Patrick Galbraith

608 Jarmany Hill Rd. Sharon, NH 03458 - patg@patg.net - http://patg.net - 603-769-0829

Summary of Experience

30 years of technical experience ranging from electronics, software development, automation, database administration, system architecture, and sometimes firefighting. 23 years of rapid learning, embracing, and leveraging Linux and other open source projects to solve real problems and create value.

Skills

- Cloud: Kubernetes, Helm, Xen hypervisor, AWS, CoreOS, Terraform, OpenStack
- Databases: MySQL (Oracle ACE), Postgresql, Oracle, MongoDB, Couchbase, etcd, ElasticSearch
- Languages: Go, Python, C/C++, Javascript, PHP, Perl
- Devops: Ansible, Terraform
- Networking: Switches, routers, PFsense, firewalling
- Monitoring/Logging: ELKstack, Nagios/Icinga, Sensu
- Wireless Broadband (WISP): Alvarion, Motorola
- Local Government (former town selectman)

Professional History

Principal Engineer, Oracle MyQL Cloud Service: October 2017 - Current
Dyn GBU, then MySQL Cloud Service Team

- Operations, Deployment, and development of MySQLaaS Cloud Service for Oracle Cloud
- Deploying control plane and other components of MySQLaaS using Terraform
- Developed a service canary deployment system using Ansible and Docker
- Java development where necessary for control plane and operations applications
- Represented and presented talks at Percona Live 2019 and Kubecon 2017 and 2018 on topics pertaining to running MySQL/Stateful applications on containers/Kubernetes (see listing)
- Operations, Maintenance, and development of automation tools and components of Hivecast, a Container-scheduling system which provides various functional containers for Edge DNS services using BGP/Anycast configurations for containers

Principal Engineer, Hewlett Packard Enterprise: November 2011 - June 2017
Hewlett Packard Enterprise New Cloud Stack, HP Cloud, HP Advanced Technology Group

- As a lead engineer in the Advanced Technology Group at HPE, participated in various R&D technology which eventually led to the prototype and development of the HPE New Stack project
- Developed the New Stack Configuration Manager service running in Kubernetes
- Contributed open-sourced work upstream to Ansible, Kubernetes, and Helm projects
- Technical Lead, Launched and operated HP Public Cloud DNS as a Service
- Technical Lead of Database Information Systems for HP Cloud, responsible for clustered MySQL backend servers and OpenStack data availability requirements
- Developed a cloud-based, database-scaling architecture design proposal for Samsung Appstore.

Various consultations 2014-2017
Clients: Health Staffing Innovations, Jobs in the US, Freedman Healthcare

- Maintain MySQL database backends and system high availability for http://healthjobsnationwide.com, and http://jobsintheus.com, popular talent acquisition job boards, as well as other clients.
- Migrated properties from on-premise QTS-hosted bare-meta/Xen to AWS
- Custom development for features on http://healthjobsnationwide.com
- Created a fully-automated system for cloud-based assets using Ansible and Terraform on AWS

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- Development and maintenance of monitoring system

[Senior Systems and Database Administrator](#), Blue Gecko: October 2010 - October 2011
- Performed remote database administration (DBA) and development for numerous clients
- Provided expertise on systems architecture for various clients for application components and backing databases (MySQL and NoSQL), including database scale-out plans using sharding and replication
- Provided custom development of storage engines and user-defined functions
- Received [Oracle ACE award](#)

Senior Software Developer, NorthScale Inc. (Now Couchbase): July 2009 - September 2010
- Participated in R&D, prototyping, and early product development during start-up phase of the Membase Database, now known as Couchbase.
- Developed a build system for Linux and Windows product binaries

Principal Software Engineer, Lycos Inc.: October 2008 to July 2009
- Developed SaaS for popular PHP applications (Drupal, Joomla, Mediawiki, etc) and MySQL into the existing Tripod infrastructure
- Migrated Tripod.com and Angelfire from Oracle to MySQL. This included modifications to Java-based applications and moving stored-procedure logic to application code

Senior Software Developer and Database Administrator - Grazr Inc.: January 2007 - October 2008
- Developed Feed Processing web applications
- Implemented both schema and database scale-out architecture and ensured 24/7 availability of backend replicated database systems
- Implemented overall systems monitoring

Senior Systems Engineer, MySQL Inc.: January 2004 - January 2007
- Participated as a member of a globally distributed team, building the world's most popular Open Source Database
- Developed features such as storage engines, partitioning features, client drivers, parser language additions
- Built an automation system for MySQL binary distributions for Linux and MS Windows

Senior Software Developer, [Open Source Technology Group](#) (OSTG): August 1999 - September 2002
- As technical manager, developer, and DBA, was responsible for several iterative releases and overall operations of the first major tech blog, [Slashdot.org](#)
- Developed relationship with MySQL AB and sponsored development of initial MySQL replication features
- Developed major site functionality such as a caching layer, troll filters, and database schema design improvements to Slashdot codebase to handle burgeoning traffic (AKA "Slashdot effect")
- Developed and operated the Linux.com and Linux foundries websites

Senior Software Developer, DBA, Application Team Lead, [Cobalt Group](#): March 1998 - July 1999
- Lead the applications team who developed web applications for automotive manufacturers and dealers
- Performed DBA tasks such as database schema design, implementing 24/7 database monitoring
- Migrated application backend database to Oracle

Other
- Selectman, [Town of Sharon, NH](#): March 2011 - October 2013
- Principal, part-owner, Radius North Communications, January 2007 - June 2010
- Fire Control Technician, FC3, USS Leahy (CG-16), United States Navy, 8/1986 - 8/1992, Desert Storm veteran
- Consulting and positions before 1999: Refer to http://patg.net/various.html

Publications and other projects
- "[Developing Web Applications with Apache, MySQL, memcached, and Perl](#)" (English, Mandarin), Wiley, ISBN: 978-0-470-41464-4
- "[Expert PHP and MySQL](#)," Wiley, ISBN: 978-0-470-56312-0

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- Galera MySQL Cluster on Kubernetes contribution
- Oracle ACE award: https://apex.oracle.com/pls/otn/f?p=19297:4:896909223092578::NO:4:P4_ID:3300
- Public maintainer/developer of DBD::mysql, Perl database driver for the MySQL RDBMS, 2004 - current
- Github: https://github.com/CaptTofu?tab=repositories
- Speaking engagements and tutorials: http://patg.net/speaking.html

Education
BCompSc - Bellevue College (1992-1997, in progress)

US Navy Fire Control A and C schools (1986-1988)
Electronics and computer systems including radar, analogue and digital computer systems