

DevOps Engineer Assignment

This document contains description and requirements for assignment for DevOps Engineer position

Goal

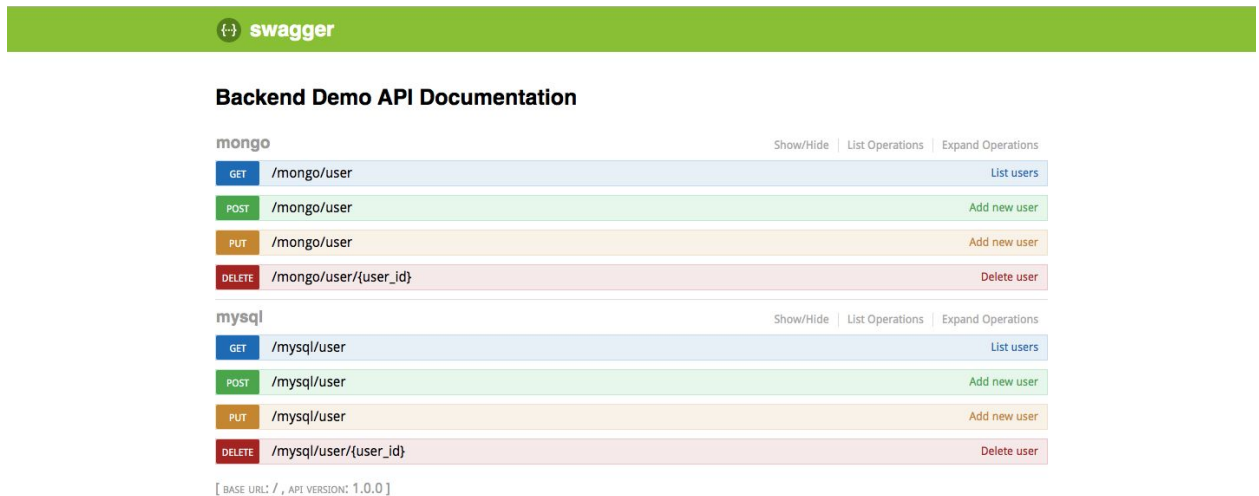
1. Verify candidate's ability to work with Jenkins
2. Verify candidate's ability to work with Docker
3. Verify candidate's ability to create running environment with different services
4. Verify candidate's ability to setup services with security in mind

Assignment (Nginx, Docker, Nodejs)

- A sample Nodejs code is given which is having two databases, MongoDB and MySQL and working CRUD operations for each database using REST APIs.
- Sample code link - https://drive.google.com/file/d/1wVJ1_zVc_-3foDVodHdIS-pvvftjFLU4/view?usp=sharing
- Create a Dockerfile for Nodejs application.
- Make the necessary changes in the code configuration. (config/default.json)
- Create 3 different docker environments using **docker-compose**, each service(Nodejs, MongoDB, MySQL) in the environment should run in a **separate container**.
- Make sure all data will be persistent even if any of the containers crashes, restarts.
- Make sure services will start in the right order (i.e. wait for mysql initialization)
- Add a custom configuration to Nginx
 - Enable HTTPS and redirect HTTP to HTTPS
 - Create a self-signed certificate or use LetsEncrypt, also document the commands you are using to create the certificate
 - Add any other configuration you may think is important (headers, deny access to important files and folders, ...)
- Commit the project to Github and write your explanations and documentation into the readme.

Expectations

- The application should open over https. Following is a sample view.



- All the APIs should work after deployment.
- If we restart any of the database containers, data should persist.
- Environments need to work after we clone it and run docker-compose up without any additional configuration.