UNIVERSITY INSTITUTE of COMPUTING
Asia's Fastest Growing University

NAAC GRADE A+ ACCREDITED UNIVERSITY

Experiment No. 2.1

Student Name: Rishav Kumar
UID: 22MCC20039
Branch: MCA - CCD
Section/Group: MCD-1/ Grp A
Semester: IV
Date of Performance: 21st Mar 24
Subject Name: CI/CD Pipelines
Subject Code: 22CAP-781

1. Aim/Overview of the practical:

Download the geerlingguy.haproxy role via Ansible Galaxy.

Then create a playbook named mainrole.yml that will run on the proxy host group and will accomplish the following tasks:

Load balance http requests between the hosts in the webservers host group by using the geerlingguy.haproxy role.

2. Code for practical:

- Open AWS account and connect to ansible_master instance.
- Open inventory file and add proxy in it along with webservers.

```
  GNU nano 6.2
[proxy]
proxy_host ansible_host=51.20.76.146

[servers]
22MCC20039_1 ansible_host=16.171.234.248
22MCC20039_2 ansible_host=13.53.128.136

[all:vars]
ansible_python_interpreter=/usr/bin/python3
```

- Install geerlingguy.haproxy using following command.

ansible-galaxy install geerlingguy.haproxy

- Make a file mainrole.yml and add following code:

```
---
- name: Configure HAProxy for Load Balancing
  hosts: proxy
  become: true

  tasks:
    - name: Include geerlingguy.haproxy role
      include_role:
        name: geerlingguy.haproxy

    - name: Configure HAProxy for Load Balancing
      vars:
        haproxy_frontends:
          - name: 'http-in'
            bind: '*:80'
            default_backend: 'webservers'
        haproxy_backends:
          - name: 'webservers'
            servers:
              - name: '22MCC20039_1'
                address: '16.171.234.248'
                port: '80'
              - name: '22MCC20039_2'
                address: '13.53.128.136'
                port: '80'
      include_role:
        name: geerlingguy.haproxy
```

- In this playbook, it includes the geerlingguy.haproxy role.
- Configures HAProxy frontends and backends, specifying the hosts in the webservers group.
- Run mainrole.yml file using command:

ansible-playbook -i /home/ubuntu/ansible/hosts --private-key=~/.ssh/ansible_key mainrole.yml

aws Services Search [Alt+S]

```
changed: [proxy_host]

TASK [geerlingguy.haproxy : Get HAProxy version.] ******************************************************************************
ok: [proxy_host]

TASK [geerlingguy.haproxy : Set HAProxy version.] ******************************************************************************
ok: [proxy_host]

TASK [geerlingguy.haproxy : Copy HAProxy configuration in place.] **************************************************************
changed: [proxy_host]

TASK [geerlingguy.haproxy : Ensure HAProxy is started and enabled on boot.] ****************************************************
ok: [proxy_host]

TASK [Configure HAProxy for Load Balancing] ************************************************************************************

TASK [geerlingguy.haproxy : Ensure HAProxy is installed.] **********************************************************************
ok: [proxy_host]

TASK [geerlingguy.haproxy : Ensure HAProxy is enabled (so init script will start it on Debian).] ******************************
ok: [proxy_host]

TASK [geerlingguy.haproxy : Get HAProxy version.] ******************************************************************************
ok: [proxy_host]

TASK [geerlingguy.haproxy : Set HAProxy version.] ******************************************************************************
ok: [proxy_host]

TASK [geerlingguy.haproxy : Copy HAProxy configuration in place.] **************************************************************
ok: [proxy_host]

TASK [geerlingguy.haproxy : Ensure HAProxy is started and enabled on boot.] ****************************************************
ok: [proxy_host]

RUNNING HANDLER [geerlingguy.haproxy : restart haproxy] ************************************************************************
changed: [proxy_host]

PLAY RECAP *********************************************************************************************************************
proxy_host                 : ok=14   changed=4    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
```