PL/SQL for Postgres
- Switch from web.py to flask 🏕️
- ~~New feature: Temp. Unavailable Replicas #1550 🏕️~~
- ~~Export/Import of json schema #716 🏕️~~
- ~~Handling of RSE attributes vs column data needs cleanup~~
  - ~~ls\_tape attribute vs rse\_type etc.~~
  - ~~0 vs False, 1 vs True should also be re-worked~~
- Rucio.cfg vs Rucio config table
- Rewrite of REST interface for metalink 🏕️
- History table definition explicitly (No Versioned models)

## Data Pre-Placement [3]

@tbeerman

- Extend C3PO to other data types?
- Any changes needed based on the study Thomas Maier did
  - Thomas will have a look on the study
- Study showed that data is replicated mostly to sites without the necessary computing resources to run jobs there
  - Rewrite algorithm to also take into account computing resources #526
- Change the algorithm to use the distance metrics #527 🏕️
  - Discuss in DevOps with David
- Add schedconf info to it

## Dataset deletion [1]

@vingar, @bari12

- ~~Rucio admin command to put tombstone on replica~~ [#82](#)

## Deletion [11]

@vingar

- Exclude temporary rse with timeout to not slow down the overall deletion rate [#528](#)
  - Right now run hospital reaper
- Automatic partitioning/full heartbeat support to have symmetric configuration for the reaper [#529](#)
- Reaper protection in case of Judge-Evaluator backlog [#1578](#)
- Relax protection of sources [#1637](#)
- Fill contents history when deleting last replica [#37](#)
- Archive Handling in Reaper [#1431](#)
- RSEs never reloaded in outer loop
  - Problem for Kubernetes (no restart)

## Documentation [2]

@vingar

- CLI documentation
  - Check methods

## Extensions [2]

@jwackito

- Add ttc to WebUI

## Functional tests [1]

@cserf

## Infrastructure [2]

@tbeerman, @cserf, @mlassnig

- Expand Kubernetes usage
  - More daemons
  - Authentication
    - Depending on traefik
- Get rid of unused dockers
  - ~~No access to dockerhub~~
  - ~~Linking of builds~~
  - Remove CC7, demo, dev, community specific containers
    - Need a general client container
- Automatic scaling of kubernetes daemons?



## Lifetime model [0]

@cserf

- Improve WebUI

## Messaging [0]

@mlasnig

- ~~Message payload limited to 4000 characters~~ [#48](#)
  - ~~Talked to Gancho, next oracle will support varchar 32k~~ → We wait for this

## Monitoring & Logging [0]

@tbeerman

- Tracking what happened with a did 🌲
  - Check of different history tables
  - Visualization (Maybe WebUI?)

## Probes & Alarms [7]

@cserf

- Long Term: Moving away from Nagios probes
- Migrate probes to separate repository [#1638](#)
  - Do we need a pypi package or is git checkout enough?

## Rebalancing [2]

@TomasJavurek

- Need smarter mechanism for problematic rules 🌲

## Recovery [3]

@cserf, @TomasJavurek

- ~~Automatic recovery of suspicious files with more than 1 replica #403~~ 🌲

## Release management [4]

@bari12, @vingar

- Better way to deal with configuration/permissions (entry point, configuration.py, ...) [#533](#) 🏕️
- Consistent headers for each source file [#534](#)
- ~~Python 3 [#67](#)~~
  - ~~We have the #PY3K COMPATIBLE flag now! **Please use it!**~~
  - ~~Should make a campaign to move server/daemons to 3.5 and 3.6~~ 🏕️

## RSE Manager & Protocols [6]

@bari12, @TWAAtGH

- Re-Write of RSE Manager 🏕️
  - @tobi

## Rules [10]

@bari12

- Reevaluate rule option : if the RSE expression doesn't point to the same RSEs anymore we should be able to reevaluate the rule. Would help a lot for decommissioning sites [#536](#)
- Long/Medium term: Mega rule support 🏕️
- Possibility of a rule dry-run 🏕️
- Transparent handling of archives with rules [#1091](#)

## Subscriptions [1]

@cserf

- RPG support 🏕️
  - Very different to subscriptions
  - Need to check the overlap and see if it can be integrated or is different service

Testing [4]

@bari12

- 3.5 tests for server

Traces [3]

@tbeerman

## Transfers [16]

@bari12, @cserf

- Problems with receiver (multi source)  
@bari12 [#704](#)
- New Daemon to dynamically adapt ranking 🏕️
  - Failed transfers, queue sizes
- New Daemon to confirm newly created Tape replicas 🏕️
  - On hold, FTS native development
- Daemon to reorder tape requests
  - Can be the same as the daemon from above

## WebUI [12]

@tbeerman

- SSO?
  - Difficult