

# Rucio 1.29 release roadmap

“Into the Donkeyverse”

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[Martin Barisits](#)

on behalf of the Rucio team

Updated after developer  
discussion on 2022-03-31



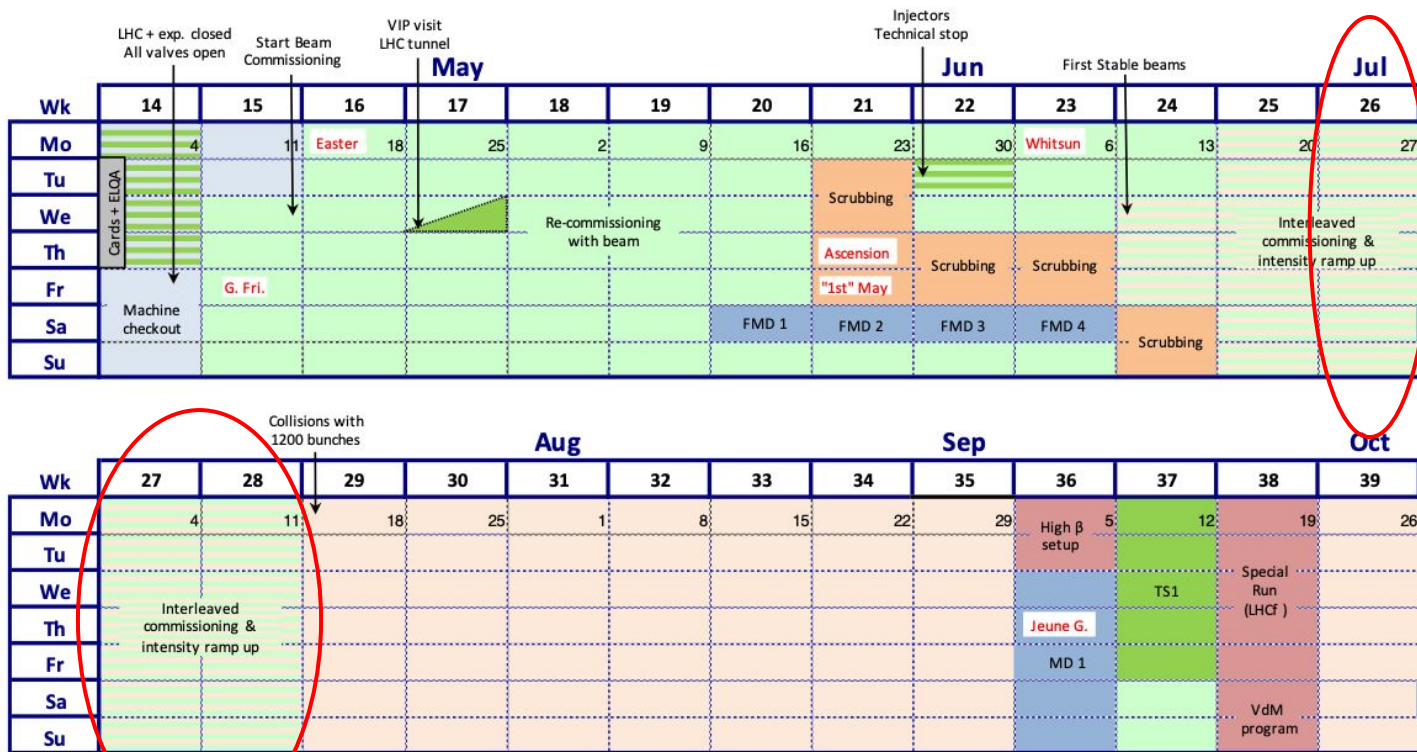
# Release plan

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- Three feature releases in 2022
  - ~~1.28~~ ~~“Teenage Mutant Ninja Donkeys”~~ ~~March 2022~~
  - 1.29 LTS “Into the Donkeyverse” July 2022
  - 1.30 “The Donkeynator” November 2022
- LTS support period
  - ~~1.20 will be supported until 2021-06~~
  - 1.23 will be supported until **2022-07**
  - 1.26 will be supported until **2023-07**
  - 1.29 will be supported until **2024-07**



# Release date



# Authentication [3 → 4]

## @massnig, @rizart



### Priorities

- ~~Host dedicated token workflow discussion meeting with interested communities in Q1-2022~~
- OIDC+SSO optimization and documentation [#5437](#)

### Tasks

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### Ongoing long term tasks

- New token workflows with storage-specific authorization [#4791](#)

### Ideas

-

# Clients [9 → 9]

@massnig, @rcarpa, @joeldierkes



## Priorities

- ~~Host python 2.7 deprecation meeting in Q1 2022~~

## Tasks

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## Ongoing long term tasks

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## Ideas

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# Consistency checks [2 → 3]

## @dchristidis, @ivmfal



### Priorities

- ~~Integrate CMS changes into Auditor #5113~~
  - ~~Hard to consolidate into one package, but publish different steps/part~~
- Further integration of CMS-style consistency checking #5438

### Tasks

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### Ongoing long term tasks

- Auditor upgrade [#3437](#)

### Ideas

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# Core & Internals [22 → 27]

@bari12, @massnig, @gabrielefronze



## Priorities

- Document and cleanup discrepancies between surl and lfn2pfn algorithms [#5129](#)
- Reduce to <20 issues
- Calculation of container length and events [#5422](#)
- Add session to API layer [#5439](#)
- Introduce heartbeat handler to all daemons [#5443](#)

## Tasks

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## Ongoing long term tasks

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## Ideas

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# Data Pre-Placement [0 → 0]

## @bari12



### Priorities

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### Tasks

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### Ongoing long term tasks

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### Ideas

- Re-write C3PO with a plugin-approach



# Database [5 → 9]

## @mlasnig, @bari12



### Priorities

- ~~Create a prototype workflow with temporary tables~~ [#5130](#)
- Further integration of temporary tables to other major workflows [#5441](#)
  - This needs sub-tasks!
- Migration of all queries to new SQLAlchemy syntax (1.4 -> 2.0) [#5247](#)
- Exchange of function-based indices with normal indices [#5440](#)

### Tasks

- Add missing query hints to code
  - Somebody from CMS might look into this

### Ongoing long term tasks

- Optimize most common workflows [#4793](#)

### Ideas

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# Dataset deletion [1 → 2]

## @bari12



### Priorities

- Allow undertaker to delete file  
dids [#5154](#)

### Tasks

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### Ongoing long term tasks

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### Ideas

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# Deletion [5 → 5]

## @cserf



### Priorities

- Re-evaluate greedy = 1TB constant [#5358](#)
- Re-factor/cleanup deletion workflow [#5442](#)

### Tasks

- Improve globus deletion workflows [#4575](#)

### Ideas

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### Ongoing long term tasks

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# DIRAC [1 → 1]

## @cserf



### Priorities



### Tasks



### Ongoing long term tasks



### Ideas



# Docker & Kubernetes [1 → 0+3+4]

## @mlasnig, @rcarpa, @ericvaandering



### Priorities

- ~~Write a documentation page about helm-charts and versioning~~ [#h/84](#)

### Tasks

- Automatic scaling of kubernetes daemons
- Helm-chart testing [#h/95](#)

### Ideas

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### Ongoing long term tasks

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# Documentation [8 → 9+4]

@bari12, @joeldierkes



## Priorities

- ~~Create a new REST documentation based on openAPI~~ [#4992](#)
- Improve the Client API documentation page [#5444](#)
- Create a good and clean Rucio installation (Server+daemons) page [#5445](#)
- Remove old documentation and forward to the new one [#5446](#)

## Tasks

- Some re-organization of documentation needed
  - Most basic workflows, installation etc. need to be explained
- Some pages do not use verbose as they should

## Ongoing long term tasks

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## Ideas

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# Functional tests [0→0]

## @cserf



### Priorities



### Tasks

- Add documentation

### Ideas



### Ongoing long term tasks



# Lifetime model [1 → 1]

## @dchristidis



### Priorities



### Tasks



### Ongoing long term tasks



### Ideas

- Introduce Follower mode
  - ATLAS: Should at least advertise it



# Messaging [4 → 4]

## @massnig



### Priorities

- Hermes2 replacement of Hermes1 [#4610](#)

### Tasks



### Ongoing long term tasks



### Ideas



# Metadata [0 → 2]

## @robbarnsley



### Priorities

- ~~Introduce new operator engine~~  
~~also to json based columns~~  
[#5144](#)
- ~~Extend plugin codebase to~~  
~~MongoDB~~ [#5143](#).
- Update and re-design  
core.meta module [#5224](#)
- Merge list\_dids and  
list\_dids\_extended [#5448](#)

### Tasks

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### Ongoing long term tasks

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### Ideas

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# Monitoring & Logging [6 → 3]

## @maany, @mlasnig, @rcarpa



### Priorities

- Further reduce logging [#5449](#)
  - Create overview of logs per component

### Tasks

- Prometheus client groundwork has been done
  - Needs more metrics and work
  - ~~Move graphite →~~  
prometheus [#3416](#)

### Ongoing long term tasks

- 

### Ideas

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# MultiVO [2 → 1]

## @Thysk



### Priorities



### Tasks



### Ongoing long term tasks



### Ideas



# Policies [2 → 3]

## @jamesp-epcc



### Priorities

- Clarify & document how policy packages are best included in a container/kubernetes based deployment [#5138](#)

### Tasks

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### Ongoing long term tasks

- Switching permissions/schema/policy to policy packages [#4798](#)

### Ideas

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# Probes & Alarms [1 → 1+7]

## @dchristidis, @ericvaandering



### Priorities

- Dead code in the probes (And ATLAS specific code) to be cleaned [#p/83](#)
- Contributor guide [#p/84](#)

### Tasks

- Move semi-required probes (e.g. obsolete calculation) to abacus daemon
- Convert CMS probes to SQLAlchemy

### Ongoing long term tasks

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### Ideas

- ~~Long Term: Moving away from Nagios probes~~
- Moving probes to prometheus

# Protocols [1 → 7]

## @mlasnig, @rcarpa



### Priorities

- [Create a documentation page about integrating S3-type storage #5450](#)
- [Add support for S3 virtual hosted buckets #5451](#)
- [Remove unused boto protocol #5346](#)

### Tasks

- Some updates needed for xrootd implementation

### Ongoing long term tasks

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### Ideas

- Rucio without rsemanager.py

# Rebalancing [2 → 0]

## @cserf



### Priorities

- ~~BB8 Re-write~~ [#4706](#)

### Tasks



### Ongoing long term tasks



### Ideas





# Recovery [3 → 6]

## @cserf



### Priorities

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### Tasks

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### Ongoing long term tasks

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### Ideas

- Archive support for necromancer
  - TPC transfer for archive contents?
  - Student project

# Release management [2 → 6]

## @bari12



### Priorities

- Add aliases for all daemons to the release [#5131](#)
- Compile a clear list where the daemon names need to be changed [#5132](#)
  - Helm-charts
  - Monitoring
  - ...
- Cleanup old tickets
- Remove author lists in header of each module
- Python 2.7 deprecation [#5435](#)

### Tasks

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### Ongoing long term tasks

Rename daemons to understandable names [#4795](#)

### Ideas

- Dependency testing of target platform

# Replicas [6 → 6]

## @mlassnig



### Priorities

- ~~Fix and stabilize geoip based replica sorting~~ [#5133](#)

### Tasks

- Add distance based sorting [#4020](#)
- –nrandom functionality [#5418](#)

### Ideas

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### Ongoing long term tasks

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# REST & API [5 → 7]

## @bziemons, @bari12



### Priorities

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### Tasks

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### Ongoing long term tasks

- Versioning for the REST API  
[#4796](#)

### Ideas

- Look into pagination for (heavy) streaming APIs
- Start thinking about API 2.0

# Rules [15 → 16]

## @bari12



### Priorities

- Many tickets!
- Fix consistency of rule grouping dependent on order of ATTACH #5251
- Flag transfer errors coming from tape sources #5410

### Tasks

- Transparent handling of archives with rules [#1091](#)
- 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](#)

### Ongoing long term tasks

- Introduction of QoS to Replication Rules [#3419](#)

### Ideas

- Possibility of a rule dry-run

# Subscriptions [0 → 1]

## @cserf



### Priorities

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### Tasks

- Include the creation of delayed rules in subscriptions

### Ideas

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### Ongoing long term tasks

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# Testing [8 → 9]

@maany, @joeldierkes



## Priorities

- ~~Test Framework for VO specific configuration & tests~~ [#4797](#)
- Write a developers testing guideline/manual [#5452](#)
- Mypy static code analysis [#4455](#)
- Add python 3.10 testing to CI [#5145](#)

## Tasks

- Improving usability of CI tests locally [#4047](#)
- ~~New test suite for python module import (Dependency breaking of clients)~~ [#3878](#)
- More tests to factories
- Make use of VO-Tests

## Ideas

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## Ongoing long term tasks

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# Traces [2 → 2]

## @mlasnig, @maany



### Priorities



### Tasks



#### Ongoing long term tasks

- Trace schema enforcement

### Ideas





# Transfers [16 → 12]

## @rcarpa, @ericvaandering



### Priorities

- ~~Many tickets!~~
- ~~Disentangle fts3 specific code from conveyor poller and receiver~~  
[#4873](#)
- Remove full\_mode from conveyor-receiver [#5453](#)
- Re-work/cleanup distance table  
[#5454](#)

### Tasks



### Ongoing long term tasks



### Ideas



# WebUI [10 → 13+11]

## @maany, @cserf



### Priorities

- ~~Get SSO login into production~~
  - ~~Need to look into it~~
  - ~~@rizart will test it~~
- ~~Finalize the WebUI 2.0~~  
architecture [#5134](#)
- Finalize authentication workflows  
in WebUI 2.0 [#5135](#)
- Remove DB dependencies  
completely from WebUI 2.0 [#4319](#)

### Tasks



### Ideas



Ongoing long term tasks  
WebUI 2.0

