

## Lesson 04 Demo 03

### Implementing YAML Anchors and Aliases

**Objective:** To implement the YAML anchors and aliases in Ansible to efficiently manage and reuse repeated tasks, reducing redundancy and enhancing maintainability in playbooks

**Tools required:** Linux terminal

**Prerequisites:** None

Steps to be followed:

1. Create Ansible playbook using YAML anchors and aliases
2. Run the Ansible playbook

#### Step 1: Create Ansible playbook using YAML anchors and aliases

1.1 Run the following command to create a YAML file:

**sudo nano users.yml**

```
poojahksimplile@ip-172-31-36-118:~$ sudo nano users.yml
poojahksimplile@ip-172-31-36-118:~$
```

1.2 Enter the script defining users and their default address using YAML anchors and aliases into the **users.yml** file

---

**users:**

- &default\_address

address:

street: "123 Main St"

city: "Anytown"

state: "CA"

zip: "12345"

- name: "Alice"

<<: \*default\_address

- name: "Bob"

<<: \*default\_address

- name: "Charlie"

<<: \*default\_address

```
GNU nano 6.2 users.yml
---
users:
  - &default_address
    address:
      street: "123 Main St"
      city: "Anytown"
      state: "CA"
      zip: "12345"

  - name: "Alice"
    <<: *default_address

  - name: "Bob"
    <<: *default_address

  - name: "Charlie"
    <<: *default_address
```

1.3 Run the following command to create another YAML file:

**sudo nano create\_users.yml**

```
poojahksimplile@ip-172-31-36-118:~$ sudo nano create_users.yml
poojahksimplile@ip-172-31-36-118:~$ █
```

1.4 Enter the script to create users using the previously defined default address into the **create\_users.yml** file

```
---
- name: Create users with default address
  hosts: localhost
  gather_facts: no

  vars_files:
    - users.yml

  tasks:
    - name: Print user profiles
      debug:
        msg: "User {{ item.name }} lives at {{ item.address.street }}, {{
item.address.city }}, {{ item.address.state }} {{ item.address.zip }}"
      loop: "{{ users }}"
      when: item.name is defined
```

```
GNU nano 6.2 create_users.yml
--
name: Create users with default address
hosts: localhost
gather_facts: no

vars_files:
- users.yml

tasks:
- name: Print user profiles
  debug:
  msg: "User {{ item.name }} lives at {{ item.address.street }}, {{ item.address.city }}, {{ item.address.state }} {{ item.address.zip }}"
  loop: "{{ users }}"
  when: item.name is defined
```

## Step 2: Run the Ansible playbook

2.1 Use the following command to run the Ansible playbook:

**ansible-playbook create\_users.yml**

```
poojahksimplile@ip-172-31-36-118:~$ ansible-playbook create_users.yml
[WARNING]: provided hosts list is empty, only localhost is available. Note that
the implicit localhost does not match 'all'

PLAY [Create users with default address] *****

TASK [Print user profiles] *****
skipping: [localhost] => (item={'address': {'street': '123 Main St', 'city': 'Anytown', 'state': 'CA', 'zip': '12345'}})
ok: [localhost] => (item={'address': {'street': '123 Main St', 'city': 'Anytown', 'state': 'CA', 'zip': '12345'}, 'name': 'Alice'}) => {
  "msg": "User Alice lives at 123 Main St, Anytown, CA 12345"
}
ok: [localhost] => (item={'address': {'street': '123 Main St', 'city': 'Anytown', 'state': 'CA', 'zip': '12345'}, 'name': 'Bob'}) => {
  "msg": "User Bob lives at 123 Main St, Anytown, CA 12345"
}
ok: [localhost] => (item={'address': {'street': '123 Main St', 'city': 'Anytown', 'state': 'CA', 'zip': '12345'}, 'name': 'Charlie'}) => {
  "msg": "User Charlie lives at 123 Main St, Anytown, CA 12345"
}

PLAY RECAP *****
localhost                : ok=1    changed=0    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

poojahksimplile@ip-172-31-36-118:~$
```

By following these steps, you have successfully implemented the YAML anchors and aliases in Ansible to efficiently manage and reuse repeated tasks, reducing redundancy and enhancing maintainability in playbooks.