

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, fixed the CUDA failures (thanks to Simeon) and resolved the template instantiation assertion.
- ❖ Improving the stability of cpt.py used to build and package cling.

Status. Clang-Repl

- ❖ Advanced the support for code undo (code unloading).
- ❖ Sent an RFC on implementing a laxer-based robust continuation facility in clang.
- ❖ More progress on parsing statements on the global scope: D127284
- ❖ The jitlink AArch64 backend is ready and clang-repl uses it.
- ❖ The shared memory remote execution facility is progressing: D127491 D130392

The goal is to provide better stability and robustness which can later cling can reuse.

Status. InterOp

- ❖ Working on a full surgery of cppy where we split it into libInterOp
- ❖ Working on simplifying CallFunc and moving it in libInterOp: [PR10850](#)

Status. Clad

- ❖ Making progress on the HPCCG benchmarks in the context of error estimation

Documentation

- ❖ Working on various documents to improve the documentation of cling and clad
- ❖ Restructured the website menus to capture better the project activities

Upstreaming Patches

- ❖ Spreadsheet tracking the progress here.
- ❖ Total amount of upstreamed cling patches 17 out of 52 upstreamable.
- ❖ The template resugaring work now has an godbolt entry

CaaS Open Projects

- ❖ Open projects are tracked in our [open projects page](#).

Next Meetings

- ❖ Monthly Meeting — 1st Sep, 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!