Asfand Qazi

Senior Developer, Cloud Architect, AWS Specialist

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Since 2006, have developed web applications, and worked as a DevOps/SRE engineer, for some of the world's most well-known brands.

Specialise in utilising both development and DevOps/SRE skills to deliver software that is scalable, secure, and reliable, within time and budget, that fulfils the requirements given.

Am an enthusiast of behaviour-driven development, continuous delivery, agile workflow, and serverless computing.

Am looking to solve challenging problems, working on products that change the world, and working with great people.

Key Achievements

Acquired certification: AWS Certified Solutions Architect.

At Verticality, pushed for and engineered several big architectural changes, including the move to a proper microservices based infrastructure, as well as the moved to a serverless container management service over containers run on self-managed servers.

At Armakuni, helped the team scale the Comic Relief donations platform so it could accept at least 200 donations per second, and at least 800,000 donations in total, during the Sport Relief 2018 televised event.

At Alliants, developed an automated, self-healing, immutable-server based continuous integration & delivery pipeline on AWS, which significantly reduced deployment and support overhead. Had to first get buy-in for tech behind the pipeline from CTO, dev team, and their clients.

At TPO, championed design of infrastructure, and continuous integration and deployment pipeline. Also had to rescue infrastructure from a disaster where ⅓ of servers were brought down due to loss of service at SoftLayer.

Skills

Software Engineering (10+ years)	Am focused on delivering easy to understand, easy to maintain code. Keep a balance between refactoring and new feature development, to ensure consistent rate of software delivery.
Test/Behaviour Driven Development (10+ years)	Implement test-driven and behaviour-driven development to increase code quality and correctness. Believe in using code reviews to further increase code quality.
Agile Development (10+ years)	Always practice agile development methodologies, like Scrum and Kanban, in teams and when alone, to ensure that the most important task is being worked on at any time.
Programming Languages (10+ years)	Have extensive experience in Ruby, Bash, and Python. Also have some experience in Javascript, Go.

Web Development (10+ years)	Have been working on Ruby on Rails applications for over 10 years. Am able to do full-stack development, but real strength lies in backend development and API development. Tied with DevOps skills, am able to create and deploy secure, reliable, scalable web applications to the cloud.
Continuous Integration and Delivery (10+ years)	Have set up continuous integration and continuous delivery pipelines using Packer, Ansible, Puppet, Terraform, CloudFormation, Vagrant, and Ruby libraries invoking the AWS API. Have automating these by chaining together command-line scripts, Jenkins, and CI SaaS tools (like CodeShip). These have followed "immutable server" philosophy, using machines images to spawn new server clusters on each deployment. Please see A Tale of Two Deployments blog post at above site for philosophy behind deployment.
Configuration Management (7 years)	Have used configuration management extensively to configure servers for different purposes, from development machines, to servers. Have always written config management in a clear and flexible way, allowing easy reuse and extension of components, while still being easy to read and understand how each host is used. Have used Ansible and Puppet for commercial and personal projects.
Infrastructure As Code (7 years)	Have used CloudFormation and Terraform on several commercial and personal projects.
AWS (7 years)	Have had extensive experience administering servers, clusters, and resources on AWS, including RDS, SNS, SQS, Route53, CloudWatch (logs, metric and alarms), S3, VPC, IAM, and others.
Unix/Linux Systems Administration (10+ years)	Have administered many virtual servers, including on SoftLayer, Digital Ocean, and AWS cloud platforms. Have set up and configured log aggregation, monitoring, notifications, automatic security upgrades, and security enhancements. Ubuntu/Debian experience: 10 years, RedHat/derivatives experience: 1 year.
Leadership (9 years)	Have been involved in leading and organizing teams, and influencing key technical decision making for the long-term greater good. Have trained and mentored juniors and mid-levels.
Databases (10+ years)	Have installed, upgraded, tuned, and configured various databases, including: PostgreSQL and MySQL (standalone and through Amazon RDS), and NoSQL DBs/tools like Redis, ElasticSearch, and Solr.
Consulting (3 years)	Was being mentored in consulting by CTO of Alliants. Learnt how to focus on finding out what clients need instead of doing what they want, persuading them without annoying them, delighting them by exceeding their expectations to ensure referrals and future business, and growing reputation as an expert to help find, nurture, and convert leads.

Recent Work History

Verticality Limited from May 2018 - Present : Cloud Architecture Consulting and Engineering

Worked with Verticality's offshore team to improve their infrastructure.

Was responsible for revamping the entire infrastructure to make it meet the key goals of security, scalability, robustness, and cost-effectiveness.

Played a key role in the transition from a distributed-monolith architecture to a proper microservices architecture which could tolerate components failing without downtime or loss of user data.

Drove the change to vendor-managed services over self-managed servers to enhance security and robustness, while reducing management overhead.

Drove the change to the vendor-managed AWS Fargate service from instance-based ECS which used self-managed servers, which enhanced scalability, cost-efficiency, stability, robustness, and security.

Built a full CI/CD pipeline for all services in AWS using CodeBuild and CodePipeline.

Built a suite of well-tested, easy to use Python tools to replace ageing Bash scripts.

Trained and mentored new DevOps / platform hires, and evangelized test-driven and behaviour-driven development among the team.

Tech used: AWS, Ansible, Terraform, AWS Lambda, Python

Armakuni Limited from January 2018 - April 2018 : Cloud Architecture Engineering and Full-Stack Development on Comic Relief Donations Platform

Worked on the Comic Relief donations platform, which was designed and tested to accept at least 200 donations a second, and at least 800,000 donations in total for the Sport Relief 2018 telethon - a very difficult the scaling problem. Working on the microservice-based architecture, was able to enhance it to be able to handle new requirements, while improving test suite to be more stable during continuous integration and delivery runs, and have fewer transient errors.

Gained experience in maintaining and improving a continuous delivery pipeline managed by Concourse CI.

Worked on infrastructure, frontend, and backend, according to client-prioritised backlog.

Was involved in monitoring and maintaining the platform during the Sport Relief 2018 telethon event on TV.

Tech used: Ruby, Sinatra, JavaScript, Cloud Foundry, Concourse CI, Redis, MongoDB, Terraform, AWS

Centrica Connected Home Limited from February 2017 - January 2018 : DevOps and SRE Engineering Consulting, Infrastructure Platform Development

Was part of the Hive Camera development team, as they developed the Hive smart camera and platform.

Was part of both SRE/DevOps and development teams, and was responsible for disseminating SRE/DevOps culture into product team, allowing them to be independent and not be bottlenecked by a central SRE/DevOps team, while also implementing expert SRE/DevOps practices.

Was able to pick up the very complex shared platform tooling very quickly, using and extending it for product team, leading to becoming productive very soon after joining.

Spearheaded rewrite on infrastructure tooling to make it more flexible and remove repetitiveness of CloudFormation templates across organisation.

Was central to design and implementation of microservices architecture for hosting camera services.

Tech used: AWS, Puppet, Linux (Ubuntu) administration, Bash, Ruby, Python, Go, CloudFormation, CfnDsl, Packer, Jenkins

Imagination Limited from November 2016 -January 2017: DevOps Consulting, Infrastructure Platform Development

Provided emergency development for a company whose previous Ansible developer departed abruptly. Was able to hit the ground running, understand a very complex project, figure out the differences between several in-development branches, and start being productive right away.

Also provisioned a brand new infrastructure on a separate AWS account to help support a new event for their client. Was able to understand, run, debug, and fix infrastructure automation scripts within a very short amount of time.

Tech used: AWS, Ansible, Linux (Ubuntu) administration, Bash, Python, MySQL, CouchDB, LDAP, CloudFormation, Packer, Jenkins

Alliants Limited from October 2015 – August 2016 : DevOps Consulting, Infrastructure Development and Maintenance, Documentation, Training, and Education

Consulted for Alliants Limited, a Ruby on Rails development consultancy, on integrating DevOps processes into their workflow.

Got buy-in from CTO, dev team, and clients, for a machine-image based immutable-server based pipeline with following features:
- creating build artifacts as entire machine images with all their dependencies baked in
- immutable server clusters getting replaced every deployment, thus reducing chance of drift from configuration management in version control
- letting developers deploy a branch to a new endpoint for testing
- zero-downtime green/blue deployments
- self-healing clusters which automatically replace non-functional backends with brand new ones
- easy scaling of clusters by using machine image to spawn new backends

Architected and developed this infrastructure, ported some existing applications to it. Got buy-in from one of Alliant's clients to convince them to use this pipeline for their new application.

Helped them up security to servers, have added redundancy to existing infrastructure, and trained their team to allow them to perform ops duties themselves, through documentation, instructional video, and automation.

Had the privilege of being mentored in consulting by CTO of Alliants.

Tech used: AWS, Ansible, Linux (RedHat, Ubuntu) administration, Continuous Integration & Delivery, Ruby, Bash, PostgreSQL, Terraform, Packer, Jenkins, IPTables

The People's Operator (TPO) LLC from January 2015 – October 2015 : Continuous Integration & Delivery Pipeline Development, Infrastructure Maintenance, DevOps Documentation and Training, and Backend Web Development

This role was split into 2 parts: first, carried out both web development and DevOps duties (January - June), and later on switched purely to performing only DevOps duties (June - October).

Had the privilege of working with Jimmy Wales, founder of Wikipedia, and Andrew McDonough, CTO of Tribesports, to develop a social network and fundraising platform, as the charitable arm of their ethical mobile phone network.

Working in an agile team, played an integral role in designing and developing a brand new social network from scratch, using Ruby on Rails, supported by PostgreSQL, ElasticSearch and Redis. Used and encouraged test-driven and behaviour driven development, code reviews to drive up code quality. Also played interim Scrum Master role for a few weeks during absence of actual lead developer.

Got buy-in for, championed, designed, and developed, infrastructure and deployment pipeline, using Ansible, Ruby, Bash, and Jenkins. Later, the infrastructure and all the apps had to be migrated from AWS to IBM SoftLayer due to legal requirements.

Had to rescue infrastructure from disaster where ⅓ of servers were brought down due to loss of service at SoftLayer. Due to use of configuration management, was able to recreate unavailable services on other parts of SoftLayer that were still available.

Tech used: Ruby, Rails, Bash, Javascript, PostgreSQL, AWS, Continuous Integration & Delivery, SoftLayer, Elasticsearch, Ansible, Linux (RedHat, Ubuntu) administration, Vagrant, Networking, Jenkins, Nginx, Redis, Sidekiq, OpenVPN, IPSec, IPTables

Akzonobel (owners of Dulux) from April 2014 – December 2014 : Web Development

Salmon Ltd was consulting for owners of Dulux paints to create a CMS with e-commerce functionality. Had to work to integrate Spree e-commerce package into existing CMS, allowing seamless flow from one site to the other. As the sole Ruby on Rails developer working on e-commerce component, was able to keep up with a team of 19 working on the rest of the site.

Was noted for always liaising with product owners to develop simplest solution that fulfilled the requirement at hand, and being "the git guru". Was involved in interviewing other Rails developers, including for when looking for replacement, and was told to be picky as "they have big boots to fill".

Also used Ansible to set up dependencies on development machines, which were Vagrant VMs running Ubuntu.

Tech used: Linux (Ubuntu) administration, Ansible, Vagrant, Ruby, JavaScript, Rails, Spree, Bash, MySQL, MongoDB, Maven

Mopp Ltd from March 2014 – April 2014 : Web Development

Short-term web development contract with cleaner booking portal, terminated early due to premature reprioritization of development funds by company shareholders and directors.

Tech used: Ruby, Rails, MySQL, JavaScript

The App Business Ltd from November 2013 – March 2014 : Mobile App API and Data Importer Development

Was part of the team responsible for developing the backend service that imports data from various third party service providers and presents the data to the football scores apps running on both Android and iOS via a JSON API. Backends had to be deployed in totally isolated production environments so had to design deployment procedure that was able to run without any intervention.

Was also given responsibility to reformat major import architecture to make it more extensible, more understandable, and more robust.

Tech used: Ruby, Rails, MySQL

Property Detective Ltd from January 2013 – October 2013 : Full Stack Web Development, Linux System Administration

Worked for Property Detective Ltd (https://www.propertydetective.com/), a consumer property research portal, to enhance their reports of areas around the UK. Duties included full-stack web development, data importer development, and systems administration of their infrastructure. Sysadmin duties included upgrading applications, securing servers, scheduling backups, adding more backend servers, administering users, and tuning databases.

Tech used: Linux administration (Ubuntu), Ruby, Rails, JavaScript, PostgreSQL Administration with PostGIS, Apache

Older Work History

Sanger Institute from February 2011 – December 2012

Worked as a full-stack web developer, as well as performing some Linux administration tasks and writing configuration management.
Tech Used: Linux (Ubuntu) administration, Bash, PostgreSQL, Ruby, Rails, Bash

Your Golf Travel Ltd and Spabreaks Ltd from April 2010 – January 2011

Work in an agile team that developed an internal booking system.
Tech Used: Linux (Debian) administration, Ruby, Bash, CouchDB

Personal Development and Freelancing from November 2008 – November 2009

Was involved in developing and hosting bespoke business directory for freelance client, and performing system administration duties for it.

Tech Used: Linux (Debian) administration, Ruby, Bash, MySQL

LCN and ServerChoice from March 2006 – November 2008

Worked for web hosting company that sold various hosting related services, such as domain names, virtual machines, hosting space, etc. Wrote a drop-in replacement domain registration system from scratch which worked for the first time.

Tech Used: Linux (Debian) administration, Ruby, Bash, PostgreSQL

Other Information

Degree: BSc. Software Engineering from the University of Westminster.
Interests and Activities: Programming, functional fitness, reading.
References available upon request

CV Updates

Latest version of this CV can always be downloaded here:

docx   https://drive.google.com/open?id=1fLtlUbx0GezgprZZaXCsynx8xCPAPIaK

pdf   https://drive.google.com/open?id=1WDXUpqiQVehxCQmo_3cxLXXWL-t9uO3g