



## EXPERIMENT NO – 5

### TITLE: Master/Slave concept in Jenkins

#### Objective: -

Create at least Two slaves in Jenkins and Run two different jobs in two slaves parallel.

1. Create 2 slaves on your local drive

 Slave1	06-10-2023 09:50	File folder
 Slave2	06-10-2023 09:21	File folder

2. Go to manage Jenkins and make 2 nodes-slave1, slave2

Dashboard > Manage Jenkins > Nodes ↗

+ New Node


☁ Configure Clouds

⚙ Node Monitoring

Build Queue




No builds in the queue.

Build Executor Status

 Built-In Node

1 Idle

Manage nodes and clouds

S	Name ↓	Architecture	Clock Difference
	Built-In Node	Windows 11 (amd64)	In sync
	Slave1	Windows 11 (amd64)	In sync
	Slave2		N/A
Data obtained		32 min	32 min

- Set as permanent agent
- Label it as Agent1
- Set remote root repo path of your local system :

Number of executors ?

1

Remote root directory ?

C:\Slave1

Labels ?

Agent1

Usage ?

Use this node as much as possible

Use this node as much as possible

Launch method ?

Launch agent by connecting it to the controller

☐ Disable WorkDir ?

Custom WorkDir path ?

Internal data directory ?

remoting

☐ Fail if workspace is missing ?

☐ Use WebSocket ?

Advanced...

Availability ?

Keep this agent online as much as possible

- Then save it
3. Go to your cmd of slave1 and run these commands

```
C:\Windows\System32\cmd.e x + v
Microsoft Windows [Version 10.0.22621.2283]
(c) Microsoft Corporation. All rights reserved.

C:\Slave1>curl -s0 http://localhost:8080/jnlpJars/agent.jar

C:\Slave1>java -jar agent.jar -jnlpUrl http://localhost:8080/manage/computer/Slave1/jenkins-agent.jnlp -secret 901c4a98ebe3c2f100354eebaf20486c231a6377f52bd
d0850523b9e1a86f6a4 -workDir "C:\Slave1"
Oct 06, 2023 9:39:02 AM org.jenkinsci.remoting.engine.WorkDirManager initializeWorkDir
INFO: Using C:\Slave1\remoting as a remoting work directory
Oct 06, 2023 9:39:02 AM org.jenkinsci.remoting.engine.WorkDirManager setupLogging
INFO: Both error and output logs will be printed to C:\Slave1\remoting
Oct 06, 2023 9:39:02 AM hudson.remoting.jnlp.Main createEngine
INFO: Setting up agent: Slave1
Oct 06, 2023 9:39:02 AM hudson.remoting.Engine startEngine
INFO: Using Remoting version: 3077.vd69cf116da_6f
Oct 06, 2023 9:39:02 AM org.jenkinsci.remoting.engine.WorkDirManager initializeWorkDir
INFO: Using C:\Slave1\remoting as a remoting work directory
Oct 06, 2023 9:39:02 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Locating server among [http://localhost:8080/]
Oct 06, 2023 9:39:02 AM org.jenkinsci.remoting.engine.JnlpAgentEndpointResolver resolve
INFO: Remoting server accepts the following protocols: [JNLP4-connect, Ping]
Oct 06, 2023 9:39:02 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Agent discovery successful
Agent address: localhost
Agent port: 49170
Identity: d0:a9:08:2c:b4:19:a7:bf:fd:2f:47:85:ca:ce:fa:48
Oct 06, 2023 9:39:02 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Handshaking
Oct 06, 2023 9:39:02 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Connecting to localhost:49170
Oct 06, 2023 9:39:02 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Trying protocol: JNLP4-connect
Oct 06, 2023 9:39:02 AM org.jenkinsci.remoting.protocol.impl.BIONetworkLayer$Reader run
INFO: Waiting for ProtocolStack to start.
Oct 06, 2023 9:39:02 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Remote identity confirmed: d0:a9:08:2c:b4:19:a7:bf:fd:2f:47:85:ca:ce:fa:48
Oct 06, 2023 9:39:03 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Connected
|
```

- Slave2

```
C:\Windows\System32\cmd.e x + v
Microsoft Windows [Version 10.0.22621.2283]
(c) Microsoft Corporation. All rights reserved.

C:\Slave2>curl -s0 http://localhost:8080/jnlpJars/agent.jar

C:\Slave2>java -jar agent.jar -jnlpUrl http://localhost:8080/manage/computer/Slave2/jenkins-agent.jnlp -secret 8efacf2aa773be883b75d06ca32244e56328a90496c31
92f022d00921c80b0b2 -workDir "C:\Slave2"
Oct 06, 2023 10:20:10 AM org.jenkinsci.remoting.engine.WorkDirManager initializeWorkDir
INFO: Using C:\Slave2\remoting as a remoting work directory
Oct 06, 2023 10:20:10 AM org.jenkinsci.remoting.engine.WorkDirManager setupLogging
INFO: Both error and output logs will be printed to C:\Slave2\remoting
Oct 06, 2023 10:20:10 AM hudson.remoting.jnlp.Main createEngine
INFO: Setting up agent: Slave2
Oct 06, 2023 10:20:10 AM hudson.remoting.Engine startEngine
INFO: Using Remoting version: 3077.vd69cf116da_6f
Oct 06, 2023 10:20:10 AM org.jenkinsci.remoting.engine.WorkDirManager initializeWorkDir
INFO: Using C:\Slave2\remoting as a remoting work directory
Oct 06, 2023 10:20:10 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Locating server among [http://localhost:8080/]
Oct 06, 2023 10:20:10 AM org.jenkinsci.remoting.engine.JnlpAgentEndpointResolver resolve
INFO: Remoting server accepts the following protocols: [JNLP4-connect, Ping]
Oct 06, 2023 10:20:10 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Agent discovery successful
Agent address: localhost
Agent port: 49170
Identity: d0:a9:08:2c:b4:19:a7:bf:fd:2f:47:85:ca:ce:fa:48
Oct 06, 2023 10:20:10 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Handshaking
Oct 06, 2023 10:20:10 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Connecting to localhost:49170
Oct 06, 2023 10:20:10 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Trying protocol: JNLP4-connect
Oct 06, 2023 10:20:10 AM org.jenkinsci.remoting.protocol.impl.BIONetworkLayer$Reader run
INFO: Waiting for ProtocolStack to start.
Oct 06, 2023 10:20:10 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Remote identity confirmed: d0:a9:08:2c:b4:19:a7:bf:fd:2f:47:85:ca:ce:fa:48
Oct 06, 2023 10:20:10 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Connected
```

- This slave is connected and now using this slave we'll make a build-

Search (CTRL+K)

1

2

Dashboard > Manage Jenkins > Nodes >

+ New Node
  
Configure Clouds
  
Node Monitoring

Build Queue

No builds in the queue.

Build Executor Status

Build-In Node

1 Idle

2 Idle

Slave1

### Manage nodes and clouds

S	Name ↓	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free...
	Built-In Node	Windows 11 (amd64)	In sync	237.57 GB	5.62 GB	2
	Slave1	Windows 11 (amd64)	In sync	237.57 GB	5.62 GB	2
	Slave2	Windows 11 (amd64)	In sync	237.57 GB	5.57 GB	2
Data obtained		47 sec	47 sec	47 sec	47 sec	

- Make a new maven project and connect it to github project for makin automatic build(cicd-lab-5)

Search (CTRL+K)

Dashboard >

+ New Item
  
People
  
Build History
  
Project Relationship
  
Check File Fingerprint
  
Manage Jenkins
  
My Views

Build Queue

No builds in the queue.

All +

S	W	Name ↓	Last Success	Last Failure
		CICD	1 mo 10 days #1	N/A
		CICD-lab1	24 days #2	N/A
		cicd-lab5	31 min #2	N/A
		minor_project	1 day 17 hr #2	N/A

- Connect it with agent1

## Configure

- General

Source Code Management

Build Triggers

Build Environment

Pre Steps

Build

Post Steps

☐ This project is parameterized ?
   
☐ Throttle builds ?
   
☐ Execute concurrent builds if necessary ?
   
☒ Restrict where this project can be run ?

Label Expression ?

Agent1

Label Agent1 matches 1 node. Permissions or other restrictions provided by plugins may further redu

Advanced...

## Source Code Management

- Give you repo URL

Git ?

Repositories ?

Repository URL ?

Credentials ?

- none -

+ Add

Advanced...

Add Repository

Branches to build ?

Branch Specifier (blank for 'any') ?

\*/main

## Pre Steps

Add pre-build step ▾

## Build

Root POM ?

pom.xml

Goals and options ?

install

Advanced...

- Build it

Name	Date modified	Type	Size
remoting	06-10-2023 09:39	File folder	
workspace	06-10-2023 09:50	File folder	
agent	06-10-2023 09:38	Executable Jar File	1,337 KB
maven3-interceptor-commons	06-10-2023 09:50	Executable Jar File	8 KB
maven35-agent	06-10-2023 09:50	Executable Jar File	9 KB
maven35-interceptor	06-10-2023 09:50	Executable Jar File	24 KB

- Now make another maven project on jenkins with label Agent2 . and give your path of local system to run different agents of same project to run processes parallelly

Dashboard > cicd-lab5.1 > Configuration

### Configure

- General
- Source Code Management
- Build Triggers
- Build Environment
- Pre Steps
- Build
- Post Steps
- Build Settings
- Post-build Actions

Label Expression ?

Agent2

Label Agent2 matches 1 node. Permissions or other restrictions provided by plugins may further reduce that list.

Advanced...

### Source Code Management

☐ None

☒ Git ?

Repositories ?

Repository URL ?

Credentials ?

- none -

## Build

Root POM ?

pom.xml

Goals and options ?

install

Advanced...

- Build it

> This PC > OS (C:) > Slave2

Name	Date modified	Type	Size
remoting	06-10-2023 10:20	File folder	
workspace	06-10-2023 10:31	File folder	
agent	06-10-2023 10:19	Executable Jar File	1,337 KB
maven3-interceptor-commons	06-10-2023 10:31	Executable Jar File	8 KB
maven35-agent	06-10-2023 10:31	Executable Jar File	9 KB
maven35-interceptor	06-10-2023 10:31	Executable Jar File	24 KB

Dashboard > cicc-lab5.1 >

Status

</> Changes

Workspace

Build Now

Configure

Delete Maven project

Modules

Rename

## Maven project cicc-lab5.1

### Permalinks

- Last build (#1), 3 min 50 sec ago
- Last stable build (#1), 3 min 50 sec ago
- Last successful build (#1), 3 min 50 sec ago
- Last completed build (#1), 3 min 50 sec ago

Build History
trend

Filter builds...

#1

Oct 6, 2023, 10:31 AM

Atom feed for all
Atom feed for failures