Jenkins Task 3

1 - What is the benefit of using master-slave architecture rather than building on master only ?

2 - What is different between authorization and authentication ?

3 - Make jenkins-shared-library and make your jenkinsfile which you used in lab2 to point to this library

4 - Try to make new slave as container or ec2 server and configure master to use it

The Solution

1 - What is the benefit of using master-slave architecture rather than building on master only ?

A - Scalability: By having multiple slave nodes, you can distribute the workload across them, allowing for horizontal scaling. This enables handling a larger number of concurrent tasks or users.

B - Improved performance: With a distributed architecture, the workload can be divided among multiple slaves, reducing the processing time for individual tasks.

C - Fault tolerance: If one slave node fails, the master can route the tasks to other available slaves, ensuring that the system continues to function without interruptions.

D - Resource utilization: Master-slave architecture enables efficient utilization of resources. The master node can focus on coordinating and managing the system, while the slave nodes handle the execution of tasks.

2 - What is different between authorization and authentication ?

A - Authentication: Authentication is the process of verifying the identity of a user or system. It ensures that the entity requesting access is who it claims to be. Authentication commonly involves providing credentials, such as a username and password, to verify identity.

B - Authorization: Authorization is the process of granting or denying access rights and permissions to authenticated users. Once a user's identity is authenticated, authorization determines what actions or resources that user is allowed to access. It involves defining and enforcing access control rules based on roles, permissions, or policies.

C - Authentication verifies the identity, while authorization determines what the authenticated entity is allowed to do or access

3 - Make jenkins-shared-library and make your jenkinsfile which you used in lab2 to point to this library

Code

master

Go to file
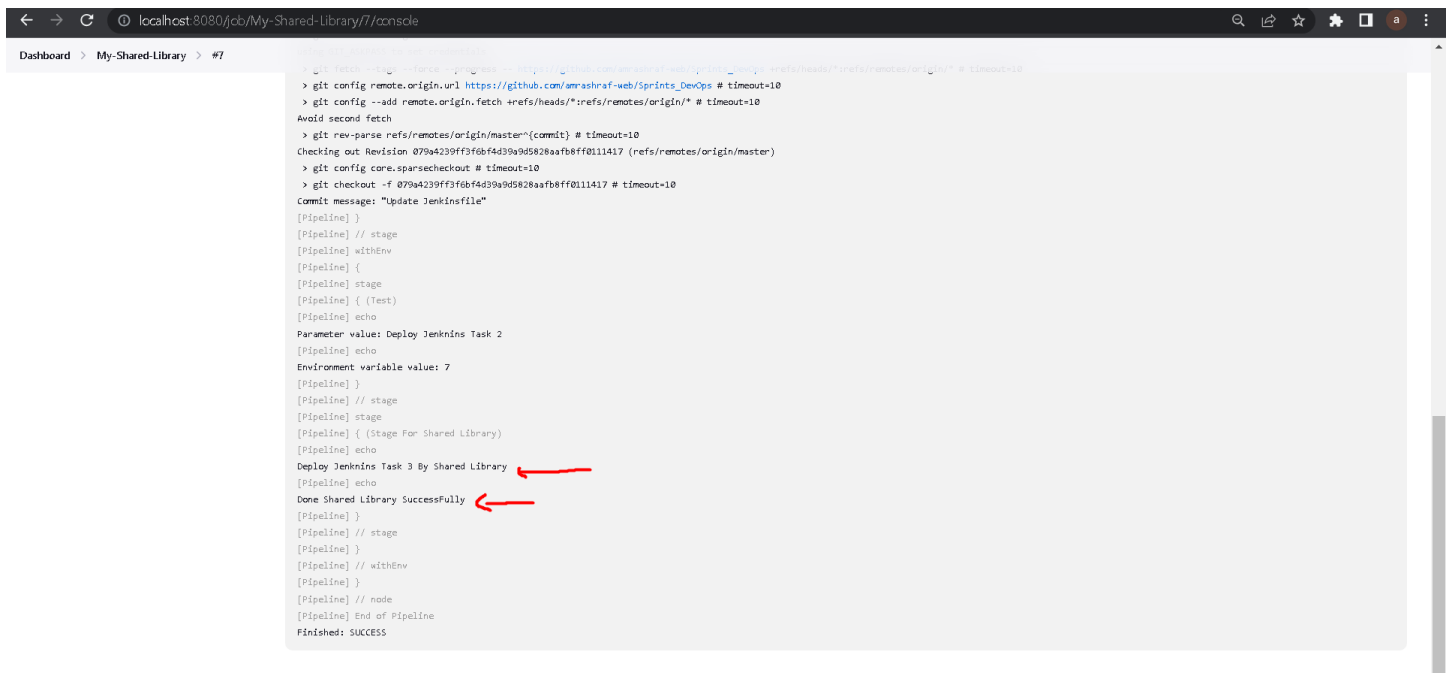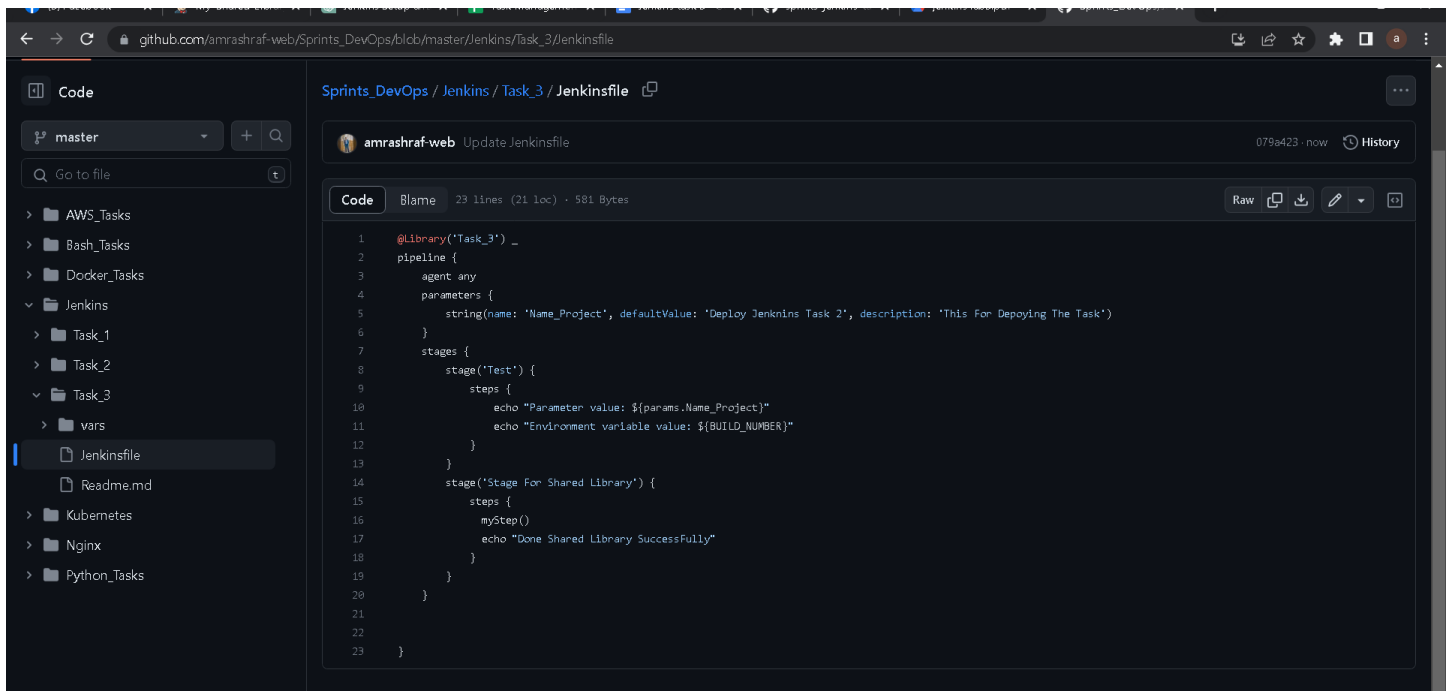
- AWS_Tasks
- Bash_Tasks
- Docker_Tasks
- Jenkins
  - Task_1
  - Task_2
  - Task_3
    - vars
    - Jenkinsfile
    - Readme.md
- Kubernetes
- Nginx
- Python_Tasks

Sprints_DevOps / Jenkins / Task_3 / Jenkinsfile

amrashraf-web Update Jenkinsfile

079a423 · now   History

Code   Blame   23 lines (21 loc) · 581 Bytes

Raw

```
1   @Library('Task_3') _
2   pipeline {
3       agent any
4       parameters {
5           string(name: 'Name_Project', defaultValue: 'Deploy Jenkins Task 2', description: 'This For Depoying The Task')
6       }
7       stages {
8           stage('Test') {
9               steps {
10                  echo "Parameter value: ${params.Name_Project}"
11                  echo "Environment variable value: ${BUILD_NUMBER}"
12              }
13          }
14          stage('Stage For Shared Library') {
15              steps {
16                  myStep()
17                  echo "Done Shared Library SuccessFully"
18              }
19          }
20      }
21  }
22
23  }
```

Dashboard > My-Shared-Library > #7

```
> git config remote.origin.url https://github.com/amrashraf-web/Sprints_DevOps # timeout=10
> git config --add remote.origin.fetch +refs/heads/*:refs/remotes/origin/* # timeout=10
Avoid second fetch
> git rev-parse refs/remotes/origin/master^{commit} # timeout=10
Checking out Revision 079a4239ff3f6bf4d39a9d5828aafb8ff0111417 (refs/remotes/origin/master)
> git config core.sparsecheckout # timeout=10
> git checkout -f 079a4239ff3f6bf4d39a9d5828aafb8ff0111417 # timeout=10
Commit message: "Update Jenkinsfile"
[Pipeline] }
[Pipeline] // stage
[Pipeline] withEnv
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Test)
[Pipeline] echo
Parameter value: Deploy Jenkins Task 2
[Pipeline] echo
Environment variable value: 7
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Stage For Shared Library)
[Pipeline] echo
Deploy Jenkins Task 3 By Shared Library
[Pipeline] echo
Done Shared Library SuccessFully
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

4 - Try to make new slave as container or ec2 server and configure master to use it

```
_="]'
Checking Java version in the PATH
openjdk version "11.0.19" 2023-04-18
OpenJDK Runtime Environment (build 11.0.19+7-post-Ubuntu-0ubuntu122.04.1)
OpenJDK 64-Bit Server VM (build 11.0.19+7-post-Ubuntu-0ubuntu122.04.1, mixed mode, sharing)
[06/23/23 16:17:14] [SSH] Checking java version of /home/ubuntu/jenkins/jdk/bin/java
Couldn't figure out the Java version of /home/ubuntu/jenkins/jdk/bin/java
bash: line 1: /home/ubuntu/jenkins/jdk/bin/java: No such file or directory

[06/23/23 16:17:14] [SSH] Checking java version of java
[06/23/23 16:17:15] [SSH] java -version returned 11.0.19.
[06/23/23 16:17:15] [SSH] Starting sftp client.
[06/23/23 16:17:15] [SSH] Copying latest remoting.jar...
[06/23/23 16:17:26] [SSH] Copied 1,370,647 bytes.
Expanded the channel window size to 4MB
[06/23/23 16:17:27] [SSH] Starting agent process: cd "/home/ubuntu/jenkins" && java  -jar remoting.jar -workDir /home/ubuntu/jenkins -jar-cache /home/ubuntu/jenkins/remoting/jarCache
Jun 23, 2023 2:17:27 PN org.jenkinsci.remoting.engine.WorkDirManager initializeWorkDir
INFO: Using /home/ubuntu/jenkins/remoting as a remoting work directory
Jun 23, 2023 2:17:27 PN org.jenkinsci.remoting.engine.WorkDirManager setupLogging
INFO: Both error and output logs will be printed to /home/ubuntu/jenkins/remoting
<===[JENKINS REMOTING CAPACITY]===>channel started
Remoting version: 3107.v665000b_51092
Launcher: SSHLauncher
Communication Protocol: Standard in/out
This is a Unix agent
WARNING: An illegal reflective access operation has occurred
WARNING: Illegal reflective access by jenkins.slaves.StandardOutputSwapper$ChannelSwapper to constructor java.io.FileDescriptor(int)
WARNING: Please consider reporting this to the maintainers of jenkins.slaves.StandardOutputSwapper$ChannelSwapper
WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations
WARNING: All illegal access operations will be denied in a future release
Evacuated stdout
Agent successfully connected and online
```

Configure

⚙ General

🔧 Advanced Project Options

🔗 Pipeline

Advanced Project Options

[Advanced ⌄]

Pipeline

Definition

[Pipeline script   ⌄]

Script ?

```
 1  pipeline {
 2     agent {label 'jenkins-slave-1'}
 3     stages {
 4        stage('Hello') {
 5           steps {
 6              echo 'Hello World'
 7           }
 8        }
 9     }
10  }
```

☑ Use Groovy Sandbox ?

Pipeline Syntax

[Save] [Apply]

Jenkins

Search (CTRL+K)   1   Amr Ashraf Mohamed   log out

Dashboard > jenkins-slave-1-project > #1

Status

Changes

Console Output

Console Output

View as plain text

Edit Build Information

Delete build '#1'

Restart from Stage

Replay

Pipeline Steps

Workspaces

```
Started by user Amr Ashraf Mohamed
[Pipeline] Start of Pipeline
[Pipeline] node
Running on jenkins-slave-1 in /home/ubuntu/jenkins/workspace/jenkins-slave-1-project
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Hello)
[Pipeline] echo
Hello World
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

Jenkins

Search (CTRL+K)   1   Amr Ashraf Mohamed   log out

Dashboard > jenkins-slave-1-project >

Status

Changes

Build Now

Configure

Delete Pipeline

Full Stage View

Rename

Pipeline Syntax

Build History   trend ⌄

Filter builds...   /

#1
Jun 23, 2023, 4:22 PM

Atom feed for all Atom feed for failures

Pipeline jenkins-slave-1-project

to run pipeline job on jenkins-slave-1

✎ Edit description

Disable Project

Stage View

	Hello
Average stage times: (Average full run time: ~ 1s)	124ms
#1 Jun 23 17:22 No Changes	124ms

Permalinks

• Last build (#1), 1 min 54 sec ago
• Last stable build (#1), 1 min 54 sec ago