

Linux Plumbers Conference 2025



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Loops handling by BPF verifier and what should we do about it?

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The BPF verifier has troubles when verifying loops, and we are slowly moving to address these.

In the talk I want to cover:

- historical evolution of loops handling by verifier;
- problems with current state of things (too crude widening, no bounds for induction variables);
- describe DFA based liveness analysis that landed recently;
- describe further steps adding DFA-based value range analysis to the verifier.

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