

INTERNATIONAL INSTITUTE OF
INFORMATION TECHNOLOGY

H Y D E R A B A D

Deployer and Bootstrapper

Group 5 - Team 1

Team members :-

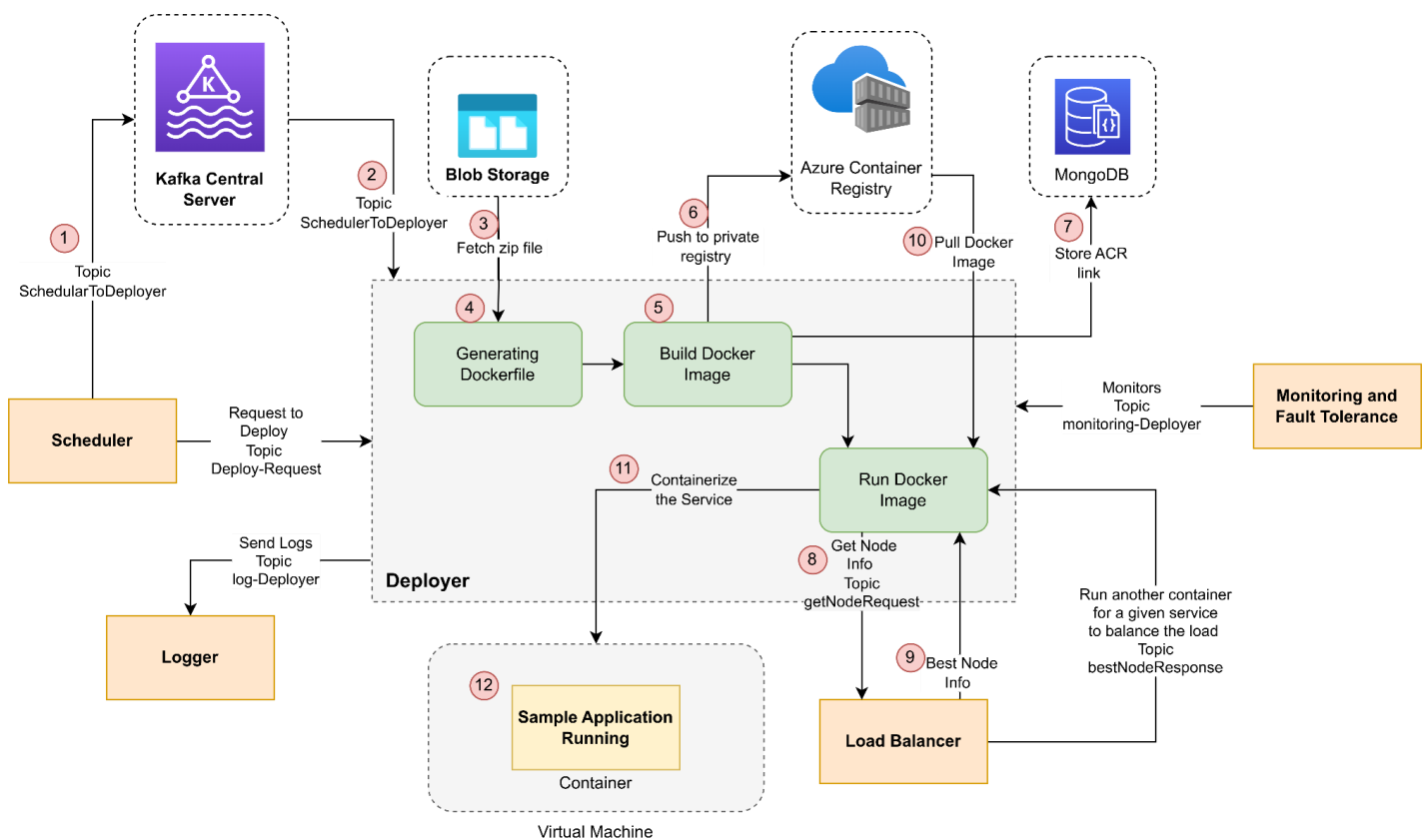
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Deployer

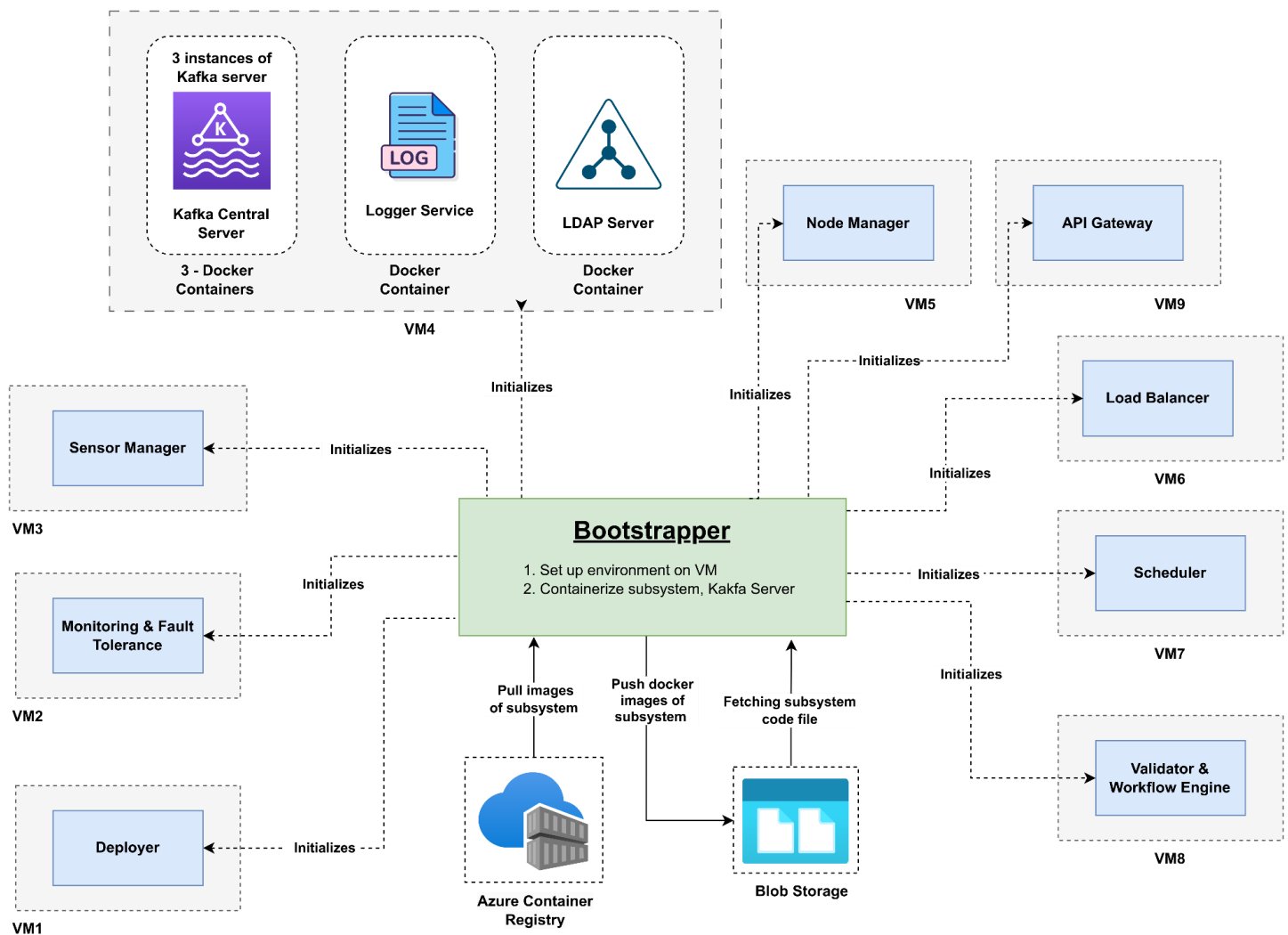
The deployment subsystem is a critical component of application deployment, responsible for managing the process of deploying an application from development to production environments. Its primary role is to automate the process of moving the application code, configurations, and other necessary files from the development environment to the production environment.



Functional Overview

- Scheduler sends a request to the deployer with the details of Application ID and Service ID to deploy.
- Deployer upon receiving the request, downloads the zip file from the blob storage and generates the Dockerfile.
- If the docker image is not present in ACR then only the docker image is built and stored in Azure Container Repository(ACR) and its corresponding image path is stored in MongoDB with other details like Application ID and Service ID.
- Deployer sends the request to the load balancer to give the best node.
- After getting a response from the load balancer, which sends the username, password and ip address of the VM, image is fetched from ACR and run on the VM.
- After running the image, the service is containerized in the VM.

Bootstrapper



Functional Overview

- Bootstrapper process will run the environment setup script on the set of available VMs (Virtual Machines).
- Every Virtual Machine's access information such as its IP, Port and username will be stored in MongoDB.
- Also, all the configuration information such as mongoDB server url, ACR information, etc will be stored in mongoDB.
- Kafka Central server will be started along with Logger and all the subsystems will be up and running.
- Kafka and every subsystem's docker image will be generated and stored on ACR (Azure container repository).
- Kafka central server will have 3 brokers(containers) running simultaneously.
- IP, Port of every container that is initialised will be stored in the service registry.