

School of Computer Science

**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
DEHRADUN, UTTARAKHAND**



**Continuous Integration and Continuous Delivery
Lab**

**Lab File
(2023-2024)**

for

5th Semester

Submitted To:

Dr. Hitesh Kumar Sharma

Submitted By:

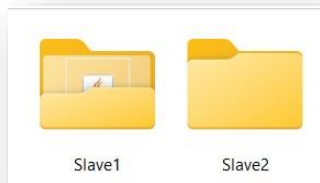
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B2- Devops (Non-Hons)

EXPERIMENT – 5

Name: - Arman Bisht
Batch – 2 [DevOps Non-Hons]
SAP ID- 500093031
Subject – Continuous Integration and Continuous Delivery Lab

Aim: Master/Slave concept in Jenkins

1] Create Slave1 and Slave2 folder in your Local drive.



2] Create a New Node and assign node name as Slave1.

New node

Node name

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

3] Run Agent slave1 command on our command line windows.

Agent Slave1

Run from agent command line: (Unix)

```
curl -sO http://localhost:8080/jnlpJars/agent.jar
java -jar agent.jar -jnlpUrl http://localhost:8080/computer/Slave1/jenkins-agent.jnlp -secret
aa3331df0dc29f823eee97b67fff48d27ea9bf9663486b007359eab3cd51dd42 -workDir "D:\Slave1"
```

Run from agent command line: (Windows)

```
curl.exe -sO http://localhost:8080/jnlpJars/agent.jar
java -jar agent.jar -jnlpUrl http://localhost:8080/computer/Slave1/jenkins-agent.jnlp -secret
aa3331df0dc29f823eee97b67fff48d27ea9bf9663486b007359eab3cd51dd42 -workDir "D:\Slave1"
```

```
PS D:\Slave1> curl.exe -sO http://localhost:8080/jnlpJars/agent.jar
PS D:\Slave1> java -jar agent.jar -jnlpUrl http://localhost:8080/computer/Slave1/jenkins-agent.jnlp -secret aa3331df0dc29f823eee97b67fff48d27ea9bf9663486b007359eab3cd51dd42 -workDir "D:\Slave1"
Oct 06, 2023 9:31:50 AM org.jenkinsci.remoting.engine.WorkDirManager initializeWorkDir
INFO: Using D:\Slave1\remoting as a remoting work directory
Oct 06, 2023 9:31:50 AM org.jenkinsci.remoting.engine.WorkDirManager setupLogging
INFO: Both error and output logs will be printed to D:\Slave1\remoting
Oct 06, 2023 9:31:50 AM hudson.remoting.jnlp.Main createEngine
INFO: Setting up agent: Slave1
Oct 06, 2023 9:31:50 AM hudson.remoting.Engine startEngine
INFO: Using Remoting version: 3107.v665080b_51892
Oct 06, 2023 9:31:50 AM org.jenkinsci.remoting.engine.WorkDirManager initializeWorkDir
INFO: Using D:\Slave1\remoting as a remoting work directory
Oct 06, 2023 9:31:50 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Locating server among [http://localhost:8080/]
Oct 06, 2023 9:31:50 AM org.jenkinsci.remoting.engine.JnlpAgentEndpointResolver resolve
INFO: Remoting server accepts the following protocols: [JNLP4-connect, Ping]
Oct 06, 2023 9:31:50 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Agent discovery successful
Agent address: localhost
Agent port: 59518
Identity: 6e:66:90:26:af:aa:dd:47:81:d8:96:a7:7b:a9:27:be
Oct 06, 2023 9:31:50 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Handshaking
Oct 06, 2023 9:31:50 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Connecting to localhost:59518
Oct 06, 2023 9:31:50 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Trying protocol: JNLP4-connect
Oct 06, 2023 9:31:50 AM org.jenkinsci.remoting.protocol.impl.BIONetworkLayer$Reader run
INFO: Waiting for ProtocolStack to start.
Oct 06, 2023 9:31:51 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Remote identity confirmed: 6e:66:90:26:af:aa:dd:47:81:d8:96:a7:7b:a9:27:be
Oct 06, 2023 9:31:51 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Connected
```

4] On your Jenkins create a new maven project name as cicd-lab5.

Enter an item name

» Required field



Freestyle project

This is the central feature of Jenkins. Jenkins will build your project, combining any SCM with any build system, and this can be even used for something other than software build.



Maven project

Build a maven project. Jenkins takes advantage of your POM files and drastically reduces the configuration.

5] Configure it.

Name ?

Slave1

Description ?

[Plain text] [Preview](#)

Number of executors ?

1

Remote root directory ?

D:\Slave1

Labels ?

Slave1

Usage ?

Use this node as much as possible

Launch method ?

Launch agent by connecting it to the controller

☐ Disable WorkDir ?

Custom WorkDir path ?

D:\Slave1

Internal data directory ?

remoting

☐ Fail if workspace is missing ?

☐ Use WebSocket ?

Advanced ▾

Availability ?

Keep this agent online as much as possible

Node Properties

☐ Disable deferred wipeout on this node ?

☒ Environment variables

List of variables ?

Name

MAVEN_OPTS

Value

6] Make a build and check the output and Node.

```
[INFO] skip non existing resourceDirectory D:\Slave1\workspace\cicd-lab5\src\test\resources
[INFO]
[INFO] --- compiler:3.10.1:testCompile (default-testCompile) @ devops.b3.cicd.lab3 ---
[INFO] No sources to compile
[INFO]
[INFO] --- surefire:3.0.0:test (default-test) @ devops.b3.cicd.lab3 ---
[INFO] No tests to run.
[JENKINS] Recording test results
[INFO]
[INFO] --- jar:3.3.0:jar (default-jar) @ devops.b3.cicd.lab3 ---
[INFO] Building jar: D:\Slave1\workspace\cicd-lab5\target\devops.b3.cicd.lab3-0.0.1-SNAPSHOT.jar
[INFO]
[INFO] --- install:3.1.0:install (default-install) @ devops.b3.cicd.lab3 ---
[INFO] Installing D:\Slave1\workspace\cicd-lab5\pom.xml to C:\Users\kamdi\.m2\repository\devops\b2\cicd\lab3\devops.b3.cicd.lab3\0.0.1-SNAPSHOT\devops.b3.cicd.lab3-0.0.1-SNAPSHOT.pom
[INFO] Installing D:\Slave1\workspace\cicd-lab5\target\devops.b3.cicd.lab3-0.0.1-SNAPSHOT.jar to
C:\Users\kamdi\.m2\repository\devops\b2\cicd\lab3\devops.b3.cicd.lab3\0.0.1-SNAPSHOT\devops.b3.cicd.lab3-0.0.1-SNAPSHOT.jar
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 3.344 s
```

Agent Slave1

Mark this node temporarily offline ?

Add description

Agent is connected.

Projects tied to Slave1

S	W	Name ↓	Last Success	Last Failure	Last Duration	Fav
		cicd-lab5	20 min #2	N/A	9.6 sec	

Nodes

S	Name ↓	Architecture	Clock Difference
	Built-In Node	Windows 11 (amd64)	In sync
	Slave1	Windows 11 (amd64)	In sync
Data obtained		29 min	29 min

