

Hugh Wells

AWS Certified Site Reliability Engineer and Security Specialist

Kraken Tech & Kraken Flex, part of the Octopus Energy Group

- Senior Platform Engineer: March 2023 -

- Kraken Customer k8s engineering
 - Development and maintenance of Helm charts to support developers in deploying applications in a standardised way
 - Cost optimization, including right sizing application pods and a project to introduce Spot nodes at \$1M estimated annual cost saving
 - Kickstarted project to migrate to ARM and replace x86 for efficiency and cost improvements
 - Leading the migration of the HPA metrics from a custom uWSGI configuration to standardised HTTP Proxy, built into Helm charts
 - Operational support for 26 production clusters globally, and supporting infrastructure including Memcached, Elasticache, Postgres, RabbitMQ and ArgoCD
 - General upgrade and maintenance cycles of cluster control plane, add-ons and core components (eg. Keda, Karpenter, Cilium, CoreDNS etc.)
- Scaling to handle Demand Flexibility events
 - Leading architectural design, project management and tech delivery of Demand Flexibility project
 - Infrastructure to absorb peak loads from events ('Savings Sessions'), mitigating against outages
 - Supporting UK's largest energy retailer in keeping the lights on over the winter
- Migration to Customer Managed Keys
 - Project to allow customers to 'Bring Your Own Key' material to the Kraken Customer platform
 - Design and build of standardised solution to be used for all customers, including planning for failure modes
- Developing and maintaining Core Platform infrastructure for teams across the company; notable projects include:
 - Global Networking components with centralised IP address management & allocation, with deployable Service Catalog Templates for teams to get a 'VPC in a box'
 - Observability Tooling improvements - moving Grafana outside of k8s, building custom CICD hooks for automated dashboard deployment, deploying network connectivity to legacy datasources for backwards compatibility
 - PagerDuty as IaC - translating existing clickops config to Terraform with custom built SSO sync functionality, developing functionality to support business processes of multiple teams, rollout across the entire company (250 people, 20 teams) with no impact to Production alarms
- Targeted assisted support (short term secondment) for specific teams in the company with novel infrastructure requirements
 - Replacement of core Grid Services telemetry component (serverless to containerised) to enable better reliability and unblock onboarding of new sites including observability, alarms and rollout across all sites

- Novel VPN solution to onboard a new Grid Services client, enabling secure DNP3 communication with our existing infrastructure
- Supporting various other projects to varying degrees; including
 - Global API Gateway Key Management solution
 - Migration of main API domain from API Gateway to CloudFront with zero-downtime
 - ECS cluster Service Catalog Product
- General BAU support including
 - AWS IAMIC and AWS Organisations management (in Terraform)
 - k8s and associated logging, monitoring and networking, updates, changes and support (including incident remediation)
 - General platform support requests including with custom CICD library, GitHub, production issues
 - Out of hours oncall for all Production components
- Other duties
 - Organising the company 'AWS Guild' to discuss architectural patterns and proposals, share knowledge & experience between teams and arrange things like mentoring & AWS Certifications
 - Mentoring and pairing with junior colleagues to share knowledge with them and learn from their areas of expertise
 - General project management and team organisation

WORTH Internet Systems

- **Site Reliability Engineer: March 2021 - March 2023**
 - Developing and maintaining Terraform & Terragrunt code for multiple clients
 - Building infrastructure supporting production applications across AWS, GCP & Azure
 - Container based: EKS & ECS, GAE & GKE
 - Serverless: Lambda, Azure Functions & IoT Hub
 - DynamoDB, RDS (Postgres), Firestore
 - Building and supporting observability in Grafana & CloudWatch
 - Prometheus, InfluxDB and custom event driven data analysis pipelines
 - Maintaining pipeline and build infrastructure in GitHub Actions, Bitbucket Pipelines, CodePipeline, Bamboo & ADO
 - General Linux administration with Ansible, Bash scripting and Python internal tooling
 - Working in an agile and highly collaborative way, using mobbing as a key tool to increase pace, quality and knowledge sharing
 - Creating operational readiness & incident management processes
- **Security Engineer: November 2021 - March 2023**
 - Owning ISO/IEC 27001:2013 ISMS and associated recertification activities
 - Complete ISMS rewrite and new certification to support business reorganisation
 - Scoping changes and planning activities for compliance with ISO/IEC 27001:2022
 - Ongoing internal support to improve risk management and security posture
 - Achieved Cyber Essentials certification, required for Government bids
 - Monitoring and managing device estate via scripts linked to MDM tooling
 - Ensuring compliance with company policy and client requirements across devices

- Developing & leading threat modelling sessions for clients, and internal projects

London Borough of Hackney

- Senior Developer: September 2020 - March 2021

- Working on API platform to deliver standardised endpoints integrating with a number of legacy backing services
- Migrating legacy databases to Postgres on RDS
- Managing AWS SSO & Control Tower, with identity federation across applications
- Restructuring infrastructure in AWS and providing new CI/CD & Terraform pipelines with improved monitoring and alerting

Ministry of Justice - Judicial Appointments Commission

- Junior Developer: June 2020 - August 2020

- Working on improving DevOps
 - Planning CI/CD pipeline replacement
 - Exploring options for a Firebase migration
- Delivering code to support business use of the application
- Led requirements analysis, design and implementation of Qualifying Tests project
- Carried out operational security review and worked to plan and implement required changes as part of ongoing penetration testing and Internal Audit reporting

Underland

- Software Engineering Intern: Summer 2019

- Python Serverless integrating with RDS, S3, Cognito and externally with Adyen & Twilio
- Carried out user research, designed and architected solutions and worked on a number of backend components such as payments, SMS and core systems

Monzo

- Customer Operations: November 2017 - May 2018

- Second Line technical & payments, May 2018 - September 2018

- Internal tooling in React & backend with Go
- Traced bugs, patched code and added new features to our codebase

- Mastercard Fraud & Dispute Specialist, September 2018 - May 2020

- Weekend disputes Expert
- Mastercard Arbitration, Compliance and technical Case Filings

Education:

iGCSEs/GCSEs: Maths, Physics, Chemistry, Biology, Geography, History, Computer Science English, French, Religious Studies

A Levels: Computer Science, Electronics *AS Levels:* Maths *Pre-U:* Physics

Degree: Computer Science BSc Hons. First Class - Royal Holloway, University of London

Professional Qualifications:

AWS Certified Security - Specialty (Expires; October 2027)

AWS Certified Cloud Practitioner (Expired; August 2024)

HashiCorp Certified: Terraform Associate (Expired; July 2024)

Certificate in Retail Banking: Conduct of Business (CertRBCB, LIBF)

Mastercard Academy: Chargeback and Dispute Resolution workshop

EASA Private Pilots Licence with Restricted Instrument Rating, Night Rating and Class 2 Medical.

Side Projects:

SwagShipHack.dev / Peregrine Coast Press

Swag shipping for hackathons and events during the Covid-19 pandemic. Transformed into start-up indie publishing house working with multiple clients (DnD, other RPG, gaming journals & more) with invoicing, contracts and supplier management. Custom quoting and order management pipeline including handling IOSS and DDP.

Hackathons & Volunteering:

Volunteer Organiser: [WHY2025](#), [MCH2022](#) on Team:Content & Team:SpeakerDesk, [EMF Camp](#) (2022 & 2024) Content & Greenroom

Hackathon Organiser: [RoyalHackaway](#), [UKGovcamp](#), [HackTheMidlands](#), [RebelMakersCamp 2016](#)

GitHub Campus Expert: githubcampus.expert/crablab

Cisco University Challenge 2017 ([1st place](#))

Hack The Midlands 2.0 ([Nexmo Sponsor Challenge](#), [Majestic Sponsor Challenge](#), Hacker Spirit Award)

Hack The Holidays 1.0 (Hacker Spirit Award), *Hack The Holidays 2.0* ([GitHub Sponsor Challenge](#))

BrumHack 5.0 - ([CapitalOne Sponsor Challenge](#))

UKGovHack

Accountability Hack ([Winner](#))

RLSB Hack ([1st place](#))

YRS 2015, YRS2014 , RS2013 (Semi-Finalist)