

# Patrick Galbraith

608 Jarman 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, Chef, Vagrant, Fleet
- Networking: Switches, routers, PfSense, firewalling
- Monitoring/Logging: ELKstack, Nagios/Icinga, Sensu
- Wireless Broadband (WISP): Alvarion, Motorola
- Local Government (former town selectman)

## Professional History

### Development, Devops, DBA, consultant: May 2015 - Current

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 bare-metal to AWS
- Custom development for features on <http://healthjobsnationwide.com>
- Full Automation of cloud-based assets using Ansible and Terraform on AWS
- Development and maintenance of monitoring system

### 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 of DNSaaS (Designate) for HP's Openstack-based cloud
- 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 proposal for Samsung Appstore.

### 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

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## 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 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

- Technical manager, developer, and operations of [Slashdot.org](#)
- Optimized Slashdot database and source code, server hardware, and server OS
- Developed relationship with MySQL AB and sponsored development of initial MySQL replication features
- Added caching layer and troll filters to Slashdot codebase to handle burgeoning traffic
- Developed Linux Foundries and Linux.com website

## Senior Software Developer, DBA, Application Team Lead, [Cobalt Group](#): March 1998 - July 1999

- Developed database-driven 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
- [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](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

**BSCS - In progress, Bellevue College (1992-current)**

**US Navy Fire Control A and C schools (1986-1988)**

Intensive technical training focused on general electronics, computer (digital and analogue), and waveguide theory and microwave concepts to specific fire control systems