



RUCIO LIGHTWEIGHT CLIENT

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Rucio Client Dependencies

- Current Rucio client package has many (16) dependencies
 - Some pull in further indirect dependencies
 - Some require specific versions of software
 - Most dependencies are mandatory
 - Some are not even used anymore
 - Some are only for Python 2 support
- Library used to access RSEs determined by server
 - May not match what client machine has

Dependency Problems

- Rucio client dependencies may conflict with other software
 - Problematic for experiments that have large, established software environments
 - e.g. DUNE
- Installation can be painful
- Containers can help but are not always the right solution
 - Spinning up heavyweight container environment to run single Rucio command is inefficient

Lightweight Client Plan

- Intention is to rationalise dependencies of existing client package
- Remove unneeded dependencies
- Make many others optional
- Try to be more flexible with package versions
- Allow client to use whatever libraries it has to access RSEs (within reason)
- Allow client to run without a config file

Lightweight Client Progress

- Client dependencies have been analysed
- First pull request ready to be merged
 - Removes unneeded dependencies
 - Makes several others optional
- Next steps will be:
 - Allowing client to choose library for accessing RSEs
 - Allowing client to work without a config file
- Funded by DUNE, but interest from other communities (e.g. SKA, STFC)