Add a worker node in your Jenkins.

Pre-requisites:

- Create another Ubuntu VM on AWS as per instruction document provided earlier which will be used to setup as worker Node for Jenkins

- Install Jenkins on master instance as per instruction document provided separately

---

➢ Login into Worker Node machine and install Java

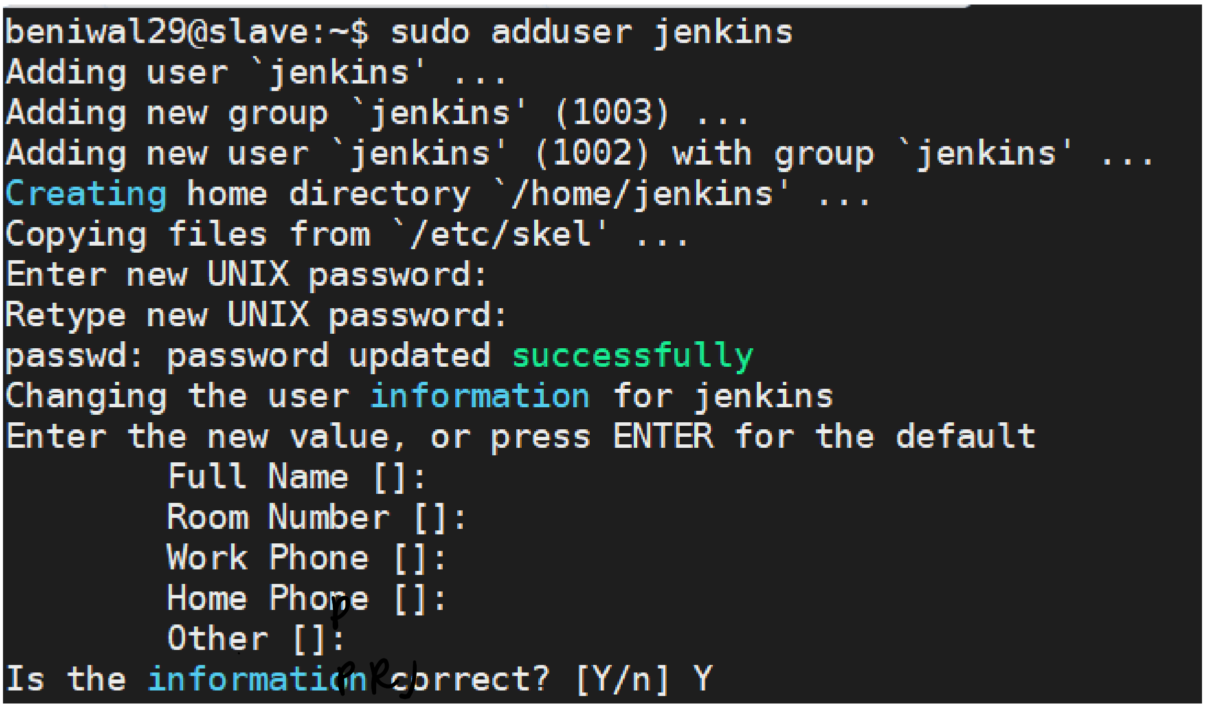
sudo apt update

sudo apt -y upgrade

sudo apt -y install openjdk-8-jdk

➢ Create a user Jenkins on worker node machine as below (**Please set a password which you need to remember as it would be required in later step in Jenkins Node setup credential screen**):

sudo adduser jenkins



```
beniwal29@slave:~$ sudo adduser jenkins
Adding user `jenkins' ...
Adding new group `jenkins' (1003) ...
Adding new user `jenkins' (1002) with group `jenkins' ...
Creating home directory `/home/jenkins' ...
Copying files from `/etc/skel' ...
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
Changing the user information for jenkins
Enter the new value, or press ENTER for the default
        Full Name []:
        Room Number []:
        Work Phone []:
        Home Phone []:
        Other []:
Is the information correct? [Y/n] Y
```

➢ Give user jenkins permissions to sudo without password by adding below in file /etc/sudoers

sudo sh -c 'echo jenkins ALL=\(ALL\) NOPASSWD:ALL >> /etc/sudoers'

- Edit below file in /etc/ssh/sshd_config to allow authentication through password

  ~~sudo sh -c 'cp /etc/ssh/sshd_config /etc/ssh/sshd_config_bak; sed "s/PasswordAuthentication no/PasswordAuthentication yes/g" /etc/ssh/sshd_config_bak > /etc/ssh/sshd_config'~~

  ```
  sudo sh -c 'perl -pi.bak -e "s/PasswordAuthentication no/PasswordAuthentication yes/g"
  /etc/ssh/sshd_config'
  ```

- Restart sshd service

  ```
  sudo systemctl restart sshd.service
  ```

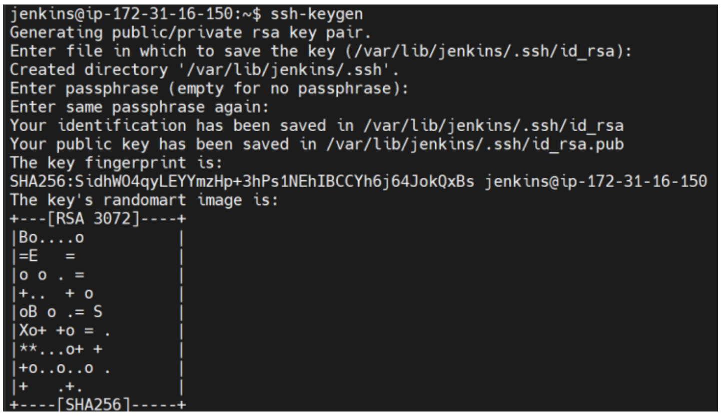
- **Login into Master Jenkins Node**

- Run below command to become Jenkins user

  ```
  sudo su - Jenkins
  ```

- Next run below command to generate ssh key

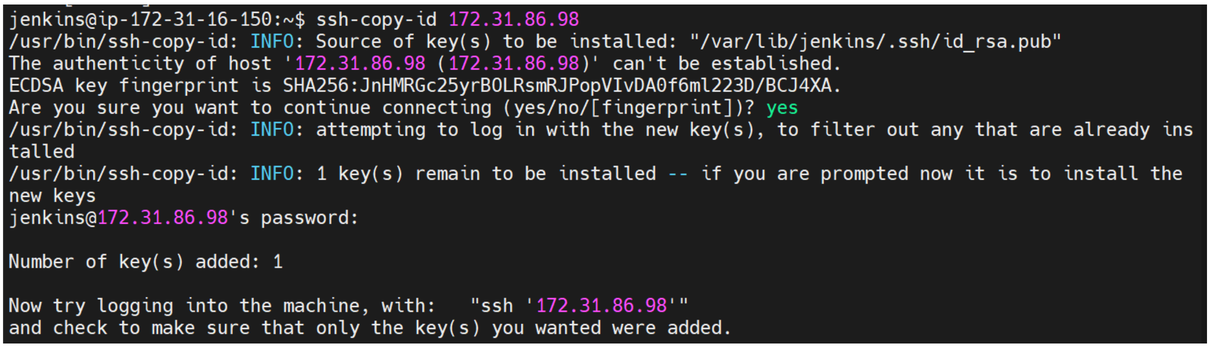
  ```
  ssh-keygen
  ```



```
jenkins@ip-172-31-16-150:~$ ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/var/lib/jenkins/.ssh/id_rsa):
Created directory '/var/lib/jenkins/.ssh'.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /var/lib/jenkins/.ssh/id_rsa
Your public key has been saved in /var/lib/jenkins/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:SidhWO4qyLEYYmzHp+3hPs1NEhIBCCYh6j64JokQxBs jenkins@ip-172-31-16-150
The key's randomart image is:
+---[RSA 3072]----+
|Bo....o          |
|=E   =           |
|o o . =          |
|+..  + o         |
|oB o .= S        |
|Xo+ +o = .       |
|**...o+ +        |
|+o..o..o .       |
|+    .+.         |
+----[SHA256]-----+
```

- Next run below command to copy ssh key to Jenkins node machine. Paste the password when prompted

  ```
  ssh-copy-id <private_ip_jenkins_node>
  ```



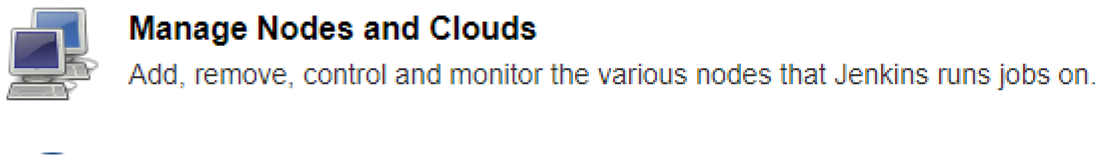
```
jenkins@ip-172-31-16-150:~$ ssh-copy-id 172.31.86.98
/usr/bin/ssh-copy-id: INFO: Source of key(s) to be installed: "/var/lib/jenkins/.ssh/id_rsa.pub"
The authenticity of host '172.31.86.98 (172.31.86.98)' can't be established.
ECDSA key fingerprint is SHA256:JnHMRGc25yrBOLRsmRJPopVIvDA0f6ml223D/BCJ4XA.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
/usr/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter out any that are already ins
talled
/usr/bin/ssh-copy-id: INFO: 1 key(s) remain to be installed -- if you are prompted now it is to install the
new keys
jenkins@172.31.86.98's password:

Number of key(s) added: 1

Now try logging into the machine, with:   "ssh '172.31.86.98'"
and check to make sure that only the key(s) you wanted were added.
```

- Next connect to Jenkins at <master_ip>:8080 from chrome

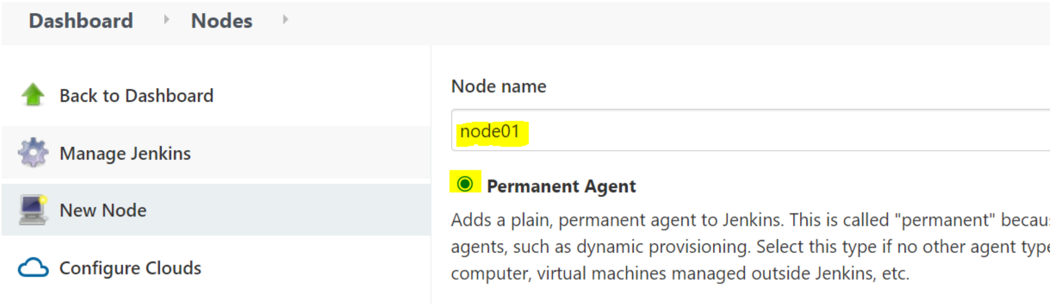
- Go to Manage Jenkins → Manage Nodes and Clouds



Manage Nodes and Clouds

Add, remove, control and monitor the various nodes that Jenkins runs jobs on.

- Click on New Node and give a name as node01 and choose Permanent Agent and click OK



Dashboard › Nodes ›

Back to Dashboard

Manage Jenkins

New Node

Configure Clouds

Node name

node01

● **Permanent Agent**

Adds a plain, permanent agent to Jenkins. This is called "permanent" becau agents, such as dynamic provisioning. Select this type if no other agent type computer, virtual machines managed outside Jenkins, etc.

- Update various fields highlighted as below

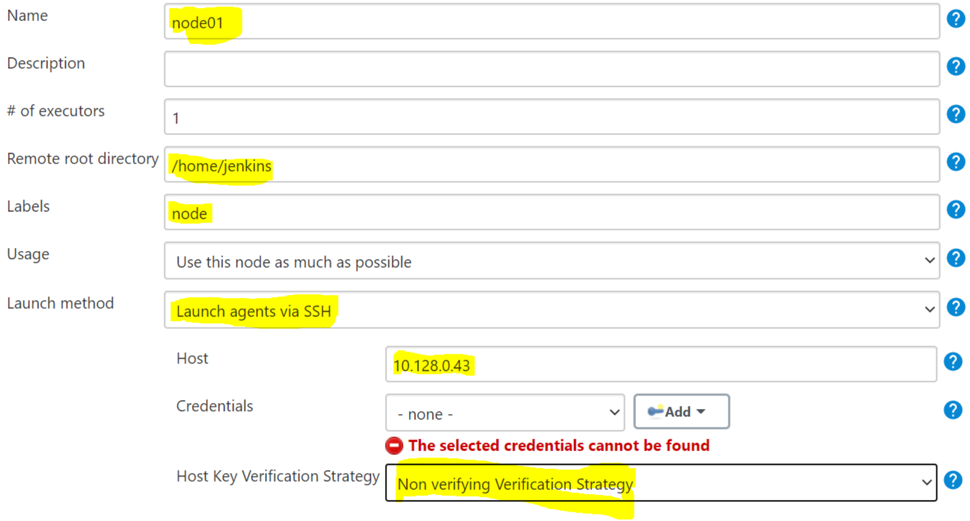
Remote root directory → /home/jenkins

Labels → node

Launch Method → Launch agent via ssh

HOST → <**Private IP of Jenkins Node machine>**

HOST key verification strategy → Non verifying Verification strategy



Name	node01
Description	
# of executors	1
Remote root directory	/home/jenkins
Labels	node
Usage	Use this node as much as possible
Launch method	Launch agents via SSH
Host	10.128.0.43
Credentials	- none - Add
	The selected credentials cannot be found
Host Key Verification Strategy	Non verifying Verification Strategy

- For credentials click on Add

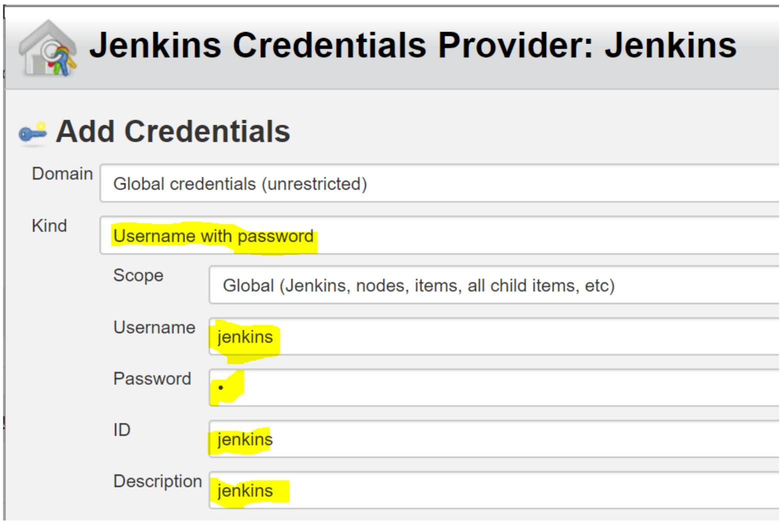
  Update below fields:

  Kind: **"Username with password"**

  Username: **jenkins**

  Password: **<password_set_at_time_of_jenkins_user_creation_on_node>**

  Update "ID" and "Description" as per your choice



Jenkins Credentials Provider: Jenkins

Add Credentials

Domain: Global credentials (unrestricted)

Kind: Username with password

Scope: Global (Jenkins, nodes, items, all child items, etc)

Username: jenkins

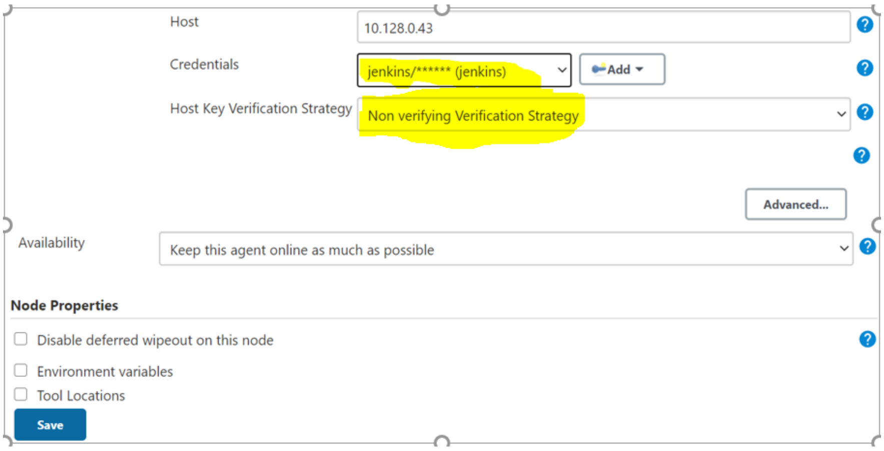
Password: •

ID: jenkins

Description: jenkins

- Click on Add

- Choose the key just added from dropdown and choose "Host key verification strategy" as highlighted below and click Save



Host: 10.128.0.43

Credentials: jenkins/****** (jenkins)

Host Key Verification Strategy: Non verifying Verification Strategy

Availability: Keep this agent online as much as possible

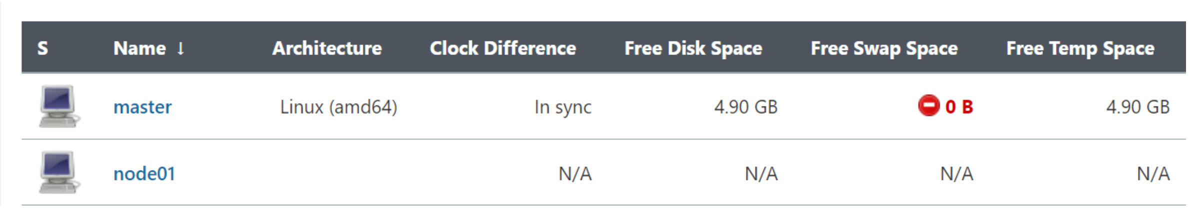
Node Properties

☐ Disable deferred wipeout on this node

☐ Environment variables

☐ Tool Locations

- Now if the node is added successfully you should see below screen without any errors



S	Name ↓	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space
🖥	master	Linux (amd64)	In sync	4.90 GB	⛔ **0 B**	4.90 GB
🖥	node01		N/A	N/A	N/A	N/A