



# THE CURRENT STATE OF TMF DECEMBER 2013 EDITION

# PLAN

---

- › What is TMF, brief overview
- › Recent features
- › Coming soon
- › Questions

# TRACING AND MONITORING FRAMEWORK

---

- › Open-source (EPL) framework to implement trace analyzers
  - Generic interfaces, classes, views
- › Support for:
  - CTF traces
    - › 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

---

Quick demo

# RECENT FEATURES

---

- › RCP (Rich Client Platform) edition
  - Stand-alone, “real” application. No need for the Eclipse IDE.
  - Smaller download
  - MUCH easier setup
  - Starts faster
  - Extensible
  - File → Open !

<http://ltnng.org/eclipse>

# RECENT FEATURES

---

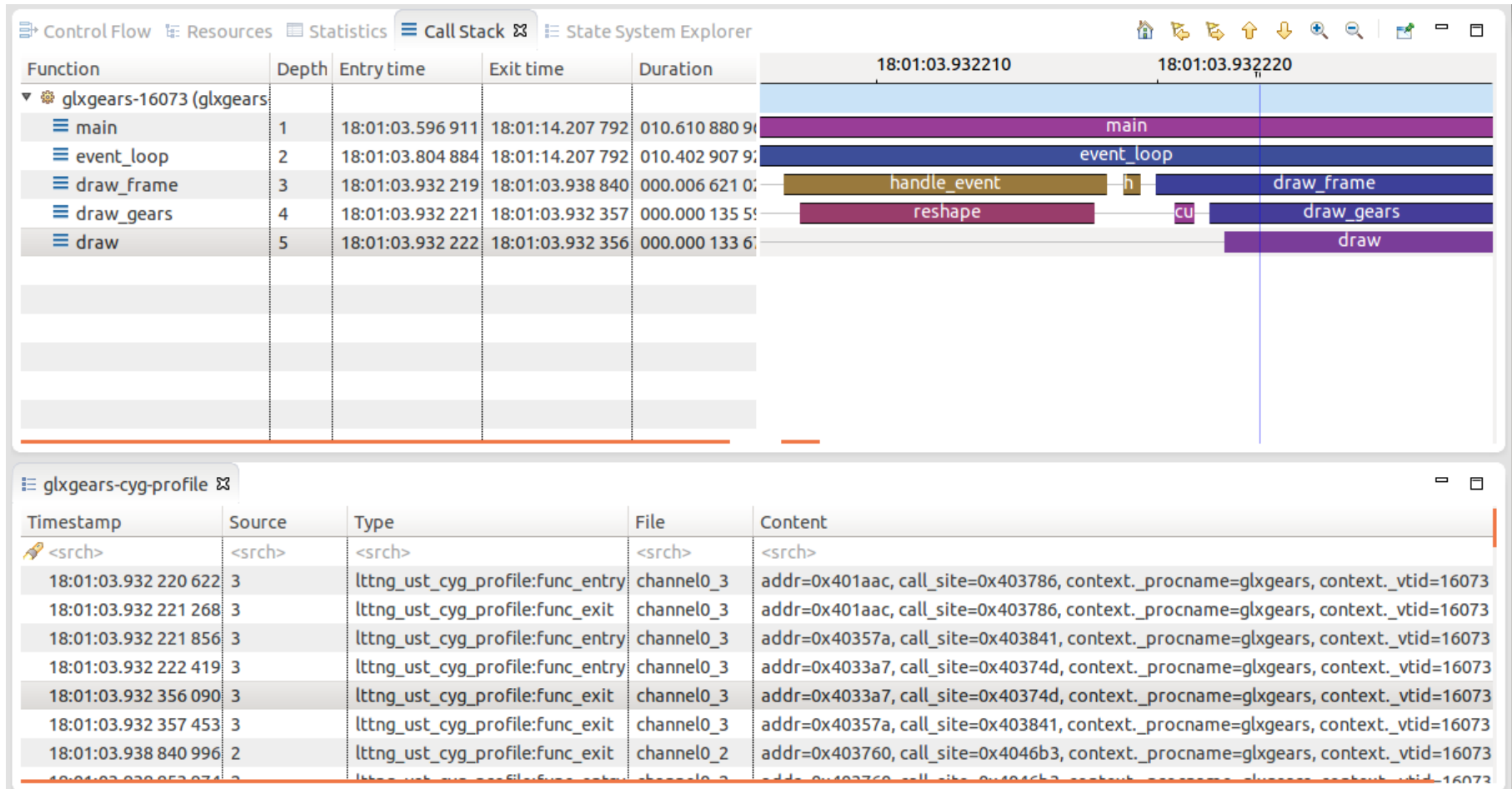
- › Simplified Import dialog
- › Batch Import dialog
- › Generic Callstack View
  - Support for Ittng-ust-cyg-profile traces

# LTTNG-UST-CYG-PROFILE HOWTO

---

- › Recompile your program with `-finstrument-functions`
- › `lttng create`
- › `lttng enable-event -a -u`
- › `lttng add-context -t vtid -t procname`
- › `lttng start`
- › `LD_PRELOAD=liblttng-ust-cyg-profile.so ./myprogram`
- › `lttng stop`
- › `lttng destroy`

# LTTNG-UST-CYG-PROFILE HOWTO



The screenshot displays a debugger window with two main panes. The top pane shows a call stack for the process 'glxgears-16073 (glxgears)'. The bottom pane shows a list of LTTNG-UST-CYG-PROFILE events.

Function	Depth	Entry time	Exit time	Duration
glxgears-16073 (glxgears)				
main	1	18:01:03.596 911	18:01:14.207 792	010.610 880 90
event_loop	2	18:01:03.804 884	18:01:14.207 792	010.402 907 90
draw_frame	3	18:01:03.932 219	18:01:03.938 840	000.006 621 00
draw_gears	4	18:01:03.932 221	18:01:03.932 357	000.000 135 50
draw	5	18:01:03.932 222	18:01:03.932 356	000.000 133 60

Timestamp	Source	Type	File	Content
<srch>	<srch>	<srch>	<srch>	<srch>
18:01:03.932 220 622	3	lttnng_ust_cyg_profile:func_entry	channel0_3	addr=0x401aac, call_site=0x403786, context._procname=glxgears, context._vtid=16073
18:01:03.932 221 268	3	lttnng_ust_cyg_profile:func_exit	channel0_3	addr=0x401aac, call_site=0x403786, context._procname=glxgears, context._vtid=16073
18:01:03.932 221 856	3	lttnng_ust_cyg_profile:func_entry	channel0_3	addr=0x40357a, call_site=0x403841, context._procname=glxgears, context._vtid=16073
18:01:03.932 222 419	3	lttnng_ust_cyg_profile:func_entry	channel0_3	addr=0x4033a7, call_site=0x40374d, context._procname=glxgears, context._vtid=16073
18:01:03.932 356 090	3	lttnng_ust_cyg_profile:func_exit	channel0_3	addr=0x4033a7, call_site=0x40374d, context._procname=glxgears, context._vtid=16073
18:01:03.932 357 453	3	lttnng_ust_cyg_profile:func_exit	channel0_3	addr=0x40357a, call_site=0x403841, context._procname=glxgears, context._vtid=16073
18:01:03.938 840 996	2	lttnng_ust_cyg_profile:func_exit	channel0_2	addr=0x403760, call_site=0x4046b3, context._procname=glxgears, context._vtid=16073



# LTTNG-UST-CYG-PROFILE HOWTO

---

- › To get the function names in the Callstack View:
  
- › Compile binary with `-g`
- › `nm myprogram > func.txt`
- › Import `func.txt` into the Callstack View
  
- › Planned features:
  - Support for reading the binary directly via CDT
  - Integrate with UST libdl instrumentation, to trace calls in dynamic libraries

# OTHER RECENT FEATURES

---

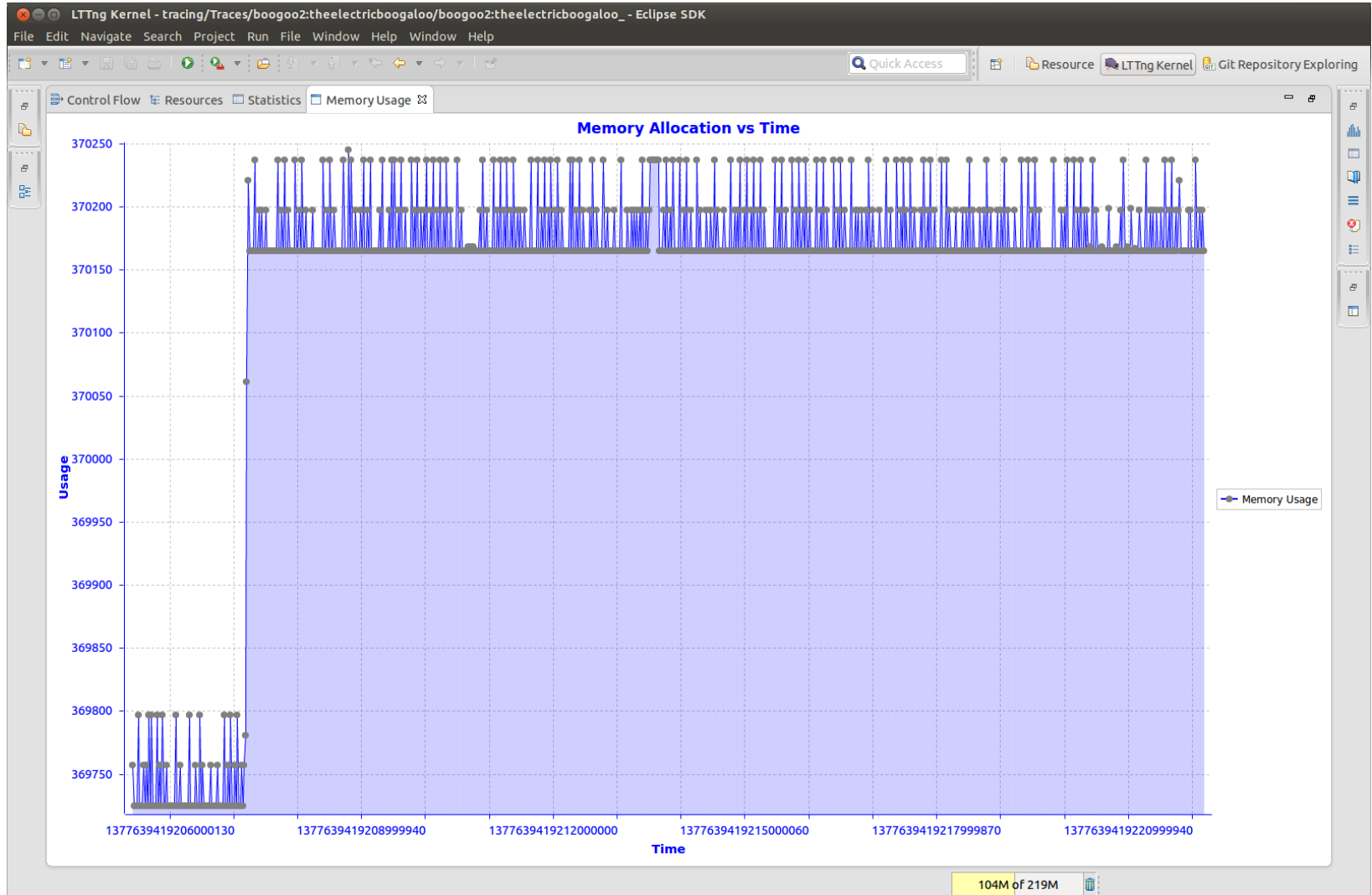
- › Trace synchronization infrastructure
  - Support for synchronizing LTTng kernel traces with network events
  - Plan to add a manual linear offset
- › Index on disk
  - Much faster to re-open existing traces
- › Other general performance improvements

# COMING SOON

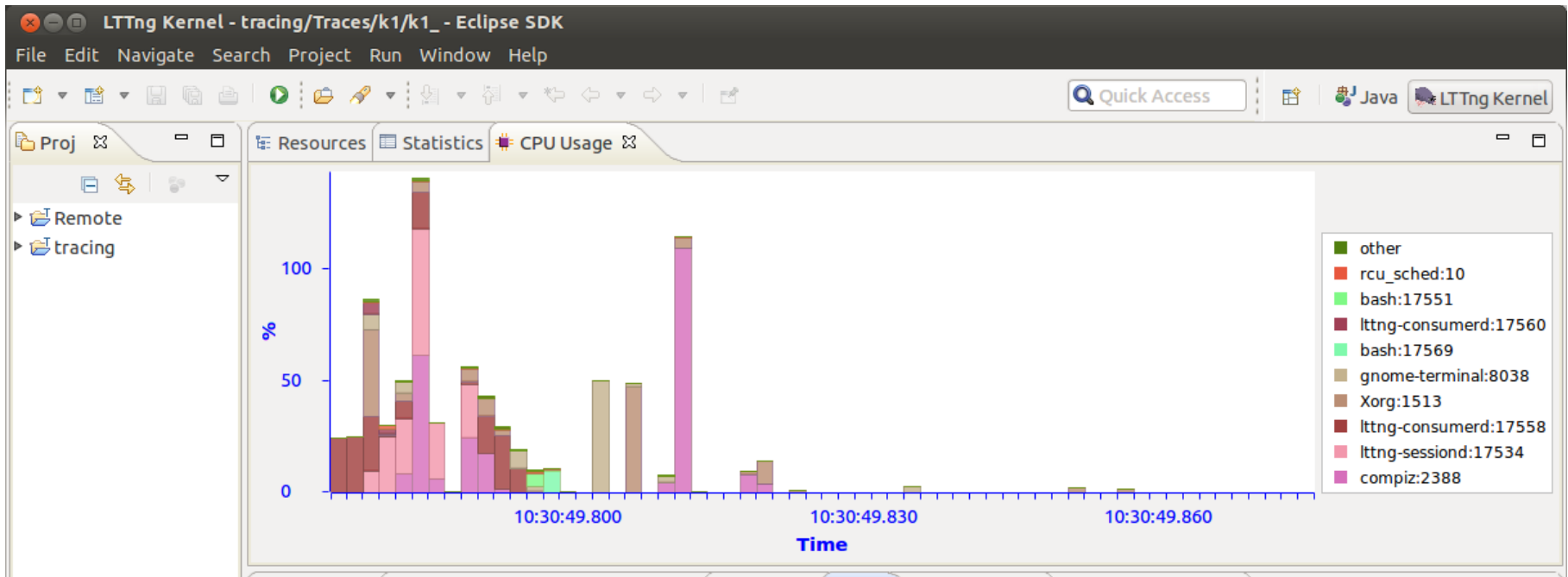
---

- › Generic SWTChart views
  - Bar charts, XY plot, Pie charts(!)
  - New Histogram, much faster
  
- › Data-driven state system providers
  - Define states in XML
  - Eventually, data-driven views

# COMING SOON



# COMING SOON



# THE TMF COMMUNITY

---

TMF/LTTng hack-a-thon  
Tomorrow, 9:30

# REFERENCES

---

- › <http://lttng.org/eclipse>
- › [http://wiki.eclipse.org/index.php/Linux\\_Tools\\_Project/LTTng2/User\\_Guide](http://wiki.eclipse.org/index.php/Linux_Tools_Project/LTTng2/User_Guide)
  
- › Mailing list
  - [linuxtools-dev@eclipse.org](mailto:linuxtools-dev@eclipse.org)
  
- › IRC
  - #lttng on OFTC
  - #eclipse-linux on Freenode

# QUESTIONS?

---