Barney Desmond

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Ten-Second Summary

I have over a decade of experience designing and running Linux systems. I'm used to solving difficult problems, and I take a rigorous approach to ensure the job is done properly. My background is in managing the full stack for web-facing applications, but my interests are much broader and I quickly pick up new skills as needed.

Employment history

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

- Built, monitored, and maintained a large fleet of RHEL systems with a commitment to availability and security. Demonstrated performance with open access to Icinga dashboards and server metrics. Systems were secured through appropriate application of industry best practices.
- Designed and deployed systems for our new hybrid cloud infrastructure (public AWS/Azure and on-premises), using Ansible for build and ongoing management.
- Assisted dev teams in structuring their build, test, and deployment pipelines using Bamboo and Docker amongst other tools.
- Wrote tools in Bash and Python to help build new non-cloud systems rapidly with VMware's APIs, followed with Puppet for ongoing management.
- Introduced Git branches and pull requests in Bitbucket for our Puppet repo, allowing proper oversight of changes. This also enabled multiple sysadmins to work on Puppet code without affecting each other.
- Wrote extensive documentation for processes to ensure repeatability and ease of future automation. This also served as a useful training reference for new staff, as a lot of organisational knowledge is latent.
- Led our internal deployment of PostgreSQL, and advised on design, performance, and migration concerns.

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.
- Internal software was deployed using Docker containers, onto our in-house Openstack cluster.

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 training modules for new staff to get them up to speed and productive as soon as possible.
- Started and maintained a new public-facing knowledgebase for customers.

Senior Linux sysadmin – Anchor   Apr 2007 – Nov 2011

- Build and administration of RHEL and Debian servers for customers, both physical and virtual (VMware, Xen, KVM).
- Upgraded internal monitoring systems to implement escalation of alerts, and more in-depth monitoring.
- Developed processes for rapid virtualisation of physical servers, helping reduce operating costs.
- Mentored new staff, working closely to get them settled in and up to speed.

Knowledge and experience

Operating Systems	Extensive Linux background, primarily Redhat (RHEL and Fedora) and Debian. Exposure to Windows desktop and server editions, some OS X.
Languages	Heavy user of Python and shell scripting, fluent in C, PHP, Perl, some Javascript, Ruby, and Java.
Development	Daily user of Git (standalone, Github, Bitbucket), Subversion, agile methodologies, deployment best practices with CI/CD, packaging in RPM and DEB formats, containerisation, debugging with tools such as gdb.
Networking	In-depth knowledge covering architecture and design, capacity planning, addressing and subnetting, routing and associated protocols, high availability, debugging, performance, IPsec and OpenVPN, IPv6, firewalls.
Databases	Well versed in PostgreSQL and its replication features, MySQL, Redis, and ElasticSearch. I have developed my own applications against them, and understand performance and integrity concerns from both sides.
Hardware	Plenty of hands-on datacentre experience, and I am thoroughly familiar with the realities of how systems are built in practice. The recent trend towards virtualisation of workloads has changed how we work, but the fundamentals remain the same.
Virtualisation	Have deployed and managed VMs with KVM, Xen, and VMware, with solid knowledge of all the layers. Familiar with AWS services and corresponding APIs, including Terraform for automation. Some experience with Docker containers at small scale.
Security	I have a pragmatic approach to security and recognise that it is a core operational concern. I have a particular interest in cryptography, risk assessment, and policy rooted in best practices.
Automation	Puppet, Ansible, automated OS installation with tools such as Kickstart and d-i, scripting with core unix utilities and Makefiles, etc.
People	I am first and foremost a good listener. I communicate clearly and effectively, and can explain complex concepts to others regardless of their level of familiarity.

Education

Bachelor of Science (Computer Science)   2002 – 2006
University of New South Wales