



Jarrod Lowe

Systems Architect and Cloud Specialist

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I am very experienced at designing systems and troubleshooting system issues, particularly in high-end networked, virtualized, and cloud environments that are operating at scale. I really enjoy getting deep into multi-layered, complicated and distributed systems, and working out the nasty edge cases, or identifying flaws in the system. I have been doing what is now termed "DevOps" for over a decade.

Skills

AI and Machine Learning Applications

Designing pipelines for AI-assisted workflows
Applied use of LLMs
Prompt engineering

Virtualisation

Amazon Web Services (AWS)
OpenStack - deploying, running and using openstack systems
KVM (QEMU) Virtualisation on Linux, VMware, CEPH

Deployment Automation and Monitoring

Terraform, Heat, OpenShift, Ansible, Puppet
AWS, Nagios, ELK, Prometheus

Networking

Ethernet, MPLS, BGP, IPv4, IPv6, TCP, UDP, IPSec, ESP, etc
Understanding interactions between IP, Firewalls, VPNs, etc

UNIX

Linux system administration
Practical monitoring systems for large deployments
Large-scale administration

Programming

Go, C, C++, Python and many more
Rapid prototyping
Regularly review other's code and design

Designing for Reliability

Designing for five-nines uptime requirements, with failures
Designing in the ability to know where problems occurred
Building systems that fail gracefully
Documenting Designs
Design in useful capacity for when failures occur

Breaking Stuff

Analysis of designs and implementations
Figuring out how I can break a system. How do we fix that?
Predicting failure scenarios, and troubleshooting those that occur

Procedure Design and Training

Designing and document procedures for others to follow
Designing and running training courses

Work History

Modica Group

2021 to present

Developer Experience Engineer

Modica Group is a leading messaging service provider. As the "Developer Experience Engineer", I build and maintain systems to help developers and SREs focus on writing good code - including building developer environments, tooling, pipelines, as well as coming up with implementation standards and assisting developers and SREs in using them. I also integrate AI/LLM systems into workflows, such as automated code review and summarisation tools, and a chatbot.

Amazon Web Services

2020 to 2021

Cloud Architect

I was a Cloud Architect at AWS. There, I helped AWS customers design and implement their workloads in the AWS cloud, or to migrate their existing on-premises workloads into the AWS cloud.

Velocix

2004 to 2019

Systems Engineer

At Velocix, a provider of large-scale content delivery systems and CDN solutions, I designed and implemented processes for system deployment and maintenance. Key achievements include creating Python-based deployment automation tools that generated documentation and installation resources for thousands of machines, significantly reducing deployment issues. I also established deployment standards, built OpenStack cloud infrastructure, and served as a technical escalation point for major customer issues.

Previous Roles

Global Crossing (Quza) - 1999 to 2002 - Security Engineer

Maintained customer firewall and internet infrastructure, and developed a network mapping system for improved configuration management.

Fonterra - 1997-1998 - Engineer

I worked at Fonterra while at University, working on VAX/VMS and Oracle Systems.

Northpower - 1990-1995 - Developer

While in High School, I worked for Northpower. I worked on the Supervisory Control and Data Acquisition (SCADA) system. I built automation for the SCADA system, and also worked on a number of other software projects as required by Northpower.

Other Work

- Prior to Northpower, I designed and built a booking system for a campground.
- In the years while working at Northpower, during a break I picked up a contract with Southpower, to work on their SCADA system, after the SCADA supplier recommended me to them.

Education & Certifications

BSc (majoring in Computer Science)

AWS Certified Solutions Architect - Professional

AWS Certified DevOps Engineer - Professional

Google Cloud Certified Professional Cloud Architect

AWS Certified Advanced Networking - Specialty

Deep Learning Specialization (Machine Learning)