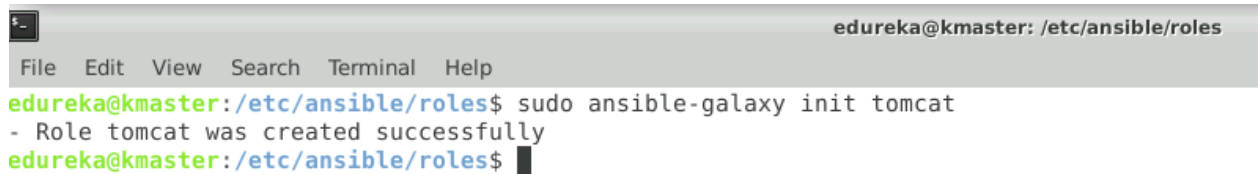


1. Go to the master machine of ansible and create the tomcat role.

Syntax: `cd /etc/ansible/role/`



```
edureka@kmaster: /etc/ansible/roles
File Edit View Search Terminal Help
edureka@kmaster:/etc/ansible/roles$ sudo ansible-galaxy init tomcat
- Role tomcat was created successfully
edureka@kmaster:/etc/ansible/roles$
```

2. Go to the task directory of tomcat role and create the mail.yml as below.

Syntax: `sudo vi /etc/ansible/role/tomcat/tasks/main.yml`



```
GNU nano 2.9.3
- name: install java
  apt: name=default-jdk state=present
- name: add tomcat group
  group: name=tomcat state=present
- name: add tomcat user
  user:
    name: tomcat
    shell: /bin/false
    group: tomcat
    home: /opt/tomcat
- name: unarchive the file
  unarchive:
    src: "{{tomcat_url}}"
    dest: "{{dest_path}}"
    remote_src: yes
    extra_opts: "--strip-components=1"
- name: change the group ownership
  file:
    path: /opt/tomcat
    group: tomcat
    owner: tomcat
    recurse: yes
- name: copy the tomcat service file
  template:
    src: templates/tomcat.service.j2
    dest: /etc/systemd/system/tomcat.service
  notify:
    - start tomcat
```

3. Go to the vars directory of the tomcat role and create the main.yml as below.

Syntax: `sudo vi /etc/ansible/role/tomcat/vars/main.yml`

```
File Edit View Search Terminal Help
GNU nano 2.9.3 main.
JAVA_HOME: /usr/lib/jvm/java-11-openjdk-amd64
tomcat_url: https://dlcdn.apache.org/tomcat/tomcat-9/v9.0.62/bin/apache-tomcat-9.0.62.tar.gz
dest_path: /opt/tomcat
```

4. Go to the template directory and create the tomcat.server.j2.yml file as below.

Syntax: `sudo vi /etc/ansible/role/tomcat/templates/tomcat.server.j2.yml`

```
GNU nano 2.9.3
[Unit]
Description=Apache Tomcat Web Application Container
After=network.targetd
[Service]
Type=forking
Environment=JAVA_HOME={{JAVA_HOME}}
Environment=CATALINA_PID=/opt/tomcat/temp/tomcat.pid
Environment=CATALINA_HOME=/opt/tomcat
Environment=CATALINA_BASE=/opt/tomcat
Environment='CATALINA_OPTS=-Xms512M -Xmx1024M -server -XX:+UseParallelGC'
Environment='JAVA_OPTS=-Djava.awt.headless=true -Djava.security.egd=file:/dev/./urandom'
ExecStart=/opt/tomcat/bin/startup.sh
ExecStop=/opt/tomcat/bin/shutdown.sh
User=tomcat
Group=tomcat
UMask=0007
RestartSec=10
Restart=always
[Install]
WantedBy=multi-user.target
```

5. Go to the handlers directory and create the main.yml file as below.

Syntax: `sudo vi /etc/ansible/role/tomcat/templates/tomcat.server.j2.yml`

```
File Edit View Search Terminal Help
GNU nano 2.9.3
- name: start tomcat
  service:
    daemon_reload: yes
    name: tomcat
    state: started
    enabled: yes
```

=====

## Apache maven

1. Create the maven role inside the master machine.

Syntax: `cd /etc/ansible/role/`

```
Applications edureka@kmaster: /etc/...
edureka@kmaster: /etc/ansible/roles
File Edit View Search Terminal Help
edureka@kmaster:/etc/ansible/roles$ sudo ansible-galaxy init maven
- Role maven was created successfully
edureka@kmaster:/etc/ansible/roles$
```

2. Create the main.yml file inside tasks in the maven role.

syntax: `nano /etc/ansible/roles/maven/tasks/main.yml`

```
edureka@kmaster: /etc/ansible
File Edit View Search Terminal Help
GNU nano 2.9.3 maven.yml

- hosts: all
  become: true
  become_user: root
  tasks:
    - name: install packages
      apt: name={{item}} state=present
      loop:
        - default-jdk
        - python3-pip
    - name: download and extract maven
      unarchive:
        src: {{maven_url}}
        dest: /opt
        remote_src: yes
    - name: install maven
      command: "update-alternatives --install /usr/bin/mvn maven /opt/apache-maven-3.8.5/bin/mvn 1001"
```

3. Create the main.yml file inside tasks in the maven role.  
syntax: `sudo nano /etc/ansible/roles/maven/vars/main.yml`

```
edureka@kmaster: /etc/ansible
File Edit View Search Terminal Help
GNU nano 2.9.3 roles/maven/vars/main.yml

maven_url: https://dlcdn.apache.org/maven/maven-3/3.8.5/binaries/apache-maven-3.8.5-bin.tar.gz
```

4. Create the project.yml file and call the both roles i.e. tomcat and maven.  
syntax: `sudo nano /etc/ansible/role/project.yml`

```
Applications edureka@kmaster: /etc/... edureka@kmaster: /etc/...
edureka@kmaster: /etc/ansible
File Edit View Search Terminal Help
GNU nano 2.9.3 project.yml

- hosts: all
  become: true
  become_user: root
  roles:
    - tomcat
    - maven
```

5. Execute the project.yml file with the below command and see the execution process.

```

edureka@kmaster:/etc/ansible$ ansible-playbook project.yml

PLAY [all] *****

TASK [Gathering Facts] *****
[DEPRECATION WARNING]: Distribution Ubuntu 18.04 on host 172.31.25.53 should use /usr/bin/python3, but is using /usr/bin/python for backward
compatibility with prior Ansible releases. A future Ansible release will default to using the discovered platform python for this host. See
https://docs.ansible.com/ansible/2.9/reference_appendices/interpreter_discovery.html for more information. This feature will be removed in version
2.12. Deprecation warnings can be disabled by setting deprecation_warnings=False in ansible.cfg.
ok: [172.31.25.53]

TASK [tomcat : install java] *****
ok: [172.31.25.53]

TASK [add tomcat group] *****
ok: [172.31.25.53]

TASK [add tomcat user] *****
ok: [172.31.25.53]

TASK [tomcat : unarchive the file] *****
changed: [172.31.25.53]

TASK [tomcat : change the group ownership] *****
changed: [172.31.25.53]

TASK [copy the tomcat service file] *****
ok: [172.31.25.53]

TASK [add tomcat user] *****
ok: [172.31.25.53]

TASK [tomcat : unarchive the file] *****
changed: [172.31.25.53]

TASK [tomcat : change the group ownership] *****
changed: [172.31.25.53]

TASK [copy the tomcat service file] *****
ok: [172.31.25.53]

TASK [maven : install packages] *****
ok: [172.31.25.53] => (item=default-jdk)
ok: [172.31.25.53] => (item=python3-pip)

TASK [download and extract maven] *****
ok: [172.31.25.53]

TASK [install maven] *****
changed: [172.31.25.53]

PLAY RECAP *****
172.31.25.53      : ok=10  changed=3  unreachable=0  failed=0  skipped=0  rescued=0  ignored=0

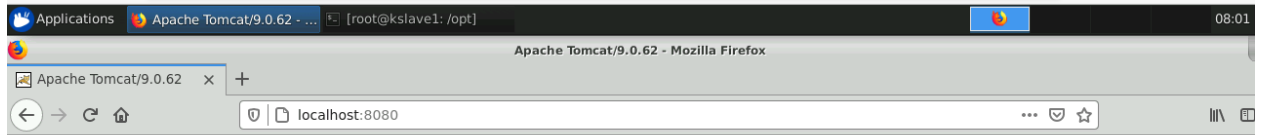
```

6. Go to the worker node to verify the tomcat and maven installation. <http://localhost:8080>

```

edureka@kslave1:~$ mvn --version
Apache Maven 3.8.5 (3599d3414f046de2324203b78ddcf9b5e4388aa0)
Maven home: /opt/apache-maven-3.8.5
Java version: 1.8.0_201, vendor: Oracle Corporation, runtime: /usr/lib/jvm/java-8-oracle/jre
Default locale: en, platform encoding: UTF-8
OS name: "linux", version: "5.4.0-1025-aws", arch: "amd64", family: "unix"
edureka@kslave1:~$

```



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## Apache Tomcat/9.0.62

 SOFTWARE FOUNDATION  
<http://www.apache.org/>

If you're seeing this, you've successfully installed Tomcat. Congratulations!



Recommended Reading:

[Security Considerations How-To](#)

[Manager Application How-To](#)

[Clustering/Session Replication How-To](#)

[Server Status](#)

[Manager App](#)

[Host Manager](#)

### Developer Quick Start

[Tomcat Setup](#)

[Realms & AAA](#)

[Examples](#)

[Servlet Specifications](#)

[First Web Application](#)

[JDBC DataSources](#)

[Tomcat Versions](#)

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END