C++ as a service — rapid software development and dynamic interoperability with Python and beyond

Interactive C++: cling and clang-repl

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Status. Cling

- Continuing to rebase cling on top of llvm13

Status. Clang-Repl

- Investigated automatizing error recovery strategies for reusing existing clang tests

Status. InterOp

- Started migrating cppyy to bare cling interfaces to understand the requirements.
- Investigating possible cppyy/Numba integration

Status. Clad

- Added generalized way of obtaining the derived type
- Added pushforward implementation support
- Reduced the code generation duplicates of derived functions
- Fixes on the error estimation framework
- Clad integration in RooFit
- Working on a paper for ACAT

CaaS Open Projects

- Patches against clang.git
  - Implement FileManager uncaching
  - Adapt the user of invalidateCache to its new signature
  - Mark the file entry invalid, until reread
  - Propagate cache flags from LookupFile() to FileManager::getFile()
  - Pass the OpenFile flag also to DirectoryLookup
  - Do not load the source file just to get an irrelevant SourceLoc (ROOT-7111)
  - Allow interfaces to operate on in-memory buffers with no source location info [Pratyush Das]
- Open projects are tracked in our open projects page.

Next Meetings

- Monthly Meeting — 10th Mar, 1700 CET/0800 PDT

If you want to share your knowledge/experience with interactive C++ we can include presentations at an upcoming next meeting

Thank you!