Drew Jess
Infrastructure / DevOps / SRE

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Profile

A driven and accomplished infrastructure engineer with extensive experience operating large-scale, high-throughput Linux workloads used by millions of people, both in the cloud and on-premises. Current holder of the Certified Kubernetes Administrator (CKA) certification.

Committed to automation, efficiency, simplicity and stability. Champion of developer empowerment, enablement and working together using DevOps principles. Approachable, personable and able to communicate effectively to all audiences. Devoted to continuous improvement and documentation. Tenacious troubleshooter. Experienced and capable remote team member.

Experience

Senior DevOps Engineer | Modulr Finance (Aug 2021 - Present)

Working as an infrastructure engineer tasked with ensuring the continued growth and stability of a scale-up company in the FinTech payments sector. Operational support of services using Java (Spring Boot) deployed across AWS EC2 and AWS EKS. Management of AmazonMQ RabbitMQ and Amazon Aurora PostgreSQL (RDS). Infrastructure-as-code managed with Terraform, configuration management on EC2 with Saltstack. Deployment of cloud-native applications on Kubernetes using custom and third-party Helm charts. Management and automated patching of container base-images and AMIs.

Accountable for incident detection, response and resolution, as well as maintenance of monitoring and troubleshooting tooling including Datadog and SumoLogic. Operational responsibility for self-hosted software engineering tooling platforms such as GitLab and Sonatype Nexus, responsible for upgrades and optimisation of their operation. Member of infrastructure out-of-hours on-call rotas.

Committed to continuous improvement through improvement of systems and processes - for example, researching and delivering significant monitoring improvements through integrating deployment systems with the Datadog Downtimes API using Python and Jenkins pipelines to reduce false-positive alerts. Also delivered the integration of HTTP-level metrics into our monitoring systems for our main API, giving insight into response code and latency data for every path we serve to our customers.

An enthusiastic team player, championing innovation, knowledge sharing and communication. Frequent presenter to a range of audiences - host of numerous well-received cross-department lunch-and-learn events (the most recent being an exploration of GitOps and ArgoCD, along with the potential value it would bring to our platform and improvements to our developer experience).

Other notable pieces of work delivered have included:

- Pioneering and championing the use of GitLab CI/CD as a replacement for Jenkins, demonstrated by delivering shared pipelines to add automatic Terraform validation and plans to merge requests.

- Easing migration of services onto our containerisation platform by developing and promoting a simple DNS-based solution to provide zero-downtime, fast-backout service switchover events.

- Planning and executing the first AWS EKS upgrades in our estate, documenting the process for the future. Has been demonstrably and successfully utilised by the team many times since.

- Migration from EC2-based RabbitMQ brokers to AmazonMQ for RabbitMQ brokers.

- Planning, execution and reporting of business continuity tests required by regulator, Pay.UK.

- Planning and execution of migrations and upgrades to managed API Gateway services (Tyk).

Principal Systems Engineer | BBC (Jan 2019 - Jul 2021)

A key member of the BBC Account team, responsible for guaranteeing the availability and reliability of backend APIs consumed by teams across the organisation. Responsible for operating a stack consisting of NodeJS, Java, PostgreSQL and LDAP deployed across AWS EC2, Lambda and RDS Aurora services, with heavy use of mTLS-secured communications. Accountable for incident response, resolution and root cause investigations. Provided infrastructure and operational specialism to a muti-disciplinary Agile feature team.

Advocated for and delivered a programme of resiliency, observability and efficiency improvements across the services that BBC Account offer. This provided improved insights into how well applications were serving the needs of our audience via additional metrics in, which helped to ensure that services were able to scale seamlessly with increased load during periods of increased audience engagement while also delivering a 50% reduction in the team's monthly AWS bills over the course of a year.

Improved and took ownership of the team's continuous integration and deployment pipelines (Jenkins, CloudFormation, Python, bash, RPM packaging) to ensure that all members of the team feel confident shipping new software to production as quickly and safely as possible.

Assumed a key role in a project accountable for migrating and restructuring the data of millions of BBC user accounts to an AWS RDS Aurora PostgreSQL cluster using Amazon DMS and PostgreSQL trigger procedures. Also re-architected and performed migration of a business-critical token storage database onto more modern and performant hardware while ensuring no impact to user experience.

Effective communicator, providing the correct level of information to stakeholders at all levels of the organization. Able to work effectively with third-party support engineers from around the world.

Senior DevOps Engineer | FanDuel (Jan 2016 - Jan 2019)

Part of a team responsible for ensuring constant site availability while ensuring seamless and elastic provisioning of infrastructure in response to the site's unique traffic patterns. Responsible for designing, building and operating infrastructure to run dozens of Java and Python microservices. Proven ability to quantify, design and deliver complex AWS-based infrastructure requirements within a multi-disciplinary Agile feature team while building a reputation as an approachable and effective operations engineer. Achieved an AWS Certified Solutions Architect - Associate certification.

Developed and maintained internal deployment tooling used to provision new development environments and perform resilient software releases, used by software engineers across the company. One example of this involved rewriting an internal Python Flask tool's authentication mechanism to use GitHub Apps instead of GitHub OAuth to improve every developer's user experience.

Experienced at building and deploying Linux systems for deployment on cloud platforms. Contributed Ruby and Puppet DSL widely to the team's source code repositories. Took ownership of an upgrade of the team's configuration management platform from Puppet 3 to Puppet 4. This was delivered successfully, despite being a challenging project which had stalled several times before.

Unix Systems Administrator | Sky (Aug 2013 - Dec 2016)

Key member of the Project Delivery team of Sky's Unix infrastructure department. Built, configured and deployed new infrastructure for high-profile projects. Provided support for thousands of Red Hat and Solaris physical and virtual systems. 24-hour incident response, resolution and root-cause analysis.

Developed build automation tools for Red Hat systems, becoming a key maintainer of the server build process. Introduced and encouraged adoption of Ansible playbooks for common operational tasks.

Achieved Red Hat Certified Systems Administrator (RHCSA) and Red Hat Certified Engineer (RHCE) certifications on RHEL6, and renewed on RHEL7.

Planned and executed mission-critical Oracle database migrations across various storage technologies (IBM and EMC SAN arrays, NetApp NAS devices). Developed scripts to automate multi-terabyte database copies across environments using Perl and the REST API of IBM XIV storage arrays.

Education

University of the West of Scotland | (Sept 2006 - Jul 2010)
BSc (Hons) Computer Networking - First Class

Court Medal Winner, 2006, 2010.