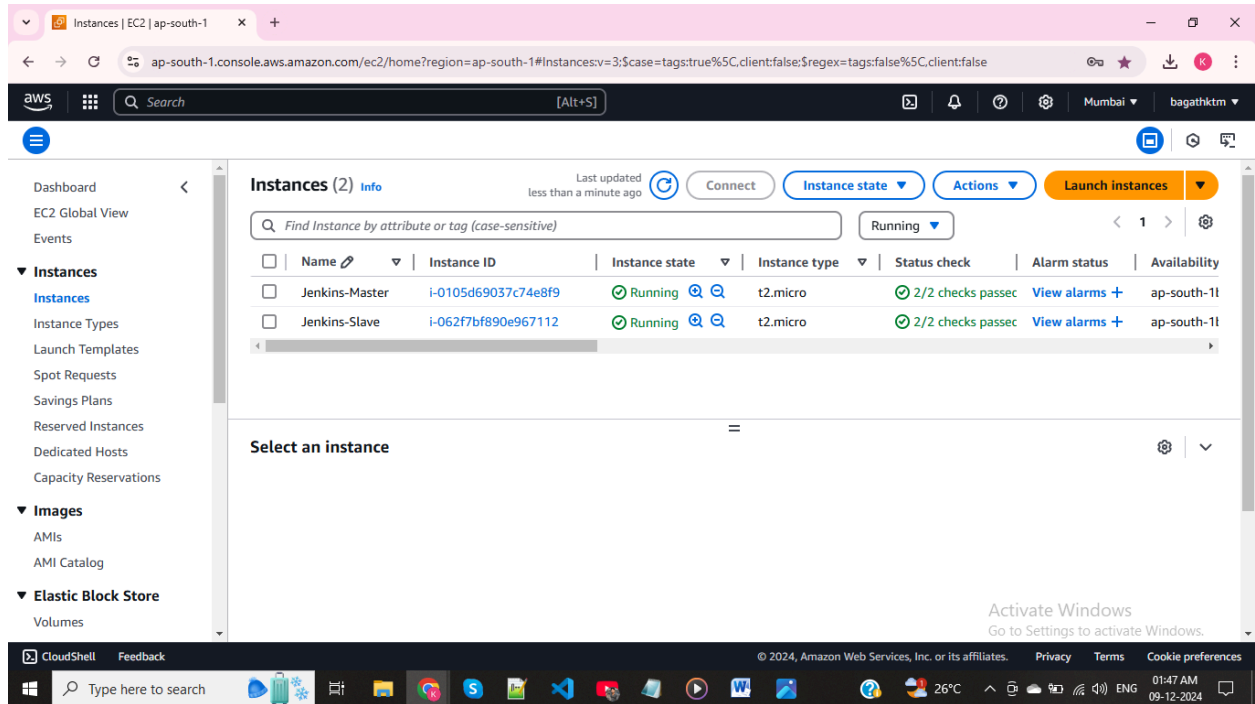
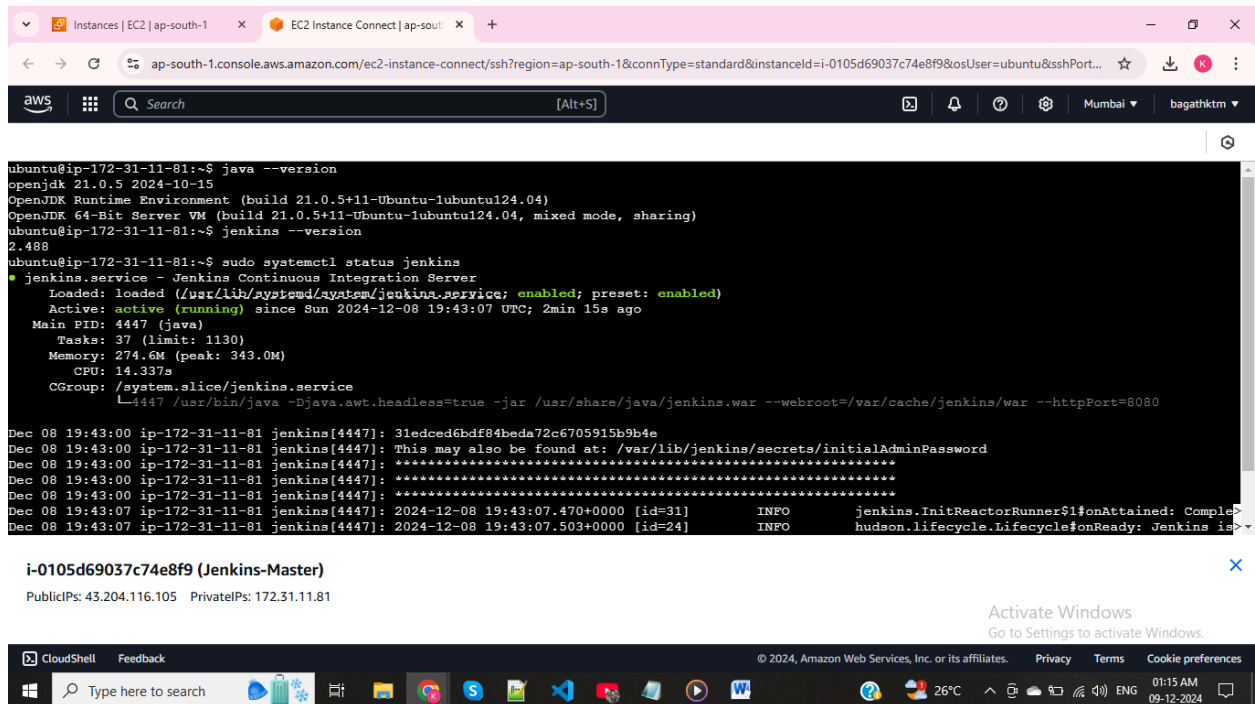


Master and Slave concept in Jenkins

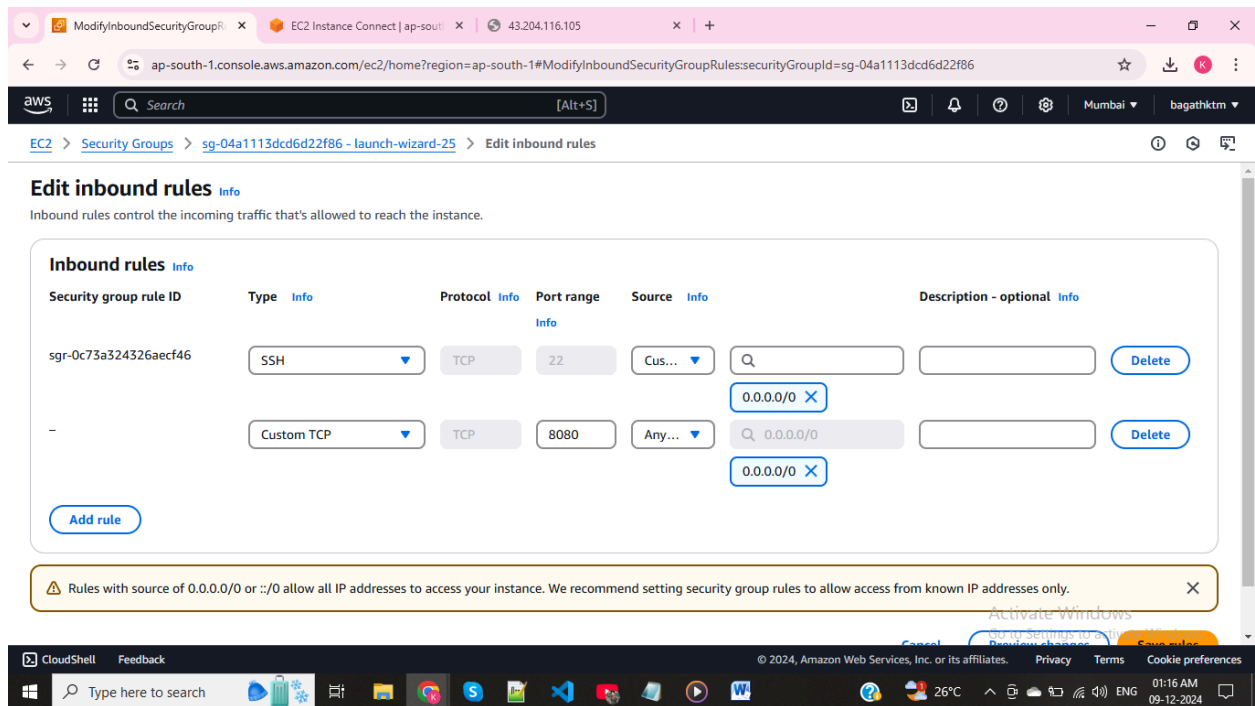
Create two EC2 instance -- Jenkins-Master and Jenkins-slave



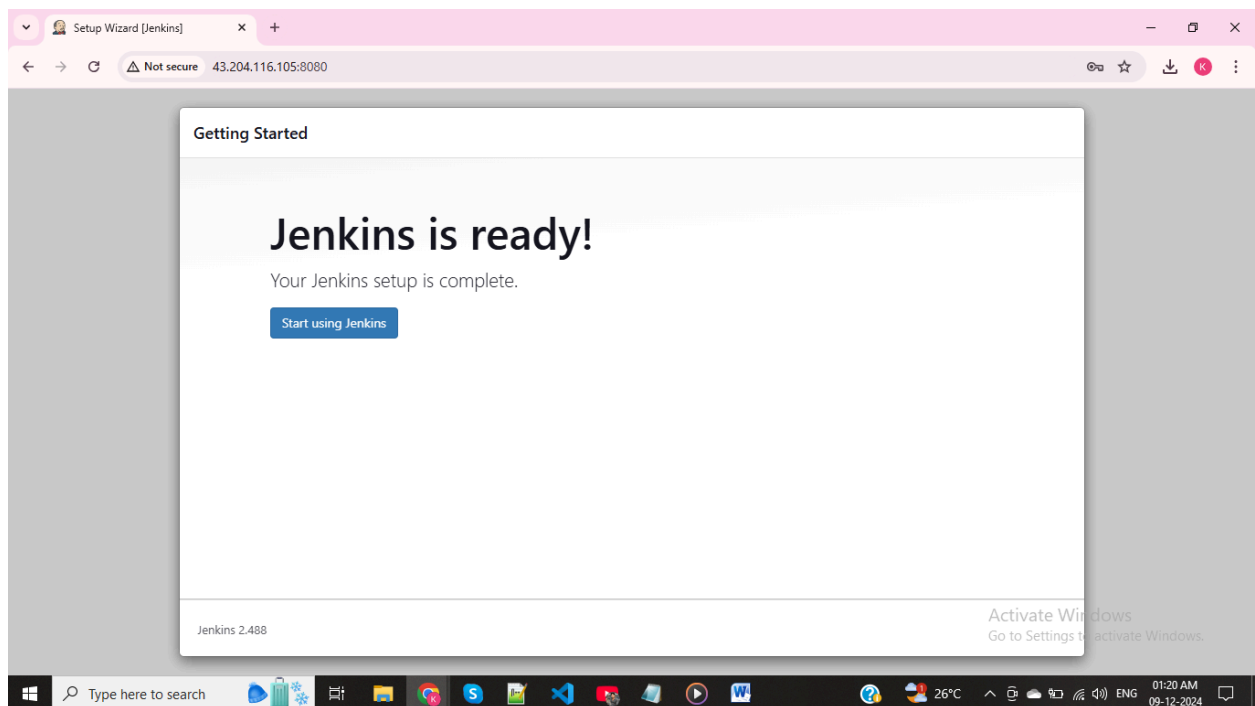
In Master installed java and jenkins



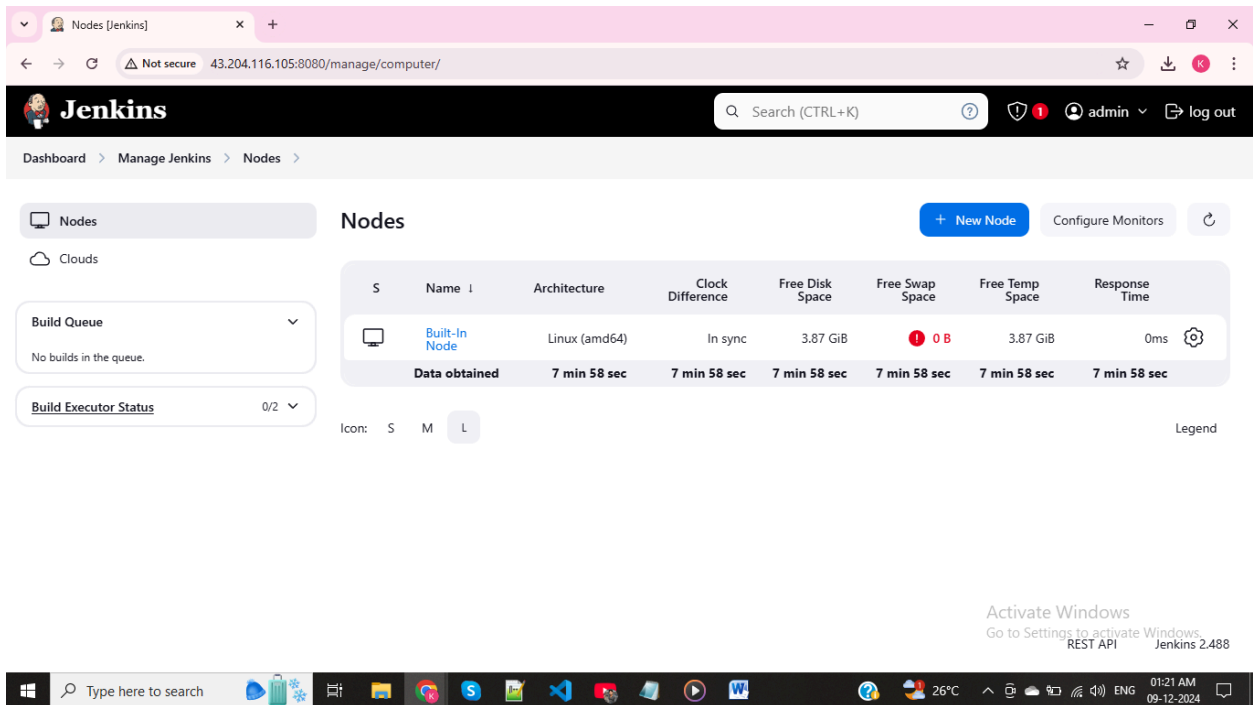
For Hosting jenkins in web server edited inbound rules and set port (8080)



Jenkins is ready to start



For Configure slave with jenkins --Go to dashboard--Manage jenkins--Nodes

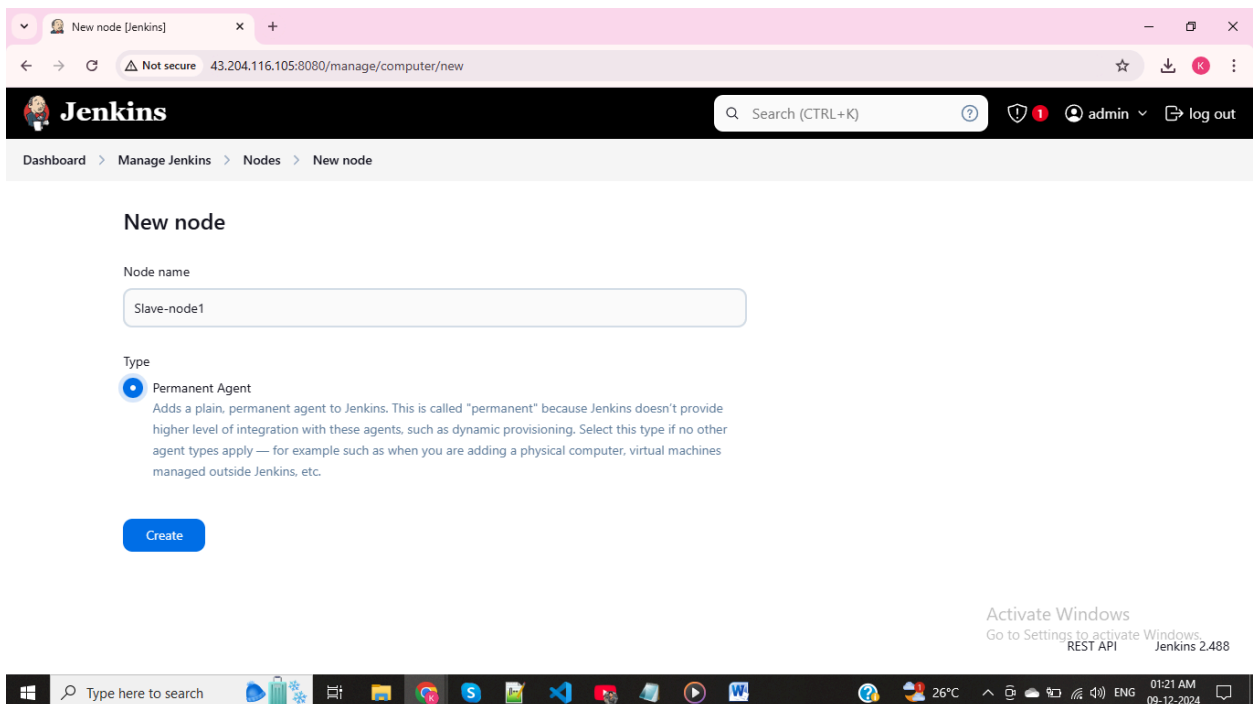


The screenshot shows the Jenkins web interface at the 'Nodes' page. The breadcrumb trail is 'Dashboard > Manage Jenkins > Nodes'. On the left sidebar, there are links for 'Nodes' (selected), 'Clouds', 'Build Queue' (showing 'No builds in the queue.'), and 'Build Executor Status' (showing '0/2'). The main content area is titled 'Nodes' and features a '+ New Node' button and a 'Configure Monitors' link. A table lists the nodes:

S	Name	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
	Built-In Node	Linux (amd64)	In sync	3.87 GiB	0 B	3.87 GiB	0ms
Data obtained		7 min 58 sec	7 min 58 sec	7 min 58 sec	7 min 58 sec	7 min 58 sec	7 min 58 sec

Below the table, there is a legend for icons: S (Slave), M (Master), and L (Label). The Windows taskbar at the bottom shows the time as 01:21 AM on 09-12-2024.

Added new node



The screenshot shows the Jenkins web interface at the 'New node' page. The breadcrumb trail is 'Dashboard > Manage Jenkins > Nodes > New node'. The page title is 'New node'. There is a 'Node name' input field containing 'Slave-node1'. Under the 'Type' section, 'Permanent Agent' is selected with a radio button. A description for 'Permanent Agent' is provided: '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.' At the bottom, there is a blue 'Create' button. The Windows taskbar at the bottom shows the time as 01:21 AM on 09-12-2024.

Configure Slave in Master (Jenkins) with Host and Credentials

The screenshot shows the Jenkins 'Create Item' page for a new node. The browser address bar shows the URL: `43.204.116.105:8080/manage/computer/createItem`. The page has a breadcrumb trail: **Dashboard > Manage Jenkins > Nodes**. The 'Launch method' dropdown is set to 'Launch agents via SSH'. The 'Host' field contains '65.0.21.70'. The 'Credentials' dropdown is set to 'ubuntu (sshkeygen)'. The 'Host Key Verification Strategy' dropdown is set to 'Manually trusted key Verification Strategy'. There is an unchecked checkbox for 'Require manual verification of initial connection'. An 'Advanced' dropdown is visible. A blue 'Save' button is at the bottom left. A Windows activation watermark is visible on the right side of the page.

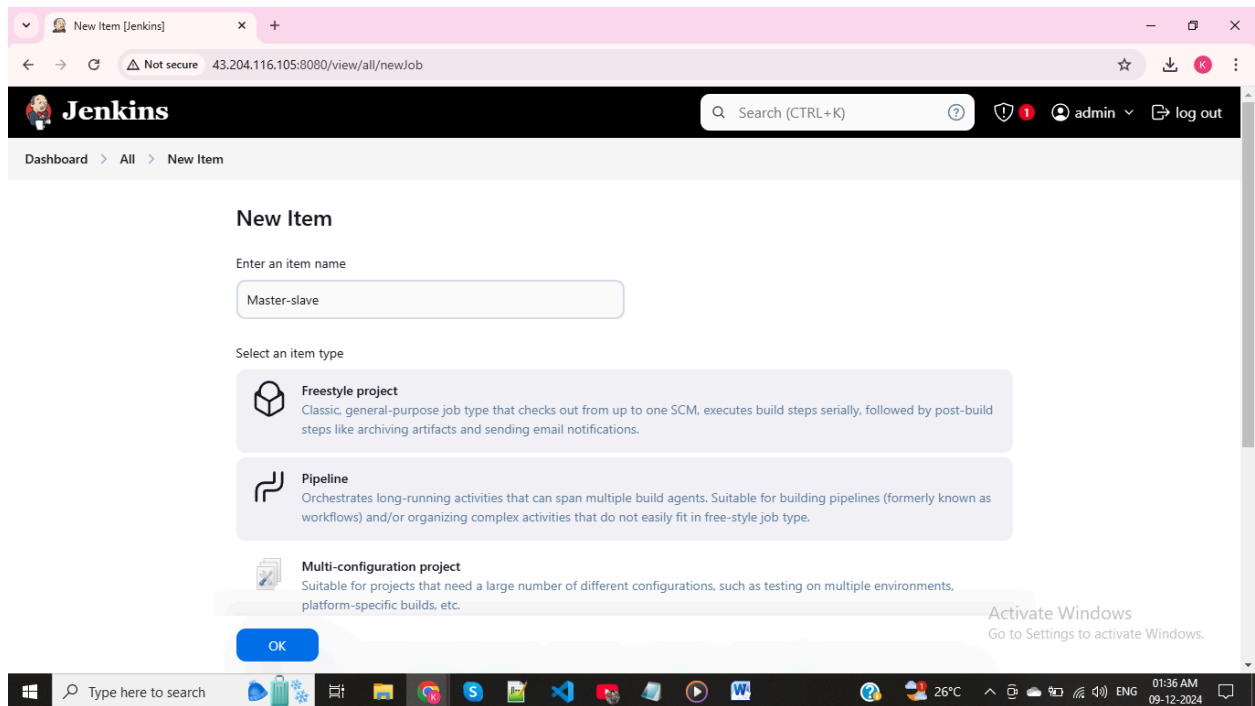
Slave node is created and its shows in Nodes

The screenshot shows the Jenkins 'Nodes' page. The browser address bar shows the URL: `43.204.116.105:8080/manage/computer/`. The page has a breadcrumb trail: **Dashboard > Manage Jenkins > Nodes**. The 'Nodes' section has a '+ New Node' button and a 'Configure Monitors' button. The 'Nodes' table lists the following nodes:

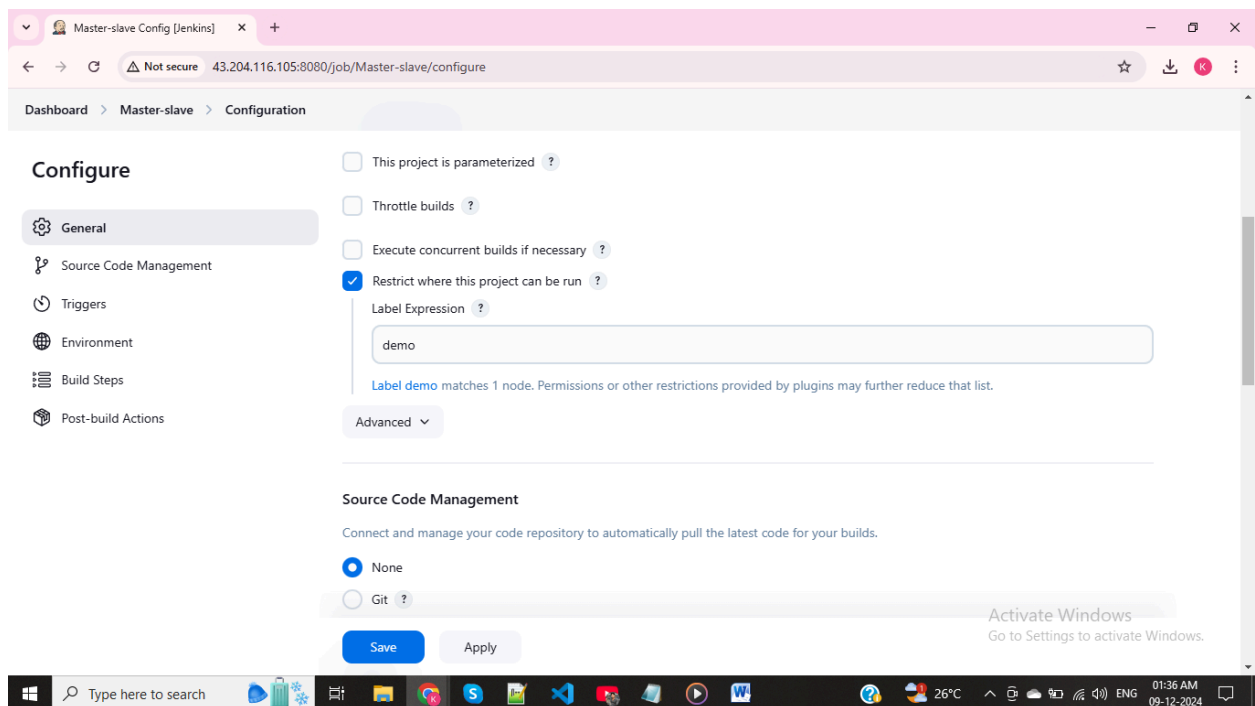
S	Name	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
	Built-In Node	Linux (amd64)	In sync	3.87 GiB	0 B	3.87 GiB	0ms
	Slave-node1		N/A	N/A	N/A	N/A	N/A
Data obtained			4 ms	3 ms	3 ms	5 ms	4 ms
							16 min

Below the table, there is a legend with 'S', 'M', and 'L' icons. The 'Slave-node1' node is shown as 'offline' in the 'Build Queue' and 'Build Executor Status' sections. A Windows activation watermark is visible on the right side of the page.

Created a Freestyle job



Go to configure --Restrict the project can be build and add slave label



Build success output

The screenshot shows the Jenkins web interface. The browser tab is 'Master-slave #1 Console [jenkins]'. The address bar shows '43.204.116.105:8080/job/Master-slave/1/console'. The Jenkins logo and search bar are at the top. The breadcrumb trail is 'Dashboard > Master-slave > #1 > Console Output'. On the left sidebar, 'Console Output' is selected. The main area shows a green checkmark icon and the title 'Console Output'. Below the title, there are buttons for 'Download', 'Copy', and 'View as plain text'. The console output text is as follows:

```
Started by user admin
Running as SYSTEM
Building remotely on slave-node1 (demo) in workspace /home/ubuntu/jenkins/workspace/Master-slave
[Master-slave] $ /bin/sh -xe /tmp/jenkins46900286499893350.sh
+ echo checking the project is build on slave
checking the project is build on slave
Finished: SUCCESS
```

At the bottom right, there is a 'REST API' link and the text 'Jenkins 2.488'. The Windows taskbar is visible at the bottom with the date '09-12-2024' and time '01:38 AM'.

Project was build in Slave and its output

The screenshot shows the AWS CloudShell interface. The browser tab is 'EC2 Instance Connect | ap-south-1'. The address bar shows 'ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=ap-south-1&connType=standard&instanceId=i-062f7bf890e967112&osUser=ubuntu&sshPort...'. The AWS logo and search bar are at the top. The terminal window shows the following commands and output:

```
ubuntu@ip-172-31-13-129:~$ ls
jenkins
ubuntu@ip-172-31-13-129:~$ cd jenkins/
ubuntu@ip-172-31-13-129:~/jenkins$ ls
remoting  remoting.jar  workspace
ubuntu@ip-172-31-13-129:~/jenkins$ cd workspace/
ubuntu@ip-172-31-13-129:~/jenkins/workspace$ ls
Master-slave
ubuntu@ip-172-31-13-129:~/jenkins/workspace$
```

Below the terminal window, the instance ID 'i-062f7bf890e967112 (Jenkins-Slave)' is displayed, along with 'PublicIPs: 65.0.21.70' and 'PrivateIPs: 172.31.13.129'. The Windows taskbar is visible at the bottom with the date '09-12-2024' and time '01:39 AM'.