



# ECLIPSE TRACING FRAMEWORK

STATUS UPDATE

ECOLE POLYTECHNIQUE  
2010-06-29

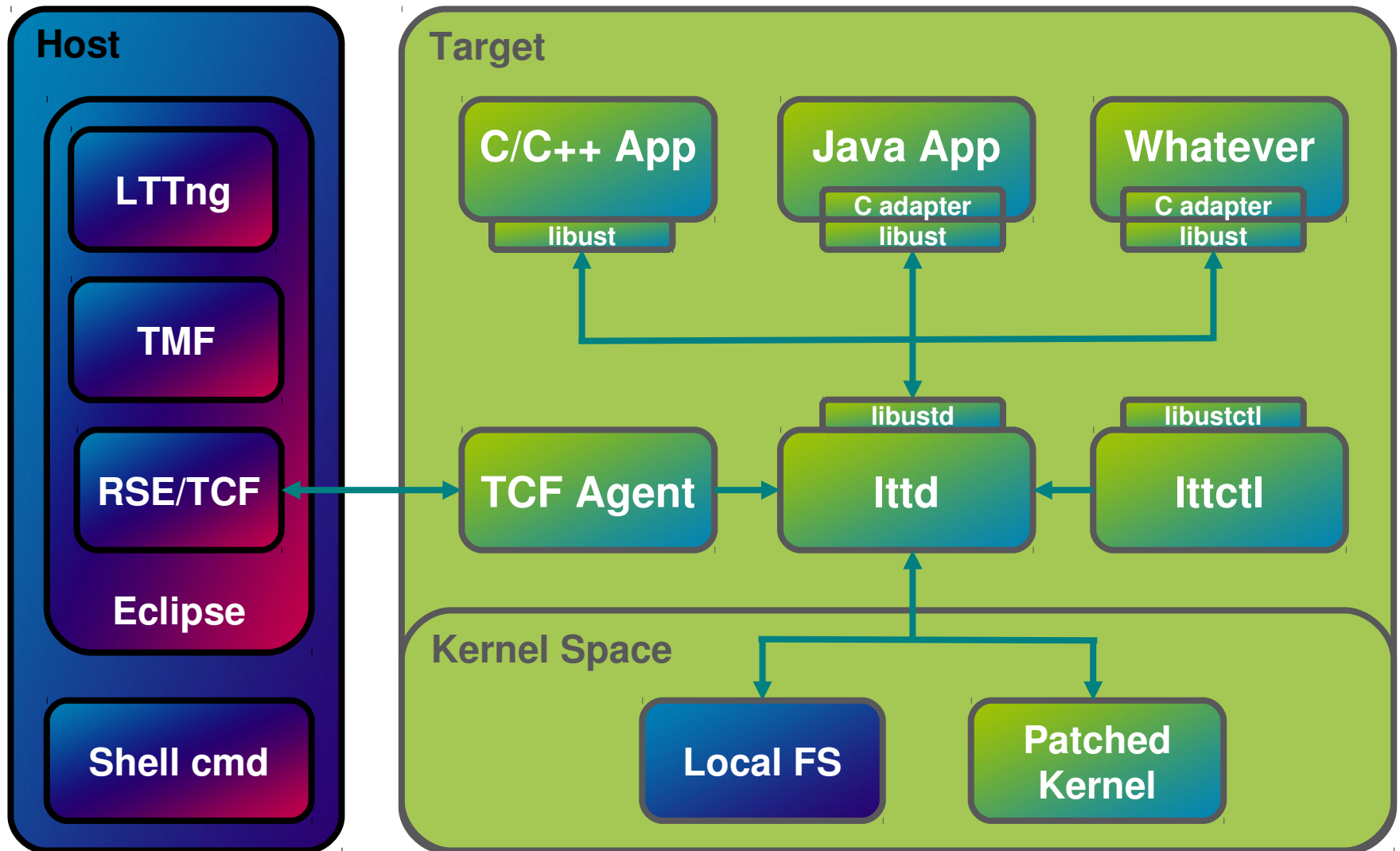
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# SUMMARY

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- › LTTng Eclipse Integration
- › Helios Delivery
- › What's coming up

# LTTNG ECLIPSE INTEGRATION

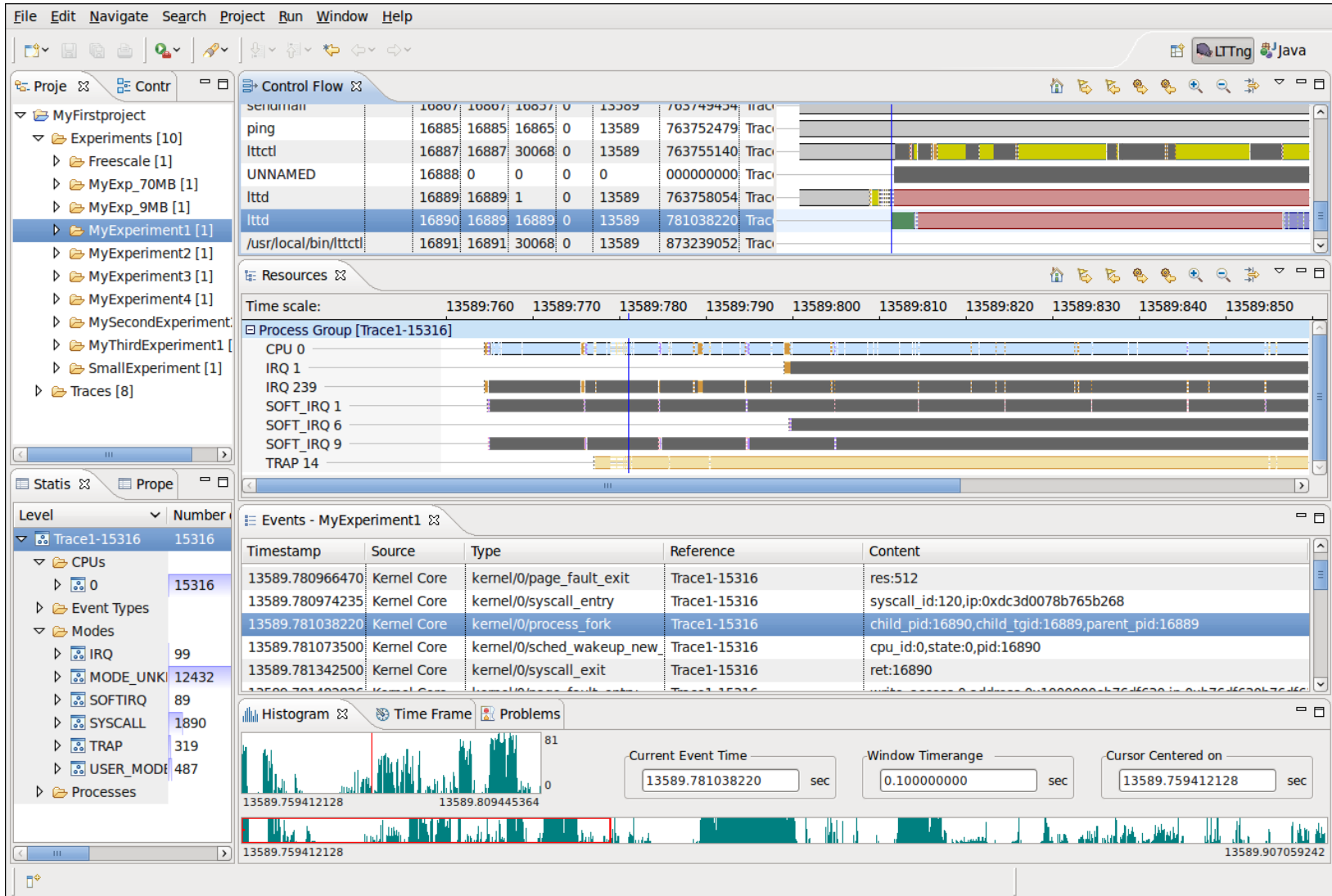


# HELIOS DELIVERY

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- › Part of the Helios simultaneous release (June/23<sup>rd</sup>)
- › A few patches were delivered since :-)
- › Contents
  - TMF
  - LTTng Perspective
    - › Project View (project management)
    - › Histogram View (trace event density over time)
    - › Events View (tabular representation of trace events)
    - › Control Flow View (processes state viewer)
    - › Resources View (system resources state viewer)
    - › Statistics View (trace statistics)

# LTTNG PERSPECTIVE

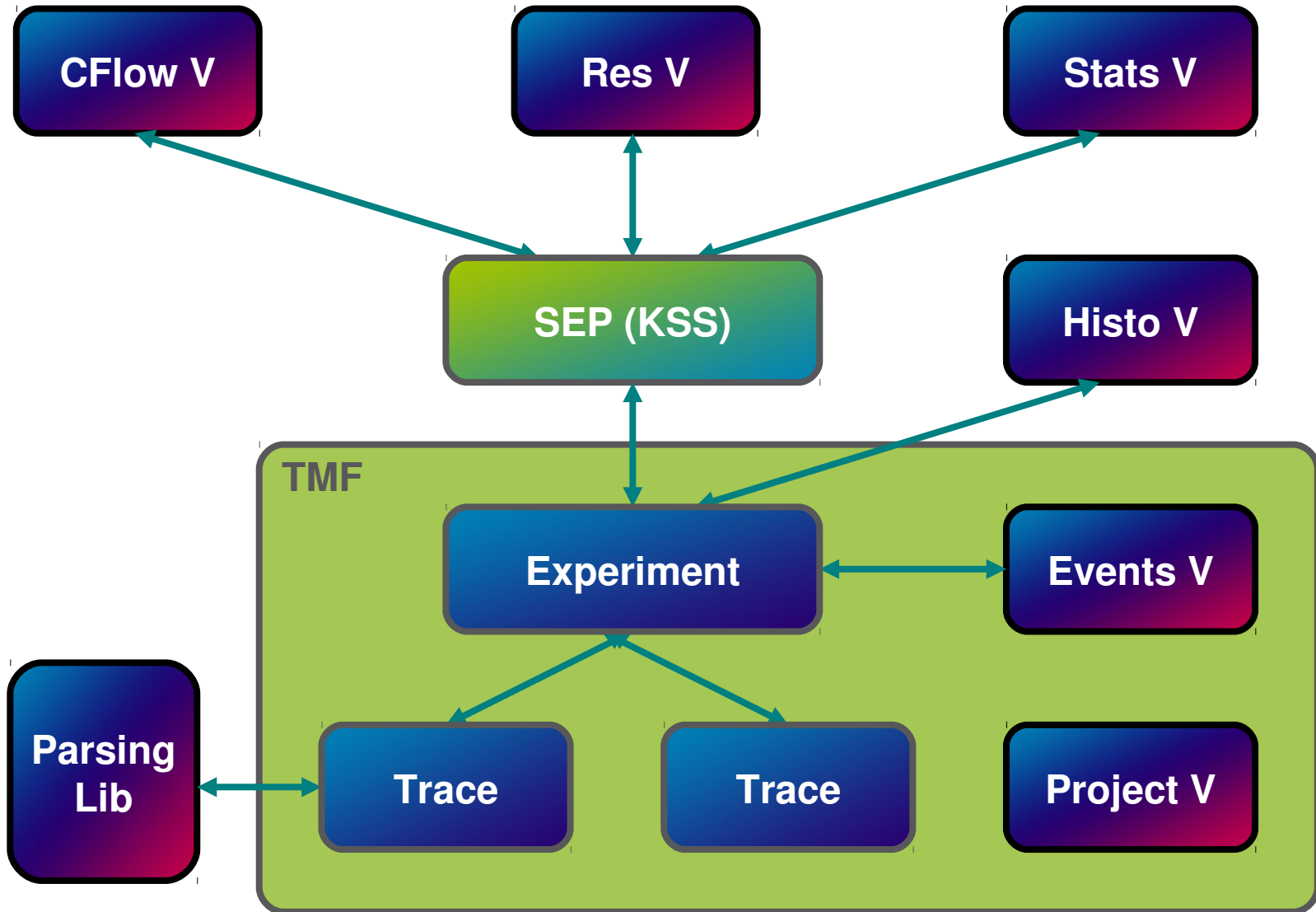


The screenshot displays the LTTng Java GUI interface, showing a project named 'MyFirstproject' with several experiments. The 'Control Flow' view is active, displaying a table of process execution data. Below this, the 'Resources' view shows a detailed timeline for a process group (Trace1-15316) on CPU 0, including various system events like IRQs and traps. The 'Events - MyExperiment1' view provides a table of kernel events with their timestamps, sources, types, references, and content. At the bottom, a histogram and time frame controls are visible, showing the current event time and window timerange.

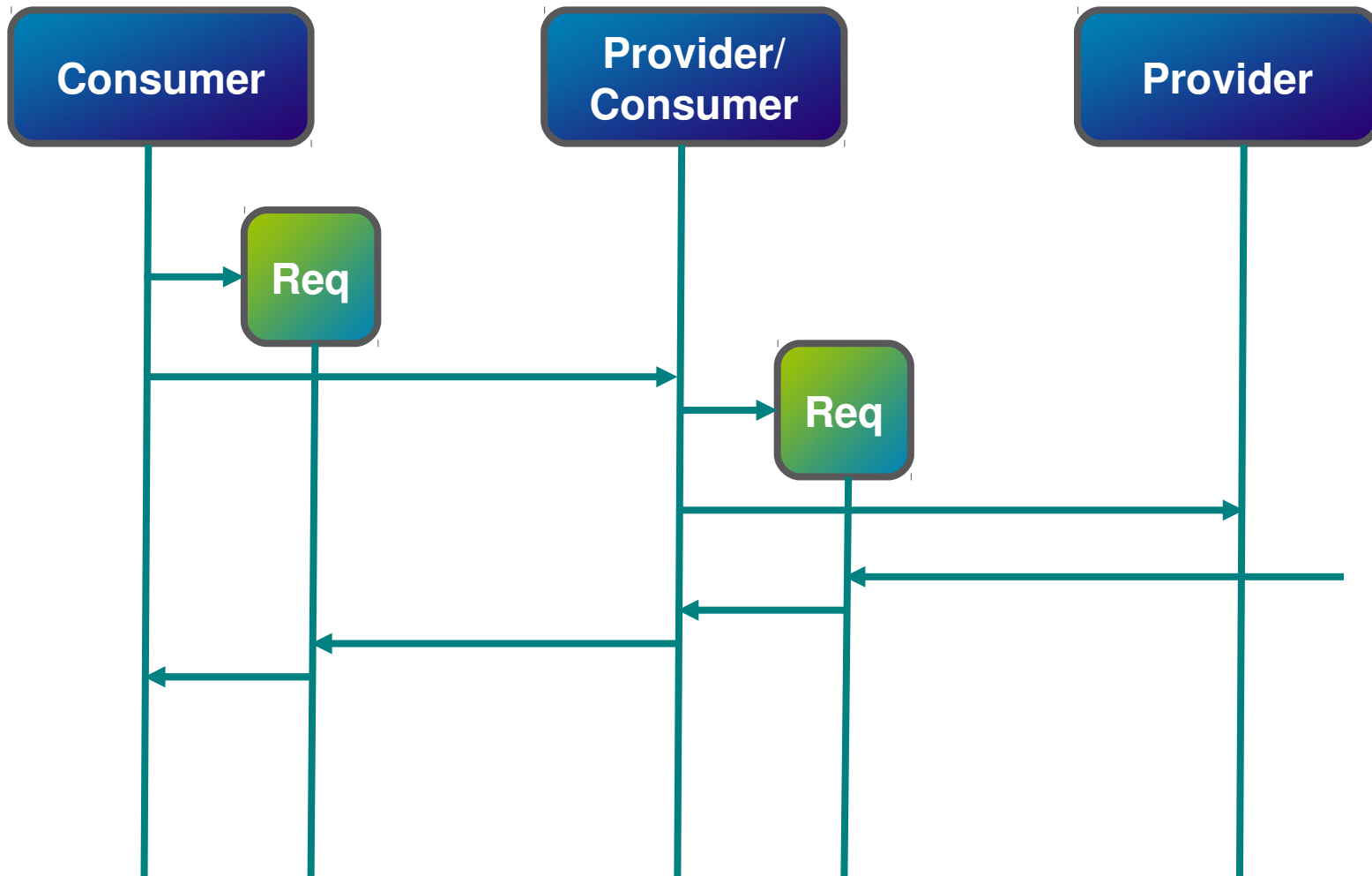
Process	pid	ppid	uid	gid	tid	traced
sendmail	16867	16867	16857	0	15389	763749434
ping	16885	16885	16865	0	13589	763752479
lftctl	16887	16887	30068	0	13589	763755140
UNNAMED	16888	0	0	0	0	000000000
lftd	16889	16889	1	0	13589	763758054
lftd	16890	16889	16889	0	13589	781038220
/usr/local/bin/lftctl	16891	16891	30068	0	13589	873239052

Timestamp	Source	Type	Reference	Content
13589.780966470	Kernel Core	kernel/0/page_fault_exit	Trace1-15316	res:512
13589.780974235	Kernel Core	kernel/0/syscall_entry	Trace1-15316	syscall_id:120,ip:0xdc3d0078b765b268
13589.781038220	Kernel Core	kernel/0/process_fork	Trace1-15316	child_pid:16890,child_tgid:16889,parent_pid:16889
13589.781073500	Kernel Core	kernel/0/sched_wakeup_new	Trace1-15316	cpu_id:0,state:0,pid:16890
13589.781342500	Kernel Core	kernel/0/syscall_exit	Trace1-15316	ret:16890

# LTTNG STRUCTURE



# TMF PROVIDER/CONSUMER



# WHAT'S COMING UP

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- › Performance improvements
  - › Events View
  - › Statistics View
  - › Request coalescing mechanism
  - › Event zero copy?
  
- › LTTng features
  - › User Space Tracing (UST)
  - › Trace Synchronization (time adjustment)
  - › Dependency Analysis
  - › Pattern Searching
  - › Trace Dump



# WHAT'S COMING UP

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- › TMF features
  - › Control View (tracer control - local/remote)
  - › Request Filtering
  - › Trace Streaming
  - › Link tracepoint to source code
  - › Standalone trace analysis
  - › Generic Statistics View
  - › CPP/AXE contributions
    - › Parser generator
    - › Improved Events View
    - › ...

# POINTERS

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- › LTTng Eclipse Project (<http://www.eclipse.org/linuxtools/projectPages/lttng>)
- › LTTng Eclipse Wiki ([http://wiki.eclipse.org/Linux\\_Tools\\_Project/LTTng](http://wiki.eclipse.org/Linux_Tools_Project/LTTng))
  
- › Linux Tools (<http://www.eclipse.org/linuxtools/index.php>)
- › Update Site (<http://download.eclipse.org/technology/linuxtools/update>)
  
- › LTTng Project (<http://lttng.org>)
- › Tracing Wiki (<http://lttng.org/tracingwiki/index.php/TracingBook>)



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