

## MASTER – SLAVE ARCHITECTURE

### TASK ON MASTER – SLAVE :

1. Create 1<sup>st</sup> instance named master and install Jenkins and JDK in the instance.
2. Create 2<sup>nd</sup> instance named as slaveA and install JDK and GIT in the instance.
3. Create 3<sup>rd</sup> instance named as slaveB and install JDK and GIT in the instance.
4. After connecting the Jenkins to web browser create 2 free style projects with 2 different git repositories in each free style project.
5. Goto nodes and create 2 nodes for slaveA and slaveB.
6. Connect one node to slaveA and another node to slaveB.
7. Install jar file to each instance.

Steps followed:

#### Instance – 1 : [ MASTER]

##### Jenkins installation :

```
sudo yum update -y
sudo wget -O /etc/yum.repos.d/jenkins.repo
http://pkg.jenkins.io/redhat/jenkins.repo
sudo rpm --import https://pkg.jenkins.io/redhat/jenkins.io-2023.key
sudo yum install jenkins -y
systemctl daemon-reload
sudo systemctl start jenkins
sudo systemctl enable Jenkins
systemctl status Jenkins
```

##### JDK Installation :

```
sudo yum install java-11 -y
```

**Instance – 2 : [ slaveA ]**

- Create a empty directory with the name slaveA

**JDK Installation :**

```
sudo yum install java-17-amazon-corretto-devel
```

**GIT Installation:**

```
sudo yum install git -y
```

- Copy the path of the directory

**Instance – 3 : [ slaveB ]**

- Create a empty directory with the name slaveB

**JDK Installation :**

```
sudo yum install java-17-amazon-corretto-devel
```

**GIT Installation:**

```
sudo yum install git -y
```

- Copy the path of the directory

**JENKINS :**

- Add path of jdk

Dashboard > Manage Jenkins > Tools

Use default maven global settings

### JDK installations

JDK installations ^ Edited

Add JDK

**JDK**

Name

JAVA\_HOME

☒ Install automatically ?

Add Installer

Add JDK

Save Apply

## • Create 2 freestyle projects

Jenkins

Search (CTRL+K)

ADMIN log out

Dashboard >

+ New Item

People

Build History

Manage Jenkins

My Views

Build Queue

No builds in the queue.

Build Executor Status

Built-In Node (offline)

slaveA (offline)

slaveB (offline)

S	W	Name	Last Success	Last Failure	Last Duration
✓	☁	project1	2 hr 4 min #12	2 hr 6 min #10	1.5 sec
✓	☀	project2	1 hr 55 min #1	N/A	8.5 sec

Icon: S M L

Icon legend

Atom feed for all

Atom feed for failures

Atom feed for just latest builds

REST API Jenkins 2.426.1

## • Create 2 nodes

Jenkins

Search (CTRL+K)

ADMIN log out

Dashboard > Manage Jenkins > Nodes

Nodes

Clouds

Build Queue

No builds in the queue.

Build Executor Status

Built-In Node (offline)

slaveA (offline)

slaveB (offline)

### Nodes

+ New Node Node Monitoring

S	Name	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
✗	Built-In Node	Linux (amd64)	In sync	5.76 GB	0 B	471.48 MB	0ms
✗	slaveA		N/A	N/A	N/A	N/A	N/A
✗	slaveB		N/A	N/A	N/A	N/A	N/A
	last checked	20 min	20 min	20 min	20 min	20 min	20 min

REST API Jenkins 2.426.1

## • Open slaveA

**Jenkins** Search (CTRL+K) ADMIN log out

Dashboard > Manage Jenkins > Nodes > slaveA

**Agent slaveA** Mark this node temporarily offline ⓘ

✖ Status  
 🗑 Delete Agent  
 ⚙ Configure  
 📜 Build History  
 📈 Load Statistics  
 📄 Log

Build Executor Status

❗ Connection was broken

Run from agent command line: (Unix) ⓘ

```
curl -sO http://54.161.131.187:8080/jnlpJars/agent.jar
java -jar agent.jar -jnlpUrl http://54.161.131.187:8080/computer/slaveA/jenkins-agent.jnlp -secret 500fc21231c4128016cd4c8a01fe06041af62f3d7a1bd569d626fc5ce465dd07 -workDir "/home/slaveA"
```

Run from agent command line: (Windows) ⓘ

```
curl.exe -sO http://54.161.131.187:8080/jnlpJars/agent.jar
java -jar agent.jar -jnlpUrl http://54.161.131.187:8080/computer/slaveA/jenkins-agent.jnlp -secret 500fc21231c4128016cd4c8a01fe06041af62f3d7a1bd569d626fc5ce465dd07 -workDir "/home/slaveA"
```

Or run from agent command line, with the secret stored in a file: (Unix) ⓘ

```
echo 500fc21231c4128016cd4c8a01fe06041af62f3d7a1bd569d626fc5ce465dd07 > secret-file
```

Copy the unix command to linux slaveA instance and to the directory of

```
Last login: Wed Nov 22 08:09:05 2023 from 18.206.107.29
[ec2-user@ip-172-31-37-64 ~]$ sudo su
[root@ip-172-31-37-64 ec2-user]# cd ..
[root@ip-172-31-37-64 home]# ls
ec2-user slaveA
[root@ip-172-31-37-64 home]# cd slaveA
[root@ip-172-31-37-64 slaveA]# curl -sO http://54.161.131.187:8080/jnlpJars/agent.jar
java -jar agent.jar -jnlpUrl http://54.161.131.187:8080/computer/slaveA/jenkins-agent.jnlp -secret 500fc21231c4128016cd4c8a01fe06041af62f3d7a1bd569d626fc5ce465dd07 -workDir "/home/slaveA"
Nov 22, 2023 10:21:38 AM org.jenkinsci.remoting.engine.WorkDirManager initializeWorkDir
INFO: Using /home/slaveA/remoting as a remoting work directory
Nov 22, 2023 10:21:38 AM org.jenkinsci.remoting.engine.WorkDirManager setupLogging
INFO: Both error and output logs will be printed to /home/slaveA/remoting
Nov 22, 2023 10:21:38 AM hudson.remoting.jnlp.Main createEngine
INFO: Setting up agent: slaveA
Nov 22, 2023 10:21:38 AM hudson.remoting.Engine startEngine
INFO: Using Remoting version: 3160.vd76b9dd10cc
Nov 22, 2023 10:21:38 AM org.jenkinsci.remoting.engine.WorkDirManager initializeWorkDir
INFO: Using /home/slaveA/remoting as a remoting work directory
Nov 22, 2023 10:21:39 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: WebSocket connection open
Nov 22, 2023 10:21:39 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Connected
```

slaveA

## • Open slaveB

**Jenkins** Search (CTRL+K) ADMIN log out

Dashboard > Nodes > slaveB

**Agent slaveB** Mark this node temporarily offline ⓘ

✖ Status  
 🗑 Delete Agent  
 ⚙ Configure  
 📜 Build History  
 📈 Load Statistics  
 📄 Log

Build Executor Status

❗ Connection was broken

Run from agent command line: (Unix) ⓘ

```
curl -sO http://54.161.131.187:8080/jnlpJars/agent.jar
java -jar agent.jar -jnlpUrl http://54.161.131.187:8080/computer/slaveB/jenkins-agent.jnlp -secret 9c9d7a2c2a0903ff98140dbfccccf248b4c7246684abba720a802aff2f47c68fc -workDir "/home/slaveB"
```

Run from agent command line: (Windows) ⓘ

```
curl.exe -sO http://54.161.131.187:8080/jnlpJars/agent.jar
java -jar agent.jar -jnlpUrl http://54.161.131.187:8080/computer/slaveB/jenkins-agent.jnlp -secret 9c9d7a2c2a0903ff98140dbfccccf248b4c7246684abba720a802aff2f47c68fc -workDir "/home/slaveB"
```

Or run from agent command line, with the secret stored in a file: (Unix) ⓘ

```
echo 9c9d7a2c2a0903ff98140dbfccccf248b4c7246684abba720a802aff2f47c68fc > secret-file
```

```

last login: Mon Nov 22 08:14:13 2023 from 10.206.107.27
[ec2-user@ip-172-31-37-9 ~]$ sudo su
[root@ip-172-31-37-9 ec2-user]# cd ..
[root@ip-172-31-37-9 home]# ls
ec2-user  slaveB
[ec2-user@ip-172-31-37-9 home]# cd slaveB
[root@ip-172-31-37-9 slaveB]# curl -sO http://54.161.131.187:8080/jnlpJare/agent.jar
java -jar agent.jar -jnlpUrl http://54.161.131.187:8080/computer/slaveB/jenkins-agent.jnlp -secret 9c9d7a2c2a0903ff98140dbfccccf248b4c7246684abba720a802aff2f47c68fc -workDir "/home/slaveB"
Nov 22, 2023 10:33:51 AM org.jenkinsci.remoting.engine.WorkDirManager initializeWorkDir
INFO: Using /home/slaveB/remoting as a remoting work directory
Nov 22, 2023 10:33:51 AM org.jenkinsci.remoting.engine.WorkDirManager setupLogging
INFO: Both error and output logs will be printed to /home/slaveB/remoting
Nov 22, 2023 10:33:52 AM hudson.remoting.jnlp.Main createEngine
INFO: Setting up agent: slaveB
Nov 22, 2023 10:33:52 AM hudson.remoting.Engine startEngine
INFO: Using Remoting version: 3160.vd76b9dd10cc
Nov 22, 2023 10:33:52 AM org.jenkinsci.remoting.engine.WorkDirManager initializeWorkDir
INFO: Using /home/slaveB/remoting as a remoting work directory
Nov 22, 2023 10:33:52 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: WebSocket connection open
Nov 22, 2023 10:33:52 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Connected

```

**NOTE :** If the slave goes offline bring the slave back to online

**Jenkins** Search (CTRL+K) ADMIN log out

Dashboard > Nodes > slaveA

**Agent slaveA** [Bring this node back online](#) [Update offline reason](#) [Add description](#)

**Status** [Delete Agent](#) [Configure](#) [Build History](#) [Load Statistics](#) [Script Console](#) [Log](#) [System Information](#) [Disconnect](#)

**Build Executor Status**

**Projects tied to slaveA**

S	W	Name	Last Success	Last Failure	Last Duration
		project1	2 hr 26 min #12	2 hr 29 min #10	1.5 sec

Icon: S M L Icon legend Atom feed for all Atom feed for failures Atom feed for just latest builds

REST API Jenkins 2.426.1

- After the slave is created, create build

**Jenkins** Search (CTRL+K) ADMIN log out

Dashboard > project1

**project1** [Add description](#) [Disable Project](#)

**Permalinks**

- Last build (#12), 2 hr 28 min ago
- Last stable build (#12), 2 hr 28 min ago
- Last successful build (#12), 2 hr 28 min ago
- Last failed build (#10), 2 hr 30 min ago
- Last unsuccessful build (#10), 2 hr 30 min ago
- Last completed build (#12), 2 hr 28 min ago

**Build History** trend

Filter builds...

Build	Time
#12	22 Nov 2023, 08:12
#11	22 Nov 2023, 08:11
#10	22 Nov 2023, 08:09
#9	22 Nov 2023, 07:24
#8	22 Nov 2023, 07:22
#7	22 Nov 2023, 07:20