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

- 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
- Came 2nd in App Development Competition in SIST'16

§ 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

Mobile Development:
Android

Methodologies & Architecture
DDD, TDD, REST, Microservices

Version Control:
Git, Microsoft Team Foundation Server

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 Kubernetes, Helm, Jenkins and an interest in Machine & Deep Learning. 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 a complete doctor management solution. It was previously deployed using Docker Compose on AWS and was taking a lot of resources so cost was increasing. I architected the complete workflow of moving Pliro to Kubernetes. It consists of 5-6 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)

Tools:
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, StakaterStacks

Created Stacks for Infrastructure related tools for Kubernetes/Openshift environment

Created multiple stacks for deploying infrastructure related applications on 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.

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)

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, Jamadar (https://github.com/stakater/Jamadar)

Kubernetes clean-up application for Dangling resources

Developed Jamadar, a Kubernetes native application that can poll at configured time intervals and watch for dangling resources that are an 'X' time period old and don't have a specific annotation, and will delete them and take corresponding actions.

Technologies

Kubernetes, Go, Slack API

Developer, Chowkidar (https://github.com/stakater/Chowkidar)

Kubernetes controller for observing events

Developed Chowkidar application, which allows you to have multiple controllers that will continuously watch any of your resources which can be specified in config in all the namespaces and automatically perform any actions given in the yaml file if the respective criteria doesn't meet. With this, you can easily check for any criteria on your Pods/other types and take corresponding actions.

Technologies

Kubernetes, Go, Slack API

Developer, iModelWebServices, Bentley Systems

Service to host different back-ends for handling iModels in Azure Service Fabric

Developed a Service which is responsible to host different back-ends for reading and writing iModels(the file responsible for all the information regarding a construction project). Created a Router and Orchestrator microservices to handle when to run and when to stop the backend service and how would the iModel be downloaded and read. The services are hosted in Azure Service Fabric using the Guest Exe Pattern.

Technologies

Azure Service Fabric, .Net, Azure Redis

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,