

# Linux Plumbers Conference 2024



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## WireGuard & GRO?

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For some time now Cilium ships with a native WireGuard integration in order to provide a lightweight encrypted tunneling solution in the Cloud Native ecosystem for K8s Pod traffic and to connect multi/hybrid-cloud environments. It also acts as an alternative to Cilium's IPsec integration. From a BPF and Cilium point of view, it provides nice benefits in that WireGuard is i) just another hop on the virtual wire on the local node, and ii) it is less complex to orchestrate than alternatives.

We briefly talk about Cilium's WireGuard integration and then the talk focusses on potential ways to improve its performance. In particular, wireguard-go, a pure user space implementation of WireGuard was able to surpass the in-kernel implementation's performance though piggy-backing on UDP GSO and GRO [0]. In this experiment, we seek to bring similar benefits to its kernel implementation via GRO and provide an analysis of our results.

[0] <https://tailscale.com/blog/more-throughput>

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