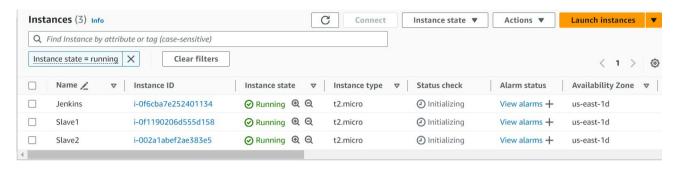# Master-Slave Architecture

- Create 3 new instances, 1 for Master and 2 for Slaves.

- Install Java in all 3 instances.

  sudo dnf install java-17-amazon-corretto -y

- Install Jenkins in master server

  sudo yum update –y

  sudo wget -O /etc/yum.repos.d/jenkins.repo \

  https://pkg.jenkins.io/redhat-stable/jenkins.repo

  sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key

  sudo yum install jenkins -y

  sudo systemctl enable jenkins

  sudo systemctl start jenkins

- Connect to Slave1 and create a new directory.

- Connect to Jenkins server using the instance IP with :8080.

- On Jenkins server, go to manage jenkins, go to nodes.

- Add a new node and provide a node name and enable permanent agent and create.

New node

Node name

Slave1

Type

◉ **Permanent Agent**

Adds a plain, permanent agent to Jenkins. This is called "permanent" because Jenkins doesn't provide higher level of integration with these agents, such as dynamic provisioning. Select this type if no other agent types apply — for example such as when you are adding a physical computer, virtual machines managed outside Jenkins, etc.

Create

- Go to slave1 and inside the created directory, give pwd and copy the directory path.

```
[root@ip-172-31-36-105 surya]# pwd
/home/ec2-user/surya
```

- In new node, Give the path in remote root directory.

Name ?

Slave1

Description ?

Plain text **Preview**

Number of executors ?

1

Remote root directory ?

🛑 Remote directory is mandatory

- Enable webScoket and create node.

✅ Use WebSocket ?

- Now, we'll get command for both Unix and Windows, Copy the Unix command and run in our created directory in Slave1 instance.

Agent Slave1

Mark this node temporarily offline ⑦

🖉 Add description

Run from agent command line: (Unix) 📋

```
curl -sO http://34.207.204.40:8080/jnlpJars/agent.jar
java -jar agent.jar -jnlpUrl http://34.207.204.40:8080/computer/Slave1/jenkins-agent.jnlp -secret
4482566549eaae6a119ad4a976d91378cce53e31238b1c18a8463542bb7a93f7 -workDir "/home/ec2-user/surya"
```

Run from agent command line: (Windows) 📋

```
curl.exe -sO http://34.207.204.40:8080/jnlpJars/agent.jar
java -jar agent.jar -jnlpUrl http://34.207.204.40:8080/computer/Slave1/jenkins-agent.jnlp -secret
4482566549eaae6a119ad4a976d91378cce53e31238b1c18a8463542bb7a93f7 -workDir "/home/ec2-user/surya"
```

- Agent.jar file will be build inside our directory and the agent is now connected.


```
[root@ip-172-31-36-105 surya]# ls
agent.jar    remoting
```

```
[root@ip-172-31-36-105 surya]# curl -sO http://54.210.184.0:8080/jnlpJars/agent.jar
java -jar agent.jar -jnlpUrl http://54.210.184.0:8080/computer/slave1/jenkins-agent.jnlp -secret af0efbc82bb8829057fc7d66c403386ffb976fff5de213459413a036370
cc59e -workDir "/home/ec2-user/surya"
Nov 24, 2023 6:55:59 AM org.jenkinsci.remoting.engine.WorkDirManager initializeWorkDir
INFO: Using /home/ec2-user/surya/remoting as a remoting work directory
Nov 24, 2023 6:55:59 AM org.jenkinsci.remoting.engine.WorkDirManager setupLogging
INFO: Both error and output logs will be printed to /home/ec2-user/surya/remoting
Nov 24, 2023 6:55:59 AM hudson.remoting.jnlp.Main createEngine
INFO: Setting up agent: slave1
Nov 24, 2023 6:55:59 AM hudson.remoting.Engine startEngine
INFO: Using Remoting version: 3160.vd76b_9ddd10cc
Nov 24, 2023 6:55:59 AM org.jenkinsci.remoting.engine.WorkDirManager initializeWorkDir
INFO: Using /home/ec2-user/surya/remoting as a remoting work directory
Nov 24, 2023 6:56:00 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: WebSocket connection open
Nov 24, 2023 6:56:00 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Connected
```

- Now, we can create a freestyle project and connect it to SCM(GIT) and run any file and create builds.

🗐 Status	✅ **slave1**
</> Changes	
🗂 Workspace	
▷ Build Now	**Permalinks**
⚙ Configure	
🗑 Delete Project	• Last build (#22), 21 hr ago
	• Last stable build (#22), 21 hr ago
✏ Rename	• Last successful build (#22), 21 hr ago
	• Last failed build (#21), 22 hr ago
	• Last unsuccessful build (#21), 22 hr ago
	• Last completed build (#22), 21 hr ago

Build History trend ∨

🔍 Filter builds... /

✅ #22   23 Nov 2023, 09:06   ⬆