- 8. Practical Exercise: Set Up a Jenkins CI Pipeline for a Maven Project, Use Ansible to Deploy Artifacts Generated by Jenkins.
 - 1. Install ssh agent and ssh plugins
 - 2. Generate rsa key pair to connect Jenkins (Windows) and Ansible (Ubuntu) in GitBash

```
MINGW64:/c/Users/balam/.ssh
```

In Git Bash

ssh-keygen

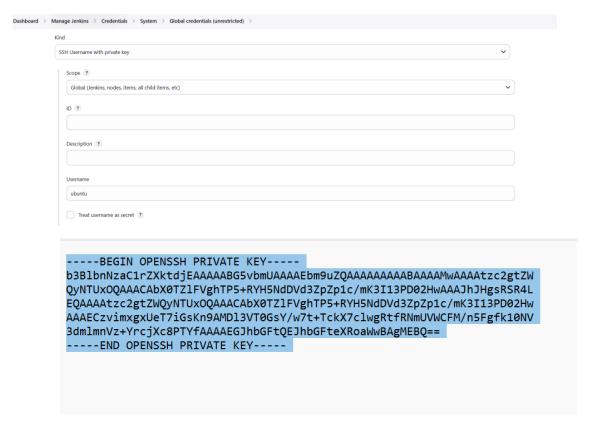
- Execute the command ip a to get the ip address of the ubuntu VM. (For eg: 192.168.1.11 or 10.100.100.139)
- Enable ssh in ubuntu
 - Open terminal
 - Execute following commands
 - su –
 - Enter password root@123
 - sudo ufw allow ssh
 - sudo ufw enable
 - sudo ufw status (Port 22 enabled)
- Execute in Git Bash
 - To copy the public key from windows to ubuntu machine scp id_ed25519.pub ubuntu@192.168.1.11:/home/ubuntu/.ssh

■ Same copy the private key file from Windows to ubuntu machine scp C:/Users/balam/.ssh/id_ed25519.pub ubuntu@192.168.1.11:/home/ubuntu/.ssh

Note: Wherever passphrase is asked press enter key.

3. In Jenkins,

- Open Jenkins -> Manage Jenkins -> Credentials
- Add Credentials -> Global -> Kind -> SSH with private key
 - Username -> ubuntu
 - o Id leave it empty, default will be created
 - Add direct key -> Click add
 - Copy the entire content of id_ed25519(C:/Users/Name/.ssh/id_ed25519) including begin and end message.
 - Paste it in key and click create.
 - o Ubuntu credentials will be added





- Goto Dashboard -> Manage Jenkins -> System
- Enter the Remote SSH site details
- Hostname ip address of ubuntu machine
- Port is 22
- Choose "ubuntu" Credentials and click save.



- In Jenkins,
 - Dashboard -> New Item -> Free Style Project
 - Choose Environment -> Select secret or text files
 - Add Build Step -> Execute shell script on remote host using ssh
 - Select -> ubuntu@ipaddress in SSH site
 - Enter command -> ansible-playbook -i hosts playbook.yml
 - Click save
- In Ubuntu
 - Execute
 - nano hosts

```
GNU nano 6.2
[ubuntu]
192.168.1.11 ansible_user=ubuntu ansible_ssh_private_key_file=/home/ubuntu/.ssh/id_ed25519
```

 nano playbook.yml (Do not miss out the hiphens (-) and indent (two spaces)

```
GNU nano 6.2

- name: Simple Playbook
hosts: all
become: false

tasks:
- name: Check Uptime of remote machine
command: uptime
```

ansible-playbook -i hosts playbook.yml

- In Jenkins,
 - Select the project -> Click Build Now
 - Once Build is ready -> Select Console Output to view output

```
Started by user mythilim
Running as SYSTEM
Building in workspace C:\ProgramData\Jenkins\.jenkins\workspace\jen1
[SSH] script:
_*******
ansible-playbook -i hosts playbook.yml
[SSH] executing...
bash: line 1: =****: command not found
ok: [192.168.1.11]
changed: [192.168.1.11]
192.168.1.11
             : ok=2 changed=1 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0
[SSH] completed
[SSH] exit-status: 0
Finished: SUCCESS
```