Looking for a Needle in a Haystack? Use Eclipse TMF!

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What is TMF (Tracing and Monitoring Framework)
  - Tool for end users (Demo)
  - Framework for developers
Kalray's use of TMF
Questions
WHAT IS TRACING?

› Basically a “high-performance printf()”
  - Insert tracepoints (probes) in your application. At runtime, when the tracepoint is hit, it will send an event to a memory buffer, but only if tracing is active.
  - Those events can be written to disk, or kept in memory (flight-recorder mode).
  - Can enable/disable tracepoints at runtime.
TRACING AND MONITORING FRAMEWORK

› Open-source (EPL) framework to implement trace analyzers
  - Part of the Eclipse Linux Tools project (http://eclipse.org/linuxtools)

› Reference views for:
  - LTTng kernel and UST traces
  - GDB traces
  - Custom text or XML logs

› Can be used as Eclipse plugins, or as a stand-alone application (RCP)
TRACING AND MONITORING FRAMEWORK
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› Tool for application developers
  - Close integration with the LTTng tracer (http://lttng.org)
    › Control Flow and Resource View for kernel traces
    › Call Stack View for userspace traces (using -finstrument-functions)
    › Tracer control

  - For all trace types:
    › Event list, with search and filtering
    › Statistics
    › Histogram (event density)
    › Possible to open many traces at the same time
TRACING AND MONITORING FRAMEWORK

Demo
TRACING AND MONITORING FRAMEWORK

› Framework for developing custom trace viewers
  - Set of generic interfaces (ITmfTrace, ITmfEvent, etc.), with provided default implementation
  - Extensive documentation (see link at the end)
  - Ongoing work on data-driven components and views, to make extensibility easier
REFERENCES

› Project page: http://eclipse.org/linuxtools/projectPages/Lttng/
› RCP download: http://lttng.org/eclipse

› Mailing list: linuxtools-dev@eclipse.org

› IRC
  - #eclipse-linux on Freenode
  - #lttng on OFTC
Evaluate This Session

1. Sign-in: [www.eclipsecon.org](http://www.eclipsecon.org)

2. Select session from schedule

3. Evaluate: [+1] [0] [-1]
QUESTIONS?