

# Linux Plumbers Conference 2024



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## how Linux tracing can use the net/ subsystem

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This talk is about a crazy idea that the Linux tracing ring buffers directly operate on your NIC tx/rx ring buffers. You may ask why? Doing that the whole Linux tracing subsystem gets Linux “networkified” as being part of the Linux networking ecosystem and you can do the same things like you do with all your other networking stuff. For example: classification, filtering, etc. Those operations can even be offloaded to your NIC hardware, sending your tracing data directly to a remote machine that analyzes it, accessing the data over a socket interface and many other things more. At the end you might need to explain to your IT why your “supposedly looking” unused networking card is still being used as a tracing offload engine.

I will explain the idea of how Linux tracing can be adapted into the Linux networking ecosystem and how already existing infrastructure in Linux networking can be used for Linux tracing data. That all makes Linux tracing hopefully faster and easier to use. This is just the beginning of implementing a whole new framework with the goal to handle distributed tracing with time synchronized tracing in Linux in a way that networking hackers like to use to debug their networks.

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