

Tasks

1. Using Terraform, and on Oracle Cloud Infrastructure (OCI), build a hop and spoke network and all of its necessary components.
2. Provision an application VM with Nuxt.js as a frontend and Laravel as a backend.
3. Provision a database VM with MySQL, Redis and Mongo.
4. Setup an automated CI/CD deployment using Jenkins.
5. Use Ansible to install and configure all systems.

Infrastructure and Assumptions

1. VM-1 for setup of terraform and ansible.
2. Using Ansible, I want to perform task 2, 3 and 4.
3. VM-2 will be used to setup MySQL, Redis and Mongo Databases.
4. VM-3 will be used to setup three applications.
 - A. one frontend app using Nuxt.js
 - B. one backend app using Laravel
 - C. one microservice app deployed using automated CI/CD with Jenkins and Kubernetes (one node for Kubernetes)
5. Frontend and backend can be exposed using nginx or with ingress in Kubernetes (domains and SSL certs will be required)
6. For task1, using a dynamic routing gateway (DRG) and remote peering connections (RPCs) is not included in the Free Tier and will incur costs so I will setup a basic network.
7. I am assuming that a docker image for an app is already uploaded to a docker registry.
- 8.