

**Reed Morrison**  
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## LINKS

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**Website:** <https://tinselcity.github.io>  
**GitHub:** <https://github.com/tinselcity>  
**LinkedIn:** <https://www.linkedin.com/in/reed-morrison>  
**Twitter:** <https://www.twitter.com/tinselcity1>

## STATEMENT

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Software engineer with experience in the development of mesh VPNs, web servers, and cloud based security applications (WAF, bot mitigation, rate-limiting). Lead teams, and created several successful product lines at a reasonably large scale (in number of customers and traffic). Interested in peer to peer networking, web servers, and web application security.

**Education:** B.S. Electrical and Computer Engineering (University of California Davis)

**Clearance:** Top Secret (Active)

## EXPERIENCE WITH

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### Software Development:

- Topics: Clients/Servers, Internet Protocols, (HTTP/H2, TLS, UDP, TCP, IP, gRPC), VPN's (IPSec), WAF's
- Languages: C, C++, Rust, Golang, Python, Bash
- OS/Environments: Linux (NixOS, RHEL, Ubuntu), K8s (RKE2), Docker

## PROFESSIONAL EXPERIENCE

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**Software Engineer** Anduril, Costa Mesa, CA  
(June 2023 -Present)

L3 mesh IPSec VPN development for drones/towers/cloud environments.  
Asset local network configuration services including radio integrations.

**Senior Principal Software Engineer** (CDN) Edgio, Playa Vista, CA  
(September 2019 - December 2022)

Edge front-end server development, including: L7 load balancing, consistent hashing/cache key generation with scaling for popular content, secure highly multi-tenant TLS termination (client to edge).  
Developed concepts for customer configurations with support for self-service and faster edge distribution.

**Security Core Development Lead** (CDN) Edgio, Playa Vista, CA  
(August 2016 - September 2019)

Lead security application development for a large global CDN with thousands of customers. Product lines included: WAF, L7 rate-limiting, and basic bot mitigation. Developed multi-tenant ModSecurity conformant WAF allowing for improved performance, and scale. Conducted code reviews, audits, and large-ish refactors of several internal and external team projects.

**Senior Software Engineer** (CDN) Edgio, Santa Monica, CA  
(August 2013 - August 2016)

**WAF and Rate-Limiting back office**

Designed and developed the security product back-office supporting the WAF and L7 rate-limiting products, including: configuration API's, fast global config distribution, logging pipelines, and an HA data cluster with customer facing dashboard API's.

**Edge to Origin TLS configuration**

Developed customer "Edge to Origin" TLS configuration including, hostname validation, cipher specifications, and certificate pinning.

**Software Engineer** CounterTack (Endpoint Security), Santa Monica, CA  
(April 2011 - July 2013)

**VM Introspection Solution**

Improved performance and reliability of existing forensics collection/analysis projects. Developed interprocess elastic buffer library with test harness. Removed analysis SW bottlenecks identified via performance profiling. Developed automated testing suite to spin-up/attack VMs, and to verify correctness of forensics results. Optimized VM system collection stack increasing data throughput, and VM performance.

**Embedded Software Engineer** Northrop Grumman Space Technology, Redondo Beach, CA  
(August 2007 - March 2011)

**Satellite - Communications System Payload Firmware:**

Lead firmware developer for command and data handling computer. Firmware bootstrapped flight SBC, including run-time initialization, bridge configuration, and ground command-able loading/patching of the flight application. Created requirements, design, and test documentation. Developed suite of SW utilities to facilitate firmware SW unit testing, including an EEPROM file system layout tool, and a diagnostic serial shell supporting program loads/memory dumps/EEPROM burns.

**Satellite -Control System Payload SW Verification:**

Led flight SW verification effort including development of test requirements, test-set HW/SW, and verification SW. Verified HW and SW aspects of the target against program requirements. Notable features of the test-set included: JTAG/Serial/1553 I/O, a scriptable remote controlled interface for full-scale remote automation, database uploads, and test vector integration for comparing simulated control laws to actuals running on the target.

**Electrical Engineer** ATK Space and Sensors, Torrance, CA  
(July 2001 - April 2007)

**Laser Radar System:**

Developed laser radar data acquisition/processing server application for multi-CPU single board computers. Demanding real-time performance requirements were met by: vectorizing radar algorithms, distributing workload over many CPUs, and optimizing corner turns per cache size. Developed multi-processor notification/communication driver.