# An Overview of LTTng and LTTV

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# *LTTng key aspects*

- Low overhead
- Architecture independent core
- Instrumentation: Linux Kernel Markers
- Very good reentrancy
- Solid monotonic timebase

# *LTTng key aspects (2)*

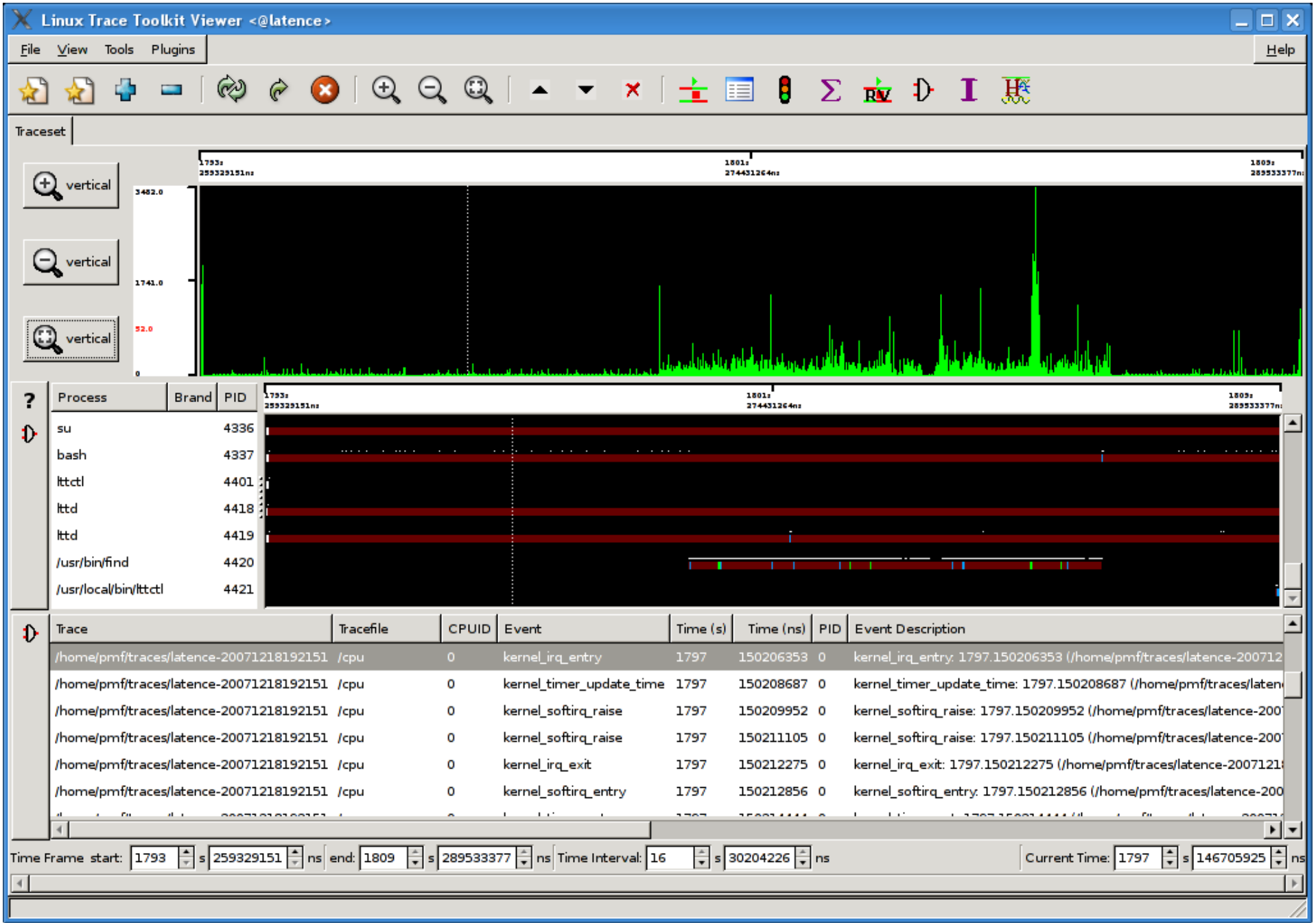
- Atomic, buffered, flight recorder or zero-copy write to disk
- Integration into the mainline Linux kernel in progress
  - Low level primitives: ***merged***
  - Kernel Markers: ***merged (2.6.24)***
  - Instrumentation: ***pending***
  - Tracer: ***pending***

# *LTTV (Viewer)*

- Modular, plugin-based
- Handles huge traces
- Views:
  - Raw events
  - Control flow
  - Histogram
  - Statistics
  - ...

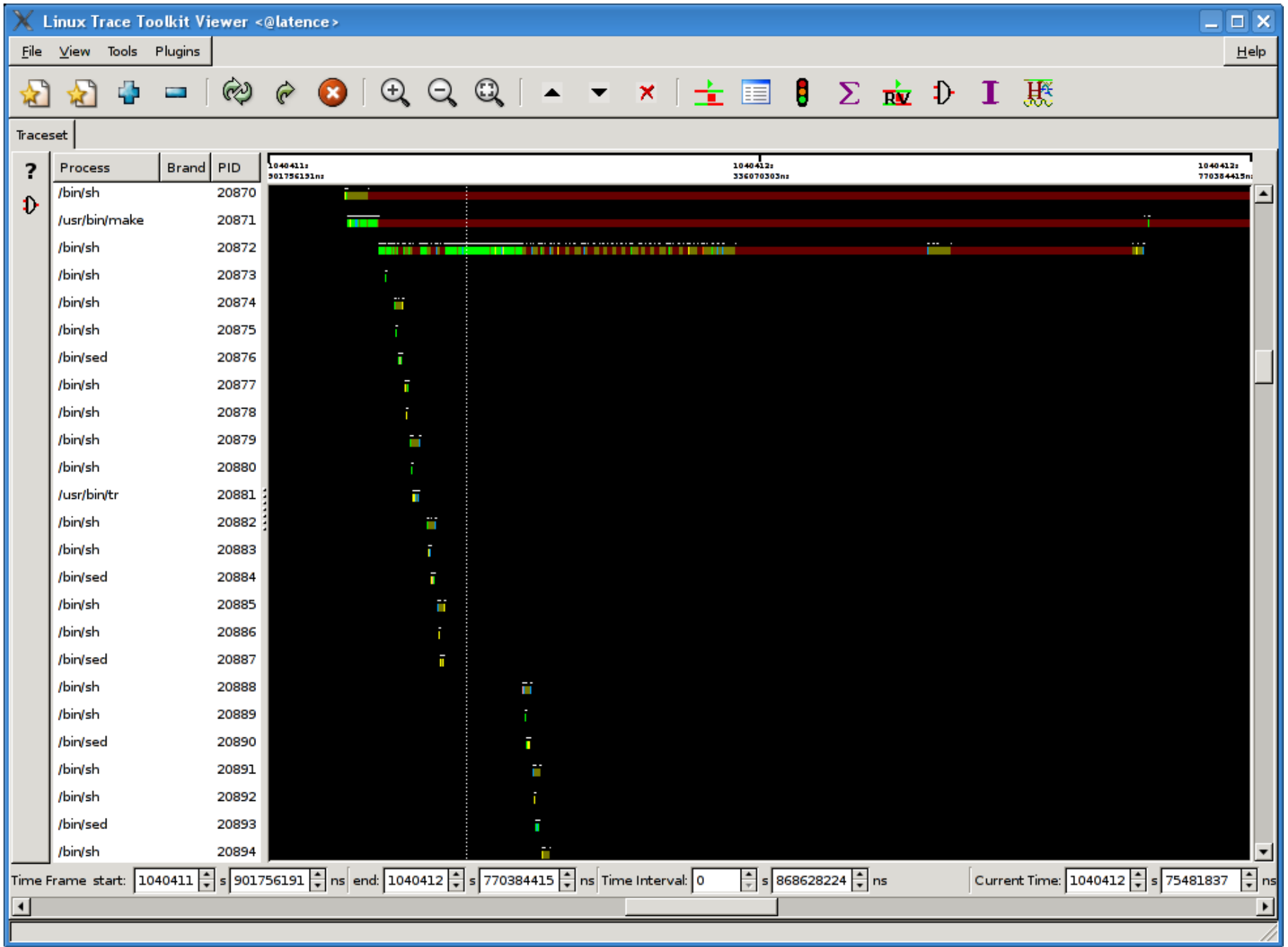
# *LTTV*

## Typical workspace



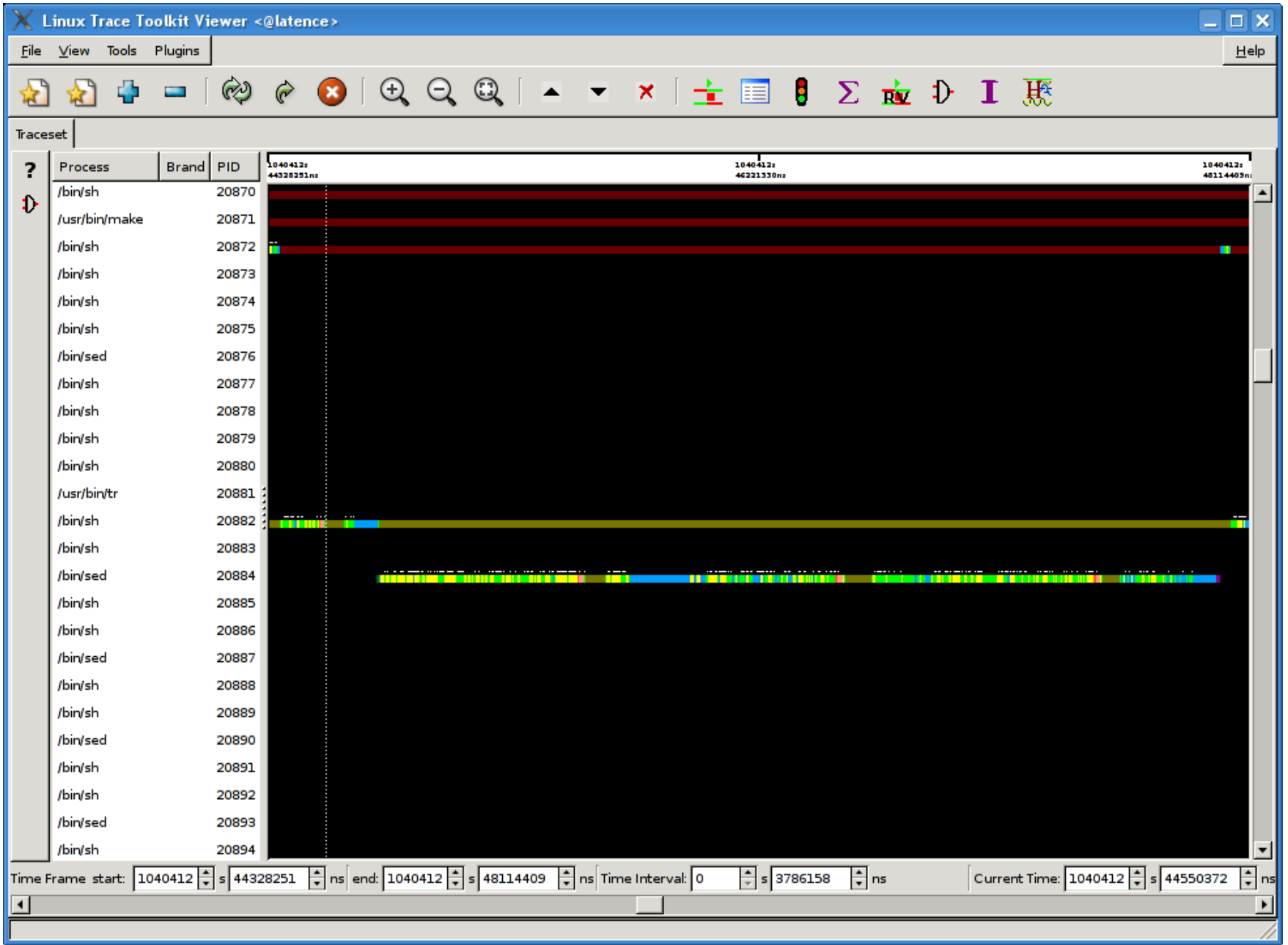
# *Control flow view*

## High level view of a compilation



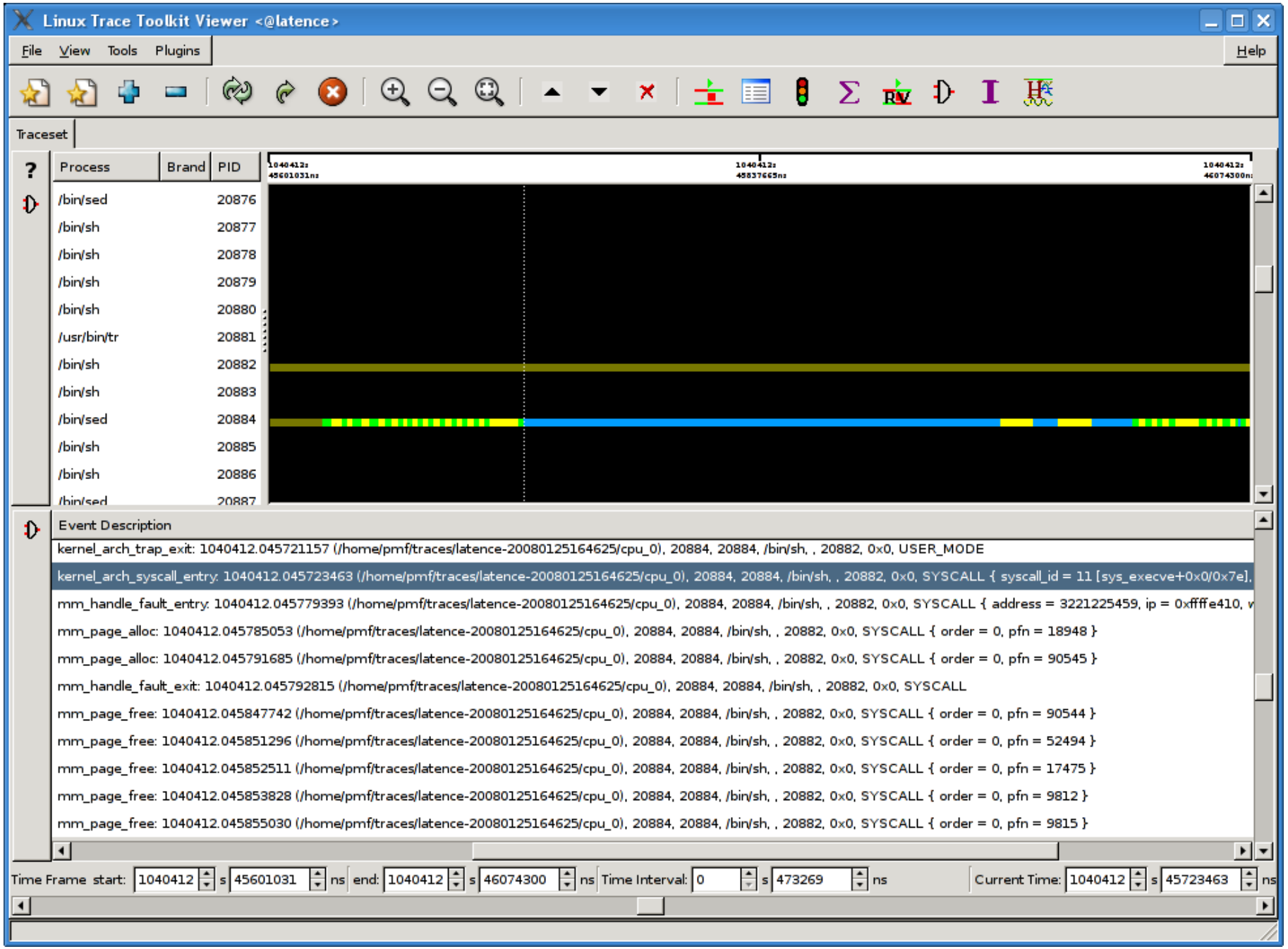
# Control flow view (2)

Zoom into a process: What's that long system call? (blue)



# Control flow view (3)

It's execve()!

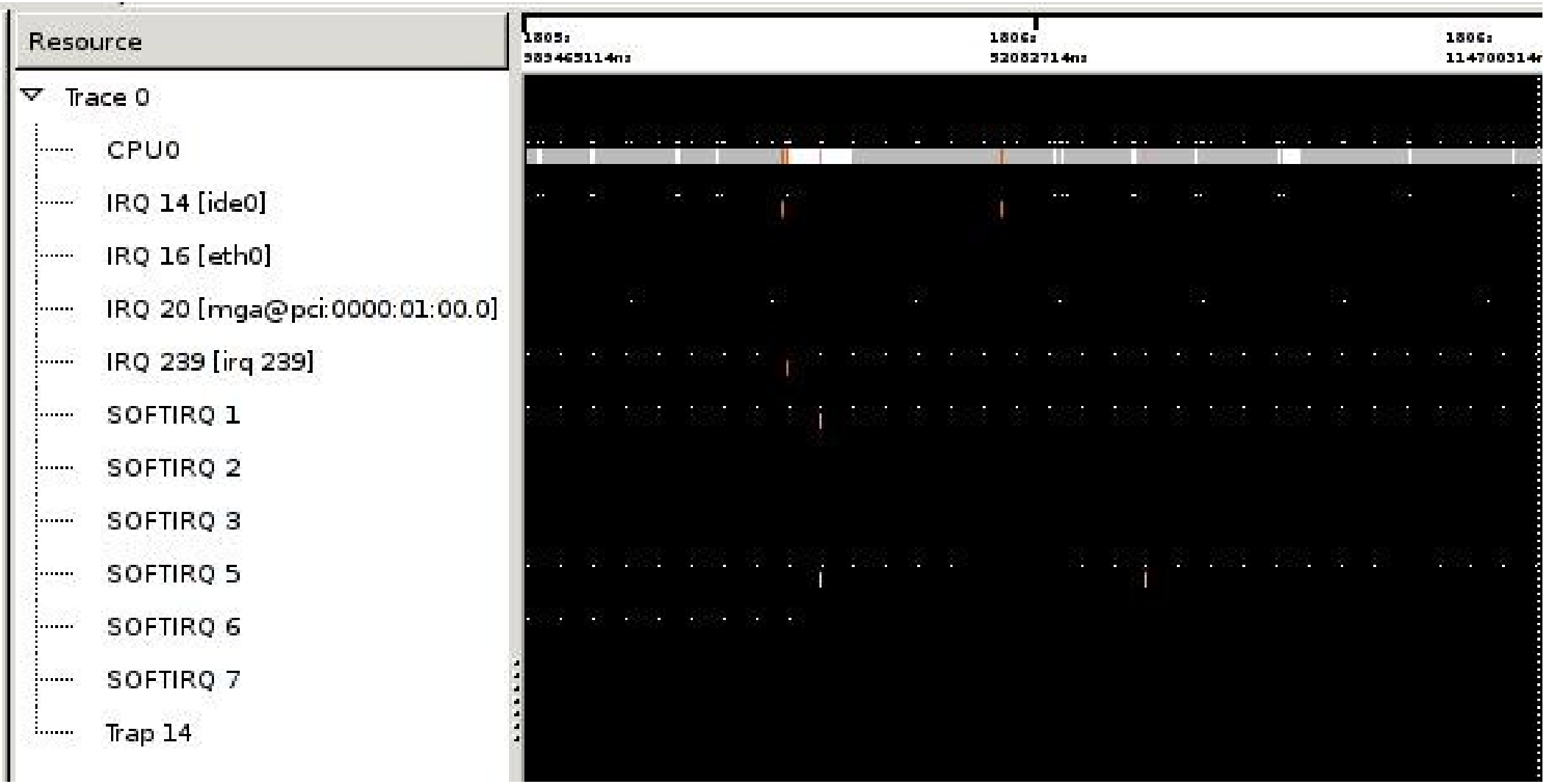


# What's new?

- Resource viewer
  - CPUs
  - IRQs
  - softIRQs
  - traps
- View traces of virtual machines and their host

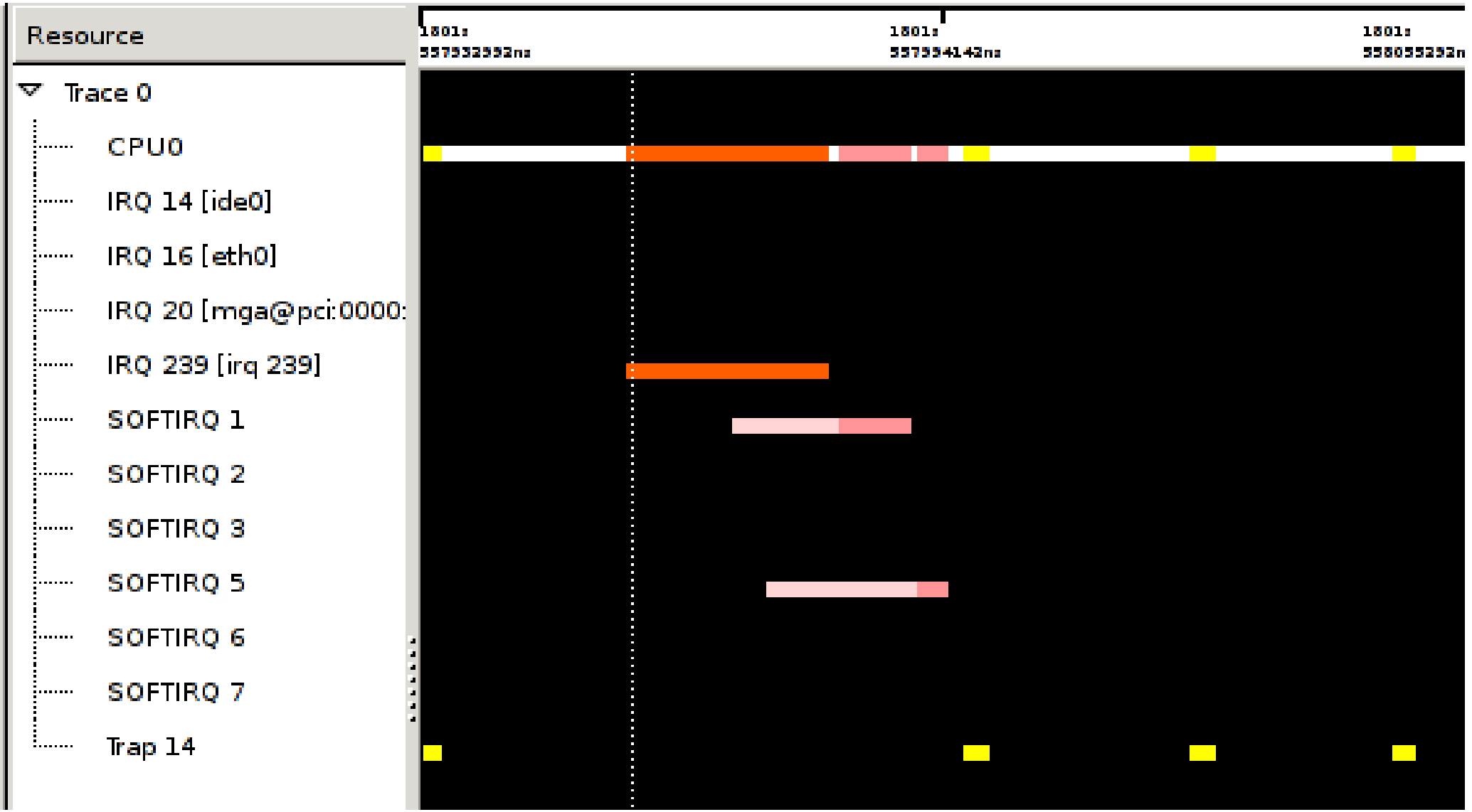
# *Resource view*

"Zoomed out"



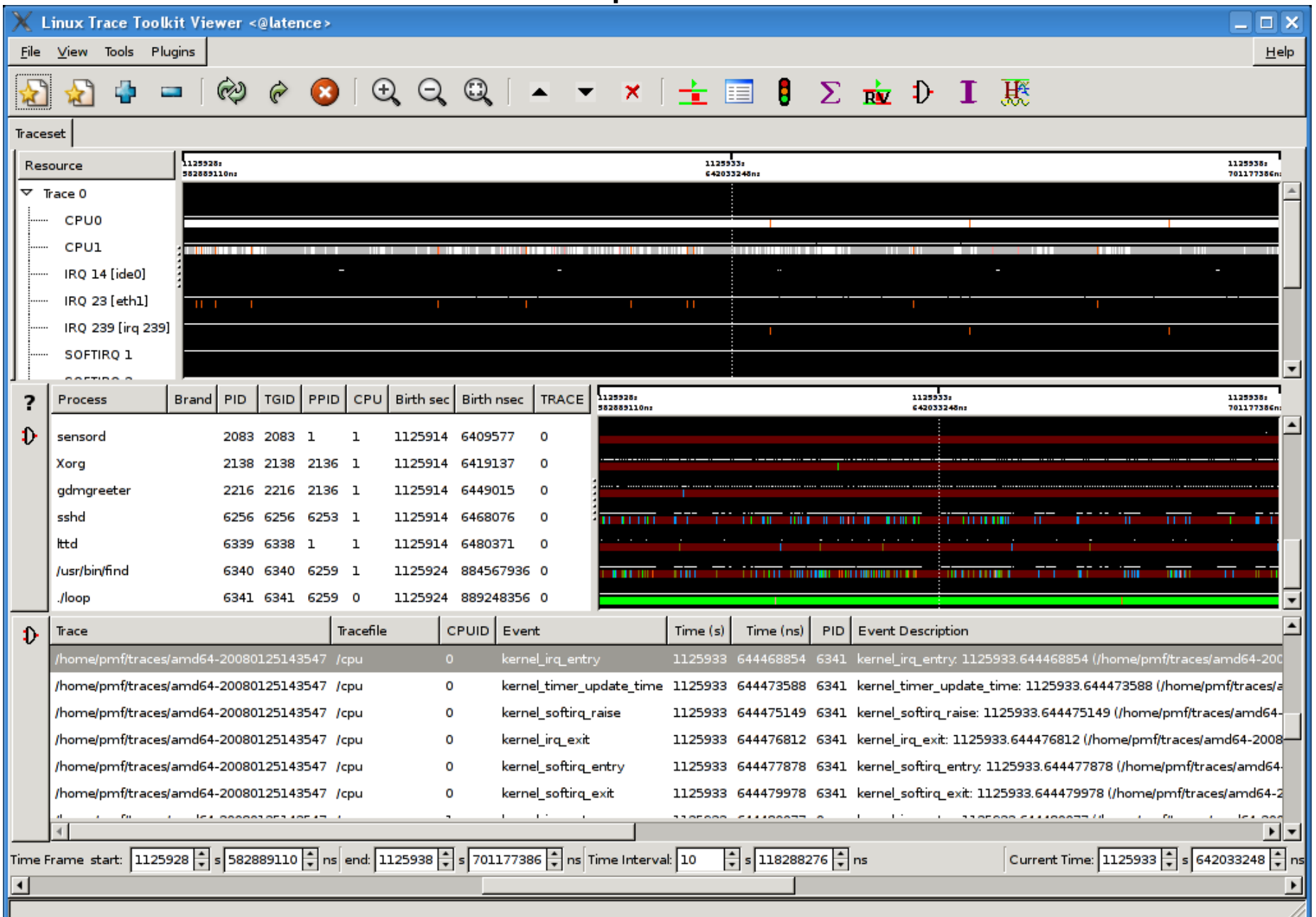
# *Resource view (2)*

Zoomed in: activity after a timer interrupt



# Resource view (3)

## Multiple CPUs



# *Virtual machine and host*