Web Service Runbook

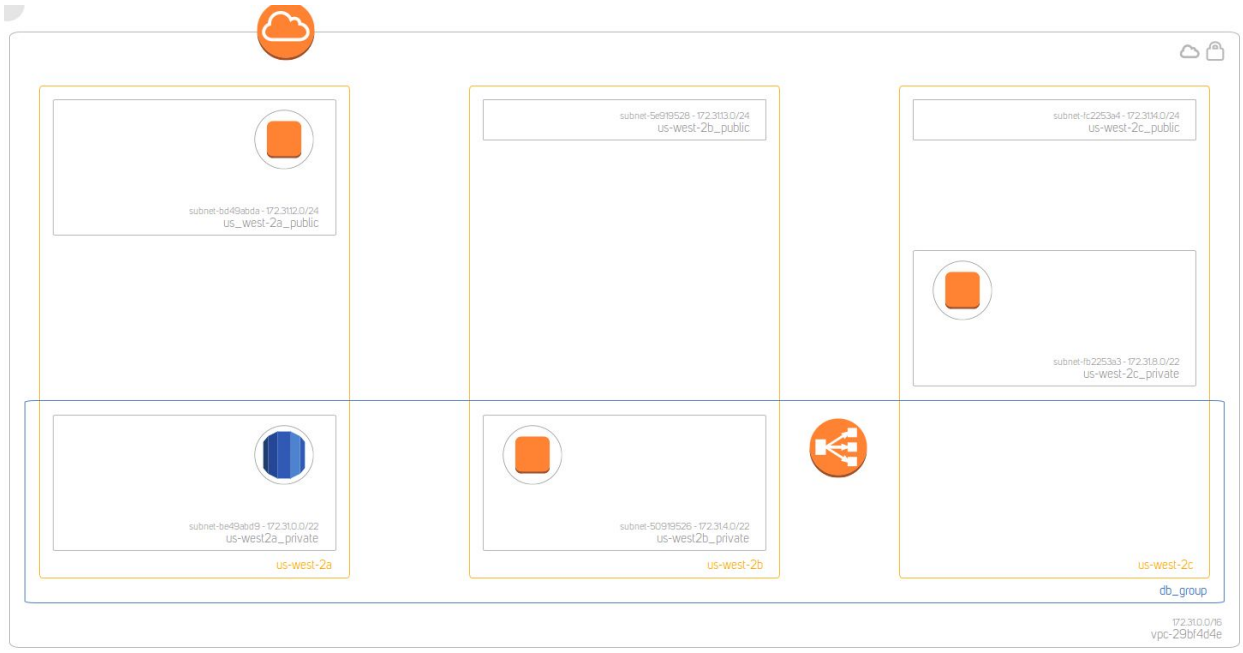
Short Description

This service includes a webserver and database for hosting a web page for curriculums and courses offered CSUN.
The setup allows access to the database through a load balancer connected to two web servers. Access is gained by communicating with the load balancer which then decides which web server is chosen for communication.

Required Software

CentOS 7
MariaDB
NGINX HTTP-server
Ansible
Terraform

Architecture Diagram



Deployment

The deployment requires a controller machine with Ansible and terraform.

Install terraform on the controller and add the command to you path. Move to the folder containing the infra.tf file and run the terraform command, user input is the password you wish to have for the database. This should create the necessary infrastructure.
SSH into the Bastion instance and install ansible on the machine. The installation scripts uses modules that requires Ansible version 2.2.0, check the version by running the command: *ansible --version.* You may have to install Ansible from source, visit Ansible installation page for details.
Clone the necessary files from github and move to the directory containing the installation scripts, db.yml and web.yml. The “ansible-playbook” commands requires input of a password before they can be executed. Make sure that the hosts.ini file is located in the same directory as the scripts.

Commands:

Terraform apply -var ‘db_password= “***userinput***”‘
ansible-playbook -i hosts.ini db.yml --ask-vault-pass
ansible-playbook -i hosts.ini web.yml --ask-vault-pass

Issues

Title: Missing or wrongly configured vault fi yole
Description: Error when running scripts and error occurs under [including secrets].
Remediation Steps: Ensure that the vault file is located where the scripts are located and that the correct password has been entered. Note that whereas multiple vault files can be included in a script they must all require the same password.
Make sure the vault file is formatted correctly with three dashes at top before the secrets are entered.

Title: Service stops
Description: Service unexpectedly stops or freezes causing either the database or webserver to become dysfunctional.
Remediation steps: Use Ansible to directly restart the affected service using the *systemd* module. If restart fails, try to update the service and start it again. If all attempts at restart fails then, if it’s possible, direct all traffic to a backup server and ensure that the data is saved in another location and reinstall the entire VM again. This should not be time consuming if Ansible is configured correctly. If the problem persists, check for configuration errors or if it’s a known issue.

Title: Overloading traffic
Description: The entire server becomes very slow or unresponsive.

Remediation steps: Check for malicious traffic. If the traffic is legitimate consider redirecting traffic to a backup server, creating another server and redirect traffic there or freeing system resources by shutting down unused services and other applications.