

## Summary

- Strong Linux & networking background
- Strong Python and Bash knowledge
- Experience supporting a wide range of languages
- Experience with both operating in a team, and self-directed
- A sysadmin who subscribes to the DevOps philosophy

## Professional Experience

### May 2014 - Present

### Systems Administrator - Osper

Osper is a pre-paid debit card for ages 8 to 18 with an accompanying mobile app for both parents and children. It allows real time tracking of young people's spending, and aims to help them become more financially responsible. We have shipped hundreds of thousands of cards to families throughout the UK and have a very active userbase.

Osper hired me at an early stage - I was the 2nd full-time engineer - so I had the opportunity to design and build the majority of its network and infrastructure. Joining a small team means I've also frequently helped out with development work on our various Python back-end systems as well. Most notably our real-time Mastercard authorisation loop for approving and denying transactions.

### Key projects

- Infrastructure as Code, ensuring everything in our AWS account is easily reproduced. Originally CloudFormation, now migrating to Terraform.
- Implementation and migration to Docker-based build and deployment (ECS) system. Careful structuring of our Dockerfiles also brought our build times down with help from the docker cache and ECS gave us a zero-downtime deployment method.
- Centralised logging, originally with the ELK stack, recently removed Logstash to be replaced by CloudWatch Logs for large cost saving.
- Monitoring and alerting of application errors with CloudWatch Log metrics

### Technologies and responsibilities

- |   |  |
|---|--|
| • Familiarity with most AWS services (e.g. S3, SQS, SES, Kinesis, Redshift ... etc) | • Docker & AWS ECS                                   |
| • AWS VPC   | • Terraform & Packer                                 |
| • Minor office network  | • Cloudformation                                     |
| • OpenVPN   | • Elasticsearch (both self-hosted and using AWS ESS) |
| • Debian  | • Logstash   |
| • Jenkins   | • CloudWatch Logs                                    |
| • Nginx   | • Kibana   |
| • Python / Bash   | • AWS RDS / Postgresql                               |
|   | • Puppet   |

- OpenLDAP
- New Relic

## **Mar 2011 - May 2014**

## **Systems Administrator - Mendeley Ltd**

Mendeley is a platform for researchers to share and store their research data, and manage their library of papers. It consists of a desktop application for managing research papers, references and other data, a cloud service for synchronising your library across computers, and an web search engine for all the published documents users had uploaded.

When I joined Mendeley it consisted of a PHP backend and a hodgepodge of “big data” (Hadoop, Hive, HDFS, HBase) and key-value stores (MongoDB, Voldemort) as well as more traditional relational databases (MySQL). I worked in a team of three to homogenise and automate our infrastructure.

### Key projects

- Took ownership of our network and datacentres, automating provisioning of new hardware via PXE & puppet.
- Rebuild of entire network, datacentre and office. Designed a fully redundant network using HA Cisco routers and firewalls.
- Replaced the PHP application’s “git pull on the server” deployment method with a Debian package system
- Worked with our newly-forming “platform team” to deploy their small self-contained Java applications to EC2 (we hadn’t heard the term “microservice” yet)

Mendeley was acquired by publishing giant Elsevier in April 2013. Part of my responsibilities during my final year at the company included aiding the transition and eventual absorption of our networks and systems into Elsevier’s.

### Technologies and responsibilities

- Puppet
- Ruby
- Supporting PHP backend
- Supporting Java microservices
- Design and maintenance of datacentre and office networks
- Cisco Catalyst / ASA
- AWS Direct Connect
- DNS (bind & Route53)
- Hadoop / HDFS / HBase (passing involvement)
- AWS EMR
- MongoDB
- MySQL / InnoDB / Replication
- Debian
- Nginx / apache / varnish
- Nagios / New Relic

**Jun 2008 - Mar 2011**

**Systems Administrator - Serendipity Interactive**

Serendipity was a SaaS company providing email and web filtering products for government and organisations, and an event ticketing product aimed at racecourses. I originally joined as a support agent, but was given additional responsibilities when I started automating things. Eventually I led a project to replace our aging windows-based and IBM-licensed email filter product with an open-source solution built in-house on top of spamassassin.

I helped run the NOC for our largest customer, the North Yorkshire County Council school authority. It included an MPLS ring to which 400 schools were connected and a central datacentre hosting our email servers and web proxies, and traffic shaping.

My experiences here gave me a good grounding in Linux fundamentals, and my first understandings of some of the lower-level network protocols.

Technologies and responsibilities

- Ruby
- Perl
- PHP
- Spamassassin / Postfix
- MySQL
- Debian
- Nagios
- VMWare ESX