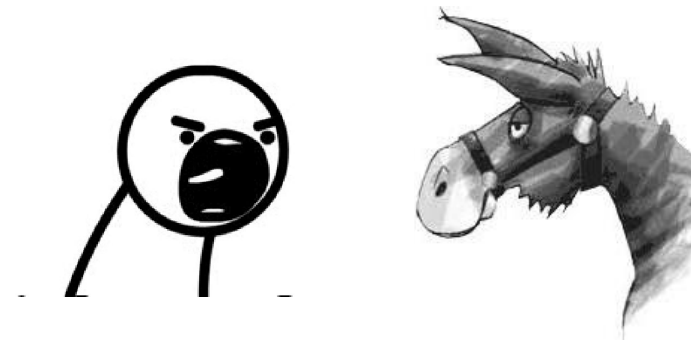




Chapter 4: Basic Usage

Rucio Interfaces - User vs. Rucio

- Communication with Rucio:
 - Command Line Interface (CLI)
 - User CLI
 - Admin CLI
 - Web User Interface (Web UI)
 - Python API
 - REST API



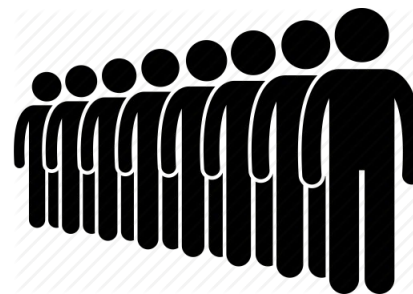
User CLI

- Answer to all your fundamental questions:
 - `rucio -h`
 - `rucio <command> -h`
- Update needed?
 - `rucio --version`
- Basic commands - dids:
 - `rucio add-dataset <dataset_name>`
 - `rucio attach <dataset_name> <file_name>`
 - `rucio list-dids <scope>:<regexp>`
 - `rucio list-files <dataset_name>`
 - `rucio get-metadata <did_name>`



User CLI

- Basic commands - rules:
 - `rucio add-rule --lifetime 86400 <dataset_name> 1 <DST_DISK>`
 - `rucio delete-rule <rule_id>`
 - `rucio rule-info <rule_id>`
 - `rucio list-rules <dataset_name>`
- Basic commands - replicas:
 - `rucio list-dataset-replicas <dataset_name>`
 - `rucio list-file-replicas <scope>:<file_name>`
 - `rucio upload --rse <DST_DISK> --scope <scope>`
 - `rucio download <scope>:<file_name>`
 - How to delete? A: `rucio delete-rule`



Administrative CLI

- Help:
 - `rucio-admin -h`
 - `rucio-admin <section> -h`
 - `rucio-admin <section> <command> -h`
- Sections:
 - `account`: user, robot, admin, group
 - `identity`: certificates
 - `rse`: endpoints
 - `scope`
 - `config`: general config of Rucio - daemons, limits, ...
 - `subscription`: automated rules
 - `replicas`



WEB UI

The image displays the Rucio Web UI interface. At the top, there are navigation menus for 'Monitoring', 'Data Transfers (R2D2)', and 'Reports'. A search bar is located in the center of the top navigation bar, and the user account 'Using account: sonar' is displayed on the right. Below the navigation bar, there are several menu items: 'Subscriptions & Rules', 'RSE Locks', 'Rucio Storage Elements (RSE)', 'Group Account Usage', 'Rule Backlog', and 'Bad file replicas'. A search bar is also present in the middle of the page, with the placeholder text 'pattern OR name OR rule id'. Below the search bar, there is a chart titled 'ATLAS Data Overview Worldwide' showing data from 2010 to 2018. The chart shows a steady increase in data volume over time, reaching approximately 350P Bytes by 2018. The 'rucio-ui' logo is visible at the bottom of the chart area.

Using account: sonar

Other Monitoring Help

Rucio Version (WebUI / Server): 1.14.9.post1 / 1.14.9.post1

Monitoring Data Transfers (R2D2) Reports

Subscriptions & Rules

RSE Locks

Rucio Storage Elements (RSE)

Group Account Usage

Rule Backlog

Bad file replicas

pattern OR name OR rule id Search

Using account: dmdadmin Other Monitoring Help

ATLAS Rucio UI Monitoring Data Transfers (R2D2) Reports Admin

You are here: Index

ATLAS Data Overview Worldwide

Bytes

400P

300P

200P

100P

0

2010 2016 2018

[rucio-ui](#)

Bytes

WEB UI

Creating a rule with R2D2

1. Select Data Identifiers (DIDs)

DID Pattern Search List of DIDs

Please start by entering a DID or DID wildcard and search for either containers or datasets. Then select the requested DIDs. Please do not use a trailing '/' for containers.

Data pattern user:ddmadmin:"sonar" **1** **Search** Container Dataset

Show 10 Filter **4** **Continue**

entries

Name
sonar.test.AGLT2_DATADISK
sonar.test.ANLASC_DATADISK
sonar.test.AUSTRALIA-ATLAS_DATADISK
sonar.test.BEIJING-LCQ2_DATADISK
sonar.test.BNL-AWSEAST_DATADISK
sonar.test.BNL-OSG2_DATADISK
sonar.test.CA-MCGILL-CLUMEQ-T2_DATADISK
sonar.test.CA-SCINET-T2_DATADISK
sonar.test.CA-VICTORIA-WESTGRID-T2_DATADISK
sonar.test.CERN-PROD-RUCIOTEST_DATADISK

Name Showing 1 to 10 of 18 entries Previous 1 2 3 4 5 ... 12 Next

2 **Continue** Select All

1. Select Data Identifiers (DIDs)

2. Select Rucio Storage Elements (RSEs)

Please enter an RSE or an RSE expression.

RSE (expression) CERN-PROD_SCRATCHDISK **3** **Check Quota**

Total size of selected DIDs: 10.91 GB

RSE	Remaining Quota	Total Quota
CERN-PROD_SCRATCHDISK	225 TB	
Name	Remaining Qu	

4 **Continue**

1. Select Data Identifiers (DIDs)

2. Select Rucio Storage Elements (RSEs)

3. Options

Please select/enter your wanted options and then submit your rule request.

Grouping
 All Dataset None

Notifications
 Yes No

Lifetime (in days). Leave empty for infinite lifetime.
1

Copies
1

Comment

Create sample
 Number of files

Asynchronous Mode






















5 **Continue**

Python API

- In environment with Rucio:

```
>> from rucio.client import Client
>> c = Client()
>> c.add_replication_rule(args)
```

- See classes and args:
 - pydoc
 - [github-client](#)

 accountclient.py	 metaclient.py
 accountlimitclient.py	 objectstoreclient.py
 baseclient.py	 pingclient.py
 client.py	 replicaclient.py
 configclient.py	 rseclient.py
 didclient.py	 ruleclient.py
 downloadclient.py	 scopeclient.py
 dq2client.py	 subscriptionclient.py
 fileclient.py	 touchclient.py
 lifetimeclient.py	 uploadclient.py
 lockclient.py	

Documentation

Rucio
latest

Search docs

- Concepts and terminology
- Typical replica workflow
- Architecture
- Contributor Guide
- Setting up a Rucio development environment
- RESTful APIs
- The Client API Reference
- Database operations
- Installing Rucio Clients
- Rucio CLI
- Rucio Administrative CLI
- RSE Expressions
- Rucio Clients
- Errors and Exceptions
- Advanced Usage
- Installing Rucio server
- Installing Rucio daemons
- Daemons CLIs

Read the Docs v: latest

Docs » Welcome to Rucio's documentation!

Edit on GitHub

Welcome to Rucio's documentation!

Rucio is a project that provides services and associated libraries for allowing scientific collaborations to manage large volumes of data spread across facilities at multiple institutions and organisations. Rucio has been developed by the [ATLAS experiment](#).

Rucio offers advanced features, is highly scalable and modular. It is a data management solution that could cover the needs of different communities in the scientific domain (e.g., HEP, astronomy, biology).

This documentation is generated by the [Sphinx toolkit](#), and lives in the [source tree](#).

General Information

This section contains the general information related to Rucio which is common to all developers, users and operators. For documentation specific to the any of these three, please see the subsequent sections.

- [Concepts and terminology](#)
- [Typical replica workflow](#)
- [Architecture](#)

Developer Document

If you want to develop with Rucio or

```
[[root@rucio-nagios-prod-02 ~]# rucio-admin account list-attributes -h  
usage: rucio-admin account list-attributes [-h] account
```

positional arguments:
account Account name

optional arguments:
-h, --help show this help message and exit

Usage example

```
$ rucio-admin account list-attributes jdoe  
+-----+  
| Key | Value |  
+-----+  
| admin | False |  
+-----+
```

Note: this table empty in most cases.

list-attributes

List attributes for an account.

```
rucio-admin account list-attributes [-h] account
```

Positional Arguments

```
account Account name
```

Usage example %

```
$ rucio-admin account list-attributes jdoe  
+-----+  
| Key | Value |  
+-----+  
| admin | False |  
+-----+
```

<https://rucio.readthedocs.io/>

More information

Website <http://rucio.cern.ch/>

Documentation <https://rucio.readthedocs.io/>

Repository <https://github.com/rucio/>

Online support <https://rucio.slack.com/messages/#support/>

Mail support rucio-users@googlegroups.com

Developer contact rucio-dev@cern.ch

Questions?

If you have a question but don't get the chance to ask it directly during the session, you can do it here: <https://goo.gl/BdSGoC>