SomeTitle

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Abstract

Background:

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Methods:

Visualization:
Generating graphs and diagrams representing the program
Easier to get an overview of program structure and execution

Interactive forwards- and backwards-stepping
two forms: re-execution, state-saving
re-execution: small memory footprint, slow backward stepping
state-save: fast stepping both ways, needs more memory, amount depending on program

Queries:
fast way to check object-relations and -properties

Tools:

GNU debugger (GDB)
tracing, reverse debugging, general debug-stuff
multiplatform, multi-language
remote debugging
CLI-only, needs separate front-end

Jinsight
made by IBM
two components: profiler and visualizer
only for z/OS or Linux on system z
builds a trace when application is running
client connects to profiler and visualizes the trace
modified JVM?
120 minute trace limit
very powerful

Javavis
relies on the Java Debug Interface (JDI), and the Vivaldi Kernel (a visualization library)
shows dynamic behavior of running program
object diagrams+sequence diagram, UML
smooth transitions
not a debugger

code canvas (visual studio)
unites all project-files on a infinite zoomable surface
both content and info
layers of visualization - files/folders, diagrams, tests, editors, traces ++
several layers visible at the same time

search

trace viewer plugin (g-Eclipse)
g-eclipse=grid, archived project
visualize and analyze communication of message-passing programs
standalone/platform independent
designed for massive parallelism
debugging
event markers

Whyline
Interrogative debugger
why did, why did not
works on recorded executions

TOD: Trace-Oriented Debugger
omniscient debugger
queries
dynamic visualizations - high-level, graph of event density

Jive
combines ale fields
contour diagram
sequence diagram
stepping - state-saving
queries - enabled by state-saving
can be used for debugging

4 Conclusion

References