1. Create Role Directories:

Navigate to the directory where your Ansible playbook is located. Inside that directory, you'll create separate directories for each role. For example:

my\_ansible\_playbook/

|-- roles/

| |-- tomcat/

| | |-- tasks/

| | |-- templates/

| | |-- vars/

| | |-- meta/

| |

| |-- maven/

| |-- tasks/

| |-- templates/

| |-- vars/

| |-- meta/

|-- playbook.yml

2. Define Role Tasks:

Inside the tasks directory of each role, you'll define the tasks that need to be executed for that role. For example, in roles/tomcat/tasks/main.yml:

---

- name: Install Apache Tomcat

apt:

name: tomcat9

state: present

- name: Configure Tomcat

template:

src: templates/tomcat.conf.j2

dest: /etc/tomcat9/server.xml

Similarly, in roles/maven/tasks/main.yml:

---

- name: Install Apache Maven

apt:

name: maven

state: present

- name: Configure Maven

template:

src: templates/maven-settings.xml.j2

dest: /etc/maven/settings.xml

3. Define Role Variables:

You can define variables for each role in the vars directory. For example, in roles/tomcat/vars/main.yml:

---

tomcat\_port: 8080

tomcat\_user: tomcat

And in roles/maven/vars/main.yml:

---

maven\_version: 3.6.3

4. Define Role Templates:

Place any configuration templates that your tasks use in the templates directory of each role. For example, roles/tomcat/templates/tomcat.conf.j2:

<Server port="{{ tomcat\_port }}">

<!-- Server configuration -->

</Server>

**5. Meta Information:**

The **meta** directory can contain dependency information if your roles have any dependencies.

**6. Use Roles in Playbook:**

In your main playbook (**playbook.yml**), you can now use these roles:

---

- hosts: my\_servers

become: yes

roles:

- tomcat

- maven

Remember to replace **my\_servers** with your actual host configuration.

**7. Run Playbook:**

Run the playbook using the **ansible-playbook** command:

ansible-playbook playbook.yml

Second Way :

**1. Create Role Directories:**

Navigate to your Ansible playbook directory and create separate directories for each role as described in the previous response.

**2. Define Role Tasks:**

Inside the **tasks** directory of each role, define the tasks needed to set up Apache Tomcat and Apache Maven. You can use package installation (**apt**, **yum**, etc.) or any other method you prefer.

**3. Define Role Variables:**

Set up variables in the **vars** directory of each role that will be used in your tasks.

**4. Create Playbook:**

Create a new playbook file (e.g., **my\_playbook.yml**) in your playbook directory. In this playbook, include the roles you've created.

yamlCopy code

--- - name: Setup Tomcat and Maven hosts: your\_target\_hosts become: yes roles: - tomcat - maven

Replace **your\_target\_hosts** with the appropriate host or host group name from your inventory file.

**5. Run the Playbook:**

Execute the playbook using the **ansible-playbook** command:

bashCopy code

ansible-playbook my\_playbook.yml

This command will run the playbook, which includes the roles for setting up Apache Tomcat and Apache Maven on the specified hosts.

Here's a hypothetical example of how your role tasks might look:

**Tomcat Role: roles/tomcat/tasks/main.yml**

yamlCopy code

--- - name: Install Apache Tomcat apt: name: tomcat9 state: present - name: Configure Tomcat template: src: templates/tomcat.conf.j2 dest: /etc/tomcat9/server.xml

**Maven Role: roles/maven/tasks/main.yml**

yamlCopy code

--- - name: Install Apache Maven apt: name: maven state: present - name: Configure Maven template: src: templates/maven-settings.xml.j2 dest: /etc/maven/settings.xml

In this example, the **templates** directory should contain the template files mentioned in the tasks.

Once you've set up the roles and the playbook, running the playbook will apply the configurations defined in the roles to the specified hosts.