engDevTools Documentation

Kevin Gomez

Started: 05-24-2018

1 Profiling Overview

The profiling tools gprof and valgrind will be used for early development and optimization.

2 gprof

2.1 Procedure

2.1.1 Running gprof

1. Include **-pg** flag when compiling code

2. Execute program. Verify **gmon.out** file is output after execution.

3. Create output file containing profile of program:
   gprof program gmon.out > output.txt

4. Review **output.txt**

2.2 Analysis

2.2.1 Analyzing gprof Output

3 valgrind

3.1 Procedure - callgrind

3.1.1 Running callgrind

1. Run valgrind with program (Use full path to program):
   valgrind –tool=callgrind $(PROGPATH)
   Verify output file containing profile **callgrind.out.####**

2. Generate profile document:
   callgrind_annotate callgrind.out.#### > output.txt

3. For more in depth analysis, open KCachegrind application and open **callgrind.out.####**

3.1.2 Running cachegrind

3.2 Analysis

3.2.1 Analyzing callgrind Output