COLIN SHEA

A Programmer, Sysadmin, and DevOps Expert

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⚙ Technical Skills

Mastery of: **Linux**, **Ruby**, **PostgreSQL**, **Kubernetes**, **Ansible**, **Python**, **TLS/SSL**, **git**, **CI/CD**, **IaC**, **AWS**, **JavaScript & TypeScript**, **Docker**

Proficient at: MySQL, HTML, SQL Server, Redis, SaltStack, Puppet, Go, PowerShell, Azure, PHP

Knowledge of: VMWare, Rust, MongoDB, OCaml, ReasonML, Elixir, C#, Rust, Java, ELK Stack, Chef

🔗 Links

Website - https://nogweii.net

Projects - https://code.nogweii.net/nogweii

Mastodon - https://social.aether.earth/@nogweii

☑ Experience

Paypal - https://www.paypal.com/

Feb 2025 - Present

Sr Software Engineer
- Engineered robust backend APIs using Go, enhancing system performance and maintainability.
- Developed comprehensive Python automation to discover, organize, and manage thousands of digital certificates, significantly improving security compliance and operational efficiency.
- Implemented rigorous infrastructure validation by setting up Terraform testing frameworks using Terratest and Go, ensuring reliability and stability of cloud deployments.

Qwick, Inc. - https://qwick.com/

Jun 2022 - Aug 2024

Staff DevOps Engineer
Leveling up the organization's DevOps chops as they were all developers without the appropriate specialized skillset. Instituted a number of reforms to allow for automated management with significant improvements to security.

- Rebuilt production with zero downtime from manually created Kubernetes 1.18 deployment to EKS 1.24 with Terraform to ensure we're not on unsupported versions.
- Upgraded the database clusters from PostgreSQL 11 to 15 in RDS resulting in huge performance improvements and switching from internet access to requiring a VPN.
- Spearheaded multiple penetration tests leading to many patches and fostering a culture of security awareness.
- Created and lead the Open Source Office and Compliance program.
- Authored dozens of documents, allowing colleagues to grok the network and improving resolution speed during incidents.

[Get Together, Inc. - https://www.irl.com/](https://www.irl.com/)

Nov 2021 - May 2022

Senior DevOps Engineer

Owned the developer experience tools that developers interacted with. Furthering automation to allow my team to focus on projects rather than ad-hoc requests.

- Managed servers in AWS to power an ECS (Elastic Container Service) cluster.
- Automated infrastructure with CloudFormation with an eye towards a Terraform replacement.
- Supported a PHP application powered by MySQL and Redis.
- Managed a fleet of build servers for running CI in Buildkite.
- Integrated a ChatOps approach to connect Github and Slack with a Python chatbot.

[StrongMind - https://www.strongmind.com/](https://www.strongmind.com/)

Nov 2017 - Jul 2021

DevOps Engineer III

Responsible for introducing various DevOps inspired practices and mentalities to the entire organization, along with migrating physical compute loads to the cloud. A heterogeneous network of Ubuntu and Windows across a broad hybrid cloud of VMWare, Microsoft Azure, Amazon AWS, and Google Cloud Platform deployments.

- Introduced and taught Confirmation Management and Infrastructure as Code concepts to automate every team's operations.
- Lead development of a full observability stack with centralized logging, unified metrics, and distributed tracing.
- Developed internal tooling with Go, Ruby and Python to bridge various external APIs and glue internal microservices together.
- Lead developer on a complete company-wide architectural overhaul to event-driven paradigms.
- Lead multiple teams, training people with no prior experience to mid-level developers.
- Contributed to the company's applications in Ruby, Python, C#, and TypeScript

Really Simple, Inc

Nov 2016 - May 2017

Senior System Administrator

Automation for an AWS based infrastructure with heavy integration of RedHat management technologies, supporting a hybrid Spring Boot, Tomcat and node.js platform.

- Ansible used to provision, deploy, and configure every server, and every service.
- Built automation to create clones of production for clients and contractors.
- Managed security policies and handled incoming reports.
- Deployed Prometheus for monitoring, Logstash for centralized logging, LYNIS and OpenSCAP for auditing, Spacewalk for patch management, FreeIPA for AAA
- Developed internal tooling with Go, Ruby and Python to automate deployment and management
- Used Docker to create reusable containers across production and testing environments
- Jenkins used for continuous integration of Java, Node.js and Ansible code. Continuous deployment via RPM packages.

Internet Security Research Group - https://letsencrypt.org

System Administrator

Deployment and management of Let's Encrypt - https://letsencrypt.org in a highly secure environment to create the first truly open CA. Part of the team shepherding it from closed beta to general access.

- Created policies to use public cloud infrastructure alongside the existing secure datacenters.
- Worked with auditors and root trust programs to create and operate a high trust network.
- Developed custom saltstack formulas for a variety of standard management tools within the high trust network.
- Worked with the developers of boulder - https://github.com/letsencrypt/boulder in Go and certbot - https://certbot.eff.org/ in Python to help automate the creation of over 5 million TLS certificates, creating one of the largest certificate authorities in the world
- Continuous integration of application code using Travis CI with continuous deployment via RPM packages.

The Evogi Group

Sep 2013 - Jun 2015

Lead System Administrator

Configuration, monitoring, and deployment of 1,000+ Ubuntu and CentOS servers in AWS running Ruby on Rails, Java, Erlang and Go applications.

- Developed custom internal applications for the operations and development teams, in Ruby, Go, and Java
- Transitioned from a monolithic server architecture to a multi-tiered architecture using Amazon VPC
- Revamped the authentication and structure for the internal admin panel of the Rails code base
- Modernized configuration management and deployment using Chef 12 and Amazon EC2 Autoscaling
- Deployed applications to Heroku, Elastic Beanstalk, and other PaaS services
- Set up Nagios, Icinga, Shiken and ELK stacks to monitor components of the network
- Helped administrate multiple MySQL databases with terabytes of data
- Maintained patches against upstream gems and cookbooks to use internally developed libraries
- Set up TeamCity for continuous integration with Rails initiated by Github webhooks

Cummings Engineering Consultants

Jan 2012 - Apr 2013

System Administrator

Configuration, monitoring, and deployment of servers across the world in a hybrid cloud running Java applications.

- Developed and deployed custom internal applications in Java and Ruby
- Migrated servers from manual setup to configuration management using Puppet
- Developed policies to secure our servers to our client's (NSA) standards
- Located and decided on international targets across all continents to expand the network to fulfill ultra-low latency demands
- Managed the internal git, Gerrit code review, NAS, and Jenkins CI servers
- Managed PostgreSQL, MySQL and MongoDB databases in high security networks
- Ran the test suite for both Java and Puppet code in Jenkins with Gerrit hooks

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✅ Certifications

SaltStack Certified Engineer
Apr 2016 - Jun 2023
SaltStack, Inc

Linux+
Apr 2010 - Present
CompTIA

A+ (IT Technician)
Jun 2009 - Present
CompTIA

Security+
Apr 2010 - Present
CompTIA

Network+
Oct 2009 - Present
CompTIA

Education

University of Advancing Technology - https://www.uat.edu

2010 - 2013

Tempe, Arizona USA

Triple Major: Open Source Technologies, Network Security & Network Engineering

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Colin Shea — colin@shea.at — References available upon request.