eBPF FOUNDATION

BPF Hackathon @ IETF 116

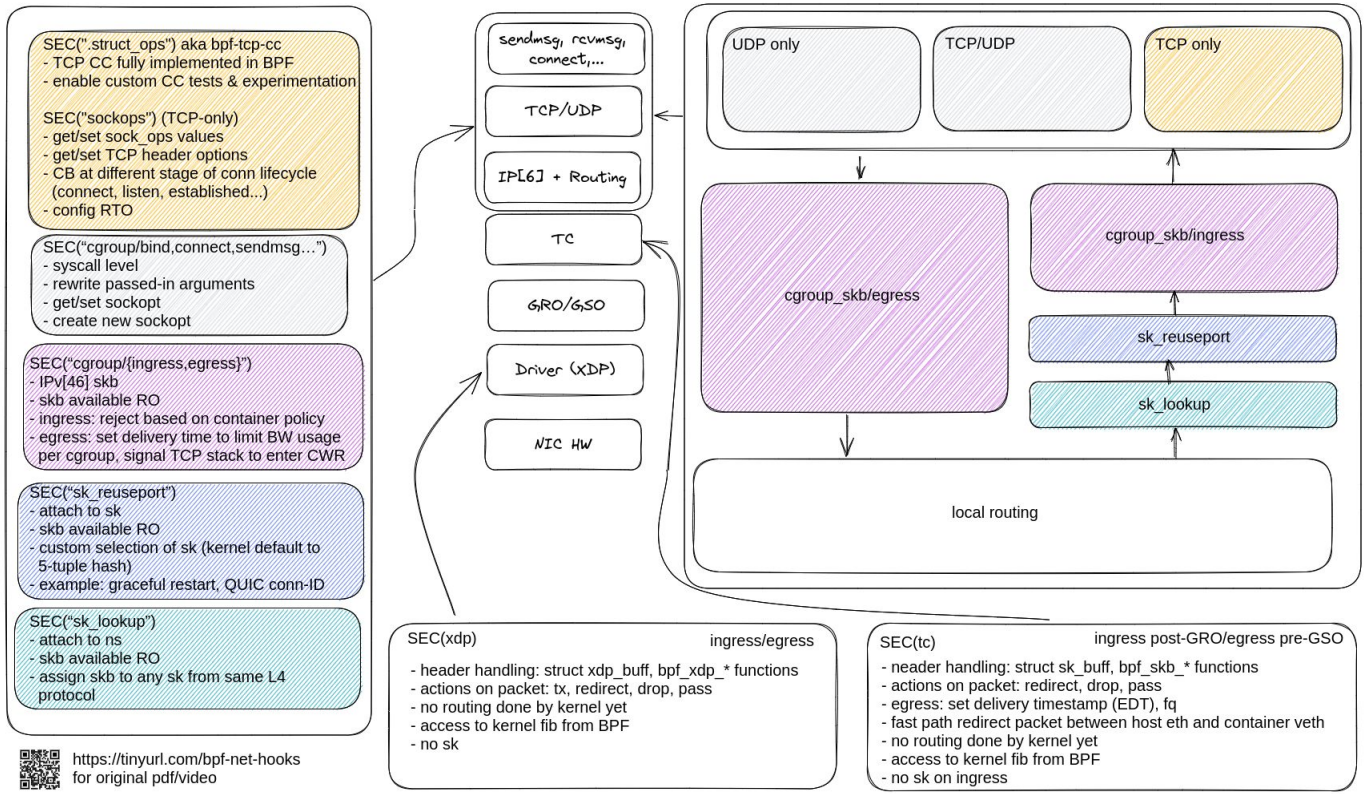
What is BPF?

An instruction set and runtime environment that allows programs to run safely and efficiently in the operating system kernel.

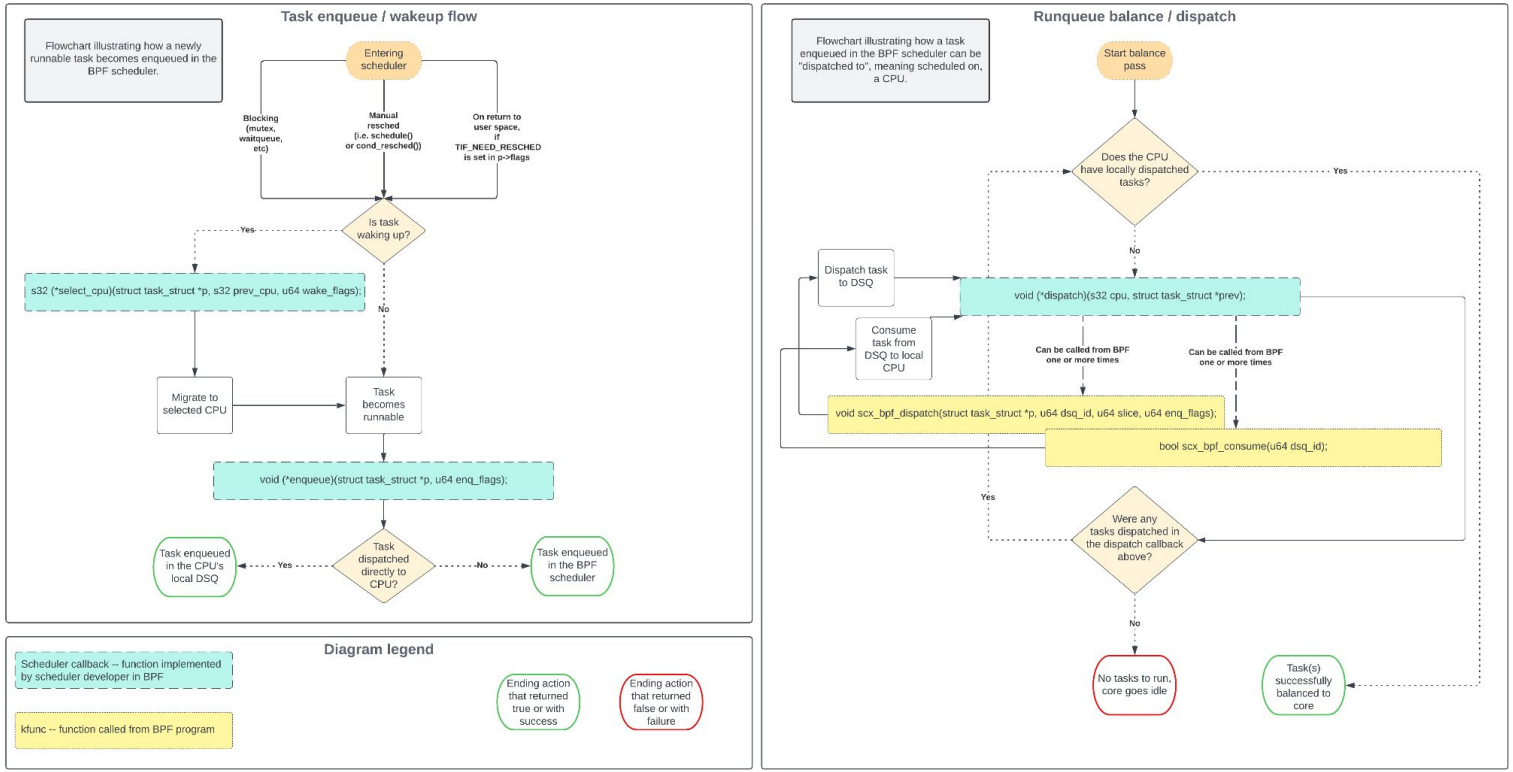
Comprised of:

- An Instruction Set Architecture (ISA)
- A verifier, which ensures programs are safe to run in the kernel
- An interpreter or a JIT, which translates BPF Byte Code instructions into native instructions
- Much, much more!

BPF networking capabilities



BPF scheduling



IETF 116 hackathon accomplishments

- Goal was to learn about BPF
  - Attendees did a self guided lab at: https://ebpf.io/get-started/
  - Also built and played with sched_ext: a new scheduling framework that allows building system-wide scheduling policies in BPF

- Landed several patches in the upstream Linux kernel, which update documentation relevant to BPF standardization

- Met with folks building PDM (Performance Diagnostic Metrics)
  - Helping them use modern BPF features