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OVERVIEW

I am a zealous and proactive Systems Engineer with a background in DevOps culture and systems programming. I have hands-on experience working with cloud-native applications and developing CI/CD pipelines. Interested in programming language design, compilers, constrained and embedded environments, and operating systems.

SKILLS

- Fluent in C, C++, and Rust for wide variety of use cases.
- Fluent in DTrace for the dynamic instrumentation of production systems.
- Have a deep understanding of UNIX operating systems design and internals.
- Deeply experienced with TCP/IP and protocols such as SSH, DNS, DHCP, UUCP, and IRC.
- Fluent in POSIX shell scripting and several domain-specific languages like AWK and SQL.
- Experienced with several languages including Forth, Lua, Oberon, LISP, and Swift.
- Hands-on experience developing and enhancing CI/CD pipelines.
- Fluent in \LaTeX for day-to-day technical and scientific documents.
- Have a good understanding of Agile development methodologies.

PROFESSIONAL HISTORY

illuria Security, Inc.
Systems Engineer

open source contributor & outside collaborator
Jan. 2022 - Present

- Co-leading the infrastructure and release-engineering team.
- Maintainer of illuria's open source projects and upstream FreeBSD ports.
- Developing a FreeBSD jails orchestrator (soon will it be released as an open-source project.)
- Refactored an internally developed FreeBSD jails manager, improved its exception handling, and wrote integration tests.
- Developing a back-end application to facilitate builds and management of FreeBSD jails through an HTTP API.
- Responsible for the dynamic instrumentation of production systems with DTrace, for monitoring and troubleshooting both kernel and application problems. Moreover, developed various DTrace scripts to gather unprovided information from protocols and services in use, including but not limited to FreeBSD jails, SSH, MySQL, PostgreSQL, and xrdp.
- Worked on the FreeBSD jail subsystem and fixed a bug in jail's rc.d script (not yet pushed to the upstream.)

Khallagh Borhan, Inc.
Software Engineer

full-time
Mar. 2021 - May. 2021

- Returned to Research & Development team, successfully delivering a new DDoS Protection system.
- Delivered a high-available Network Anomaly Detection platform with a highly-constrained budget.
- Leveraged BSD sockets, Berkeley-Packet Filter, Netmap for high-efficiency, ioctl operations to control the behaviour of the packet filter, and SQLite API.

Lead DevOps Engineer

Apr. 2019 - Feb. 2020

- Led the engineering team, architected and delivered regional Kubernetes clusters.
- Provided training to engineering teams on the use of containers, the Git Version Control System, and Continuous Integration, Delivery, and Deployment pipelines.
- Automated build process and sped up deployments by 80% by implementing Continuous Tests and leveraging CI/CD pipelines.
- Provided training to NOC personnel on understanding metrics and maintaining the platform.
- Developed an agentless cluster provisioner and manager to facilitate the scaling and maintenance procedures.

DevOps Engineer

Sep. 2016 - Dec. 2018

- Rearchitected the infrastructure of a multimedia streaming platform and improved the overall performance by 80% and achieved 99.9% uptime.
- Detected improper reference model in the application and reduced memory usage by 75% after resolving memory leaks.
- Increased delivery velocity by 70% and removed bureaucratic interruptions by introducing Continuous Tests and building a sustainable agile culture.
- Got promoted thrice and worked on 4 different projects.
- Designed and set up monitoring and alerting systems for NOC.

Bidopin

full-time

DevOps Engineer

Dec. 2017 - Mar. 2019

- Helped the engineering department to bounce back from a pivotal setback caused by the lack of a trusted DevOps culture and Business-IT alignment.
- Built a rational roadmap and bridged the gap between IT and business decision-makers by defining mutual objectives and reforming expectations.
- Provided training to engineering teams on understanding Git workflows and making the most of Version Control Systems.
- Defined release, change, versioning, and upgrade policies.
- Architected an infrastructure to ensure high availability.
- Consolidated database and reduced costs by 70%.

Volunteer Work

- Contribute to the *FreeBSD Project* since 2019 (src, ports, and docs.)
- Organised *Iran BSD User Group (IRBUG)* from *April 2019* to *January 2021*. Used to run workshops and hold monthly meetings to gather around and share knowledge.
- Translated *HTTP3-Explained* from English into Persian.