

Erik Ziegenbalg

COMPUTER SCIENTIST

CONTACT

✉ erik@ezthinking.org

📍 San Francisco, CA

🐙 github.com/ziegenbalg

EDUCATION

Computer Science

University of California,
Santa Cruz

2010 - 2014

SKILLS

// Programming Languages

- C [packet programming, forwarding planes]
- Rust [axum, tokio, serde, rayon, crossbeam]
- Python/Perl/Bash/GO

// Operating Systems & Architectures

- Linux
- Fuchsia
- X86 / ARM

// Data Processing

- Intel SPDK
- HP DAOS

// AI, LLM & Foundation Models

- Claude API / Anthropic SDK
- Agentic workflows & MCP
- RAG & retrieval pipelines
- LLM application architecture
- Prompt engineering & evals

// Machine Learning

- PyTorch & TensorFlow
- CNN/RNN/PPO architectures
- End-to-end ML pipelines

PROFILE

Systems engineer with 10+ years building distributed infrastructure, from network operating systems at AT&T/Brocade to AI-powered platforms. I specialize in taking ambiguous technical problems in complex environments and making them tractable—bridging the gap between what teams say they need and what they actually need. Currently focused on foundation model integration, agentic development workflows, evaluation frameworks, and production AI systems.

WORK EXPERIENCE

Linux Operating System Service Owner (Contract)

Johnson & Johnson | 2024 - 2025

- **Owned the Ubuntu-based Linux platform-as-a-service** end-to-end for J&J's Manufacturing Labs & Logistics division — reporting to three senior directors and directing a tiered L1–L3 technical support organization across global manufacturing sites
- **Defined product vision and multi-year roadmap** for the standardized OS platform, translating business, operational, and regulatory needs into prioritized capabilities while balancing reliability, security, cost efficiency, and GxP / 21 CFR Part 11 compliance
- **Led technical discovery and architecture design** across stakeholder groups from initial evaluation through production deployment, authoring executive roadmaps alongside engineering implementation guides for GxP-compliant environments
- **Designed cloud-integrated deployment architecture** supporting Ottawa and Monarch robotic medical systems with 25% reduction in technical downtime
- **Directed cross-functional delivery** across DevSecOps, IT, manufacturing engineering, and L1–L3 support — shipping the unified platform with a 90% reduction in deployment overhead
- **Pioneered the AI-enabled Linux image build pipeline** — an LLM-driven, RAG-backed recipe-to-ISO workflow that retrieves from a curated corpus of approved configurations and benchmarks, composes new images on natural-language intent, and runs automated GxP verification
- **Architected ServiceNow enterprise integration** connecting the Linux OS deployment lifecycle to J&J's change management, CMDB, GRC, and Incident Management modules — with OAuth 2.0 Client Credentials, bidirectional webhook sync for CR approval gating, and drift-to-priority mapping (P1–P4) supporting 21 CFR Part 11 auditability

Senior Software Engineer

ViaSat | 2022 – 2024

- **Built and operated containerized networking-configuration services** on a major cloud platform — lightweight microservices architected for enterprise scale, with production-grade reliability and CI/CD-driven rollouts

Erik Ziegenbalg

SKILLS

// Cloud & Networking

- AWS (EKS, Lambda, DynamoDB, SQS, Terraform)
- AWS App Runner, VPC, Site-to-Site VPN
- Azure, GCP
- Kubernetes, Docker, Containerization
- Microservices, REST APIs, event streaming (Kafka)
- Observability (Prometheus, Grafana, OTel, DataDog)
- PKI's, L2/L3 VPN's, BGP, IPSEC
- Intel DPDK, Linux cgroups
- 5G/LTE/RF, Delay Tolerant Networks

// Config Systems

- Vyatta's in house golang/dbus component interface VCI (Yang based)
- Shift Left, Simulation/Test Driven Development

WORK EXPERIENCE (CONTINUED)

Sr. Member of Technical Staff

AT&T | 2017 – 2022

- **Fixed network authentication bottlenecks** by engineering PPPoE and OCSP+stapling data plane acceleration modules using Intel DPDK, and achieved improved packet processing performance
- **Fixed lack of standardized configuration models** by developing RFC7950 YANG-based data models for critical system utilities (RAID and Disk Encryption), and achieved consistent system management interfaces
- **Fixed service integration challenges** by architecting standalone system services using Vyatta's proprietary component interface (VCI), and achieved seamless dbus communication across golang, Python, and C++ components
- **Fixed corporate transition complexities** by managing technical responsibilities during Brocade to AT&T acquisition, and achieved continuity of network OS development initiatives

Sr. Software Engineer

Brocade Communications Systems | 2014 – 2017

- **Fixed network performance limitations** by engineering BPF packet load balancing and filtering solutions, achieving optimized traffic distribution across forwarding planes
- **Fixed legacy networking constraints** by implementing SDN networks, DMVPN, and MPLS switched distributed forwarding planes, achieving modern scalable network infrastructure
- **Fixed system integration gaps** by developing gnlubb NSS extensions and Linux OS integration layers, achieving seamless Network OS functionality
- **Fixed build process inefficiencies** by implementing cutting-edge build systems, achieving streamlined development and deployment workflows

REFERENCES

Jim Gosnell

VP of Programs
ViaSat

Rob Smets

MLL Workstation Service Owner
Johnson & Johnson
E: rob.smets@telnet.be

Tony Malott

Global Service Owner
Johnson & Johnson
E: tmalott@its.jnj.com

Dan Winterburn

Lead DevSecOps Engineer
Johnson & Johnson
E: dan.winterburn@gmail.com