Karl J. Haworth

(231) 357-1189 karlhaworth.com me (at) karlhaworth.com

ABOUT

Highly motivated, leadership driven, team player, and quick learner with extensive experience in computer applications and statistical reporting. Creative thinker and problem solver with exceptional planning and analytical abilities.

EDUCATION

Albion College; Albion, Michigan `August 2010 – May 2014`
Bachelor of Arts
Major: Economics and Management
Minor: Statistics

EXPERIENCE

Principal Engineer, IT DevOps `American Airlines` `June 2020 – Present`

Worked in the Delivery Transformation organization architecting solutions for automation using devops methodologies

- Develop overall strategic technical plan and create architecture proposals based on identified solution gaps
- Create solutions with high level of innovation, cost effectiveness, high quality and faster time to market
- Contribute to the overall strategy and manage complex issues within functional area of expertise
- Serve as a Subject Matter Expert in Automation architecture
- Collaborate with business and technical partners to identify and scope the opportunities, outline potential value and ROI, identify risks, benefits and constraints

Network Automation Engineer `American Airlines` `June 2019 – June 2020`

Worked in the Enterprise Network Automation organization architecting solutions for automation using devops methodologies

- Develop overall strategic technical plan and create architecture proposals based on identified solution gaps
- Create solutions with high level of innovation, cost effectiveness, high quality and faster time to market
- Contribute to the overall strategy and manage complex issues within functional area of expertise
- Serve as a Subject Matter Expert in Automation architecture

Senior IT Infrastructure Engineer `American Airlines` `January 2018 – June 2019`

Worked in the Enterprise Network Services department deploying, optimizing, and creating engineering toolsets.

- Plan, create, and document processes for new platforms
- Evaluate and correct the integrity of existing systems
- Plan, create, and implement automation between platforms
- Maintain and administer multiple platforms including products from Riverbed, CA Technologies, Infoblox, and Gigamon
- Troubleshoot network and network device issues with routing and administration
- Implement data monitoring and collection equipment based on diagrams and run-books provided by architect

IT Infrastructure Engineer `American Airlines` `June 2016 – January 2018`

Worked in the Enterprise Network Services department with network and application performance monitoring toolsets.

- Implement data monitoring and collection equipment based on diagrams and run-books provided by architect
- Plan, create, and document processes for existing platforms
- Maintain and administer multiple platforms including products from Riverbed and CA Technologies
- Troubleshoot common network and network device issues with routing and administration

Associate IT Infrastructure Engineer (ADEPT) `American Airlines` `June 2014 – May 2016`

The American Airlines Development Program for Technology (ADEPT) is a college recruiting program created to develop a technical talent pipeline for Information Technology(IT).

- Deploy functional networks
- Configure and install various network devices and services
- Maintain complete technical documentation
- Resolve issues that tiers of support have escalated
- Perform network maintenance and system upgrades

Statistical Analyst Intern `US Airways` `July 2012 – June 2014`

Assisted the Systems Engineering & Operations staff with support, analysis, and reporting.

- Creation of performance metrics
- System performance and capacity planning analysis
- System troubleshooting and documentation of complex processes
- Engagement of software vendors and internal development staff to resolve problems as necessary

TECHNICAL SKILLS

`Kubernetes` `Python` `CI/CD` `Docker` `GIT` `Rest APIs` `Relational Databases (MSSQL, MySQL)` `Cisco Networking` `DNS` `DHCP` `Process Automation` `Network Management Systems` `Shell scripts` `Batch` `Powershell` `Cloud Environments` `Network Data Aggregation and Mapping` `HTML/CSS Responsive Layouts` `PHP` `Perl` `Mac OS` `Windows OS` `Linux` `Cisco IOS`

AWARDS

Delivery Transformation Principals Award
This team developed a comprehensive interface to deliver Infrastructure for IT-to-IT, and enable Real Time delivery of our products through automation. Their automated and integrated delivery infrastructure will be a huge time saver for many teams in the infrastructure procurement process.
- *Chief Information Officer (CIO), Executive Vice President (EVP)*   `December 19, 2019`

NOTABLE RECOGNITION

I wanted to let you know that I was on a call for a Runway demo and discussion and was very impressed with Karl. He has a great understanding of the platform and the technology of course, but his patience, and willingness to engage and even debate in a very productive and respectful manner was impressive.
- *Vice President (VP) Corporate Technology*   `Feb 5, 2021`

Terrific work on Project 42 - I loved seeing the progress you've made. This will have a huge impact on how we work and I so appreciate all your hard work. Keep it up - you are making us all better.
- *Chief Information Officer (CIO), Executive Vice President (EVP)*   `November 13, 2019`

SELFLESS: Karl has been helping multiple infrastructure teams in their automation and self service journey. He provides training, shares his knowledge to boost the teams to get started on development with Runway. This is on top of his own development commitment. But he never push the other teams away when they need him.
- *Sr. IT DevOps Automation Manager*   `September 10, 2020`

PROJECTS

Infrastructure Orchestration Platform   `April 2018 - June 2020`

PROBLEM
All requests for infrastructure are done though a ticketing system and then multiple administrators manually perform the required task hours or days later, in multiple platforms creating a long lag in the time to delivery.

SOLUTION
An orchestration platform for infrastructure requests was created that is secure with enterprise authentication, fully logged, provides an attractive and easy to use interface, and reduces the time to delivery through APIs and automation while standardizing and creating relationships among infrastructure objects.

`Kubernetes` `HTML` `CSS` `Python` `jQuery` `REST APIs` `Websockets` `Gunicorn App Server` `MySql` `Linux Server` `Docker Containers` `Jenkins CI/CD` `Active Directory` `Regular Expressions` `SNMP` `SMTP` `Redis` `Celery` `RabbitMQ` `S3 Object Storage` `Cisco PnP` `Nornir` `Nginx`

- Set out the integration strategy
- Define technical designs and implementation of system integrations/API Gateways
- Define, implement, and manage the development architecture and supporting toolsets required to build and test complex applications in an efficient and rapid manner
- Architect and develop with REST web API services
- Create a mechanism for continuous integration and continuous delivery (CI/CD)
- Communicate with other stakeholders/end users in the software development lifecycle
- Work within a project management/agile delivery methodology in a leading role as part of a wider team
- Create automated deployment mechanisms from code push
- Documentation of solutions (e.g. data models, configurations, and setup)
- Ensure that platforms and data solutions can be deployed and operated in a highly repeatable and predictable manner
- Requirements Analysis and Solution Architecture Design

H3C Firmware Upgrade Automation   `February 2019`

PROBLEM
Engineers have to manually upgrade the firmware on H3C devices as they are unsupported by all enterprise tools.

SOLUTION
Create Perl script inside of CA Spectrum to push firmware with the expect module for an interactive automated session.

`CA Spectrum` `Perl Scripting` `Expect Scripting` `Regular Expressions` `Comware OS (H3C)`

- Set out the integration strategy
- Define technical designs
- Communicate with other stakeholders/end users in the software development lifecycle
- Requirements Analysis and Solution Architecture Design

Network Device Insourcing Automation   `March 2016 - June 2016`

PROBLEM
Migrate thousands of devices from an outsourced vendor to in-sourced.

SOLUTION
Created plan of migrating devices via SNMP TRAP and using SNMP to rapidly rewrite device configurations in bulk.

`CA Spectrum` `Perl Scripting` `SNMP` `Comware OS (H3C)` `SSH`

- Define technical requirements
- Automate migration workflow
- Optimize communication by implementing SNMP over SSH to reduce time to configure and reduce implementation failures
- Develop new capabilities in existing toolsets to communicate with newly acquired unsupported devices
- Communicate regularly with management regarding status
- Work with platform administrators and engineering teams to implement and validate solutions