

Steve T.

# eBPF

## for Developers

From Kernel Internals to Production Systems —  
A Complete Guide with Working Code



```
xdp_pass
bpf_trace_printk("Hello eBPF!\n");
LSEC("kprobe/do_sys_open"),
bpf_get_current_pid();
```

Networking • Tracing & Profiling • Security • Kubernetes

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# From Kernel Internals to Production Systems – A Complete Guide with Working Code

**About this book:** eBPF is the most transformative technology in modern systems programming. It lets you run safe, high-performance programs inside the Linux kernel without modifying kernel source or loading kernel modules. This book takes you from zero eBPF experience to production-ready expertise through a progressive series of complete, working code examples. You will learn the architecture (verifier, maps, helpers, BTF), the toolchain (libbpf, CO-RE, bpftool), and real-world applications across networking (XDP, TC), tracing (kprobes, uprobes, tracepoints, fentry/fexit), security (LSM), performance profiling, container observability, and Kubernetes integration. Every concept is demonstrated with end-to-end source code you can compile and run yourself.

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# Conclusion: The Programmable Kernel Era

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# Appendix A: Exercise Solutions

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