

ServiceX Front End Status

G. Watts (UW/Seattle)

D. Liu (UW/Seattle)

Oct 16, 2020



SX Front End

[Github](#) (ssl-hep account)

- Goals:
- Provide end-user pythonic access to ServiceX
- Layer common use case utilities
 - Copy data to local files (pandas/parquet)
 - Data Science Format Conversion
 - Pandas, Awkward
 - Consistent Ordering of Data
 - Progress Feedback
 - Credential Management
 - Caching Layer for easy reuse of identical queries

Many thanks to everyone that submitted PR's!

RC3 Status

RC3 Release (v2.1b4) is done but for testing

- All outstanding PR's are in, and all scheduled issues taken care of
- Testing Status
 - Tested against xAOD backend
 - One failing test – but looks like due to a change in how tlorentz vectors are behaving in the client
 - Tested against the uproot backend
 - Hard failure on all files
 - Still investigating
 - See the slack convo
 - Do not know if the bug is with the sx backend or the frontend, and this test worked on preRC3 stuff (the qastle **looks** ok to me)

SX Integrated Tests

[Github](#) (David's Personal account)

- Goals:
 - High level integration tests
 - Acceptance test?
- Testing
 - Test uproot and xAOD backends
 - Make sure basic functionality is present
 - Tests ServiceX, frontend, basic func_adl and qastle queries
- Testing environment
 - Command line (with appropriate package dependencies)
 - Github CI (a public api with SX credentials as github secrets)
 - Docker Container

RC3 Status

RC3 Release is almost ready to go

- At least one bug in the current tests: TLZ from uproot isn't behaving as expected

Next...

Frontend

Next release concentrates on usability & documentation

- Examples in tutorials or documentation
 - func_adl
 - TCut
 - Qastle generation
- Stress Testing
- Other end-user use cases that come up
- Multi-endpoint support in credential manager
 - 2 xAOD instances of ServiceX...

Further Out

- Analysis Facility Use Cases
 - E.G. streaming (do not copy data locally)
- Streaming by file to end user
 - To allow processing of data as it arrives on local machine, including caching

Testing

Next release concentrates on usability & documentation

- Examples in tutorials or documentation
- Moving this repo to ssl-hep
- Some ideas
 - Integrate into servicex command line?
- Build comparison of uproot and xaod backend
 - Unify func_adl access to backends

ServiceX

These are usability issues that show up in the API of the front-end

- Better management of the transformer image tag