

*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

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- ❖ Release of ROOT is done. We need to fix 6 tests in Cling

# Status. Clang-Repl

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- ❖ Incremental Input (RFC)
  - ❖ D143142 — Enable Lexer to grow its buffer
  - ❖ D143144 — Add TryGrowLexerBuffer / SourceFileGrower
  - ❖ D143148 — Add basic multiline input support
- ❖ Value Handling (RFC)
  - ❖ D141215 — Introduce Value and implement pretty printing

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

# Status. InterOp

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- ❖ GitHub actions-based CI is done
- ❖ Improved the template instantiation API
- ❖ Added several tests to describe missing functionality
- ❖ Opened issues for GSoC students to try addressing
- ❖ Merged CallFunc work: [PR 11252](#)
- ❖ libInterOp-based cppyy: pass 60 / 476 tests.
  - ❖ Fixed missing gInterpreter-related test failures
  - ❖ Better template instantiation logic

# Status. Clad

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- ❖ Looking at how to optimize the time for generation in Cling. Investigating the current performance issue

# Status. Zeus-Clang-Repl

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- ❖ Colored diagnostics
- ❖ Working on Parameterized kernel specs proposal
- ❖ Working on deploying Clad
- ❖ Working on shipping the InterOp-based cppy
- ❖ Backporting the Clang-Repl patches under review to progress with the Zeus kernel integration towards a feature complete product

# Upstreaming Patches

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- ❖ Spreadsheet tracking the progress [here](#).
- ❖ Total amount of upstreamed cling patches 26(26+0) out of 52 upstreamable.

# CaaS Open Projects

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



# Next Meetings

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- ❖ Monthly Meeting — 6th Apr, 1700 CET / 0800 PDT
  - ❖ A talk on Numba

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

Thank you!