

Jenkins – Add Node to Jenkins Master

To add a Node/Slave to Jenkins master.

Step 1:

Create an VM with same OS and install Java 1.8 as installed on Jenkins master.

Before you can install Jenkins, you need to setup a Java virtual machine on your system.

Here, let's install the latest OpenJDK Runtime Environment 1.8.0 using YUM:

```
sudo yum install java-1.8.0-openjdk.x86_64
```

After the installation, you can confirm it by running the following command:

```
java -version
```

This command will tell you about the Java runtime environment that you have installed:

```
openjdk version "1.8.0_91"
```

```
OpenJDK Runtime Environment (build 1.8.0_91-b14)
```

```
OpenJDK 64-Bit Server VM (build 25.91-b14, mixed mode)
```

In order to help Java-based applications locate the Java virtual machine properly, you need to set two environment variables: "JAVA_HOME" and "JRE_HOME".

```
sudo cp /etc/profile /etc/profile_backup
```

```
echo 'export JAVA_HOME=/usr/lib/jvm/jre-1.8.0-openjdk' | sudo tee -a /etc/profile
```

```
echo 'export JRE_HOME=/usr/lib/jvm/jre' | sudo tee -a /etc/profile  
source /etc/profile
```

Finally, you can print them for review:

```
echo $JAVA_HOME
```

```
echo $JRE_HOME
```

Step2:

Create an project folder on the Node/Slave for the workspace area.

```
[root@localhost project]# pwd
/root/project
[root@localhost project]#
```

The folder should have the same user permission that would be used to authenticate Slave from Master.

For example, if you are using **centos** as the username then the folder “project” should have the same right as below.

```
[centos@localhost root]$ cd ~
[centos@localhost ~]$ ls
[centos@localhost ~]$ pwd
/home/centos
[centos@localhost ~]$ mkdir project
[centos@localhost ~]$ ls -l
total 0
drwxrwxr-x. 2 centos centos 5 May  5 00:26 project
centos@localhost ~$
```

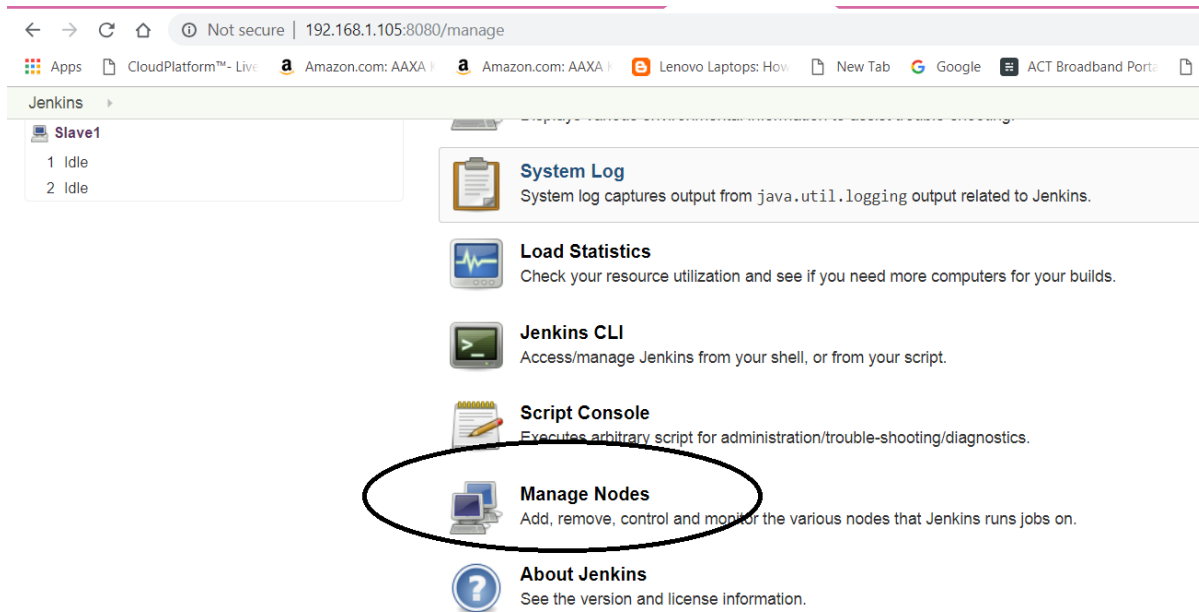
If it does not then,

```
$ chown centos:centos project
```

Step3:

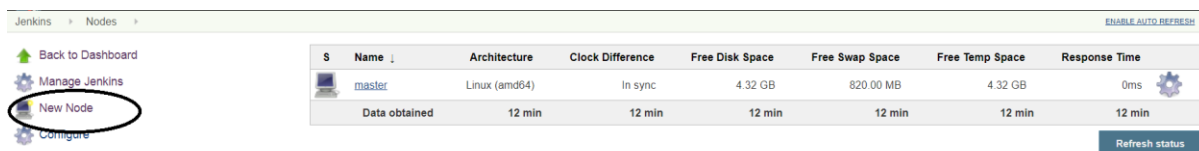
On the Jenkins master, under the Manage Jenkins

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The screenshot shows the Jenkins 'manage' page at 192.168.1.105:8080. On the left, under 'Jenkins', there is a 'Slave1' section with two 'Idle' status indicators. The main content area lists several management tools: 'System Log', 'Load Statistics', 'Jenkins CLI', 'Script Console', 'Manage Nodes', and 'About Jenkins'. The 'Manage Nodes' option, which includes the subtext 'Add, remove, control and monitor the various nodes that Jenkins runs jobs on.', is circled in black.

Click on “Manage Nodes”.

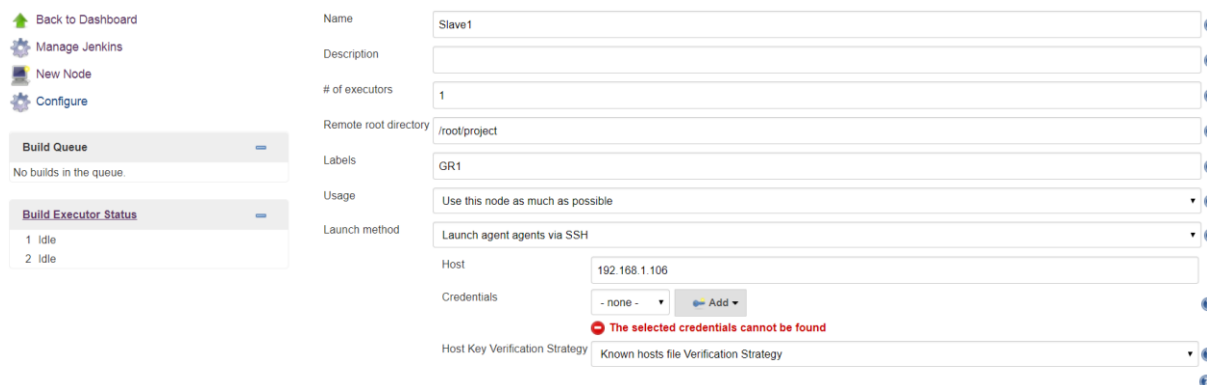


The screenshot shows the Jenkins 'Nodes' page. On the left sidebar, the 'New Node' link is circled in black. The main area displays a table of nodes:

S	Name	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
	master	Linux (amd64)	In sync	4.32 GB	820.00 MB	4.32 GB	0ms
	Data obtained	12 min	12 min	12 min	12 min	12 min	12 min

A 'Refresh status' button is located at the bottom right of the table.

Click on “New Node”.



The screenshot shows the 'New Node' configuration page. The left sidebar has 'New Node' selected. The main form contains the following fields:

- Name: Slave1
- Description: (empty)
- # of executors: 1
- Remote root directory: /root/project
- Labels: GR1
- Usage: Use this node as much as possible
- Launch method: Launch agent agents via SSH
- Host: 192.168.1.106
- Credentials: - none - (with an 'Add' button)
- Host Key Verification Strategy: Known hosts file Verification Strategy

A red error message is displayed below the Credentials field: 'The selected credentials cannot be found'.

Provide the below

Name: < Any name>

Executors: no of jobs to be run parallelly on the slave.

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Remote directory : -- on the slave node, the location where the “workspace” would be used temporarily during the JOB execution.

Label: -- Group of Slave machines, eg: -GR1

Launch Method : -- SSH agent

Host name : -- Ip address of the slave machine, eg:- 192.168.1.106.

Credentials: -- Username and pwd to login to the Slave machine by the Master.

In case the slave VM is simple usr and pwd. Then below



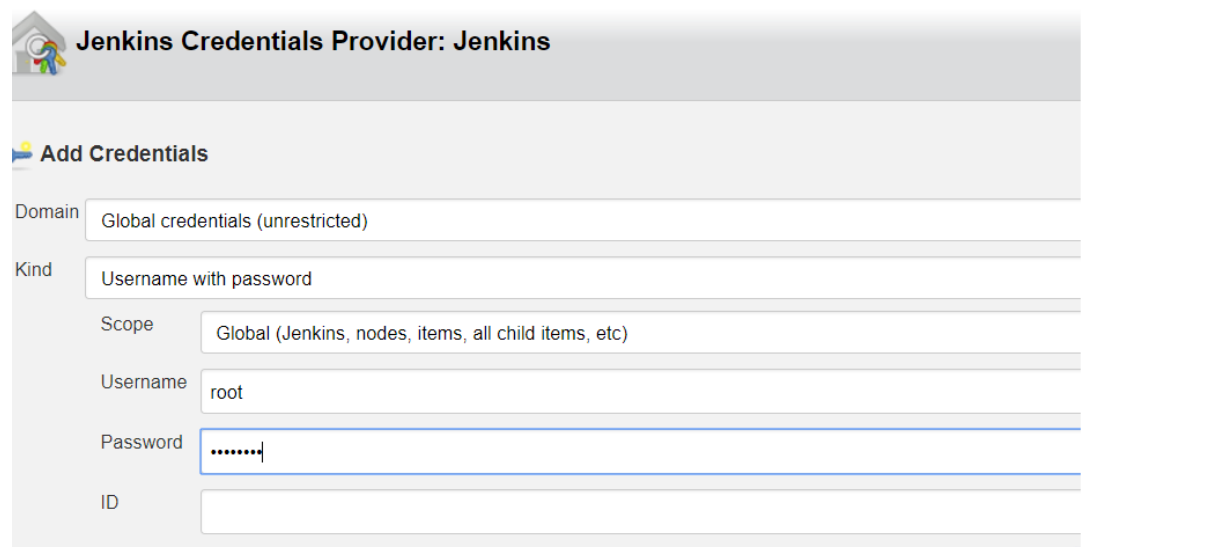
Host: 192.168.1.106

Credentials: - none - Add

Host Key Verification Strategy: Known hosts file Verification Strategy

Click on “ Jenkins”.

Option 1: -- Adding username and password for VM’s created on laptop.



Jenkins Credentials Provider: Jenkins

Add Credentials

Domain: Global credentials (unrestricted)

Kind: Username with password

Scope: Global (Jenkins, nodes, items, all child items, etc)

Username: root

Password:

ID:

Enter the username and pwd and click on “Save” Then the below screen, to select the credentials that is just configured

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Launch method

Launch agent agents via SSH

Host

192.168.1.106

Credentials

root/***** Add

Host Key Verification Strategy

Known hosts file Verification Strategy

Option 2: - For slave machines created on AWS EC2 instance.

Add Credentials

Domain

Global credentials (unrestricted)

SSH Username with private key

Scope

Global (Jenkins, nodes, items, all child items, etc)

ID

Description

Username

centos

Private Key

Enter directly

Key

Enter New Secret Below

-----BEGIN RSA PRIVATE KEY-----

-----END RSA PRIVATE KEY-----

Passphrase

The credentials created should be selected as above screen.

Host

192.168.1.106

Credentials

root/***** Add

Host Key Verification Strategy

Non verifying Verification Strategy

Known hosts file Verification Strategy

Manually provided key Verification Strategy

Manually trusted key Verification Strategy

Non verifying Verification Strategy

Keep this agent online as much as possible

Properties

Select “ non Verifying” as we don’t hve the SSL.

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Availability

Keep this agent online as much as possible

Node Properties


- ☐ Disable deferred wipeout on this node
- ☐ Environment variables
- ☐ Tool Locations


Save


Click on save.


Once the Agent is successfully installed, the below screen would be visible.


Jenkins ▸ Nodes ▸ Slave1


 Back to List


 Status


 Delete Agent


 Configure


 Build History

 Load Statistics


 Script Console

 Log

 System Information

 Disconnect

Build Executor Status



Agent Slave1

Labels

[GR1](#)

Projects tied to Slave1

None

