Factsheet

TimingProfiler for X86

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AbsInt

TimingProfiler helps you identify application parts that cause unsatisfactory execution times. It delivers results as soon as there is compiled code, and thus can be used very early in the development process, when measurements on physical hardware are costly or impossible. This makes TimingProfiler ideally suited for constantly monitoring timing behavior during software development and in model-based development environments.

Key benefits

- TimingProfiler gives detailed information about the execution time and time-critical paths.
- The analysis is purely static. No access to physical hardware and no code instrumentation are required.
- The analyzer does not need to be stimulated with concrete inputs. By default, it takes all potential inputs into account.
- Nevertheless, the analysis can be restricted to specific execution scenarios if desired.
- The tool shows call and control flow graphs, and displays all relevant information about the executable.
- Hotspots and bottlenecks can be identified at early development stages so that late-stage integration problems can be avoided.
- This provides for easy integration into the development process, and enables application in continuous test and integration frameworks.
- TimingProfiler can be seamlessly coupled with StackAnalyzer to additionally take the stack behavior into account, providing a unified approach to addressing resource usage.

Supported compilers

- CAD-UL Tool Suite C/C++ compiler for x86 Protected Mode

- CompCert C Compiler
- Cygnus LynxOS x86 C/C++ Compiler of LynuxWorks for 32-bit flat mode
- GNU C/C++ Compiler (GCC) for 32-bit flat mode or 64-bit long mode
- Intel iC-86 C/C++ Compiler (ICC) for 16-bit real mode
- LLVM/Clang based C/C++ compilers
- PL/I compiler for x86 processors (protected mode)

Supported processor derivates

The supported instruction sets are x86-32 (= ia32 = Intel 32), x86-64 (= Amd64 = Intel 64), x87, MMX, 3DNow!, SSE, SSE2, SSE3, SSE4.1, SSE4.2, AES, AVX, and AVX2.

System requirements

- Windows: x86-64 Windows 10 or newer
- Linux: x86-64 CentOS/RHEL 7 or compatible
- 4 GB of RAM (16 GB recommended)
- 4 GB of disk space

Also available

The following AbsInt products are also available for this target:

- StackAnalyzer
- ValueAnalyzer

More information

- Visit our website: www.absint.com
- Speak with a product specialist: call +49 681 383 600

About AbsInt

AbsInt provides advanced development tools for embedded systems, and tools for analysis, optimization and verification of safety-critical software. Our customers are located in more than 40 countries worldwide. We have distribution agreements with major software distributors in Asia, North America, Middle East, and throughout Europe.

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