



LTTng presentation and update

LTtng features

- Kernel tracing
 - Tracepoints
 - System calls
 - k[ret]probes
- User-space tracing
 - C/C++ (tracef/tracelog)
 - Source code mapping
 - Java (JUL and log4j)
 - Python

Effici **OS** – Everything else with:

- `echo -n "text" >/proc/lttng_logger`

LTTng features

- Channels
 - Subbuffer-size
 - Trace file rotation
 - Timers
- Contexts
 - Pid, procname, etc
 - perf PMU counters
 - RT-related contexts

LTNg features

- Filtering
 - Kernel
 - User-space
 - Contexts
- Wildcards
- Log-level
- Per-pid tracking

LTNg features

- Snapshots
- Streaming
- Live
- Save/load
- MI

Viewers

- Babeltrace
- TraceCompass
- LTTng-analyses

LTTng Progress in 2015

- LTTng 2.7 (09/2015)
 - <https://ltnng.org/blog/2015/10/14/ltnng-2.7-released/>
 - Kernel filtering
 - PID tracker
 - Kernel tracer wildcards

LTTng Progress in 2015

- LTTng 2.7 (09/2015)
 - Python logging
 - Persistent memory UST ring buffer
 - Custom clock sources, CPU identifier plugins
 - Custom kernel tracer clock sources will be in 2.8
 - LTTng UST tracelog() API

LTTng Progress in 2015

- Membarrier system call
 - Speed improvement for Userspace RCU read-side,
 - Improves LTTng user-space tracing,
 - Merged in Linux kernel 4.3,
 - Used by Userspace RCU library $\geq 0.9.0$ if available,
 - Also used by CoreCLR (Microsoft .NET Core Runtime).

LTtng Upcoming Features (2.8)

- Expose buffer overwritten information in LTtng-UST and LTtng-modules (upcoming LTtng 2.8),
- Allow regenerating the LTtng-UST and LTtng-modules metadata after NTP major adjustment (upcoming LTtng 2.8),
- Solaris 10 and 11 ports,
- New contexts for real-time tracing,
- Fetch library load information in UST, mapping events to source code.

Babeltrace Progress/Roadmap

- Babeltrace 1.3 (10/2015)
 - Solaris port,
- Babeltrace 1.4 (approx. 02/2016)
 - Packet intersection,
 - Mapping events to source code,
 - Warn on lost packets,

Babeltrace Progress/Roadmap

- Babeltrace 2.0 (approx. 03/2016)
 - Plugin system overhaul,
 - Intermediate Representation,
- Babeltrace 2.1 (approx. 07/2016)
 - 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.

Questions ?



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