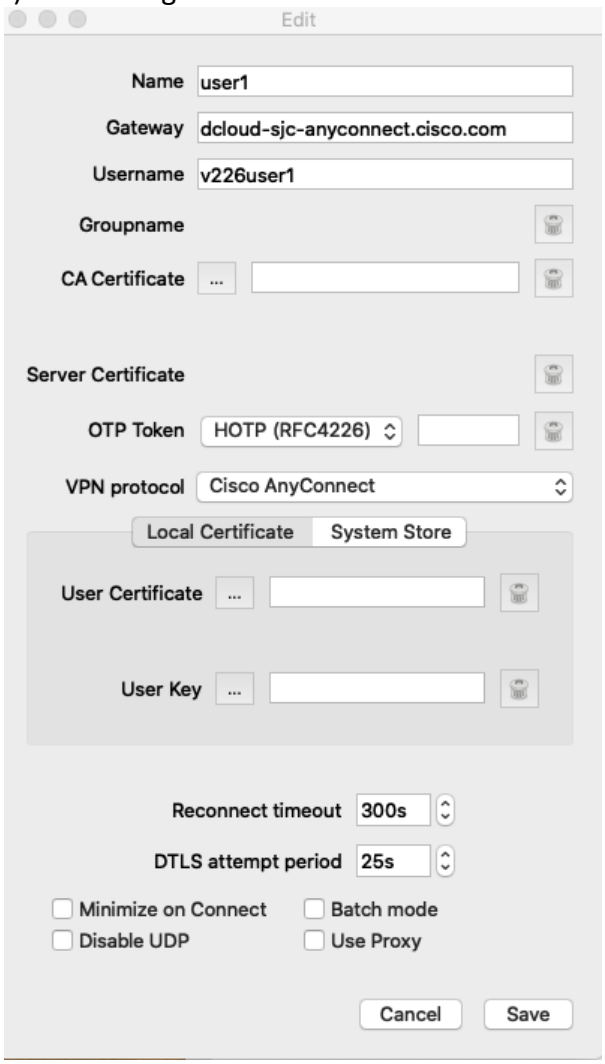
Name:Parvathi Pai
SJSU ID: 015293460
GitHub repo: https://github.com/ParvathiRPai/Ansible

1) Connecting to the Cisco dcloud instance –



2) dclould instance connection tested –

```
→  ~ ping 198.18.134.30
PING 198.18.134.30 (198.18.134.30): 56 data bytes
64 bytes from 198.18.134.30: icmp_seq=0 ttl=61 time=45.087 ms
64 bytes from 198.18.134.30: icmp_seq=1 ttl=61 time=43.181 ms
64 bytes from 198.18.134.30: icmp_seq=2 ttl=61 time=45.241 ms
64 bytes from 198.18.134.30: icmp_seq=3 ttl=61 time=34.819 ms
64 bytes from 198.18.134.30: icmp_seq=4 ttl=61 time=51.052 ms
64 bytes from 198.18.134.30: icmp_seq=5 ttl=61 time=47.125 ms
64 bytes from 198.18.134.30: icmp_seq=6 ttl=61 time=49.495 ms
64 bytes from 198.18.134.30: icmp_seq=7 ttl=61 time=45.030 ms
```

3) Connecting to ubuntu server

```
→  ~ ssh root@198.18.134.28
root@198.18.134.28's password:
Welcome to Ubuntu 14.04.5 LTS (GNU/Linux 4.4.0-42-generic x86_64)

 * Documentation:  https://help.ubuntu.com/

367 packages can be updated.
298 updates are security updates.

Your Hardware Enablement Stack (HWE) is supported until April 2019.
Last login: Tue Jun 26 10:52:47 2018 from 10.16.27.145
root@ubuntu:~#
```

4) Install ansible in the Ubuntu server

```
root@ubuntu:~# sudo apt install ansible
```

5) Configure the inventory in etc/ansible/hosts in the ubuntu server

```
root@ubuntu:/etc/ansible# vim hosts
```

6) Add the IP address of the hosts that is centos1 and centos2 in /etc/ansible/hosts ansible inventory

```
## 10.25.1.56
## 10.25.1.57

# Here's another example of host ranges, this time there are no
# leading 0s:

## db-[99:101]-node.example.com
198.18.134.49 hosts_indexSuffix=1
198.18.134.50 hosts_indexSuffix=2
~
~
~
~
~
```

7) Installing SSH in the ubuntu server

```
root@ubuntu:/# apt-get install openssh-server
```

8) Proof that ssh is installed

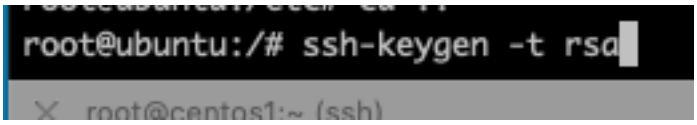
```
root@ubuntu:/etc# ls -al | grep ssh
drwxr-xr-x   2 root root     4096 Sep  7 19:29 ssh
```

9) connecting to centOS1 and centOS2 :

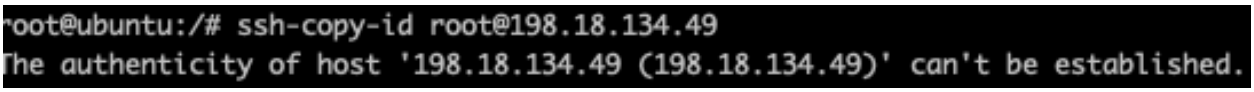
```
→  ~ ssh root@198.18.134.50
The authenticity of host '198.18.134.50 (198.18.134.50)' can't be established.
ECDSA key fingerprint is SHA256:HwfAoAKNMcll2MvKxfvYMm/CDi6ztTzCPc2PfTYHV8o.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '198.18.134.50' (ECDSA) to the list of known hosts.
root@198.18.134.50's password:
Last login: Tue Jun 26 15:49:39 2018 from 10.16.27.145
[root@centos2 ~]#
```

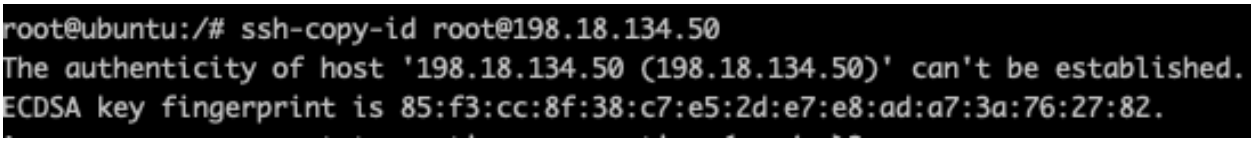
```
Last login: Mon Aug 31 13:05:42 on ttys000
→  ~ ssh root@198.18.134.49
root@198.18.134.49's password:
Last login: Tue Jun 26 15:49:19 2018 from 10.16.27.145
[root@centos1 ~]#
```

10) Public key generation in Ubuntu:

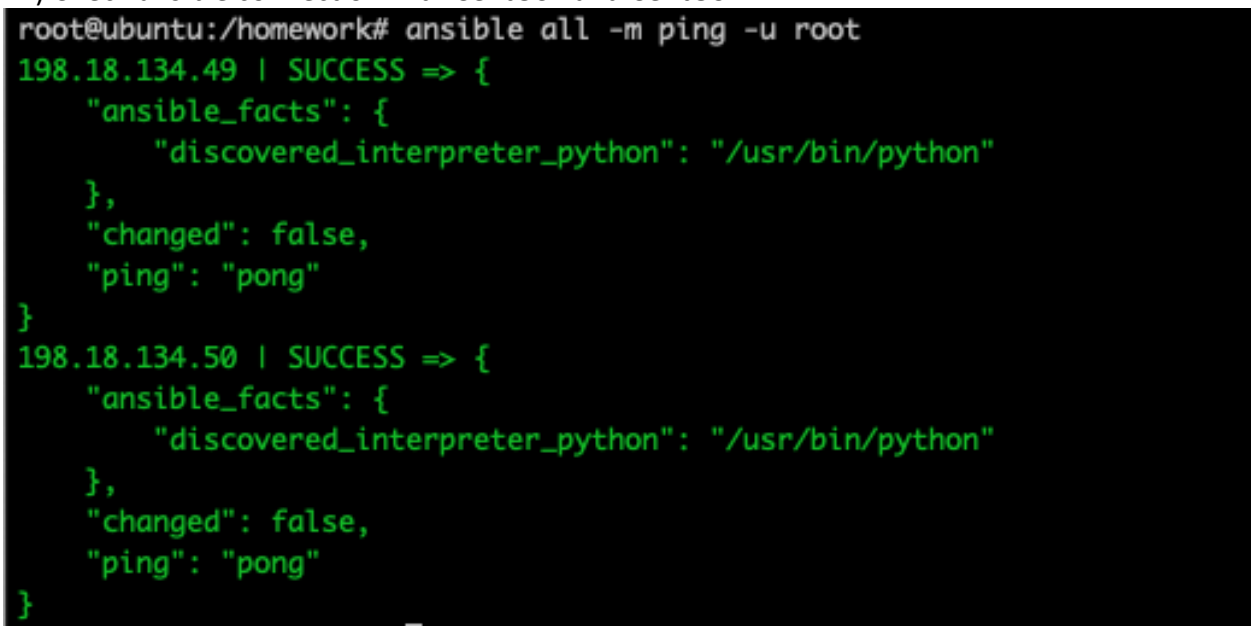


11) Connecting to CentOS1 and CentOS2 –

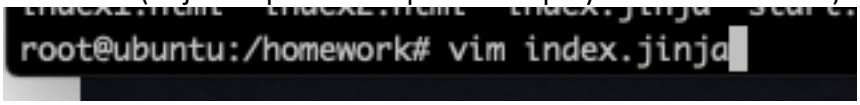




12) Check ansible connection with CentOS1 and CentOS2



13) Configuring the messages that should be deployed in ansible and displayed in CentOS1 and CentOS2 – (Jinja template is helpful for deployment the html file)



```
<!DOCTYPE html>
<html lang="en">
<head>
    <title>Hello from Centos {{ hosts_indexSuffix }}</title>
</head>
<body>
    <h1>Hello from Centos {{ hosts_indexSuffix }}</h1>
</body>
</html>
~
~
~
```

14) Configuring playbook –
full code in GitHub https://github.com/ParvathiRPai/Ansible/blob/master/start.yml
also, at the end of the document

```yaml
- hosts: all
  user: root
  tasks:
  - name: Add epel-repo
    yum:
      name: epel-release
      state: present

  - name: Install Nginx
    yum:
      name: nginx
      state: present

  - name: add index.html file
    template:
      src: /homework/index.jinja
      dest: /usr/share/nginx/html/index.html

  - name: Open port 80 for http
    firewalld:
      service: http
      permanent: true
      state: enabled
  - name: Restart the firewalld service to load in the firewall changes
    service:
      name: firewalld
      state: restarted

  - name: Start Nginx
    service:
      name: nginx
      state: started
~
~
~
~
~
```

```
root@ubuntu:/homework# ls
index.jinja  start.yml  stop.yml
```

15) Run the playbook

```
root@ubuntu:/homework# ansible-playbook start.yml
```

Playbook is deployed successfully

```
root@ubuntu:/homework# ansible-playbook start.yml

PLAY [all] ***********************************************************************************************************************************************************

TASK [Gathering Facts] ***********************************************************************************************************************************************
ok: [198.18.134.49]
ok: [198.18.134.50]

TASK [Add epel-repo] *************************************************************************************************************************************************
ok: [198.18.134.49]
ok: [198.18.134.50]

TASK [Install Nginx] *************************************************************************************************************************************************
ok: [198.18.134.49]
ok: [198.18.134.50]

TASK [add index.html file] *******************************************************************************************************************************************
changed: [198.18.134.49]
changed: [198.18.134.50]

TASK [Open port 80 for http] *****************************************************************************************************************************************
ok: [198.18.134.49]
ok: [198.18.134.50]

TASK [Restart the firewalld service to load in the firewall changes] *************************************************************************************************
changed: [198.18.134.49]
changed: [198.18.134.50]

TASK [Start Nginx] ***************************************************************************************************************************************************
ok: [198.18.134.49]
ok: [198.18.134.50]

PLAY RECAP ***********************************************************************************************************************************************************
198.18.134.49              : ok=7    changed=2    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
198.18.134.50              : ok=7    changed=2    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
```

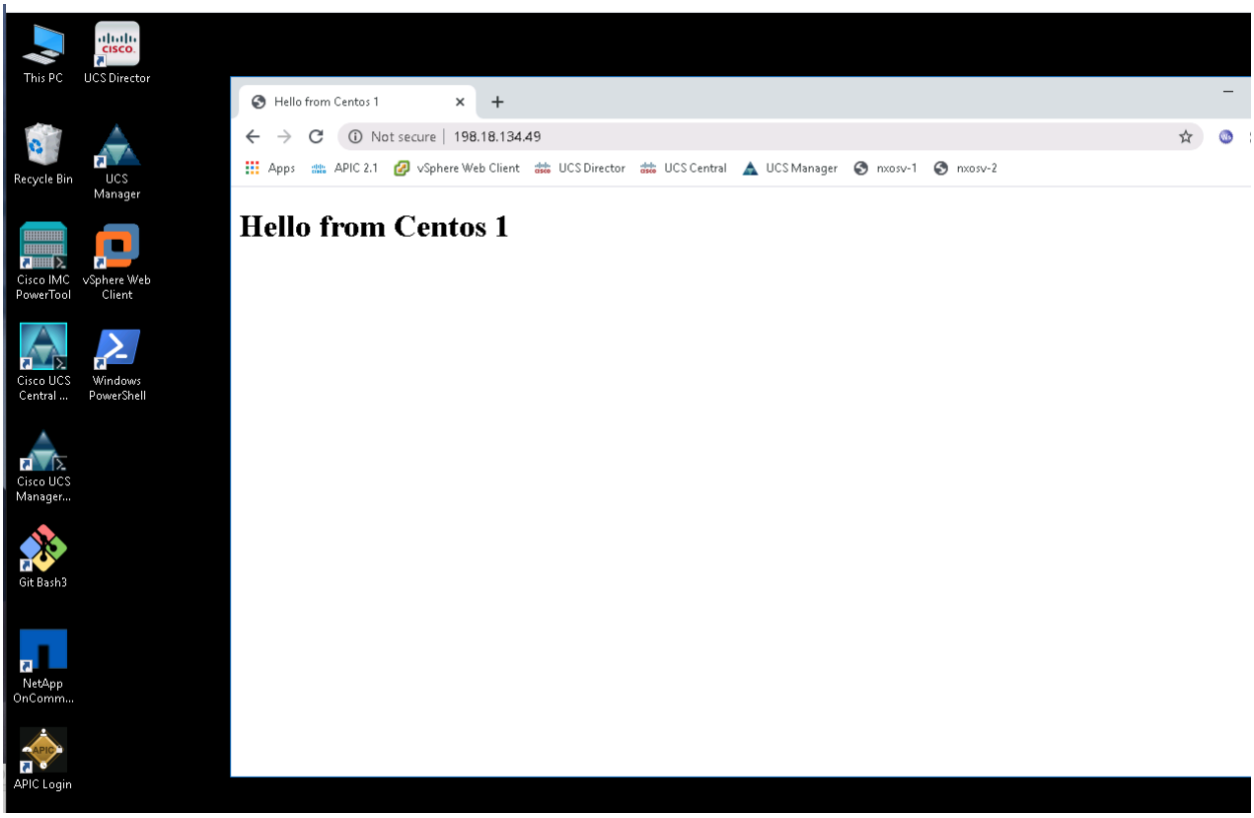
16) Message from CentOS1

```
root@ubuntu:/homework# curl 198.18.134.49
<!DOCTYPE html>
<html lang="en">
<head>
    <title>Hello from Centos 1</title>
</head>
<body>
    <h1>Hello from Centos 1</h1>
</body>
</html>
```

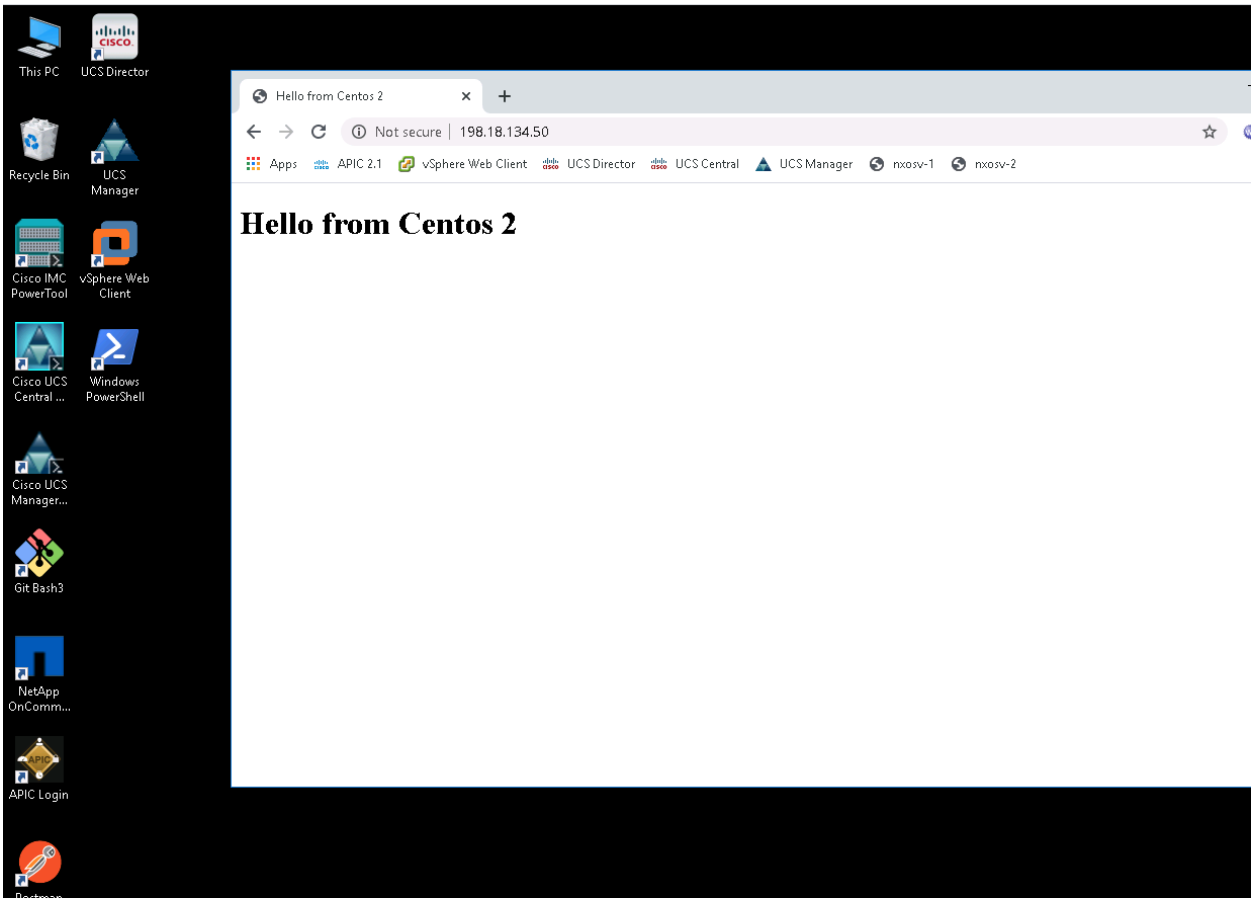
17) Message from CentOS2

```
root@ubuntu:/homework# curl 198.18.134.50
<!DOCTYPE html>
<html lang="en">
<head>
    <title>Hello from Centos 2</title>
</head>
<body>
    <h1>Hello from Centos 2</h1>
</body>
</html>
```

20) Message in the browser from CentOS1 in windows 10 workstation



21) Message in the browser from CentOS2



22) Un-deploy ansible

a) Create a playbook to un-deploy – For undeployed the steps followed in deployed should be reversed

```
root@ubuntu:/homework# vim stop.yml
```

b) Configure the playbook code in GitHub

https://github.com/ParvathiRPai/Ansible/blob/master/stop.yml

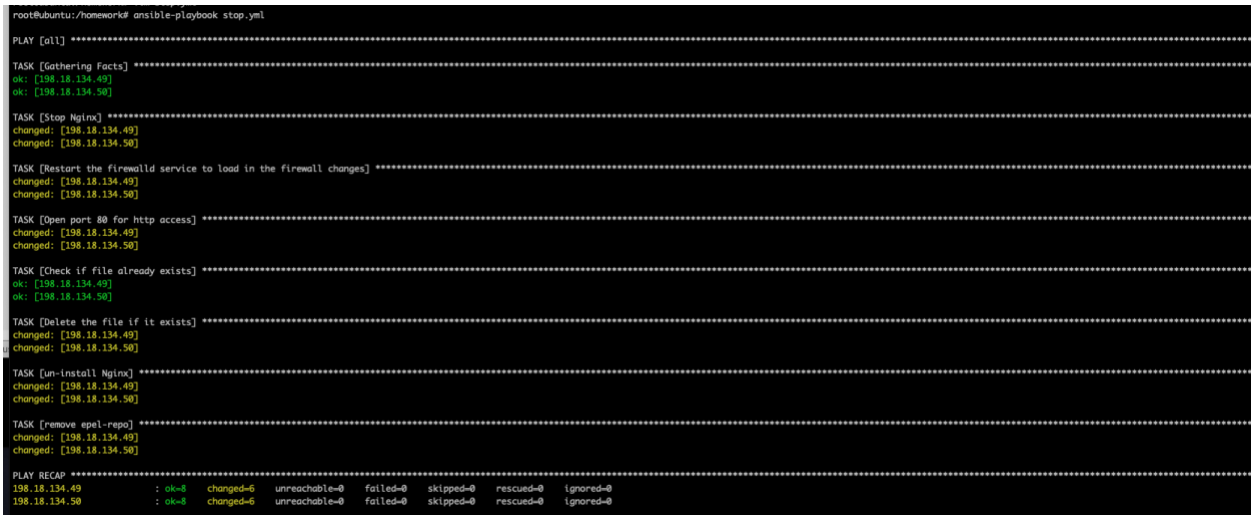
and also, at the end

```
- hosts: all
  user: root
  tasks:
  - name: Stop Nginx
    service:
      name: nginx
      state: stopped
  - name: Restart the firewalld service to load in the firewall changes
    service:
      name: firewalld
      state: stopped
  - name: Open port 80 for http access
    firewalld:
      service: http
      permanent: true
      state: disabled
  - name: Check if file already exists
    stat:
      path: /usr/share/nginx/html/index.html
    register: file_exists
  - name: Delete the file if it exists
    file:
      path: /usr/share/nginx/html/index.html
      state: absent
    when: file_exists.stat.exists
  - name: un-install Nginx
    yum:
      name: nginx
      state: absent
  - name: remove epel-repo
    yum:
      name: epel-release
      state: absent
~
~
~
~
```

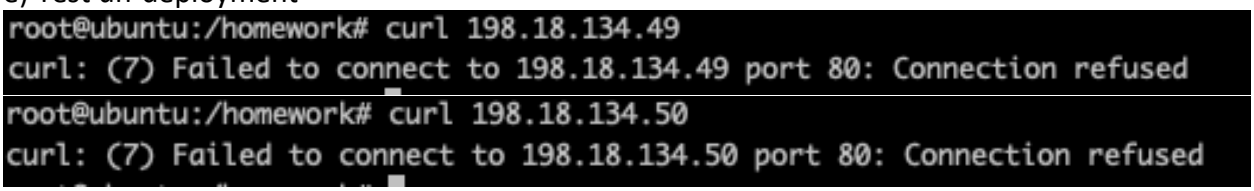
c) Run the playbook

```
root@ubuntu:/homework# ansible-playbook stop.yml
```

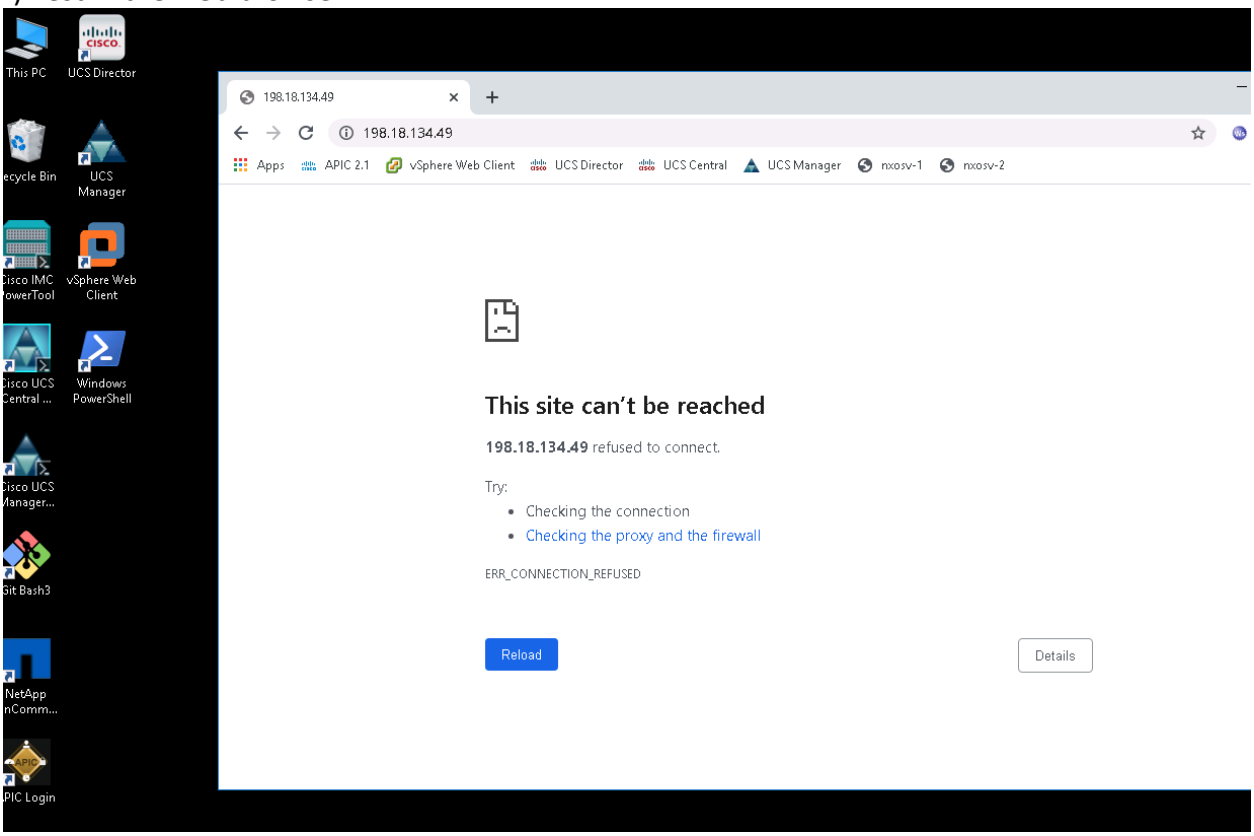
d) run succeeds

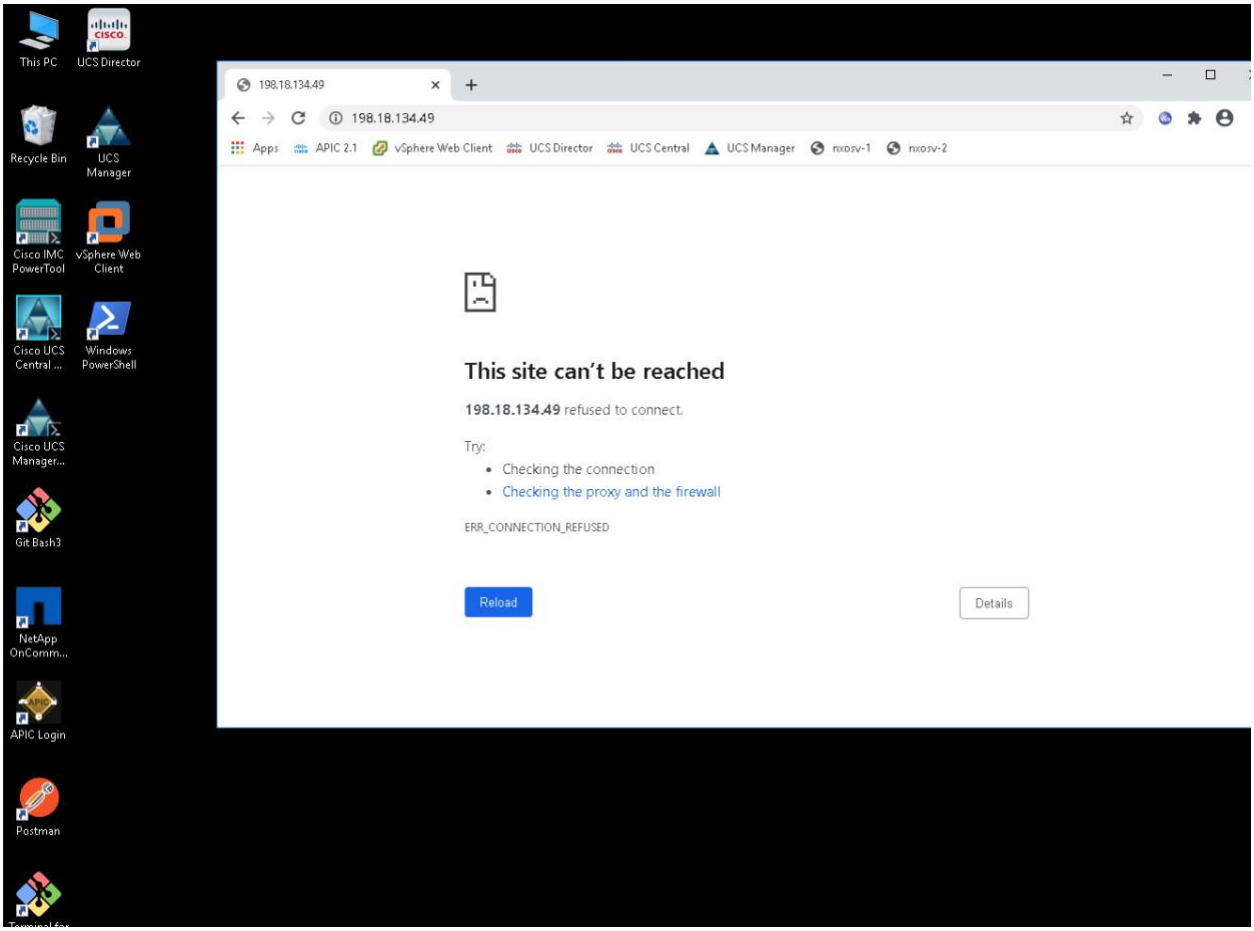


e) Test un-deployment



f) Test in the web browser





Code:

Index.jinja - https://github.com/ParvathiRPai/Ansible/blob/master/index.jinja

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Hello from Centos {{ hosts_indexSuffix }}</title>
</head>
<body>
  <h1>Hello from Centos {{ hosts_indexSuffix }}</h1>
</body>
</html>
```

Start.yml - https://github.com/ParvathiRPai/Ansible/blob/master/start.yml

```
- hosts: all
  user: root
  tasks:
  - name: Add epel-repo
    yum:
      name: epel-release
      state: present

  - name: Install Nginx
    yum:
      name: nginx
      state: present

  - name: add index.html file
    template:
      src: /homework/index.jinja
      dest: /usr/share/nginx/html/index.html

  - name: Open port 80 for http
    firewalld:
      service: http
      permanent: true
      state: enabled
  - name: Restart the firewalld service to load in the firewall changes
    service:
      name: firewalld
      state: restarted

  - name: Start Nginx
    service:
      name: nginx
      state: started
```

Stop.yml - https://github.com/ParvathiRPai/Ansible/blob/master/stop.yml

```
- hosts: all
  user: root
  tasks:
  - name: Stop Nginx
    service:
      name: nginx
      state: stopped
  - name: Restart the firewalld service to load in the firewall changes
    service:
      name: firewalld
      state: stopped
  - name: Open port 80 for http access
    firewalld:
      service: http
      permanent: true
      state: disabled
  - name: Check if file already exists
    stat:
      path: /usr/share/nginx/html/index.html
    register: file_exists
  - name: Delete the file if it exists
    file:
      path: /usr/share/nginx/html/index.html
      state: absent
    when: file_exists.stat.exists
  - name: un-install Nginx
    yum:
      name: nginx
      state: absent
  - name: remove epel-repo
    yum:
      name: epel-release
      state: absent
```