

# NICK GRAHAM

Principal Infrastructure Engineer

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 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:

- 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.
- Led VMware expansion to two new datacenters in China, including hardware purchasing, deployment, and configuration.
- Created a VM deployment process automation from the ground up with VMware Orchestrator.
- Architected and implemented up all of the backup infrastructure required to support disaster recovery for all of Xerox's systems

#### 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 custom code for the ticket tracking system (Spiceworks), in order to add some custom fields and workflows that the base product didn't provide.
- 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.

#### 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