# Data Injection: CTA

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## Set up a rucio-client with X.509 authentication using singularity image

We use the following document: https://docs.google.com/document/d/11uCGqrP\_TIofAsbm\_Kylz2sjsvV4kEv5dLeTbOsKfxI/edit#heading=h.qasaz2piu2fu

### Steps performed:

1. Remove passphrase from the key :

openssl pkcs12 -in mycert.p12 -clcerts -nokeys -out client.crt  
openssl pkcs12 -in mycert.p12 -nocerts -nodes -out client.key  
chmod 400 client.crt  
chmod 400 client.key

1. Edit Rucio.cfg (note: Rucio.cfg is not populated with environment variables, therefore we edited it manually)

[client]  
rucio\_host = https://escape-rucio.cern.ch:32300/  
auth\_host = <https://escape-rucio.cern.ch:32301>  
auth\_type = userpass  
ca\_cert = /opt/rucio/etc/CERNCertificationAuthority.pem  
account = gillardo  
request\_retries = 3  
auth\_type = x509  
client\_cert = /opt/rucio/etc/client.crt  
client\_key = /opt/rucio/etc/client.key  
vo = escape

Note: for lapp-esc02, the webdav server does not support checksum, therefore, we disabled the checksum for this specific RSE within RUCIO.

rucio-admin rse set-attribute --rse LAPP-WEBDAV --key verify\_checksum --value False

rucio-admin rse info LAPP-WEBDAV

1. Execute singularity image

singularity run -B ${HOME}/.rucio/:/opt/rucio/etc -B ${HOME}/.globus/client.crt:/opt/rucio/etc/client.crt -B ${HOME}/.globus/client.key:/opt/rucio/etc/client.key rucio-cli.simg

1. initialize the voms proxy

voms-proxy-init -voms escape

## Upload a file, even mock if real data is not available for the time being:

1. Create the scope

rucio-admin scope add --account gillardo –scope CTA\_LAPP\_FREDERIC

1. Upload a file

rucio -v upload --rse LAPP-WEBDAV --scope CTA\_LAPP\_FREDERIC cta\_data1.hdf5

1. add replication rule

rucio add-rule CTA\_LAPP\_FREDERIC:cta-data1.hdf5 1 LAPP-DCACHE

1. Check rule status  
   rucio list-rules CTA\_LAPP\_FREDERIC:cta-data1.hdf5

ID ACCOUNT SCOPE:NAME STATE[OK/REPL/STUCK] RSE\_EXPRESSION COPIES EXPIRES (UTC) CREATED (UTC)  
be7ab08aa67b4b409297f33c34cf6895 gillardo CTA\_LAPP\_FREDERIC:cta-data1.hdf5 OK[1/0/0] LAPP-WEBDAV 1 2020-10-05 09:41:49  
50e81b6d15e844b0bccd052456df2785 gillardo CTA\_LAPP\_FREDERIC:cta-data1.hdf5 REPLICATING[0/1/0] LAPP-DCACHE 1 2020-10-05 09:46:06

ID ACCOUNT SCOPE:NAME STATE[OK/REPL/STUCK] RSE\_EXPRESSION COPIES EXPIRES (UTC) CREATED (UTC)  
be7ab08aa67b4b409297f33c34cf6895 gillardo CTA\_LAPP\_FREDERIC:cta-data1.hdf5 OK[1/0/0] LAPP-WEBDAV 1 2020-10-05 09:41:49  
50e81b6d15e844b0bccd052456df2785 gillardo CTA\_LAPP\_FREDERIC:cta-data1.hdf5 OK[1/0/0] LAPP-DCACHE 1 2020-10-05 09:46:06

1. Download the file locally:

We specify from which rse (lapp-dcache) we want to perform the download:

rucio download --rse LAPP-WEBDAV CTA\_LAPP\_FREDERIC:cta-data1.hdf5 --rse LAPP-DCACHE

## Next step for demo of November 2020

* Create an dataset, attach uploaded files to given dataset
* Replication done on 2 sites
* Delete files from original rse

## Experiment use case blocker

* OpenID support
* Metadata management:
* Set any type of metadata during the upload
* Query the file thanks to a query mechanism using metadata values.