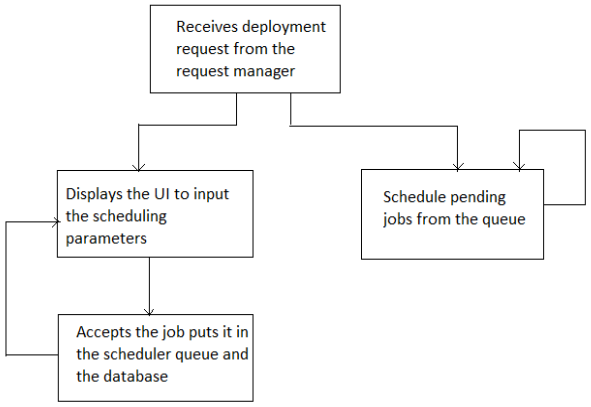
Group-7 Team-1 Project Requirement Document

Scheduler

The Scheduler is connected to the request manager , deployment manager and Service Lifecycle manager . Scheduler receives the deployment request from the request manager which is added to a queue . It then schedules pending jobs from the queue and sends them to the deployment module.

Block Diagram



Functional Requirements

1. Portal

The portal is used to schedule the deployment of jobs.

2. Python scheduler module

Using the python schedule module, a task will be scheduled to run at the specific day at a specific time. Whenever the event arrives, an API POST request will be sent to the deployer with the details of App ID and the User ID's. Scheduling requests can be of three types: One-Time jobs, daily jobs, and weekly jobs. In the case of one-time jobs, they would be scheduled for the earliest day among the chosen days.

3. Database

The database will store User Id, application Id and the schedule time and period for each user.

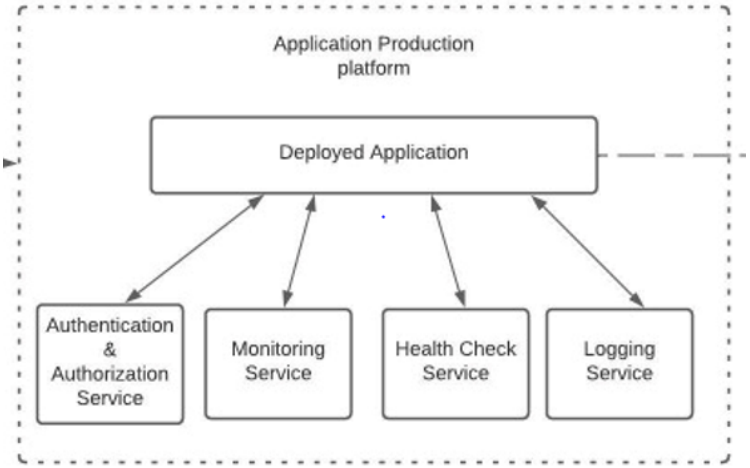
Monitoring Module

The monitoring module will be connected to most of the other modules of the platform that include- Scheduler, Sensor, load balancer, deployer, node manager. It monitors them periodically using heartbeat messages and reports and takes appropriate action in the case when there is an error encountered.

Submodules

- Monitoring Service
- Health Check Service
- Logging Service

Block diagram



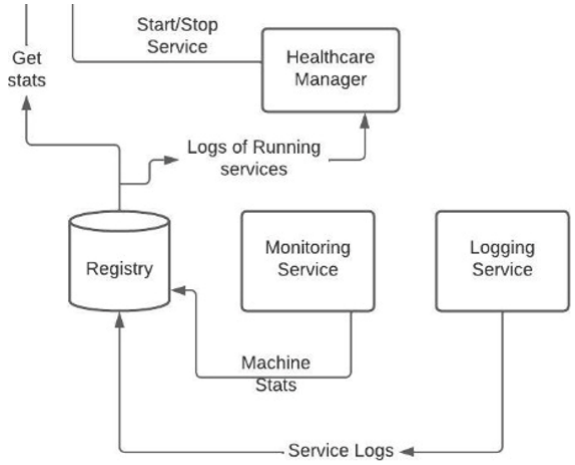
Interactions among sub-modules

The monitoring system is responsible for continuously monitoring the status of all the other modules. And the Health Check service checks the health of each module by periodically sending in the requests, attempting connection. The logs are taken care of by the logging service. It checks if the log file content has been updated or not.

- **Monitoring Service:** The monitoring system is responsible for continuously monitoring the status of all the other modules. It is also responsible for verifying if an instance of the module itself is working or not. It detects and reports any abnormal behavior of any module and the node on which it is running.

- **Health Check service:** The Health Check Service is the load balancer. It checks the health of each module by periodically sending in the requests, attempting connection, or sending a ping to them and getting back the status. It distributes the workload among all the running instances of the service.

- **Logging Service:** It is a log monitoring service that checks if the log file content has been updated or not. It can take the log file path and the log message as the input and check whether the service has written the specified log message onto the log file or not.


Get
stats
Start/Stop
Service
Healthcare
Manager
Logs of Running
services
Registry
Monitoring
Service
Logging
Service
Machine
Stats
Service Logs