SYNTAX

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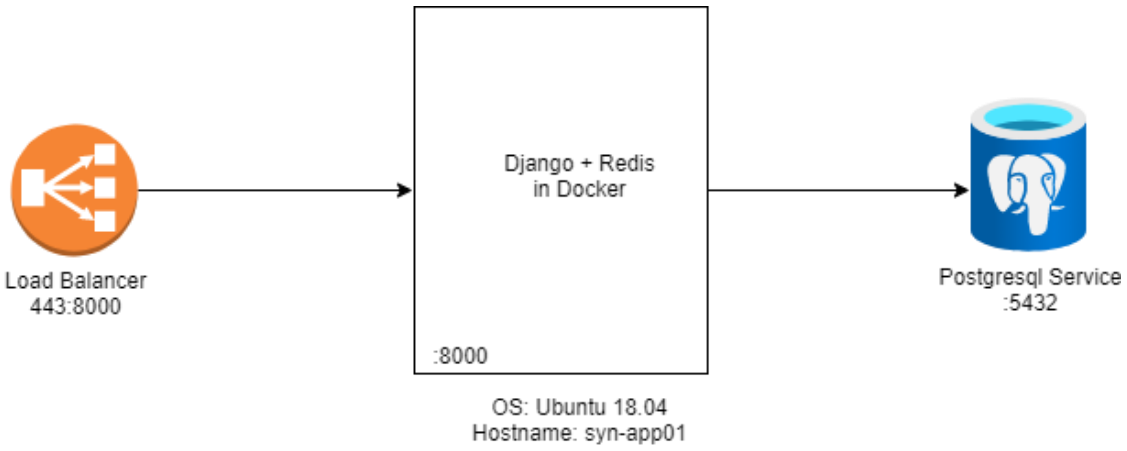
Cloud Automation Analyst – IaC

Scenario

Our customer wants to migrate a web application to the public cloud. Your team is asked to prepare a Proof-of-concept to automate the end-to-end provisioning of the required infrastructure.

Requirements

The design team proposed the following architecture:



Mission

Your mission is to write an automation using your tool of choice (ansible is preferred) to automate the setup and the configuration of the requested architecture. You can choose the cloud service of your choice (Azure or AWS). Your automation program must include at least the following requirements:

Virtual Machine:

1. Provision a Ubuntu 18.04 machine with the minimal CPU and memory configuration (to be able to use the free-tier subscription)
2. The hostname of this VM must be: *syn-app01*
3. Install Python3, Docker and Docker-compose packages

4. Create a *docker-compose.yml* file under */tmp/syntax/* with the content of the following Gist: https://gist.github.com/yassineselmi/1d929dced4e069fb338b2b4fbd8c5a0e

5. All environment variables in this file can be defined by the user before running the automation
6. Start the containers

Database service

1. Provision a PostgreSQL database (using Amazon RDS or Azure Databases)
2. The database name, port, username, and password can be defined by the user before running the automation.

(Extra Credit)

Load balancer

1. Provision a load balancer which forwards the HTTPS traffic to the application server on port 8000.
2. Since this project is a PoC, only a list of IP addresses is allowed to access to the application. This list must be defined by the user before running the automation.

PS: Please submit your code to a Git repository.