



Collabora Productivity

Profiling with Callgrind

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Callgrind

One of the tools from the Valgrind suite

Tool for profiling

Records call history in a program run as a call-graph

KCachegrind

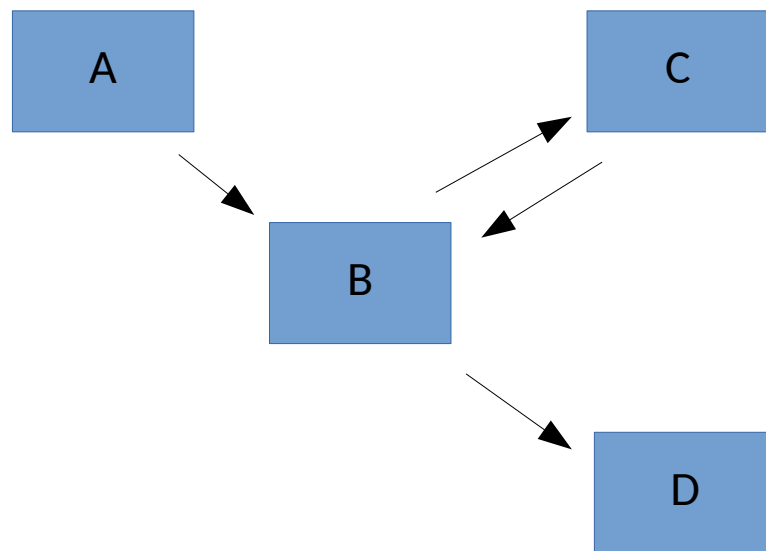
- UI tool to visualize results

Trivial Example

Cycles

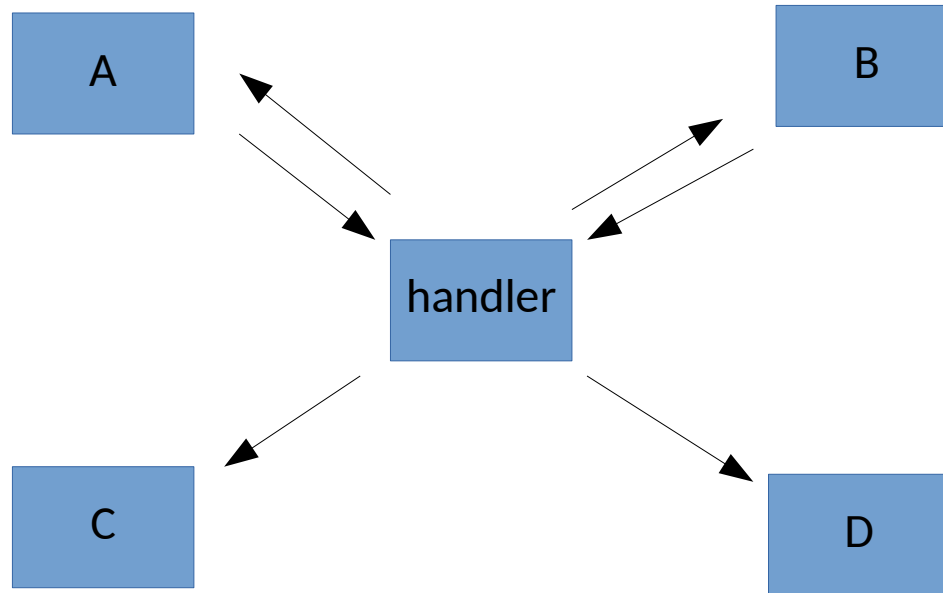
Profiling does statistics

- Results are a “summary” of calls
- It is difficult/impossible to detect internal logic of code



Cycles #2

- Common with event loop handling functions



Cycles Example

Tracing only specific parts of code

- `--dump-before=function`
- `--dump-after=function`
- `--zero-before=function`

Tracing only specific parts of code #2

- `valgrind -tool=callgrind -instr-atstart=no ...`
- `callgrind_control -instr=on/off`
- `#include <valgrind/callgrind.h>`
 - `CALLGRIND_START_INSTRUMENTATION`
 - `CALLGRIND_STOP_INSTRUMENTATION`
 - `CALLGRIND_DUMP_STATS`
 - `CALLGRIND_ZERO_STATS`

Selective Example

Usage in LO

- VALGRIND=callgrind soffice
- VALGRIND="callgrind -args" soffice
- Slow
 - --instr-atstart=no and selective profiling can sometimes help

Interpreting/understanding

Results and their understanding should be verified in practice

Understanding usually requires understanding code

LO example



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Thank you.

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