



EfficiOS - May 2016 LTTng & Trace Compass Progress Report

LTTng 2.8 (release 05/2016)

- Shared object base address dump for mapping event to source code,
- Java Application Contexts,
 - Dynamic typing,
 - Enumeration type in LTTng-UST declarative Tracepoint probes,
- Discarded Events and Lost Packets Statistics,
- Metadata regeneration (for NTP major adjustments),
- Solaris 10 and 11 ports,

LTTng 2.8 (release 05/2016)

- New contexts for real-time tracing,
- Overhauled Man pages.

Upcoming in LTTng 2.9

- Gather detailed arguments for poll, epoll, select system calls in lttng-modules,
 - Custom declarative tracepoint probe code,
 - Variant, structure, enumeration support,
- LTTng session templates,
- Snapshot ring-buffer in discard mode
 - Effectively a “single-shot” mode,
- New state dump lttng command,

Upcoming in LTTng 2.9

- LTTng modules/Linux: instrument sched_set_prio,
- Performance Monitoring Unit counters on 32-bit ARM, for both lttng-modules and lttng-ust,
- Custom counters support (raw value) on 32-bit ARM,
- Improve speed of LTTng-UST on 32-bit ARM:
 - Improve getcpu speed (cpu_id cache),
 - Restartable critical sections,

Trace Compass

- In Neon:
 - Integration between Trace Compass and LTTng Analyses,
 - Mapping LTTng-UST events to source code,
 - Address PID 0 modeling problem,

Trace Compass

- After Neon:
 - Stream intersection mode,
 - Show only active threads in Control Flow View,
 - Trace Trimming using Babeltrace,
 - Allow multiple concurrent instances of Control Flow and Resource Views, pin/unpin,
 - Filter to show only threads on a give CPU in Control Flow View,
 - ...

Trace Compass

- After Neon:
 - Control Flow View refactoring,
 - Line thickness configurable in Control Flow View,
 - Goto next event cursor per-thread (in control flow view).

LTtng Analyses in Trace Compass

- Machine Interface to call external analysis scripts from Trace Compass GUI,
- JSON formatted layout to export analysis results into Trace Compass,
 - Tables,
 - Bar charts,
 - Scatter charts,
 - User configurable,
 - Etc...

BareCTF

- Port to 64-core Parallella (if we receive the board),
- Include support,
- Tracepoint instrumentation API.

Babeltrace Progress/Roadmap

- Babeltrace 1.4 (05/2016)
 - Stream intersection,
 - Mapping events to source code,
 - Warn on lost packets,

Babeltrace Progress/Roadmap

- Babeltrace 2.0
 - Plugin system overhaul,
 - Intermediate Representation,
- Babeltrace 2.1
 - Event filtering,
 - Add support for CTF 2.0,
 - Keep backward compability with CTF 1.8.

CTF 2.0

- Goal: transition from own metadata grammar (TSDL) to JSON,
- Will be easier to extend, and easier to parse by alternative CTF reader implementations,
- Add type attributes for formatting,
- Binary trace data stream will be unchanged,
- Will be introduced with Babeltrace 2.1.

Tracing External Projects

- CTF integration for Titan logger,
- Tracing RTEMS using BareCTF (GSoC project).

Workgroups and Events

- Diagnostic and Monitoring Workgroup
 - <http://diamon.org>
- Tracing Summit 2016
 - <http://tracingsummit.org>

Questions ?



*Effici*OS



www.efficios.com



lttng.org



lttng-dev@lists.lttng.org



[@lttng_project](https://twitter.com/lttng_project)

*Effici*OS