

Module 6: Jenkins Assignment – 2

1. Add 2 nodes to Jenkins master
2. Create 2 jobs with the following jobs:
 - a. Push to test
 - b. Push to prod
3. Once a push is made to test branch, copy Git files to test server
4. Once a push is made to master branch, copy Git files to prod server
 - I have created two instances in aws and named them as slave1 and slave 2
 - Then navigated to jenkins webview
 - Configured the nodes in manage jenkins >> Nodes >> add Nodes
 - Slave1 as node1 and slave2 as node2

Dashboard > Manage Jenkins > Nodes > slave1 > Configure

Status

Delete Agent

Configure

Build History

Load Statistics

Script Console

Log

System Information

Disconnect

Name ?

slave1

Description ?

Plain text [Preview](#)

Number of executors ?

1

Remote root directory ?

/home/ubuntu/jenkins

Labels ?

Usage ?

Use this node as much as possible

Launch method ?

Launch agents via SSH

Host ?

172.31.47.180

Credentials ?

ubuntu

+ Add

Host Key Verification Strategy ?

Non verifying Verification Strategy

Advanced Edited

Availability ?

Keep this agent online as much as possible

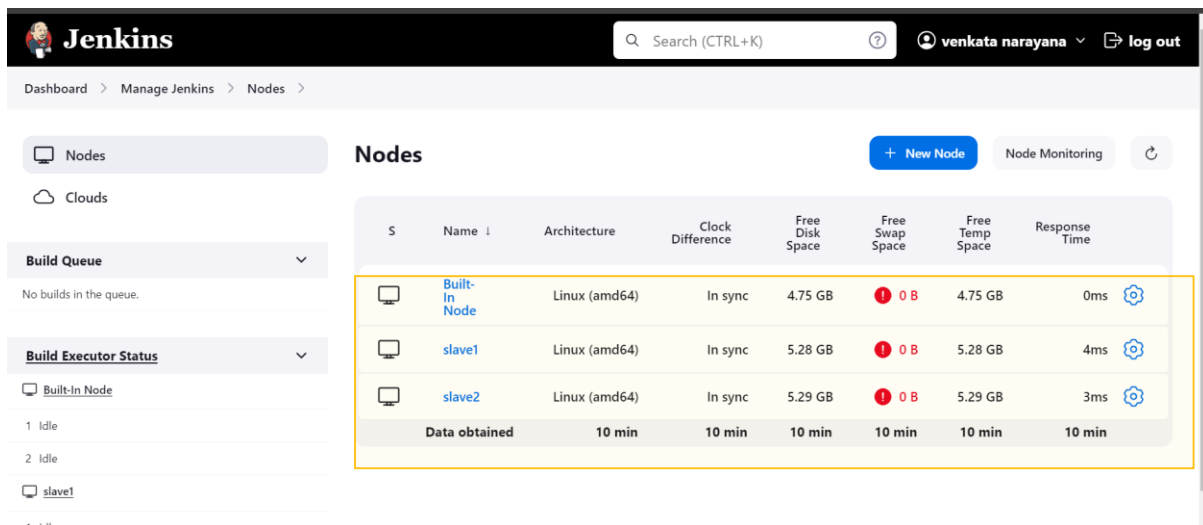
Node Properties

Disable deferred wipeout on this node ?

Save

- Similarly slave2 also added

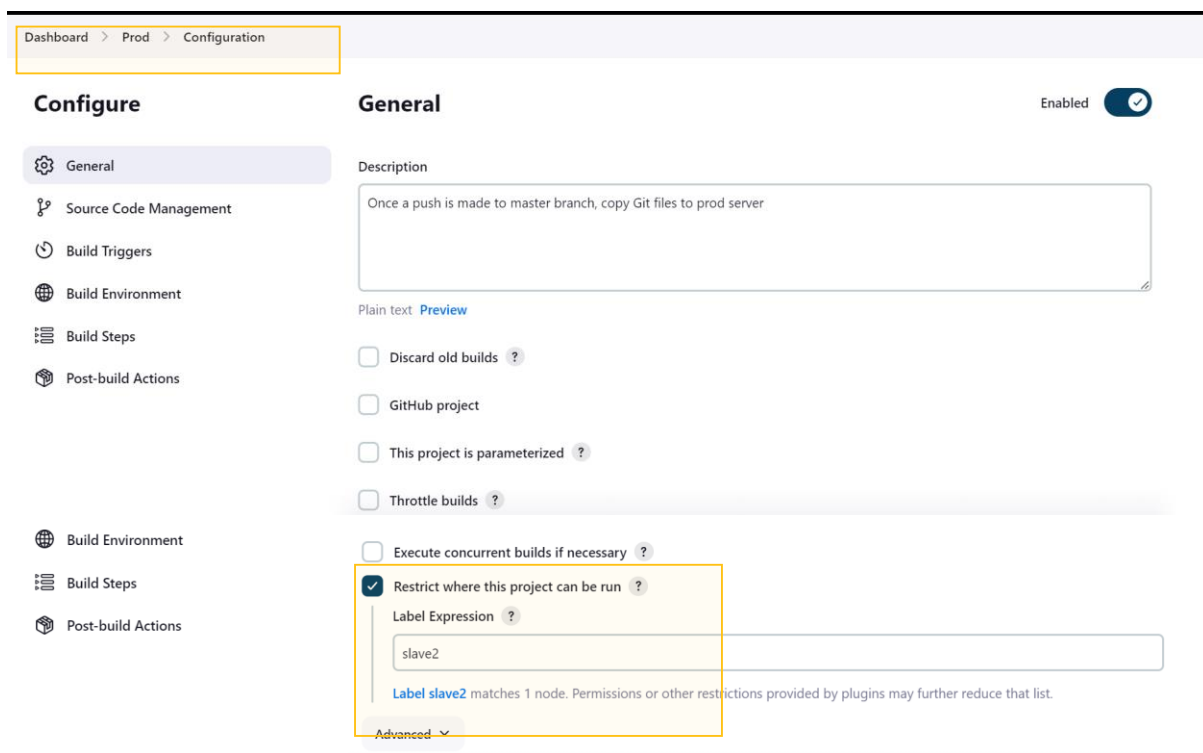
Jenkins cluster



The screenshot shows the Jenkins 'Nodes' page. The left sidebar contains links for 'Nodes', 'Clouds', 'Build Queue', and 'Build Executor Status'. The main area displays a table of nodes. A yellow box highlights the 'Built-In Node' and 'slave2' rows. The 'slave2' row shows it is in sync, has 5.29 GB of free disk space, 0 B of free swap space, 5.29 GB of free temp space, and a response time of 3ms.

S	Name	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
	Built-In Node	Linux (amd64)	In sync	4.75 GB	0 B	4.75 GB	0ms
	slave1	Linux (amd64)	In sync	5.28 GB	0 B	5.28 GB	4ms
	slave2	Linux (amd64)	In sync	5.29 GB	0 B	5.29 GB	3ms
Data obtained		10 min	10 min	10 min	10 min	10 min	10 min

- After that prod job is created by selecting new item from leftside menu of dashboard
- Set slave 2 as prod server



The screenshot shows the Jenkins 'Configuration' page for a project named 'Prod'. The left sidebar contains links for 'General', 'Source Code Management', 'Build Triggers', 'Build Environment', 'Build Steps', and 'Post-build Actions'. The main area displays the 'General' configuration. A yellow box highlights the 'Restrict where this project can be run' option, which is checked, and the 'Label Expression' field, which contains 'slave2'. The 'Label slave2 matches 1 node. Permissions or other restrictions provided by plugins may further reduce that list.' message is visible below the field.

Dashboard > Prod > Configuration

Configure

General

Enabled ☒

Description

Once a push is made to master branch, copy Git files to prod server

Plain text [Preview](#)

☐ 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 slave2 matches 1 node. Permissions or other restrictions provided by plugins may further reduce that list.

Advanced ☐

- In source code management configured the git repository and credentials are set
- Master branch is specified as build trigger
- And webhook is enabled

Configure

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

Source Code Management

☐ None

☒ Git ?

Repositories ?

Repository URL ?
https://github.com/Venkat-Narayan-07/03Jan2024.git

Credentials ?
ubuntu

+ Add

Configure

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

Build Triggers

Branches to build ?

Branch Specifier (blank for 'any') ?
*/master

Add Branch

Repository browser ?
(Auto)

Additional Behaviours
Add

Configure

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

Build Triggers

☐ Trigger builds remotely (e.g., from scripts) ?

☐ Build after other projects are built ?

☐ Build periodically ?

☒ GitHub hook trigger for GITScm polling ?

☐ Poll SCM ?

Build Environment

☐ Delete workspace before build starts

☐ Use secret text(s) or file(s) ?

☐ Add timestamps to the Console Output

☐ Inspect build log for published build scans

Save

Apply

- Similarly test job is also created and specified develop branch as build trigger and webhook is enabled
- Slave1 is set as test server

Dashboard >

+ New Item Add description

People All +

S	W	Name	Last Success	Last Failure	Last Duration
...	☀	Prod	N/A	N/A	N/A
✓	☀	test	1 hr 4 min #4	N/A	0.45 sec

Icon: S M L Icon legend Atom feed for all Atom feed for failures Atom feed for just latest builds

Build Queue ▼

No builds in the queue.

Then navigated to jenkins master instance

And checkout to the develop branch

```
ubuntu@ip-172-31-38-170:~/git$ git status
On branch develop
nothing to commit, working tree clean
```

A new file is added and committed to git hub repo

```
ubuntu@ip-172-31-38-170:~/git$ touch assign2testserver.txt
ubuntu@ip-172-31-38-170:~/git$ git add assigntestserver.txt
fatal: pathspec 'assigntestserver.txt' did not match any files
ubuntu@ip-172-31-38-170:~/git$ git add assign2testserver.txt
ubuntu@ip-172-31-38-170:~/git$ git commit -m "test"
[develop 60eac44] test
Committer: Ubuntu <ubuntu@ip-172-31-38-170.ec2.internal>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly. Run the
following command and follow the instructions in your editor to edit
your configuration file:

    git config --global --edit

After doing this, you may fix the identity used for this commit with:

    git commit --amend --reset-author

1 file changed, 0 insertions(+), 0 deletions(-)
```

- Then the changes are pushed to remote repo

```
ubuntu@ip-172-31-38-170:~/git$ git push origin develop
Username for 'https://github.com': Venkat-Narayan-07
Password for 'https://Venkat-Narayan-07@github.com':
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (2/2), 249 bytes | 249.00 KiB/s, done.
Total 2 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/Venkat-Narayan-07/03Jan2024.git
 22b709a..60eac44 develop -> develop
```

As soon as changes are pushed to github , test job is automatically trigger and built a job

Dashboard > test >

Status

</> Changes

Workspace

Build Now

Configure

Delete Project

test

Trigger a pipeline using Git when push on develop branch
Pipeline should pull Git content to a folder

Edit description
Disable Project

Permalinks

Last build (#5), 1.6 sec ago

Code is copied to the test server

```
ubuntu@ip-172-31-47-180:~/jenkins/workspace/test$ ls
1.txt 123.txt assign1.txt assign2testserver.txt trigger1.txt venkat.html
ubuntu@ip-172-31-47-180:~/jenkins/workspace/test$
```

i-02db224271da2dd11 (Slave1)

PublicIPs: 54.172.39.70 PrivateIPs: 172.31.47.180

Then checked out to master branch in jenkins master

```
ubuntu@ip-172-31-38-170:~/git$ git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.
ubuntu@ip-172-31-38-170:~/git$ git branch
  develop
* master
```

A file is created added and committed to local repo

```
ubuntu@ip-172-31-38-170:~/git$ touch kvn.txt
ubuntu@ip-172-31-38-170:~/git$ git add kvn.txt
ubuntu@ip-172-31-38-170:~/git$ git commit -m "prodJob"
[master fca20a7] prodJob
Committer: Ubuntu <ubuntu@ip-172-31-38-170.ec2.internal>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly. Run the
following command and follow the instructions in your editor to edit
your configuration file:

    git config --global --edit

After doing this, you may fix the identity used for this commit with:

    git commit --amend --reset-author

1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 kvn.txt
```

Then the achanges are pushed to the remote repo

```
ubuntu@ip-172-31-38-170:~/git$ git push origin master
Username for 'https://github.com': Venkat-Narayan-07
Password for 'https://Venkat-Narayan-07@github.com':
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Compressing objects: 100% (4/4), done.
Writing objects: 100% (4/4), 517 bytes | 517.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/Venkat-Narayan-07/03Jan2024.git
 8233d68..8547a89 master -> master
ubuntu@ip-172-31-38-170:~/git$
```

Prob is also triggerd automatically

Dashboard > Prod >

Workspace Edit description

Build Now Disable Project

Configure

Delete Project

GitHub Hook Log

Rename

Permalinks

- Last build (#2), 6 sec ago
- Last stable build (#1), 17 min ago
- Last successful build (#1), 17 min ago
- Last completed build (#1), 17 min ago

Build History

trend ▾

Filter builds...

Build	Status	Time
#2	Success	Jan 3, 2024, 10:28 AM
#1	Success	Jan 3, 2024, 10:11 AM

Atom feed for all Atom feed for failures

And code is copied to the prod server

```
*** System restart required ***
Last login: Tue Jan  2 08:23:00 2024 from 18.206.107.29
ubuntu@ip-172-31-44-227:~$ ls
jenkins
ubuntu@ip-172-31-44-227:~$ cd jenkins
ubuntu@ip-172-31-44-227:~/jenkins$ ls
remoting  remoting.jar  workspace
ubuntu@ip-172-31-44-227:~/jenkins$ cd workspace
ubuntu@ip-172-31-44-227:~/jenkins/workspace$ ls
Prod  Prod@tmp
ubuntu@ip-172-31-44-227:~/jenkins/workspace$ cd prod
-bash: cd: prod: No such file or directory
ubuntu@ip-172-31-44-227:~/jenkins/workspace$ cd Prod
ubuntu@ip-172-31-44-227:~/jenkins/workspace/Prod$ ls
assign1.txt  kvn.txt
ubuntu@ip-172-31-44-227:~/jenkins/workspace/Prod$
```

i-0585a5bddade95525 (Slave2)

PublicIPs: 3.81.85.150 PrivateIPs: 172.31.44.227