

## REPORT

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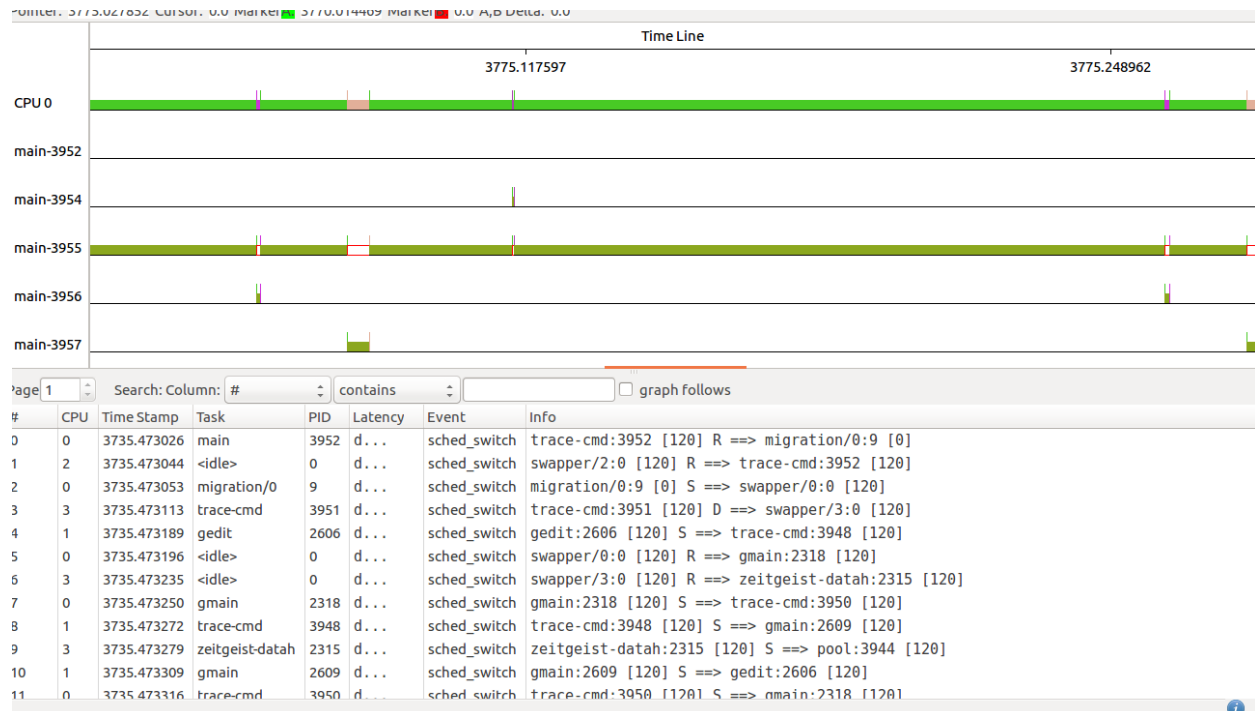
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- PRIORITY AND SCHEDULING POLICY**

```
hena@hena-Inspiron-5537:~$ ps -aeLfc | grep main
root      4240    3337    4240      1 TS      19  20:38 pts/4      00:00:00 sudo ./main
root      4241    4240    4241      6 TS      19  20:38 pts/4      00:00:00 ./main
root      4241    4240    4244      6 FF      55  20:38 pts/4      00:00:00 ./main
root      4241    4240    4245      6 FF      50  20:38 pts/4      00:00:01 ./main
root      4241    4240    4246      6 FF      65  20:38 pts/4      00:00:00 ./main
root      4241    4240    4247      6 FF      70  20:38 pts/4      00:00:00 ./main
root      4241    4240    4248      6 TS      19  20:38 pts/4      00:00:00 ./main
hena      4250    4221    4250      1 TS      19  20:38 pts/6      00:00:00 grep --color=auto main
hena@hena-Inspiron-5537:~$
```

Our input file has four threads (3 Periodic and 1 Aperiodic threads). We have set FIFO policy for each thread, while the priority can be seen for the photo above.

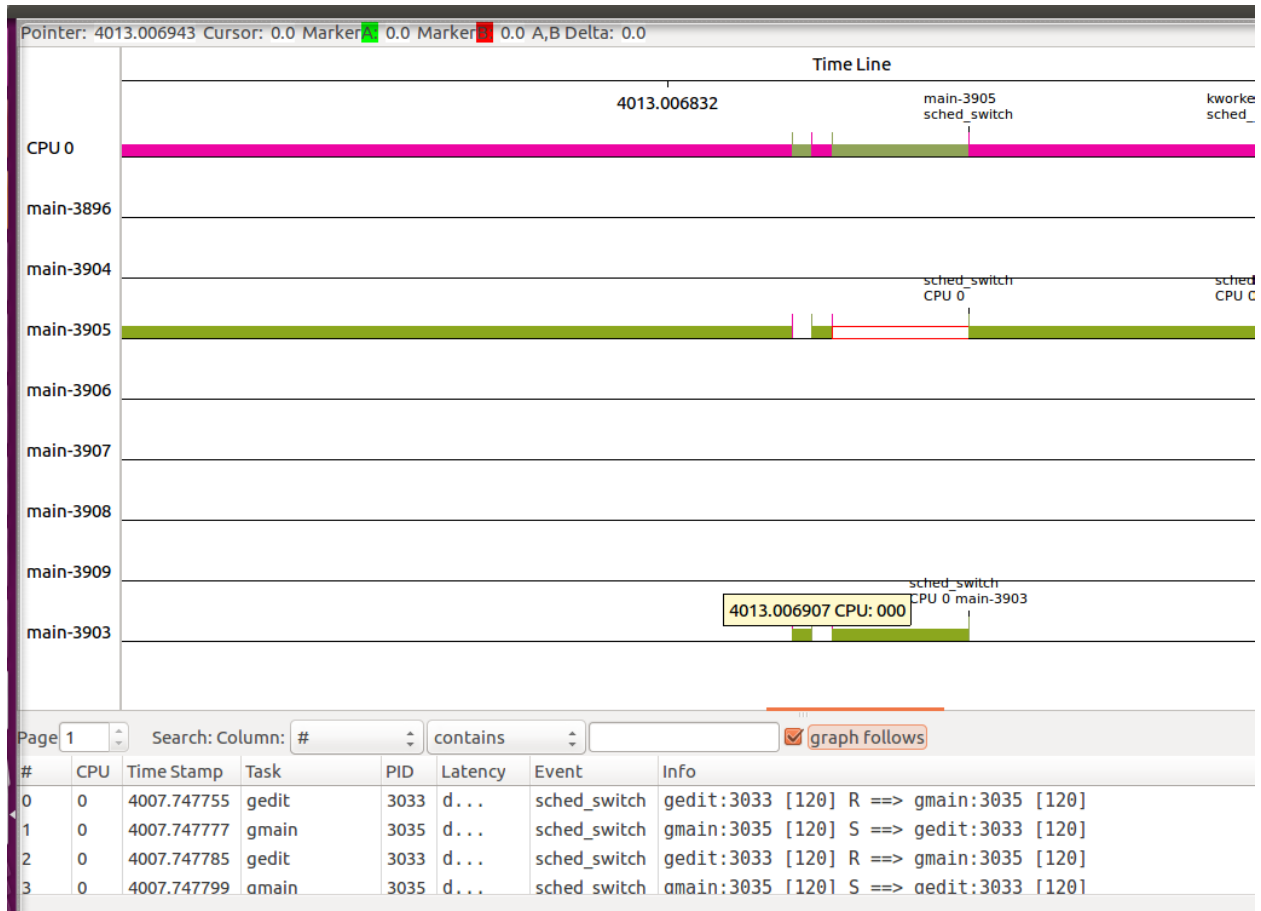
- FOR P-THREAD MUTEX**



The Thread with ID 3955 is running, and it has lowest priority (50-as seen in the photo of priority). Thread 3956 (priority 65) come tries to preempt the thread but because of the lock it will have to wait

till the thread unlocks the mutex. The same thing happens for Thread 3957 (priority 70), it has to wait for mutex to get unlocked. Moreover Thread 3956 which has lower priority then Thread 3957 but still it runs delaying the execution of thread with highest priority. This is priority inversion.

- **FOR PI ENABLED MUTEX**



In the photo above, the thread 3905 has is the lowest priority thread, while thread 3903 has the highest priority it waits for the lower priority thread to unlock the mutex, during this time it would not allow another lower priority to preempt the thread 3905 as the thread 3905 will inherent the priority of thread 3903.