SSH passwordless Authentication :

Master
server

Ssh / user

Production servers
(NODES)
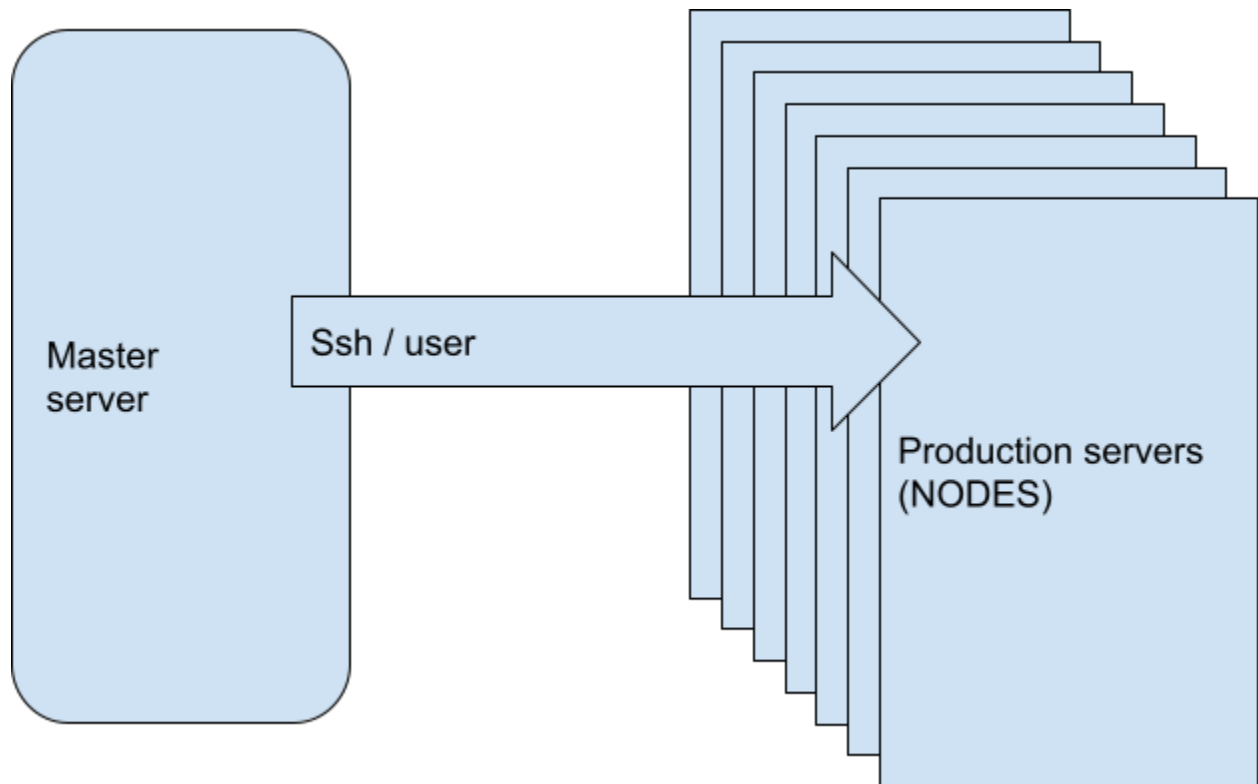
Stage 01: Configure Master server

1. Create ubuntu 16 server with t2.micro

2. Create user (maha)
 # adduser maha

3. Make maha user as sudoer
 # visudo
maha   ALL=(ALL)   NOPASSWD: ALL
Ctr+x, press y, press enter

4. Change password authentication
 # vi /etc/ssh/sshd_config
Password authentication yes
:wq!

5. Restart ssh service
 # service ssh restart

Stage 02: configure Production servers (nodes)

6. Create ubuntu 16 server with t2.micro

7. Create user (maha)
   # adduser maha

8. Make maha user as sudoer
    # visudo
    maha   ALL=(ALL)   NOPASSWD: ALL
    Ctr+x, press y, press enter

9. Change password authentication
    # vi /etc/ssh/sshd_config
    Password authentication yes
    :wq!

10.   Restart ssh service
    # service ssh restart

Stage 03: Connect from master to nodes without passwd and pem file

ON MASTER As MAHA user
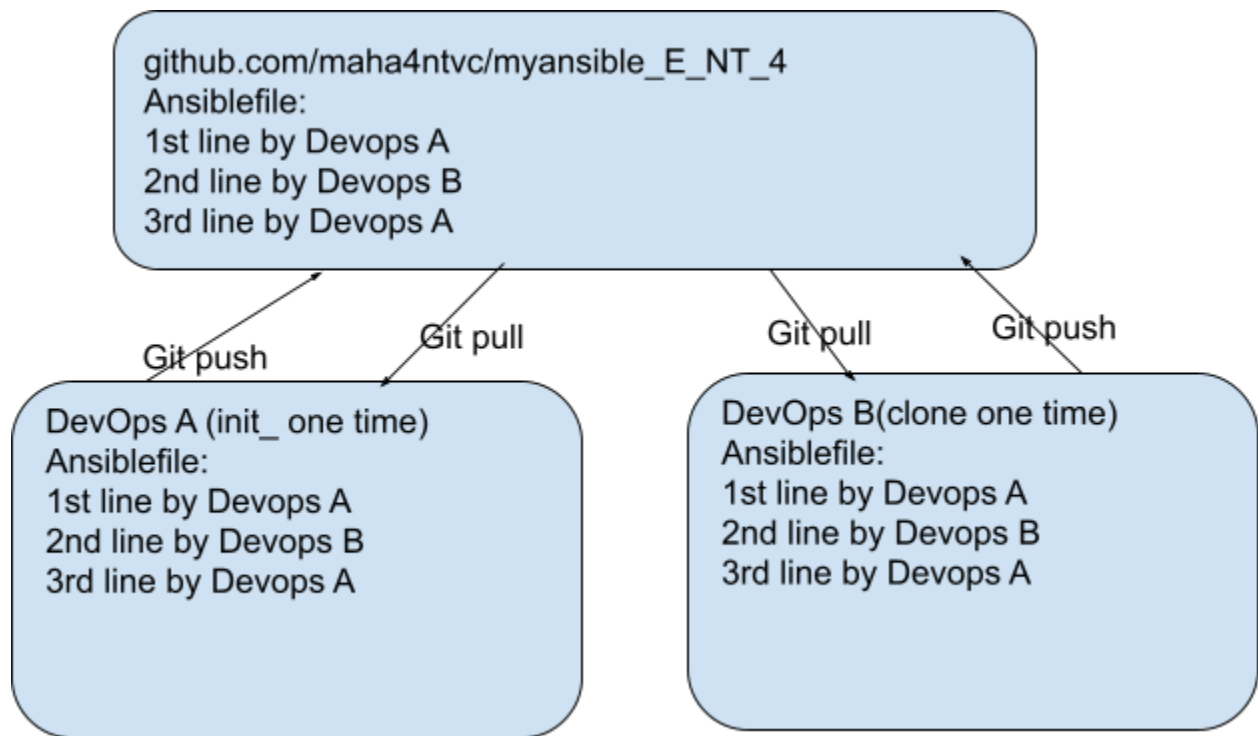
- *generate key pair on maha user*
  $ ssh-keygen

- *Copy public key into node server side*
  $ ssh-copy-id <private ip of nodes>

- *We can connect from master to nodes without passwd and with pem file*
  $ ssh <private ip of nodes>

Ansible:

1) *How to use git*
2) *What is CM?*
3) *What is ansible?*
4) *Ansible install configuration*
5) *Ansible ART*

What is Git and use?

Git version control:

github.com/maha4ntvc/myansible_E_NT_4
Ansiblefile:
1st line by Devops A
2nd line by Devops B
3rd line by Devops A

Git push   Git pull   Git pull   Git push

DevOps A (init_ one time)
Ansiblefile:
1st line by Devops A
2nd line by Devops B
3rd line by Devops A

DevOps B(clone one time)
Ansiblefile:
1st line by Devops A
2nd line by Devops B
3rd line by Devops A

Git add -A
Git commit -m " comment"
Git push

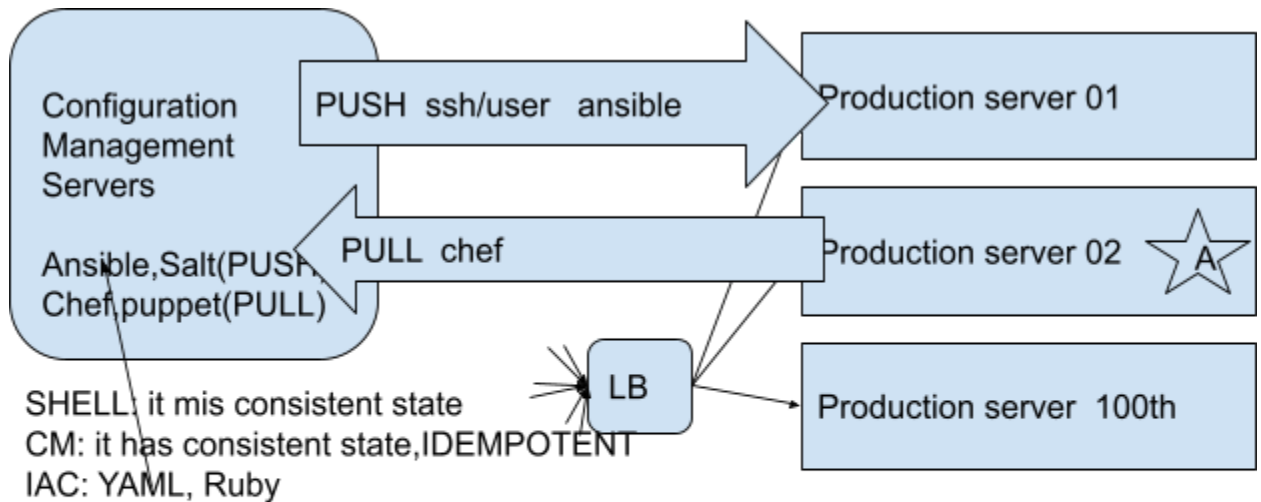*vs*

Git pull

1) Create github account
2) Sing in github.com
3) Create Repo (mytestrep03dec)
4) Initial repo in ur laptop

```
echo "# -mytestrep03dec" >> README.md
git init
git add README.md
git commit -m "first commit"
git config --global user.name "maha"
git config --global user.email "maha@gamail.com"
git commit -m "first commit"
git branch -M main
git remote add origin
https://github.com/maha4ntvc/-mytestrep03dec.git
git push -u origin main
```

```
5)  Create a file
    git add -A
    git commit -m "comment"
    git push
```


Configuration Management Servers

Ansible,Salt(PUSH)
Chef,puppet(PULL)

PUSH ssh/user ansible → Production server 01

PULL chef ← Production server 02   ☆A

LB → Production server 100th

SHELL: it mis consistent state
CM: it has consistent state,IDEMPOTENT
IAC: YAML, Ruby

Provision: it provide suitable environment   for deploying application
1)   Install softwares
2)   Create files and folders
3)   Create users and groups
4)   Change configure files 5) deploy application ....etc

Configuration Management : CM

PUSH : Ansible

PUSH ssh/user

Ansible master
Servers

Production servers

NODES
Or
HOSTS
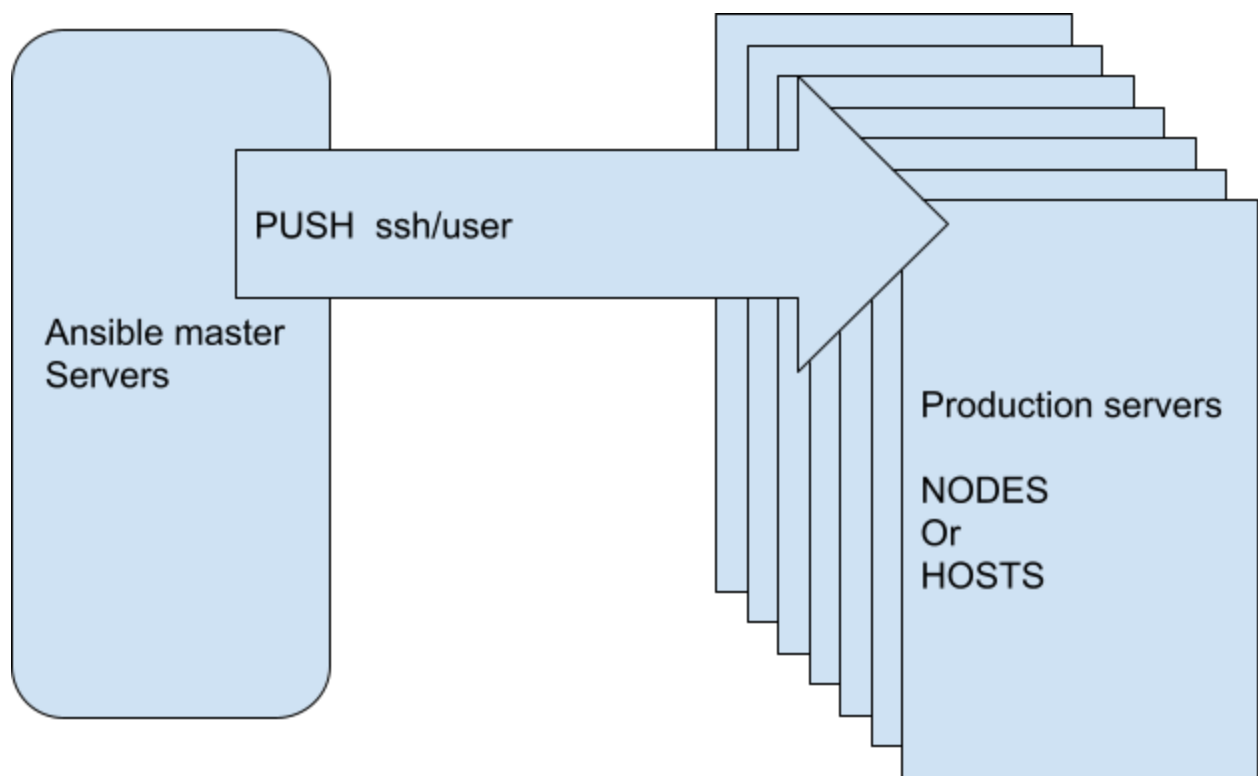
Ansible master server install and configuration:

1) **Create a ec2 ubuntu 16 servers**
2) **Create ansible user as maha with passwd**
   # adduser maha
3) **Make ansible user as sudoer**
   # visudo
   maha ALL=(ALL) NOPASSWD: ALL
   Ctr+x, press y, press enter

4) **Make password authentication yes**
   # vi /etc/ssh/sshd_config
   Password authentication yes
   :wq!

5) **Restart ssh service**
   # service ssh restart

6) **Install ansible**
   # apt-add-repository ppa:ansible/ansible
   # apt-get update
   # apt-get install ansible

Ansible NODES configuration:

7) *Create a ec2 ubuntu 16 servers*
8) *Create ansible user as maha with passwd*
   # adduser maha
9) *Make ansible user as sudoer*
   # visudo
   maha ALL=(ALL)   NOPASSWD: ALL
   Ctr+x, press y, press enter

10) *Make password authentication yes*
    # vi /etc/ssh/sshd_config
    Password authentication yes
    :wq!

11) *Restart ssh service*
    # service ssh restart

12) *Don't Install ansible*
    # apt-add-repository ppa:ansible/ansible
    # apt-get update
    # apt-get install ansible

Ansible master server communication with ansible nodes: without password and pem file

ON ANSIBLE MASTER AS Ansible user(maha)

13) *$ ssh-keygen*
14) *$ ssh-copy-id <private ip of ansible nodes>*
15) *$ ssh <private ip of ansible nodes>*
16) *We are trying to connect by ansible*
    - *Create hosts file*
      Vi myhosts
      <private ip of node1>
      <private ip of node2>
      <private ip of noden>
      :wq!
    $ ansible all -i myhosts -m ping
    Success with green colour