

Experiment no. 6

Aim: To understand Jenkins master-slave architecture & scale your Jenkins stand alone implementations by implementing slave nodes.

Introduction:

Setting up a master slave configuration in Jenkins is a common practice to distinguish distribute build and Jenkins server that manages and delegates tasks to multiple remote agents for parallel execution. This setup helps in improving efficiency, scalability and resource utilization.

Objective -

The goal of this experiment is to configure a Jenkins master-slave and run a simple build job on the slave node.

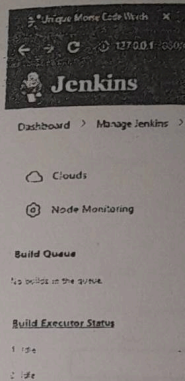
Theory:

In Jenkins, the master-slave setup involves a central Jenkins master server and multiple slave nodes. The theory is to distribute build jobs across these slave nodes for parallel execution and resource isolation, improving build throughput, scalability and efficiency.

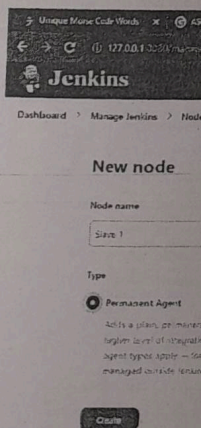
• Jenkins master: The central server that manage build job scheduling and coordination.

• Jenkins slave nodes: Additional machine or agent configured to execute build jobs independently.

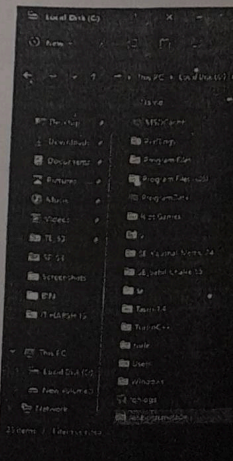
1) open Jenkins



2) create a new node



3) directory



Create

4) In

Dashboard > Manage Jenkins > Nodes

[Fast lane] Preview

Number of executors ?

1

Remote root directory ?

C:\ Jenkins\workspace

Labels ?

slave1

Usage ?

Use this node as much as possible

Save

5) make change in usage of launch methods.

Dashboard > Manage Jenkins > Nodes > jenkins-slave-01

Number of executors 1

Remote root directory /usr/jenkins/remotedir

Labels jenkins-slave

Usage Use this node as much as possible

Launch method Launch agent by connecting it to the controller

Save

6) go to slave 1

The screenshot shows the Jenkins web interface. The top navigation bar includes links for Dashboard, Manage Jenkins, Nodes, and Slave 1. The main content area is titled 'Agent Slave 1' and contains a section for 'Run from agent command line: (Unix)'. This section includes a terminal window with the following command:

```
curl -sO http://localhost:8080/jenkins/agent.jar
java -jar agent.jar -jnlpurl http://localhost:8080/computer/Slave201/jenkins-agent.jnlp -secret
c7e7551450e83597c208894ecr2a5574236788ff8079dc6292cd691e981cda --workDir "C:\jenkinsremotedir"
```

Below this, there is a section for 'Run from agent command line: (Windows)' which is partially visible. At the bottom of the page, there is a note that says 'Or run from agent command line, with the secret stored in a file: (Unix)'.

7) 90 to man

Unique Mono C# Words X ASCII

127.0.0.1

Dashboard Manage Jenkins Security

Marking Formatter

Plain Text

Agents will connect to master via

Agents

TCP port for inbound agent

Fixed

Random

Disable

Agent protocols

Save Apply

3) 4 to c

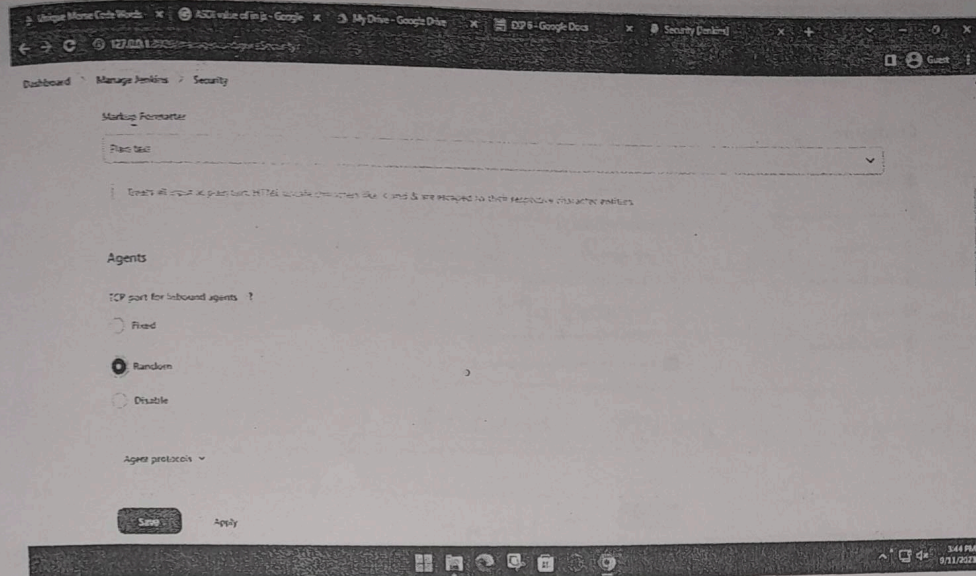
The screenshot shows a Windows command prompt window. The title bar reads "Command Prompt". The address bar shows "C:\Users\student-...". The command prompt displays the following text:

```
Microsoft Windows
(c) Microsoft Corporation

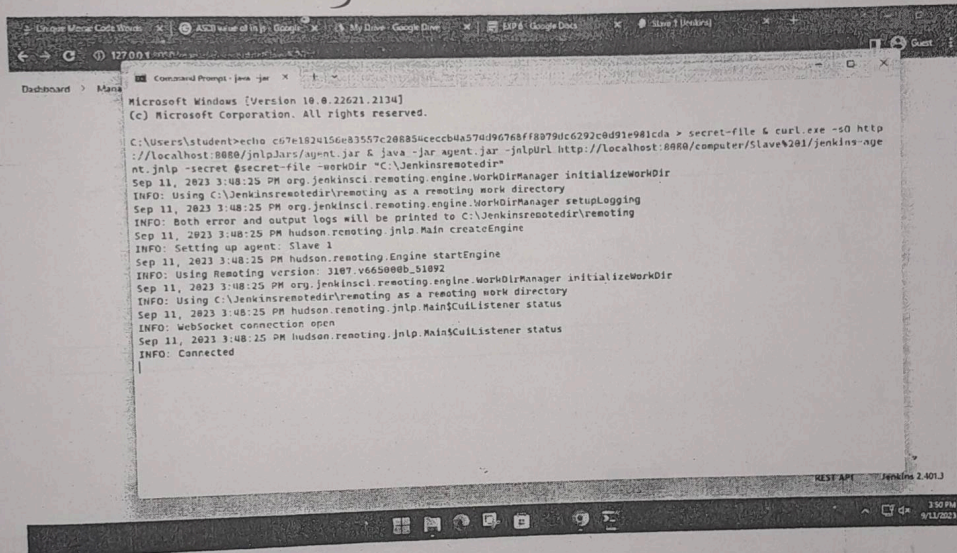
C:\Users\student-...
C:\Users\student-.../localhost:8080
net.nlp - secret 60
Sep 11, 2023 3:48
INFO: Using C:\
Sep 11, 2023 3:48
INFO: Both error
Sep 11, 2023 3:48
INFO: Setting up
Sep 11, 2023 3:48
INFO: Using Remot
Sep 11, 2023 3:48
INFO: Using C:\
Sep 11, 2023 3:48
INFO: websocket c
Sep 11, 2023 3:48
INFO: Connected
```

g) go to cor

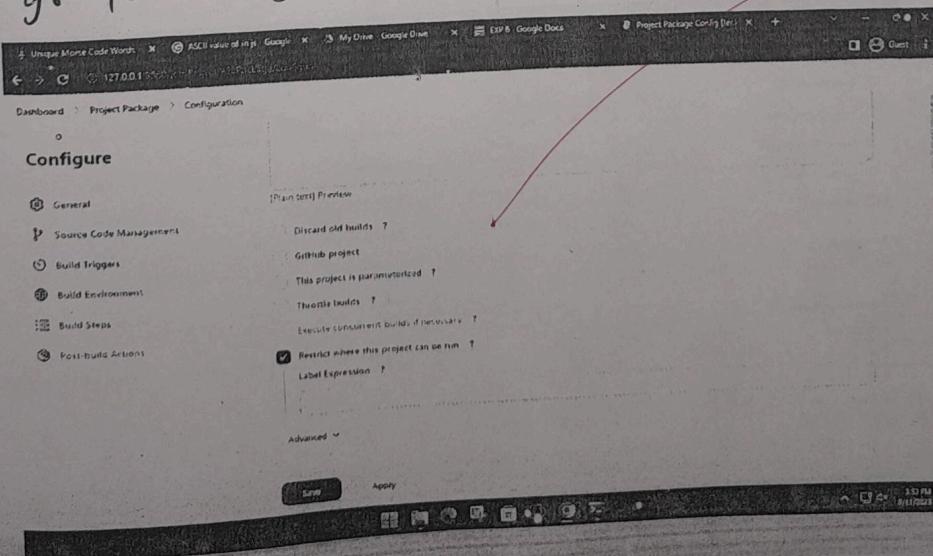
7) go to manage Jenkins



8) go to cmd for port



9) go to configuration



10) Go to node & then slave 2 configuration

Dashboard > Project Package > Configuration

Configure

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

Discard old builds ?

GitHub project

This project is parameterized ?

Throttle builds ?

Execute concurrent builds if necessary ?

☒ Restrict where this project can be run ?

Label Expression

slave2

Label with slave matches 1 node. Periodic or other restrictions provided by plugins may further restrict this.

Advanced

Save Apply

11) paste the directory on tool location and

Dashboard > Nodes > Slave 1 > Configure

Disable deferred wipeout on this node ?

Environment variables

☒ Tool Locations

List of tool locations :

Name

git

Home

C:\Program Files\Git\cmd

Name

Save

my Test the project by build

Dashboard >

- Build History
- Project Relationship
- Check File Fingerprint
- Manage Jenkins
- My Views

Build Queue

Build Executor Status

S	W	Name	Last Success	Last Failure	Last Duration
✓	✓	MyTestProject	7 days 0 hr	7 days 0 hr	4.2 sec
✓	✓	Project Compile	6 days 23 hr	N/A	4.3 sec
✓	✓	Project Package	6 days 23 hr	N/A	3.4 sec
✓	✓	Project Test	6 days 23 hr	N/A	3.2 sec
✓	✓	Project Deploy	20 days	N/A	23 min

REST API

me: sumit Bansk
No: 03

Aim : To
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pre-requ
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Theory !
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