

Martin Walsh

SYSTEMS ENGINEER · DEVOPS · SRE

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Summary

Code-slinging system administrator, DevOps practitioner, open source enthusiast with more than 15 years experience and a penchant for automating ... everything.

- Detail-oriented and dedicated to fulfilling business objectives
- Trusted teammate and mentor with a reputation for high productivity
- Deep understanding of configuration management practices and rationale
- ChatOps fan; an advocate for operational transparency through a self-service approach
- Strong programming background; Python language expert in scripting/automation

Seeking a challenging, and multifaceted, systems engineering position requiring the creative application of open source technology.

Proficiencies

Cloud (AWS)	IAM VPC EC2 S3 EFS ECS ECR RDS Aurora Cloudfront ELB Route53 Cloudwatch EMR
Operating Systems	RHEL/Centos/Amazon Linux Debian/Ubuntu OpenBSD Mac OS X
Network Servers	Apache Nginx HAProxy RabbitMQ BIND Postfix SSH
Databases/Datastores	MySQL/MariaDB/Aurora PostgreSQL MongoDB Redis Memcached
Configuration Management	Puppet Hiera PuppetDB Ansible Terraform Packer
Monitoring	Nagios Ganglia Graphite Statsd Monit Elasticsearch Logstash Kibana Grafana
Programming/Scripting Languages	Python Ruby Crystal Coffeescript/Javascript Bash
Other Tools	Make Git Jenkins Vagrant Docker

Work Experience

Rocketmiles

Chicago, IL

SR. SYSTEMS ENGINEER

2016–2018

First systems engineering hire.

100% Cloud: AWS (RDS | Aurora | ElastiCache | EC2 | ELB | Beanstalk | EBS | EFS | ECS | ECR | Lambda | S3 | EMR | Redshift), Compose, Cloudflare.

- Established infrastructure automation using Ansible and Terraform.
- Built a bootstrapping, docker-based, and fully automated CI/CD pipeline with Jenkins, ECS, ECR, Ansible, Terraform, Groovy.
- Developed chatbot scripts to trigger builds, test and/or deployments, and respond on success or failure using Hubot, Coffeescript.
- Extended Ansible with custom modules providing a less error-prone, automated blue-green deployment process on ElasticBeanstalk.
- Provisioned an ELK stack (elasticsearch, beats, kibana, grafana, cloudwatch, S3 etc.) providing centralized logging and monitoring.
- Created a general-purpose performance and load testing suite for diagnosing issues and performance comparisons during deployments.
- Designed, implemented and proctored the systems-engineering challenge to facilitate evaluation of prospective hires.
- Helped to guide the scope and vision of a newly formed systems engineering team.
- Provided systems engineering domain expertise in support of the ongoing development and deployment of several selling platforms.
- Assisted in the launch of two new whitelabel web products, by building production infrastructure and ancillary services on a tight timeline.
- Authored a business continuity plan.

Jellyvision

Chicago, IL

SR. DEVOPS ENGINEER

Jul 2016–Sep 2016

- Identified and contributed improvements to the onboarding procedure for new DevOps engineering hires.
- Established stop-gap redundancy for a highly critical, customer facing, authentication system.

Wellspring Worldwide

Chicago, IL

SR. SYSTEMS ENGINEER

2015–2016

Geographically distributed cloud (AWS), datacenter, and on-site infrastructure:

MariaDB/Percona MySQL, PHP, Apache, Mesos, Cassandra, Zookeeper, RabbitMQ, VMWare.

- Worked closely with dev teams to improve the performance and stability of production applications.
- Implemented a performance testing suite using Python, Ruby, matplotlib/seaborn, Apache, JMeter.
- Hosted weekly training sessions for Ops staff covering topics such as configuration management, centralized logging, and monitoring.
- Implemented automated testing and deployment (ChatOps-style) for several in-house apps using Slack, Hubot, Jenkins.
- Setup an ELK stack to provide centralized logging services for web and mail logs.
- Instituted a new workflow for config management activities based on best practices including unit/acceptance tests.
- Provided guidance related to cultural change (DevOps), systems engineering planning and priorities.
- Built an automated RPM builder with Docker and Jenkins.

Leapfrog Online

SR. SYSTEMS ENGINEER

Evanston, IL

2012–2015

Datacenter and on-premise infrastructure.

Responsible for system performance, reliability and security of all customer-facing infrastructure.

Apache, Nginx, HAProxy, RabbitMQ, Redis, GitHub Enterprise, Make, Jenkins, Ansible, Puppet, PuppetDB, Hiera, Graphite, ELK, Grafana

- Participated in two large-scale datacenter migrations with minimal downtime.
- Provided in-house, systems-engineering focussed training to cross-functional audiences, covering topics such as:
 - Nagios configuration best practices and custom plugin development
 - Puppet best practices, development workflow and testing
 - Dashboard creation and data analysis with Kibana/Grafana
 - SSL/HTTPS, DNS and domain registration
- Created or maintained more than 75 custom Puppet modules, parser functions, providers and facts.
- Developed a lightweight Puppet dashboard replacement that included endpoints for monitoring integration.
- Automated the reproducible build-out of a comprehensive disaster recovery environment.
- Implemented helper scripts to automate config management tasks including unit/acceptance testing, catalog diff and full context render.
- Shepherded a chatbot used extensively for automated deployments, nagios management and alerting, and orchestration of routing tasks.
- Managed a Nagios instance with approximately 1800 service checks.
- Wrote custom nagios plugins and notification handlers.
- Created Docker images for local testing by fellow software and systems engineers.
- Replaced Windows DNS with BIND automation allowing a self-service workflow based on standard deployment procedures.

Parity Systems, Ltd.

SYSTEM ADMINISTRATOR

Evanston, IL

2005–2012

Solo linux system administrator, responsible for the care and feeding of all network services and hardware used by internal staff and clients: Tomcat, PostgreSQL, Samba, Nagios, VMWare, ESXi, KVM/libvirt, Proxmox, dnsmasq, PXE/netboot, Subversion, Selenium, AS/400, DB/400

- Supported developers and end-users alike, by providing documentation, training and bug reports.
- Constructed a server-room climate monitoring system for less than \$100 with owfs, Nagios and Python.
- Automated mainframe configuration, monitoring and reporting tasks using Jython, JTOpen.
- Developed several special-purpose network applications (FTP, LPD, xmlrpc) used for internal projects.
- Implemented a comprehensive network and performance monitoring solution using Nagios, Python/Jython/Java, and rrdtool.
- Created a debian based thumb-drive disaster recovery environment.
- Built a bootable, immutable operating system image to provide distributed PDF conversion services for an internally hosted Java app.
- Implemented an OpenBSD/pf-based "bump-in-the-wire" transparent firewall.

RS Industrial

IT MANAGER

Buford, GA

2000–2005

Standalone sysadmin and IT help desk, providing corporate leadership and support for the entire organization:

MS Exchange, Active Directory, Postfix, Spamassassin, BIND, dhcpd, Hylafax/cups, Samba, Nagios, Filemaker Pro, MS Great Plains.

- Researched, recommended and purchased new technology for the entire organization.
- Coordinated, planned and assisted in overseeing the construction of a second office space and shared LAN.
- Supervised the development of wholesale and retail ecommerce web sites.
- Integrated disparate accounting and customer service platforms, to reduce duplicate entry.
- Developed several custom customer service platform features, in Filemaker Pro, to automate common tasks.
- Automated weekly sales reporting to save time and increase accuracy.
- Created a voice-call alerting system with Nagios, festival text-to-speech, Python and pyserial.
- Programmed the PLC of an adhesive extruder for manufacturing products to customer specifications.