

# Linux Plumbers Conference 2024



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## Real-time MC

### CFP closes on July 12th.

The real-time community around Linux has been responsible for important changes in the kernel over the last few decades. Preemptive mode, high-resolution timers, threaded IRQs, sleeping locks, tracing, deadline scheduling, and formal tracing analysis are integral parts of the kernel rooted in real-time efforts, mostly from the PREEMPT\_RT patch set. The real-time and low latency properties of Linux have enabled a series of modern use cases, like low latency network communication with NFV and the use of Linux in safety-critical systems.

This MC is the space for the community to discuss the advances of Linux in real-time and low latency features. For example (but not limited to):

- Bits left for the PREEMPT\_RT merge
- Advances in the fully preemptive mode
- CPU isolation (mainly about how to make it dynamic)
- Tools for PREEMPT\_RT and low latency analysis
- Tools for detecting non-optimal usages of the PREEMPT\_RT
- Improvement on locks non-protected for priority inversion
- General improvements for locking
- General improvements for scheduling
- Other RT operating systems that run in parallel with Linux and the integration with Linux
- Real-time virtualization

Examples of topics that the community discussed over the last years that made progress in the RT MC:

- timerlat/osnoise tracers and RTLA
- DL server for starvation avoidance
- Proxy execution (still under discussion)
- Tracing improvements - for example, to trace IPIs

Join us to discuss the future of real-time and low-latency Linux.

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