

Iain Samuel McLean Elder

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I am certified AWS solutions architect and security specialist. I have 10 years of experience in the professional IT industry and 5 years designing and operating solutions in the AWS cloud. Trusted to handle AWS administration and architecture, IAM infrastructure, core data processing, and incident response. I specialize in improving security and optimizing costs. I have contributed to security tools aws-gate and saml2aws.

Freelance AWS consultant. September 2020 - Present

I work with clients to improve security and automation and eliminate unnecessary costs by following AWS's recommended architectural practices. For a mobile security startup:

- Implemented role-based SSO to avoid sharing long-lived credentials
- Implemented a multi-account architecture to separate development from production
- Rolled out Session Manager to reduce EC2 attack surface and key administration
- Recommended cost reductions by analyzing cost explorer data and inspecting architecture
- Enhanced the open-source aws-gate to allow access to private RDS via Session Manager

Tech: JumpCloud, AWS IAM, SAML, AWS Organizations, Session Manager, SSH, Cost Explorer.

Kepler Data Tech. May 2019 - September 2020

Kepler applies Agile and DevOps methodologies with a Data Product approach to guarantee continuous and operational value deliveries from the beginning.

- Launched operations service for inaugural client, Atresmedia. Monitoring 500 technical and business metrics across multiple AWS environments
- Researched performance characteristics of different Redshift cluster configurations
- Rolled out HTTPS of Cognos analytics on EC2 with ALBs
- Reduced costs up to 90% across EC2 and RDS using reservations, rightsizing, and workload scheduling
- Maintained IAM infrastructure, users, policies, and roles.
- For client X migrated sales data warehouse from on-premises SQL Server to AWS Aurora PostgreSQL. Rewrote stored procedures and checked for data quality issues.
- For client X completed the implementation of the ETL pipeline. Extracted development environment into Docker container.

Tech: AWS CloudFormation, AWS CloudWatch, Opsgenie, Redshift, ELB, Compute Optimizer, Savings Plans, IAM, SQL Server, Aurora PostgreSQL, Python, Docker.

Freelance DevOps. August 2018 - May 2019

Feeld is the world's leading private and open-minded dating platform.

- Designed and implemented a technical strategy for GDPR compliance
- Identified and fixed unreliable test cases to reduce false positives in the CI system
- Contributed small performance and stability improvements to Feeld's backend API

Tech: CircleCI, Node.js, Coffeescript, MongoDB.

Spotlight Education turns education data into stories that students, parents and educators can easily understand.

- Improved reliability of a batch process that personalizes 1 million videos on a fleet of almost 3,000 EC2 instances. Replaced custom autoscaling code with auto scaling groups mixed instance policies
- Standardized devops environment setup and documented first steps for new starts

Tech: AWS CloudFormation, AWS auto scaling, Ruby.

Wakoopa/Netquest. July 2016 - July 2018

Wakoopa provides passive metering solutions to collect reliable, high-quality online behavioral data. Acquired by Netquest in 2014 and by GfK in 2016.

- Reporting directly to the CTO, I improved application security and stability, and maintained continuity through changes to staff and strategy.
- Defined onboarding and offboarding procedures. Maintained a list of all systems to check for access.
- Directly responsible for 20% of behavioral data as the owner of a heterogenous global network of 40 Squid proxy servers.
- Led the introduction of Opsgenie as the incident management system. Defined alarm thresholds and escalation procedures with business and participated in on-call rotation.
- Rolled out CloudWatch Logs across infrastructure to allow development teams to investigate events more quickly
- Took control of DNS and certificate management by consolidating domains in Route 53 and using AWS Certificate Manager where appropriate.
- Set up private NPM repository for front-end developers composed in Docker

Tech: AWS CloudFormation, Opsgenie, AWS CloudWatch, Ruby, Chef, Bash, Ansible, Squid, Apache, Nginx, Codeship, Github, Jira, Confluence, IAM, Docker.

Skyscanner. October 2010 - June 2016

Skyscanner aimed to be the first travel website to show every commercial flight on Earth. Acquired by Ctrip in 2016.

- Improved coverage and accuracy of flight data through maintenance of the automated data acquisition platform using web scraping in Python and analytics queries in SQL.
- Administration of high-throughput and high-volume OLTP and OLAP database systems. Management of 2000 databases across 400 SQL Server instances.
- Migrated geospatial ETL pipeline from on-premises to AWS cloud. Reduced build time from weeks to hours. Identified and delivered data quality improvements for geospatial microservices.

Tech: Python, Windows Server, Microsoft SQL Server, T-SQL, PowerShell, PostgreSQL, CentOS Linux, Bash, PostgreSQL, AWS CloudFormation, FogBugz, Jira, svn, git.

Education and Certifications

- **Security - Specialty.** Amazon Web Services. October 2020
- **Associate Solutions Architect.** Amazon Web Services. February 2018
- **Business Intelligence MSc.** University of Dundee. May 2015
- **Internet Computer Science BSc.** University of St Andrews. May 2010
- **DELE C1.** Cervantes Institute. May 2019