

# iRODS<sup>®</sup>

## Python iRODS Client 1.0

Daniel Moore  
Applications Engineer  
iRODS Consortium

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The original implementation was by **Chris LaRose** and **Michael Gatto** at CyVerse (then known as the iPlant Collaborative) in 2013.

The library was contributed in mid-2014 to the newly established iRODS Consortium and was taken over by **Antoine de Torcy**. Antoine brought the library up to PyPI standards with modern packaging and maintained it through v0.7.0.

**Daniel Moore** then took the reins in 2018 and has shepherded the code from v0.8.0 to today.

Thank you to the 41 contributors and many users over the years.

## Atomic Metadata

- allows a batch of add/remove operations within one transaction
- increased efficiency over individual operations
  - demonstrated up to 750x speedup for large batches

## Parallel Transfer

- new client-controlled multi-connect with iRODS release 4.2.9+
- data object put() and get() spawn threads for transfer
- increased efficiency over single-threaded put/get operations
  - demonstrated 3-4x speedup

## XML Protocol Hardening

- *BinBytesBuf* for JSON API payloads in iRODS 4.2.9
  - corrects cases like AVU searches containing '<', '>', '&'
- Remaining work includes handling control characters in object names

## New Checksum Functionality

```
>>> from irods.test.helpers import make_session
>>> session = make_session()
>>> d = session.data_objects.create("/some/object")
>>> d.chksum()
'sha2:47DEQpj8HBSa+/TImW+5JCeuQeRkm5NMpJWZG3hSuFU='
```

We can now:

- list current ACLs, same as **ils -A**
- login via PAM/SSL using client environment configuration
- configure connection timeouts
- issue temporary passwords
- manage session cleanup
- query rules/tasks in the delay queue
- automate Python client testing in a Jenkins CI workflow

- fix known bugs
- prepare to drop support for Python2
- continue working towards full coverage of the iRODS API

Questions?

