#### **Aseef Ahmed**

Present Location: Wellington, New Zealand

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LinkedIn: linkedin.com/in/aseefahmed | Web: aseefahmed.github.io

AWS DevOps Engineer | AWS Developer | AWS SysOps Administrator | AWS Solution Architect | Alexa Developer | Azure Architect | Data Science | Machine Learning | Red Hat Certified Engineer (RHCE)

AWS & Redhat Certified Professional / GCP / Microsoft Azure / Docker / Kubernetes / Openshift / Ansible / Terraform / Linux / Python / ElasticSearch / Jenkins / Git / Nginx / IoT / Serverless Application Development

- Red Hat And AWS Certified Engineer having more than 9+ years of overall professional IT experience and 4+ years of experience in dealing with Cloud service providers like AWS & GCP, DevOps Implementation, Build & Release engineering and Linux administration.
- Technologies used throughout my career include AWS | GCP | Microsoft Azure | Docker | Kubernetes | Jenkins | Ansible | Linux | Git | Red Openshift | Python | PHP | MySQL | DataDog | NewRelic | Nginx | Networking | ElasticSearch | Chef | Terraform and many more.
- Learned new technologies and tools, and introduced them to the company; in which way it helped the company build up an agile development environment. It improved the product quantity and work efficiency.

#### Professional Certifications - AWS / Azure / Red Hat

- AWS Certified SysOps Administrator Associate [Verify]
- AWS Certified Developer Associate [Verify]
- AWS Certified Solution Architect Associate [Verify]
- AWS Certified Alexa Skill Builder [Verify]
- AWS Certified Cloud Practitioner [Verify]
- Microsoft Certified: Azure Administrator Associate [Verify]
- Microsoft Certified: Azure Al Engineer Associate [Verify]
- Microsoft Certified: Azure Data Scientist Associate [Verify]
- Microsoft Certified: Azure Data Fundamentals [Verify]
- Microsoft Certified: Azure AI Fundamentals [Verify]
- Microsoft Certified: Azure Fundamentals [Verify]
- Red Hat Certified Specialist in Ansible Automation [Verify]
- Red Hat Certified Engineer (RHCE) [Verify]
- Red Hat Certified Specialist in Openshift Administrator [Verify]
- Red Hat Certified System Administrator [Verify]
- Red Hat Certified Specialist in Virtualization [Verify]

	Key Skills	
Amazon Web Services (AWS)	Google Cloud Platform (GCP)	Microsoft Azure
Kubernetes	Ansible	Agile Methodology
Jenkins	GitHub   GitLab	Nginx Web Server
Git	SDLC	Networking
DevOps	Shell Scripting	Pandas   Numpy   Matplotlik
Python	Docker	Tableau   Power Bl
ELK Stack / Splunk	Linux	Openshift
Terraform	Chef	Machine Learning

#### **CAREER REVIEW**

November, 2019 – Current: Ministry of Social Development (MSD), New Zealand Cloud Engineer



January, 2019 – October, 2019: Packt Publishing

DevOps Content Creator



January, 2018 – Jan, 2019: CrossOver
Senior DevOps Engineer & Chief Cloud Architect



Dec, 2016 – Nov, 2017: MARS Solutions Ltd Sr. Software Engineer



April, 2015 – Dec, 2016: Fair Pattern Inc.

Sr. Software Engineer



April, 2011 – Feb, 2015: Nexus IT Consultants
Senior Software Engineer



February, 2008 – September, 2009: BJIT Ltd. (Bangladesh-Japan IT)

PHP Developer



July, 2007 – May, 2008: Evoknow Inc. (US Based Company)
Web Developer

#### PROJECT HANDLED

# Building & Deploying a Serverless Web Application into GCP

- Hosted the frontend application into Google Storage
- Managing & Authenticating the users through Amazon Cognito
- Building the serverless backend with Lambda, NoSQL & Python
- Building & Deploying RESTful APs with API Gateway

## Automated software delivery life cycle using CI/CD pipeline ini GCP

- Successfully generated a release pipeline that automates software delivery process using GCP DevOps toolchain.
- Presented automated code deployments by connecting pipeline
- Managed and plugged build service, including Jenkins with the CI/CD automation.

#### Created a build server for Continuous Integration (CI) on GCP

- o Introduced and presented a virtual application server to host Jenkins server using GCP Virtual Instance. In that single-node setup, both the Jenkins server and agent run on the same instance.
- Efficaciously installed Jenkins on instances
- Configured the Jenkins with build servers in order to spin up additional instances as build servers, based on resource consumption.

#### Migrated a GIT repository from GitHub into GCP Repository

 Migrated a big project to the GCP repository. As the project was too big, the migration process has been done incrementally with a python script.

#### Hosted a static website in AWS (Using AWS S3, Route53 & CloudFront)

- o Installed, arranged and configured a static website using Amazon S3. Amazon S3
- Connected the domain name with that website using Amazon Route 53. Amazon Route 53 for describing Domain Name System (DNS) where to find that website.

#### • Break a Monolith Application into Microservices

- Containerize the application
- Deploying the application into ECS cluster
- Breaking the application into several interconnected services and push each service's image to an Amazon ECR repository
- Deploying the application as a set of interconnected services behind an Application Load Balancer (ALB)

#### Deploy a Kubernetes Application in Google Kubernetes Engine

- Launching a Python web application environment using GCP App Service. App Service provisions and manages the underlying infrastructure such as GCP instances and stack components such as OS, web server, language/framework)
- Deploy the web application using App Engine

#### Migrating database from Oracle to Amazon Redshift

 Converted the data warehouse schema and code from an Oracle data warehouse running on Amazon Relational Database Service (Amazon RDS) using the AWS Schema Conversion Tool (AWS SCT).

- Migrated data from the Oracle data warehouse to Amazon Redshift using the AWS Database Migration Service (AWS DMS).
- Performed post-migration activities such as running SQL queries to validate object types, object count, and number of rows for each table between source and target data warehouses.

## • Set Up an Email-Receiving Pipeline

- Set up a domain to receive email using Amazon SES
- Saved the emails in raw format to an Amazon S3 bucket. Amazon SES saved the email to the Amazon S3 bucket in raw format, so that we can have the flexibility to process and displayed the email with our own application.

## Deploy a Data Warehouse

- o Created an Amazon Redshift cluster from the AWS Management Console.
- o Configured the cluster by choosing the instance type and specifying the number of nodes.
- Secured the cluster using AWS IAM and set it up for access.
- Loaded the data to the cluster from Amazon S3 after defining a schema and creating the tables.
- Setting up SQL Workbench/J to access the data in the Amazon Redshift cluster using the Amazon Redshift JDBC driver.
- o Analyzed the data with standard SQL from SQL Workbench/J.

#### Design a database for a mobile app with Amazon DynamoDB

o The DynamoDB contained a single-table design that combined multiple entity types in one table and a composite primary key that allow for many-to-many relationships. The table also had an inverted index to allow reverse lookups on our many-to-many entities. We also normalized the data to make the information consistent and redundancy free.

### • Implementing Amazon ElastiCache for caching session data using Redis

o Configured Amazon ElastiCache nodes for Redis as a distributed cache to handle the sessions from the application.

#### Deploy WordPress with Amazon RDS, CloudFront, Cloud Formation and EC2 in AWS

- o I also make sure Automated backup and recovery are there so that we won't lose data in the event of any accident
- CloudFormation script has been written so that the wordpress application can be deployed into another region or infrastructure with ease and without any human intervention.
- Scripts has also been written in Python to take automated backup of the application and database and stored them in Amazon Simple Storage (S3) service.

#### • Implementing Continuous Delivery Pipelines with Spinnaker and Google Kubernetes Engine (GKE)

- o Set up an environment by launching Google Cloud Shell, created a Kubernetes Engine cluster, and configured the identity and user management scheme.
- Deployed Spinnaker to Kubernetes Engine using Helm chart.
- Build the Docker image and create triggers to rebuild the docker images when the application changes.
- Configured a Spinnaker pipeline to reliably and continuously deploy the application to the Kubernetes Engine

#### • Setting up a Development Environment for Python using AppDev in GCP

o Set up a Python development environment on Google Cloud Platform, using Google Compute Engine to create a virtual machine (VM) and installed software libraries for the development.

#### • Launch a service using Deployment Manager in GCP

- o Installed and configured an advanced deployment using Deployment Manager templates.
- Enabled Stackdriver monitoring.
- Configured Stackdriver Uptime Checks and notifications.
- Configured a Stackdriver dashboard with two charts, one showing CPU usage and the other ingress traffic.
- Performed a load test and simulate a service outage.

## Automating cloud infrastructure with Ansible / Chef

- o Used Ansible/chef to automate cloud infrastructure such as virtual machines, load balancer, storage etc in AWS/GCP
- o automated configuration management such as installing software packages, updating patches and configurations etc. within the virtual machines

#### Build a Log Analytics Solution in AWS

- o Set up a Kinesis Agent on data sources to collect data and send it continuously to Amazon Kinesis Firehose.
- Created an end-to-end data delivery stream using Kinesis Firehose. The delivery stream transmitted
  the data from the agent to destinations including Amazon Kinesis Analytics, Amazon Redshift,
  Amazon Elasticsearch Service, and Amazon S3.
- o Processed incoming log data using SQL queries in Amazon Kinesis Analytics.
- o Loaded the processed data from Kinesis Analytics to Amazon Elasticsearch Service to index the data.
- o Analyzed and visualized the processed data using Kibana.

### Build a Serverless Real-Time Data Processing App in AWS

- o Created a stream in Kinesis and wrote to and read from the stream to track information
- Build a Kinesis Data Analytics application to read from the stream and aggregated metrics
- Persisted aggregate data from the application to a backend database stored in DynamoDB and run queries against those data.
- Used Kinesis Data Firehose to flush the raw sensor data to an S3 bucket for archival purposes.

### • Implementing CI/CD Pipeline with Azure DevOps for the following Stack

- Kubernetes
- Node.JS Application
- Java Application
- .NET Core App
- Web App & SQL Server Database

### Securing the Secrets in the pipelines using Azure Key Vault

- Accessing Secrets from Azure Key Vault
- Linking Secrets from Azure Key Vault

### • Data Analysis & Visualization with Various Python Libraries

- o Data analysis, cleaning, transformation with Pandas Library
- Data visualization with Matplotlib and Tableau

 Implementing data ingestion pipeline using various AWS services like Lambda Function, Simple Storage Service (S3), Step Functions etc.

## • Implementing Configuration Management using Terraform

- Deploying three tier web application in Azure with Terraform
- Deploying Terraform infrastructure using Azure DevOps
- Deploying Terraform infrastructure in Azure using Jenkins

#### Automating infrastructure deployments in the Cloud with Terraform and Azure Pipelines

- Developing Terraform Code for the infrastructure
- o Building application using Azure Pipeline
- o Deploying Azure resources using Terraform (IaC) in Azure CD pipeline

## Automating Infrastructure Deployments in the Cloud with Ansible and Azure Pipelines

- Creating Azure service principal
- Configuring and Defining Ansible on Linux VM
- Creating Azure Connections on Azure DevOps

## • Implementing CI/CD pipelines for deploying Azure Web Apps

- Deploying Azure Infrastructure using Terraform and Azure Pipeline
- o Using multiple deployment slots for development, staging and production environment
- Monitoring health check of the web application via Azure Log Analytics

#### • Designing infrastructure for deploying three-tier application in multiple Azure Region

- o Implementing Azure Traffic Manager to minimize the application latency
- o Makings sure Azure resources are highly available and fault tolerant using various Azure offerings

### • Implementing CI/CD pipeline for Microservice application on Azure Kubernetes Cluster

- Configuring build and release pipeline within Azure DevOps
- Building infrastructure and deploying application with Azure Pipelines
- o Monitoring Kubernetes clusters using Prometheus and Grafana

[For more of my projects, please visit <a href="https://aseefahmed.github.io/#projects">https://aseefahmed.github.io/#projects</a>]

**TECHNICAL SKILLS** 

Cloud Experiences : AWS, GCP, Azure, IBM Cloud

Container Orchestration Tools : Docker, Docker Swarm, Kubernetes, Red Hat Openshift, AWS ECS

Programming Skills : HTML5, CSS JavaScript PHP, MySQL Bootstrap WordPress Ruby on Rails

C#, Python, ASP.NET, Shell Programming, Data Analysis in Python

PHP Frameworks : Laravel, Codeigniter, Zend, CakePHP, Django, Magento

DevOps Tools : Jenkins, Chef, Ansible, Puppet, AWS, Selenium, Datadog/New Relic,

Maven, Docker

Microsoft Azure : Azure DevOps, Machine Learning, Data Factory, Web App, Azure

Function

Servers : Apache, Nginx, Tomcat

Cloud Computing (AWS) : Elastic Cloud Compute (EC2), Simple Storage Service (S3), Cloud

Formation, Relational Database Services (RDS) and many more

**English Proficiency** : IELTS - 7.5

JavaScript Skills : JQuery, React.JS, Node.JS, Angular.JS

Database Skills : MySQL, MongoDB, SQL Server

Microsoft Office : MS. Excel, MS. Access, MS. PowerPoint

Third Party API : Amazon, Payment Gateways, Google, Facebook, Twitter

Operating System : Linux, Mac, Windows
Version Control System : Git, Github/BitBucket

Linux Server : System Administration, Database Server, Web Server, DNS Server, Mail

Server, Firewall

Project Management Tools : Jira and Microsoft Office 2010

#### **EDUCATION**

- Computer Science & Engineering (CSE), Jahangirnagar University (Bangladesh)
- Master's in Business Administration (MBA), University of Wales (United Kingdom)

#### Hobbie

- Learning new technologies
- Subscribing online courses/webinars/blogs focusing latest technologies
- Watching movies