

Ten-Second Summary

I have 12+ years of professional experience as a Linux sysadmin, solving difficult problems, finding ways to do things better, and teaching people. I come with a pragmatic and rigorous approach to security, knowing that it's as much of a cultural challenge as it is a technical one. I'm not a developer but I'm well versed in current practices and workflows, Python is my go-to when code needs writing.

Employment experience

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

- Developed and improved security policy for access to Linux systems based on best practices.
- Designed OS hardening process for new RHEL7 deployments, implemented using Ansible and Puppet.
- Performed security config auditing and remediation across our fleet of servers.
- Post-incident analysis to inform our response to security incidents.
- Automated many common processes to reduce human error and improve request turnaround.
- Wrote processes and documentation so I could educate new coworkers on internal assumed knowledge.
- Planned migration or replacement of legacy systems, switching cfengine to Puppet for management.

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.
- Maintained *libmarquise*, a supporting C library for components of Vaultaire.
- 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. Topics as diverse as performance, security, networking, new products, deep dive kernel debugging.
- Developed all new training modules for new staff to get them up to speed and productive as soon as possible.

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.
- 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 (Bitbucket, Github, standalone), svn, development methodologies, testing regimes, deployment best practices with CI/CD, packaging in RPM and DEB formats, containerisation, debugging tools
Security	Policy, risk assessment, reporting, auditing, analysis and testing, best practices, strong interest in cryptography
Automation	Ansible, Puppet, automated OS installation with tools such as Kickstart and d-i, scripting with core unix utilities, etc.
Cloud services	Amazon AWS, automation with Terraform and Python code. Docker containers and tooling. Some exposure to Azure and Openshift/Openstack
Networking	Architecture and design, capacity planning, addressing and subnetting, routing and associated protocols, high availability, debugging, performance, IPsec and OpenVPN, IPv6, firewalls
Databases	PostgreSQL (with replication), MySQL, SQLite, Redis
Webapps	Common LAMP stack, nginx, WSGI, Rails via Thin/Unicorn/Passenger, Tomcat
Scalability & clustering	HAproxy, Corosync and Pacemaker, DRBD
Hardware	I have plenty of hands-on datacentre experience and am thoroughly familiar with the realities of how systems are built in practice
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