Cloud Devops Engineer

CASE STUDY

Business Requirements

Wolkentech (p) Ltd, Wants to develop and publish their product Web APIs on azure which gives basic public access to their Software Product . They don’t want to invest on infrastructure and they want the entire solution to be managed on cloud. As part of the solution , They require following Azure services

a. Azure Sql to host product data

b. Azure Kubernetes Service to run WebApi services as containers

c. Azure App services to host and test WebApi application

d. Azure Container registry to build and publish WebApi images

e. Azure Storage services to store Application logs.

f. Azure repos and Azure pipeline for Code management and CI/CD pipeline

Case Study

- As per the business requirement, the solution is already designed and developed by using 12 factor app principles.
- The following artifacts are ready
  1. Sql Db Schema
  2. Source code of WebApi services [written in .NetCore 5.1] with Dockerfile
- Scenario 1 is you need to create a devops pipeline using azure devops to maintain the code repo at the azure repos and build a pipeline host the WebApi application on azure app services [Serverless].
- Scenario 2 is you need to create a devops pipeline using azure devops to maintain the code repo at the azure repos and build a pipeline to build and publishWebApi application to ACR and deploy to AKS.
- Use Terraform to create azure Storage account and blob storage to store logs, ACR,AKS cluster , Azure SQL and Azure AppService [That would help the client to setup the reproduceable (IAC initiative) environment quick and easy]

Continued…

- Create one more pipeline to Azure Kubernetes service where the containerized WEBAPI service will run as multiple instances and expose them through a load balancer service
- Before running This containers make sure that Azure Sql db account and create required schema and data
- Create azure dashboard showing key metrics of the services running so that it would give insight about the deployment
- We need to make this ecosystem up and running and need to hand it over to the client and let the client monitor and manage the deployment on their own. Any minor changes to the code will be made by them and handle the deployment through CI/CD pipeline which we already setup.

Deliverables

1. Azure Dashboard showing the deployments key metrics
2. Azure blob storage to store application logs
3. Azure app service to host and test WEBAPI application
4. Azure SQL db
5. AKS Cluster hosting the same production ready WEBAPI services
6. Terraform script to create AKS ,ACR, Azure SQL, Azure App Service and Azure storage account, blob storage
7. Azure Code repos and Pipeline