Muhammad Ali Kahoot

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§ Role

Software / DevOps Engineer (Team Lead)

§ Education

National University of Computer and Emerging Sciences, Islamabad
BS (CS) — 2012 - 2016

Achievements

- Top 14% on StackOverflow
- Employee of the Quarter(Oct - Dec 2018)
- Dean's list of honour for five semesters i.e. Fall 2012, Fall 2013, Fall 2014, Spring 2015, Spring 2016
- Won the Telenor Hackathon in health category

§ COMPETENCE

Container Platforms:
Docker, Kubernetes, OpenShift, Azure Kubernetes Service,

DevOps Tools:
Helm, Jenkins, Weaveworks Flux, Sealed Secrets Controller, Sonatype Nexus, Keycloak, Chartmuseum, Docker Compose, Terraform, Prometheus, Grafana, EFK stack, Istio

Programming:
.Net, .Net Core, Java, GoLang, Python

Methodologies & Architecture
DDD, TDD, REST, Microservices

Version Control:
Git, Microsoft Team Foundation Server

Tools:

SUMMARY

Software & DevOps Engineer with more than 3 years of experience, I have a vast skill set ranging from Software Development to cloud related technologies like Docker Containers, Kubernetes, Helm, Jenkins, Terraform, AWS. I have a keen interest in working & exploring cutting-edge technologies which challenge my research & software development skills.

EMPLOYMENTS

Software / DevOps Engineer(Team Lead), Aurora Solutions (Stakater)

(http://www.stakater.com)
Islamabad, Pakistan— Apr'18-to date

Currently leading the Stakater(Team in Aurora Solutions) for development of the Stakater platform which provides an easy and secure way to create a Kubernetes based environment. Stakater leverages tools such as Kubernetes, Docker Containers, Helm, etc. My responsibilities include managing Stakater team, reviewing sprints and working on Stakater platform. I have closely worked in defining and implementing the architecture of Stakater. I have also worked on deploying complete infrastructure related stacks on Kubernetes/Openshift using helm which include monitoring stack, logging stack, etc.

Technologies
AWS, Docker,, Shell Scripting, Kubernetes, Jenkins, Github, Gitlab, Bitbucket, Slack, Prometheus, Grafana, Helm, Spring, GoLang, Kubernetes Controllers, GitOps, Flux, EFK stack.

DevOps Instructor, Dice Analytics Pakistan (www.diceanalytics.pk)

Islamabad, Pakistan— Jun'19-to data
Teaching professional course on DevOps with Github, Jenkins, Docker Containers, Kubernetes and Ansible

Software Engineer, Bentley Systems Pakistan (www.bentley.com)

Islamabad, Pakistan— Jun'16-to Apr'18

Worked in Research & Development team called STA (Strategic Technology Advancement). The team works on different projects prioritized and assigned by OCTO (Office of the CTO) for Bentley products

Developer Intern, Code for Pakistan, LMKR Pakistan

Islamabad, Pakistan — Jun'15-to Aug'15

Worked with Code for Pakistan and LMKR in a joint venture. Developed an android app DocLocator through which one can find all the doctors in Islamabad using different search perspectives and fields.

PROJECTS

Deployment Architect, Movement of Pliro to Kubernetes

Migration of Pliro Application from Docker Compose to Kubernetes

Pliro is an application of Aurora Solutions which provides complete doctor management solution. It was previously deployed using Docker Compose on AWS and was taking a lot of resources so cost was increasing. We architected the complete workflow of moving Pliro to Kubernetes. It consists of 6 microservices & 2 environments Dev & Prod.. We moved it to Kubernetes, deploying with GitOps in Dev environment and CIOps in prod environment. The code was managed in Bitbucket. The services were deployed through Helm using HelmReleases and SealedSecrets were used for k8s secrets,

Tools & Technologies
Docker Compose, Bitbucket, Weaveworks Flux, Jenkins, Helm, SealedSecrets, Sonatype Nexus(Private Storage for Images, app artifacts, Helm Charts)

Eclipse, Visual Studio, Visual Studio Code, Enterprise Architect, Jupyter iPython Notebook

Databases:
Oracle, Parse, Azure SQL, Azure CosmosDB, Azure Storage, Azure Redis, DocumentDB

Event Queue:
Azure Service Bus Topics

Microservices Orchestrators:
Azure Service Fabric

§ TRAININGS / MOOCs

- Big Data Analytics & Machine Learning using Apache Spark + Java from Webixn Technologies
- Python & Data Science from Dice Analytics
- Docker Deep Dive by Nigel Poulton from Pluralsight

Coursera:

- Neural Networks and Deep Learning from Coursera
- Improving Deep Neural Networks from Coursera
- Structuring Machine Learning Projects from Coursera
- Deep Learning Specialization from Coursera (Currently Enrolled: Completed 3/5 courses)

Developer, Terraform Azure Openshift
(https://github.com/stakater/terraform-azure-openshift)
Create Openshift Cluster on Azure using Terraform

Develop & manage Openshift cluster on Azure using terraform. We used already built modules and modified them to fit our needs.

Tools & Technologies
Terraform, Ansible, Openshift, Azure

Developer, EKS on AWS using Terraform
Create EKS(Managed Kubernetes) on AWS using Terraform

Develop & manage an EKS cluster on AWS using terraform. EKS is the managed Kubernetes offering of AWS. We used already built modules and leveraged it to create an EKS cluster for our needs..

Tools & Technologies
Terraform, EKS, AWS

Architect, StakaterPlatform
Architected Stacks for Platform related tools for Kubernetes/Openshift environment

Worked on StakaterPlatform, and divided it into different stacks which are required for deploying your applications for CI/CD in Kubernetes/Openshift. The stacks can be deployed through helm on just a single command. The stacks and their corresponding tools are:

Control: ExternalDNS, Ingress Controllers, Reloader, efs-provisioner, HelmOperator, Sealed Secrets Controller, K8s Dashboard

Delivery: Jenkins, Nexus, SonarQube, RDLM, Chartmuseum

Security: Keycloak, ProxyInjector

Logging: Fluentd, ElasticSearch, Kibana, Curator, Logrotate, Cerebro

Monitoring: Prometheus Operator, Prometheus, Grafana, Node Exporter, Kube-State-Metrics, AlertManager

Mesh: Istio

All of these stacks are deployed through Helm Operator and can be configured to be deployed on any Kubernetes/Openshift cluster on a single command using Flux for GitOps

Deployment Architect, Email Service Application
Created a CIOps & GitOps(Flux) workflow for Email Service Application using SealedSecrets

Developed a deployment workflow for an Email Service Application with GitOps for dev and CIOps for qa & prod environments in Openshift cluster. We used Jenkins for CIOps and WeaveWorks Flux for GitOps. Whenever a microservice was updated, the change was automatically reflected in dev environment using WeaveWorks Flux(GitOps) and the change was committed to qa & prod manually and a Jenkins pipeline(CIOps) got triggered for updation there. The code was managed in Bitbucket. The services were deployed through Helm using HelmReleases and SealedSecrets were used for k8s secrets,

Tools & Technologies
Bitbucket, Weaveworks Flux, Jenkins, Helm, SealedSecrets, Openshift, Sonatype Nexus(Private Storage for Images, app artifacts, Helm Charts)

Hosting static websites

Host static websites using AWS S3 & Cloudfront through Terraform

Developed a complete module to host static websites using AWS S3 & Cloudfront through terraform. Created everything required through terraform modules. Can be used for any type of static website

Tools & Technologies

Terraform, AWS, S3, Cloudfront, Route53, Certificate Manager

Deployment Architect, Carbook

Created a complete CI & CD workflow for Carbook microservices through Jenkins & GitLab

Developed complete CI/CD workflow to deploy Carbook application (Aurora Solutions Product) on kubernetes cluster. Carbook consists of many microservices with different technology stack, so created different pipelines for each of them. The code was managed in GitLab and Jenkins is used for the pipelines. All the services are deployed through helm charts using Umbrella Charts concept making it suitable to deploy them in different environments like mock, dev and prod.

Tools & Technologies

Jenkins, GitLab, Helm, Kubernetes, Sonatype Nexus(Private Storage for Images, app artifacts), ChartMuseum

Developer, Kubernetes Controllers

- **Jamadar (https://github.com/stakater/Jamadar)**
  Kubernetes clean-up application for Dangling resources
- **Chowkidar (https://github.com/stakater/Chowkidar)**
  Kubernetes controller for observing events

Technologies

Kubernetes, Go, Slack API

Developer, Connect Containers, Bentley Systems

Refactor the Monolithic Services into more maintainable and scalable microservices, using Docker Containers and Kubernetes

Re-modelled and re-architected the monolithic Bentley Connect Services to a microservices based architecture and deployed them in Docker Containers and Kubernetes using Azure Kubernetes Service. Implemented the micro-services on CQRS (Command Query Responsibility Segregation) and Event Driven Pattern and use Azure Service Bus Topics as the event queue. Made the performance of the Read Service faster by implementing Materialized Views using NOSQL in Azure CosmosDB. Created a CI/CD pipeline using Microsoft VSTS Task based definitions. Implemented Istio as Service Mesh in the cluster and used Zipkin for Distributed Tracing for the micro-services.

Technologies

Containers, Kubernetes, Azure Kubernetes Service, Azure Service Bus Topics, Azure CosmosDB, Istio, Zipkin,

Customer Churn Prediction, Dice Analytics

Predict if a customer would churn

Developed a Classifier that predicted whether a Customer would churn in near future based on its sales history. Used Logistic Regression, kNN, Decision Trees, Random Forest and XGBoost Classifier for prediction.

Technologies

Jupyter Notebook, Python, Sklearn, Machine Learning,