

```
ubuntu@ip-172-31-18-207: ~  
* login as: ubuntu  
* Authenticating with public key "imported-openssh-key" from agent  
Welcome to Ubuntu 16.04.7 LTS (GNU/Linux 4.4.0-1128-aws x86_64)  
  
* Documentation:  https://help.ubuntu.com  
* Management:    https://landscape.canonical.com  
* Support:       https://ubuntu.com/advantage  
  
16 packages can be updated.  
2 of these updates are security updates.  
To see these additional updates run: apt list --upgradable  
  
Last login: Fri Jun 18 10:18:33 2021 from 171.60.224.42  
ubuntu@ip-172-31-18-207:~$ cd apache/  
ubuntu@ip-172-31-18-207:~/apache$ cd .  
ubuntu@ip-172-31-18-207:~$ tree apache/  
apache/  
├── defaults  
│   └── main.yml  
├── files  
├── handlers  
│   └── main.yml  
├── meta  
│   └── main.yml  
├── README.md  
├── tasks  
│   └── main.yml  
├── templates  
├── tests  
│   ├── inventory  
│   └── test.yml  
└── vars  
    └── main.yml  
  
8 directories, 8 files  
ubuntu@ip-172-31-18-207:~$ ls  
apache  ec2.yml  httpd.yml  index.html  
ubuntu@ip-172-31-18-207:~$ vi role.yml  
ubuntu@ip-172-31-18-207:~$ ls  
apache  ec2.yml  httpd.yml  index.html  role.yml  
ubuntu@ip-172-31-18-207:~$ rm role.yml  
ubuntu@ip-172-31-18-207:~$ ls  
apache  ec2.yml  httpd.yml  index.html  
ubuntu@ip-172-31-18-207:~$
```

## ROLES TOMCAT INSTALLTION

```
ubuntu@ip-172-31-18-207: ~/tomcat/tasks  
ubuntu@ip-172-31-18-207:~$ ansible-galaxy init tomcat  
- Role tomcat was created successfully  
ubuntu@ip-172-31-18-207:~$ cd tomcat/  
ubuntu@ip-172-31-18-207:~/tomcat$ cd tasks  
ubuntu@ip-172-31-18-207:~/tomcat/tasks$ ls  
main.yml  
ubuntu@ip-172-31-18-207:~/tomcat/tasks$ cd ..  
ubuntu@ip-172-31-18-207:~/tomcat$ ls  
defaults  files  handlers  meta  README.md  tasks  templates  tests  vars  
ubuntu@ip-172-31-18-207:~/tomcat$ cd tasks/  
ubuntu@ip-172-31-18-207:~/tomcat/tasks$ vi main.yml  
ubuntu@ip-172-31-18-207:~/tomcat/tasks$ vi main.yml  
ubuntu@ip-172-31-18-207:~/tomcat/tasks$
```

```
ubuntu@ip-172-31-18-207: ~/tomcat/tasks
--
# tasks file for tomcat
- name: Upgrade all packages
  apt:
    name: '*'
    state: latest

- name: Java installation
  apt:
    name: openjdk-8-jdk
    state: present

- name: Tomcat download
  get_url:
    uri: https://downloads.apache.org/tomcat/tomcat-9/v9.0.46/bin/apache-tomcat-9.0.46.tar.gz
    dest: /opt
    mode: '0777'

- name: Extract into /opt
  ansible.builtin.unarchive:
    src: /opt/apache-tomcat-9.0.46.tar.gz
    dest: /opt
    remote_src: yes
    mode: '0777'

- name: Starting server
  shell: nohup /opt/apache-tomcat-9.0.46/bin/startup.sh &

"main.yml" 27L, 569C
1,1 All
```

```
ubuntu@ip-172-31-18-207: ~
ubuntu@ip-172-31-18-207:~$ ansible-playbook role.yaml

PLAY [localhost] *************************************************************************************************************************************
TASK [Gathering Facts] ************************************************************************************
ok: [localhost]

TASK [tomcat : Upgrade all packages] *********************************************************************
ok: [localhost]

TASK [tomcat : Java installation] *********************************************************************
fatal: [localhost]: FAILED! => ["changed": false, "msg": "No package matching 'java-1.8.0-openjdk' is available"]

PLAY RECAP *********************************************************************
localhost                : ok=2   changed=0   unreachable=0   failed=1   skipped=0   rescued=0   ignored=0

ubuntu@ip-172-31-18-207:~$ cd tomcat/tasks/
ubuntu@ip-172-31-18-207:~/tomcat/tasks$ vi main.yml
ubuntu@ip-172-31-18-207:~/tomcat/tasks$ vi main.yml
ubuntu@ip-172-31-18-207:~/tomcat/tasks$ cd
ubuntu@ip-172-31-18-207:~/tomcat/tasks$ cd
ubuntu@ip-172-31-18-207:~$ ansible-playbook role.yaml --syntax-check

playbook: role.yaml
ubuntu@ip-172-31-18-207:~$ ansible-playbook role.yaml

PLAY [localhost] *********************************************************************
TASK [Gathering Facts] ************************************************************************************
ok: [localhost]

TASK [tomcat : Upgrade all packages] *********************************************************************
ok: [localhost]

TASK [tomcat : Java installation] *********************************************************************
changed: [localhost]

TASK [tomcat : Tomcat download] *********************************************************************
changed: [localhost]

TASK [tomcat : Extract into /opt] *********************************************************************
changed: [localhost]

TASK [tomcat : Starting server] *********************************************************************
changed: [localhost]

PLAY RECAP *********************************************************************
localhost                : ok=6   changed=4   unreachable=0   failed=0   skipped=0   rescued=0   ignored=0

ubuntu@ip-172-31-18-207:~$
```

```
ubuntu@ip-172-31-18-207: ~  
- hosts: all  
  remote_user: ubuntu  
  become: yes  
  roles:  
  - tomcat
```

"role.yaml" 6L, 70C

1,0-1 All

Links 32°C AQI 84 ENG 2041 20-06-2021

```
ubuntu@ip-172-31-18-207: ~  
-k: [localhost]  
TASK [tomcat : Starting server] *****  
changed: [localhost]  
PLAY RECAP *****  
localhost : ok=6 changed=1 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0  
ubuntu@ip-172-31-18-207:~$ less role.yaml  
ubuntu@ip-172-31-18-207:~$ vi role.yaml  
ubuntu@ip-172-31-18-207:~$ vi role.yaml  
ubuntu@ip-172-31-18-207:~$ ansible-playbook role.yaml  
PLAY [all] *****  
TASK [Gathering Facts] *****  
(DEPRECATION WARNING): Distribution Ubuntu 16.04 on host 172.31.28.78 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: [172.31.28.78]  
(DEPRECATION WARNING): Distribution Ubuntu 16.04 on host 172.31.19.124 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: [172.31.19.124]  
TASK [tomcat : Upgrade all packages] *****  
changed: [172.31.28.78]  
changed: [172.31.19.124]  
TASK [tomcat : Java installation] *****  
changed: [172.31.19.124]  
changed: [172.31.28.78]  
TASK [tomcat : Tomcat download] *****  
changed: [172.31.28.78]  
changed: [172.31.19.124]  
TASK [tomcat : Extract into /opt] *****  
changed: [172.31.19.124]  
changed: [172.31.28.78]  
TASK [tomcat : Starting server] *****  
changed: [172.31.19.124]  
changed: [172.31.28.78]  
PLAY RECAP *****  
172.31.19.124 : ok=6 changed=5 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0  
172.31.28.78 : ok=6 changed=5 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0  
ubuntu@ip-172-31-18-207:~$
```

Links 35°C Mostly sunny 1049 21-06-2021

## Added server.xml.j2 and executed

```
ubuntu@ip-172-31-18-207: ~  
Documentation at /docs/jndi-resource-tasks.html  
-->  
<GlobalNamingResources>  
<!-- Editable user database that can also be used by  
UserDatabaseRealm to authenticate users -->  
-->  
<Resource name="UserDatabase" auth="Container"  
    type="org.apache.catalina.UserDatabase"  
    description="User database that can be updated and saved"  
    factory="org.apache.catalina.users.MemoryUserDatabaseFactory"  
    pathname="conf/tomcat-users.xml" />  
</GlobalNamingResources>  
  
<!-- A "Service" is a collection of one or more "Connectors" that share  
a single "Container". Note: A "Service" is and itself a "Container",  
so you may not define subcomponents such as "Valves" at this level.  
Documentation at /docs/config/service.html -->  
-->  
<Service name="Catalina">  
  
<!-- The connectors can use a shared executor, you can define one or more named thread pools-->  
<!--  
<Executor name="tomcatThreadPool" namePrefix="catalina-exec-"  
    maxThreads="150" minSpareThreads="4"/>  
-->  
  
<!-- A "Connector" represents an endpoint by which requests are received  
and responses are returned. Documentation at :  
Java HTTP Connector: /docs/config/http.html  
Java AJP Connector: /docs/config/ajp.html  
APR (HTTP/AJP) Connector: /docs/apr.html  
Define a non-SSL/TLS HTTP/1.1 Connector on port 8080 -->  
-->  
<Connector port="{(tomcat.port)}" protocol="HTTP/1.1"  
    connectionTimeout="20000"  
    redirectPort="8443" />  
-->  
<!-- A "Connector" using the shared thread pool-->  
<!--  
<Connector executor="tomcatThreadPool"  
    port="8080" protocol="HTTP/1.1"  
    connectionTimeout="20000"  
    redirectPort="8443" />  
-->  
  
<!-- Define an SSL/TLS HTTP/1.1 Connector on port 8443  
This connector uses the NIO implementation. The default  
SSL implementation will depend on the presence of the APR/native  
library and the useOpenSSL attribute of the  
AprLifecycleListener. -->  
-->
```

```
ubuntu@ip-172-31-18-207: ~/jenkins/tasks  
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by  
applicable law.  
  
New release '18.04.5 LTS' available.  
Run 'do-release-upgrade' to upgrade to it.  
  
Last login: Sun Jun 27 14:47:35 2021 from 106.201.172.100  
ubuntu@ip-172-31-18-207:~$ ls -ltr  
total 32  
-rw-rw-r-- 1 ubuntu ubuntu 168 Jun 16 13:43 httpd.yaml  
-rw-rw-r-- 1 ubuntu ubuntu 11 Jun 16 13:46 index.html  
-rw-rw-r-- 1 ubuntu ubuntu 346 Jun 17 06:06 ec2.yaml  
drwxrwxr-x 10 ubuntu ubuntu 4096 Jun 18 10:18 apache  
drwxrwxr-x 10 ubuntu ubuntu 4096 Jun 20 15:02 tomcat  
-rw-rw-r-- 1 ubuntu ubuntu 7600 Jun 27 14:58 server.xml.j2  
-rw-rw-r-- 1 ubuntu ubuntu 459 Jun 27 15:23 role.yaml  
ubuntu@ip-172-31-18-207:~$ vi server.xml.j2  
ubuntu@ip-172-31-18-207:~$ ansible-playbook role.yaml  
[WARNING]: Found variable using reserved name: roles  
  
PLAY [all] *****  
  
TASK [Gathering Facts] *****  
[DEPRECATION WARNING]: Distribution Ubuntu 16.04 on host 172.31.28.78 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: [172.31.28.78]  
[DEPRECATION WARNING]: Distribution Ubuntu 16.04 on host 172.31.19.124 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: [172.31.19.124]  
  
TASK [Template] *****  
changed: [172.31.19.124]  
ok: [172.31.28.78]  
  
TASK [Shuting server] *****  
changed: [172.31.19.124]  
changed: [172.31.28.78]  
  
TASK [Starting server] *****  
changed: [172.31.28.78]  
changed: [172.31.19.124]  
  
PLAY RECAP *****  
172.31.19.124 : ok=4 changed=3 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0  
172.31.28.78 : ok=4 changed=2 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0
```



# ROLES JENKINS INSTALLATION

```
ubuntu@ip-172-31-18-207: ~  
ubuntu@ip-172-31-18-207:~$ ansible-playbook role1.yaml  
ERROR! the role 'jenkins' was not found in /home/ubuntu/roles:/home/ubuntu/.ansible/roles:/usr/share/ansible/roles:/etc/ansible/roles:/home/ubuntu  
The error appears to be in '/home/ubuntu/role1.yaml': line 5, column 5, but may  
be elsewhere in the file depending on the exact syntax problem.  
The offending line appears to be:  
  
    roles:  
    - jenkins  
    ^ here  
ubuntu@ip-172-31-18-207:~$ vi role1.yaml  
ubuntu@ip-172-31-18-207:~$ tree jenkins/  
jenkins/  
├── defaults  
│   ├── main.yml  
│   ├── files  
│   ├── handlers  
│   │   └── main.yml  
│   ├── meta  
│   │   └── main.yml  
│   ├── README.md  
│   ├── tasks  
│   │   └── main.yml  
│   ├── templates  
│   ├── tests  
│   │   ├── inventory  
│   │   └── test.yml  
│   └── vars  
│       └── main.yml  
8 directories, 8 files  
ubuntu@ip-172-31-18-207:~$ vi role1.yaml  
ubuntu@ip-172-31-18-207:~$ ansible-playbook role1.yaml  
{WARNING}: While constructing a mapping from /home/ubuntu/jenkins/tasks/main.yml, line 4, column 3, found a duplicate dict key (name). Using last defined value only.  
ERROR! conflicting action statements: gpgkey, yum_repository  
The error appears to be in '/home/ubuntu/jenkins/tasks/main.yml': line 4, column 3, but may  
be elsewhere in the file depending on the exact syntax problem.  
The offending line appears to be:  
  
- name: Add jenkins repo install  
  ^ here  
ubuntu@ip-172-31-18-207:~$ cd jenkins/tasks/  
ubuntu@ip-172-31-18-207:~/jenkins/tasks$ vi main.yml  
ubuntu@ip-172-31-18-207:~/jenkins/tasks$ cd  
ubuntu@ip-172-31-18-207:~$ vi server.xml.j2  
ubuntu@ip-172-31-18-207:~$
```

```
ubuntu@ip-172-31-18-207: ~  
ERROR! conflicting action statements: apt_repository, gpgkey  
The error appears to be in '/home/ubuntu/jenkins/tasks/main.yml': line 4, column 3, but may  
be elsewhere in the file depending on the exact syntax problem.  
The offending line appears to be:  
  
- name: Add jenkins repo install  
  ^ here  
ubuntu@ip-172-31-18-207:~$ cd jenkins/  
ubuntu@ip-172-31-18-207:~/jenkins$ cd tasks/  
ubuntu@ip-172-31-18-207:~/jenkins/tasks$ vi main.yml  
ubuntu@ip-172-31-18-207:~/jenkins/tasks$ cd  
ubuntu@ip-172-31-18-207:~$ cd jenkins/  
ubuntu@ip-172-31-18-207:~/jenkins$ cd tasks/  
ubuntu@ip-172-31-18-207:~/jenkins/tasks$ vi main.yml  
ubuntu@ip-172-31-18-207:~/jenkins/tasks$ cd  
ubuntu@ip-172-31-18-207:~$ ansible-playbook role1.yaml  
{WARNING}: While constructing a mapping from /home/ubuntu/jenkins/tasks/main.yml, line 4, column 3, found a duplicate dict key (name). Using last defined value only.  
ERROR! conflicting action statements: apt_repository, gpgkey  
The error appears to be in '/home/ubuntu/jenkins/tasks/main.yml': line 4, column 3, but may  
be elsewhere in the file depending on the exact syntax problem.  
The offending line appears to be:  
  
- name: Add jenkins repo install  
  ^ here  
ubuntu@ip-172-31-18-207:~$ cd jenkins/  
ubuntu@ip-172-31-18-207:~/jenkins$ cd tasks/  
ubuntu@ip-172-31-18-207:~/jenkins/tasks$ vi main.yml  
ubuntu@ip-172-31-18-207:~/jenkins/tasks$ vi main.yml  
ubuntu@ip-172-31-18-207:~/jenkins/tasks$ vi main.yml  
ubuntu@ip-172-31-18-207:~/jenkins/tasks$ cd  
ubuntu@ip-172-31-18-207:~$ ansible-playbook role1.yaml  
{WARNING}: Found variable using reserved name: port  
  
PLAY [all] *****  
  
TASK [Gathering Facts] *****  
fatal: [172.31.28.78]: UNREACHABLE! => {"changed": false, "msg": "Failed to connect to the host via ssh: Permission denied (publickey).", "unreachable": true}  
fatal: [172.31.19.124]: UNREACHABLE! => {"changed": false, "msg": "Failed to connect to the host via ssh: Permission denied (publickey).", "unreachable": true}  
  
PLAY RECAP *****  
172.31.19.124      : ok=0    changed=0    unreachable=1    failed=0    skipped=0    rescued=0    ignored=0  
172.31.28.78      : ok=0    changed=0    unreachable=1    failed=0    skipped=0    rescued=0    ignored=0  
ubuntu@ip-172-31-18-207:~$
```

```
ubuntu@ip-172-31-18-207: ~/jenkins/tasks
tasks file for jenkins

- name: ensure the jenkins apt repository key is installed
  apt_key: url=https://pkg.jenkins.io/debian-stable/jenkins.io.key state=present
  become: yes

- name: ensure the repository is configured
  apt_repository: repo='deb https://pkg.jenkins.io/debian-stable binary/' state=present
  become: yes

- name: ensure jenkins is installed
  apt: name=jenkins update_cache=yes
  become: yes

- name: ensure jenkins is running
  service: name=jenkins state=started

"main.yml" 17L, 533C
1,0-1 All
```

```
ubuntu@ip-172-31-18-207: ~
TASK [Gathering Facts] *****
fatal: [172.31.28.78]: UNREACHABLE! => ("changed": false, "msg": "Failed to connect to the host via ssh: Permission denied (publickey).", "unreachable": true)
fatal: [172.31.19.124]: UNREACHABLE! => ("changed": false, "msg": "Failed to connect to the host via ssh: Permission denied (publickey).", "unreachable": true)

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

ubuntu@ip-172-31-18-207:~$ cd etc
-bash: cd: etc: No such file or directory
ubuntu@ip-172-31-18-207:~$ cd /etc/ansible
ubuntu@ip-172-31-18-207:/etc/ansible$ vi hosts
ubuntu@ip-172-31-18-207:/etc/ansible$ cd
ubuntu@ip-172-31-18-207:~$ vi role1.yaml
ubuntu@ip-172-31-18-207:~$ ansible-playbook role1.yaml
[WARNING]: Found variable using reserved name: port

PLAY [all] *****

TASK [Gathering Facts] *****
[DEPRECATION WARNING]: Distribution Ubuntu 16.04 on host 172.31.28.78 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: [172.31.28.78]
[DEPRECATION WARNING]: Distribution Ubuntu 16.04 on host 172.31.19.124 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: [172.31.19.124]

TASK [ensure the jenkins apt repository key is installed] *****
changed: [172.31.28.78]
changed: [172.31.19.124]

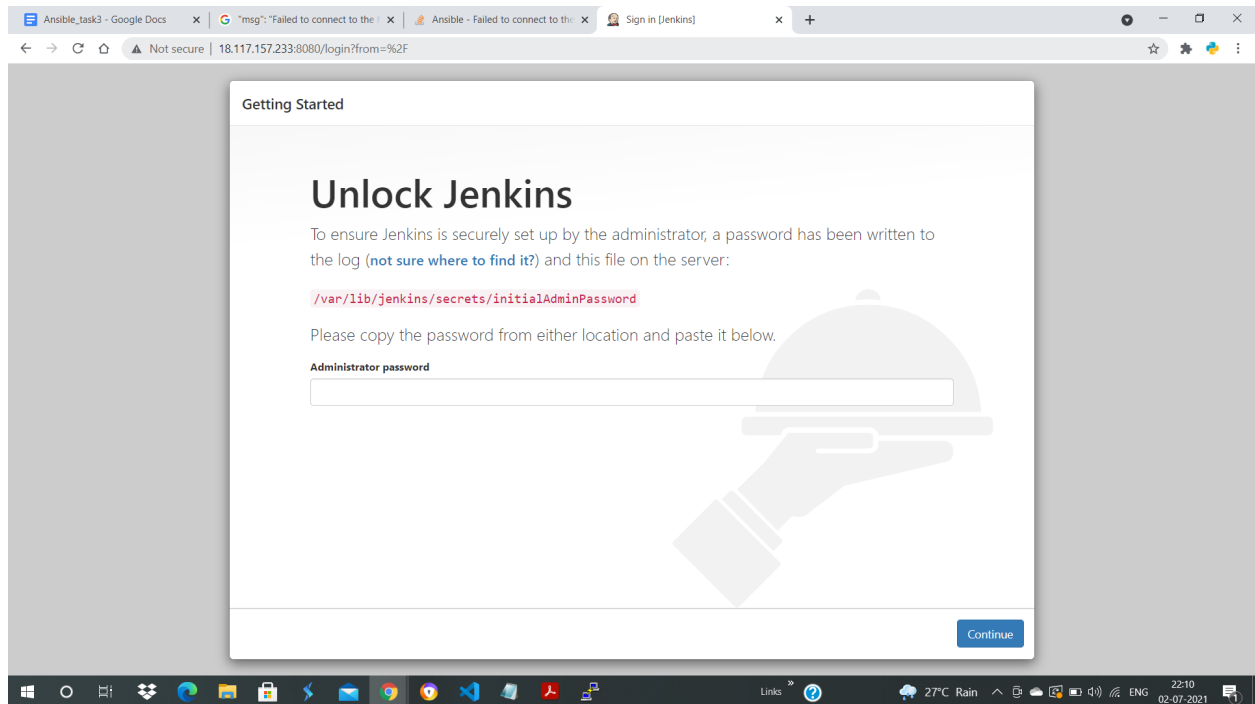
TASK [jenkins : ensure the repository is configured] *****
changed: [172.31.19.124]
changed: [172.31.28.78]

TASK [ensure jenkins is installed] *****
changed: [172.31.28.78]
changed: [172.31.19.124]

TASK [ensure jenkins is running] *****
ok: [172.31.28.78]
ok: [172.31.19.124]

PLAY RECAP *****
172.31.19.124      : ok=5    changed=3    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
172.31.28.78      : ok=5    changed=3    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

ubuntu@ip-172-31-18-207:~$
```



```
ubuntu@ip-172-31-18-207: ~/jenkins/tasks
# tasks file for jenkins
- name: ensure the jenkins apt repository key is installed
  apt_key: url=https://pkg.jenkins.io/debian-stable/jenkins.io.key state=present
  become: yes

- name: ensure the repository is configured
  apt_repository: repo='deb https://pkg.jenkins.io/debian-stable binary/' state=present
  become: yes

- name: ensure jenkins is installed
  apt: name=jenkins update_cache=yes
  become: yes

- name: ensure jenkins is running
  service: name=jenkins state=started

- name: changing port
  lineinfile:
    path: /etc/sysconfig/jenkins
    regexp: '^JENKINS_PORT='
    line: JENKINS_PORT=({port})
  notify:
    - restart Jenkins
```

Under Jenkins/vars (vi main.yaml)



```
ubuntu@ip-172-31-18-207: ~/jenkins/vars
--
vars file for jenkins

port: 7070

"main.yml" 5L, 41C
1,1 All
```

```
ubuntu@ip-172-31-18-207: ~/jenkins/handlers
--
handlers file for jenkins
name: restart jenkins
service:
  name: jenkins
  state: restarted

"main.yml" 6L, 106C
1,1 All
```

```
ubuntu@ip-172-31-18-207: ~  
TASK [ensure jenkins is installed] *****  
changed: [172.31.28.78]  
changed: [172.31.19.124]  
  
TASK [ensure jenkins is running] *****  
ok: [172.31.28.78]  
ok: [172.31.19.124]  
  
PLAY RECAP *****  
172.31.19.124      : ok=5    changed=3    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0  
172.31.28.78      : ok=5    changed=3    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0  
  
ubuntu@ip-172-31-18-207:~$ cd jenkins/  
ubuntu@ip-172-31-18-207:~/jenkins$ cd tasks/  
ubuntu@ip-172-31-18-207:~/jenkins/tasks$ vi main.yml  
ubuntu@ip-172-31-18-207:~/jenkins/tasks$ cd  
ubuntu@ip-172-31-18-207:~$ cd jenkins/  
ubuntu@ip-172-31-18-207:~/jenkins$ cd vars/  
ubuntu@ip-172-31-18-207:~/jenkins/vars$ vi main.yml  
ubuntu@ip-172-31-18-207:~/jenkins/vars$ cd ..  
ubuntu@ip-172-31-18-207:~/jenkins$ cd handlers/  
ubuntu@ip-172-31-18-207:~/jenkins/handlers$ vi main.yml  
ubuntu@ip-172-31-18-207:~/jenkins/handlers$ cd ..  
ubuntu@ip-172-31-18-207:~/jenkins$ cd vars/  
ubuntu@ip-172-31-18-207:~/jenkins/vars$ vi main.yml  
ubuntu@ip-172-31-18-207:~/jenkins/vars$ cd  
ubuntu@ip-172-31-18-207:~$ ansible-playbook role1.yml -e "tomcat_port=8080"  
ERROR! We were unable to read either as JSON nor YAML, these are the errors we got from each:  
JSON: No JSON object could be decoded  
YAML: Syntax Error while loading YAML.  
      did not find expected '-' indicator  
  
The error appears to be in '/home/ubuntu/jenkins/tasks/main.yml': line 19, column 2, but may  
be elsewhere in the file depending on the exact syntax problem.  
  
The offending line appears to be:  
  
- name: changing port  
  lineinfile:  
    > here  
ubuntu@ip-172-31-18-207:~$ jenkins/tasks/  
-bash: jenkins/tasks/: is a directory  
ubuntu@ip-172-31-18-207:~$ cd jenkins/  
ubuntu@ip-172-31-18-207:~/jenkins$ cd tasks/  
ubuntu@ip-172-31-18-207:~/jenkins/tasks$ vi main.yml  
ubuntu@ip-172-31-18-207:~/jenkins/tasks$ cd  
ubuntu@ip-172-31-18-207:~$ ansible-playbook role1.yml -e "tomcat_port=8080"  
ERROR! A malformed block was encountered while loading a block  
ubuntu@ip-172-31-18-207:~$
```

```
ubuntu@ip-172-31-18-207: ~  
..writes, validate")  
  
PLAY RECAP *****  
172.31.19.124      : ok=5    changed=0    unreachable=0    failed=1    skipped=0    rescued=0    ignored=0  
172.31.28.78      : ok=5    changed=0    unreachable=0    failed=1    skipped=0    rescued=0    ignored=0  
  
ubuntu@ip-172-31-18-207:~$ ansible-playbook role1.yml -e "tomcat_port=8080"  
[WARNING]: Found variable using reserved name: port  
  
PLAY [all] *****  
  
TASK [Gathering Facts] *****  
[DEPRECATION WARNING]: Distribution Ubuntu 16.04 on host 172.31.28.78 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: [172.31.28.78]  
[DEPRECATION WARNING]: Distribution Ubuntu 16.04 on host 172.31.19.124 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: [172.31.19.124]  
  
TASK [ensure the jenkins apt repository key is installed] *****  
ok: [172.31.28.78]  
ok: [172.31.19.124]  
  
TASK [jenkins : ensure the repository is configured] *****  
ok: [172.31.19.124]  
ok: [172.31.28.78]  
  
TASK [ensure jenkins is installed] *****  
ok: [172.31.28.78]  
ok: [172.31.19.124]  
  
TASK [ensure jenkins is running] *****  
ok: [172.31.28.78]  
ok: [172.31.19.124]  
  
TASK [jenkins : changing port] *****  
fatal: [172.31.28.78]: FAILED! => ("changed": false, "msg": "Unsupported parameters for (lineinfile) module: notify Supported parameters include: attributes, backrefs, backup, content, crease, delimiter, directory_mode, firstmatch, follow, force, group, insertafter, insertbefore, line, mode, owner, path, regexp, remote_src, selevel, serole, setype, seuser, src, state, unsafe_writes, validate")  
fatal: [172.31.19.124]: FAILED! => ("changed": false, "msg": "Unsupported parameters for (lineinfile) module: notify Supported parameters include: attributes, backrefs, backup, content, crease, delimiter, directory_mode, firstmatch, follow, force, group, insertafter, insertbefore, line, mode, owner, path, regexp, remote_src, selevel, serole, setype, seuser, src, state, unsafe_writes, validate")  
  
PLAY RECAP *****  
172.31.19.124      : ok=5    changed=0    unreachable=0    failed=1    skipped=0    rescued=0    ignored=0  
172.31.28.78      : ok=5    changed=0    unreachable=0    failed=1    skipped=0    rescued=0    ignored=0  
  
ubuntu@ip-172-31-18-207:~$
```

```
ubuntu@ip-172-31-18-207: ~  
ubuntu@ip-172-31-18-207:~$ cd jenkins/  
ubuntu@ip-172-31-18-207:~/jenkins$ cd tasks/  
ubuntu@ip-172-31-18-207:~/jenkins/tasks$ vi main.yml  
ubuntu@ip-172-31-18-207:~/jenkins/tasks$ vi main.yml  
ubuntu@ip-172-31-18-207:~/jenkins/tasks$ cd  
ubuntu@ip-172-31-18-207:~$ ansible-playbook role1.yml  
[WARNING]: Found variable using reserved name: port  
  
PLAY [all] *************************************************************************************************************************************  
  
TASK [Gathering Facts] *************************************************************************************************************************************  
[DEPRECATION WARNING]: Distribution Ubuntu 16.04 on host 172.31.28.78 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: [172.31.28.78]  
[DEPRECATION WARNING]: Distribution Ubuntu 16.04 on host 172.31.19.124 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: [172.31.19.124]  
  
TASK [ensure the jenkins apt repository key is installed] *********************************************************************  
ok: [172.31.28.78]  
ok: [172.31.19.124]  
  
TASK [jenkins : ensure the repository is configured] *********************************************************************  
ok: [172.31.19.124]  
ok: [172.31.28.78]  
  
TASK [ensure jenkins is installed] *********************************************************************  
ok: [172.31.28.78]  
ok: [172.31.19.124]  
  
TASK [ensure jenkins is running] *********************************************************************  
ok: [172.31.28.78]  
ok: [172.31.19.124]  
  
TASK [jenkins : changing port] *********************************************************************  
[fatal: [172.31.19.124]: FAILED! => ("changed": false, "msg": "Destination /etc/sysconfig/jenkins does not exist !", "rc": 257)]  
[fatal: [172.31.28.78]: FAILED! => ("changed": false, "msg": "Destination /etc/sysconfig/jenkins does not exist !", "rc": 257)]  
  
PLAY RECAP *********************************************************************  
172.31.19.124      : ok=5    changed=0    unreachable=0    failed=1    skipped=0    rescued=0    ignored=0  
172.31.28.78      : ok=5    changed=0    unreachable=0    failed=1    skipped=0    rescued=0    ignored=0  
  
ubuntu@ip-172-31-18-207:~$ cd etc/sysconfig  
-bash: cd: etc/sysconfig: No such file or directory  
ubuntu@ip-172-31-18-207:~$ cd jenkins/  
ubuntu@ip-172-31-18-207:~/jenkins$ cd tasks/
```

```
ubuntu@ip-172-31-18-207: ~/jenkins/tasks  
# tasks file for jenkins  
- name: ensure the jenkins apt repository key is installed  
  apt_key: url=https://pkg.jenkins.io/debian-stable/jenkins.io.key state=present  
  become: yes  
  
- name: ensure the repository is configured  
  apt_repository: repos='deb https://pkg.jenkins.io/debian-stable binary/' state=present  
  become: yes  
  
- name: ensure jenkins is installed  
  apt: name=jenkins update_cache=yes  
  become: yes  
  
- name: ensure jenkins is running  
  service: name=jenkins state=started  
  
- name: changing port  
  lineinfile:  
    path: /etc/sysconfig/jenkins  
    regexp: '^JENKINS_PORT='  
    line: JENKINS_PORT={{port}}  
  notify:  
    - restart Jenkins  
  
"main.yml" 25L, 668C  
1,0-1 All
```

```
ubuntu@ip-172-31-18-207: ~/jenkins/tasks
[WARNING]: Found variable using reserved name: port

PLAY [all]

TASK [Gathering Facts]
[DEPRECATION WARNING]: Distribution Ubuntu 16.04 on host 172.31.28.78 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: [172.31.28.78]
[DEPRECATION WARNING]: Distribution Ubuntu 16.04 on host 172.31.19.124 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: [172.31.19.124]

TASK [ensure the jenkins apt repository key is installed]
ok: [172.31.28.78]
ok: [172.31.19.124]

TASK [jenkins : ensure the repository is configured]
ok: [172.31.19.124]
ok: [172.31.28.78]

TASK [ensure jenkins is installed]
ok: [172.31.28.78]
ok: [172.31.19.124]

TASK [ensure jenkins is running]
ok: [172.31.28.78]
ok: [172.31.19.124]

TASK [jenkins : changing port]
fatal: [172.31.19.124]: FAILED! => ("changed": false, "msg": "Destination /etc/sysconfig/jenkins does not exist!", "rc": 257)
fatal: [172.31.28.78]: FAILED! => ("changed": false, "msg": "Destination /etc/sysconfig/jenkins does not exist!", "rc": 257)

PLAY RECAP
172.31.19.124      : ok=5    changed=0    unreachable=0    failed=1    skipped=0    rescued=0    ignored=0
172.31.28.78      : ok=5    changed=0    unreachable=0    failed=1    skipped=0    rescued=0    ignored=0

ubuntu@ip-172-31-18-207:~$ cd /etc/sysconfig
-bash: cd: /etc/sysconfig: No such file or directory
ubuntu@ip-172-31-18-207:~$ cd /jenkins/
ubuntu@ip-172-31-18-207:~/jenkins$ cd tasks/
ubuntu@ip-172-31-18-207:~/jenkins/tasks$ vi main.yml
ubuntu@ip-172-31-18-207:~/jenkins/tasks$ cd
ubuntu@ip-172-31-18-207:~$ cd /etc/sysconfig/jenkins
-bash: cd: /etc/sysconfig/jenkins: No such file or directory
ubuntu@ip-172-31-18-207:~$ cd /etc/ansible
-bash: cd: /etc/ansible: No such file or directory
ubuntu@ip-172-31-18-207:~$ sudo su
root@ip-172-31-18-207:/home/ubuntu# cd /etc/sysconfig/jenkins
```

## JENKINS ROLES INSTALLATION

```
ubuntu@ip-172-31-18-207: ~/jenkins/tasks

23 additional security updates can be applied with UA Infra: ESM
Learn more about enabling UA Infra: ESM service for Ubuntu 16.04 at
https://ubuntu.com/16-04

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

New release '18.04.5 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Last login: Sat Jul 3 04:44:28 2021 from 171.78.191.78
ubuntu@ip-172-31-18-207:~$ sudo su
root@ip-172-31-18-207:/home/ubuntu# cd
root@ip-172-31-18-207:~$ cd /etc/ansible/
root@ip-172-31-18-207:/etc/ansible# ls -ltr
total 28
-rw-r--r-- 1 root root 19985 May 24 21:17 ansible.cfg
drwxr-xr-x 2 root root 4096 May 24 21:49 roles
-rw-r--r-- 1 root root 1048 Jun 16 07:33 hosts
root@ip-172-31-18-207:/etc/ansible# vi hosts
root@ip-172-31-18-207:/etc/ansible# cd
root@ip-172-31-18-207:~$ exit
exit
ubuntu@ip-172-31-18-207:~$ tree jenkins/
jenkins/
├── defaults
│   └── main.yml
├── files
├── handlers
│   └── main.yml
├── meta
│   └── main.yml
├── README.md
├── tasks
│   └── main.yml
├── templates
├── tests
│   └── inventory
│       └── test.yml
├── vars
│   └── main.yml
└──

8 directories, 8 files
ubuntu@ip-172-31-18-207:~$ cd /jenkins/
ubuntu@ip-172-31-18-207:~/jenkins$ cd tasks/
ubuntu@ip-172-31-18-207:~/jenkins/tasks$ vi main.yml
ubuntu@ip-172-31-18-207:~/jenkins/tasks$ vi main.yml
ubuntu@ip-172-31-18-207:~/jenkins/tasks$
```

```
ubuntu@ip-172-31-18-207: ~/jenkins/tasks
# tasks file for 'jenkins'

- name: Add jenkins repo install
  yum_repository:
    name: jenkins
    description: jenkins repo
    baseurl: http://pkg.jenkins.io/redhat
    gpgkey: http://pkg.jenkins.io/redhat/jenkins.io.key

- name: install java and jenkins
  yum:
    name: "{{item}}"
    state: present
  loop:
    - java
    - jenkins

- name: jenkins start
  service:
    name: jenkins
    state: started

- name: changing port
  lineinfile:
    path: /etc/sysconfig/jenkins
    regexp: "JENKINS_PORT="
    line: JENKINS_PORT={{port}}
  notify:
    - restart Jenkins
```

```
ubuntu@ip-172-31-18-207: ~
├── tasks
│   ├── main.yml
│   ├── templates
│   ├── tests
│   │   ├── inventory
│   │   └── test.yml
│   └── vars
│       └── main.yml
└── 8 directories, 8 files

ubuntu@ip-172-31-18-207:~$ cd jenkins/
ubuntu@ip-172-31-18-207:~/jenkins$ cd tasks/
ubuntu@ip-172-31-18-207:~/jenkins/tasks$ vi main.yml
ubuntu@ip-172-31-18-207:~/jenkins/tasks$ cd
ubuntu@ip-172-31-18-207:~$ ansible-playbook role1.yml
[WARNING]: Found variable using reserved name: port

PLAY [all] *****

TASK [Gathering Facts] *****
[WARNING]: Platform linux on host 172.31.40.112 is using the discovered Python interpreter at /usr/bin/python, but future installation of another Python interpreter could change this. See
https://docs.ansible.com/ansible/2.9/reference_appendices/interpreter_discovery.html for more information.
ok: [172.31.40.112]
[WARNING]: Platform linux on host 172.31.43.41 is using the discovered Python interpreter at /usr/bin/python, but future installation of another Python interpreter could change this. See
https://docs.ansible.com/ansible/2.9/reference_appendices/interpreter_discovery.html for more information.
ok: [172.31.43.41]

TASK [Add jenkins repo install] *****
ok: [172.31.43.41]
ok: [172.31.40.112]

TASK [install java and jenkins] *****
ok: [172.31.43.41] => (item=java)
ok: [172.31.40.112] => (item=java)
ok: [172.31.40.112] => (item=jenkins)
ok: [172.31.43.41] => (item=jenkins)

TASK [jenkins start] *****
ok: [172.31.40.112]
ok: [172.31.43.41]

TASK [jenkins : changing port] *****
ok: [172.31.40.112]
ok: [172.31.43.41]

PLAY RECAP *****
172.31.40.112      : ok=5    changed=0    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
172.31.43.41      : ok=5    changed=0    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

ubuntu@ip-172-31-18-207:~$
```

```
ubuntu@ip-172-31-18-207: ~  
"msg": "Failed to connect to the host via ssh: Permission denied (publickey,gssapi-keyex,gssapi-with-mic).",  
"unreachable": true  
}  
ubuntu@ip-172-31-18-207:~$ ansible -i prod -m ping all  
(WARNING): Unable to parse /home/ubuntu/prod as an inventory source  
(WARNING): No inventory was parsed, only implicit localhost is available  
(WARNING): provided hosts list is empty, only localhost is available. Note that the implicit localhost does not match 'all'  
ubuntu@ip-172-31-18-207:~$ ansible -m ping all  
172.31.43.41 | UNREACHABLE! => {  
  "changed": false,  
  "msg": "Failed to connect to the host via ssh: Permission denied (publickey,gssapi-keyex,gssapi-with-mic).",  
  "unreachable": true  
}  
172.31.40.112 | UNREACHABLE! => {  
  "changed": false,  
  "msg": "Failed to connect to the host via ssh: Permission denied (publickey,gssapi-keyex,gssapi-with-mic).",  
  "unreachable": true  
}  
ubuntu@ip-172-31-18-207:~$ ansible -i hosts -m ping myservers  
(WARNING): Unable to parse /home/ubuntu/hosts as an inventory source  
(WARNING): No inventory was parsed, only implicit localhost is available  
(WARNING): provided hosts list is empty, only localhost is available. Note that the implicit localhost does not match 'all'  
(WARNING): Could not match supplied host pattern, ignoring: myservers  
ubuntu@ip-172-31-18-207:~$ sudo su  
root@ip-172-31-18-207:/home/ubuntu# cd  
root@ip-172-31-18-207:~# cd /etc/ansible  
root@ip-172-31-18-207:/etc/ansible# vi hosts  
root@ip-172-31-18-207:/etc/ansible# cd  
root@ip-172-31-18-207:~$ exit  
exit  
ubuntu@ip-172-31-18-207:~$ ansible -m ping all  
(WARNING): Platform linux on host ec2-user@172.31.43.41 is using the discovered Python interpreter at /usr/bin/python, but future installation of another Python interpreter could change  
this. See https://docs.ansible.com/ansible/2.9/reference_appendices/interpreter_discovery.html for more information.  
ec2-user@172.31.43.41 | SUCCESS => {  
  "ansible_facts": {  
    "discovered_interpreter_python": "/usr/bin/python"  
  },  
  "changed": false,  
  "ping": "pong"  
}  
(WARNING): Platform linux on host ec2-user@172.31.40.112 is using the discovered Python interpreter at /usr/bin/python, but future installation of another Python interpreter could change  
this. See https://docs.ansible.com/ansible/2.9/reference_appendices/interpreter_discovery.html for more information.  
ec2-user@172.31.40.112 | SUCCESS => {  
  "ansible_facts": {  
    "discovered_interpreter_python": "/usr/bin/python"  
  },  
  "changed": false,  
  "ping": "pong"  
}  
ubuntu@ip-172-31-18-207:~$ ansible-playbook role1.yaml
```

```
root@ip-172-31-18-207:/etc/ansible  
# This is the default ansible 'hosts' file.  
#  
# It should live in /etc/ansible/hosts  
#  
# - Comments begin with the '#' character  
# - Blank lines are ignored  
# - Groups of hosts are delimited by [header] elements  
# - You can enter hostnames or ip addresses  
# - A hostname/ip can be a member of multiple groups  
#  
# Ex 1: Ungrouped hosts, specify before any group headers.  
#  
## green.example.com  
## blue.example.com  
## 192.168.100.1  
## 192.168.100.10  
#  
# Ex 2: A collection of hosts belonging to the 'webservers' group  
#  
## [webservers]  
## alpha.example.org  
## beta.example.org  
## 192.168.1.100  
## 192.168.1.110  
#  
# If you have multiple hosts following a pattern you can specify  
# them like this:  
#  
## www[001:006].example.com  
#  
# Ex 3: A collection of database servers in the 'dbservers' group  
#  
## [dbservers]  
##  
## db01.intranet.mydomain.net  
## db02.intranet.mydomain.net  
## 10.25.1.56  
## 10.25.1.57  
#  
# Here's another example of host ranges, this time there are no  
# leading 0s:  
#  
## db-[96:101]-node.example.com  
[dev]  
ec2-user@172.31.40.112  
ec2-user@172.31.43.41  
-  
-  
-  
"hosts" 46L, 1066C  
1,1 All
```

```
ubuntu@ip-172-31-18-207: ~  
    },  
    "discovered_interpreter_python": "/usr/bin/python"  
  },  
  "changed": false,  
  "ping": "pong"  
}  
[WARNING]: Platform linux on host ec2-user@172.31.40.112 is using the discovered Python interpreter at /usr/bin/python, but future installation of another Python interpreter could change this. See https://docs.ansible.com/ansible/2.9/reference_appendices/interpreter_discovery.html for more information.  
ec2-user@172.31.40.112 | SUCCESS => {  
  "ansible_facts": {  
    "discovered_interpreter_python": "/usr/bin/python"  
  },  
  "changed": false,  
  "ping": "pong"  
}  
ubuntu@ip-172-31-18-207:~$ ansible-playbook role1.yaml  
[WARNING]: Found variable using reserved name: port  
  
PLAY [all] *****  
  
TASK [Gathering Facts] *****  
[WARNING]: Platform linux on host ec2-user@172.31.40.112 is using the discovered Python interpreter at /usr/bin/python, but future installation of another Python interpreter could change this. See https://docs.ansible.com/ansible/2.9/reference_appendices/interpreter_discovery.html for more information.  
ok: [ec2-user@172.31.40.112]  
[WARNING]: Platform linux on host ec2-user@172.31.40.112 is using the discovered Python interpreter at /usr/bin/python, but future installation of another Python interpreter could change this. See https://docs.ansible.com/ansible/2.9/reference_appendices/interpreter_discovery.html for more information.  
ok: [ec2-user@172.31.40.112]  
  
TASK [Add jenkins repo install] *****  
ok: [ec2-user@172.31.40.112]  
ok: [ec2-user@172.31.43.41]  
  
TASK [install java and jenkins] *****  
ok: [ec2-user@172.31.43.41] => (item=java)  
ok: [ec2-user@172.31.40.112] => (item=java)  
ok: [ec2-user@172.31.43.41] => (item=jenkins)  
ok: [ec2-user@172.31.40.112] => (item=jenkins)  
  
TASK [jenkins start] *****  
ok: [ec2-user@172.31.40.112]  
ok: [ec2-user@172.31.43.41]  
  
TASK [jenkins : changing port] *****  
ok: [ec2-user@172.31.40.112]  
ok: [ec2-user@172.31.43.41]  
  
PLAY RECAP *****  
ec2-user@172.31.40.112 : ok=5  changed=0  unreachable=0  failed=0  skipped=0  rescued=0  ignored=0  
ec2-user@172.31.43.41 : ok=5  changed=0  unreachable=0  failed=0  skipped=0  rescued=0  ignored=0  
  
ubuntu@ip-172-31-18-207:~$
```

