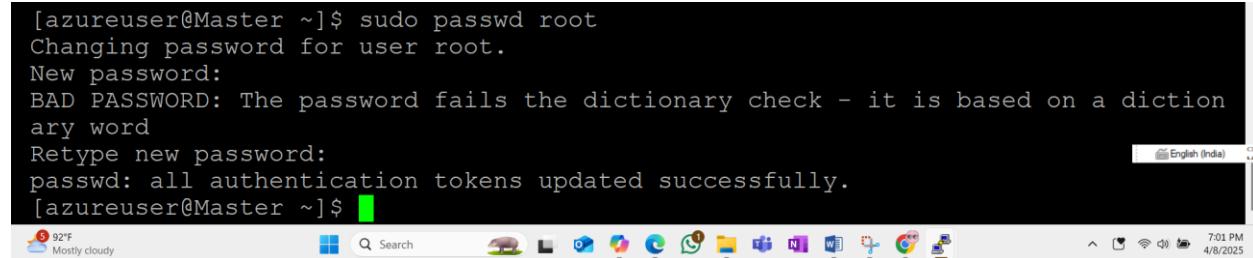


To change or add new password for root user

```
[azureuser@Master ~]$ sudo passwd root
Changing password for user root.
New password:
BAD PASSWORD: The password fails the dictionary check - it is based on a dictionary word
Retype new password:
passwd: all authentication tokens updated successfully.
[azureuser@Master ~]$
```



Ansible setup on Redhat 8.10

To change local user to root user → Sudo –i

To update os from root user-----→ dnf update

```
root@Master:~#
root@Master:~# login as: azureuser
root@Master:~# Authenticating with public key ""
root@Master:~# Activate the web console with: systemctl enable --now cockpit.socket

Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
Last login: Mon Apr  7 06:56:40 2025 from 49.204.13.163
[azureuser@Master ~]$ sudo dnf update
Last metadata expiration check: 13:06:09 ago on Sun 06 April 2025 06:04:00 PM UTC.
Dependencies resolved.

Transaction Summary
=====
Install  3 Packages
Upgrade 24 Packages

Total download size: 158 M
[1] Air Poor
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sudo dnf install python3

```

root@Master:~#
Verifying : python3-perf-4.18.0-553.44.1.el8_10.x86_64
Verifying : python3-jinja2-2.10.1-7.el8_10.noarch
Verifying : python3-jinja2-2.10.1-6.el8_10.noarch
Installed products updated.

Upgraded:
bptool-4.18.0-553.47.1.el8_10.x86_64   freetype-2.9.1-10.el8_10.x86_64   glibc-2.28-251.el8_10.14.x86_64   glibc-common-2.28-251.el8_10.14.x86_64
grub2-geometria-2.28-251.el8_10.14.x86_64   grub2-imagepack-en-2.28-251.el8_10.14.x86_64   grub2-common-12.02-162.el8_10.noarch   grub2-efi-x64-1:2.28-251.el8_10.x86_64
grub2-pe-12.02-162.el8_10.x86_64   grub2-pc-12.02-162.el8_10.noarch   grub2-tools-12.02-162.el8_10.x86_64   grub2-tools-efi-1:2.28-251.el8_10.x86_64
grub2-tools-extra-1:2.02-162.el8_10.x86_64   libgcc-8.5.0-26.el8_10.x86_64   libgcc-8.5.0-26.el8_10.x86_64   libgcc-8.5.0-26.el8_10.x86_64
krb5-libs-1.18.2-31.el8_10.x86_64   libgcc-8.5.0-26.el8_10.x86_64   libgomp-8.5.0-26.el8_10.x86_64   libstdc++-8.5.0-26.el8_10.x86_64
microcode_ctl-4:20250211-1.el8_10.x86_64   python3-jinja2-2.10.1-7.el8_10.noarch   python3-perf-4.18.0-553.47.1.el8_10.x86_64   tzdata-2025b-1.el8.noarch
Installed:
kernel-4.18.0-553.47.1.el8_10.x86_64   kernel-core-4.18.0-553.47.1.el8_10.x86_64   kernel-modules-4.18.0-553.47.1.el8_10.x86_64

Complete!
[azureuser@Master ~]$ python --version
-bash: python: command not found
[azureuser@Master ~]$ sudo python --version
sudo: python: command not found
[azureuser@Master ~]$ sudo
[root@Master ~]# python --version
-bash: python: command not found
[root@Master ~]# python3 --version
-bash: python3: command not found
[root@Master ~]# dnf install python3
Last metadata expiration check: 0:02:18 ago on Mon 07 Apr 2025 07:14:56 AM UTC.
Package python3-3.6.8-39.module+el8.10.0+20784+edafcd43.x86_64 is already installed.
Dependencies resolved.
Nothing to do.
Complete!
[root@Master ~]# python --version
-bash: python: command not found
[root@Master ~]# python3 --version
python 3.6.8
[root@Master ~]# python
-bash: python: command not found
[root@Master ~]# dnf install python3-pip -y
usage: dnf install [-c [config file]] (-q) [(-v) [--version]
                   [--installroot [path]] [--nodocs] [--nopugins]
                   [--enableplugin [plugin]] [--disableplugin [plugin]]
                   [--releaseve RELEASERVER] [--setopt SETOPTS]
                   [--skip-broken] [-h] [--allowerasing] [-b | --nobest] [-C]
                   [-R [minutes]] [-d [debug level]] [--debugsolver]
                   [--showduplicates] [-e ERRORLEVEL] [--obsoletes]
                   [--rmverbosity [debug level name]] [-y] [--assumeno]
                   [--enablerepo [repo]] [--disablerepo [repo] | --repo
                   [repo]] [--enable | --disable] [-x [package]]
                   [--disableexcludes [repo]] [--repofrompath [repo,path]])

```

Install Python: Ansible requires Python. Use the command:

sudo dnf install python3

Verify the installation with:

python3 --version

dnf install python3

- python3 --version
- dnf install python3-pip -y

```
root@Master:~#
[--enableplugin [plugin]] [--disableplugin [plugin]]
[–releasever RELEASEVER] [–setopt SETOPTS]
[–skip-broken] [-h] [–allowerasing] [-b | --nobest] [-C]
[-m [minutes]] [-d [debug level]] [–debugsolver]
[–showduplicates] [-e ERRORLEVEL] [–obsoletes]
[–repodata-retry-debug [level]] [–repodata-retry-error]
[–assumeno]
[–enablecgd [repo] | –disablerepo [repo] | --repo
[repo]] [-enable | --disable] (-x [package])
[–disableexcludes [repo]] [--repofrompath [repo.path]]
[–noautoremove| –nogpgcheck] [–color COLOR] [–refresh]
[-4] [-6] [–destdir DESTDIR] [–downloadonly]
[–comment COMMENT] [–bugfix] [–enhancement]
[–newpackage] [–security] [–advisory ADVISORY]
[–bug BUGZILLA] [–cve CVE]
[–sec-severity {Critical,Important,Moderate,Low}]
[–research ARCH]
PACKAGES [PACKAGE ...]

dnf install: error: unrecognized arguments: -pip
root@Master ~]# dnf install python3-pip
Last metadata expiration check: 0:04:14 ago on Mon 07 Apr 2025 07:14:56 AM UTC.
Package python3-pip-9.0.3-24.el8.noarch is already installed.
Dependencies resolved.
Nothing to do.
Complete!
root@Master ~]# dnf pip3 install --upgrade pip
No such command: pip3. Please use /bin/dnf --help
It could be a DNF command, try: "dnf install 'dnf-command(pip3)'"
root@Master ~]# pip3 install --upgrade pip
WARNING: Running pip install with root privileges is generally not a good idea. Try 'pip3 install --user' instead.
Collecting pip
  Downloading https://files.pythonhosted.org/packages/a4/6d/6463d49a933f547439d6b5b98b46af8742cc03ae83543e4d7688c2420f8b/pip-21.3.1-py3-none-any.whl (1.7MB)
  100% |████████████████████████████████| 1.7MB 707kB/s
Installing collected packages: pip
Successfully installed pip-21.3.1
root@Master ~]# dnf install epel-release
Last metadata expiration check: 0:06:02 ago on Mon 07 Apr 2025 07:14:56 AM UTC.
No matching arguments found: epel-release
Error: Unable to find a match: epel-release
root@Master ~]# useradd ansible
root@Master ~]# passwd ansible
Changing password for user ansible.
New password:
BAD_PASSWORD: The password fails one dictionary check - it is based on a dictionary word
Re-type new password:
passwd: all authentication tokens updated successfully.
root@Master ~]# visudo
root@Master ~]# vi /etc/ssh/sshd_config
root@Master ~]# systemctl restart sshd
root@Master ~]# history
```

- dnf pip3 install --upgrade pip
- pip3 install --upgrade pip

- 1. useradd ansible
- 2. passwd ansible → P@55w0rd!

```

root@Master:~#
[root@Master ~]# dnf pip3 install --upgrade pip
No such command: pip3. Please use /bin/dnf --help
It could be a DNF plugin command, try: "dnf install 'dnf-command(pip3)'"
[root@Master ~]# pip3 install --upgrade pip
WARNING: Running pip install with root privileges is generally not a good idea. Try 'pip3 install --user' instead.
Collecting pip
  Downloading https://files.pythonhosted.org/packages/a4/6d/6463d49a933f547439d6b5b98b46af8742cc03ae83543e4d7688c2420f8b/pip-21.3.1-py3-none-any.whl (1.7MB)
    100% |██████████| 1.7MB 707kB/s
Installing collected packages: pip
Successfully installed pip-21.3.1
[root@Master ~]# dnf install epel-release
Last metadata expiration check: 0:06:02 ago on Mon 07 Apr 2025 07:14:56 AM UTC.
No match for argument: epel-release
Error: Unable to find a match: epel-release
[root@Master ~]# useradd ansible
[root@Master ~]# passwd ansible
Changing password for user ansible.
New password:
BAD PASSWORD: The password fails the dictionary check - it is based on a dictionary word
Retype new password:
passwd: all authentication tokens updated successfully.
[root@Master ~]# vi /etc/ssh/sshd_config
[root@Master ~]# systemctl restart sshd
[root@Master ~]# history
  1  vi /etc/hostname
  2  python --version
  3  python --version
  4  dnf install python3
  5  python --version
  6  python3 --version
  7  python
  8  dnf install python3-pip -y
  9  dnf install python3-pip -y
 10  dnf pip3 install --upgrade pip
 11  pip3 install --upgrade pip
 12  dnf install epel-release
 13  useradd ansible
 14  passwd ansible
 15  visudo
 16  vi /etc/ssh/sshd_config
 17  systemctl restart sshd
 18  history
[root@Master ~]# visudo
[root@Master ~]# vi /etc/ssh/sshd_config
[root@Master ~]# visudo
[root@Master ~]# vi /etc/ssh/sshd_config
[root@Master ~]# :C
[root@Master ~]#

```

- 3. Visudo

Set command shift : 100 or 100 gg → copy the line (yy) → root ALL=(ALL) ALL

Paste the line (p) and change to newuser → ansible ALL=(ALL) NOPASSWD : ALL

```

Defaults env_reset
Defaults env_keep = "COLORS DISPLAY HOSTNAME HISTSIZE KDEDIR LS_COLORS"
Defaults env_keep += "MAIL PATH QT_QPA_PLATFORMtheme QT_QPA_PLATFORMplugin QT_QPA_PLATFORMstyle"
Defaults env_keep += "LC_COLLATE LC_IDENTIFICATION LC_MEASUREMENT LC_MESSAGES"
Defaults env_keep += "LC_MONETARY LC_NAME LC_NUMERIC LC_PAPER LC_TELEPHONE"
Defaults env_keep += "LC_ALL LANGUAGE LANGUAGES _XKB_CHARSET XAUTHORITY"

# Adding HOME to env_keep may enable a user to run unrestricted
# commands via sudo.
Defaults env_keep += "$HOME"

Defaults secure_path = /sbin:/bin:/usr/sbin:/usr/bin

## Next comes the main part: which users can run what software on
## which machines (the sudoers file can be shared between multiple
## hosts)
## Syntax:
##
##      user        MACHINE=COMMANDS
##
## The COMMANDS section may have other options added to it.
## Allow root to run any commands anywhere
#root  ALL=(ALL)      ALL
#ansible ALL=(ALL)    NOPASSWD: ALL

## Allows members of the 'sys' group to run networking, software,
## service management apps and more.
## sys  ALL=(ALL)      NOPASSWD: ALL
## Allows people in group wheel to run all commands
wheel  ALL=(ALL)      ALL

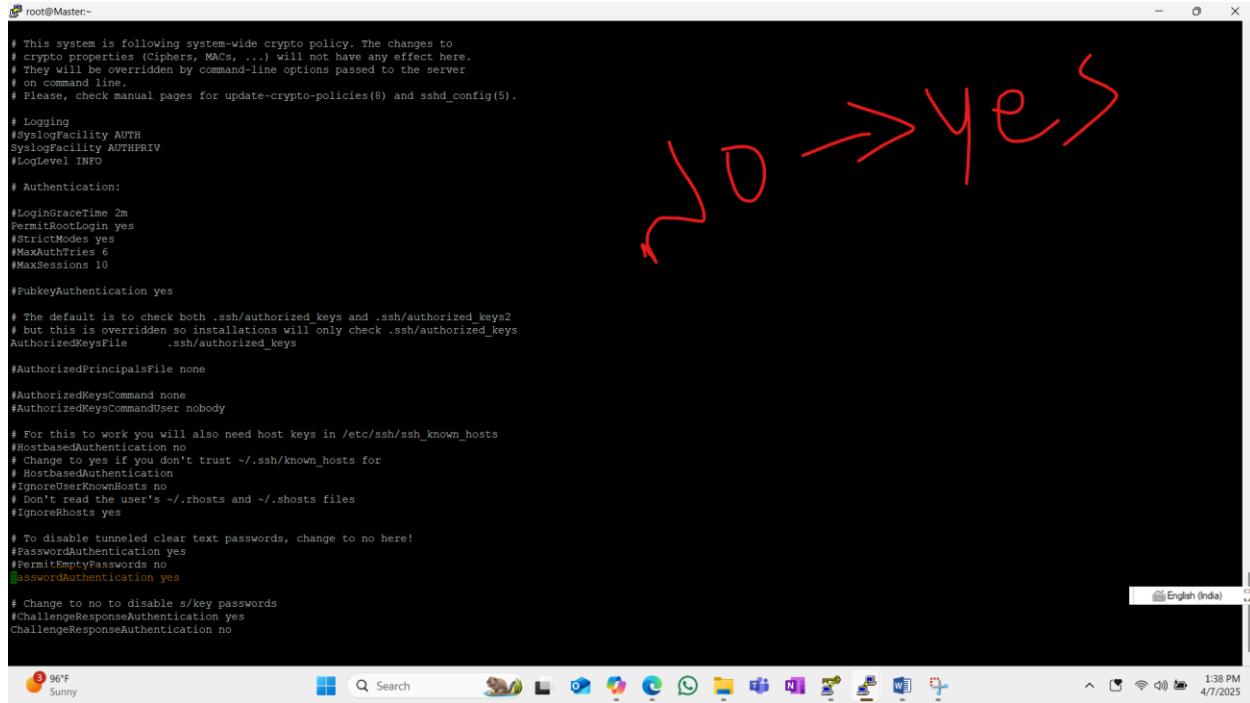
## Same thing without a password
## wheel      ALL=(ALL)      NOPASSWD: ALL
## Allows members of the users group to mount and unmount the
## cdrom as root
## users   ALL=/bin/mount /mnt/cdrom, /bin/unmount /mnt/cdrom
## Allows members of the users group to shutdown this system
## users  localhost=/bin/shutdown -h now
## Read drop-in files from /etc/sudoers.d (the # here does not mean a comment)
##included /etc/sudoers.d

```

- 4. vi /etc/ssh/sshd_config

set command shift:71 or 71gg

passwordauthenticatio No →yes



```
# This system is following system-wide crypto policy. The changes to
# crypto properties (Ciphers, MACs, ...) will not have any effect here.
# They will be overridden by command-line options passed to the server
# on command line.
# Please, check manual pages for update-crypto-policies(8) and sshd_config(5).

# Logging
#SyslogFacility AUTH
SyslogFacility AUTHPRIV
#LogLevel INFO

# Authentication:
#LoginGraceTime 2m
PermitRootLogin yes
#StrictModes yes
#MaxAuthTries 6
#MaxSessions 10

#PubkeyAuthentication yes

# The default is to check both .ssh/authorized_keys and .ssh/authorized_keys2
# but this is overridden so installations will only check .ssh/authorized_keys
AuthorizedKeysFile .ssh/authorized_keys

#AuthorizedPrincipalsFile none

#AuthorizedKeysCommand none
#AuthorizedKeysCommandUser nobody

# For this to work you will also need host keys in /etc/ssh/ssh_known_hosts
#HostbasedAuthentication no
# Change to yes if you don't trust ~/.ssh/known_hosts for
# HostbasedAuthentication
#IgnoreUserKnownHosts no
# Don't read the user's ~/.rhosts and ~/.shosts files
#IgnoreRhosts yes

# To disable tunneled clear text passwords, change to no here!
#PasswordAuthentication yes
#PermitEmptyPasswords no
#PasswordAuthentication yes

# Change to no to disable s/key passwords
#ChallengeResponseAuthentication yes
ChallengeResponseAuthentication no
```

- 5. systemctl restart sshd

We have to perform above all steps from create new user to systemctl restart sshd on all slave machines.

Below is the steps To install ansible on Redhat 8.10 after installing dependency

To install ansible → def install ansible

To check the version → ansible --version

```

root@Master:~#
[root@Master ~]# dnf install ansible
Last metadata expiration check: 1:10:42 ago on Mon 07 Apr 2025 07:14:56 AM UTC.
Dependencies resolved.
=====
| Package           | Architecture | Version      | Repository   | Size |
|=====|
| Installing:     |             |              |             |       |
| ansible          | noarch      | 2.9.27-1.el8ae | ansible-2-for-rhel-8-x86_64-rhui-rpms | 17 M |
|=====|
| Installing dependencies: |             |              |             |       |
| sshpass          | x86_64      | 1.09-4.el8    | rhel-8-for-x86_64-appstream-rhui-rpms | 30 k |
|=====|
| Installing weak dependencies: |             |              |             |       |
| python3-jmespath | noarch      | 0.9.0-11.el8  | rhel-8-for-x86_64-appstream-rhui-rpms | 45 k |
|=====|
Transaction Summary
Install 3 Packages

Total download size: 17 M
Installed size: 96 M
Is this ok [y/N]: y
Downloading Packages:
(1/3) python3-jmespath-0.9.0-11.el8.noarch.rpm
(2/3) sshpass-1.09-4.el8.x86_64.rpm
(3/3) ansible-2.9.27-1.el8ae.noarch.rpm
Total                                         154 kB/s | 45 kB   00:00
95 kB/s | 30 kB   00:00
15 MB/s | 17 MB   00:01
15 MB/s | 17 MB   00:01

Total
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing:           1/1
  Installing:         sshpass-1.09-4.el8.x86_64
  Installing:         python3-jmespath-0.9.0-11.el8.noarch
  Installing:         ansible-2.9.27-1.el8ae.noarch
  Preparing transaction: ansible-2.9.27-1.el8ae.noarch
  Verifying:          sshpass-1.09-4.el8.x86_64
  Verifying:          python3-jmespath-0.9.0-11.el8.noarch
  Verifying:          ansible-2.9.27-1.el8ae.noarch
Total                                         1/1
1/3
2/3
3/3
3/3
1/3
2/3
3/3

Installed:
  ansible-2.9.27-1.el8ae.noarch
  python3-jmespath-0.9.0-11.el8.noarch
  sshpass-1.09-4.el8.x86_64

Complete!
[root@Master ~]# ansible --version
ansible 2.9.27
  config file = /etc/ansible/ansible.cfg
  configured module search path = ['~/root/.ansible/plugins/modules', '/usr/share/ansible/plugins/modules']

```

Now move to ansible path and add hosts on inventory

Vi /etc/ansible/ansible.cfg

Remove hash (#) before Inventory and sudo_user

Default static inventory of ansible is /etc/ansible/hosts

```

root@Master:~#
# config file for ansible -- https://ansible.com/
# =====

# nearly all parameters can be overridden in ansible-playbook
# or with command line flags. ansible will read ANSIBLE_CONFIG,
# ansible.cfg in the current working directory, .ansible.cfg in
# the home directory or /etc/ansible/ansible.cfg, whichever it
# finds first

[defaults]

# some basic default values...

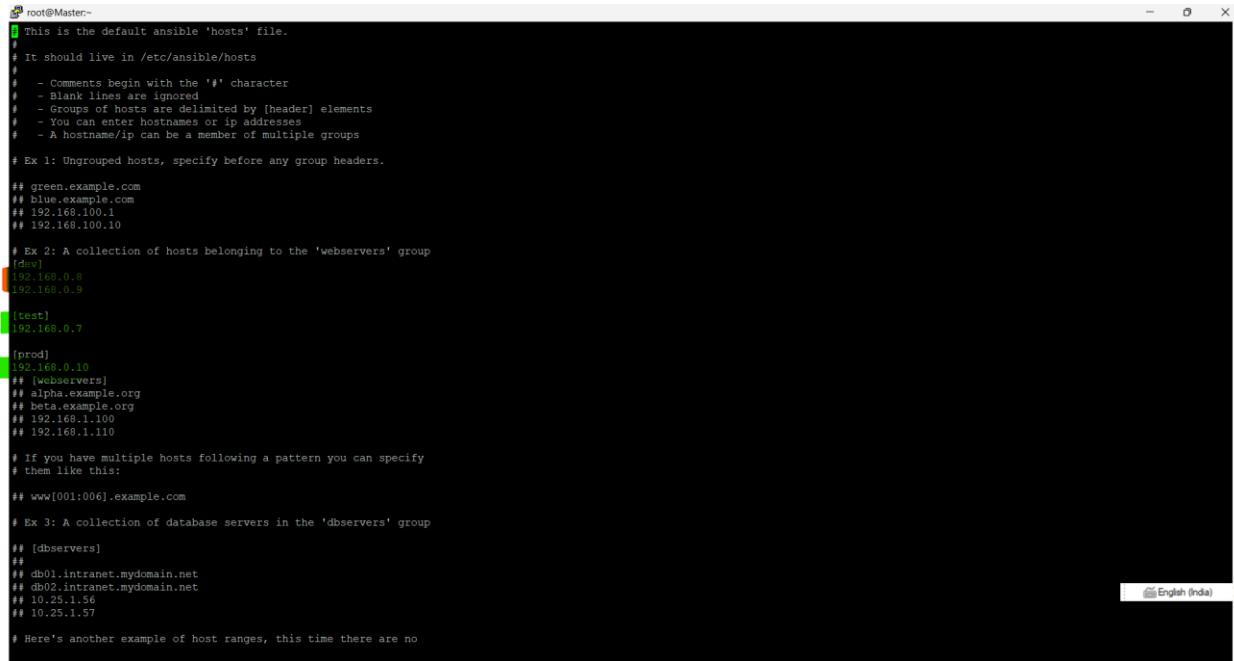
inventory      = /etc/ansible/hosts
library        = /usr/share/my_modules/
module_utils   = /usr/share/my_module_utils/
remote_tmp     = ~/.ansible/tmp
local_tmp      = ~/.ansible/tmp
plugin_filters_cfg = /etc/ansible/plugin_filters.yml
forks          = 5
poll_interval  = 15
sudo_user      = root
ask_sudo_pass  = True

```



We have to add (host) target ipaddress or slave ip address on under /etc/ansible/hosts

We have to give private ip's of the slave machines or hostmachiens.



```
root@Master:~# 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
## 192.168.1.100
## 192.168.1.100

# Ex 2: A collection of hosts belonging to the 'webservers' group
[dev]
192.168.0.8
192.168.0.9

[test]
192.168.0.7

[prod]
192.168.0.10
[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
```

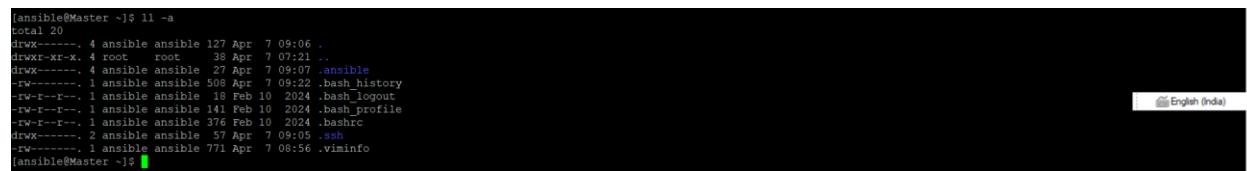
After successfully added the hosts , we have to generate the ssh key on under ansibleuser

Su – ansible

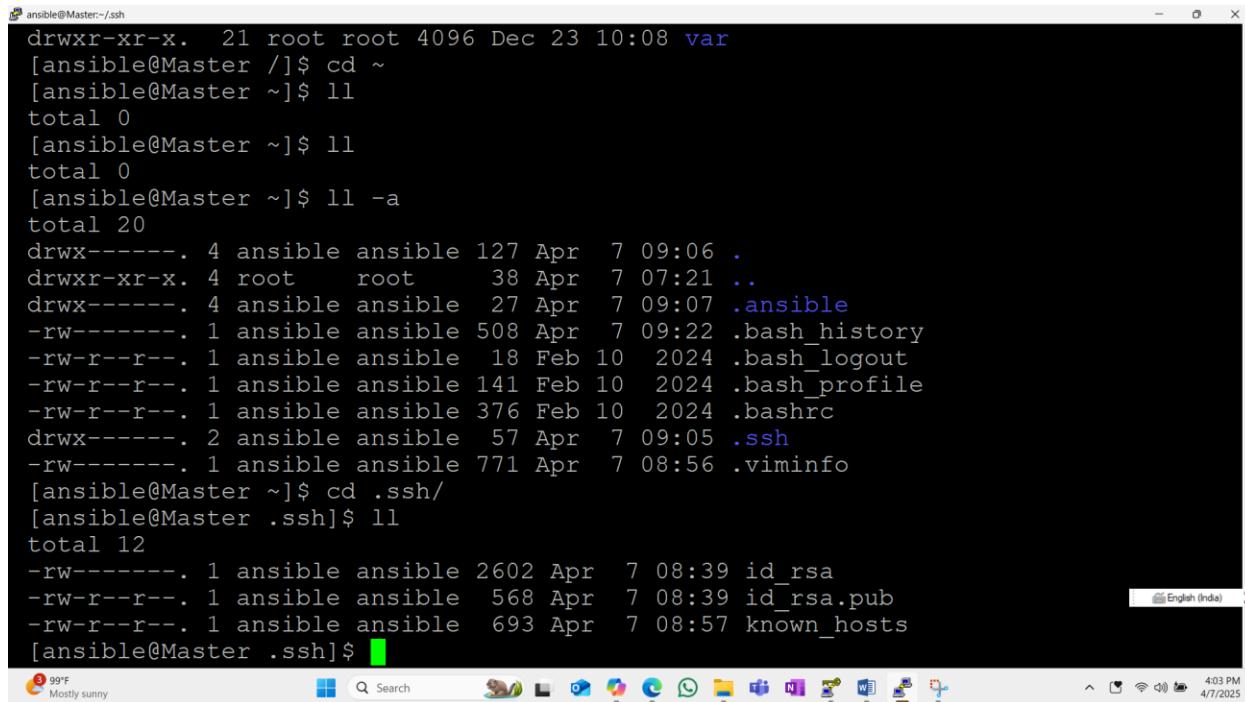
[root@Master ~]# su - ansible

Last login: Mon Apr 7 08:55:02 UTC 2025 on pts/1

ssh-keygen→it will generate a new private and public key



```
[ansible@Master ~]$ ll -a
total 20
drwx-----. 4 ansible ansible 127 Apr 7 09:06 .
drwxr-xr-x. 4 root root 38 Apr 7 07:21 ..
drwx-----. 4 ansible ansible 27 Apr 7 09:07 .ansible
-rw-----. 1 ansible ansible 508 Apr 7 09:22 .bash_history
-rw-r--r--. 1 ansible ansible 18 Feb 10 2024 .bash_logout
-rw-r--r--. 1 ansible ansible 141 Feb 10 2024 .bash_profile
-rw-r--r--. 1 ansible ansible 376 Feb 10 2024 .bashrc
drwx----- 2 ansible ansible 57 Apr 7 09:05 .ssh
-rw----- 1 ansible ansible 771 Apr 7 08:56 .viminfo
[ansible@Master ~]$
```



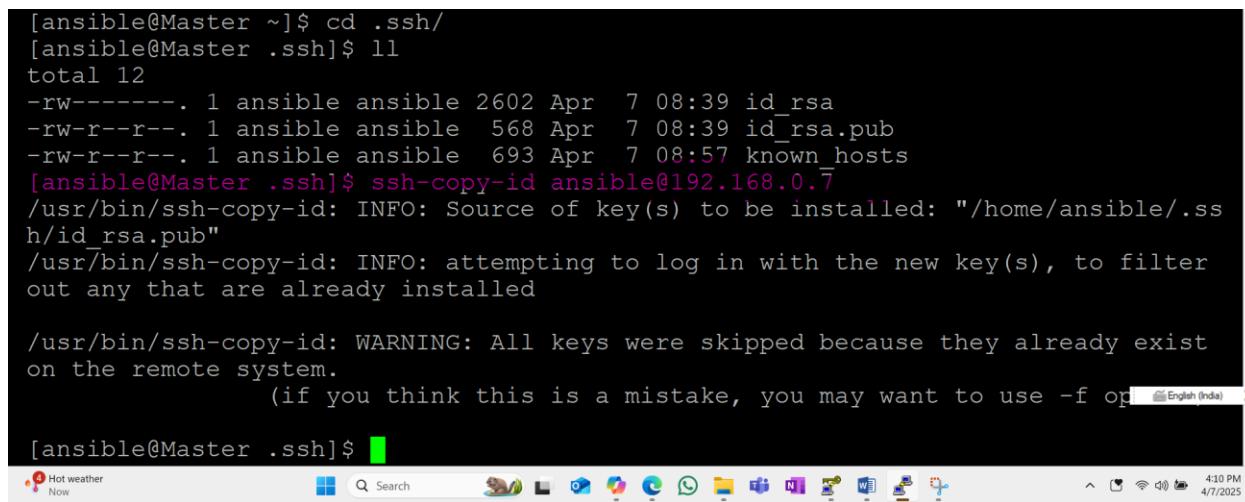
```
ansible@Master:~/ssh
drwxr-xr-x. 21 root root 4096 Dec 23 10:08 var
[ansible@Master /]$ cd ~
[ansible@Master ~]$ ll
total 0
[ansible@Master ~]$ ll
total 0
[ansible@Master ~]$ ll -a
total 20
drwx-----. 4 ansible ansible 127 Apr  7 09:06 .
drwxr-xr-x. 4 root   root    38 Apr  7 07:21 ..
drwx-----. 4 ansible ansible 27 Apr  7 09:07 .ansible
-rw-----. 1 ansible ansible 508 Apr  7 09:22 .bash_history
-rw-r--r--. 1 ansible ansible 18 Feb 10 2024 .bash_logout
-rw-r--r--. 1 ansible ansible 141 Feb 10 2024 .bash_profile
-rw-r--r--. 1 ansible ansible 376 Feb 10 2024 .bashrc
drwx-----. 2 ansible ansible 57 Apr  7 09:05 .ssh
-rw-----. 1 ansible ansible 771 Apr  7 08:56 .viminfo
[ansible@Master ~]$ cd .ssh/
[ansible@Master .ssh]$ ll
total 12
-rw-----. 1 ansible ansible 2602 Apr  7 08:39 id_rsa
-rw-r--r--. 1 ansible ansible 568 Apr  7 08:39 id_rsa.pub
-rw-r--r--. 1 ansible ansible 693 Apr  7 08:57 known_hosts
[ansible@Master .ssh]$
```

Hear the above commands and data shows id_rsa is private key and id_rsa.pub is public key

Hear if the public key and private key the both key will match then the ssh will be enabled

So if we copy the public key from master server to slave(host) the SSH connection will be enabled.

To copy the ssh key from master server to slave server we have to give username@ip of the server



```
[ansible@Master ~]$ cd .ssh/
[ansible@Master .ssh]$ ll
total 12
-rw-----. 1 ansible ansible 2602 Apr  7 08:39 id_rsa
-rw-r--r--. 1 ansible ansible 568 Apr  7 08:39 id_rsa.pub
-rw-r--r--. 1 ansible ansible 693 Apr  7 08:57 known_hosts
[ansible@Master .ssh]$ ssh-copy-id ansible@192.168.0.7
/usr/bin/ssh-copy-id: INFO: Source of key(s) to be installed: "/home/ansible/.ssh/id_rsa.pub"
/usr/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter
out any that are already installed

/usr/bin/ssh-copy-id: WARNING: All keys were skipped because they already exist
on the remote system.
(if you think this is a mistake, you may want to use -f option)

[ansible@Master .ssh]$
```

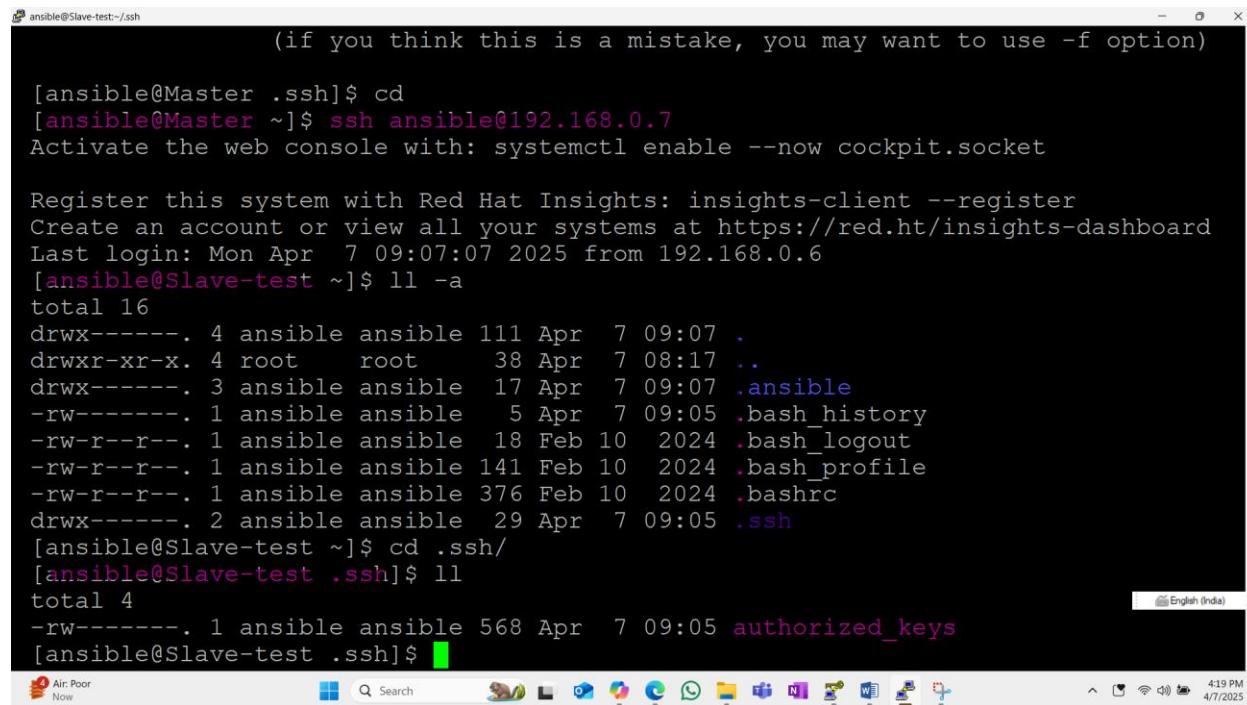
I have already copy the ssh key from master to slave server so I got the above error , whenever we copy from the first time we have to give slave server password ex: I have created user name called ansible on my slave server and give root privileges to my user and my user password is (P@55w0rd!)

So I have given that password whenever it will ask.

Same way we have to all your slave servers.

Once it successfully copied ssh key to all your servers you can check it was copied successfully or not on your server by using below command or steps

To connect slave server from master you can use ssh slaveserver username @ipaddress

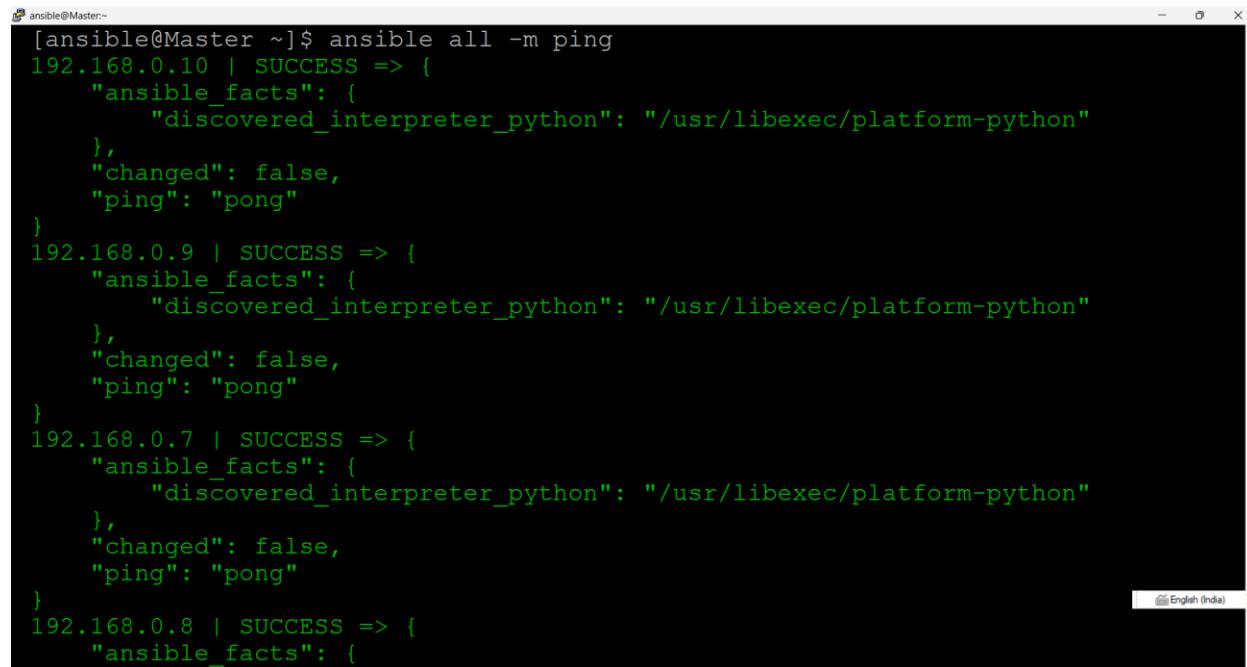


```
ansible@Slave-test:~/ssh
(if you think this is a mistake, you may want to use -f option)

[ansible@Master .ssh]$ cd
[ansible@Master ~]$ ssh ansible@192.168.0.7
Activate the web console with: systemctl enable --now cockpit.socket

Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
Last login: Mon Apr  7 09:07:07 2025 from 192.168.0.6
[ansible@Slave-test ~]$ ll -a
total 16
drwx----- 4 ansible ansible 111 Apr  7 09:07 .
drwxr-xr-x  4 root      root    38 Apr  7 08:17 ..
drwx----- 3 ansible ansible 17 Apr  7 09:07 .ansible
-rw------- 1 ansible ansible  5 Apr  7 09:05 .bash_history
-rw-r--r--  1 ansible ansible 18 Feb 10 2024 .bash_logout
-rw-r--r--  1 ansible ansible 141 Feb 10 2024 .bash_profile
-rw-r--r--  1 ansible ansible 376 Feb 10 2024 .bashrc
drwx----- 2 ansible ansible  29 Apr  7 09:05 .ssh
[ansible@Slave-test ~]$ cd .ssh/
[ansible@Slave-test .ssh]$ ll
total 4
-rw----- 1 ansible ansible 568 Apr  7 09:05 authorized_keys
[ansible@Slave-test .ssh]$
```

Same way we have to check reaming all servers once it successfully completed we can check it was communicating or not by using below command



```
ansible@Master:-
[ansible@Master ~]$ ansible all -m ping
192.168.0.10 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/libexec/platform-python"
  },
  "changed": false,
  "ping": "pong"
}
192.168.0.9 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/libexec/platform-python"
  },
  "changed": false,
  "ping": "pong"
}
192.168.0.7 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/libexec/platform-python"
  },
  "changed": false,
  "ping": "pong"
}
192.168.0.8 | SUCCESS => {
  "ansible_facts": {
```

Ansible all --list-hosts

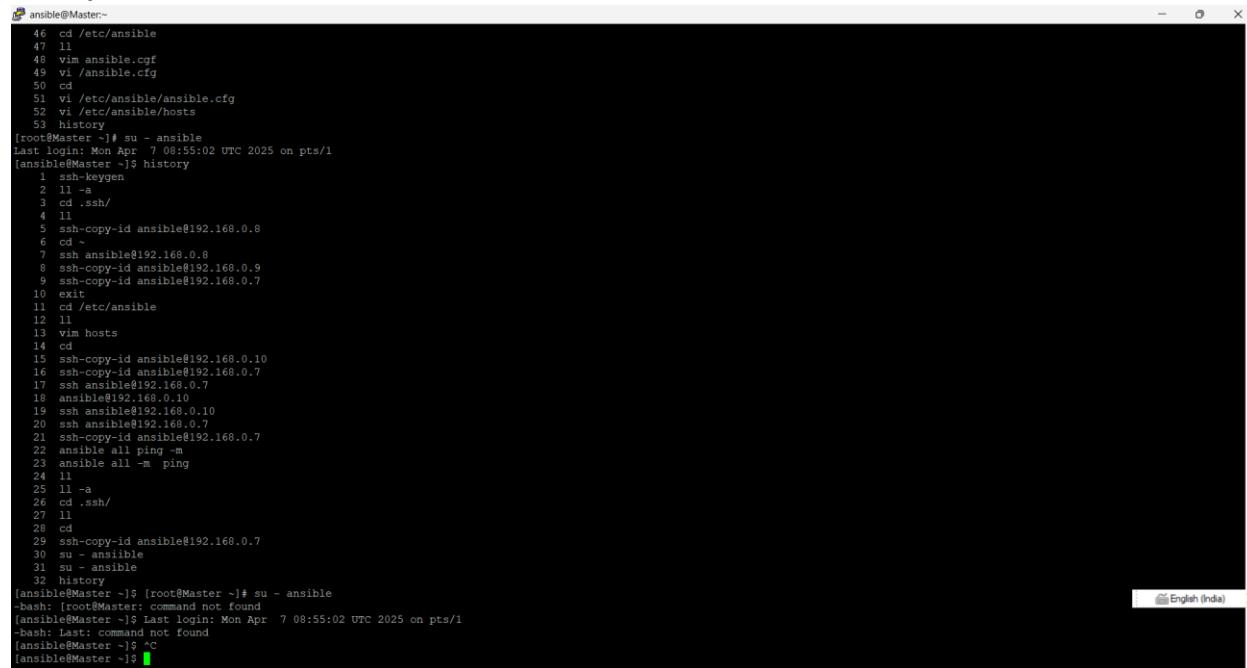
Ansible dev --list-hosts

Ansible dev[0] --list-hosts

Ansible prod --list-hosts

```
[ansible@Master ~]$ ansible all --list-hosts
  hosts (4):
    192.168.0.8
    192.168.0.9
    192.168.0.7
    192.168.0.10
[ansible@Master ~]$ ansible dev --list-hosts
  hosts (1):
    192.168.0.8
[ansible@Master ~]$ ansible jenkins --list-hosts
  hosts (1):
    192.168.0.9
[ansible@Master ~]$ ansible prod --list-hosts
  hosts (1):
    192.168.0.10
[ansible@Master ~]$ ansible test --list-hosts
  hosts (1):
    192.168.0.7
[ansible@Master ~]$ ansible dev[0] --list-hosts
  hosts (1):
    192.168.0.8
[ansible@Master ~]$ █
```

History of all commands on under ansibleuser



```
ansible@Master~
46 cd /etc/ansible
47 ll
48 vim ansible.cfg
49 vi /ansible.cfg
50 cd
51 vi /etc/ansible/ansible.cfg
52 vi /etc/ansible/hosts
53 history
[ansible@Master ~]# su - ansible
Last login: Mon Apr  7 08:55:02 UTC 2025 on pts/1
[ansible@Master ~]$ history
 1 ssh-keygen
 2 ll -a
 3 cd .ssh/
 4 ll
 5 ssh-copy-id ansible@192.168.0.8
 6 cd ~
 7 ssh ansible@192.168.0.8
 8 ssh-copy-id ansible@192.168.0.9
 9 ssh-copy-id ansible@192.168.0.7
10 exit
11 cd /etc/ansible
12 ll
13 vim hosts
14 cd
15 ssh-copy-id ansible@192.168.0.10
16 ssh-copy-id ansible@192.168.0.7
17 ssh ansible@192.168.0.7
18 ansible@192.168.0.10
19 ssh ansible@192.168.0.10
20 ssh ansible@192.168.0.7
21 ssh-copy-id ansible@192.168.0.7
22 ansible all ping -a
23 ansible all -m ping
24 ll
25 ll -a
26 cd .ssh/
27 ll
28 cd
29 ssh-copy-id ansible@192.168.0.7
30 su - ansible
31 su - ansible
32 history
[ansible@Master ~]$ su - ansible
[ansible@Master ~]$ command not found
[ansible@Master ~]$ Last login: Mon Apr  7 08:55:02 UTC 2025 on pts/1
[ansible@Master ~]$ Last: command not found
[ansible@Master ~]$ ^C
[ansible@Master ~]$
```

Create play books

Whenever we created a play book the playbook file extension should be .yml or yaml

Ex (test.yml)

vim test.yml

structure of playbook

target

variables

task

target → on which server we have to go for performing the tasks

task → on the target server which task we have perform

ex:

playbook start with (---) end with (...)

- hosts: test	test → group of host machines or we can one host server as well
user: ansible	user → host machine username
become: yes	become → authentication yes or not
connection: ssh	connection : how the master server connect to slave server

tasks:

- name: this task is for installing java1.8.0 on test server

action: dnf name=java-1.8.0-openjdk state=present

- name: this task is used to install git on test server

action: dnf name=git state=present

...

State

Different type of states

1. Install->present
2. Uninstall->absent
3. Update->latest
4. Start->started
5. Restart->restarted
6. Stop->stopped

Different types modules

Action : yum name=git state=present

Yum: name=git state=present

Command → we have to give full command

Command : yum install git -y state=present

Note: under tasks we are writing about on the above mentioned hosts which action we are going to perform

To check the indentation

YAMLLint - The YAML Validator

:wq

ansible-playbook test.yml

The screenshot shows a terminal window titled 'ansible@Master:~'. It displays the output of several Ansible playbooks. The first playbook, 'test.yml', fails due to unsupported parameters for the dnf module. Subsequent playbooks ('test2.yml' and 'test3.yml') also fail with the same error. The final playbook, 'test4.yml', succeeds, installing Java 1.8.0 and Git. The terminal window includes a status bar at the bottom showing the date (4/7/2025), time (4:56 PM), and battery level (99%).

```
ansible@Master:~
```

```
PLAY [test] *****
TASK [Gathering Facts] *****
ok: [192.168.0.7]

TASK [this task is for installing java1.8.0 on test server] *****
fatal: [192.168.0.7]: FAILED! => {"changed": false, "msg": "Unsupported parameters for (dnf) module: status. Supported parameters include: allow_downgrade, autoremove, bugfix, conf_file, disable_excludes, disable_gpg_check, disable_plugin, disablerepo, download_dir, download_only, enable_plugin, enablerepo, exclude, install_repoquery, install_weak_deps, installroot, list, lock_timeout, name, releasever, security, skip_broken, state, update_cache, update_only, validate_certs"}
```

```
PLAY RECAP *****
192.168.0.7 : ok=1    changed=0    unreachable=0    failed=1    skipped=0    rescued=0    ignored=0
```

```
[ansible@Master ~]$ vim test.yml
[ansible@Master ~]$ ansible-playbook test.yml
```

```
PLAY [test] *****
TASK [Gathering Facts] *****
ok: [192.168.0.7]

TASK [this task is for installing java1.8.0 on test server] *****
fatal: [192.168.0.7]: FAILED! => {"changed": false, "msg": "Unsupported parameters for (dnf) module: status. Supported parameters include: allow_downgrade, autoremove, bugfix, conf_file, disable_excludes, disable_gpg_check, disable_plugin, disablerepo, download_dir, download_only, enable_plugin, enablerepo, exclude, install_repoquery, install_weak_deps, installroot, list, lock_timeout, name, releasever, security, skip_broken, state, update_cache, update_only, validate_certs"}
```

```
PLAY RECAP *****
192.168.0.7 : ok=1    changed=0    unreachable=0    failed=1    skipped=0    rescued=0    ignored=0
```

```
[ansible@Master ~]$ vim test.yml
[ansible@Master ~]$ ansible-playbook test.yml
```

```
PLAY [test] *****
TASK [Gathering Facts] *****
ok: [192.168.0.7]

TASK [this task is for installing java1.8.0 on test server] *****
changed: [192.168.0.7]

TASK [this task is used to install git on test server] *****
changed: [192.168.0.7]
```

```
PLAY RECAP *****
192.168.0.7 : ok=3    changed=2    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
```

```
[ansible@Master ~]$ vim test.yml
[ansible@Master ~]$
```

After run the above command it will run the all task and the output will be you can see on below screen shot.

The screenshot shows a terminal window titled 'ansible@Slave-test:~'. It displays the output of the successful Ansible playbooks from the previous screenshot. The Java and Git installations are confirmed to have been installed successfully. The terminal window includes a status bar at the bottom showing the date (4/7/2025), time (4:56 PM), and battery level (99%).

```
ansible@Slave-test:~
```

```
[ansible@Slave-test ~]$ java -version
openjdk version "1.8.0_442"
OpenJDK Runtime Environment (build 1.8.0_442-b06)
OpenJDK 64-Bit Server VM (build 25.442-b06, mixed mode)
```

```
[ansible@Slave-test ~]$ git --version
git version 2.43.5
```

```
[ansible@Slave-test ~]$
```

Playbook 2

```
ansible@Master:~
```

PLAY [dev[0] test] *****

TASK [Gathering Facts] *****

ok: [192.168.0.7]
ok: [192.168.0.8]

TASK [this task is for installing java1.8.0 on test server] *****

ok: [192.168.0.7]
changed: [192.168.0.8]

TASK [this task is used to install git on test server] *****

ok: [192.168.0.7]
changed: [192.168.0.8]

TASK [this task is used to install java17 on test and dev[0] server] *****

changed: [192.168.0.8]
changed: [192.168.0.7]

PLAY RECAP *****

192.168.0.7	: ok=4	changed=1	unreachable=0	failed=0	s
192.168.0.8	: ok=4	changed=3	unreachable=0	failed=1	English (India)

```
[ansible@Master ~]$
```

Output

```
azureuser@Slave-Dev ~]$ git --version
git version 2.43.5
[azureuser@Slave-Dev ~]$ java -version
openjdk version "1.8.0_442"
OpenJDK Runtime Environment (build 1.8.0_442-b06)
OpenJDK 64-Bit Server VM (build 25.442-b06, mixed mode)
[azureuser@Slave-Dev ~]$ sudo yum install java-17-openjedk -y
Last metadata expiration check: 1:06:37 ago on Tue 08 Apr 2025 11:33:07 AM UTC.
No match for argument: java-17-openjedk
Error: Unable to find a match: java-17-openjedk
[azureuser@Slave-Dev ~]$ sudo yum install java-17-openjdk -y
Last metadata expiration check: 1:06:49 ago on Tue 08 Apr 2025 11:33:07 AM UTC.
Package java-17-openjdk-1:17.0.14.0.7-3.el8.x86_64 is already installed.
Dependencies resolved.
Nothing to do.
Complete!
[azureuser@Slave-Dev ~]$ cat /etc/os-release
NAME="Red Hat Enterprise Linux"
VERSION="8.10 (Ootpa)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="8.10"
PLATFORM_ID="platform:el8"
PRETTY_NAME="Red Hat Enterprise Linux 8.10 (Ootpa)"
```

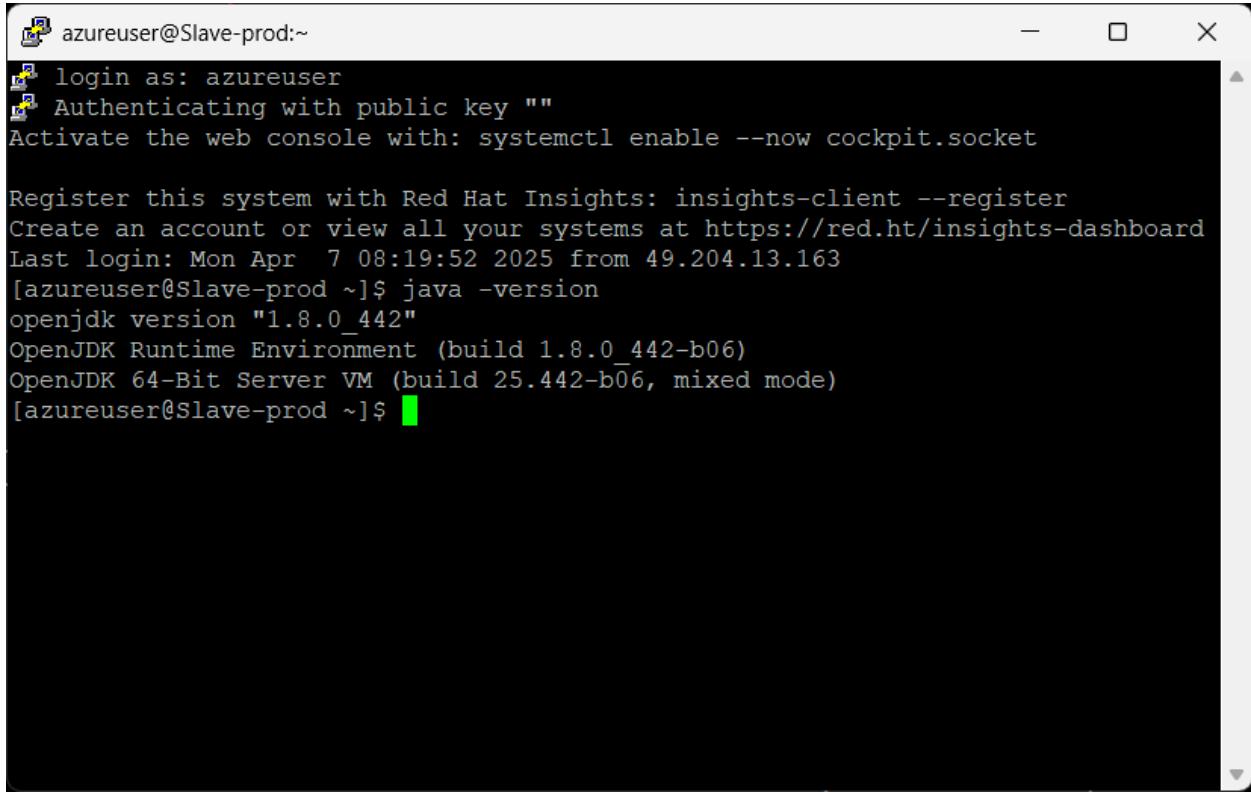
```
[azureuser@Slave-Dev ~]$ rpm -qa | grep java  
tzdata-java-2025b-1.el8.noarch  
java-packages-filesystem-5.3.0-2.module+el8+2598+06babf2e.noarch  
java-17-openjdk-headless-17.0.14.0.7-3.el8.x86_64  
java-1.8.0-openjdk-headless-1.8.0.442.b06-2.el8.x86_64  
java-1.8.0-openjdk-1.8.0.442.b06-2.el8.x86_64  
java-17-openjdk-17.0.14.0.7-3.el8.x86_64  
[azureuser@Slave-Dev ~]$
```

2. Write a play book using vars

```
[ansible@Master ~]$ ansible-playbook var.yml
PLAY [prod] ****
TASK [Gathering Facts] ****
ok: [192.168.0.10]

TASK [this task is installed java on prodserver] ****
changed: [192.168.0.10]

PLAY RECAP ****
192.168.0.10 : ok=2    changed=1    unreachable=0    failed=0    s
kipped=0    rescued=0    ignored=0
```



The screenshot shows a terminal window titled "azureuser@Slave-prod:~". The session starts with a password prompt for "azureuser". It then displays system information and logs from the "java -version" command. The terminal has a dark background with light-colored text.

```
azureuser@Slave-prod:~$ 
[?] login as: azureuser
[?] Authenticating with public key ""
Activate the web console with: systemctl enable --now cockpit.socket

Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
Last login: Mon Apr  7 08:19:52 2025 from 49.204.13.163
[azureuser@Slave-prod ~]$ java -version
openjdk version "1.8.0_442"
OpenJDK Runtime Environment (build 1.8.0_442-b06)
OpenJDK 64-Bit Server VM (build 25.442-b06, mixed mode)
[azureuser@Slave-prod ~]$ 
```

3. write a play book give variable on run time

```
[ansible@Master ~]$ ansible-playbook varrun.yml --extra-vars "scm=git install=present"

PLAY [prod] ****

TASK [Gathering Facts] ****
ok: [192.168.0.10]

TASK [install git on prod server] ****
changed: [192.168.0.10]

PLAY RECAP ****
192.168.0.10 : ok=2    changed=1    unreachable=0    failed=0    s
kipped=0    rescued=0    ignored=0
```

```
[azureuser@Slave-prod:~]  
[azureuser@Slave-prod ~]$ git --version  
git version 2.43.5  
[azureuser@Slave-prod ~]$
```

To install httpd service on redhat 8.10

Sudo yum install httpd

To check the status of the service → Systemctl status httpd

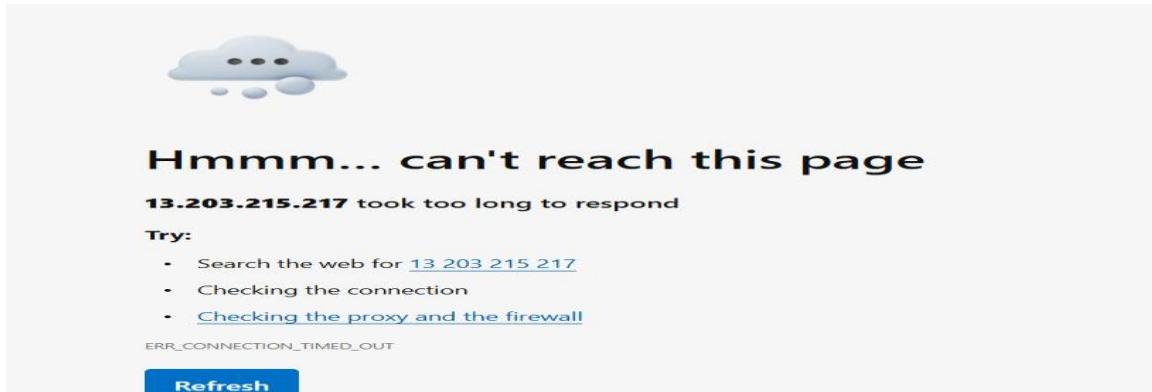
To start the service → Systemctl start httpd

Some times it will ask root password to start the service , if you know the root password you can give that ,if not we can create new password to root by using below command

Sudo passwd root

```
[azureuser@Master ~]$ sudo passwd root
Changing password for user root.
New password:
BAD PASSWORD: The password fails the dictionary check - it is based on a dictionary word
Retype new password:
passwd: all authentication tokens updated successfully.
[azureuser@Master ~]$
```

Some times the service will run but when we try to acces the webpage will get error like



In this situation we have to add ports on below mentioned path

4. Need to set port configuration 8080 in vi /etc/httpd/conf/httpd.conf Give “Listen 8080” save it and

Restart it.

- vim /etc/httpd/conf/httpd.conf >> add Listen 8080
- systemctl status httpd
- systemctl restart httpd
- netstat -tuln | grep ':8080'
- netstat -tuln | grep ':80'
- sudo firewall-cmd --add-port=80/tcp --permanent
- sudo firewall-cmd --add-port=8080/tcp --permanent
- sudo firewall-cmd --reload

```

root@Master:~#
[12116 /usr/sbin/httpd -DFOREGROUND
[12117 /usr/sbin/httpd -DFOREGROUND
Apr 08 13:34:34 Master systemd[1]: Starting The Apache HTTP Server...
Apr 08 13:34:34 Master systemd[1]: Started The Apache HTTP Server.
Apr 08 13:34:34 Master httpd[12112]: Server configured, listening on: port 80
[azureuser@Master ~]$ sudo firewall-cmd --permanent --add-service=http
success
[azureuser@Master ~]$ sudo firewall-cmd --permanent --add-service=https
success
[azureuser@Master ~]$ sudo firewall-cmd --reload
success
[azureuser@Master ~]$ sudo firewall-cmd --permanent --add-port=8080/tcp
success
[azureuser@Master ~]$ sudo firewall-cmd --reload
success
[azureuser@Master ~]$ vim /etc/httpd/conf/httpd.conf
[azureuser@Master ~]$ sudo -i
[root@Master ~]# vim /etc/httpd/conf/httpd.conf
[root@Master ~]# vim /etc/httpd/conf/httpd.conf
[root@Master ~]# systemctl restart httpd
[root@Master ~]# vim /etc/httpd/conf/httpd.conf
[root@Master ~]# vim /etc/httpd/conf/httpd.conf

```

4. Playbook for install httpd service

You can automate these steps in your virtual machine using Ansible playbooks. Below is an example of how to structure your playbook to perform these actions:

Example Ansible Playbook

```
---
```

```
- name: Configure VM to listen on ports 80 and 8080
```

```
hosts: your_vm
```

```
become: yes
```

```
tasks:
```

```
# Ensure Apache is installed
```

```
- name: Install Apache HTTP Server
```

```
yum:
```

```
  name: httpd
```

```
  state: present
```

```
# Update httpd.conf to listen on port 8080
```

```
- name: Add Listen 8080 to httpd.conf
```

```
lineinfile:
```

```
  path: /etc/httpd/conf/httpd.conf
```

```
regexp: '^Listen 8080'
```

```
line: 'Listen 8080'
```

```
state: present
```

```
# Restart Apache
```

```
- name: Restart Apache
```

```
service:
```

```
name: httpd
```

```
state: restarted
```

```
# Check port listening (optional)
```

```
- name: Check ports using netstat
```

```
command: netstat -tuln
```

```
register: netstat_output
```

```
- debug:
```

```
var: netstat_output.stdout
```

```
# Add ports to the firewall
```

```
- name: Allow port 80 in firewall
```

```
firewalld:
```

```
port: 80/tcp
```

```
permanent: yes
```

```
state: enabled
```

```
- name: Allow port 8080 in firewall
```

```
firewalld:
```

```
port: 8080/tcp
```

```
permanent: yes
```

```
state: enabled
```

```
# Reload firewall to apply changes

- name: Reload firewall
  command: firewall-cmd --reload
```

5. playbook for create a folder and file and insert some data in the file

```
ansible@Master:~
-----
- hosts: test
  user: ansible
  become: yes
  connection: ssh

  tasks:
    - name: Create a folder on home
      file:
        path: "/home/test"
        state: directory

    - name: create a file in test folder
      file:
        path: "/home/test/file1.txt"
        state: touch
    - name: insert data on file1
      copy:
        dest: "/home/test/file1.txt"
        content: |
          hello this is my first test file
"folderfiledata.yml" 25L, 467C
```

Output

```
ansible@Slave-test:/home/test
drwxr-xr-x. 5 root      root      50 Apr 11 12:38 ..
drwx----- 3 ansible  ansible   17 Apr  7 09:07 .ansible
-rw----- 1 ansible  ansible  125 Apr  7 12:12 .bash_history
-rw-r--r-- 1 ansible  ansible   18 Feb 10 2024 .bash_logout
-rw-r--r-- 1 ansible  ansible  141 Feb 10 2024 .bash_profile
-rw-r--r-- 1 ansible  ansible  376 Feb 10 2024 .bashrc
drwx----- 2 ansible  ansible  29 Apr  7 09:05 .ssh
[ansible@Slave-test ~]$ cd opt
-bash: cd: opt: No such file or directory
[ansible@Slave-test ~]$ ll
total 0
[ansible@Slave-test ~]$ cd /home/
[ansible@Slave-test home]$ ll
total 0
drwx----- 4 ansible  ansible  111 Apr  7 09:07 ansible
drwx----- 3 azureuser azureuser  95 Apr  6 18:36 azureuser
drwxr-xr-x. 2 root      root      23 Apr 11 12:38 test
[ansible@Slave-test home]$ cd test
[ansible@Slave-test test]$ ll
total 4
-rw-r--r-- 1 root      root     33 Apr 11 12:38 file1.txt
[ansible@Slave-test test]$ cat file1.txt
hello this is my first test file
[ansible@Slave-test test]$
```

7. Write a play book to install multiple services in single task using loop

```
---  
- hosts: test  
  user: ansible  
  connection: ssh  
  become: yes  
  
  tasks:  
    - name: this task is used to deploy multiple services in single time  
      yum: name={{item}} state=present  
      with_items:  
        - git  
        - tree  
        - maven  
        - httpd  
        - java-1.8.0-openjdk
```

I have already installed 3 services on this machine so here it's installed only one

```
[ansible@Master ~]$ ansible-playbook loop.yml

PLAY [test] ****
TASK [Gathering Facts] ****
ok: [192.168.0.7]

TASK [this task is used to deploy multiple services in single time] ****
[DEPRECATION WARNING]: Invoking "yum" only once while using a loop via
squash_actions is deprecated. Instead of using a loop to supply multiple items
and specifying `name: "{{item}}``, please use `name: ['git', 'tree', 'maven',
'httpd', 'java-1.8.0-openjdk']` and remove the loop. This feature will be
removed in version 2.11. Deprecation warnings can be disabled by setting
deprecation_warnings=False in ansible.cfg.
changed: [192.168.0.7] => (item=['git', 'tree', 'maven', 'httpd', 'java-1.8.0-op
enjdk'])

PLAY RECAP ****
192.168.0.7 : ok=2    changed=1    unreachable=0    failed=0    s
kipped=0    rescued=0    ignored=0
```

8. Write a play book to create users and group in server

```
ansible@Master:~
-----
- hosts: test
  user: ansible
  connection: ssh
  become: yes

tasks:
  - name: add single user
    user: name=Ashok state=present

  - name: add multiple user in single time
    user: name={{item}} state=present
    with_items:
      - user1
      - user2
      - user3
    ...
~
```

```
[ansible@Master ~]$ vim adduser.yml
[ansible@Master ~]$ ansible-playbook adduser.yml

PLAY [test] ****
TASK [Gathering Facts] ****
ok: [192.168.0.7]

TASK [add single user] ****
changed: [192.168.0.7]

TASK [add multiple user in single time] ****
changed: [192.168.0.7] => (item=user1)
changed: [192.168.0.7] => (item=user2)
changed: [192.168.0.7] => (item=user3)

PLAY RECAP ****
192.168.0.7 : ok=3    changed=2    unreachable=0    failed=0    s
kippe
d=0      rescued=0     ignored=0
```

```
---
- hosts: test
  user: ansible
  connection: ssh
  become: yes

  tasks:
    - name: add group in server
      group: name=msoft state=present

    - name: add multiple groups in server
      group: name={{item}} state=present
      with_items:
        - cis
        - devops
        - dev

    ...
~
```

```
[ansible@Master ~]$ vim addgroup.yml
[ansible@Master ~]$ ansible-playbook addgroup.yml

PLAY [test] ****
TASK [Gathering Facts] ****
ok: [192.168.0.7]

TASK [add group in server] ****
changed: [192.168.0.7]

TASK [add multiple grouops in server] ****
changed: [192.168.0.7] => (item=cis)
changed: [192.168.0.7] => (item=devops)
changed: [192.168.0.7] => (item=dev)

PLAY RECAP ****
192.168.0.7 : ok=3    changed=2    unreachable=0    failed=0    s
kipped=0    rescued=0    ignored=0
```

9. write a playbook to install services using conditions

```
ansible@Master:~
-----
- hosts: dev
  user: ansible
  connection: ssh
  become: yes

  tasks:
    - name: install maven on Redhat
      action: yum name=maven state=present
      when: ansible_os_family == "RedHat"

    - name: install maven on Ubuntu
      action: apt name=maven state=present
      when: ansible_os_family == "Ubuntu"
...
~
```

```
[ansible@Master ~]$ vim codetion.yml
[ansible@Master ~]$ ansible-playbook codetion.yml

PLAY [dev] ****
TASK [Gathering Facts] ****
ok: [192.168.0.8]

TASK [install maven on Redhat] ****
changed: [192.168.0.8]

TASK [install maven on Ubuntu] ****
skipping: [192.168.0.8]

PLAY RECAP ****
192.168.0.8 : ok=2    changed=1    unreachable=0    failed=0    s
kipped=1    rescued=0    ignored=0
```

10. write a playbook to delete user and group in a server

```
ansible@Master:~  
----  
- hosts: test  
  user: ansible  
  become: yes  
  connection: ssh  
  
  vars:  
    delete: absent  
    create: present  
  
  tasks:  
    - name: delte user in server  
      user: name=user1 state={{delete}}  
    - name: delte group in server  
      group: name=cis state={{delete}}  
...  
~  
~  
~
```

```
[ansible@Master ~]$ vim deleteusergroup.yml  
[ansible@Master ~]$ ansible-playbook deleteusergroup.yml  
  
PLAY [test] ****  
TASK [Gathering Facts] ****  
ok: [192.168.0.7]  
  
TASK [delte user in server] ****  
changed: [192.168.0.7]  
  
TASK [delte group in server] ****  
changed: [192.168.0.7]  
  
PLAY RECAP ****  
192.168.0.7 : ok=3    changed=2    unreachable=0    failed=0    s  
kipped=0    rescued=0    ignored=0
```

```
ansible@Slave-test:~  
systemd-resolve:x:193:193:systemd Resolver:/sbin/nologin  
tss:x:59:59:Account used for TPM access:/sbin/nologin  
polkitd:x:998:996:User for polkitd:/sbin/nologin  
clevis:x:1997:993:Clevis Decryption Framework unprivileged user:/var/cache/clevis  
:/sbin/nologin  
unbound:x:996:992:Unbound DNS resolver:/etc/unbound:/sbin/nologin  
sshd:x:74:74:Privilege-separated SSH:/var/empty/sshd:/sbin/nologin  
libstoragemgmt:x:995:991:daemon account for libstoragemgmt:/var/run/lsm:/sbin/no  
login  
cockpit-ws:x:994:990:User for cockpit web service:/nonexisting:/sbin/nologin  
cockpit-wsinstance:x:993:989:User for cockpit-ws instances:/nonexisting:/sbin/no  
login  
sssd:x:992:988:User for sssd:/sbin/nologin  
setroubleshoot:x:991:987:/var/lib/setroubleshoot:/sbin/nologin  
chrony:x:990:986:/var/lib/chrony:/sbin/nologin  
tcpdump:x:72:72::/sbin/nologin  
azureuser:x:1000:1000:Cloud User:/home/azureuser:/bin/bash  
ndatp:x:989:985::/home/ndatp:/sbin/nologin  
ansible:x:1001:1001::/home/ansible:/bin/bash  
apache:x:48:48:Apache:/usr/share/httpd:/sbin/nologin  
Ashok:x:1002:1002::/home/Ashok:/bin/bash  
user2:x:1004:1004::/home/user2:/bin/bash  
user3:x:1005:1005::/home/user3:/bin/bash  
[ansible@Slave-test ~]$
```

11. Write a playbook to install Jenkins

```
---
- name: Install Jenkins with Java 17 on Red Hat 8.10
  hosts: all
  become: yes

  tasks:
    - name: Install Java 17
      yum:
        name: java-17-openjdk-devel
        state: present

    - name: Add Jenkins repository
      get_url:
        url: https://pkg.jenkins.io/redhat-stable/jenkins.repo
        dest: /etc/yum.repos.d/jenkins.repo

    - name: Import Jenkins GPG key
      rpm_key:
        state: present
        key: https://pkg.jenkins.io/redhat-stable/jenkins.io.key

    - name: Install Jenkins
      yum:
        name: jenkins
        state: present

    - name: Configure Jenkins to use Java 17
      lineinfile:
        path: /etc/sysconfig/jenkins
        regexp: '^JENKINS_JAVA_CMD='
        line: 'JENKINS_JAVA_CMD="/usr/lib/jvm/java-17-openjdk/bin/java"'

    - name: Start and enable Jenkins service
      systemd:
        name: jenkins
        state: started
        enabled: yes

    - name: Open firewall port for Jenkins
      firewalld:
        port: 8080/tcp
        permanent: yes
```

```
state: enabled

  - name: Reload firewall
    command: firewall-cmd --reload

---

  - name: Configure httpd and Jenkins
    hosts: all
    become: yes

  tasks:
    - name: Install httpd (Apache)
      yum:
        name: httpd
        state: present

    - name: Start and enable httpd service
      service:
        name: httpd
        state: started
        enabled: true

    - name: Configure httpd to listen on port 80
      lineinfile:
        path: /etc/httpd/conf/httpd.conf
        regexp: "^Listen"
        line: "Listen 80"
        state: present
      notify: Restart httpd

    - name: Install Jenkins
      yum:
        name: jenkins
        state: present

    - name: Configure Jenkins to listen on port 8080
      lineinfile:
        path: /etc/sysconfig/jenkins
        regexp: "^JENKINS_PORT"
        line: "JENKINS_PORT=8080"
        state: present
      notify: Restart Jenkins
```

```

- name: Start and enable Jenkins service
  service:
    name: jenkins
    state: started
    enabled: true

handlers:
- name: Restart httpd
  service:
    name: httpd
    state: restarted

- name: Restart Jenkins
  service:
    name: jenkins
    state: restarted

```

```

---
- hosts: jenkins
  user: ansible
  connection: ssh
  become: yes

  tasks:
    - name: Install Java 17
      yum:
        name: java-17-openjdk-devel
        state: present

    - name: getting repo from jenkins.io
      get_url:
        url: "https://pkg.jenkins.io/redhat-stable/jenkins.repo"
        dest: "/etc/yum.repos.d/jenkins.repo"

    - name: getting key from jenkins.io
      ansible.builtin.rpm_key:
        key: "https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key"
        state: present

    - name: install jenkins
      yum:
        name: jenkins
        state: present

    - name: Open firewall port for Jenkins
      firewalld:
        port: 8080/tcp
        permanent: yes
        state: enabled

    - name: start the jenkins
      service: name=jenkins state=started
...

```

```
[ansible@Master ~]$ vim jenkins.yml
[ansible@Master ~]$ ansible-playbook jenkins.yml

PLAY [jenkins] ****
TASK [Gathering Facts] ****
ok: [192.168.0.9]

TASK [Install Java 17] ****
ok: [192.168.0.9]

TASK [getting repo from jenkins.io] ****
ok: [192.168.0.9]

TASK [getting key from jenkins.io] ****
ok: [192.168.0.9]

TASK [install jenkins] ****
ok: [192.168.0.9]

TASK [Open firewall port for Jenkins] ****
ok: [192.168.0.9]

TASK [start the jenkins] ****
changed: [192.168.0.9]

PLAY RECAP ****
192.168.0.9 : ok=7    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
```

```
[azureuser@jenkins ~]$ systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
  Loaded: loaded (/usr/lib/systemd/system/jenkins.service; disabled; vendor pr>
  Active: active (running) since Tue 2025-04-15 12:32:55 UTC; 32s ago
    Main PID: 9160 (java)
      Tasks: 52 (limit: 49010)
     Memory: 938.8M
       CGroup: /system.slice/jenkins.service
               └─9160 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/j>

Apr 15 12:32:46 jenkins jenkins[9160]: Jenkins initial setup is required. An ad>
Apr 15 12:32:46 jenkins jenkins[9160]: Please use the following password to pro>
Apr 15 12:32:46 jenkins jenkins[9160]: e6336cd27cf3455dad69ec07d41da58a
Apr 15 12:32:46 jenkins jenkins[9160]: This may also be found at: /var/lib/jen>
Apr 15 12:32:46 jenkins jenkins[9160]: ****
Apr 15 12:32:55 jenkins jenkins[9160]: 2025-04-15 12:32:55.003+0000 [id=31] >
Apr 15 12:32:55 jenkins jenkins[9160]: 2025-04-15 12:32:55.096+0000 [id=23] >
Apr 15 12:32:55 jenkins systemd[1]: Started Jenkins Continuous Integration Serv>
Apr 15 12:32:56 jenkins jenkins[9160]: 2025-04-15 12:32:56.976+0000 [id=48] >
Apr 15 12:32:56 jenkins jenkins[9160]: 2025-04-15 12:32:56.977+0000 [id=48] >

[azureuser@jenkins ~]$
```

ashok

Ashok@123

Welcome to Jenkins!

This page is where your Jenkins jobs will be displayed. To get started, you can set up distributed builds or start building a software project.

Start building your software project

- Create a job** +
- Set up a distributed build**
- Set up an agent** 🖥
- Configure a cloud** ☁
- Learn more about distributed builds** ?

Some time when we try to install or get the tomcat or any software will get error on that time we have to check the system have internat acces or not if not we have to chek the DNS server is up and running or not.

project-vnet | DNS servers

Virtual network

Search

DNS servers ⓘ

Default (Azure-provided)

Custom

IP Address

192.168.0.13

Add DNS server

Subnets

Bastion

DDoS protection

Firewall

Microsoft Defender for Cloud

Network manager

DNS servers

Peerings

Service endpoints

Private endpoints

Properties

Locks

Monitoring

Manuval process to setup tomcat

```
wget https://dlcdn.apache.org/tomcat/tomcat-9/v9.0.104/bin/apache-tomcat-9.0.104.tar.gz
tar -zvxf apache-tomcat-9.0.104.tar.gz
cd apache-tomcat-9.0.104
cd conf
vim tomcat-users.xml
```

```

ansible@Master:~ 
Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.

-->
<tomcat-users xmlns="http://tomcat.apache.org/xml"
               xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
               xsi:schemaLocation="http://tomcat.apache.org/xml tomcat-users.xsd"
               version="1.0">

<!--
By default, no user is included in the "manager-gui" role required
to operate the "/manager/html" web application. If you wish to use this app,
you must define such a user - the username and password are arbitrary.

Built-in Tomcat manager roles:
- manager-gui      - allows access to the HTML GUI and the status pages
- manager-script   - allows access to the HTTP API and the status pages
- manager-jmx      - allows access to the JMX proxy and the status pages
- manager-status   - allows access to the status pages only

The users below are wrapped in a comment and are therefore ignored. If you
wish to configure one or more of these users for use with the manager web
application, do not forget to remove the <!... ...> that surrounds them. You
will also need to set the passwords to something appropriate.
-->
<!--
<user username="admin" password="" roles="manager-gui"/>
<user username="robot" password="" roles="manager-script"/>
-->
<!--
The sample user and role entries below are intended for use with the
examples web application. They are wrapped in a comment and thus are ignored
when reading this file. If you wish to configure these users for use with the
examples web application, do not forget to remove the <!... ...> that surrounds
them. You will also need to set the passwords to something appropriate.
-->
<!--
<role rolename="tomcat"/>
<role rolename="role1"/>
<user username="tomcat" password="" roles="tomcat"/>
<user username="both" password="" roles="tomcat,role1"/>
<user username="role1" password="" roles="role1"/>
-->
<role rolename="manager-gui"/>
<role rolename="manager-script"/>
<user username="tomcat" password="Ashok@123" roles="manager-gui, manager-script"/>
</tomcat-users>

```

COPY

Paste it

```

cd apache-tomcat-9.0.104
cd webapps/manager/META-INF
vim context.xml

```

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
-->
<Context antiResourceLocking="false" privileged="true">
    <CookieProcessor className="org.apache.tomcat.util.http.Rfc6265CookieProcessor"
                  sameSiteCookies="strict" />
    <Valve className="org.apache.catalina.valves.RemoteAddrValve"
          allow=".*" />
    <Manager sessionAttributeValueClassNameFilter="java.lang.(?>Boolean|Integer|Long|Number|String)|org.apache.catalina.filters.CsrfPreventionFilter\$LruCache\$(?:\\\$)?|java.util.(?>List|Map)" />
</Context>

```

We have to replace with “.*” with the existing values

The screenshot shows the Apache Tomcat Web Application Manager interface. At the top, there's a navigation bar with links like 'Import favorites', 'Spars...', 'View Profile', 'https://api.whatsapp...', 'Booking.com', 'New folder', 'Ansible', and 'Other fa...'. To the right of the navigation bar is the Apache logo. Below the navigation bar, there's a yellow banner with the text 'Manager' and a cartoon cat icon. The main content area is titled 'Tomcat Web Application Manager'. It features a table titled 'Applications' with columns: Path, Version, Display Name, Running, Sessions, and Commands. The table lists several applications: 'Welcome to Tomcat' (Path: /, Version: None specified), 'Tomcat Documentation' (Path: /docs, Version: None specified), 'Servlet and JSP Examples' (Path: /examples, Version: None specified), 'Tomcat Host Manager Application' (Path: /host-manager, Version: None specified), and 'Tomcat Manager Application' (Path: /manager, Version: None specified). Each application row has a set of buttons for 'Start', 'Stop', 'Reload', 'Undeploy', and 'Expire sessions with idle ≥ 30 minutes'. A 'Deploy' button is located at the bottom of the table.

Applications					
Path	Version	Display Name	Running	Sessions	Commands
/	None specified	Welcome to Tomcat	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/docs	None specified	Tomcat Documentation	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/examples	None specified	Servlet and JSP Examples	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/host-manager	None specified	Tomcat Host Manager Application	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/manager	None specified	Tomcat Manager Application	true	1	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes English (India)

The above setup is manual

For this same deployment to setup multiple servers using ansible playbook we have follow below steps with the above steps.

```
cd apache-tomcat-9.0.104
cd conf
cp tomcat-users.xml /home/ansible
```

```
cd apache-tomcat-9.0.104
cd webapps/manager/ META-INF
cp context.xml /home/ansible
```

```
[ansible@Master ~]$ ll
total 12568
-rw-rw-r--. 1 ansible ansible      1172 Apr 11 12:30 adddata.yml
-rw-rw-r--. 1 ansible ansible      324 Apr 13 18:08 addgroup.yml
-rw-rw-r--. 1 ansible ansible      340 Apr 13 18:08 adduser.yml
drwxrwxr-x. 9 ansible ansible    4096 Apr 20 11:41 apache-tomcat-9.0.104
-rw-rw-r--. 1 ansible ansible 12787166 Apr  4 12:59 apache-tomcat-9.0.104.tar.gz
-rw-rw-r--. 1 ansible ansible      340 Apr 13 18:20 codetion.yml
-rw-r-----. 1 ansible ansible   1316 Apr 20 11:51 context.xml
-rw-rw-r--. 1 ansible ansible      298 Apr 13 18:29 deleteusergroup.yml
-rw-rw-r--. 1 ansible ansible      467 Apr 11 12:53 folderfiledata.yml
-rw-rw-r--. 1 ansible ansible      847 Apr 15 13:12 jenkins.yml
-rw-rw-r--. 1 ansible ansible      326 Apr 13 17:47 loop.yml
-rw-rw-r--. 1 ansible ansible    1185 Apr 15 13:09 setupfirewall.yml
-rw-rw-r--. 1 ansible ansible      171 Apr 11 12:55 startservice.yml
-rw-rw-r--. 1 ansible ansible      161 Apr 11 12:53 stopservice.yml
-rw-rw-r--. 1 ansible ansible      440 Apr  8 12:44 test.yml
drwxrwxr-x. 3 ansible ansible       65 Apr  9 12:55 tic-tac-toe-docker
-rw-----. 1 ansible ansible 2910 Apr 20 11:50 tomcat-users.xml
-rw-rw-r--. 1 ansible ansible   1277 Apr 20 12:07 tomcat.yml
-rw-rw-r--. 1 ansible ansible   1954 Apr 19 19:43 tomtest.yml
-rw-rw-r--. 1 ansible ansible      175 Apr  8 13:11 varrun.yml
-rw-rw-r--. 1 ansible ansible      268 Apr  8 13:01 var.yml
-rw-rw-r--. 1 ansible ansible     401 Apr 13 17:38 webservice.yml
```

vim tomcat.yml

```
ansible@Master:~
---
- hosts: test
  user: ansible
  become: yes
  connection: ssh

  tasks:
    - name: Install Java 17
      yum: name=java-17-openjdk state=present
      tags: java

    - name: get tomcat from dlcd
      get_url:
        url: "https://dlcdn.apache.org/tomcat/tomcat-9/v9.0.104/bin/apache-tomcat-9.0.104.tar.gz"
        dest: "/root/"

    - name: untar the tar file
      unarchive:
        src: /root/apache-tomcat-9.0.104.tar.gz
        dest: /root/
        remote_src: yes

    - name: rename the tar file
      command: mv /root/apache-tomcat-9.0.104 /root/tomcat
      tags: rename

    - name: Allow port 8080 in the firewall (firewalld)
      firewalld:
        port: 8080/tcp
        permanent: yes
        state: enabled

    - name: replace tomcat-users.xml
      copy:
        src: "/home/ansible/tomcat-users.xml"
        dest: "/root/tomcat/conf/tomcat-users.xml"

    - name: replace context.xml
      copy:
        src: "/home/ansible/context.xml"
        dest: "/root/tomcat/webapps/manager/META-INF/context.xml"

    - name: stop the tomcat server
      shell: nohup /root/tomcat/bin/shutdown.sh

    - name: start the tomcat
      shell: nohup /root/tomcat/bin/startup.sh
```

ansible-playbook tomcat.yml --skip-tag="rename"

```
[ansible@Master ~]$ ansible-playbook tomcat.yml --skip-tag="rename"
PLAY [test] ****
TASK [Gathering Facts] ****
ok: [192.168.0.7]
TASK [Install Java 17] ****
ok: [192.168.0.7]
TASK [get tomcat from dlcd] ****
ok: [192.168.0.7]
TASK [untar the tar file] ****
ok: [192.168.0.7]
TASK [Allow port 8080 in the firewall (firewalld)] ****
ok: [192.168.0.7]
TASK [replace tomcat-users.xml] ****
changed: [192.168.0.7]
TASK [replace context.xml] ****
changed: [192.168.0.7]
TASK [stop the tomcat server] ****
changed: [192.168.0.7]
TASK [start the tomcat] ****
changed: [192.168.0.7]
PLAY RECAP ****
192.168.0.7 : ok=9    changed=4    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
```

```
drwxr-xr-x. 9 root root 4096 Apr 20 11:16 apache-tomcat-9.0.104
-rw-r--r--. 1 root root 12787166 Apr 4 12:59 apache-tomcat-9.0.104.tar.gz
-rw-r--r--. 1 root root 0 Apr 19 19:29 {changed}
drwxr-xr-x. 10 root root 4096 Apr 20 10:49 tomcat
[root@Slave-test ~]# cd tomcat
[root@Slave-test tomcat]# ll
total 144
drwxr-xr-x. 9 root root 4096 Apr 20 10:49 apache-tomcat-9.0.104
drwxr-x---. 2 root root 4096 Apr 20 10:44 bin
-rw-r-----. 1 root root 24136 Apr 4 12:32 BUILDING.txt
drwxr-----. 3 root root 4096 Apr 20 12:05 conf
-rw-r-----. 1 root root 6166 Apr 4 12:32 CONTRIBUTING.md
drwxr-x---. 2 root root 4096 Apr 20 10:44 lib
-rw-r-----. 1 root root 57092 Apr 4 12:32 LICENSE
drwxr-x---. 2 root root 4096 Apr 20 10:49 logs
-rw-r-----. 1 root root 2333 Apr 4 12:32 NOTICE
-rw-r-----. 1 root root 3283 Apr 4 12:32 README.md
-rw-r-----. 1 root root 6902 Apr 4 12:32 RELEASE-NOTES
-rw-r-----. 1 root root 16538 Apr 4 12:32 RUNNING.txt
drwxr-x---. 2 root root 30 Apr 20 10:44 temp
drwxr-x---. 7 root root 81 Apr 4 12:32 webapps
drwxr-x---. 3 root root 22 Apr 20 10:49 work
[root@Slave-test tomcat]#
```

The screenshot shows the Tomcat Web Application Manager interface. At the top, there's a header bar with a logo of a yellow cat and the Apache Software Foundation logo. Below the header, the title "Tomcat Web Application Manager" is centered. A message box says "Message: OK". The main area has tabs for "Manager", "List Applications", "HTML Manager Help", "Manager Help", and "Server Status". Under the "Manager" tab, there's a table titled "Applications" with columns for Path, Version, Display Name, Running, Sessions, and Commands. The table lists several applications: "/ (None specified, Welcome to Tomcat, true, 0, Start Stop Reload Undeploy, Expire sessions with idle ≥ 30 minutes); /docs (None specified, Tomcat Documentation, true, 0, Start Stop Reload Undeploy, Expire sessions with idle ≥ 30 minutes); /examples (None specified, Servlet and JSP Examples, true, 0, Start Stop Reload Undeploy, Expire sessions with idle ≥ 30 minutes); /host-manager (None specified, Tomcat Host Manager Application, true, 0, Start Stop Reload Undeploy, Expire sessions with idle ≥ 30 minutes); and /manager (None specified, Tomcat Manager Application, true, 1, Start Stop Reload Undeploy, Expire sessions with idle ≥ 30 minutes). Below the table is a "Deploy" section with a note about the deploy directory.

9. Write a play book to use tags for skip the particular task

```
ansible@Master:~
-----
- hosts: test
  user: ansible
  connection: ssh
  become: yes

  tasks:
    - name: install git on test server
      yum: name=git state=present
      tags: git

    - name: install maven on test server
      yum: name=maven state=present
      tags: maven

    - name: install tree on test server
      yum: name=tree state=present
      tags: tree
...
~
```

```
[ansible@Master ~]$ ansible-playbook testtag.yml --skip-tag="maven"

PLAY [test] ****
TASK [Gathering Facts] ****
ok: [192.168.0.7]

TASK [install git on test server] ****
ok: [192.168.0.7]

TASK [install tree on test server] ****
ok: [192.168.0.7]

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

[ansible@Master ~]$
```

10. Write a play book to run particular task

```
ansible@Master:~
```
- hosts: test
 user: ansible
 connection: ssh
 become: yes

 tasks:
 - name: install git on test server
 yum: name=git state=present
 tags: git

 - name: install maven on test server
 yum: name=maven state=present
 tags: maven

 - name: install tree on test server
 yum: name=tree state=present
 tags: tree
```
~
```

```
[ansible@Master ~]$ ansible-playbook testtag.yml --tag="maven"

PLAY [test] ****
TASK [Gathering Facts] ****
ok: [192.168.0.7]

TASK [install maven on test server] ****
ok: [192.168.0.7]

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

[ansible@Master ~]$
```

12. Write a play book to get git repo files on slave server

The screenshot shows a GitHub repository page for 'official-images'. The repository is public and forked from 'docker-library/official-images'. A pull request from 'tianon' has been merged. The terminal window below displays an Ansible playbook named 'git.yml'.

```
ansible@Master:~
-----
- hosts: test
  user: ansible
  connection: ssh
  become: yes

  tasks:
    - name: download git repo
      git:
        repo: "https://github.com/ashokkota0268/official-images.git"
        version: "master"
        dest: "/root/my-gitfolder"
.
.
.
~
```

```
[ansible@Master ~]$ ansible-playbook git.yml

PLAY [test] ****
TASK [Gathering Facts] ****
ok: [192.168.0.7]

TASK [download git repo] ****
changed: [192.168.0.7]

PLAY RECAP ****
192.168.0.7 : ok=2    changed=1    unreachable=0    failed=0
kipped=0    rescued=0   ignored=0
```

Output:

```
[root@Slave-test ~]# ll
total 12496
drwxr-xr-x. 9 root root 4096 Apr 20 11:16 apache-tomcat-9.0.104
-rw-r--r--. 1 root root 12787166 Apr 4 12:59 apache-tomcat-9.0.104.tar.gz
-rw-r--r--. 1 root root 0 Apr 19 19:29 {changed:
drwxr-xr-x. 10 root root 4096 Apr 20 10:49 tomcat
[root@Slave-test ~]# ll
total 12500
drwxr-xr-x. 9 root root 4096 Apr 20 11:16 apache-tomcat-9.0.104
-rw-r--r--. 1 root root 12787166 Apr 4 12:59 apache-tomcat-9.0.104.tar.gz
-rw-r--r--. 1 root root 0 Apr 19 19:29 {changed:
drwxr-xr-x. 8 root root 4096 Apr 20 18:23 my-gitfolder
drwxr-xr-x. 10 root root 4096 Apr 20 10:49 tomcat
[root@Slave-test ~]# cd my-gitfolder
[root@Slave-test my-gitfolder]# ll
total 116
-rwxr--xr-x. 1 root root 867 Apr 20 18:23 _bashbrew-cat-sorted.sh
-rw-r--r--. 1 root root 3421 Apr 20 18:23 CODE-OF-CONDUCT.md
-rwxr--xr-x. 1 root root 12013 Apr 20 18:23 diff-pr.sh
-rw-r--r--. 1 root root 928 Apr 20 18:23 Dockerfile
drwxr--xr-x. 2 root root 4096 Apr 20 18:23 library
-rw-r--r--. 1 root root 10758 Apr 20 18:23 LICENSE
-rw-r--r--. 1 root root 592 Apr 20 18:23 MAINTAINERS
-rwxr--xr-x. 1 root root 3540 Apr 20 18:23 naughty-commits.sh
-rwxr--xr-x. 1 root root 2755 Apr 20 18:23 naughty-constraints.sh
-rwxr--xr-x. 1 root root 3395 Apr 20 18:23 naughty-from.sh
-rwxr--xr-x. 1 root root 1787 Apr 20 18:23 naughty-sharedtags.sh
-rw-r--r--. 1 root root 1724 Apr 20 18:23 NEW-IMAGE-CHECKLIST.md
-rwxr--xr-x. 1 root root 901 Apr 20 18:23 pr-urls.sh
-rw-r--r--. 1 root root 34741 Apr 20 18:23 README.md
-rw-r--r--. 1 root root 1397 Apr 20 18:23 SECURITY.md
drwxr--xr-x. 3 root root 99 Apr 20 18:23 test
-rwxr--xr-x. 1 root root 2837 Apr 20 18:23 toc.sh
```

Git private repo

Run Ansible playbook from Jenkins

1. We have to install publish over SSH plugin from Available plugins

Manage Jenkins > plugins > Available plugins

Plugins

Updates

Available plugins

Installed plugins

Advanced settings

Name

Enabled

Infrastructure plugin for Publish Over X 0.22

Send build artifacts somewhere.

Publish Over SSH 387.vec3df0f668cd

Send build artifacts over SSH

Report an issue with this plugin

We have to setup publish over ssh

Manage Jenkins > System > publish over ssh

SMTP server

Default user e-mail suffix

Advanced

Edited

Test configuration by sending test e-mail

Publish over SSH

A configuration to use to connect to a SSH server

Jenkins SSH Key

Passphrase

Concealed

Change Password

Path to key

Save Apply

SSh Server > Add > Name (any thing) > Hostname > Master server ip(pub or private) > Ansible server user name (how we connect the master server)

Ex: my master server ip : 192.168.0.6

User name: ansible

```
[ansible@Master ~]$ ll
total 12576
-rw-rw-r--. 1 ansible ansible      1172 Apr 11 12:30 adddata.yml
-rw-rw-r--. 1 ansible ansible      324 Apr 13 18:08 addgroup.yml
-rw-rw-r--. 1 ansible ansible      340 Apr 13 18:08 adduser.yml
drwxrwxr-x. 9 ansible ansible    4096 Apr 20 11:41 apache-tomcat-9.0.104
-rw-rw-r--. 1 ansible ansible 12787166 Apr  4 12:59 apache-tomcat-9.0.104.tar.gz
-rw-rw-r--. 1 ansible ansible      340 Apr 13 18:20 codetion.yml
-rw-r-----. 1 ansible ansible     1316 Apr 20 16:49 context.xml
-rw-rw-r--. 1 ansible ansible      298 Apr 13 18:29 deleteusergroup.yml
-rw-rw-r--. 1 ansible ansible      467 Apr 11 12:53 folderfiledata.yml
-rw-rw-r--. 1 ansible ansible      272 Apr 20 18:24 git.yml
-rw-rw-r--. 1 ansible ansible      847 Apr 20 18:31 jenkins.yml
-rw-rw-r--. 1 ansible ansible      326 Apr 13 17:47 loop.yml
-rw-rw-r--. 1 ansible ansible    1185 Apr 15 13:09 setupfirewall.yml
-rw-rw-r--. 1 ansible ansible      171 Apr 11 12:55 startservice.yml
-rw-rw-r--. 1 ansible ansible      161 Apr 11 12:53 stopservice.yml
-rw-rw-r--. 1 ansible ansible      379 Apr 20 18:10 testtag.yml
-rw-rw-r--. 1 ansible ansible      440 Apr  8 12:44 test.yml
drwxrwxr-x. 3 ansible ansible       65 Apr  9 12:55 tic-tac-toe-docker
-rw-----. 1 ansible ansible   2910 Apr 20 16:52 tomcat-users.xml
-rw-rw-r--. 1 ansible ansible     1277 Apr 20 17:08 tomcat.yml
-rw-rw-r--. 1 ansible ansible    1954 Apr 19 19:43 tomtest.yml
-rw-rw-r--. 1 ansible ansible      175 Apr  8 13:11 varrun.yml
-rw-rw-r--. 1 ansible ansible      268 Apr  8 13:01 var.yml
-rw-rw-r--. 1 ansible ansible     401 Apr 13 17:38 webservice.yml
[ansible@Master ~]$ vim loop.yml
[ansible@Master ~]$ vim loop.yml
[ansible@Master ~]$
```

The screenshot shows the Jenkins management interface for configuring an SSH server. The 'SSH Server' section is open, showing the following fields:

- Name: Ashok
- Hostname: 192.168.0.6
- Username: ansible
- Remote Directory: (empty)
- A checkbox for "Avoid sending files that have not changed" is unchecked.
- An "Advanced" dropdown menu is open, showing "Edited".

At the bottom left of the configuration form, there is a green "Add" button. A red circle has been drawn around this button, likely indicating where the user should click to proceed.

Test configuration if it's success then save it.

Create a new job > free style > Send file or execute commands over ssh before the build starts > name (it will come by default) > source file (your playbook) > Exec command (executable command) > save and build it

The screenshot shows the Jenkins configuration interface for a job named "testansible". The "Configure" screen is displayed, specifically the "SSH Publishers" section under the "Environment" tab. The "SSH Server" is configured with the name "Ashok". Under the "Transfers" section, a "Transfer Set" is defined for the file "loop.yml". The "Exec command" field contains the command "ansible-playbook loop.yml --skip-tag="services"".

The screenshot shows the Jenkins dashboard for the "testansible" job. The status is "Success". The "Builds" section shows one build, #1, completed 20 min ago at 8:39 AM. The "Permalinks" section lists the last four builds: Last build (#1), 20 min ago; Last stable build (#1), 20 min ago; Last successful build (#1), 20 min ago; and Last completed build (#1), 20 min ago.

```
ansible@Master:~
---
- hosts: test
  user: ansible
  connection: ssh
  become: yes

  tasks:
    - name: this task is used to deploy multiple services in single time
      yum: name={{item}} state=present
      with_items:
        - git
        - tree
        - maven
        - httpd
        - java-1.8.0-openjdk
      tags: service

    - name: create a file for test of integration form jenkins
      file:
        path: "/root/testdir/test.txt"
        state: directory
...
~
```

```
root@Slave-test:~/testdir
- login as: azureuser
  Authenticating with public key ""
Activate the web console with: systemctl enable --now cockpit.socket

Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
Last login: Sun Apr 20 17:53:32 2025 from 49.204.14.136
[azureuser@Slave-test ~]$ ll
total 0
[azureuser@Slave-test ~]$ sudo -i
[root@Slave-test ~]# ll
total 12500
drwxr-xr-x. 9 root root 4096 Apr 20 11:16 apache-tomcat-9.0.104
-rw-r--r--. 1 root root 12787166 Apr 4 12:59 apache-tomcat-9.0.104.tar.gz
-rw-r--r--. 1 root root 0 Apr 19 19:29 {changed:
drwxr-xr-x. 8 root root 4096 Apr 20 18:23 my-gitfolder
drwxr-xr-x. 3 root root 22 Apr 21 08:39 testdir
drwxr-xr-x. 10 root root 4096 Apr 20 10:49 tomcat
[root@Slave-test ~]# cd testdir
[root@Slave-test testdir]# ll
total 0
drwxr-xr-x. 2 root root 6 Apr 21 08:39 test.txt
[root@Slave-test testdir]#
```

If we write anything wrong in play book the build will go to unstable

```

ansible@Master:~
---
- hosts: test
  user: ansible
  connection: ssh
  become: yes

  tasks:
    - name: this task is used to deploy multiple services in single time
      yum: name={{item}} state=present
      with_items:
        - git
        - tree
        - maven
        - httpd
        - java-1.8.0-openjdk
      tags: service

    - name: create a file for test of integration form jenkins
      file:
        path: "/root/testdir/test.txt"
        state: directory
...

```

File → File

Import favorites | Sparsh | View Profile | https://api.whatsapp.com | Booking.com | New folder | Ansible

Jenkins

Dashboard > testansible >

Status: ! testansible

Permalinks:

- Last build (#2), 19 sec ago
- Last stable build (#1), 27 min ago
- Last successful build (#2), 19 sec ago
- Last unstable build (#2), 19 sec ago
- Last unsuccessful build (#2), 19 sec ago
- Last completed build (#2), 19 sec ago

Builds:

Build	Result	Timestamp
#2	Unstable	9:06 AM
#1	Successful	8:39 AM

Ansible Handlers

Whenever the first task will perform on that time only the (handlers) second task will be execute.

```

ansible@Master:~
```

```

  hosts: prod
  user: ansible
  connection: ssh
  become: yes

  tasks:
    - name: install java 1.8.0 jdk
      yum: name=java-1.8.0-openjdk state=present
      notify: install maven

  handlers:
    - name: install maven
      yum: name=maven state=present
  ...

```

```

[ansible@Master ~]$ ansible-playbook handlers.yml

PLAY [prod] ****

TASK [Gathering Facts] ****
ok: [192.168.0.10]

TASK [install java 1.8.0 jdk] ****
ok: [192.168.0.10]

PLAY RECAP ****
192.168.0.10 : ok=2     changed=0     unreachable=0     failed=
kipped=0     rescued=0    ignored=0

```

On my prod server I have already installed the java 1.8.0 , so this is not install again so it was skipped handler task as well

Because neenu playbook lo em rassanu antey naa tasks lo ishina task perform aytene naa handlers lo unna action perform avvali ani but neenu already naa prod server lo java 1.8.0 install cheseyadam valana java aneadi malli install avvaleadu (ok) ani vastey already andulo install ayyi undi ani meening, changed ani vastey task perform ayyindi ani meening.

Ansible-valut

If you want secure the data or encrypt the data →ansible-vault encrypt playbook name

new vault passwd:1234

Confirm new vault password: 1234

Cat playbook name

```
[ansible@Master ~]$ vim encryptdata.yml
[ansible@Master ~]$ ansible-valut encrypt encryptdata.yml
-bash: ansible-valut: command not found
[ansible@Master ~]$ ansible-vault encrypt encryptdata.yml
New Vault password:
Confirm New Vault password:
Encryption successful
[ansible@Master ~]$ viw encryptdata.yml
-bash: viw: command not found
[ansible@Master ~]$ cat encryptdata.yml
$ANSIBLE_VAULT;1.1;AES256
6665643739323532633066353530356363396234346164323138616630
3631633563653439313033643638386234373564303330650a39653362
66393062303263343439333363264666386362626236626538663734
3930353963636165660a6661613831613836661373230313462633461
6638393563663832313361393335333962313331653066336461326639
33363238323930336435376138363636386638356234323365633265
6363613665353963323430633862326334623464633763333432633432
35613839353734323039
[ansible@Master ~]$
```

If you want decrypt the data → ansible-vault decrypt playbook name

```
[ansible@Master ~]$ ansible-vault decrypt encryptdata.yml
Vault password:
Decryption successful
[ansible@Master ~]$ cat encryptdata.yml
hello heare i am saving encrypted data please don't change and see
[ansible@Master ~]$
```

If you want see the data without decrypt the data

Ansible-vault view encryptdata.yml

```
[ansible@Master ~]$ ansible-vault view encryptdata.yml
Vault password:
hello heare i am saving encrypted data please don't change and see
[ansible@Master ~]$
```

If you want to see the ansible-vault keys

→ Ansible-vault

```
[ansible@Master ~]$ ansible-vault
usage: ansible-vault [-h] [--version] [-v]
                      {create,decrypt,edit,view,encrypt,encrypt_string,rekey}
...
ansible-vault: error: the following arguments are required: action
```

If you want to change the encrypted key

Ansible-vault rekey playbook name

```
[ansible@Master ~]$ ansible-vault rekey encryptdata.yml
Vault password:
New Vault password:
Confirm New Vault password:
Rekey successful
[ansible@Master ~]$
```

If you forget the key we can't do anything 😊 our data will be loss

We have to save this keys very securely using azure key vault or any other secure places

To create a file using encrypted format

Ansible-vault create playbook or file name

```
[ansible@Master ~]$ ansible-vault create devsec.yml
New Vault password:
Confirm New Vault password:
[ansible@Master ~]$
```

>> We can't change the data with out decrypt the file

Roles

This role concept we use for devied the task to multiple users

16 . write a play book to setup tomcat by dividing task to multiple users

```
mkdir myapps
```

```
cd myapps
```

```
vim main.yml
```

```
ansible@Master:~/myapps
-----
  - hosts: prod
    connection: ssh
    user: ansible
    become: yes

    roles:
      - Ashok
      - prabhu
      - Anji

~
~
~
~
~
~
~
```

```
mkdir roles
```

```
cd roles
```

```
mkdir Ashok Prabhu Anji
```

```
[ansible@Master myapps]$ vim main.yml
[ansible@Master myapps]$ cd roles
[ansible@Master roles]$ ll
total 0
drwxrwxr-x. 3 ansible ansible 19 Apr 21 10:49 Anji
drwxrwxr-x. 3 ansible ansible 19 Apr 21 10:29 Ashok
drwxrwxr-x. 3 ansible ansible 19 Apr 21 10:38 prabhu
[ansible@Master roles]$
```

```
cd Ashok  
mkdir tasks  
cd tasks  
vim main.yml
```

```
ansible@Master:~/myapps/roles
-----
- name: install java 17 on server
  yum: name=java-17-openjdk state=present

- name: get tomcat from dlc当地
  get_url:
    url: "https://dlcdn.apache.org/tomcat/tomcat-9/v9.0.104/bin/apache-tomcat-9.0.104.tar.gz"
    dest : "/root"
- name: untar the tar file
  unarchive:
    src: /root/apache-tomcat-9.0.104.tar.gz
    dest: /root/
    remote_src: yes
...
~
```

```
cd prabhu  
mkdir tasks  
cd tasks  
vim main.yml
```

```
ansible@Master:~/myapps/roles
-----
- name: rename the untar file
  command: mv /root/apache-tomcat-9.0.104 /root/tomcat

- name: replace tomcat-users.xml
  copy:
    src: "/home/ansible/tomcat-users.xml"
    dest: "/root/tomcat/conf/tomcat-users.xml"
- name: replace context.xml
  copy:
    src: "/home/ansible/context.xml"
    dest: "/root/tomcat/webapps/manager/META-INF/context.xml"
...
~
```

```
cd Anji  
mkdir tasks  
cd tasks  
vim main.yml
```

```

ansible@Master:~/myapps
total 4
drwxrwxr-x. 1 ansible ansible 397 Apr 21 10:38 main.yml
[ansible@Master tasks]$ vim main.yml
[ansible@Master tasks]$ cd ..
[ansible@Master Ashok]$ cd ..
[ansible@Master roles]$ cd ..
[ansible@Master myapps]$ ll
total 4
-rw-rw-r--. 1 ansible ansible 127 Apr 21 10:57 main.yml
drwxrwxr-x. 5 ansible ansible 45 Apr 21 10:28 roles
[ansible@Master myapps]$ ansible-playbook main.yml

PLAY [prod]
*****
TASK [Gathering Facts]
ok: [192.168.0.10]

TASK [Ashok : install java 17 on server]
changed: [192.168.0.10]

TASK [Ashok : get tomcat from dlcdn]
changed: [192.168.0.10]

TASK [Ashok : untar the tar file]
changed: [192.168.0.10]

TASK [prabhu : rename the untar file]
changed: [192.168.0.10]

TASK [prabhu : replace tomcat-users.xml]
changed: [192.168.0.10]

TASK [prabhu : replace context.xml]
changed: [192.168.0.10]

TASK [Anji : allow port 8080 in the firewall]
ok: [192.168.0.10]

TASK [Anji : stop the tomcat server]
changed: [192.168.0.10]

TASK [Anji : start the tomcat]
changed: [192.168.0.10]

PLAY RECAP
192.168.0.10 : ok=10    changed=8    unreachable=0    failed=0    s
kipped=0   rescued=0   ignored=0

[ansible@Master myapps]$ 

```

S 97°F Mostly sunny

Properties Monitoring Capabilities (7) Recommendations (7) Tutorials

Virtual machine		Networking	
Computer name	Slave-prod	Public IP address	4.213.159.40 (Network interface)
Operating system	Linux (redhat 8.10)	Public IP address (IPv6)	-
VM generation	V2	Private IP address	192.168.0.10
VM architecture	x64	Private IP address (IPv6)	-
Agent status	Ready	Virtual network/subnet	project-vnet/project-subnet
Agent version	2.13.1.1	DNS name	Configure
Libvirt connection	disabled		

Not secure | 4.213.159.40:8080/manager/html

Import favorites | Spash | View Profile | https://api.whatsapp.com | Booking.com | New folder | Ansible

The APACHE Software Foundation

Tomcat Web Application Manager

Message: OK

Manager List Applications HTML Manager Help Manager Help Server Status

Applications						
Path	Version	Display Name	Running	Sessions	Commands	
/	None specified	Welcome to Tomcat	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ [30] minutes	
/docs	None specified	Tomcat Documentation	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ [30] minutes	
/examples	None specified	Servlet and JSP Examples	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ [30] minutes	
/host-manager	None specified	Tomcat Host Manager Application	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ [30] minutes	
/manager	None specified	Tomcat Manager Application	true	1	Start Stop Reload Undeploy Expire sessions with idle ≥ [30] minutes	English (India)

Deploy

```
[ansible@Master myapps]$ tree
```

```
.
├── main.yml
└── roles
    ├── Anji
    │   └── tasks
    │       └── main.yml
    ├── Ashok
    │   └── tasks
    │       └── main.yml
    └── prabhu
        └── tasks
            └── main.yml
```

When we try to install using yum or action or command if it's not working on that time we can use raw module

```
---
- hosts: localhost

  tasks:
    - name: install vim-common
      raw: name=vim-common state=present
-
```

Debug

Ansible setup modules

Debug module we are using most of the scenarios it will help a lot

1. If we want to see slave server os(the slave server working on which os)

- Hosts: all
- User: ansible
- Connection: ssh
- Become: yes

```
tasks:  
  - Debug:  
    msg: "slave server working on {{ansible_os_family}}".  
  - Debug:  
    msg: "slave server working on {{ansible_devices}}".  
  - Debug:  
    msg: "slave server working on {{ansible_kernel}}".
```

- Debug:
msg: "slave server memory{{ansible_memory_mb.real}}".
- Debug:
msg: "slave server tptsl memory{{ansible_memory_mb.real.total}}".
- Debug:
msg: "slave server free memory is{{ansible_memory_mb.real.free}}".
- Debug:
msg: "slave server used memory {{ansible_memory_mb.real.used}}".

```
ansible@Master:~  
- hosts: all  
  user: ansible  
  connection: ssh  
  become: yes  
  
  tasks:  
    - debug:  
        msg: "the slave server os name is {{ansible_os_family}}"  
    - debug:  
        msg: "the slave servers working on {{ansible_kernel}}"  
    - debug:  
        msg: "the slave server total memory is {{ansible_memory_mb.real}}"  
    - debug:  
        msg: "the slave server total memory free space is {{ansible_memory_mb.real.free}}"  
    - debug:  
        msg: "the slave server total used memory {{ansible_memory_mb.real.used}}"  
    - debug:  
        msg: " the slave server total memory {{ansible_memory_mb.real.total}}"  
    - debug:  
        msg: "the slaver server {{ansible_devices}}"  
...  
~
```

What ever command we have perform that command data will store in one registry and using that registry we can see the data in ansible playbook executable

- Hosts: all
User: ansible
Connection: ssh
Become: yes

Tasks:

- Name: to check the git status

Command: git -v

Register: abc

-debug:

Msg: "to check the gi status {{abc.stdout}}"

```
ansible@Master:~  
----  
- hosts: dev  
  connection: ssh  
  become: yes  
  user: ansible  
  
  tasks:  
    - name: install git  
      yum: name=git state=present  
  
    - name: to check the git status  
      command: git -v  
      register: abc  
  
    - debug:  
      msg: "to check the gi status {{abc.stdout}}"  
...  
~  
~  
~  
~  
~  
~
```

```
[ansible@Master ~]$ vim debugstatus.yml  
[ansible@Master ~]$ ansible-playbook debugstatus.yml  
  
PLAY [dev] ****  
  
TASK [Gathering Facts] ****  
ok: [192.168.0.8]  
  
TASK [install git] ****  
ok: [192.168.0.8]  
  
TASK [to check the git status] ****  
changed: [192.168.0.8]  
  
TASK [debug] ****  
ok: [192.168.0.8] => {  
    "msg": "'to check the gi status git version 2.43.5'"  
}  
  
PLAY RECAP ****  
192.168.0.8 : ok=4    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
```

Ansible Ad-hoc commands

Using Ansible ad-hoc commands we can install any packages from master to slave server without writing any play book but we can't reuse this command multiple times like play book.

Ex: ansible all -m yum -a "pkg= git state=present"

All → all your hosts

-m → Module

-a → Argument

Pkg → package

-b → become

To install java -1.8.0-openjdk on Jenkins server

Ansible Jenkins -b -m yum -a "pkg=java-1.8.0-openjdk state=present"

```
[ansible@Master ~]$ ansible jenkins -b -m yum -a "pkg=java-1.8.0-openjdk state=present"
192.168.0.9 | CHANGED => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/libexec/platform-python"
    },
    "changed": true,
    "msg": "",
    "rc": 0,
    "results": [
        "Installed: java-1.8.0-openjdk-1:1.8.0.442.b06-2.el8.x86_64",
        "Installed: gtk2-2.24.32-5.el8.x86_64",
        "Installed: java-1.8.0-openjdk-headless-1:1.8.0.442.b06-2.el8.x86_64"
    ]
}
[ansible@Master ~]$
```



Ansible Jenkins -b -m yum -a "pkg=git state=present"

```
[ansible@Master ~]$ ansible jenkins -b -m yum -a "pkg=git state=present "
192.168.0.9 | CHANGED => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/libexec/platform-python"
    },
    "changed": true,
    "msg": "",
    "rc": 0,
    "results": [
        "Installed: perl-Storable-1:3.11-3.el8.x86_64",
        "Installed: perl-Term-ANSIColor-4.06-396.el8.noarch",
        "Installed: perl-Term-Cap-1.17-395.el8.noarch",
        "Installed: perl-Text-ParseWords-3.30-395.el8.noarch",
        "Installed: perl-Text-Tabs+Wrap-2013.0523-395.el8.noarch",
        "Installed: perl-Time-Local-1:1.280-1.el8.noarch",
        "Installed: perl-constant-1.33-396.el8.noarch",
        "Installed: perl-parent-1:0.237-1.el8.noarch",
        "Installed: perl-podlators-4.11-1.el8.noarch",
        "Installed: perl-threads-1:2.21-2.el8.x86_64",
        "Installed: perl-Mozilla-CA-20160104-7.module+el8.3.0+6498+9eecfe51.noar
ch",
        "Installed: perl-Error-1:0.17025-2.el8.noarch",
        "Installed: perl-IO-Socket-SSL-2.066-4.module+el8.3.0+6446+594cad75.noar
ch",
        "Installed: perl-Git-2.43.5-2.el8_10.noarch",
        "Installed: perl-Data-Dumper-2.167-399.el8.x86_64",
        "Installed: perl-Encode-4:2.97-3.el8.x86_64",
        "Installed: perl-Digest-1.17-395.el8.noarch",
        "Installed: perl-MIME-Base64-3.15-396.el8.x86_64",
        "Installed: perl-PathTools-3.74-1.el8.x86_64"
    ]
}
```

```
[ansible@Master ~]$ ansible jenkins -a "git -v"
192.168.0.9 | CHANGED | rc=0 >>
git version 2.43.5
```

```
[ansible@Master ~]$ ansible all -a "git -v"
192.168.0.9 | CHANGED | rc=0 >>
git version 2.43.5
192.168.0.8 | CHANGED | rc=0 >>
git version 2.43.5
192.168.0.10 | CHANGED | rc=0 >>
git version 2.43.5
192.168.0.7 | CHANGED | rc=0 >>
git version 2.43.5
```

To check the memory

```
[ansible@Master ~]$ ansible all -a "df -h"
192.168.0.9 | CHANGED | rc=0 >>
Filesystem      Size  Used Avail Use% Mounted on
/devtmpfs        3.8G   0    3.8G  0% /dev
tmpfs           3.8G   0    3.8G  0% /dev/shm
tmpfs           3.8G  8.6M  3.8G  1% /run
tmpfs           3.8G   0    3.8G  0% /sys/fs/cgroup
/dev/mapper/rootvg-rootlv  2.0G 778M 1.3G 39% /
/dev/mapper/rootvg-usrlv  10G 3.0G 7.1G 30% /usr
/dev/sda1       496M 181M 315M 37% /boot
/dev/mapper/rootvg-varlv  8.0G 1.5G 6.6G 18% /var
/dev/sda15      495M 5.9M 489M 2% /boot/efi
/dev/mapper/rootvg-homelv 1014M 40M 975M 4% /home
/dev/mapper/rootvg-tmplv  2.0G 47M 2.0G 3% /tmp
/dev/sdb1       16G 28K 15G 1% /mnt
tmpfs          770M   0  770M 0% /run/user/1001
192.168.0.10 | CHANGED | rc=0 >>
Filesystem      Size  Used Avail Use% Mounted on
/devtmpfs        3.8G   0    3.8G  0% /dev
tmpfs           3.8G   0    3.8G  0% /dev/shm
tmpfs           3.8G  17M  3.8G  1% /run
tmpfs           3.8G   0    3.8G  0% /sys/fs/cgroup
/dev/mapper/rootvg-rootlv  2.0G 810M 1.2G 40% /
/dev/mapper/rootvg-usrlv  10G 2.9G 7.2G 29% /usr
/dev/mapper/rootvg-homelv 1014M 40M 975M 4% /home
/dev/sda1       496M 181M 315M 37% /boot
/dev/mapper/rootvg-varlv  8.0G 1.1G 7.0G 13% /var
/dev/sda15      495M 5.9M 489M 2% /boot/efi
/dev/mapper/rootvg-tmplv  2.0G 47M 2.0G 3% /tmp
/dev/sdb1       16G 28K 15G 1% /mnt
tmpfs          770M   0  770M 0% /run/user/1001
192.168.0.8 | CHANGED | rc=0 >>
Filesystem      Size  Used Avail Use% Mounted on
```

To check the ls -a

```
[ansible@Master ~]$ ansible all -a "ls -a"
192.168.0.8 | CHANGED | rc=0 >>
.
..
.ansible
.bash_history
.bash_logout
.bash_profile
.bashrc
.ssh
192.168.0.7 | CHANGED | rc=0 >>
.
..
.ansible
.bash_history
.bash_logout
.bash_profile
.bashrc
.config
.m2
.ssh
.vim
.viminfo
192.168.0.9 | CHANGED | rc=0 >>
.
..
.ansible
.bash_history
.bash_logout
.bash_profile
.bashrc
.ssh
192.168.0.10 | CHANGED | rc=0 >>
.
```

To create a directory

```
[ansible@Master ~]$ ansible all -a "mkdir testdiradhoc"
[WARNING]: Consider using the file module with state=directory rather than running 'mkdir'. If you need to use command because file is insufficiently permissive, consider using 'become' or set 'command_warnings=False' in ansible.cfg to get rid of this message.
192.168.0.8 | CHANGED | rc=0 >>
192.168.0.10 | CHANGED | rc=0 >>
192.168.0.7 | CHANGED | rc=0 >>
192.168.0.9 | CHANGED | rc=0 >>
[ansible@Master ~]$
```

To check the dir

```
[ansible@Master ~]$ ansible all -a "ls -a"
192.168.0.10 | CHANGED | rc=0 >>
.
..
.ansible
.bash_history
.bash_logout
.bash_profile
.bashrc
.ssh
testdiradhoc
192.168.0.7 | CHANGED | rc=0 >>
.
```

To create a file

```
[ansible@Master ~]$ ansible all -a "touch testdiradhoc/hello.txt"
[WARNING]: Consider using the file module with state=touch rather than running 'touch'. If you need to use command because file is insufficiently permissive, consider using 'become' or set 'command_warnings=False' in ansible.cfg to get rid of this message.
192.168.0.8 | CHANGED | rc=0 >>
192.168.0.7 | CHANGED | rc=0 >>
192.168.0.10 | CHANGED | rc=0 >>
192.168.0.9 | CHANGED | rc=0 >>
[ansible@Master ~]$ ansible all -a "ls -a"
192.168.0.9 | CHANGED | rc=0 >>
.
..
.ansible
.bash_history
.bash_logout
.bash_profile
.bashrc
.ssh
testdiradhoc
192.168.0.7 | CHANGED | rc=0 >>
```

Copy module

```
[ansible@Master ~]$ ansible test -b -m copy -a "src=/home/ansible/helloworld.tex  
t dest=/root/"  
192.168.0.7 | CHANGED => {  
    "ansible_facts": {  
        "discovered_interpreter_python": "/usr/libexec/platform-python"  
    },  
    "changed": true,  
    "checksum": "da39a3ee5e6b4b0d3255bfef95601890af80709",  
    "dest": "/root/helloworld.text",  
    "gid": 0,  
    "group": "root",  
    "md5sum": "d41d8cd98f00b204e9800998ecf8427e",  
    "mode": "0644",  
    "owner": "root",  
    "secontext": "system_u:object_r:admin_home_t:s0",  
    "size": 0,  
    "src": "/home/ansible/.ansible/tmp/ansible-tmp-1745273047.570283-10448-27103  
1813855450/source",  
    "state": "file",  
    "uid": 0  
}
```

English (India)

Module 10: ANSIBLE

- Ansible
- History
- Ansible workflow
- Chef workflow
- Ansible inventory host pattern
- Host patterns
- Ad-hoc commands
- Ansible modules
- Ansible playbooks
- Yaml
- Ansible variables
- Ansible handlers
- Ansible loops
- Ansible conditions
- Ansible vault
- Ansible roles
- Ansible tags

- Ansible pip
- Ansible debug
- Ansible galaxy
- Ansible userinfo
- Ansible git module
- Ansible raw module
- Ansible copy module
- Ansible file module
- Ansible folder module
- Ansible - jenkins setup
- Deploy a webapp using ansible playbook
- Deploy a web services using playbook
- Ansible setup modules
- Ansible debug
- Advantages & disadvantages
- Interview questions