

Patrick Galbraith

DATABASE SYSTEMS ARCHITECT AND PRINCIPAL SOFTWARE ENGINEER

JANUARY 2017 TO CURRENT (PRINCIPAL ENGINEER)

HP Enterprise Cloud Management System Group

- Development of database-backed, Go-based, containerized RESTful service component for Cloud Management System (under development)
- Architected RESTful API used by various other teams
- Configuration of Go-based service into Kubernetes cluster including developing chart that sets up database infrastructure and Tyk API Gateway configuration
- Development of various Helm charts, including contribution of Percona Helm chart to the public Kubernetes Helm Chart repository
- Provide numerous documents for organization on best kubernetes practices, application containerization and Kubernetes integration, and general Kubernetes cluster usage

JANUARY 2014 TO JANUARY 2017 (PRINCIPAL ENGINEER)

HP Advanced Technology Group

- Research of next-generation technologies, particularly cloud virtualization and containerization

SKILLS AND EXPERIENCE

Oracle ACE Award

Linux/UNIX - 22 years

MySQL - 18 years

Apache - 21 years

Ansible

Terraform

Python

Go

C/C++

Perl - 21 years

PHP

Oracle

pfSense

Dev-ops, DBA, sys-admin,
networking, security

Wireless: Motorola, Alvarion

- Worked on several prototype projects involving clustered container orchestration and management
- Contributed a MySQL Galera Cluster application to the Kubernetes project
- Developed a Go application for stress testing MySQL deployments on Kubernetes using Locust
- Developed a complete AWS Deployment setup using Terraform
- Development of automation of Kubernetes clusters with both Fleet and Ansible
- Development of automation for Docker containers and presented a talk at AnsibleFest 2014
- Developed Ansible drivers for HP Switches, Docker, and Nova
- Presented at various conferences on a number of topics including Ansible, CoreOS, Kubernetes, MySQL, and Docker

NOVEMBER 2011 TO 2013 (PRINCIPAL CLOUD DEVELOPER, TECHNICAL LEAD)

HP Cloud Services

- Technical Lead for DNSaaS (HP Cloud DNS)
 - Built and led a geographically-distributed development team
 - Aggressive delivery of project from team creation to GA in 7 month period
 - Developed DNSaaS using Designate (Open-source inspired project)
 - Architected a backend HA Database Cluster. Built automation necessary virtual infrastructure required such as Galera (Percona XtraDB Cluster) using Chef
 - Worked with Akamai to utilize geo-location and anycast to provide global DNS functionality for the DNSaaS users
 - Delivered features despite aggressive and varying feature list and security requirements

PROJECTS AND PUBLICATIONS

Developing Web Applications with Apache, MySQL, memcached, and Perl (Wiley)

ISBN: 978-0-470-41464-4

Expert PHP and MySQL

ISBN: 978-0-470-56312-0

Galera MySQL Cluster on Kubernetes

Author/developer: Memcached Functions for MySQL

Maintainer/developer:

DBD::mysql Perl MySQL driver

Team member Drizzle Database

Developer FederatedX Storage Engine

INTERNET

Website/Blog <http://patg.net>

Patrick Galbraith on Google

CPAN projects

MySQL Users Conference 2011:

Perl Programming with MySQL and Drizzle

MySQL Users Conference 2011:

Narada: using Gearman, Sphinx,

- Technical Lead for PaaS Cloud (Platform Services)
 - Built and led a geographically distributed team responsible for building a private Openstack-based cloud a private cloud used by various services such as DBaaS (database as a service), LBaaS (Load Balancers as a Service).
- Database Consultation with Samsung (Seoul, Korea). Developed architectural plan for MySQL database HA and Scale-out to accommodate growth for Samsung Apps
- Architected, designed and developed DBaaS (Database as a Service)
- Assumed management of database systems for HPCS

Memcached, Drizzle and PHP to build a search application

Other conferences:

MySQL Users Conference 2009

MySQL Users Conference 2008

MySQL Users Conference 2005

Open Source Convention 2004

OCTOBER 2010 TO NOVEMBER 2011 (SENIOR SYSTEMS AND DATABASE ADMINISTRATOR)

Blue Gecko

Provided DBA, development, and systems architectural expertise to various clients for various application components including:

- Database scaling, sharding, backup, and redundancy and high availability both for MySQL and NoSQL
- Custom storage engine development and support.

JULY 2009 TO OCTOBER 2010 (SOFTWARE DEVELOPER)

NorthScale Inc. (Now Couchbase)

Contributed to the development and testing of the Membase Database.

EDUCATION

Naval Electronics Schools 1986-1988

BSCS in progress, GPA 3.71

Various non-degree college courses: C, Java programming, .NET fundamentals

CIVIL SERVICE

Elected Selectman, Town of Sharon, NH March 8, 2011 (3 year term)

Veteran of Operation Desert Storm, US Navy (1990, Navy 1986-1992)

OCTOBER 2008 TO JULY 2009 (PRINCIPAL SOFTWARE ENGINEER)

Lycos Inc.

- Implemented support for PHP and MySQL for Tripod users.
- Integrating back-end database PHP and MySQL database servers into the existing Tripod infrastructure, modifying various PHP applications (Drupal, Gallery, Joomla, Mediawiki, etc) as well as implementing a PHP application installer and MySQL database administration tool.

JANUARY 2007 TO OCTOBER 2008 (SENIOR SOFTWARE DEVELOPER,
DATABASE ADMINISTRATOR)

Grazr Inc.

- Designed, implemented, and managed Database Architecture schema and infrastructure, consisting of multiple-master, multiple-slave replication
- Built mod_perl web applications, back-end server applications to support Grazr Web 2.0 applications

JANUARY 2004 TO JANUARY 2007 (SENIOR SYSTEMS ENGINEER)

MySQL Inc.

Designed, Developed, and implemented a number of MySQL features:

- Federated Storage Engine
- Maintainer and developer of DBD::mysql perl database driver.
- *mysqlslap* MySQL benchmarking and load emulation tool.

- *mysqldump* backup utility and database partitioning
- MySQL server build automation tools for Linux and MS Windows.

AUGUST 1999 TO SEPTEMBER 2002 (SENIOR SOFTWARE DEVELOPER)

Open Source Development Network/VA Linux

- Technical manager, developer, and operations of Slashdot.org by reconfiguring and optimizing application database and source code, server hardware, and server OS.
- Development and launch of Linux.com, Newsforge.com news sites and Sourceforge Foundries.

MARCH 1998 TO AUGUST 1999 (SENIOR SOFTWARE ENGINEER, TEAM LEAD)

The Cobalt Group

- Technical Manager of applications group.
- Developed database-driven web applications for automotive manufacturers and dealers.
- DBA tasks such as database schema design, implementing database monitoring tools, and working with Oracle Technical Services for MySQL to Oracle migration and implementation.

SEPTEMBER 1996 TO MARCH 1998 (TO NOVEMBER 1998 CONSULTANT)

Horvitz Newspapers

- Development and operations of the web sites for daily local area newspapers Eastside Journal, South County Journal, The Daily Times, and Mercer Island Reporter.
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AUGUST 1986 TO CURRENT

Other

- Radius North Communications - Principal 01/07 - 06/10
 - Classmates Online - Senior Software Developer (contract) 2/03 to 8/03
 - T-Mobile - Senior Systems Engineer (contract) 10/02 to 2/03
 - Newscope Technology 1/96 to 9/96
 - McCaw Cellular/AT&T Wireless - Test Engineer (contract) 9/95 - 1/96
 - Siemens Ultrasound Group - Production Technician (contract) 1/93 - 6/95
 - Pacific Spectrum Technologies - Field Service Technician 8/92 - 1/93
 - US Navy - Fire Control Technician (Electronics Technician) 8/86 - 8/92
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CONTACT PATRICK GALBRAITH