

Trynity Mirell

Site Reliability Engineer

Skills

Languages: Ruby, Python, Perl, Erlang, JavaScript, Java, C, Shell Scripting, SQL \LaTeX

Platforms: **Linux** (Gentoo, Ubuntu, Debian, Red Hat, CentOS), **Mac OS X**, **SmartOS/Solaris**

Experience

2018- Present **Site Reliability Engineer**, *Booking.com*, Amsterdam, NL.

- Maintained multiple Kubernetes Clusters with Federation
- Maintained large NoSQL (**Cassandra**, **HBase**) installations
- Developed tooling around SLO/SLI Monitoring
- Developed tooling around Event-Based Metric Aggregations
- Maintained Puppet/GitLab Infrastructure

2015-2018 **Senior Systems Engineer**, *Apple*, Cupertino, CA, US.

- Maintained a global server infrastructure with over 30 datacenters and 60,000 nodes (**Puppet**)
- Maintained multiple Hadoop clusters, running Spark/YARN/Hive/Impala/HBase
- Maintained a distributed, proprietary key/value database spanning over 5,000 nodes
- Maintained an alerting system spanning over 100,000 checks (**Nagios/Naemon**)
- Developed service discovery infrastructure to enable DNS round-robin load balancing (**Consul**)
- Developed a build system to enable building Debian packages for different Ubuntu releases (**Docker**)

2014-2015 **DevOps Contractor**, *Splice*, St. Louis, MO, US.

- Maintained Initial Ops Configuration (OpsWorks, Chef)
- Migrated to new Infrastructure Setup (Terraform, Docker, Packer)
- Developed Docker Images for isolated environments (Docker)
- Developed AMIs for quicker server initialization (Packer)
- Managed Continuous Integration, developed automated deployment system (Jenkins)
- Managed DNS Infrastructure (CloudFlare)
- Managed Metric Collection Services (Librato, collectd)
- Managed Logging Services, automated new instance setup with automated logging (Logentries)
- Managed Server Infrastructure (Go, nginx, memcached, Elasticsearch, Redis, MySQL)
- Managed various AWS Services (EC2, RDS, SQS, DynamoDB, S3, Route53, ElasticCache, VPC, IAM, OpsWorks, CloudWatch)

2013-2014 **DevOps Contractor**, *Utilitarienne*, St. Louis, MO, US.

- Managed Server Infrastructure for Clients Across Various Environments (Shared Hosting, VSP, AWS, Colocation)
- Developed methods for deploying a client-ready web stack to AWS (Packer, Capistrano)
- Worked with clients to setup their internal code development infrastructure and tools (git, Beanstalk, AWS CodeDeploy)

2012 **Client Services Engineer**, *Basho*, Austin, TX, US.

- Supported **Riak**, a distributed fault-tolerant NoSQL database written in Erlang
- Diagnosed customer issues, provided real-time support during on-call hours
- Maintained debugging tools and diagnostics **Ruby/Erlang**
- Tuned database performance in cloud deployments (AWS/Joyent)
- Improved network performance with tcpdump and Wireshark
- Integrated ZFS with Amazon Web Services (AWS) Elastic Block Storage (EBS) on Ubuntu Linux
- Comparatively benchmarked multiple operating systems (Ubuntu, SmartOS), filesystems (ext4, ZFS), and storage backends (Google's LevelDB, Bitcask) to establish best practices

- 2011 **Software Engineer**, *HomeAway*, Austin, TX, US.
- Developed and maintained Ruby/Selenium framework for automated testing of HomeAway.com, a vacation rental reservation management system
 - Wrote Domain Specific Language (DSL) for automated website testing, capable of converting English descriptions of behavior directly into runnable tests
 - Supported Behavior-Driven Development (BDD) via Ruby's Cucumber and Test-Driven Development (TDD) via Ruby's RSpec
 - Migrated framework to the JRuby engine to integrate with existing Java (Selenium) infrastructure
 - Migrated department from Subversion (SVN) to git, instituted code review policy, and created related training materials
- 2010 - 2011 **Software Engineer Consultant**, *Cisco via Aerotek*, Austin, TX, US.
- Worked with the Intrusion Prevention System (IPS) Signature Development Team to develop a test framework to ensure network attack signature validity
 - Developed libraries to control the Cisco IPS and network attack test tools (BreakingPoint, MetaSploit, Mu Dynamics)
 - Developed Ruby on Rails front end for test framework, with Resque as the background job processor
 - Integrated existing Java libraries into JRuby, adding scripting extensions to existing GUI code
 - Developed a virtualization solution for the Cisco IPS, using QEMU and Virtual Distributed Ethernet (VDE), allowing simulation of a switched network environment
- 2009 - 2010 **Application Protocol Engineer**, *BreakingPoint*, Austin, TX, US.
- Implemented and upgraded protocol simulators for BreakingPoint's Storm/Firestorm network traffic simulation and monitoring device
 - Reverse engineered protocols based on existing client/server implementations
 - Wrote new Ruby API to communicate with the product via XML
 - Maintained Subversion (SVN) source control system, wrote new build system and automated test suite
 - Debugged and performance tested a new TCP/UDP, IP, and Ethernet stack written in Ruby
 - Debugged MRI Ruby interpreter with gdb to address memory leaks and performance in Ruby C extensions
- 2009 **Software Engineer Consultant**, *Cisco via Impact Linux*, Austin, TX and Irvine, CA, US.
- Developed new cross-compiling Linux build system for Linksys-branded products on MIPS, ARM, and PPC440 architectures
 - Developed disk and user management backend software to interface with UI
 - Developed XML SOAP RPC applications allowing Linksys MediaHub to communicate with other devices for Digital Living Network Alliance Universal Plug and Play (DLNA/UPnP)
 - Interacted with open source software projects to push patches upstream
- 2008 - 2009 **Software Engineer**, *Affiliated Computer Services*, Austin, TX, US.
- Administered servers and applications (J2EE) for real-time processing of electronic payment cards
 - Administered Apache/Tomcat services, set up dynamic load-balancing and failover
 - Wrote new code in Perl and Bash, debugged Java EE transaction processing applications
 - Debugged network issues using protocol analyzers (Wireshark, tcpdump, netcat, socat)

Education

- 2007 **Bachelor's of Arts, Linguistics**, *University of Texas at Austin*.