

Nathan Reynolds

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Software engineering professional with strong affinity for devops & agile principles, product development and cloud infrastructure.

Strengths:

- Python
- AWS
- Linux
- Distributed systems
- Cloud infrastructure automation
- Performance engineering & analysis
- Continuous delivery
- Agile development
- Operations & live support
- Automated testing

Professional experience:

2017 - **DevOps Consultant**, KCOM
present

Development, CI/CD & cloud infrastructure within AWS Premier Partner consultancy. Projects included:

- IoT/big data platform project:
 - Development, architecture and performance analysis of Python microservices with AWS Lambda (SAM), API Gateway, Kinesis Firehose, SQS, SNS, X-Ray, CloudWatch, SSM, KMS, IAM, Glue, Athena, EMR.
 - Infrastructure automation with CloudFormation & Packer, orchestrated with cfn-sphere and custom Bash/Python scripts.
 - Discovered and remedied performance hotspots to increase capacity beyond customer projections.
 - Designed, ran and analysed load tests. Included development of custom load injector to push 800 million messages per day.
 - Improved platform observability with CloudWatch & X-Ray.
 - Increased performance of legacy ETL process 450x.
- Data marketplace project:
 - Reverse-engineered & documented customer's 60 microservice Docker-based platform on Azure with bespoke container orchestration.
 - Containerised in-house microservices, assisted team with development use of Docker.
 - Automated CI, infrastructure and deployment in Jenkins using Python, Bash and Packer.
 - Wrote debugging HTTP proxy in Go.
- Internal projects:
 - Two Kubernetes PoCs: one to explore Azure K8S options, another to assess cross-cloud potential and developer experience.
- Certification:
 - AWS DevOps Pro.

2013 - **Platform Lead**, Proxama
2017 (*previously: Feature Team Lead, 2015*)

Agile development, team leadership, CI and cloud infrastructure in mobile location

marketing company.

Platform consisted of customer-facing UIs, APIs and backend infrastructure.

- Led development of platform using Python, Django, Flask/Eve, Node.js, Docker and AWS.
- Development included product improvement and non-functional requirements: resilience, monitoring, scalability, security and cost effectiveness.
- Presented updates to peer leads and the board.
- Reduced infrastructure spend by several thousand per month.
- Deconstructed high level designs into estimable, actionable and testable pieces of work. Acted as scrum master to ensure work pieces were available, priorities were clear, and reduce blockers faced by development team.
- Pioneered CI within the company, creating custom pipeline software for Gitlab & Jenkins, code review visualisation and notifications.
- Built UI testing framework with Python and Selenium.

2013 -
2013 **Contract Developer, TSO**

- Developed sites for government customers using PHP, Drupal and graph databases. Wrote technical proposals for project tenders.

2012 -
2013 **Senior Developer, Soak**

- Architected and led backend development of peer-to-peer car rental marketplace in PHP's Zend Framework.
- Automated VPS provisioning in Python & Bash, reducing per-customer setup time from hours to minutes.
- Designed SVG rendering pipeline to create on-demand PDFs from a template PDF - previously laid out with code, a time consuming and error prone process.

2011 -
2012 **Contract Developer, Cluster Digital**

- Improved performance of Fujifilm's Drupal site, growth of which led to increasing issues. Used PHP's Xdebug, MySQL's slow query log, and custom tools to aggregate sampled performance data and identify the site's weak points.

2008 -
2011 **Developer, Aviva**

- Lead developer on RAC's route planner refresh in Python and Django, including load testing and resolution of performance issues.
- Built Python SAML library to integrate with company's single sign-on.
- Wrote CMS to create microsites for company pension plans.
- Rebuilt RAC's European Breakdown application.
- Developed Python spreadsheet simulator to aid migration of internal calculators.

2008 -
2008 **Contract Developer, Perenco**

- Designed and developed gas platform monitoring application in PHP, Javascript and XSLT.