

ANSIBLE ASSIGNMENT 4

Name: Vikram

Assignment: Manage Static Files in Ansible Role (Replace index.html on NGINX Slave)

Problem Statement

Use the existing Ansible setup from Assignment 3 and:

1. Add an index.html file in the *files* directory of the NGINX role
 2. Replace the default NGINX index page on slave2 only
 3. Ensure this is done only via the role_nginx role
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Environment Used

master-node → Controls Ansible & roles

- slave1 → Apache node
- slave2 → NGINX node (target machine for index.html replacement)

Inventory already configured as:

[slave1]

10.0.15.253 ansible_user=ubuntu ansible_ssh_private_key_file=/home/ubuntu/.ssh/mykey.pem

[slave2]

10.0.11.55 ansible_user=ubuntu ansible_ssh_private_key_file=/home/ubuntu/.ssh/mykey.pem

TASK 1 — Create files folder and add custom index.html

Step 1 — Go to the NGINX role directory

`cd ~/roles/role_nginx`

Step 2 — Create the files directory

`mkdir -p files`

Step 3 — Add custom index.html

Create the file:

`nano files/index.html`

Paste the content:

```
<h1>Welcome to Vikram's Custom NGINX Page!</h1>
<p>This page was deployed using Ansible Role Automation.</p>
```

Save & exit.

```
ubuntu@ip-10-0-6-254:~$ ls
addtext.sh  roles  roles-playbook.yml  run-script.yml
ubuntu@ip-10-0-6-254:~$ cd roles
ubuntu@ip-10-0-6-254:~/roles$ ls
role_apache  role_nginx
ubuntu@ip-10-0-6-254:~/roles$ cd role_nginx
ubuntu@ip-10-0-6-254:~/roles/role_nginx$ ls
README.md  defaults  files  handlers  main.yml  meta  tasks  templates  tests  vars
ubuntu@ip-10-0-6-254:~/roles/role_nginx$ mkdir -p files
ubuntu@ip-10-0-6-254:~/roles/role_nginx$ nano files/index.html
```

```
GNU nano 7.2
<h1>Welcome to Vikram's Custom NGINX Page!</h1>
<p>This page was deployed using Ansible Role Automation.</p>
```

TASK 2 — Modify NGINX role to replace the default index.html

Edit role tasks:

[nano tasks/main.yml](#)

Your file should contain EXACTLY:

- name: Install NGINX

apt:

 name: nginx

 state: present

 update_cache: yes

- name: Start NGINX service

service:

 name: nginx

 state: started

 enabled: yes

```
- name: Replace default NGINX index.html
  copy:
    src: index.html
    dest: /var/www/html/index.html
    owner: www-data
    group: www-data
    mode: '0644'
```

This ensures the index.html replaces the one on slave2 only

Because the role is only applied to slave2 in your main playbook

```
ubuntu@ip-10-0-6-254:~/roles/role_nginx$ nano tasks/main.yml
ubuntu@ip-10-0-6-254:~/roles/role_nginx$ █
```

```
GNU nano 7.2
-----
- name: Install NGINX
  apt:
    name: nginx
    state: present
    update_cache: yes

- name: Start NGINX service
  service:
    name: nginx
    state: started
    enabled: yes

- name: Replace default NGINX index.html
  copy:
    src: index.html
    dest: /var/www/html/index.html
    owner: www-data
    group: www-data
    mode: '0644'

# tasks file for role_nginx
```

TASK 3 — Update the roles-playbook.yml

Cd ~

Edit:

[nano roles-playbook.yml](#)

Final version must be:

```
- name: Install Apache on Slave1
  hosts: slave1
  become: yes
  roles:
    - role_apache

- name: Install NGINX on Slave2 with custom index.html
  hosts: slave2
  become: yes
  roles:
    - role_nginx
```

```
ubuntu@ip-10-0-6-254:~/roles/role_nginx$ cd ..
ubuntu@ip-10-0-6-254:~/roles$ cd ..
ubuntu@ip-10-0-6-254:~$ nano roles-playbook.yml █
```

GNU nano 7.2

```
---
- name: Install Apache on Slave1
  hosts: slave1
  become: yes
  roles:
    - role_apache

- name: Install NGINX on Slave2 with custom index.html
  hosts: slave2
  become: yes
  roles:
    - role_nginx
```

TASK 4 — Run the playbook

ansible-playbook roles-playbook.yml

Expected output:

TASK [Replace default NGINX index.html] => changed

```
ubuntu@ip-10-0-6-254:~$ ansible-playbook roles-playbook.yml

PLAY [Install Apache on Slave1] *****
TASK [Gathering Facts] *****
ok: [10.0.15.253]

TASK [role_apache : Install Apache2] *****
ok: [10.0.15.253]

TASK [role_apache : Start Apache2 service] *****
ok: [10.0.15.253]

PLAY [Install NGINX on Slave2 with custom index.html] *****
TASK [Gathering Facts] *****
ok: [10.0.11.55]

TASK [role_nginx : Install NGINX] *****
ok: [10.0.11.55]

TASK [role_nginx : Start NGINX service] *****
ok: [10.0.11.55]

TASK [role_nginx : Replace default NGINX index.html] *****
changed: [10.0.11.55]
```

i-02649cf4a25091ffd (ansible master)

PublicIPs: 98.81.74.63 PrivateIPs: 10.0.6.254

X

TASK 5 — Verify on slave2

Run:

curl localhost

You should now see:

Welcome to Vikram's Custom NGINX Page!

This page was deployed using Ansible Role Automation.

```
ubuntu@ip-10-0-11-55:~$ curl localhost
<h1>Welcome to Vikram's Custom NGINX Page!</h1>
<p>This page was deployed using Ansible Role Automation.</p>
ubuntu@ip-10-0-11-55:~$ █
```

i-Odde7c0f6be97fe6f (slave2)

Public IPs: 3.80.238.215 Private IPs: 10.0.11.55

Conclusion

In this assignment:

Reused existing Ansible multi-node cluster

Enhanced the NGINX role with *files* directory

Replaced default index.html using the copy module

Deployment correctly affected only the NGINX slave

Fully automated file deployment using roles