

DevOps Certification Training

Jenkins Assignment – 3

Adding a Slave node in Jenkins

- By Swapnil Jadhav

You are working for an MNC - Software Solutions company as a DevOps Engineer and Company would want you to establish the CI/CD pipeline in their organization by automating various workflows.

As there is only one build server setup, many teams have to wait for their changes to be build. The organization would like to setup a slave node, so that workload can be shared from the master to the slave node and parallel builds can be performed.

You are requested to do following action items :

1. Create an AWS EC2 Ubuntu instance. (name as Jenkins-master)
2. Setup Jenkins on this server.
3. Add another AWS EC2 ubuntu instance(name as Jenkins-slave)
4. Add this node to the Jenkins Master as Slave.
5. Configure the pipeline script from previous assignment to run the build on slave node.
6. Trigger the build on master and verify if the build is running on slave node or not.

Instances (2) <a href="#">info</a>								
Find instance by attribute or tag (scope-sensitive)								
<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Publ
<input type="checkbox"/>	slave	i-0bc1207b920ba7c52	Running	t2.micro	2/2 checks passed	No alarms	ap-northeast-1c	ec2-
<input type="checkbox"/>	master	i-00a786b0c7473157e	Running	t2.micro	2/2 checks passed	No alarms	ap-northeast-1c	ec2-

<div> <div>+ New Node</div> <div>☁ Configure Clouds</div> <div>📊 Node Monitoring</div> </div> <div> <div>Build Queue</div> <div>No builds in the queue</div> <div>Build Executor Status</div> <div> <div><input type="checkbox"/> Built-In Node</div> <div>1 idle</div> <div>2 idle</div> <div><input type="checkbox"/> slave1</div> <div>1 idle</div> <div>2 idle</div> </div> </div>	<div>Manage nodes and clouds</div> <div> <div> <div>5</div> <div>Name</div> <div>Architecture</div> <div>Clock Difference</div> <div>Free Disk Space</div> <div>Free Swap Space</div> <div>Free Temp Space</div> <div>Response Time</div> </div> <div> <div><input type="checkbox"/> Built-In Node</div> <div>Linux (amd64)</div> <div>In sync</div> <div>4.80 GB</div> <div><div><div></div></div> 0 B</div> <div>4.80 GB</div> <div>0ms</div> </div> <div> <div><input type="checkbox"/> slave1</div> <div>Linux (amd64)</div> <div>In sync</div> <div>5.22 GB</div> <div><div><div></div></div> 0 B</div> <div>5.22 GB</div> <div>33ms</div> </div> <div> <div>Data obtained</div> <div>14 min</div> <div>14 min</div> <div>14 min</div> <div>14 min</div> <div>14 min</div> <div>14 min</div> </div> </div>
--	---

Definition

Pipeline script

Script ?

```

1 pipeline {
2   agent {
3     label 'slave1'
4   }
5
6   tools {
7     // Install the Maven version configured as "M3" and add it to the path.
8     maven "M2_HOME"
9   }
10
11   stages {
12     stage('Build') {
13       steps {
14
15         git 'https://github.com/swapnilsjadhav9519/jenmavensample.git'
16
17         sh "mvn -Dmaven.test.failure.ignore=true clean package"
18
19       }
20     }
21   }
22 }
23
24
25

```

The screenshot shows the Jenkins web interface. The top navigation bar includes the Jenkins logo, a search bar, and user information (admin, log out). The left sidebar contains links to Dashboard, Status, Changes, Console Output (selected), View as plain text, Edit Build Information, Delete build #2, Get Build Data, Restart from Stage, Replay, Pipeline Steps, and Workspaces. The main content area is titled 'Console Output' and displays the build log. The log shows the build was started by user 'admin', is running on a slave node, and is currently in the 'stage' phase. The log also indicates that the recommended git tool is 'NONE' and that no credentials were specified for fetching changes from the remote git repository.

**Console Output**

```
Started by user: admin
[Pipeline] Start of Pipeline
Running on slave in /root/workspace/jenkins-sample
[Pipeline] {
[Pipeline] stage
[Pipeline] { [Declaration: tool: none]}
[Pipeline] end
[Pipeline] echo
[Pipeline] {
[Pipeline] // stage
[Pipeline] waitFor
[Pipeline] {
[Pipeline] stage
[Pipeline] { [null]}
[Pipeline] end
[Pipeline] echo
[Pipeline] waitFor
[Pipeline] {
The recommended git tool is: NONE
No credentials specified
Fetching changes from the remote git repository
```

```

The recommended git tool is: NONE
No credentials specified
Fetching changes from the remote Git repository
> git rev-parse --resolve-git-dir /root/workspace/jenpipesample/.git # timeout=10
> git config remote.origin.url https://github.com/swapnils-jadhav9519/jenmavensample.git # timeout=10
Fetching upstream changes from https://github.com/swapnils-jadhav9519/jenmavensample.git
> git --version # timeout=10
> git --version # 'git version 2.34.1'
> git fetch --tags --force --progress -- https://github.com/swapnils-jadhav9519/jenmavensample.git +refs/heads/*:refs/remotes/origin/* # timeout=10
Checking out Revision d4e66352fc0de1386bcb91190730f2cddde81028 (refs/remotes/origin/master)
Commit message: "maven project add"
First time build. Skipping changelog.
[Pipeline] sh
+ mvn -Dmaven.test.failure.ignore=true clean package
> git rev-parse refs/remotes/origin/master^{commit} # timeout=10
> git config core.sparsecheckout # timeout=10
> git checkout -f d4e66352fc0de1386bcb91190730f2cddde81028 # timeout=10
> git branch -a -v --no-abbrev # timeout=10
> git branch -D master # timeout=10
> git checkout -b master d4e66352fc0de1386bcb91190730f2cddde81028 # timeout=10

```

```

Dashboard -> jenpipesample -> #1

+ git checkout -b master d4e66352fc0de1386bcb91190730f2cddde81028 # timeout=10
[INFO] Scanning for projects...
[INFO]
[INFO] -----> [pom.xml] my_assignment <-----
[INFO] Building my_assignment 0.0.1-SNAPSHOT
[INFO] -----< [pom.xml] -----
[INFO]
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ my_assignment ---
[INFO] Deleting /root/workspace/jenpipesample/target
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ my_assignment ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory /root/workspace/jenpipesample/src/main/resources
[INFO]
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ my_assignment ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 1 source file to /root/workspace/jenpipesample/target/classes
[INFO]
[INFO] --- maven-resources-plugin:2.6:testResources (default-testResources) @ my_assignment ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory /root/workspace/jenpipesample/src/test/resources
[INFO]
[INFO] --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ my_assignment ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 1 source file to /root/workspace/jenpipesample/target/test-classes
[INFO]
[INFO] --- maven-surefire-plugin:2.6.8:test (default-test) @ my_assignment ---
[INFO]
[INFO] -----> [pom.xml] my_assignment <-----
[INFO]
[INFO] T E S T S
[INFO]
[INFO]
[INFO] Results:
[INFO]
[INFO] Tests run: 0, Failures: 0, Errors: 0, Skipped: 0
[INFO]

```

```
[INFO] --- maven-surefire-plugin:3.0.0-M5:test (default-test) @ my_assignment ---
[INFO]
[INFO] -----
[INFO] T E S T S
[INFO] -----
[INFO] Running com.assignment.my_assignment.AppTest
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.121 s - in com.assignment.my_assignment.AppTest
[INFO]
[INFO] Results:
[INFO]
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO] --- maven-jar-plugin:2.4:jar (default-jar) @ my_assignment ---
[INFO] Building jar: /root/workspace/jenpipesample/target/my_assignment-0.0.1-SNAPSHOT.jar
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 5.587 s
[INFO] Finished at: 2023-03-06T06:02:24Z
[INFO] -----
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```