

Jeff Stafford

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I started my career in neuroscience troubleshooting actual bugs – I find fixing software bugs is easy by comparison. I have over eight years of devops experience with Canada’s most successful tech startups, hospitals, and particle physics facilities. I’ve also worked as a scientist in bioinformatics, and dabble with software projects in my spare time ([example Golang project with over 1.5 thousand stars on Github](#)). I’ve also got solid people skills – I’ve taught at universities, trained and led teams of engineers, and I write fantastic documentation. Skeptical? My work has been independently [certified by the US government](#) as meeting the exacting standards for US federal agency use. I am a dual Canadian and US citizen and earned the right to work in either country. I really like bunnies.

Experience and Education

Senior Manager, Senior Infrastructure Engineer

Oct 2020 – Present

Exiger

Toronto, ON

- Performed all operations work for Exiger’s flagship products on **AWS, GCP, and IBM Cloud** using **Kubernetes, Ansible, and Terraform**. I monitored everything using the **Elastic stack** and **Datadog**.
- I setup Exiger’s **FedRAMP** environment on **AWS GovCloud** and trained a new team to manage it, earning our **FedRAMP agency approval** within 9 months from the date I started the project. My efforts enabled Exiger to sell our products to the US government and military-industrial complex, doubling Exiger’s revenue (a great sysadmin can be a moneymaker too!).
- Completed **CIS** and **DISA STIG** hardening for **Amazon Linux** and **Ubuntu** AMIs using **Ansible** and **Packer**.
- Functioned as the “company DBA” for **MySQL/Percona Server, Postgres, Solr, Redis, ActiveMQ, Kafka, Hadoop, HBase, Bigtable**, and more. This includes both self-managed database instances on **EC2** and **Kubernetes**, as well as managed services like **AWS RDS** and **Redshift**.
- Reverse-engineered and took over ownership of Exiger’s production-critical, but abandoned data lake. I migrated over 50TB of data from **HBase/Hadoop** to **Google Cloud Bigtable/Google Cloud Storage** without downtime. My changes cut data lake response times over 10x and ended months of business-impacting performance degradation.
- Moved the entire company from manual app deployments on VMs to zero-downtime **ArgoCD** deployments on **Kubernetes** with apps packaged as **Helm charts** (with secrets stored in **Hashicorp Vault**). I used **Bitbucket Pipelines** and **Jenkins** to build **Docker images**.
- I was voted the **most impactful hire in the 2020-2021 year** at Exiger’s first-ever internal tech awards. I’ve been promoted two times and I am the only employee to win five awards.

Cloud Engineer

Sept 2018 – Oct 2020

VM Farms

Toronto, ON

- Managed and operated a fleet of more than 1500 **CentOS Linux** instances on **AWS, Cloud.ca**, and VM Farms’ proprietary cloud using **Ansible, Puppet, Terraform, and Kubernetes**. I monitored all of this with the **ELK stack, Prometheus, and Grafana**. Though I can’t mention any clients by name, you’ve likely used the systems I managed at VM Farms without realizing it (especially if you’ve read the news in Canada, used a commercial VPN, or purchased insurance of any kind).

- I managed a wide variety of databases on VMs including: **MySQL/Percona Server, Postgres, Couchbase, Memcached, Redis, and Elasticsearch.**
- Built a very large number of CI/CD pipelines for multiple companies using **CircleCI, TravisCI, Github Actions, and Jenkins.**
- Reverse-engineered, documented, and became the maintainer of VM Farms' proprietary private cloud platform and client-facing web portal (**Python/Django**).
- Deployed **Cloudflare's** WAF for a very large Canadian bank's travel insurance division and trained them how to use it. They were quite pleased with it.
- **Trained three new team members** from a junior level (no prior Linux experience) to an intermediate level (able to architect new cloud environments on their own and perform production migrations to AWS without downtime). **I led a small team** that migrated a number of companies with >10 million requests per day each to Kubernetes on AWS and performed all day-to-day operations post-migration.

Scientific Computing Specialist

Jan 2016 – Aug 2018

Centre for Advanced Computing at Queen's University

Kingston, ON

- Built and administered a [~4000 core high-performance computing cluster](#) with **SLURM** as part of Canada's national supercomputing infrastructure and a **Hadoop** cluster used by both the Queen's Smith School of Business and University of Toronto Rotman School of Management.
- Completed **data science** (**R, Python, scikit-learn, ggplot2, dplyr, pandas, seaborn**, etc.) and **bioinformatics** (**mRNA sequencing, 16s sequencing, statistics**, etc.) contracts for academic and industry clients. This includes [publishing scientific papers](#).
- **Lectured at Queen's University, St. Lawrence College, and the University of Ottawa** (including for-credit courses). Topics included **R, Python, Git, Bash**, and [high-performance computing](#). The linked lessons and materials were written by me, with several now under community maintenance.

M.Sc. Zoology

Sept 2013 – Dec 2015

University of British Columbia

Vancouver, BC

Thesis: [Juvenile hormone esterase \(*Jhe*\) is a conserved regulator of hunger-induced behavior.](#)

- Identified shared genetic changes caused by hunger in *Drosophila melanogaster* (fruit fly) and *Aedes aegypti* (mosquito) through mRNA sequencing, and discovered that Juvenile Hormone acts in a previously unknown role in regulating feeding and sleep behavior in insects.
- [Produced a set of MATLAB algorithms](#) that allowed assessment of insect movement behavior from video. This work was [published in Cell](#) (most prestigious journal in the life sciences).

B.Sc. Cell Biology and Genetics with Co-op Certificate

Sept 2008 – May 2013

University of British Columbia

Vancouver, BC

- I published a [first-author paper in the Journal of Neuroscience](#) that showed that *Drosophila* fruit flies have a "sixth sense" capable of detecting the nutritional content of their food. (A "first-author paper" means you did the majority of the science and this is a rare achievement for undergraduates.)