

Jonathan Dieter

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Experienced infrastructure manager with a proven record in using the latest in open source technology to automate IT infrastructure administration and improve development processes

Professional Experience

Spearline

Head of Software Services

Skibbereen, Ireland

Jan 2020 – Present

- **Build and manage the IT infrastructure team** that develops, maintains, and monitors the company's services and infrastructure.
- **Manage AWS infrastructure and billing**, ensuring efficient resource usage and using savings plans and spot instances to reduce costs.
- **Implement best practices around the company development process**, using containerization to create auditable and reproducible builds while also improving the CI/CD pipeline to reduce developer toil.
- **Oversee infrastructure security**, making sure vulnerabilities are detected and patched quickly, setting up automated container and dependency vulnerability scanning, and setting up simulations to prepare the team to respond to security incidents.
- **Automate deployment of company infrastructure** using Ansible, reducing the amount of work required in setting up and maintaining our infrastructure by roughly 20 times.
- **Create and implement a plan to upgrade database structure with no downtime**. This involves a transition from a single over-normalized database (multiple tables with the same primary key) to a clustered CockroachDB database with a normalized schema, using scripts to ensure that changes to the old database are continually converted to the upgraded structure on the new database.
- **Design and build a REST API** for internal and external use with the new database structure, allowing us to standardize access to our data and implement security controls. Development on the API is done using our CI/CD pipeline, and changes require tests that cover 100% of the code.
- **Designed a new ostree-based operating system** for use on our servers around the world, allowing us to do image based updates and separating responsibility for the operating system from service management.
- **Oversaw the expansion of our global server infrastructure** as it more than doubled, while managing upgrades of our older servers from an end-of-life operating system to our new ostree-based operating system.
- **Designed and deployed a VPN to multiple global regions** to secure our global server infrastructure. The VPN was built using the Wireguard protocol, with automatic failover using AWS Global Accelerator, where clients automatically connect to the closest VPN server.

Sangoma
Software Engineer (Cloud Development Team)

Remote
May 2019 – Dec 2019

- **Upgraded customer cloud deployments** of the Switchvox telephony appliance to a new version with a different CPU architecture, and helped maintain the customer-facing portal for purchasing new Switchvox cloud deployments.

Spearline
NOC Engineer

Skibbereen, Ireland
Nov 2018 – Apr 2019

- **Designed and built an automated CI/CD development pipeline** in the cloud to facilitate the company's transition from manual error-prone production deployments to automated production deployments that occur multiple times a day
- **Containerized customer facing web applications** for easier testing and deployment.
- **Deployed an Amazon ECS cluster** to increase uptime of customer facing web applications, making them highly available.

Lebanon Evangelical School
Senior Systems Administrator

Loueizeh, Beirut, Lebanon
Sept 2004 – July 2018

- **Led a small team** of three other system administrators, eventually training one to be my replacement.
- **Set up a LizardFS distributed filesystem** to store data for users logging into our system.
- **Created a custom OpenWRT firmware** for our consumer-grade wireless access points that configure the access point and gracefully handle network disconnections, and then split the network into separate VLANs.
- **Created and maintained a web-based grading system** accessible by students, staff and parents, complete with an internal mirror kept up-to-date using MySQL replication.
- **Automated notifications of outages** and sub-optimal service performance.

Other Experience

Fedora Project
Packager (Volunteer)

April 2007 – Present

- **Created and packaged zchunk**, a compression format designed to have highly efficient deltas. Fedora uses zchunk to reduce the amount of metadata that users download when checking for package updates.

Primary programming languages

- Python
- C
- Bash

Upstream work

Had PRs merged into the following projects:

- Linux kernel (USB/IP userspace)
- oVirt
- Ceph
- iPXE
- rpm-ostree
- podman
- redis-py

GitHub profile

- <https://github.com/jdieter>