

Karl J. Haworth

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ABOUT

Driven and motivated professional with a proven track record of leadership in application and cloud architecture, software delivery, and team collaboration. Recognized for being a quick learner with a creative mindset and exceptional problem-solving skills. Possess extensive experience in planning, analyzing, and implementing innovative solutions.

EXPERIENCE

Architect - Developer Accelerator Product Group (DevOps/DevEx), American Airlines March 2023 - Present
Product Agility

Worked in the Product Agility organization supporting the solution, strategy, and planning of technical implementations

- Collaborated with other Architects in Technology and Transformation to provide direction for Developer Accelerator
- Led discussions with Product Technical Leads and Technical Delivery Managers to determine technical strategy and skills required
- Aligned product group strategies with enterprise initiatives and principals
- Assisted engineers in selecting solutions that met business requirements and long-term goals
- Collaborated with neighboring organizations to incorporate **networking design** considerations
- Partnered with Engineering team to streamline redeployment and configuration of major infrastructure, resulting in a **300% increase** in efficiency and enhanced SLAs and KPIs
- Ensured backlog reflected appropriate technical solutions to achieve product objectives and priorities
- Responsible for **finops** practices within an organization where financial savings were established and improvements to budget forecasting were made
- Designed **layered security** solution in partnership with **secrets management** team and platform to ensure security in dynamic environments, including Kubernetes and GitHub actions
- Implemented secure base images and image scanning protocols for enterprise utilizing **GitHub Actions, enhancing security** measures
- Improved Enterprise CI/CD pipelines and actions through collaboration with external teams to ensure success while **reducing time to complete**
- **Contributed to open source** initiatives through updates, capability enhancements, security fixes, and improvements in Dockerfile security in helm charts and Backstage plugins
- Led multiple **proof of concepts (POC)** and beta programs to introduce various services and products to the enterprise
- Implemented **Automated Delivery Governance** utilizing the Sigstore framework to attest to artifacts produced in CI/CD processes along with **Supply-chain Levels for Software Artifacts (SLSA)** provenance and signing
- Contributed to overall **GitHub Actions testing plan** for internally provided workflows and actions using test repositories, test workflows, and ephemeral repositories while applying Software Development methodologies
- Identified and resolved areas of technical debt
- Actively participated in **Diversity, Inclusion, and Equity (DEI)** sessions and trainings to promote diverse perspectives
- Supported hiring processes, description creation, and candidate selection at various job levels
- Contributed and worked on logging strategies utilizing **FluentBit** with structured logging

Senior Principal Developer, Product Technical Lead - Developer American Airlines June 2022 - March 2023
Experience, Product Agility

Worked in the Delivery Transformation organization creating architectural solutions for automation using DevOps methodologies

- Developed overall strategic technical plans and crafted architecture strategy for shared Kubernetes clusters for enterprise use
- Mentored, guided, and supported developers across American Airlines IT
- Developed the overall automation strategy and managed complex integrations between multiple teams
- Acted as a subject matter expert in automation architecture
- Architected and worked with team to implement additional Global Traffic Management (GTM) automation capabilities for **Payment Card Industry (PCI)** workloads
- Facilitated knowledge transfer sessions on Network Routing, Domain Name System (DNS), and Global Traffic Management (GTM) to support Kubernetes automation
- Led team in parallel programming and design strategies to **expedite** project completion
- Enhanced **reliability and recoverability** of vendor-based infrastructure implementations through skill enhancement in binary and artifact management team
- Contributed to product group strategy and roadmaps
- Directed knowledge transfer sessions to foster transparent knowledge sharing

- Supported hiring panels, description creation, and candidate selection at multiple job levels

Principal Programmer, Product Technical Lead, Developer

American Airlines

January 2021 - June 2022

Experience

Led architectural solutions for automation using DevOps methodologies within the Delivery Transformation organization

- Developed overall strategic technical plans and created architecture strategy for a developer portal used across all American Airlines information technology
- Mentored, guided, and supported developers across American Airlines IT department
- Developed and executed strategic technical plans and architecture strategy for **shared Kubernetes clusters** for enterprise use
- Architected, built, and operated a **Kubernetes Operator** to reduce the native Kubernetes manifest, communicate with **Global Traffic Management** (GTM) providers (Akamai and Infoblox), and create ephemeral environments based on Pull Requests
- Worked with teams to **troubleshoot application migrations** to Kubernetes and provide ongoing support
- Decreased overall Enterprise time to deploy **meshed cross-region** Kubernetes clusters using internal networks using **GitHub Actions** and **Terraform**
- Showcased expertise in automation architecture as a subject matter expert

Principal Engineer, Developer Experience

American Airlines

June 2020 - January 2021

Worked in the Delivery Transformation organization contributing to the creation of solutions for automation using devops methodologies

- Orchestrated the planning, architecture, implementation, and management of an InnerSourced **Internal Developer Portal** (IDP) utilizing **Backstage.io**
- Formulated architecture proposals based on identified solution gaps
- Managed complex issues within functional area of expertise and contributed to overall strategic direction
- Leveraged multiple Azure Services such as App Services, Functions, Redis, Postgres, Storage Accounts, and Azure Kubernetes Service (AKS) though **Infrastructure as Code** (IAC) mainly using Terraform
- Directed a team of developers as the technical lead, ensuring adherence to **Agile** best practices
- **Simplified** complex designs and implementations through a user-friendly developer portal supported by various backend services
- Collaborated with stakeholders and end users throughout the software development lifecycle
- Worked with developers across the company to implement their solutions into an **InnerSource** framework
- Developed functionality using **React**, **Typescript**, and **GitHub Actions**

Network Automation Engineer

American Airlines

June 2019 - June 2020

Senior IT Infrastructure Engineer, Networking

American Airlines

January 2018 - June 2019

IT Infrastructure Engineer, Networking

American Airlines

June 2016 - January 2018

Associate IT Infrastructure Engineer (ADEPT)

American Airlines

June 2014 - June 2016

Statistical Analyst Intern

US Airways

July 2012 - June 2014

TECHNICAL SKILLS

- Process Automation
- Internal Developer Portal (IDP)
- Backstage.io
- Kubernetes
- Helm
- Service Mesh
- Certificates
- Cloud Environments
- Terraform (IAC)
- Object Oriented Programming
- Unit Testing
- Integration Testing
- TypeScript
- JavaScript
- React
- Express
- Python
- Continuous Integration (CI)
- Continuous Deployment (CD)
- GitOps
- Docker
- GitHub Actions
- git
- Rest APIs
- Relational Databases
- Agile methodology
- Networking
- Global Traffic Management (GTM)
- Domain Name System (DNS)

RECOGNITION

Thank you for the numerous times that you have supported the refunds domain. On several occasions you have went above and beyond for us. I appreciate your partnership.

- Senior Manager, IT Applications

April 11, 2024

Karl, You've dialed into security items this quarter and it has been awesome. From setting up Chainguard to be easy peasy, to looking to the future for our security, it's been awesome. Thank you!!! #Accountable to a more secure AA.

- Senior Manager, IT Agile and DevOps

March 30, 2024

Karl, I want to express my gratitude for your unwavering support of our team. Your expertise and patience consistently lead to learning and improved, secure technological outcomes. Thank you for all you do. #Accountable

- Engineering Manager, IT DevOps

March 30, 2024

VOLUNTEERING

Mentor - Engineering Academy

Oct 1, 2021 - Present

Engineering Academy Guidance Board Member - Engineering Academy

Oct 1, 2021 - Present

COMMUNITY ENGAGEMENTS

BackstageCon Europe 2024 Program Committee Member - BackstageCon -

Jan 26, 2024

CloudNativeCon

Ecosystem Panel - Analyst Event - KubeCon - CloudNativeCon

Nov 7, 2023

Hitting the Runway with Argo at American Airlines - ArgoCon - CloudNativeCon

Nov 6, 2023

Backstage at the world's largest airline - The Journey to the Internal Developer Portal

Oct 4, 2023

EDUCATION

Albion College, Albion, Michigan

Bachelor of Arts

Major: Economics and Management Minor: Statistics

August 2010 - May 2014