

Ten-Second Summary

I have over a decade of professional experience as a Linux sysadmin, solving difficult problems and making things work in both commercial and government settings. More recently I've taken on devops roles to deploy and manage large, complex systems. Automation, proper processes, and documentation ensures they're reliable, maintainable, and secure.

Employment experience

Enterprise Linux administrator – NSW Dept. of Education Aug 2015 – Present

- Worked with other teams to adapt existing systems and design new ones for our hybrid OpenShift/AWS environment.
- Scripted and automated common rollout procedures to reduce errors, and improve efficiency and reporting.
- Wrote and improved large amounts of documentation and processes to bring them to an auditable standard.
- Automated RPM packaging for software developed in-house, deployed to servers via RedHat Satellite.
- Setup automated patching for 1000+ RHEL hosts, reducing hands-on effort by an order of magnitude.
- Post-mortem forensic analysis to inform our response to security incidents.
- Wrote onboarding docs for new staff members, reducing the time needed for face-to-face training.

R&D Engineer – Anchor Aug 2013 – Aug 2015

- Worked as part of an internal team on tooling and efficiency measures to support frontline sysadmins.
- Languages and tools were chosen for their suitability to the task. This broadly included Python, Ruby and Haskell for app code, and Postgres, Redis, Elasticsearch, and Ceph for the backend technologies.
- Wrote *UMAD*, a knowledge search engine spanning disparate sources of information, including our wiki, support ticketing system, domain registrations, and CRM.
- *Vaultaire* and associated microservices, a time-series database for large-scale storage of monitoring metrics, built on top of the Ceph datastore.
- Internal software was deployed using *Docker* containers, onto our in-house *Openstack* cluster.
- *Jenkins* and *Travis* CI for packaging and deployment to private repos, in addition to comprehensive testing.

Technical writer – Anchor Nov 2011 – Aug 2013

- Wrote and edited thousands of pages of internal procedures, guides, and documentation, supporting every facet of the business, targeted for different audiences as required.
- Managed deadlines presented by multiple teams, ensuring documentation was consistently delivered on-time.
- Published 200+ articles on the blog, written to a specifically tech-savvy audience, to entertain and enlighten.
- Developed all new training modules for new staff to get them up to speed and productive as soon as possible.
- Initiated and maintained a new public-facing knowledgebase for customers.

Senior Linux sysadmin – Anchor Apr 2007 – Nov 2011

- Upgraded internal monitoring systems to implement escalation of alerts.
- Introduced Puppet for automation of customer server builds, replacing cfengine.
- Mentored new staff, working closely to get them settled in and up to speed.
- Forensic analysis and reporting following security breaches.
- Developed processes for rapid virtualisation of physical servers, helping reduce operating costs.

Knowledge and experience

Operating Systems	Extensive Linux background, primarily Redhat (RHEL and Fedora) and Debian. Exposure to Windows 7/8/10, Server 2008 and 2012, some OS X
Languages	Heavy use of Python, shell, Perl, PHP, C, some Ruby and Java, Haskell
Development	Git (standalone, Github, Bitbucket), svn, development methodologies, testing regimes, deployment best practices with CI/CD, packaging in RPM and DEB formats, containerisation, debugging tools
Networking	Architecture and design, capacity planning, addressing and subnetting, routing and associated protocols, high availability, debugging, performance, IPsec and OpenVPN, IPv6, firewalls
Hardware	I have plenty of hands-on datacentre experience and am thoroughly familiar with the realities of how systems are built in practice
Databases	PostgreSQL (with replication), MySQL, SQLite, Redis
Security	Policy, risk assessment, reporting, auditing, analysis, best practice, cryptography
Automation	Ansible, Puppet, automated OS installation with tools such as Kickstart and d-i, scripting with core unix utilities, etc.
Webapps	Common LAMP stack, nginx, WSGI, Rails via Thin/Unicorn/Passenger, Tomcat
Scalability & clustering	HAproxy, Corosync and Pacemaker, DRBD
People	I am first and foremost a good listener. I communicate clearly and effectively in any medium, and can explain complex concepts to others regardless of their level of familiarity.

Education

Bachelor of Science (Computer Science)
University of New South Wales

2002 – 2006