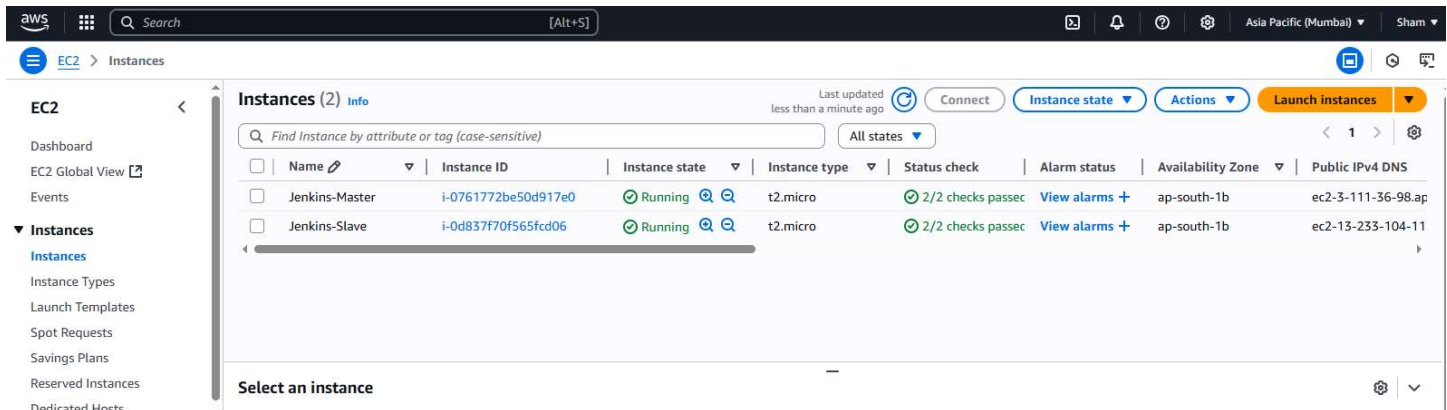


Configure for Master-Slave Agent Setup with Permeant and SSH Mode

1. Create separate Instance for master and Slave.



The screenshot shows the AWS Management Console interface for EC2 Instances. The left sidebar contains navigation links for Dashboard, EC2 Global View, Events, and Instances. The main content area displays a table of instances. Two instances are listed: Jenkins-Master and Jenkins-Slave, both in a Running state. The Jenkins-Master instance has an Instance ID of i-0761772be50d917e0 and is located in the ap-south-1b Availability Zone. The Jenkins-Slave instance has an Instance ID of i-0d837f70f565fcd06 and is also in the ap-south-1b Availability Zone. Both instances are t2.micro type and have 2/2 checks passed.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
Jenkins-Master	i-0761772be50d917e0	Running	t2.micro	2/2 checks passed	View alarms	ap-south-1b	ec2-3-111-36-98.ap
Jenkins-Slave	i-0d837f70f565fcd06	Running	t2.micro	2/2 checks passed	View alarms	ap-south-1b	ec2-13-233-104-11

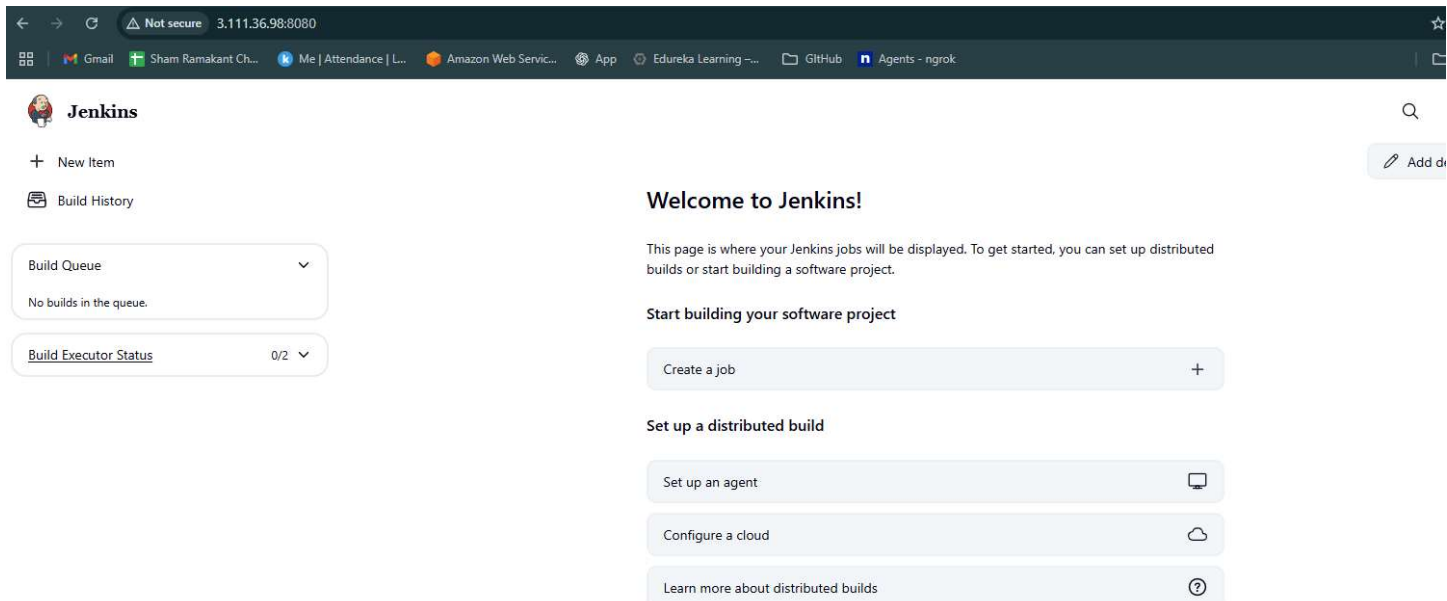
2. Configure Jenkins-Master server.

```
root@ip-172-31-8-214:~# systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
   Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled; preset: enabled)
   Active: active (running) since Wed 2025-07-30 06:23:09 UTC; 18s ago
     Main PID: 4379 (java)
       Tasks: 40 (limit: 1124)
      Memory: 291.0M (peak: 303.9M)
         CPU: 17.475s
      CGroup: /system.slice/jenkins.service
              └─4379 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --httpPort=8080

Jul 30 06:22:51 ip-172-31-8-214 jenkins[4379]: 8abe0a7848c9443b99bc27f5bc8b6edf
Jul 30 06:22:51 ip-172-31-8-214 jenkins[4379]: This may also be found at: /var/lib/jenkins/secrets/initialAdminPassword
Jul 30 06:22:51 ip-172-31-8-214 jenkins[4379]: *****
Jul 30 06:22:51 ip-172-31-8-214 jenkins[4379]: *****
Jul 30 06:22:51 ip-172-31-8-214 jenkins[4379]: *****
Jul 30 06:22:59 ip-172-31-8-214 jenkins[4379]: 2025-07-30 06:22:59.802+0000 [id=48] INFO h.m.DownloadService$Downloadable#load: Obtained the updated data file
Jul 30 06:22:59 ip-172-31-8-214 jenkins[4379]: 2025-07-30 06:22:59.804+0000 [id=48] INFO hudson.util.Retrier#start: Performed the action check updates server s
Jul 30 06:23:09 ip-172-31-8-214 jenkins[4379]: 2025-07-30 06:23:09.178+0000 [id=31] INFO jenkins.InitReactorRunner$1#onAttained: Completed initialization
Jul 30 06:23:09 ip-172-31-8-214 jenkins[4379]: 2025-07-30 06:23:09.212+0000 [id=24] INFO hudson.lifecycle.Lifecycle#onReady: Jenkins is fully up and running
Jul 30 06:23:09 ip-172-31-8-214 systemd[1]: Started jenkins.service - Jenkins Continuous Integration Server.
lines 1-20/20 (END)
```

i-0761772be50d917e0 (Jenkins-Master)

PublicIPs: 3.111.36.98 PrivateIPs: 172.31.8.214



The screenshot shows the Jenkins web interface. The top navigation bar includes links for New Item, Build History, and Add. The main content area displays 'Welcome to Jenkins!' and 'Start building your software project'. The 'Build Queue' section shows 'No builds in the queue'. The 'Build Executor Status' section shows '0/2' executors. The 'Welcome to Jenkins!' message states: '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.' The 'Start building your software project' section includes buttons for 'Create a job', 'Set up an agent', 'Configure a cloud', and 'Learn more about distributed builds'.

3. Configuring Agent on Jenkins.

Jenkins / Manage Jenkins / Nodes

Nodes

New Node

Configure Monitors

S	Name	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
	Built-In Node	Linux (amd64)	In sync	3.94 GiB	0 B	3.94 GiB	0ms
	Slave-node		N/A	N/A	N/A	N/A	N/A
last checked		4 ms	5 ms	3 ms	5 ms	5 ms	2 ms

Icon: S M L

Legend

aws

Search

[Alt+S]

Asia Pacific (Mumbai)

Sham

```
root@ip-172-31-11-237:~# java -jar agent.jar -url http://3.111.36.98:8080/ -secret 708ce9766926af2b42847d5223d6c96597aca041d44b1ca2e5a1c54674f8f9e1 -name "Slave-node" -webSocket -workDir "/home/jenkins"
Jul 30, 2025 6:36:44 AM org.jenkinsci.remoting.engine.WorkDirManager initializeWorkDir
INFO: Using /home/jenkins/remoting as a remoting work directory
Jul 30, 2025 6:36:44 AM org.jenkinsci.remoting.engine.WorkDirManager setupLogging
INFO: Both error and output logs will be printed to /home/jenkins/remoting
Jul 30, 2025 6:36:44 AM hudson.remoting.Launcher createEngine
INFO: Setting up agent: Slave-node
Jul 30, 2025 6:36:44 AM hudson.remoting.Engine startEngine
INFO: Using Remoting version: 3309.v27b9314fd1a4
Jul 30, 2025 6:36:44 AM org.jenkinsci.remoting.engine.WorkDirManager initializeWorkDir
INFO: Using /home/jenkins/remoting as a remoting work directory
Jul 30, 2025 6:36:45 AM hudson.remoting.Launcher$CuiListener status
INFO: WebSocket connection open
Jul 30, 2025 6:36:45 AM hudson.remoting.Launcher$CuiListener status
INFO: Connected
```

i-0d837f70f565fcd06 (Jenkins-Slave)

PublicIPs: 13.233.104.115 PrivateIPs: 172.31.11.237

← → ↺

Not secure 3.111.36.98:8080/manage/computer/

☆

Gmail Sham Ramakant Ch...

Me | Attendance | L...

Amazon Web Servic...

App

Edureka Learning -...

GitHub

Agents - ngrok

All Bookma...

Jenkins / Manage Jenkins / Nodes

Nodes

New Node


Configure Monitors

S	Name	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
	Built-In Node	Linux (amd64)	In sync	3.77 GiB	0 B	3.77 GiB	0ms
	Slave-node	Linux (amd64)	In sync	4.19 GiB	0 B	4.19 GiB	104ms
last checked		5 min 23 sec	5 min 23 sec	5 min 23 sec	5 min 23 sec	5 min 23 sec	5 min 23 sec

Icon: S M L

Legend

4. Create a Simple Job and running on Agent.

 **Jenkins**

[+ New Item](#)

[Build History](#)

Build Queue

No builds in the queue.

Build Executor Status

Built-In Node

0/2

Slave-node

0/1

All

+

S	W	Name ↓	Last Success	Last Failure	Last Duration
...	☀	Test-slave-node	N/A	N/A	N/A

Icon: S M L

[Add description](#)

 **Jenkins** / Test-slave-node

Status

</> Changes

▶ Build Now

⚙ Configure

🗑 Delete Pipeline

📄 Stages

✎ Rename

❓ Pipeline Syntax

Builds

Filter

Today

✔ #2 06:47

✔ Test-slave-node

This is simple job for test slave node

Permalinks

- [Last build \(#2\), 7.9 sec ago](#)
- [Last stable build \(#2\), 7.9 sec ago](#)
- [Last successful build \(#2\), 7.9 sec ago](#)
- [Last completed build \(#2\), 7.9 sec ago](#)

 **Jenkins** / Test-slave-node / #2

Status

</> Changes

📄 Console Output

✎ Edit Build Information

🗑 Delete build '#2'

🕒 Timings

🔗 Pipeline Overview

🔄 Restart from Stage

🔄 Replay

📋 Pipeline Steps


📁 Workspaces

✔ Console Output




[Download](#) [Copy](#) [View as plain text](#)

```
Started by user sham
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Slave-node in /home/jenkins/workspace/Test-slave-node
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Check Working Directory)
[Pipeline] echo
Running pwd on the slave node...
[Pipeline] sh
+ pwd
/home/jenkins/workspace/Test-slave-node
[Pipeline] sh
+ whoami
root
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

5. Run Jenkins Agent Permanently in Detached Mode.

 Jenkins


Manage Jenkins / Nodes









Nodes

+ New Node

Configure Monitors



S	Name ↓	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
	Built-In Node	Linux (amd64)	In sync	3.77 GiB	 0 B	3.77 GiB	0ms 
	Slave-node	Linux (amd64)	In sync	4.19 GiB	 0 B	4.19 GiB	104ms 
last checked		20 min	20 min	20 min	20 min	20 min	20 min

Icon: S M L

Legend

```
root@ip-172-31-11-237:~# sudo mkdir -p /home/jenkins/agent
cd /home/jenkins/agent

# Download the agent.jar from controller
sudo curl -sO http://3.111.36.98:8080/jnlpJars/agent.jar

# Set permissions
sudo chown -R jenkins:jenkins /home/jenkins
root@ip-172-31-11-237:/home/jenkins/agent# curl -sO http://3.111.36.98:8080/jnlpJars/agent.jar
root@ip-172-31-11-237:/home/jenkins/agent# chown -R jenkins:jenkins /home/jenkins
root@ip-172-31-11-237:/home/jenkins/agent# █

root@ip-172-31-11-237:/home/jenkins/agent# cat /etc/systemd/system/jenkins-agent.service

Description=Jenkins Agent
After=network.target


[Service]
User=jenkins
WorkingDirectory=/home/jenkins/agent
ExecStart=/usr/bin/java -jar /home/jenkins/agent/agent.jar \
    -url http://3.111.36.98:8080/ \
    -secret 708ce9766926af2b42847d5223d6c96597aca041d44b1ca2e5a1c54674f8f9e1 \
    -name "Slave-node" \
    -webSocket \
    -workDir "/home/jenkins"
Restart=always
RestartSec=10

[Install]
WantedBy=multi-user.target
root@ip-172-31-11-237:/home/jenkins/agent# █

root@ip-172-31-11-237:/home/jenkins/agent# sudo systemctl daemon-reload
sudo systemctl enable jenkins-agent
sudo systemctl start jenkins-agent
sudo systemctl status jenkins-agent
Created symlink /etc/systemd/system/multi-user.target.wants/jenkins-agent.service → /etc/systemd/system/jenkins-agent.service.
● jenkins-agent.service
   Loaded: loaded (/etc/systemd/system/jenkins-agent.service; enabled; preset: enabled)
   Active: active (running) since Wed 2025-07-30 07:08:21 UTC; 35ms ago
     Main PID: 4092 (java)
       Tasks: 2 (limit: 1124)
      Memory: 8.7M (peak: 8.8M)
         CPU: 14ms
    CGroup: /system.slice/jenkins-agent.service
            └─4092 /usr/bin/java -jar /home/jenkins/agent/agent.jar -url http://3.111.36.98:8080/ -secret 708ce9766926af2b42847d5223d6c96597aca041d44b1ca2e5a1c54674f8f9e1 -na
lines 1-13/13 (END)█



Jul 30 07:08:21 ip-172-31-11-237 systemd[1]: Started jenkins-agent.service.
Jul 30 07:08:21 ip-172-31-11-237 systemd[1]: /etc/systemd/system/jenkins-agent.service:2: Assignment outside of section. Ignoring.
Jul 30 07:08:21 ip-172-31-11-237 systemd[1]: /etc/systemd/system/jenkins-agent.service:3: Assignment outside of section. Ignoring.
lines 1-13/13 (END)█
```


Jenkins / [Manage Jenkins](#) / [Nodes](#)



Nodes


+ New Node
Configure Monitors




S	Name ↓	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
	Built-In Node	Linux (amd64)	In sync	3.77 GiB	 0 B	3.77 GiB	0ms 
	Slave-node	Linux (amd64)	In sync	4.18 GiB	 0 B	4.18 GiB	93ms 
	last checked	42 sec	42 sec	42 sec	42 sec	42 sec	42 sec

Icon: S M L
Legend

Verify on server



 Search

```


root@ip-172-31-11-237:/home/jenkins/agent# cd ..
root@ip-172-31-11-237:/home/jenkins# ls
agent  caches  remoting  workspace
root@ip-172-31-11-237:/home/jenkins#




```

6. Connecting Node via SSH

- Step: 1. Generate key one master using: ssh-keygen
2. Transfer Public Key to Slave Server.
3. Try to Connect slave server on Master manually.










Create Node.


Jenkins / [Manage Jenkins](#) / [Nodes](#)

Nodes

+ New Node
Configure Monitors

S	Name ↓	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
	Built-In Node	Linux (amd64)	In sync	3.75 GiB	 0 B	3.75 GiB	0ms 
	Slave-node	Linux (amd64)	In sync	4.17 GiB	 0 B	4.17 GiB	20ms 
	Slave-ssh	Linux (amd64)	In sync	4.19 GiB	 0 B	4.19 GiB	70ms 
	last checked	41 sec	41 sec	41 sec	41 sec	41 sec	41 sec

Icon: S M L
Legend

Jenkins

Test-slave-node / #3

Search

Settings

Help

Status

Changes

Console Output

Edit Build Information

Delete build '#3'

Timings

Pipeline Overview

Restart from Stage

Replay

Pipeline Steps

Workspaces

Previous Build

Download

Copy

View as plain text

Started by user `sham`

[Pipeline] Start of Pipeline

[Pipeline] node

Running on `Slave-ssh` in `/home/ubuntu/workspace/Test-slave-node`

[Pipeline] {

[Pipeline] stage

[Pipeline] { (Check Working Directory)

[Pipeline] echo

Running `pwd` on the slave node...

[Pipeline] sh

+ `pwd`

`/home/ubuntu/workspace/Test-slave-node`

[Pipeline] sh

+ `whoami`

`ubuntu`

[Pipeline] sh

+ `touch sham.txt`

[Pipeline] }

[Pipeline] // stage

[Pipeline] }

[Pipeline] // node

[Pipeline] End of Pipeline

Finished: SUCCESS

```
ubuntu@ip-172-31-10-154:~$ cd /home/ubuntu/.ssh/
ubuntu@ip-172-31-10-154:~/.ssh$ LS
LS: command not found
ubuntu@ip-172-31-10-154:~/.ssh$ ls
LS: command not found
ubuntu@ip-172-31-10-154:~/.ssh$ ls
authorized keys
ubuntu@ip-172-31-10-154:~/.ssh$ vi authorized_keys
ubuntu@ip-172-31-10-154:~/.ssh$ cd ..
ubuntu@ip-172-31-10-154:~$ pwd
/home/ubuntu
ubuntu@ip-172-31-10-154:~$ ls
caches  remoting  remoting.jar  workspace
ubuntu@ip-172-31-10-154:~$ cd workspace/
ubuntu@ip-172-31-10-154:~/workspace$ ls
Test-slave-node  Test-slave-node@tmp
ubuntu@ip-172-31-10-154:~/workspace$ cd Test-slave-node
ubuntu@ip-172-31-10-154:~/workspace/Test-slave-node$ ls
sham.txt
ubuntu@ip-172-31-10-154:~/workspace/Test-slave-node$
```

i-0a1eabc15fe476d76 (Slave-SSH)

PublicIPs: 43.204.211.155 PrivateIPs: 172.31.10.154