

DEVOPS **INSIDERS**

B12 Interview Preparation Notes

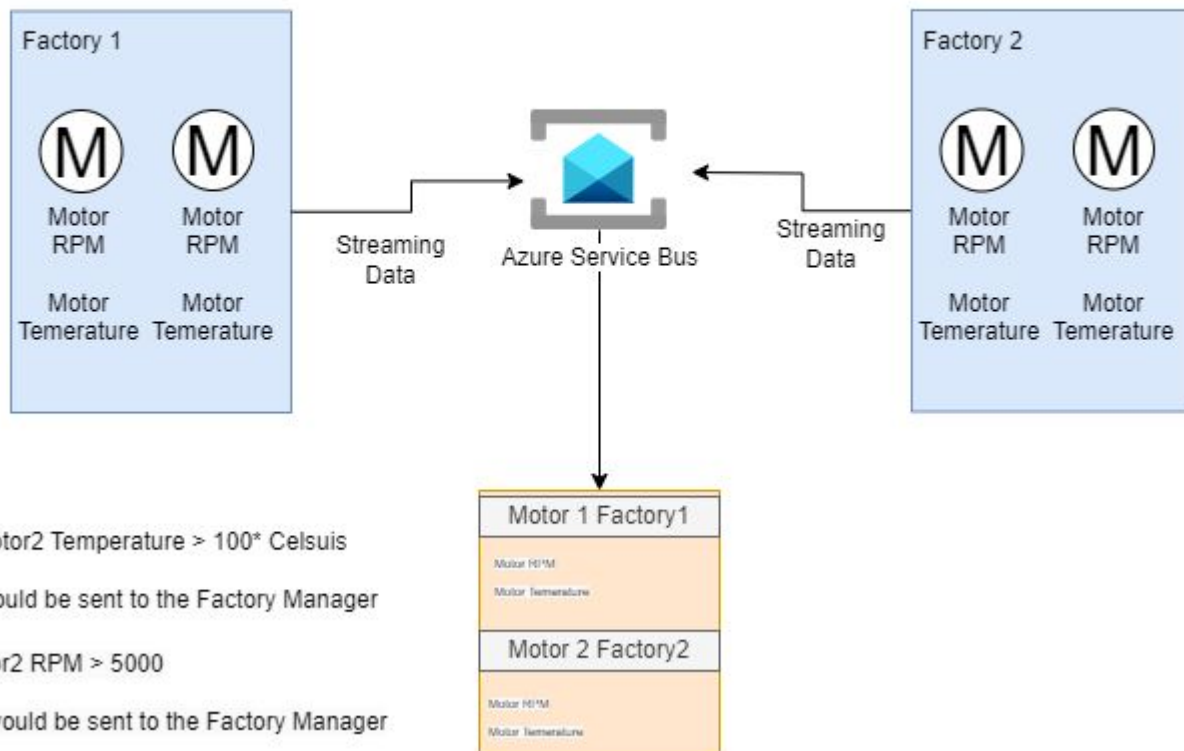
25-10-2023

Interview Hint: Client is searching for a DevOps engineer for an IOT Based Application. (Home Automation)

Tell Me about Yourself?

My name is Lakhan, I am having 10+ Years of exp. I am having experience majorly on Azure cloud and other tools like terraform, docker, Kubernetes. Let me walk you through a project that I have recently delivered.

Industrial IOT Application



For the development there was a of 20 developers. So they were writing the code in dotnet, and the UI was created in React. and while planning of the applciation around 25 microservices were planned.

6 - UI

19 - Backend

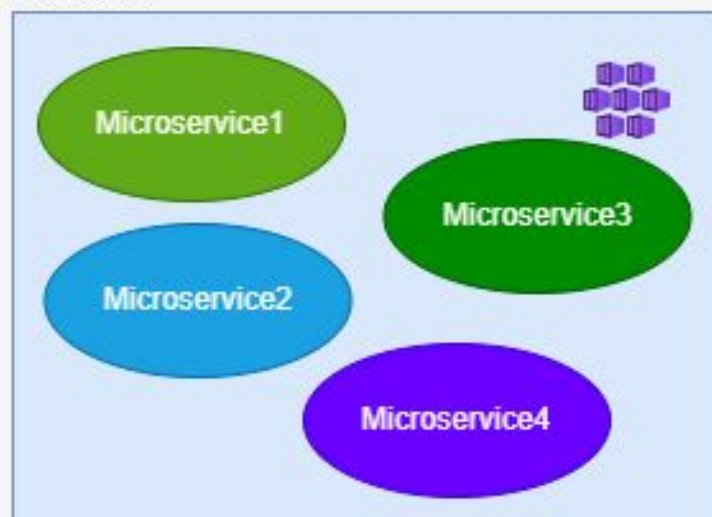


My role was to design the deployment architecture and the CICD architecture. Let me explain you the deployment architecture...

So the EntryPoint of the application was the Application Gateway, We have applied public Ip, and a SSL certificate. and also WAF was enabled. The backend of the app gateway was the Azure Kubernetes Cluster where all our microservices were running.



Vnet and Subnet



Let me give you a walk through inside the cluster.

Deployment.yaml

Service.yaml

secrets.yaml

ingress.yaml

Inside the Kubernetes Cluster, We have created deployment.yaml, service.yaml ingress.yaml and configmap.yaml for each microservice. For each microservice, 3 replicas to make it highly available.

We were using service of type ClusterIP.

To expose the application, We have created a ingress.yaml file.

configmap.yaml

hpa.yaml

StatefulSet Vs
Deployment Vs Daemon
Set

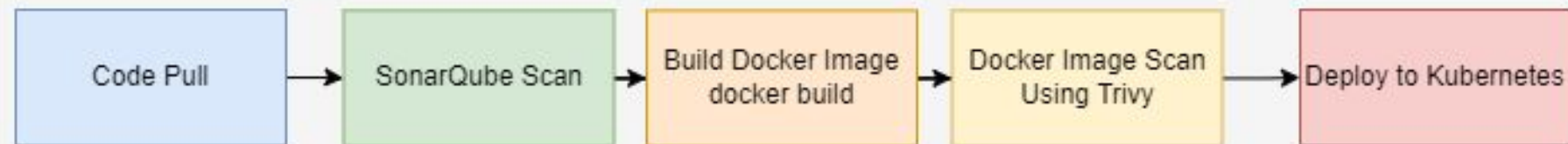
Service Account

All the Infra in the azure was created using Terraform and the code was stored in a separate repository and we created a azure pipeline run the terraform plan, apply and there was a stage for tfsec and trufflehog scan also for compliance.

CICD architecture

For Each Microservice, There was one Repo created in which there was a Dockerfile and all the Kuberentes manifests files(deployment.yaml, service.yaml, configmap.yaml) were also stored in that spetic repo. azure-pipeline.yaml

So, CICD Pipeline created with the below stages:



Future Plans: We are trying to setup Service Mesh using Linkerd.
Currently I have no Idea about that but are exploing on it.