

# Martin Walsh

SYSTEMS ENGINEER · DEVOPS · SRE

✉️ marty@sysadmindry.com | 📷 martinwalsh | 📱 marty | 🌐 walshmartin

## 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

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

Evanston, IL

SR. SYSTEMS ENGINEER

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.

Evanston, IL

SYSTEM ADMINISTRATOR

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 an 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

Buford, GA

IT MANAGER

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.