Joseph Kavanagh

SYSTEMS ENGINEER

INTRODUCTION

I am a recent Computer Science graduate from Durham University with a keen interest in DevOps. My interest in computers stemmed from my childhood where my father would always be taking apart and fixing electronics and eventually built my first PC with me. I always seek to ensure I architect reliable, secure and fault-tolerant systems. In my spare time I am either studying, spending time with friends, playing video games or tinkering with applications on my home or cloud servers.

HOW TO REACH ME:

Email: Joseph@kav.sh
Phone: +44 7891 593411
Website: https://josephkav.io

CERTIFICATIONS

Red Hat Certified Specialist in Ansible Automation
Certification ID: 200-171-080
Current Until: 07/12/2023

CompTIA Network+
Current Until: 26/02/2024

SKILLS

- Linux
- Ansible Automation
- Docker
- Python
- Java
- C++
- Networking
- Git
- AWS

PERSONAL EXPERIENCE

- Home server running proxmox (debian-based hypervisor)
  - LXC/docker/VMs running services such as AWX (Upstream Ansible Tower), Grafana, MatterMost NextCloud and UniFi Controller.
  - Used heavily for my dissertation project as it was very CPU heavy, and the Dual Xeon CPU's were able to gather data I would not otherwise of been able to produce or compare.
- VPS Running Gitea (self-hosted git)
  - Focused mainly on security, encrypted the drive Gitea retrieves data.
  - Automatic decryption and mounting. Rather than having the decyption key unencrypted on the VPS, I require an Azure Blob request for the decryption token, which must come from the VPS IP.
- VPS running josephkav.io
  - Deployed webhooks to listen for pushes to github. When a push occurs, this triggers the server to run hugo to rebuild the static site. So any changes to the repo are rapidly deployed to the site.
- All servers are built/maintained with Ansible to enable quick and easy rebuilding in the event of system issues.

WORK EXPERIENCE

Managed Systems Engineer

Orb Data | Aug. 2020 to present

Orb manage the monitoring of systems/devices for various companies, primarily using IBM Tivoli. I have updated various systems and transitioned a few to new platforms/environments with the help of Ansible, Docker as well as Terraform. My role has also involved looking into the way things are currently being performed and designing/implementing ways to improve them through automation and version-control. I have created a CI/CD pipeline consisting of git servers and automated testing of new git pushes to ensure that they are functional before being updated on the web server(s) and then reloaded by the servers that use these files.

Summer Intern

Flow | July. 2019 to Sept. 2020

Setting up the business' software using AWS services. They are a new company, aiming to provide sensors to companies along with a free app that anyone could download so that they can see whether a place that is subscribed to Flow is busy, in real time.
I was involved in:

- Setting up the database to store all of the data
- Creating the backend API that the app talks to when it wants to retrieve data
- Setting up authentication on this so that each user can only see and edit what they need to.

The business is still very early in development, so there isn't much publicly available about this company.

Summer Intern

IBM | July. 2018 to Sept. 2018

Cyber Fundamentals program designed to develop strong cyber security related skills and experience. Included working with a company in the energy industry to develop a phishing solution.

Topics covered included:

- Internet and Hardware
- Networking
- Cyber Crime Industry
- Cloud architecture, management, and security
- Linux administration
- Defensive and Offensive Cyber
- JS/Python/C++/Bash

EDUCATIONAL TRAINING

Durham University (2016-2020)

First Class Bachelor of Science (Hons) in Computer Science

Modules included Software Engineering, Software Methodologies, Advanced Computer Systems and Digital Electronics, Theory of Computation, Parallel Programming, Networks and Systems.

Final Year Project (Dissertation): Snake-in-the-box. Implemented three different algorithms to solve the snake-in-the-box problem and compared the effectiveness of each.

The Campion School (2009-2016)

4 A Levels:

A*: Mathematics.
A : Further Mathematics, Biology and Chemistry.

11 GCSEs:

A*: Computer Science, Mathematics, Physics, History.
A : Biology, Chemistry, English Literature, English Language, Classical Studies, Italian, Religious Education.