

Andrew Rodland

Principal Engineer | Distributed Systems & Infrastructure

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Summary

Polyglot software engineer with 20+ years of experience building high-traffic distributed systems. Deep expertise in cloud-native infrastructure, video streaming platforms, and backend services. Proven track record of leading technical initiatives from concept to production.

Core Expertise

Primary: Go, Distributed Systems, Kubernetes, Cloud Infrastructure

Languages: Go, Python, C, Shell, JavaScript, Perl

Infrastructure: Kubernetes, Docker, Linux, HAProxy, Prometheus, GCP, AWS

Data Systems: PostgreSQL, MySQL, Spanner, ClickHouse, Redis

Protocols & Frameworks: gRPC, REST, DASH/HLS, RTMP

Professional Experience

Vimeo, Inc.

Principal Engineer, Core Services | *March 2021 – September 2025*

Principal Engineer, Video Systems | *February 2018 – February 2021*

Lead Engineer, Live Video Platform | *October 2018 – September 2019*

Senior Backend Engineer, Video Systems | *March 2015 – January 2018*

Architected and maintained large-scale infrastructure for video upload, transcoding, and streaming serving millions of users. Key contributions:

- Led operational architecture of Vimeo's adaptive streaming packager (DASH/HLS), enabling seamless multi-bitrate video delivery
- Designed and implemented novel load-balancing algorithm in HAProxy, significantly improving CDN scalability and reducing hotspots
- Core contributor to Vimeo Live platform, building real-time video ingestion and distribution systems
- Overhauled the queue management system driving Falkor, Vimeo's distributed transcoding system, improving efficiency and allowing it to serve 100% traffic
- Championed observability practices using Prometheus and distributed profiling to improve service reliability

Technologies: Go, Kubernetes, Docker, HAProxy, gRPC, Spanner, ClickHouse, ffmpeg, DASH/HLS, Prometheus

Shutterstock, Inc.

Principal Engineer, Customer Experience | *October 2014 – February 2015*

Technical Lead, Customer Experience | *October 2011 – October 2014*

Developer, Large Accounts | *April 2011 – October 2011*

Led technical direction for customer-facing systems serving millions of daily users. Built scalable web applications and services across the full stack.

- Led team through rapid scaling phase, maintaining system reliability while expanding features
- Drove architecture transition to microservices, improving system modularity and team velocity
- Spearheaded content discovery improvements resulting in measurable increases in user engagement
- Developed internal tooling for A/B testing, user analytics, and deployment automation

Technologies: Perl, Mason, Node.js, MySQL, Redis, Hadoop, Solr, StatsD, MogileFS

PlatinumTel Communications

Developer & Systems Administrator | *2006-2011*

Full-stack development, Linux systems administration, and telephony infrastructure (Asterisk/SIP).

Publications & Speaking

Development of an Open-Source IRI-based Nowcasting Tool | COSPAR Scientific Assembly, Athens (2022)

HAProxy Load Balancing at Vimeo | HAProxyConf, Amsterdam (2019)

Load Balancing, Consistent Hashing, and Locality | Velocity NY (2017)

Improving Load Balancing with a New Consistent Hashing Algorithm | Vimeo Engineering Blog (2016)

Cited in "Consistent Hashing with Bounded Loads" (Mirrokni, Thorup, Zadimoghaddam 2017)

Episode 321: Marpa | FLOSS Weekly (2015)

Open Source & Recognition

- Active contributor to numerous open-source projects
- Maintainer of several widely-used Perl libraries including `Crypt::PBKDF2`, `Digest::HMAC`, `CLI::Osprey`, and `Test::Exit`
- Co-inventor on two image search patents
- Technical contributor to *The Definitive Guide to Catalyst* and *Effective Perl Programming* 2/e
- Amateur Extra radio operator maintaining ML-based ionospheric propagation prediction tools, and a suite of software for using the FlexRadio software-defined radio transceivers with Linux