Flock Networks Ltd

Established 2019

Our modular IP Routing Suite source code allows manufacturers to quickly produce and sell the next generation of internet network devices.

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Flock Networks History

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- Founded in 2019 to create a next generation IP routing suite with unrivalled security, stability and performance.
- In 2020 the Flock Internet Routing Engine (FIRE) source code is licenced by Graphiant (a next generation SD-WAN startup).
- By 2021 a small team of Graphiant employees have used FIRE to create, sell and deploy thousands of devices throughout the world.
- Devices range from very low end CPE’s to controllers with 128 CPU cores.
- In 2026 the FIRE source code will be available to be licenced by any vendor.

Current Generation

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- Current IP network devices have a long Time to Market. They are built using ancient control plane technology making them hard to create, hard to test and hard to reach production quality.
- Once deployed these devices are difficult to update and painful to operate and monitor.
- End customers, vendor tech support and engineers are fed up with IP network devices “randomly” crashing and having to patch never ending security issues.

Next Generation

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- The Flock Internet Routing Engine (FIRE) is modular. Just take the components you need.
- FIRE is platform agnostic. Its generic API can easily be integrated into any hosting platform (Linux, BSD, SONiC, Redox, VM or Container on x86, ARM or RISC-V).
- The FIRE protocol implementations are complete and production battle tested. 1000's of integration tests are run before any code is changed.
- 1000's of devices have been in production for 4 years. FIRE has never crashed. FIRE has never even had a memory leak.

FIRE internals

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- The Flock Internet Routing Engine (FIRE) is solely written in the Rust language. Around 400k lines of production code and 600k of test code.
- Rust code has been shown to reduce the most serious security issues. Google saw a 1000x reduction in Android when switching to Rust code.
- FIRE achieves linear scalability vs CPU cores by extensive use of multi-threading. FIRE code is lock free, FIRE cannot deadlock.
- FIRE can use all 3rd party Rust libraries to quickly support any configuration, operational or dataplane API e.g. gRPC, Netconf, YANG, REST, netlink, FPM (SONiC)

More information

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