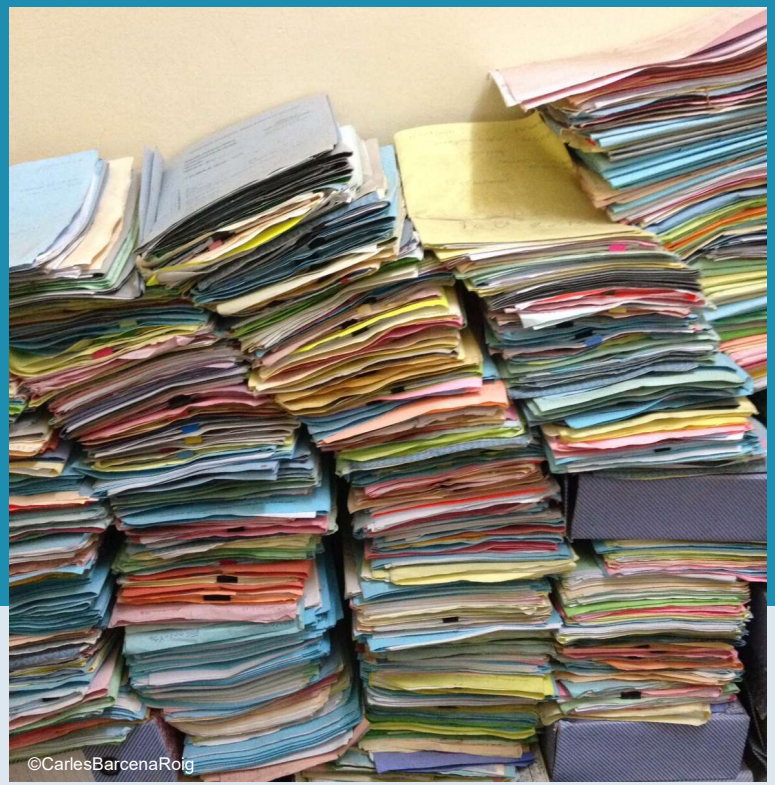
KU LEUVEN

04. Working with iRODS

Basic



Goals of this module

- Get familiar with the different clients of iRODS: Metalnx, Webdav interface, icommands (CLI), Python iRODS Client (PRC)
- You will learn:
  - moving around iRODS
  - putting and getting data
  - adding metadata to objects and collections
  - query/search data based on metadata*
  - managing data: create collections, move data, remove data, manage permissions

Clients

metalnx

KU Leuven Portal

DAVRods

PRC-Python API

Cadaver client

DAVRods

iCommands

CentOS7
Ubuntu16
Ubuntu18

PRC-Python API

metalnx

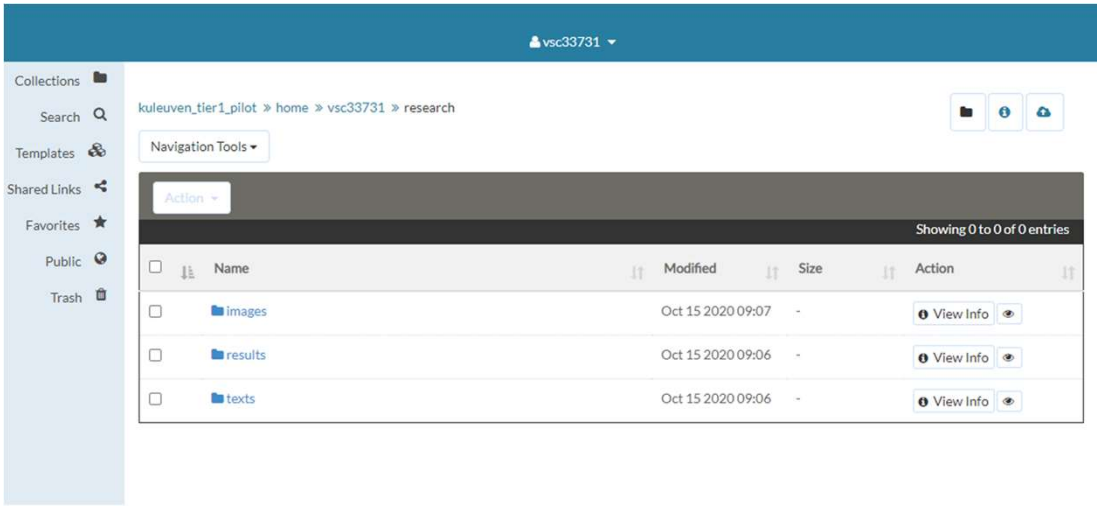
KU Leuven Portal

References:

KU Leuven portal: https://irods-demo.t.icts.kuleuven.be/
Metalnx: https://irods-demo.t.icts.kuleuven.be/metalnx/
Cyberduck: https://cyberduck.io/
WinSCP: https://winscp.net/eng/download.php
Cadaver client: http://www.webdav.org/cadaver/
Icommands: https://irods.org/download/
Python iRODS Client (PRC) : https://github.com/irods/python-irodsclient

MetaInx

- graphical user interface easiness
- working with data objects/collections
- adding metadata to data objects/collections
- downloading data objects
- permission
- iRODS design



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WebDav client

- graphical user interface easiness
- working with data objects/collections
- adding metadata to data objects/collections
- downloading data objects
- permission
- iRODS design

icommands

`iput – iget- irsync –imeta...`

- uploading/downloading data
- adding metadata to data objects/collections
- querying based on metadata
- deleting data objects/collections
- synchronization of data
- ACLs to data objects/collections

```
vsc33731@login1 ~
$ imkdir research

vsc33731@login1 ~
$ icd research

vsc33731@login1 ~
$ iput dataset1

vsc33731@login1 ~
$ iput dataset2

vsc33731@login1 ~
$ ils
/kuleuven_tier1_pilot/home/vsc33731/research:
  dataset1
  dataset2
```

Python iRODS Client (PRC)

`Python3, python-irodsclient`

- working with data objects/collections
- adding metadata to data objects/collections
- querying based on metadata
- deleting data objects/collections
- listing the disk usage
- ACLs to data objects/collections

```
In [1]: from vsc_irods.session import VSCiRODSSession

In [2]: session = VSCiRODSSession(txt='-')

In [3]: irods_path = session.path.get_irods_home() + "/research"

In [4]: session.path.imkdir('research')

In [5]: session.path.ichdir('research')

In [6]: session.bulk.put("./dataset*", irods_path)

In [7]: for item in session.search.find(irods_path, types='f'):
   ...:     print(item)
   ...:
/kuleuven_tier1_pilot/home/vsc33731/research/dataset1
/kuleuven_tier1_pilot/home/vsc33731/research/dataset2
```