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Safe sharing of the network with eBPF

Tuesday, 14 November 2023 12:30 (30 minutes)

In this talk, we share some transport tunings built using eBPF to improve network performance and reliability. We will discuss examples of problems observed along with their solutions at different scopes –intra datacenter(small RTT) and inter-region(long RTT) network. Next, we talk about how we used one BPF attachpoint (struct_ops) to try a TCP congestion control change aimed at improving network performance. We will walk through our journey around prototyping and deploying custom congestion control algorithms. We will discuss how tcp_iter helped us tackle the problem of existing connections and version management. Lastly, we bring some open challenges for the eBPF community from our experience so far.

Primary author:　MADHAVAN, Balasubramanian (Meta Inc.)

Co-author:　GUPTA, Prankur (Meta Platforms Inc)

Presenters:　MADHAVAN, Balasubramanian (Meta Inc.);　GUPTA, Prankur (Meta Platforms Inc)

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