

SUMMARY

Staff Site Reliability Engineer with extensive experience designing and building scalable cloud infrastructure, improving service reliability, leading incident response and maintaining service level objectives. Proven track record in reducing costs, reducing toil, optimizing pipelines, and mentoring engineering teams.

WORK EXPERIENCE

Moody's Analytics / Passfort

London

Staff Site Reliability Engineer / Staff Software Engineer

2023–Present

- Designed and implemented cloud agnostic support for new infrastructure components in the core platform with a focus on performance, reliability and security.
- Designed and implemented databricks infrastructure in azure together with robust RBAC and SSO.
- Implemented SOC2 ready disaster recovery (DR) planning and tabletop drills.
- Moved on to SRE support rota for incidents involving infrastructure, major outages or requiring elevated permissions in production environments.
- Implemented secure workload identity based access to postgresSQL and MySQL for new services in GCP.
- Migrated container registry infrastructure from GCP to Jfrog Artifactory against a tight deadline.
- Led the migration of the core reporting platform to a homeogenous solution based on databricks resulting in a 70% reduction in incidents.
- Reduced data pipelines' costs by 50% through use of spot instances and code refactor, all while improving completion time by 20%.
- Sped up data pipelines' by 50% through implementing efficient data load functionality into postgres based on COPY commands.
- Managed two direct reports, providing guidance and support to ensure their professional growth and success.
- Led the end-to-end design and implementation of an automated reporting platform, spanning external and internal service integration, REST APIs, and database schema design.

Senior Software Engineer

2022–2023

- Optimised all database operations for a service to under 75ms, achieved through use of appropriate indexes and query optimization.
- Moved to 2nd line engineering support to tackle solving a wider range of issues with the platform, organise incident response and lead postmortems and root cause analysis processes.
- Improved P95 latency for a heavily used core API endpoint by 10x.
- Mentoring and onboarding fellow engineers, juniors and new starters across a number of different teams.

Software Engineer

2021–2022

- Mentoring and helping new starters as well as other teammates across areas of expertise.
- Optimize container image size from over 800MB to just under 100MB by only including necessary binaries and libraries leading to a 10% speedup in CI/CD pipeline.
- Added Datadog metrics, dashboards, alerts, and playbooks for business-critical functionality.

Junior Software Engineer

2018–2021

- Full stack design, development and testing including CI/CD pipelines, kubernetes for shipping micro-services, incident/bug response as first line support and weekly demos of new features.

SKILLS/TOOLS

Rust, Python, Bash, JavaScript | Kubernetes, Cilium, Ceph | Flask, Axum, OpenAPI, REST APIs
Terraform, GCP, Azure, AWS | PostgreSQL, MySQL, Redis, ElasticSearch, Pulsar | Circle CI, Github actions
Grafana OSS, Datadog, OpenTelemetry | SQL, Spark, LogQL, PromQL | Vynos, Tailscale, Linux | Scrum

PROJECTS

Home ops

2020–present

- Talos linux based kubernetes with 3 HA control plane nodes and 3 worker nodes. Rook-ceph for cluster storage including block, object, and distributed filesystem based storage. Cilium for cluster networking together with BGP peering for publishing load balancer IPs.
- Cluster wide PVC backups using velero, shipped to external blob storage.
- HA postgres and redis clusters used by various workloads
- Monitoring and alerting stack using grafana, prometheus, loki, alloy and tempo able to ingest and alert on metrics, logs and traces.
- Implemented gitops principles with argoCD, kustomize and renovate for automated deployments and updates
- Implemented secure secret management with hashicorp vault and external secrets operator
- Ldap and OIDC based SSO for all applications that support it using kanidm + oauth2 proxy

EDUCATION

Queen Mary UoL | MSc Big Data Science | Distinction

2018–2019

University of East Anglia | BSc Computer Science | 2.1

2015–2018