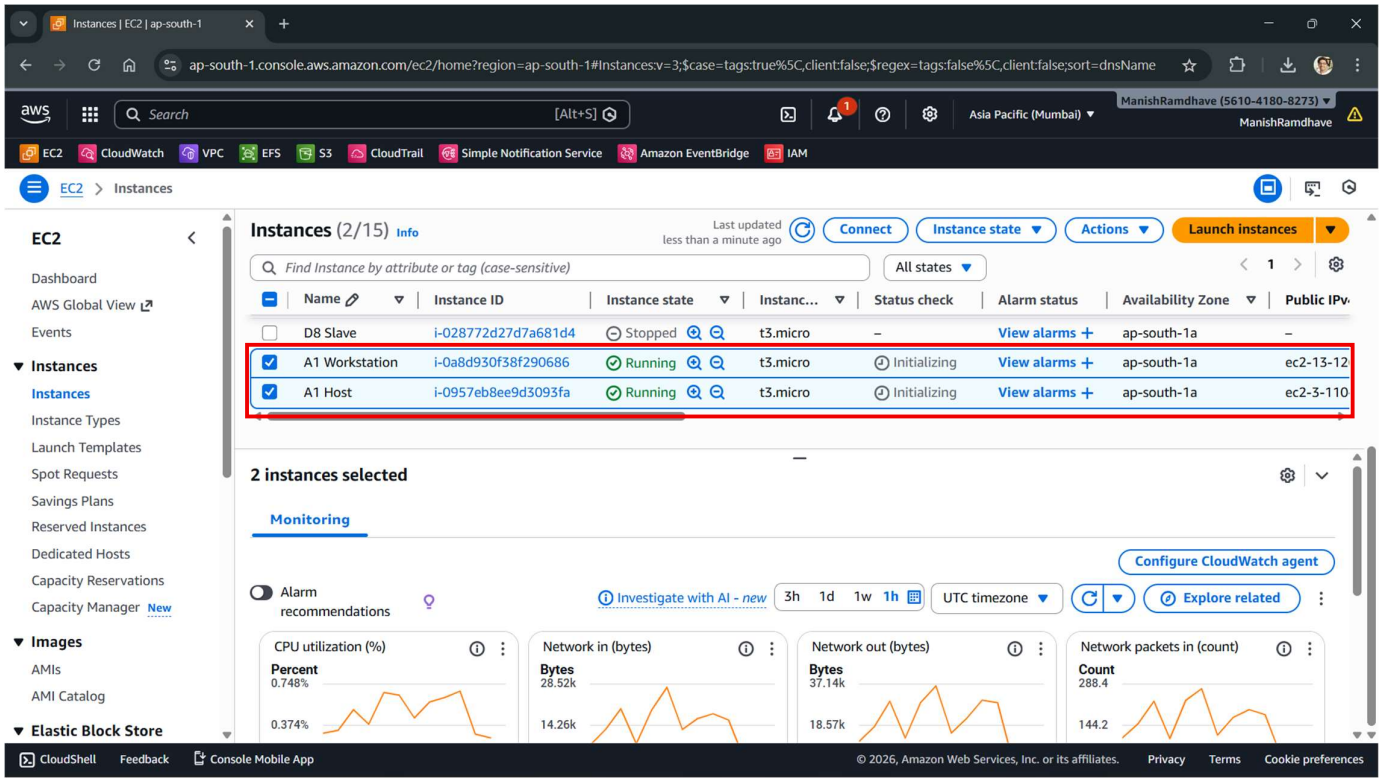
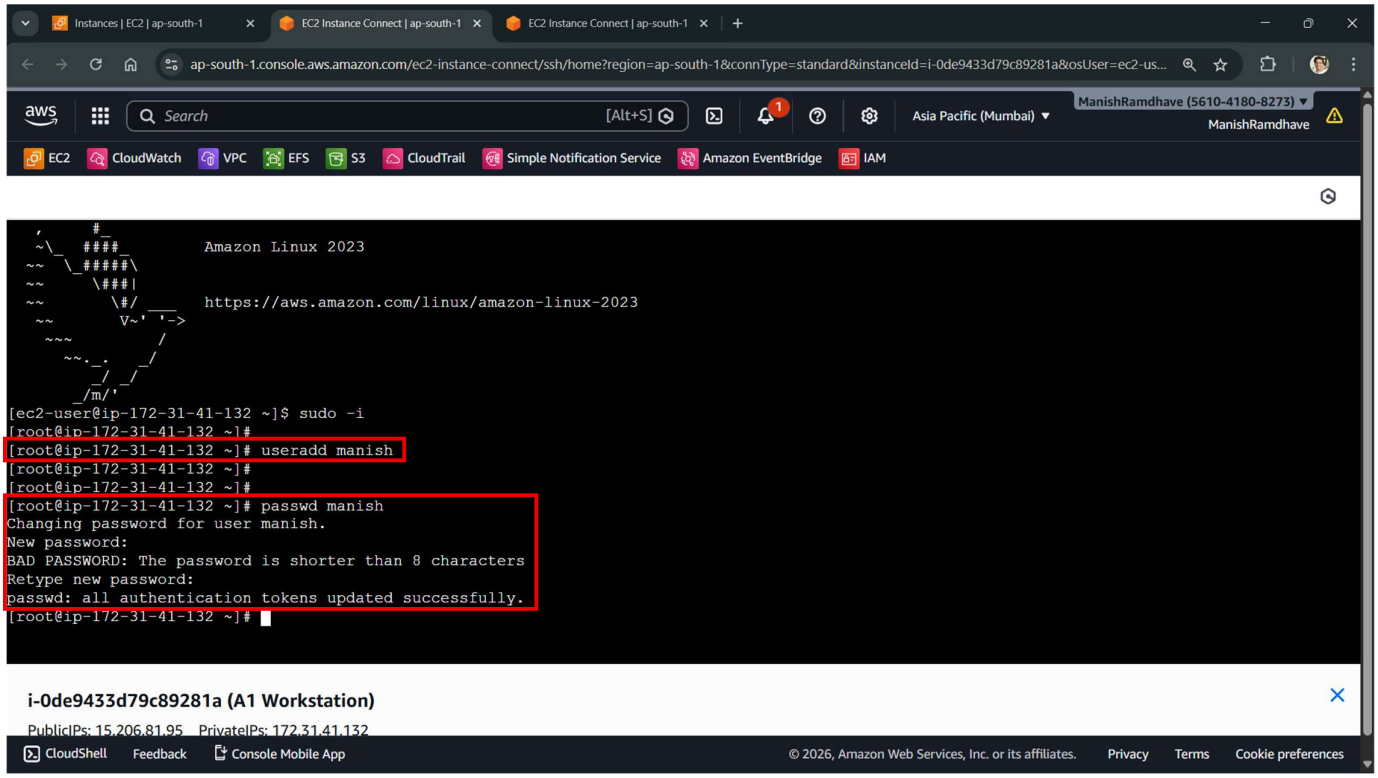
Ansible Assignment 1

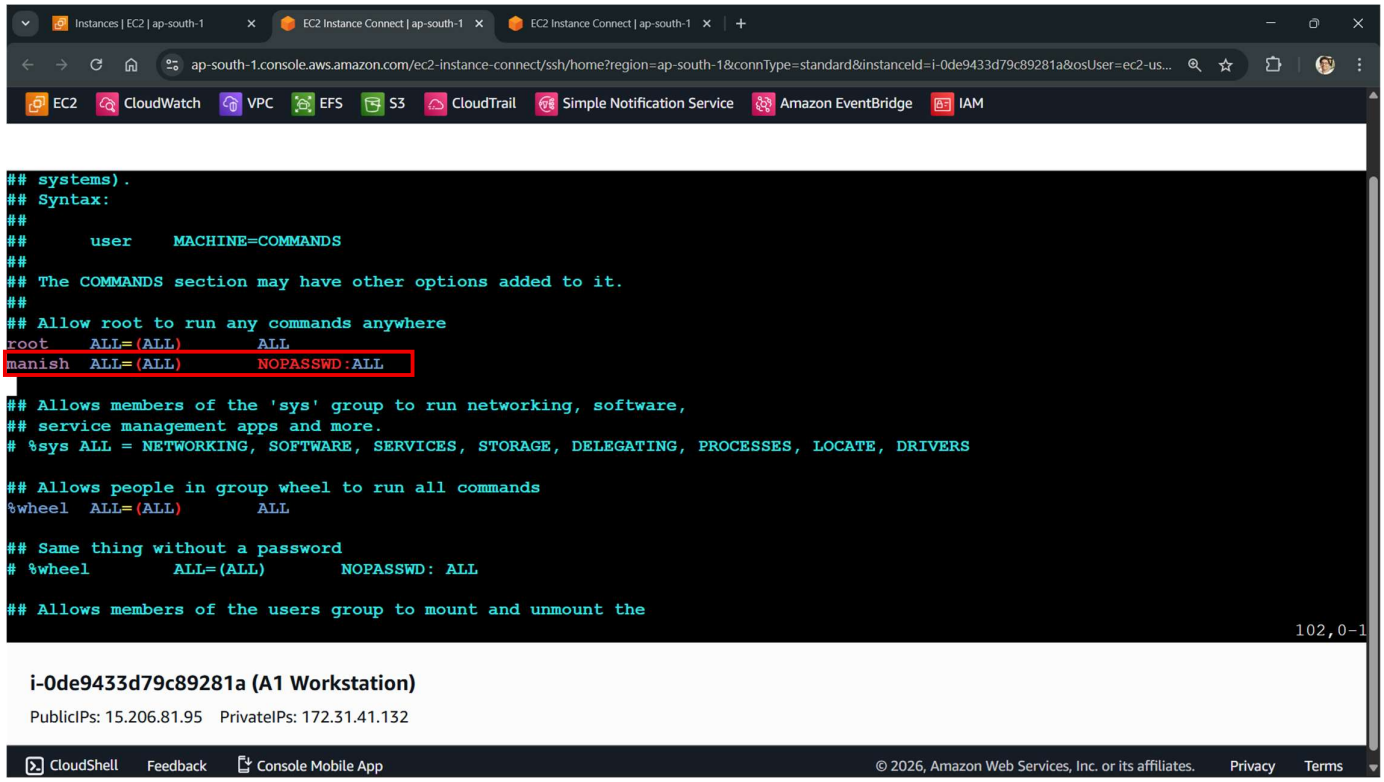
Step 1: Launched instances for our **Jenkins Master and Slave:**



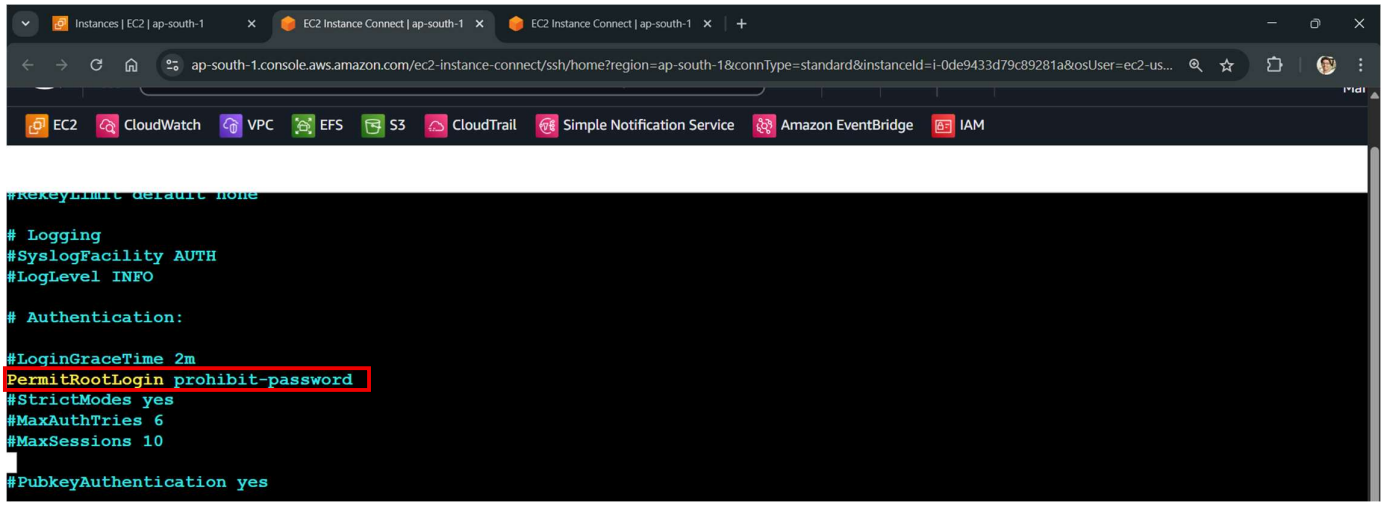
Step 2: Created an user having **'manish'** and also applied a **password** to it **on both 'Workstation' as well as 'Host'**:

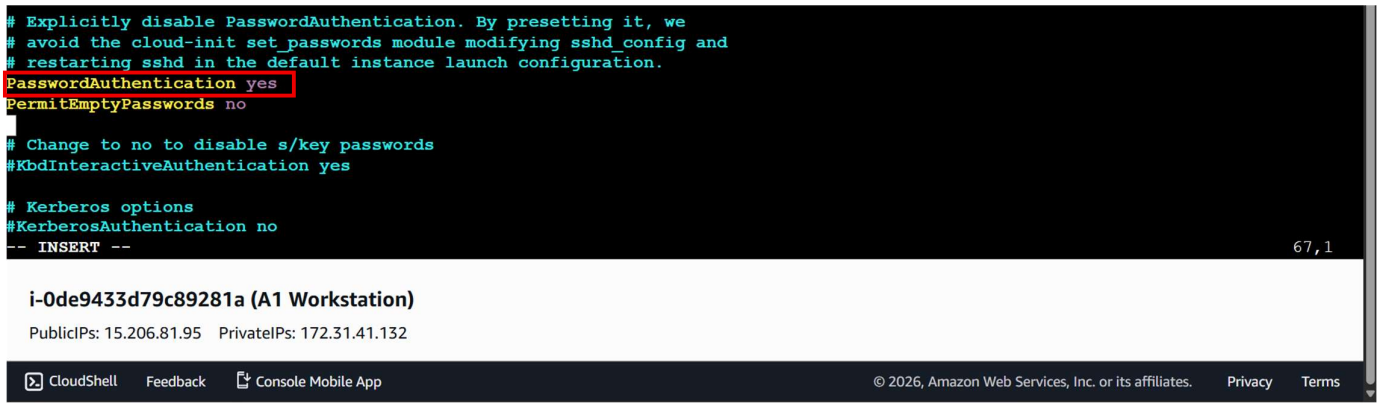


Step 3: Updated the **'sudoers'** file in /etc for assigning **superuser privileges** to **'manish'** user:

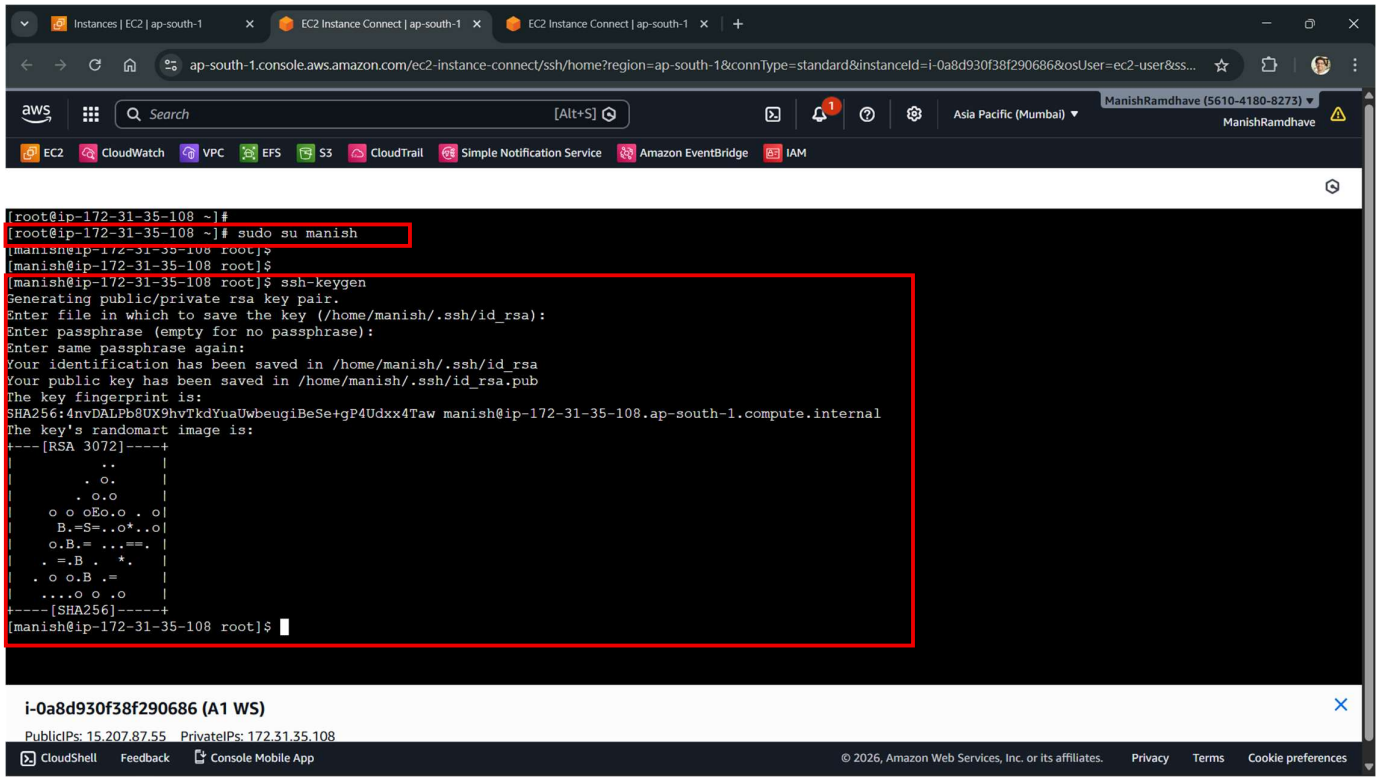


Step 4: In /etc/ssh/**sshd_config** file, made following changes and **restarted the 'sshd service'**:

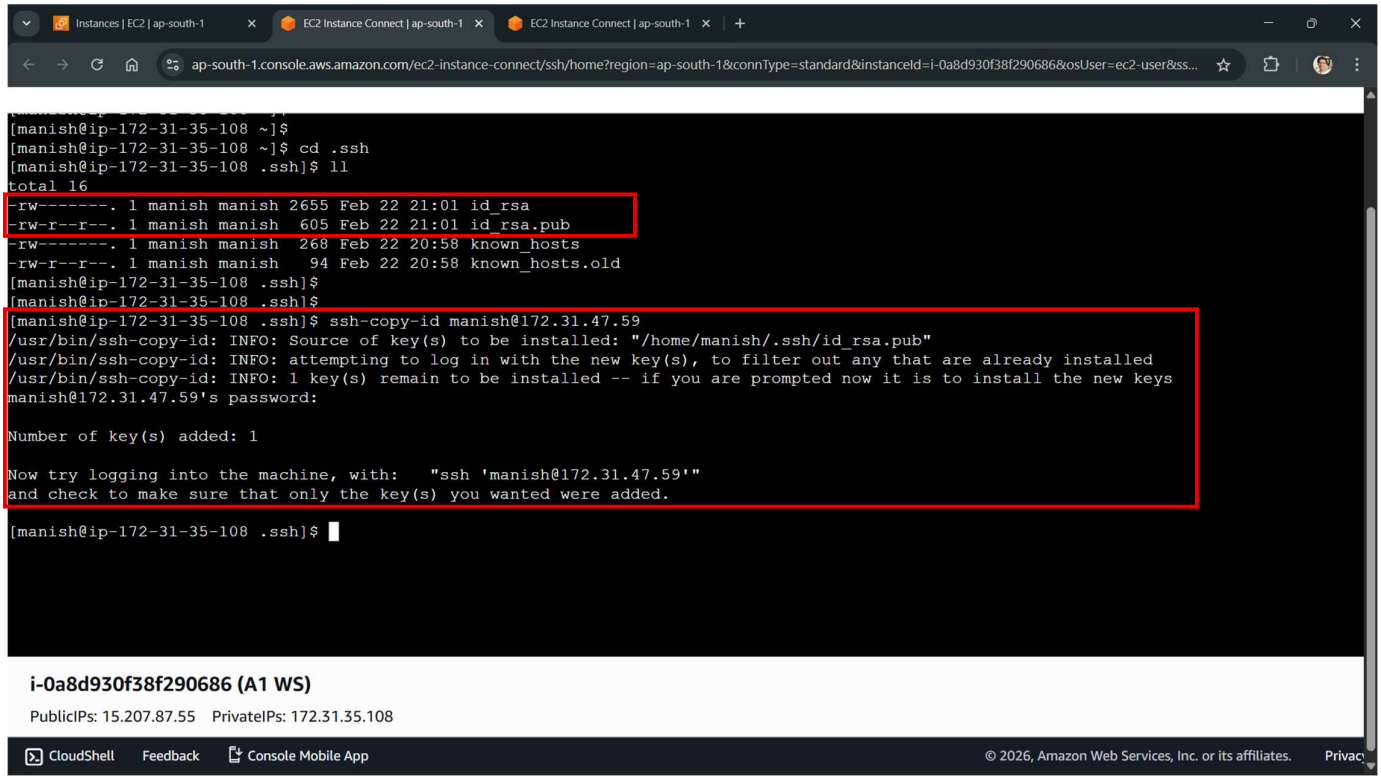




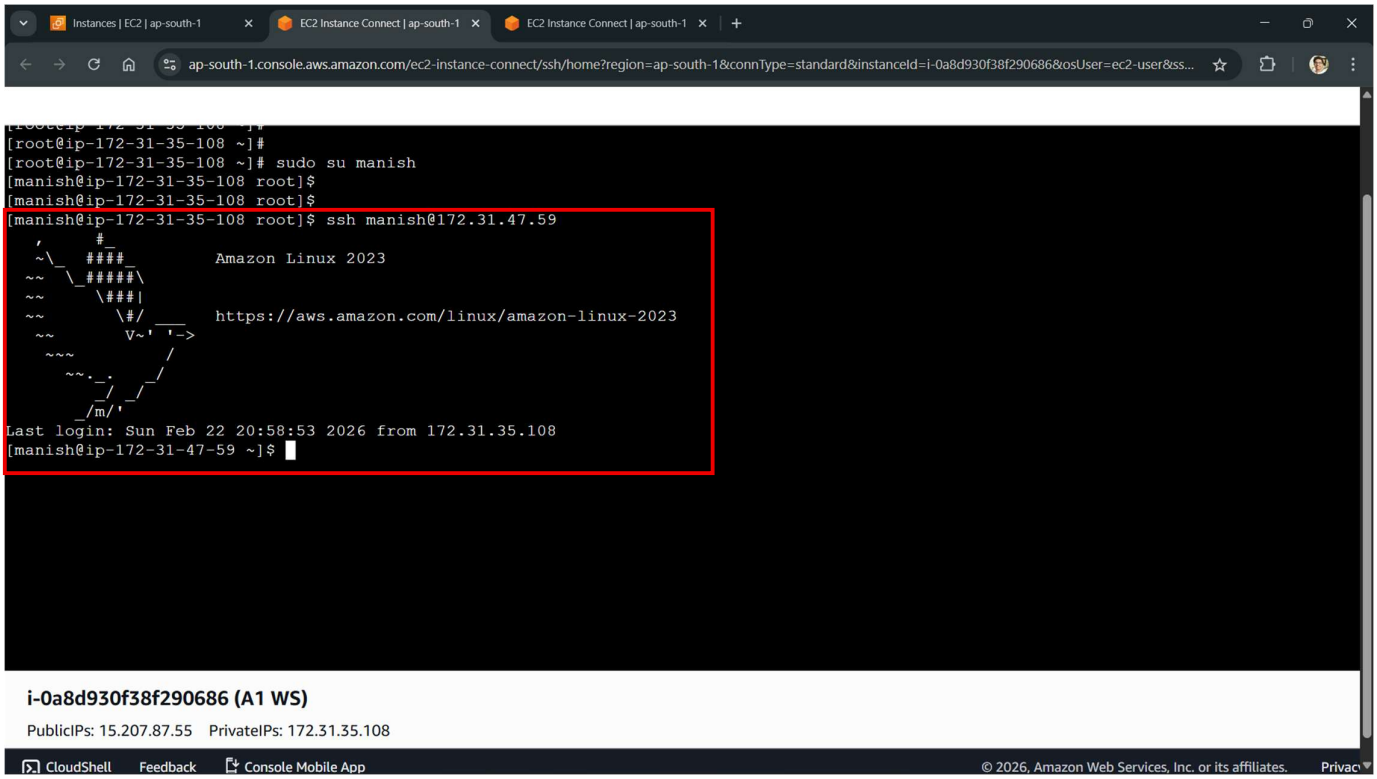
Step 5: Logged in to the **'manish'** user and generated **SSH private and public keypairs**:



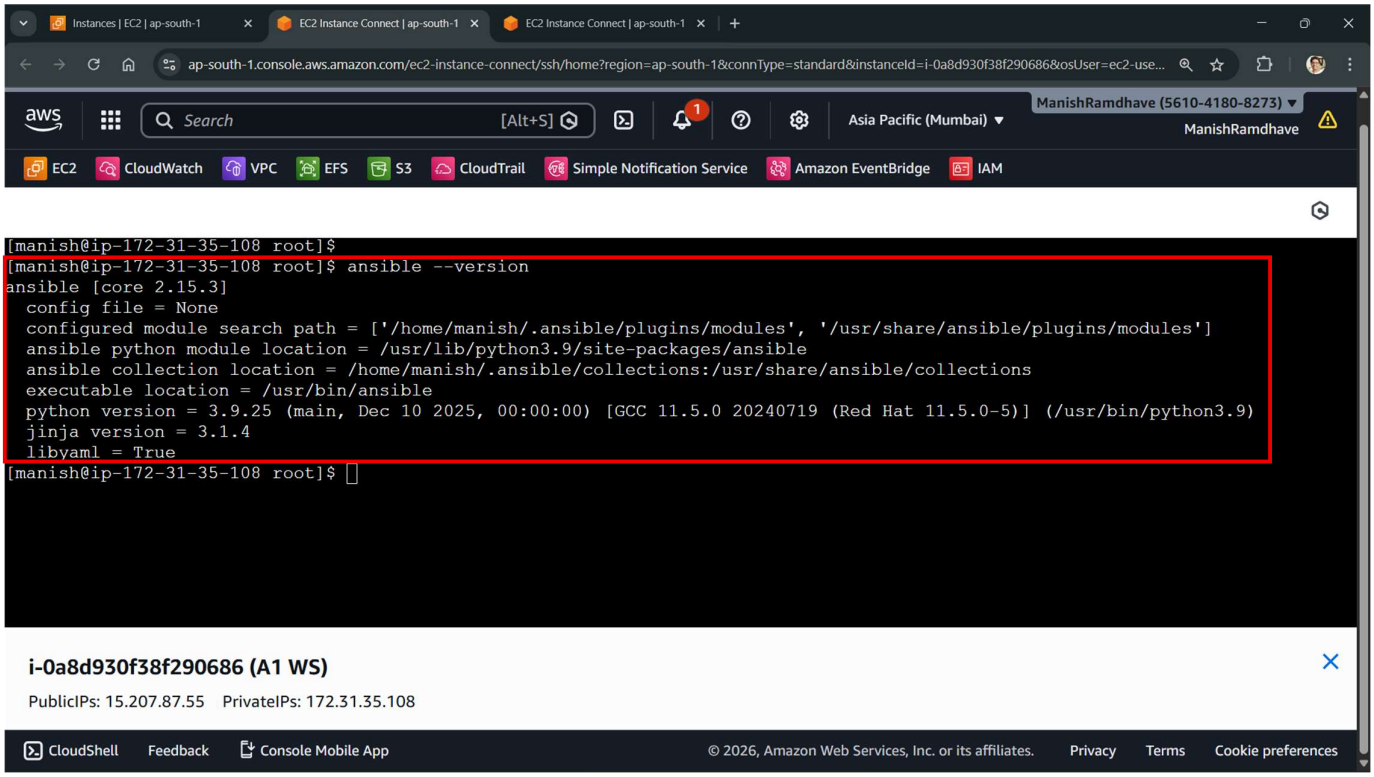
Step 6: Generated both **Private (id_rsa) and Public (id_rsa.pub) key pairs** and **copied them to the host instance** using its private IP:



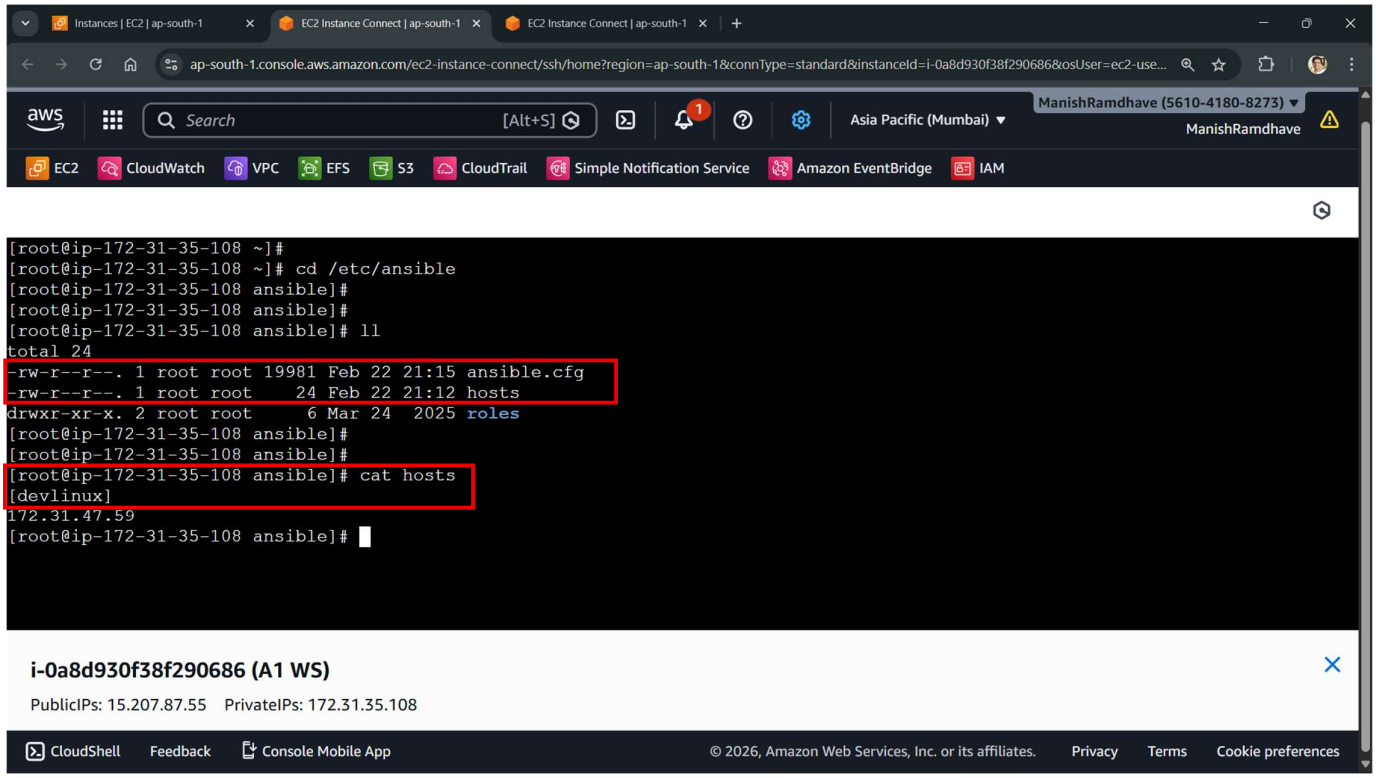
Step 7: Successfully logged in to the **Host** from **Workstation** using SSH and Private IP of Host:



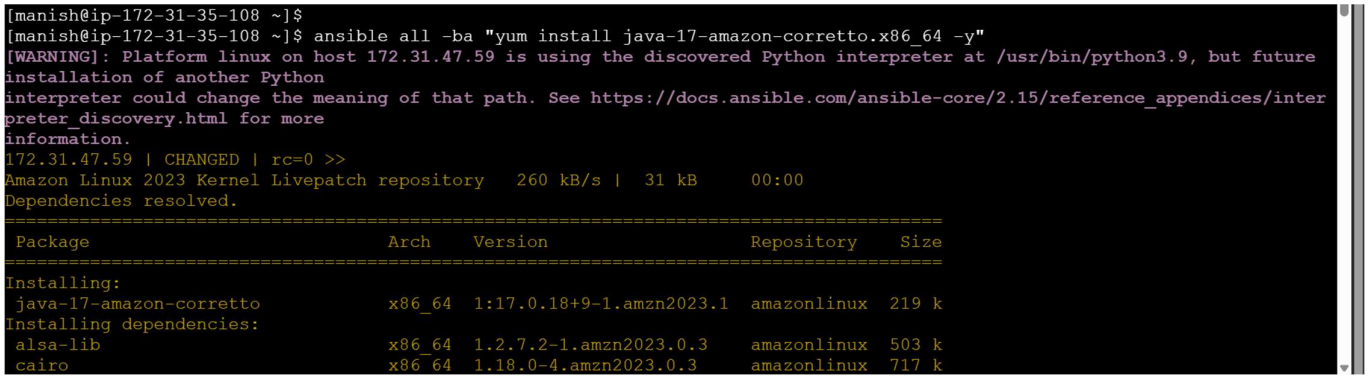
Step 8: Installed **Ansible** on the **Workstation**:



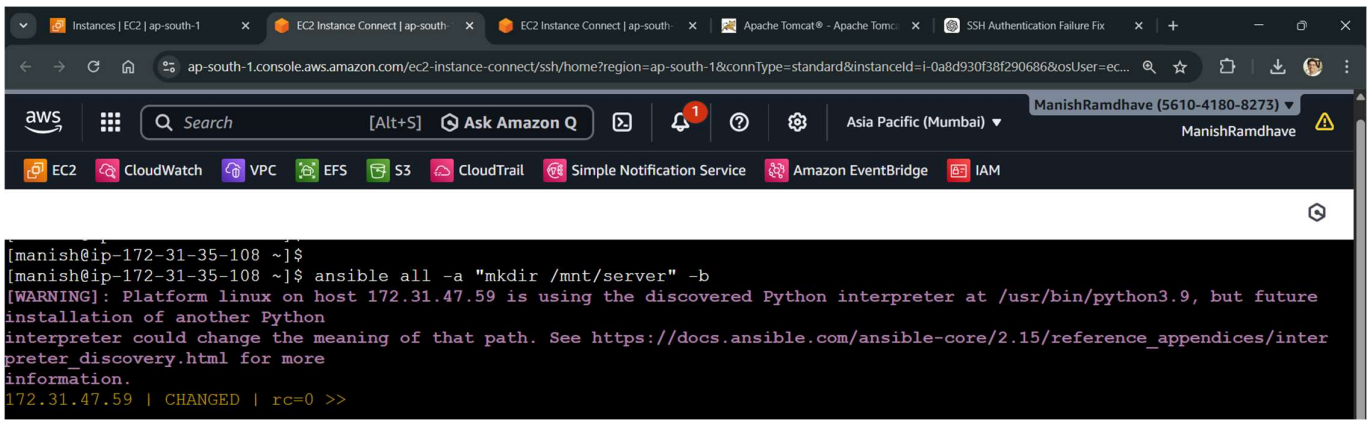
Step 9: Created two files in **/etc/ansible/** path, '**hosts**' and '**ansible.cfg'.** The 'hosts' consists of the host instances' private IPs :



Step 10: Installed **Java-17** on **Host instance** by **Workstation** instance using **adhoc commands**:



Step 11: Made a '**server**' folder in **/mnt/** path using '**adhoc' commands which will run on 'Host'**:



Step 12: Downloaded the **Apache-Tomcat-10.1.52** in '**/mnt/server/' path:**

```
[manish@ip-172-31-35-108 ~]$
[manish@ip-172-31-35-108 ~]$ ansible all -m shell -a "cd /mnt/server && wget https://dlcdn.apache.org/tomcat/tomcat-10/v10.1
.52/bin/apache-tomcat-10.1.52.zip" -b
[WARNING]: Platform linux on host 172.31.47.59 is using the discovered Python interpreter at /usr/bin/python3.9, but future
installation of another Python
interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.15/reference_appendices/inter
preter_discovery.html for more
information.
172.31.47.59 | CHANGED | rc=0 >>
--2026-02-22 21:58:33--  https://dlcdn.apache.org/tomcat/tomcat-10/v10.1.52/bin/apache-tomcat-10.1.52.zip
Resolving dlcdn.apache.org (dlcdn.apache.org)... 151.101.2.132, 2a04:4e42::644
Connecting to dlcdn.apache.org (dlcdn.apache.org)|151.101.2.132|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 14869727 (14M) [application/zip]
Saving to: 'apache-tomcat-10.1.52.zip'
```

Step 13: Extracted the 'a**pache-tomcat-10.1.52.zip'** file in the same path**:**

```
[manish@ip-172-31-35-108 ~]$
[manish@ip-172-31-35-108 ~]$ ansible all -m shell -a "cd /mnt/server && unzip apache-tomcat-10.1.52.zip" -b
[WARNING]: Platform linux on host 172.31.47.59 is using the discovered Python interpreter at /usr/bin/python3.9, but future
installation of another Python
interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.15/reference_appendices/inter
preter_discovery.html for more
information.
172.31.47.59 | CHANGED | rc=0 >>
Archive:  apache-tomcat-10.1.52.zip
   creating: apache-tomcat-10.1.52/
   creating: apache-tomcat-10.1.52/bin/
   creating: apache-tomcat-10.1.52/conf/
   creating: apache-tomcat-10.1.52/lib/
   creating: apache-tomcat-10.1.52/logs/
```

Step 14: After Extraction, deleted the **apache-tomcat-10.1.52.zip** file:

```
[manish@ip-172-31-35-108 ~]$
[manish@ip-172-31-35-108 ~]$ ansible all -m shell -a "cd /mnt/server && rm -rf apache-tomcat-10.1.52.zip" -b
[WARNING]: Platform linux on host 172.31.47.59 is using the discovered Python interpreter at /usr/bin/python3.9, but future
installation of another Python
interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.15/reference_appendices/inter
preter_discovery.html for more
information.
172.31.47.59 | CHANGED | rc=0 >>
```

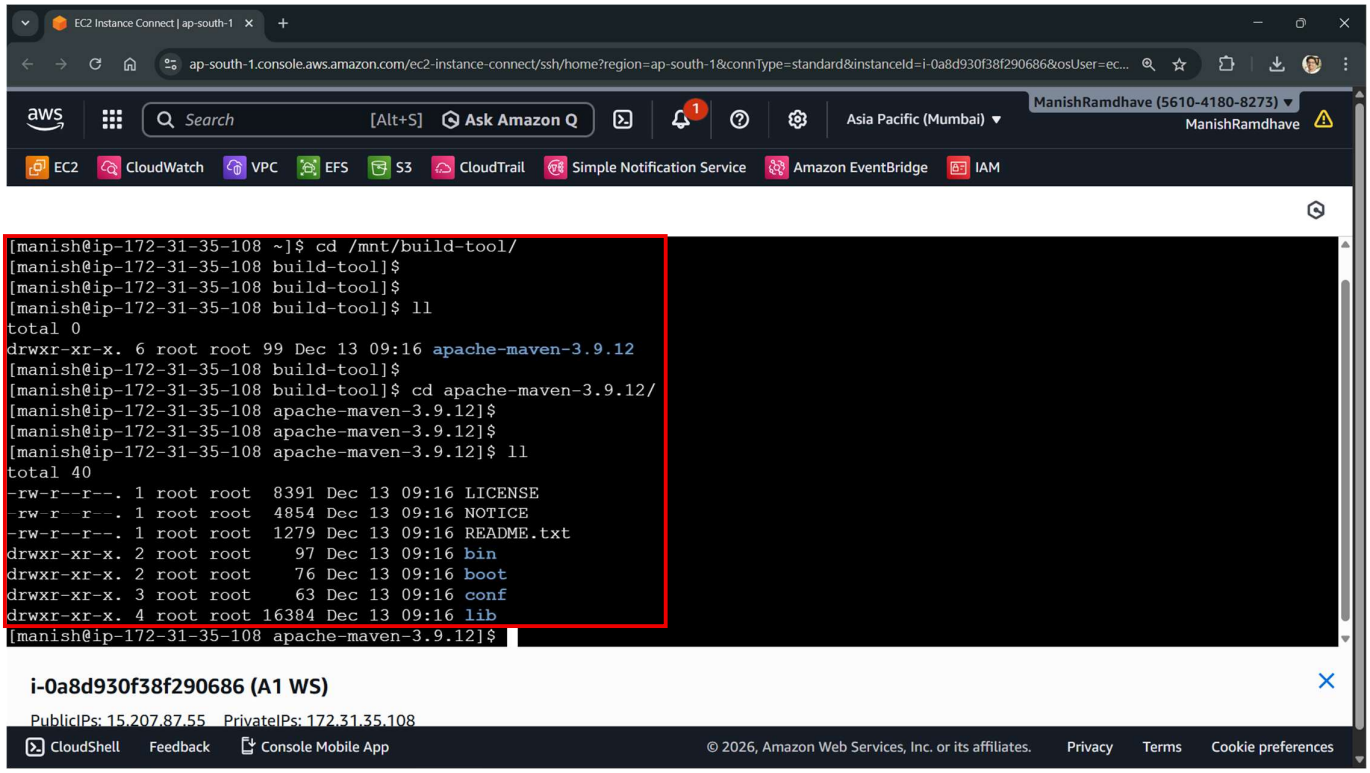
Step 15: Assigned full permission to the **'apache-tomcat-10.1.52' folder (i.e.Tomcat Home)**:

```
[manish@ip-172-31-35-108 ~]$
[manish@ip-172-31-35-108 ~]$ ansible all -m shell -a "cd /mnt/server && chmod -R 777 apache-tomcat-10.1.52" -b
[WARNING]: Platform linux on host 172.31.47.59 is using the discovered Python interpreter at /usr/bin/python3.9, but future
installation of another Python
interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.15/reference_appendices/inter
preter_discovery.html for more
information.
172.31.47.59 | CHANGED | rc=0 >>
```

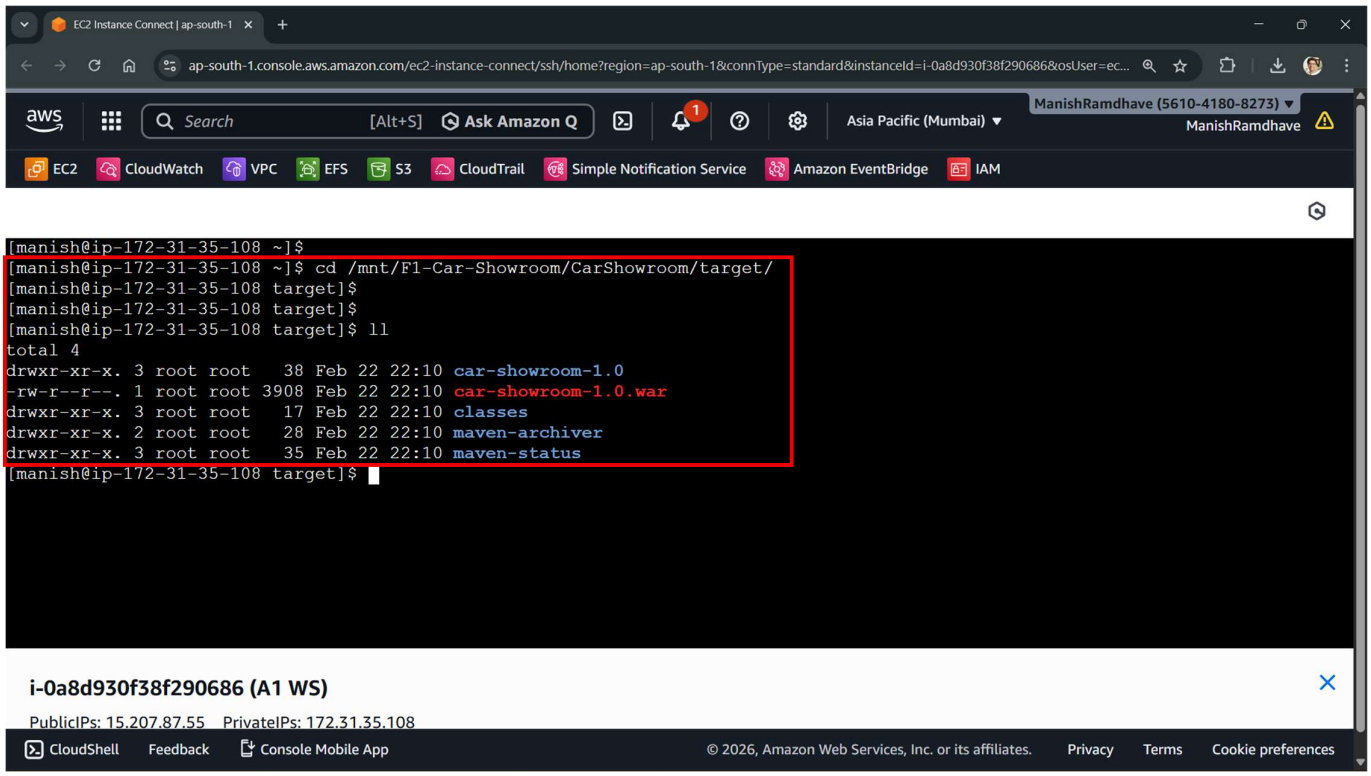
Step 16: Started the **apache-tomcat-10.1.52 using '/bin/startup.sh'** script file**:**

```
[manish@ip-172-31-35-108 ~]$
[manish@ip-172-31-35-108 ~]$ ansible all -m shell -ba "cd /mnt/server/apache-tomcat-10.1.52/bin && ./startup.sh"
[WARNING]: Platform linux on host 172.31.47.59 is using the discovered Python interpreter at /usr/bin/python3.9, but future
installation of another Python
interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.15/reference_appendices/inter
preter_discovery.html for more
information.
172.31.47.59 | CHANGED | rc=0 >>
Using CATALINA_BASE:   /mnt/server/apache-tomcat-10.1.52
Using CATALINA_HOME:   /mnt/server/apache-tomcat-10.1.52
Using CATALINA_TMPDIR: /mnt/server/apache-tomcat-10.1.52/temp
Using JRE_HOME:        /usr
Using CLASSPATH:       /mnt/server/apache-tomcat-10.1.52/bin/bootstrap.jar:/mnt/server/apache-tomcat-10.1.52/bin/tomcat-juli
.jar
Using CATALINA_OPTS:
Tomcat started.
```

Step 17: Created a **'build-tool' folder in /mnt/ on Workstation** and Downloaded the **Apache-Maven-3.9.12 in it**:



Step 18: Compiled and Packaged the **'car-showroom-1.0.war' file** in the **target** folder:



Step 19: Copied the **'car-showroom-1.0' application to Tomcat Home's /webapps folder** and it gets deployed as we have kept **tomcat server started:**

```
[manish@ip-172-31-35-108 ~]$
[manish@ip-172-31-35-108 ~]$ ansible all -m copy -a "src=/mntansible all -m copy -a "src=/mnt/F1-Car-Showroom/CarShowroom/ta
rget/car-showroom-1.0.war dest=/mnt/server/apache-tomcat-10.1.52/webapps/" -b
[WARNING]: Platform linux on host 172.31.47.59 is using the discovered Python interpreter at /usr/bin/python3.9, but future
installation of another Python
interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.15/reference_appendices/inter
preter_discovery.html for more
information.
172.31.47.59 | CHANGED => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3.9"
    },
    "changed": true,
    "checksum": "66ebd081e9b3531f3dd042a71b41ad1e852f129a",
    "dest": "/mnt/server/apache-tomcat-10.1.52/webapps/car-showroom-1.0.war",
    "gid": 1001,
    "group": "manish",
    "md5sum": "d5128f2bc9a0f60f1e015de8e4546dd7",
    "mode": "0664",
```

Results:

We have successfully deployed the **'car-showroom-1.0' application** using **ansible 'adhoc command'** and hosted the same application using **Host Public IP and Tomcat Server Port No.8080:**