

Jenkins

lab_1

1) What is Jenkins used for

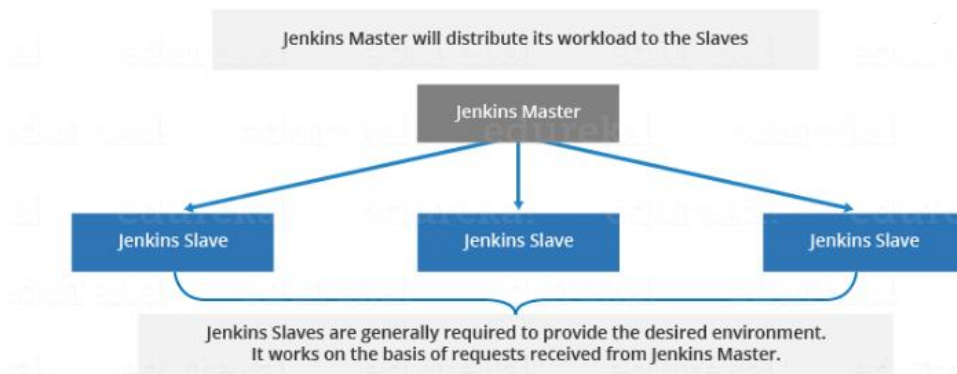
- Jenkins is used to build and test your product continuously, so developers can continuously integrate changes into the build.

2) What is Jenkins agent? What is Jenkins executor (Build Executor)?

- An agent is typically a machine, or container, which connects to a Jenkins controller and executes tasks when directed by the controller

- A Jenkins executor is one of the basic building blocks which allow a build to run on a node/agent (e.g. build server). Think of an executor as a single "process ID", or as the basic unit of resource that Jenkins executes on your machine to run a build.

3) Explain Jenkins master-slave architecture?



Jenkins Master

Your main Jenkins server is the Master. The Master's job is to handle:

- Scheduling build jobs.
- Dispatching builds to the slaves for the actual execution.
- Monitor the slaves (possibly taking them online and offline as required).
- Recording and presenting the build results.
- A Master instance of Jenkins can also execute build jobs directly.

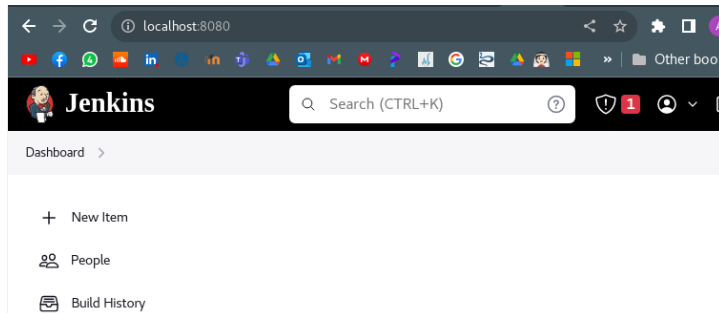
Jenkins Slave

A Slave is a Java executable that runs on a remote machine. Following are the characteristics of Jenkins Slaves:

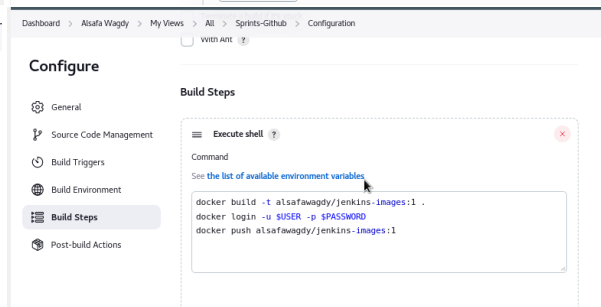
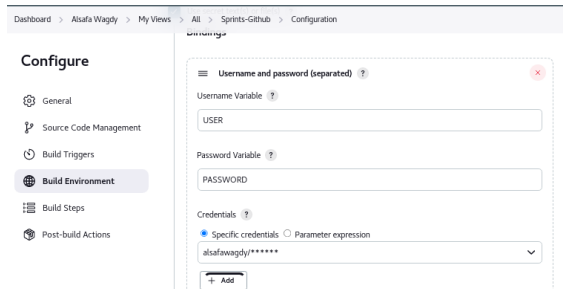
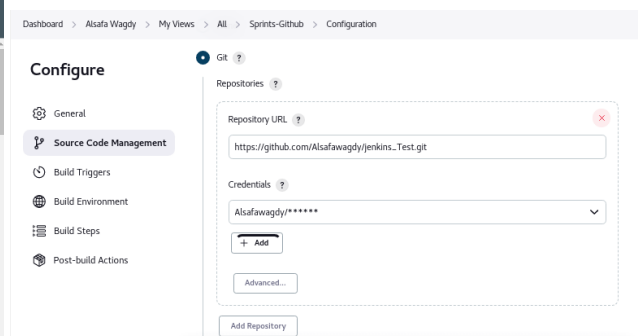
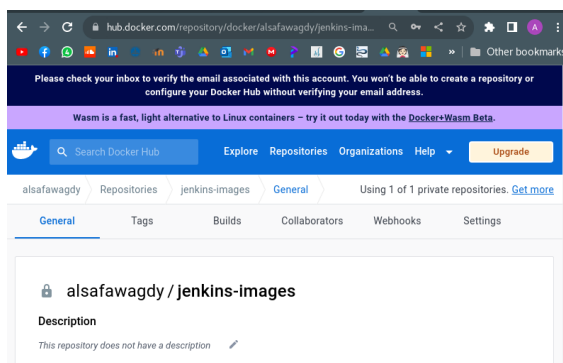
- It hears requests from the Jenkins Master instance.
- Slaves can run on a variety of operating systems.
- The job of a Slave is to do as they are told to, which involves executing build jobs dispatched by the Master.
- You can configure a project to always run on a particular Slave machine or a particular type of Slave machine, or simply let Jenkins pick the next available Slave.

4) Install jenkins with docker image.

```
[Alsaifa@Alsaifa ~]$ sudo docker run -p 8080:8080 -p 50000:50000 -d \
> -v jenkins_home:/var/jenkins_home \
> -v /var/run/docker.sock:/var/run/docker.sock \
> -v $(which docker):/usr/bin/docker jenkins/jenkins:lts
[sudo] password for Alsaifa:
bd26ca4dc31b095bcc9d5f3dbf17bb5a8331571a7fa62d65f1a4f233ada080f7
```



5) Create free style project and link it to private git repo containing any dockerfile then build an image from this dockerfile and push it to private docker repo



```
0512/c0d4/9b: Preparing
9c742cd6c7a5: Preparing
293d5db30c9f: Waiting
03127cdb479b: Waiting
9c742cd6c7a5: Waiting
6b5aaff44254: Mounted from library/openjdk
b626401ef603: Mounted from library/openjdk
9b55156abf26: Mounted from library/openjdk
53a0b163e995: Mounted from library/openjdk
9b5c615417f4: Pushed
293d5db30c9f: Mounted from library/openjdk
03127cdb479b: Mounted from library/openjdk
9c742cd6c7a5: Mounted from library/openjdk
1: digest: sha256:c2c0da1feb39a1b42d9b328d527c30484f5cf83ca8c1fceb445aa287bee1cdc5
size: 2003
Finished: SUCCESS
```

