

Ansible Case Study

You are a DevOps Engineer and the organization you are working on needs to set up two configuration management server groups. One for Apache and another for Nginx. Being a DevOps Engineer it is your task to deal with this configuration management issue.

Let us see the tasks that you need to perform using Ansible.

1. Create two Server Groups. One for Apache and another for Nginx.
2. Push two HTML files with their server information.

Make sure that you don't forget to start the services once the installation is done. Also, send post-installation messages for both server groups.

Using Ansible Roles accomplish the above tasks.

Also, once the Apache server configuration is done you need to install Java on that server group using Ansible role in a playbook.

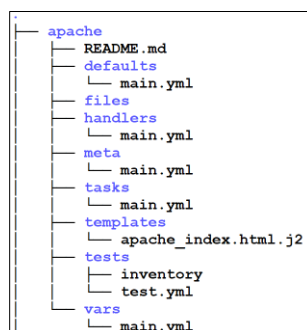
Answer:

```
$ ansible-galaxy init apache
- Role apache was created successfully

$ ansible-galaxy init nginx
- Role nginx was created successfully

$ ansible-galaxy init java
- Role java was created successfully
```

Apache Role Files



File: apache/tasks/main.yml

```
---
- name: Update apt cache
  ansible.builtin.apt:
    update_cache: yes

- name: Install Apache
  ansible.builtin.apt:
    name: apache2
    state: present

- name: Push Apache HTML File
  ansible.builtin.template:
    src: templates/apache_index.html.j2
    dest: /var/www/html/index.html
  notify: Restart Apache
```

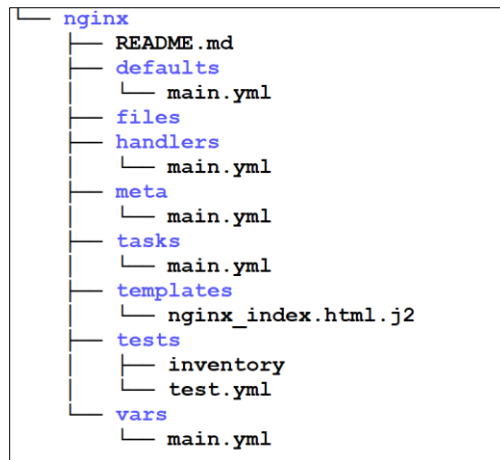
File: apache/templates/apache_index.html.j2

```
<html>
  <head>
    <title>Apache Server</title>
  </head>
  <body>
    <h1>This is the Apache Server</h1>
  </body>
</html>
```

```
$ cat apache/handlers/main.yml
```

```
---
- name: Restart Apache
  ansible.builtin.service:
    name: apache2
    state: restarted
```

Nginx Role Files



```
$ cat nginx/tasks/main.yml
---
- name: Update apt cache
  ansible.builtin.apt:
    update_cache: yes

- name: Install Nginx
  ansible.builtin.apt:
    name: nginx
    state: present

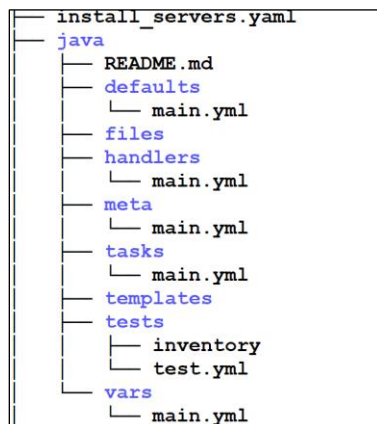
- name: Push Nginx HTML File
  ansible.builtin.template:
    src: templates/nginx_index.html.j2
    dest: /usr/share/nginx/html/index.html
  notify: Restart Nginx
```

```
$ cat nginx/handlers/main.yml
---
- name: Restart Nginx
  ansible.builtin.service:
    name: nginx
    state: restarted
```

```
$ cat nginx/templates/nginx_index.html.j2
<html>
  <head>
    <title>Nginx Server</title>
  </head>
```

```
<body>
  <h1>This is the Nginx Server</h1>
</body>
</html>
```

Java Role Files



File: java/tasks/main.yml

```
---
- name: Update apt cache
  ansible.builtin.apt:
    update_cache: yes

- name: Install Java
  ansible.builtin.apt:
    name: openjdk-11-jdk
    state: present
```

File: Install_servers.yaml

```
$ cat install_servers.yaml
---
- name: Install and Configure Apache Servers
  hosts: apache_servers
  roles:
    - apache

- name: Post Installation Message for Apache Servers
  hosts: apache_servers
  tasks:
    - name: Print Apache Installation Completed
```

```
        debug:
            msg: "Apache Server installation completed. Visit
http://{{ ansible_host }}/\"

- name: Install and Configure Nginx Servers
  hosts: nginx_servers
  roles:
    - nginx

- name: Post Installation Message for Nginx Servers
  hosts: nginx_servers
  tasks:
    - name: Print Nginx Installation Completed
      debug:
        msg: "Nginx Server installation completed. Visit
http://{{ ansible_host }}/\"

- name: Install Java on Apache Servers
  hosts: apache_servers
  roles:
    - java
```