NICK GRAHAM

Principal Infrastructure Engineer

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View a better version of my resume on the web at nickjgraham.com

LinkedIn

GitHub

SUMMARY

I'm Nick, an experienced systems engineer with a wide range of proficiencies ranging from simple Linux administration to complex automated application service deployments with Kubernetes.

Over the years I've worked to develop a broad set of skills across the IT space, and at the moment I'm using those to support developers and projects at Capital District Physician's Health Plan, a regional health insurance company in upstate New York.

WORK EXPERIENCE

Principal Infrastructure Engineer

Capital District Physician's Health Plan

2016 - Present

As a leader on the Linux engineering team I serve as the subject matter expert for Linux and its related technology stack. My responsibilities include creating architecture solutions, overseeing technology projects to completion, and implementing automation processes that reduce toil and solve business problems. I provide leadership in decision-making and hold responsibility for my team members.

In addition to these duties, I manage monitoring and incident response, ensuring high availability and system uptime. I also act as a liaison between the development and infrastructure teams, facilitating collaboration and ensuring that developers have the tools and support they need to efficiently write and deploy code.

I primarily operate in a Linux environment on AWS and VMware, utilizing tools such as Kubernetes, Git, Ansible, Jenkins, and Python to build and maintain application server systems and pipelines that serve developers and business units.

Achievements:

- Architected and executed Single Sign-On (SSO) system expansion to AWS, creating a multi-region, highly available system with no downtime since its creation. This greatly improved the reliability of our authentication system for both employees and customers.
- Fully automated deployment and configuration management of Mulesoft application server architecture using Ansible, including over 80 individual services across 4 SDLC environments. This allowed for consistent, reliable, quick deployments of new services and updates.
- Led the containerization of legacy Tomcat services into fully automated, reliable solution on Kubernetes. This enabled developers to deploy new services with minimal effort, and provided a consistent, reliable platform for those services to run on.
- Created many CI/CD pipelines in Jenkins to turn complex processes like code builds, file deployments, or configuration changes into scheduled, or one-click operations. This greatly reduced the time and effort required to deploy changes, as well as reducing the chance for human error.
- Automated the transition from CentOS to RHEL, and subsequent upgrades to RHEL 9. This reduced the amount of labor required to perform these upgrades by the whole engineering staff.
- Organized and streamlined Ansible playbook usage, including the development of easy-to-use environment build scripts, and personal training/mentoring for other engineers. This enhanced the use of Ansible and improved automation capabilities for everyone's work across the team.
- Created a custom internal site with Python that integrates with our SSO system APIs. This provides users across the company with a central place to find SSO links, rather than relying on links maintained in wikis or emails.

Technologies used:

Ansible, Jenkins, Kubernetes, Linux, Mulesoft, Nginx, OpenTelemetry, Packer, Ping Federate, Python, Red Hat Enterprise Linux, Sumologic, Terraform, Tomcat, Windows

Firefighter

Wilton Volunteer Fire Department

2024 - Present

Back in 2024 I decided to volunteer some of my time and give back to my community by joining my local volunteer fire department.

I am currently an active firefighter and apparatus operator with the department, and spend much of my free time training, going on calls, and helping people in need.

Systems Engineer

Xerox Corporation

2013 - 2016

At Xerox I quickly rose to become the subject matter expert for a number of systems including our VMware infrastructure (thousands of hosts across 6 datacenters in the US, UK, and China), Commvault backup infrastructure, as well as an automated self-service tool I created that employees used to build sandbox environments and adjust the scale of production services. I also acted as a general systems engineering resource for both Windows and Linux server work.

Achievements:

- Architected and implemented up all of the backup infrastructure required to support disaster recovery for all of Xerox's systems
- Led VMware expansion to two new datacenters in China, including hardware purchasing, deployment, and configuration.
- Enhanced the system lifecycle process around all of our VMware infrastructure. Everything from creation of new servers, patching existing ones, updating configurations, and server decommissioning was streamlined and automated in some way.
- Created a VM deployment process automation from the ground up with VMware Orchestrator.

Technologies used:

Commvault Simpana, Linux, Powershell, SUSE Linux Enterprise Server, VMware, Windows Server

Information Systems Intern

Saratoga Hospital

2013 - 2013

For my senior year of college, right before graduating, I took up an internship with one of the larger hospitals close to me. There I learned about the interpersonal nature of IT, helping users and developers get what they need, more than I ever had in any of my college classes. I also started delving into automation and found my love for reducing toil.

Achievements:

- Created a fully featured PC deployment solution using the Microsoft Deployment Toolkit (MDT). Before my arrival PC deployments were all done manually, clicking through the installer. After deploying MDT new PC builds were as simple as starting a machine and selecting the PXE boot option.
- Created custom code for the ticket tracking system (Spiceworks), in order to add some custom fields and workflows that the base product didn't provide.

Technologies used:

Javascript, Microsoft Deployment Toolkit, Windows Server

IT Technician

SUNY Canton

2009 - 2013

While in college I worked in my school's IT department. There I worked alongside the more senior networking staff and acted as a junior network engineer; making smaller scale cabling changes, adjusting VLANs and port statuses on switches, and just generally helping out around the shop.

Achievements:

- Created a PHP application to track the association between switches, patch panel ports, and wall ports in classrooms. Identifying where various switch ports went was a huge hassle at the time, and my contribution removed the painful process of having to manually trace out each network connection when making port changes.

Technologies used:

Linux, Networking, PHP

SKILLS & TOOLS

Application Servers

Apache HTTPd
IIS
Nginx
Ping Federate (SAML/Oauth)
Tomcat

Automation

Ansible
Artifact Repositories
Jenkins
Packer
Terraform

Containerization

Docker
Kubernetes
Rancher

Hypervisors

Amazon Web Services
VMware

Operating Systems

Red Hat Linux
Ubuntu
Windows Server

Programming

Bash
Javascript
Powershell
Python

Others

Active Directory, Amazon Web Services, Artificial Intelligence (AI), Change Management, Configuration Management, Databases (MSSQL, MySQL), DNS, Documentation, ELK (Elasticsearch, Logstash, Kibana), IIS, Large Language Models (LLMs), Log Management, Mulesoft, Nagios, Networking, Nginx, Oauth, Physical Server Administration (Blade/Rack), Rancher, Red Hat Enterprise Linux (RHEL), SAN Management, Sonatype Nexus, Source Control (Git), SSL/TLS Certificates & Ciphers, Sumologic, System Integration, Ubuntu, VMware Horizon, VMware PowerCLI

EDUCATION

BS, Information Technology
SUNY Canton
2013

CERTIFICATIONS

- VMware VCP6-DCV
  current
- Cisco CCNA
  2013

LANGUAGE

English (Native)

INTERESTS

3D Printing
Cars
Landscaping
Mechanics
Music
Robotics