

Thomas Noonan II

DevOps Engineer

Kingston, Ohio (970) 744-5667 tom@tjnii.com

Summary

DevOps / Site Reliability Engineer experienced at integrating disparate applications, architecting single-sign-on with user management, running applications at scale using Docker and configuration management, implementing common backend services supporting production applications, configuring servers and networks, and working with the business to reduce overhead via automation.

Experience Highlights

- Single-sign-on and user provisioning with SAML and SCIM
- Application containerization using Docker
- Automated builds using Bamboo and Buildkite
- Automated deployments using Chef, Docker, and Buildkite
- Application deployments using Mesos, AWS ECS, Docker on VMs and Docker on metal
- Robust monitoring using Sensu and Uchiwa
- Performance monitoring using Riemann and Grafana
- Centralized logging using Elasticsearch, Sumologic, and AWS CloudWatch
- Configuration management using Chef, Puppet, Ansible, Terraform, and AWS CloudFormation
- Consul, Vault, and AWS ParameterStore configuration and password storage
- Custom DSLs in Ruby
- Custom APIs in Ruby Sinatra and Python Flask Restful
- Auditable and controllable user self-service models using Git
- Software testing using RSpec and Test Kitchen
- Linux system administration and troubleshooting
- Network administration and troubleshooting
- SAN administration and troubleshooting
- Version control using Git, Github, and BitBucket
- Programming and scripting in many languages including Ruby, Python, Bash, and C
- MySQL, PostgreSQL, and Oracle databases
- Customer support experience
- Service provider experience
- Agile development environment experience

Abridged Employment, Education, and Experience History

- **Root Insurance, January 2018 to February 2020:**

- **Security Engineer with the Root Security Team:**

- * Architected and implemented Okta as a central identity provider in a non-AD environment.
 - * Migrated over 500 users from Google as an identity provider to Okta as an identity provider.
 - * Enabled SAML single sign-on for dozens of SaaS applications in use by the business.
 - * Enabled HR as a master via custom connectors between Root's payroll platform and Okta allowing HR data to directly master IT profiles.
 - * Rearchitected the IT onboarding flow to allow for streamlined user onboarding in a growth-heavy company reducing the onboarding workflow of the IT and HR teams.
 - * Implemented centralized user provisioning and deprovisioning to reduce IT user management overhead and business risk.
 - * Implemented role based access control and user provisioning via automated group management to allow for employees to have correct application assignments automatically.
 - * Architected custom tooling and connectors as needed to bridge gaps between incompatible SaaS applications in use by the business as microservices hosted in AWS.
 - * Collaborated with multiple business units to identify applications capable of supporting single-sign-on and assisted with implementation.
 - * Rolled out mandatory multi-factor authentication to the business.
 - * Participated in policy writing and risk analysis of the business.
 - * Deployed AWS infrastructure using CloudFormation and Terraform.

Senior Infrastructure Engineer supporting the Root Mobile App:

- * Collaborated with other members of the site reliability team on deployment infrastructure for supporting Root's main Ruby application.
 - * Containerized off-the-shelf software solutions into configurations deployable in AWS ECS as both sidecar and standalone microservices with configuration test suites.
 - * Worked with management on security and disaster recovery plans for the business.
 - * Architected and implemented the network for Root's headquarters in a greenfield office build, including infrastructure-as-code and automated configuration deployments for both switches and on-premise infrastructure servers.
 - * Managed the low voltage wiring installation and security system installation at Root's headquarters.
- **ShoreTel (formerly Corvisa), August 2015 to October 2017:** DevOps Engineer supporting the Corvisa Summit Telephony Platform.
 - Supported development teams running containerized applications in a Mesos / Marathon environment.
 - Performed Site Reliability Engineer duties to maintain stable backend platforms for use by production services.
 - Designed and implemented redundant, message based monitoring using Sensu and ported existing Nagios checks to Sensu.
 - Developed and implemented a custom, git repository based monitoring configuration system using a custom Ruby DSL to allow users to easily define microservice monitoring checks.
 - Designed and implemented performance monitoring using Riemann, InfluxDB, and Grafana which allowed git-based configuration by users including docker-compose based local test environments and automatic testing of changes gating bad changes from reaching production.
 - Managed Chef infrastructure supporting approximately 1200 nodes.
 - Architected and developed a custom virtual machine deployment tool which allowed VM deployments to be defined via a simple DSL to allow automated, idempotent VM deployments.
 - Upgraded, improved, and maintained centralized logging using Logstash, Elasticsearch, and Kibana.
 - Implemented and maintained multiple open source tools and frameworks as containerized applications, such as Redis, Kafka, RabbitMQ, Portus, Docker Registries, Consul, Vault, Sensu, Uchiwa, Riemann, InfluxDB, Grafana, Elasticsearch, Logstash, HAProxy, and Nginx.
 - Developed numerous tools in Bash, Python, and Ruby to improve self service to users, integrate diverse tools into cohesive frameworks, and resolve operational difficulties encountered at scale.
 - **Tek Systems, contracted to Comcast, June 2014 to May 2015:** Senior Linux Engineer in the Technology and Product division of Comcast.
 - Administered, maintained, supported, and improved the Video On Demand transcode and distribution services of Comcast Wholesale.
 - Maintained Linux servers running in house developed applications utilizing Tomcat and Oracle.
 - Developed applications in Python and Ruby to solve operational issues faced by the Ops team.
 - Utilized Flask-Restful to implement REST APIs within Python to interconnect applications and provide middle tier services interfacing with MySQL, PostgreSQL, and Oracle databases.
 - Implemented Docker and Puppet based workflows for application deployment allowing for application environment synchronization, simple deployments, and easy application rollback.
 - Standardized server configurations using Puppet.
 - Utilized Agile development practices for both development and operational tasks.

- **RackSpace Hosting, October 2012 to May 2014:**
 - **DevOps Engineer in the SMB Unit of RackSpace Hosting:** Configured and administered customer environments via Chef configuration management tools.
 - * Developed Chef cookbooks to provide general and extensible application management cookbooks to highly tailored cookbooks to configure a customer’s application.
 - * Utilized continuous integration tools and automated test suites to maintain cookbook code quality.
 - * Collaborated with other engineers and customers on shared code bases using git and GitHub for version control.
 - * Worked with other engineers and management to set code quality standards, best practices, and team procedures.
 - * Provided system administration support to customers with immediate response times to site and server issues.
 - **Enterprise System Administrator in the Enterprise Unit of RackSpace Hosting:** Administered, triaged, and repaired high profile web and database servers hosted at RackSpace.
 - * Configured all operating system aspects of customer servers, including disks, kernel tuning, package management and patching, firewalls, and software configuration.
 - * Troubleshoot servers both in real time and after the fact to determine causes of site outages and performance issues.
 - * Used Python and Bash scripts to characterize server behavior to advise on performance issues.
 - * Advised customers on high availability configurations such as Red Hat Cluster Services, Multi-Master MySQL, load balancing, and horizontal scaling using both dedicated gear and public cloud.
 - * Offered front line support to customers with immediate response times to site and server issues.
- **Roosevelt High School Cyber Patriot Program (Volunteer), January 2013 to June 2014:**
 - Volunteer system administrator and instructor for the Roosevelt High School Cyber Patriot Program.
 - Instructed students on network theory, Linux use and administration, and system security.
 - Administered infrastructure for the program to allow the students to practice with malware and black-hat software in a controlled environment.
 - Managed routers, Puppet and Chef configuration management servers, SSH and Samba bastion servers, local Yum servers, as well as general network infrastructure servers.
 - Managed an OpenVZ sandbox environment for classroom use which allowed students rapid access to a Linux sandbox as root, while not allowing them to interfere with other students.
 - Utilized VMware virtualization to host the Cyber Patriot environment.
- **Randstad Staffing (formerly Spherion Staffing), contracted to Hewlett-Packard December 2009 to September 2012:** Enterprise Server Technician and System Administrator for HP’s Enterprise Server Lab.
 - Administered, configured, assembled, triaged, and repaired HP’s line of flagship servers.
 - Supported HP’s engineering and firmware teams by maintaining server prototypes, lab infrastructure, and test scripts.
 - Performed hardware level troubleshooting and repair of server prototypes.
 - Administered approximately 50-100 infrastructure servers on both real hardware and virtualized platforms ranging from low visibility test servers to production servers visible to multiple business units within HP.
 - Assisted with network support including general maintenance, outage triage, and firewall configuration.
 - Configured and troubleshoot Fibre Channel and FCoE SANs.
 - Assisted with data center operations and management.
 - Designed and developed a custom IP VPN solution in C to allow cross-site automated design verification and tests of embedded management processors.
- **Iowa State University, 2003-2006:** Worked towards a Bachelors Degree in Computer Engineering. Studied computer programming, electronics, and embedded programming.