



# LibreOffice loves LLVM

Stephan Bergmann  
Red Hat

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# LibreOffice

- State of the art productivity suite
- Cross platform
- Millions of lines of C++ code
  - with a long history
- Clang, GCC, MSVC
  - clang-cl (some minor issues)
- C++11, C++14 as available



# Static Analysis

- Long tradition of warning-free code (-Werror -Wall -Wextra etc.)
- Various external checkers like Coverity Scan
  - a pain with obscure false positives...
- Can we do even better?
  - warnings no tool emits, yet would be generally useful
  - warnings about specifics of the LibreOffice code base

# Clang Plugins

- More than 50 different RecursiveASTVisitors by now
  - slowing down the build?
- From trivial ones...
  - nullptr, override, dynamic exception specifications, new S(), sal\_Bool
- ...to highly specific...
  - some dtors must implement “disposal protocols”
- ...to the controversial “style police”
  - explicitly passing a defaulted argument
- Lots of them can do automatic rewriting (thank god!)
- Some global analysis: write out interesting facts, post-process with Python
- Integrated with Gerrit/Jenkins patch handling

# Runtime Analysis

- Large ‘make check’ test suite
  - but never large enough...
  - lots of pathological sample documents
- Daily Clang ASan/UBSan builds
- Fuzzing
  - reading file formats, also UI interactions
  - AFL, Google OSS-Fuzz

Where you find us:

[libreoffice.org/community/developers](https://libreoffice.org/community/developers)

#libreoffice-dev on Freenode

[libreoffice@lists.freedesktop.org](mailto:libreoffice@lists.freedesktop.org)