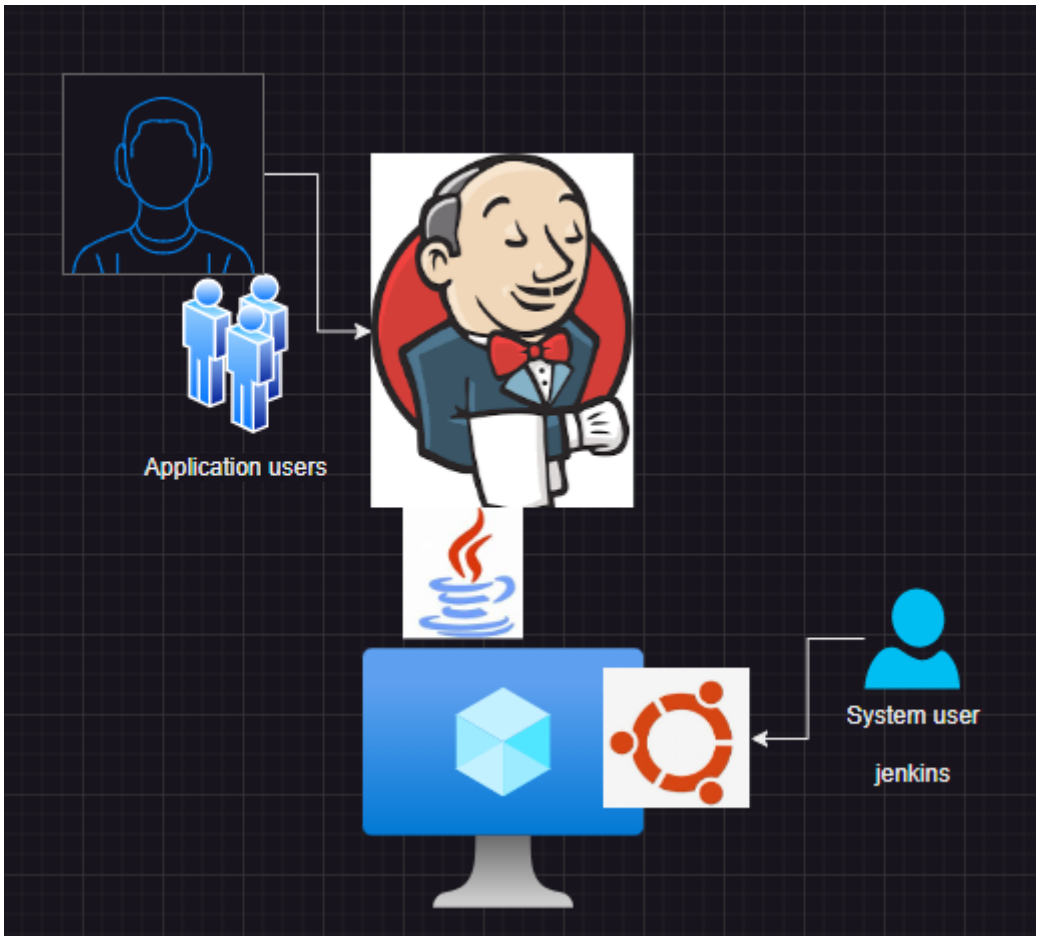
Jenkins

User Management in Jenkins

- Jenkins Applications can have many users and groups



- Users can be created in jenkins using Jenkins database
- Users can be imported from
    - Active Directory
    - Unix groups
    - Java Servlet
- The above options can be Changed setting present in Manage Jenkins => Security
- Users can be created from Manage Jenkins => users
- Jenkins Authorization can be set by matrix based authorization.

Jenkins Home Directory and Workspace

- `JENKINS_HOME` Environmental variable will have the path of the jenkins home directory
- Jenkins home directory is the memory of jenkins i.e. Backup of Jenkins is backing up the Home directory
- When we execute any project, it will be executed in the workspace

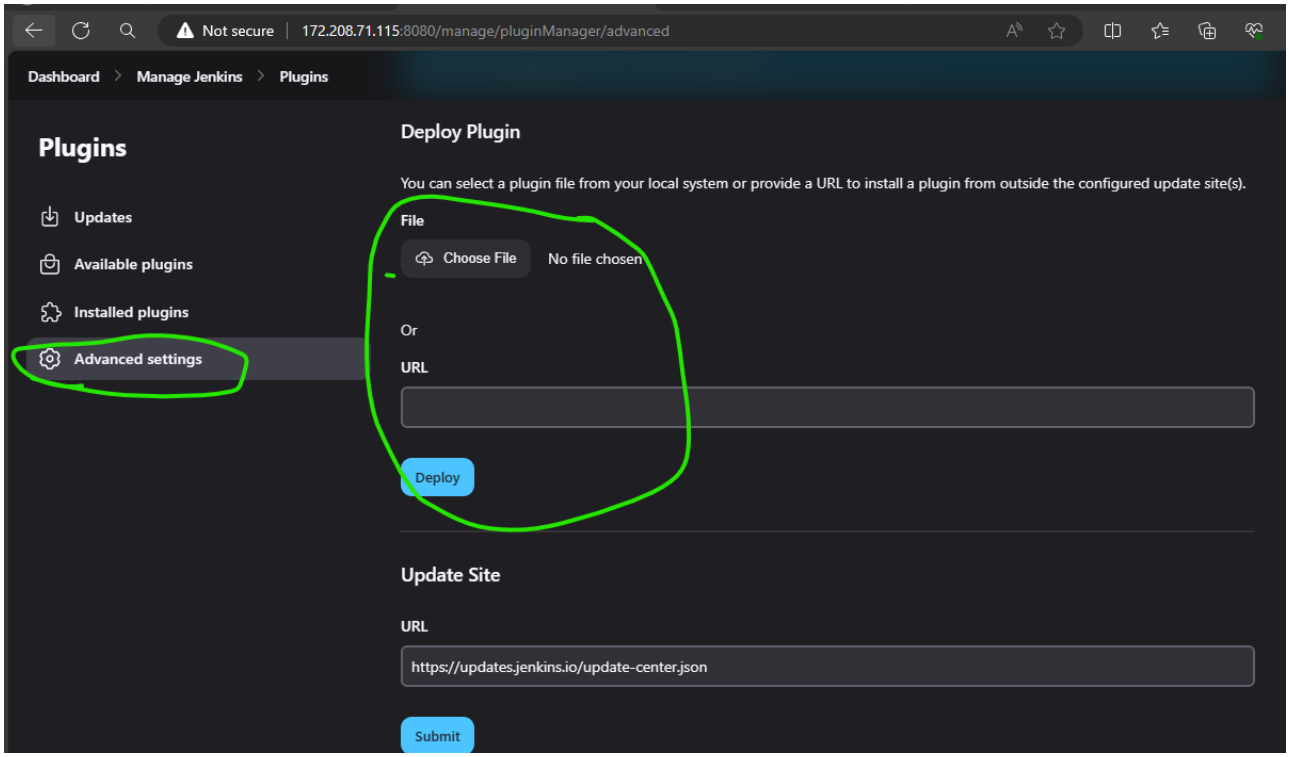
```
# directory
<JENKINS_HOME>/workspace/<project-name>
```

- When we create any project ti will be stored as xml file in jobs folder

```
# directory
<JENKINS_HOME>/jobs/<project-name>
```

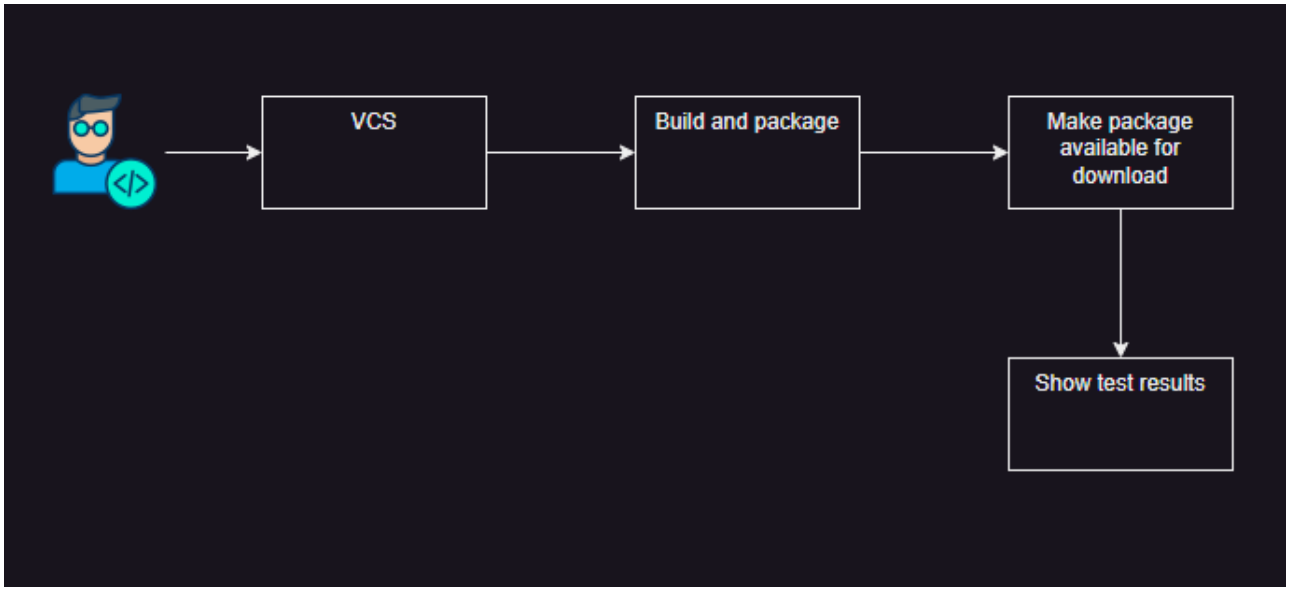
plugin

- Plugin in jenkins provides functionality in terms of
  - UI in freestyle projects
  - steps in declartive/scripted pipelines
  - Some additional configurations
- Plugins can be found from available plugins section
- To install additional plugins developed by your organization or third party purchase, we need to specify the path of hpi (hudson plugin interface) or jpi (jenkins plugin interface).

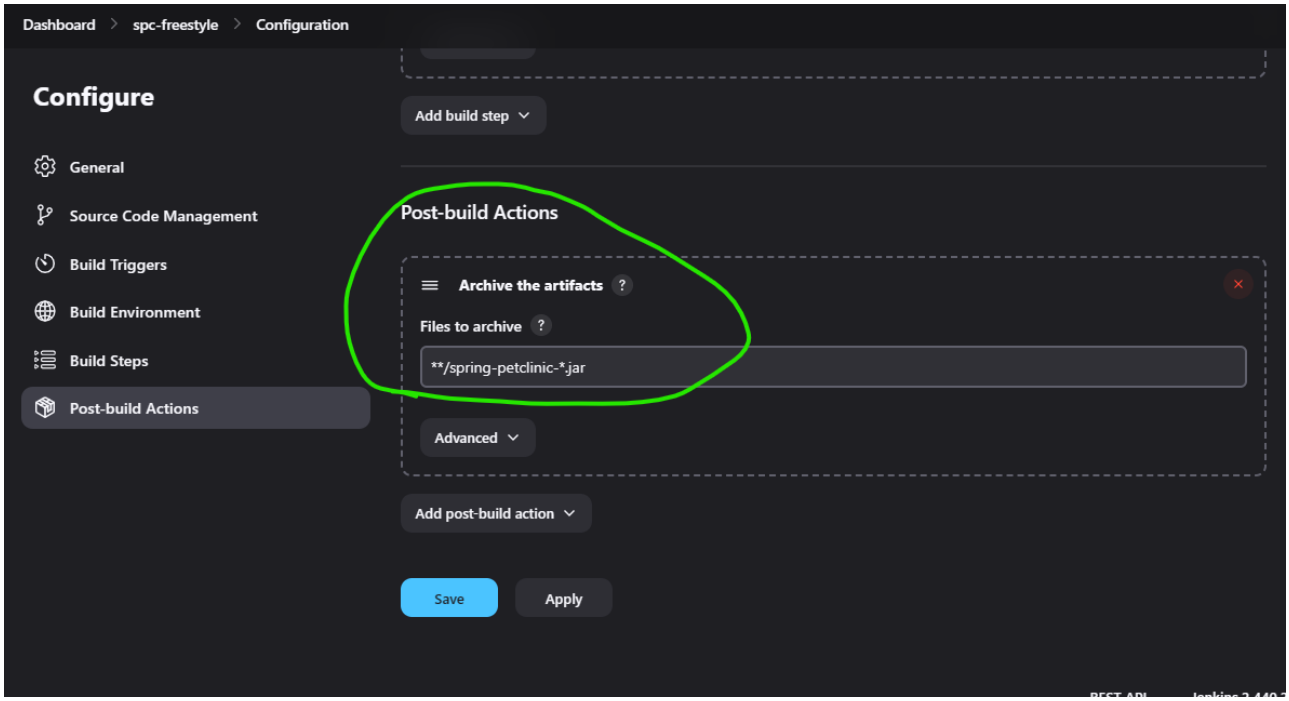


Archiving the artifacts and showing test results

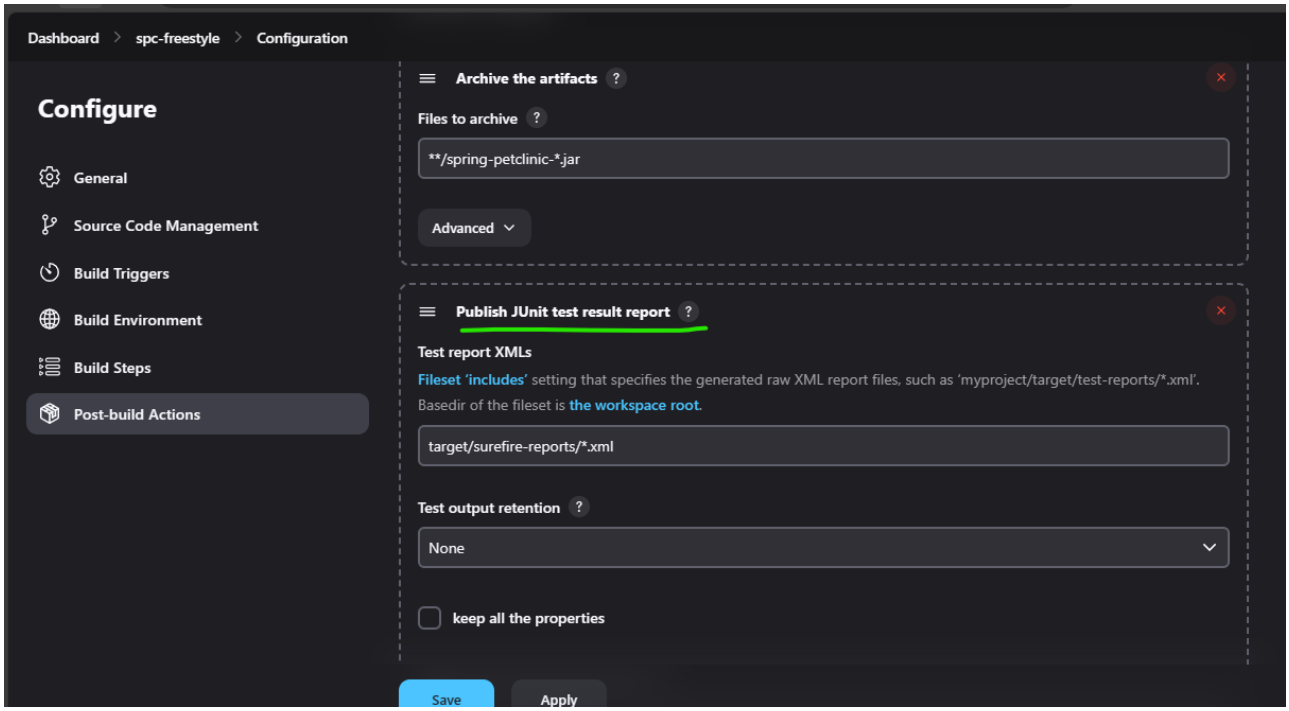
- overview

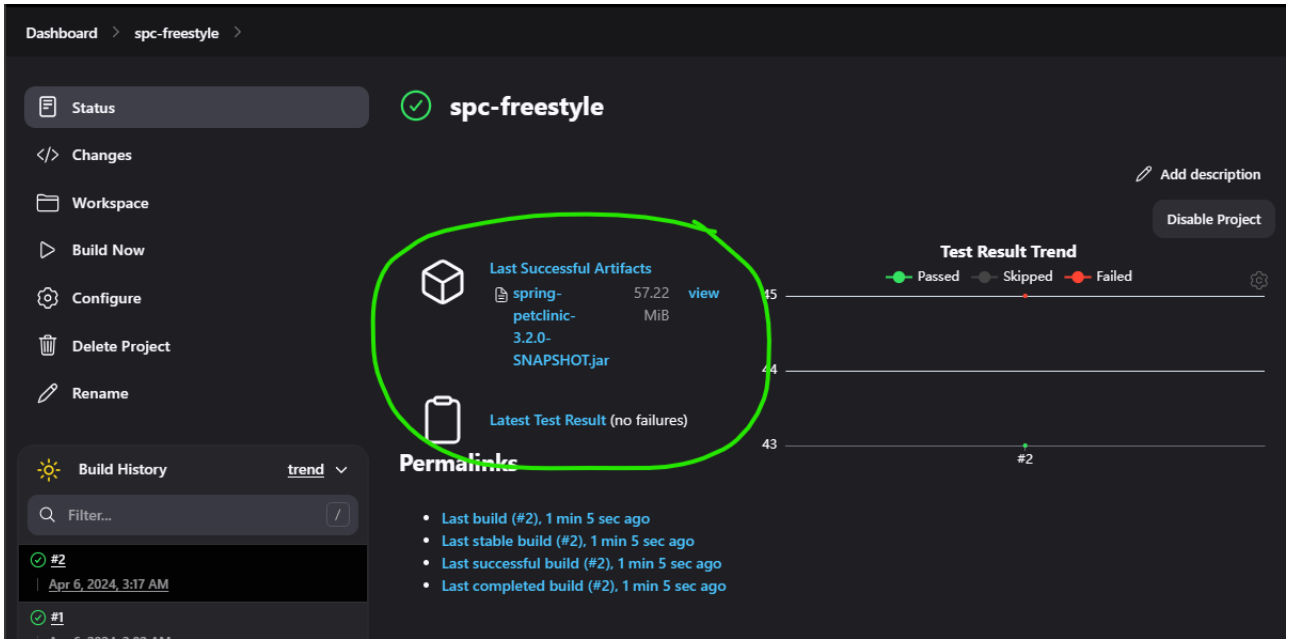


- Archive jar file (Post Build)



- Publishing junit test results (Post Build)

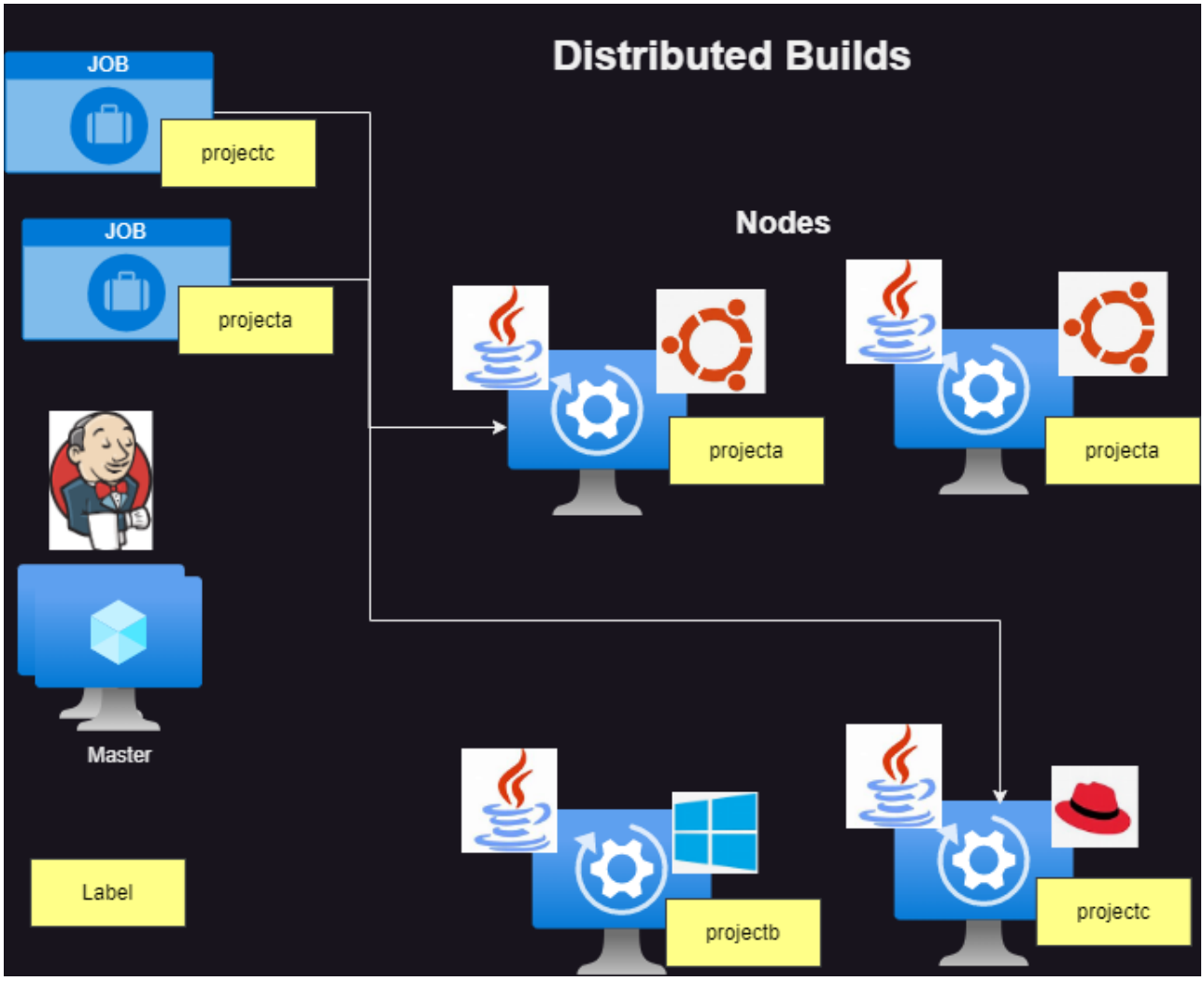




Distributed Builds

- We have a Jenkins Master(s) and Node(s)
- Each of Node will have a label.

- Jenkins jobs can be scheduled on nodes matching labels



Configure a centos node with java 8

- purpose: building jdk 8 projects
- Adding a linux node to jenkins master
- Create a centos 7 node
- ssh into it
- Install jdk 8 for jenkins master to communicate with node

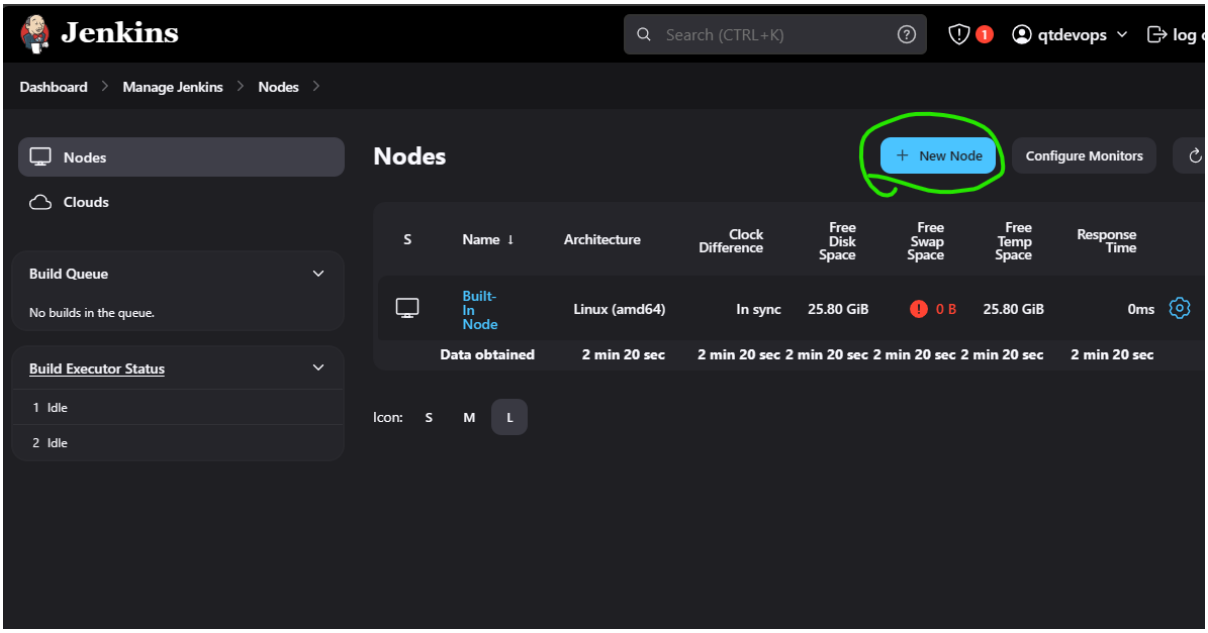
```
sudo yum install java-1.8.0-openjdk-devel -y
```

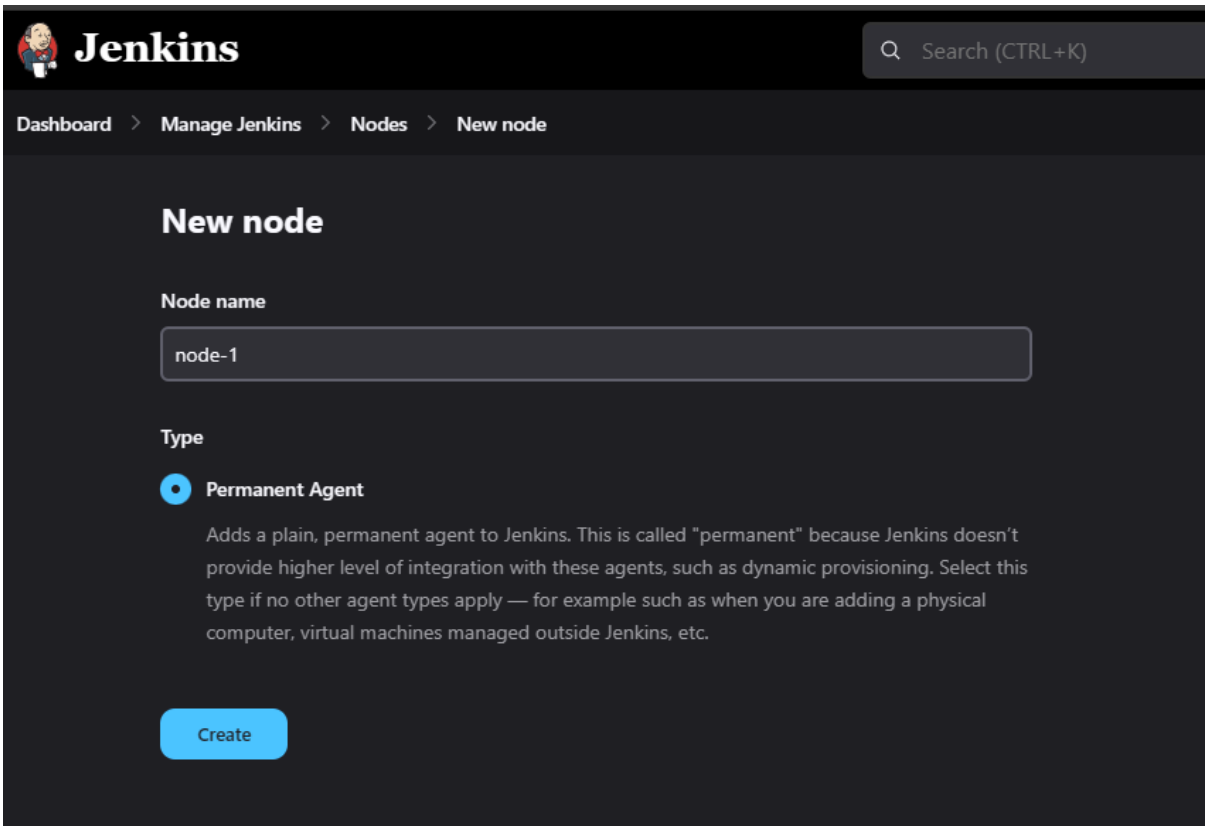
- Install maven and git

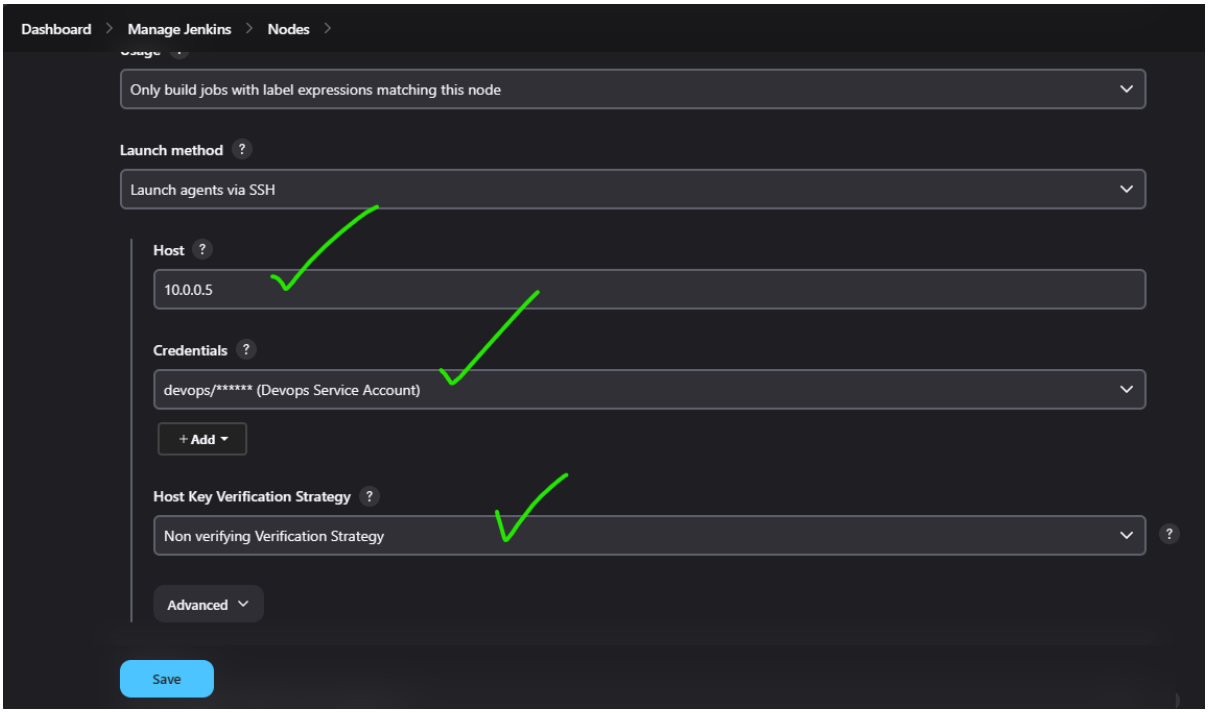
```
sudo yum install git maven -y
```

- Configure this node on Jenkins

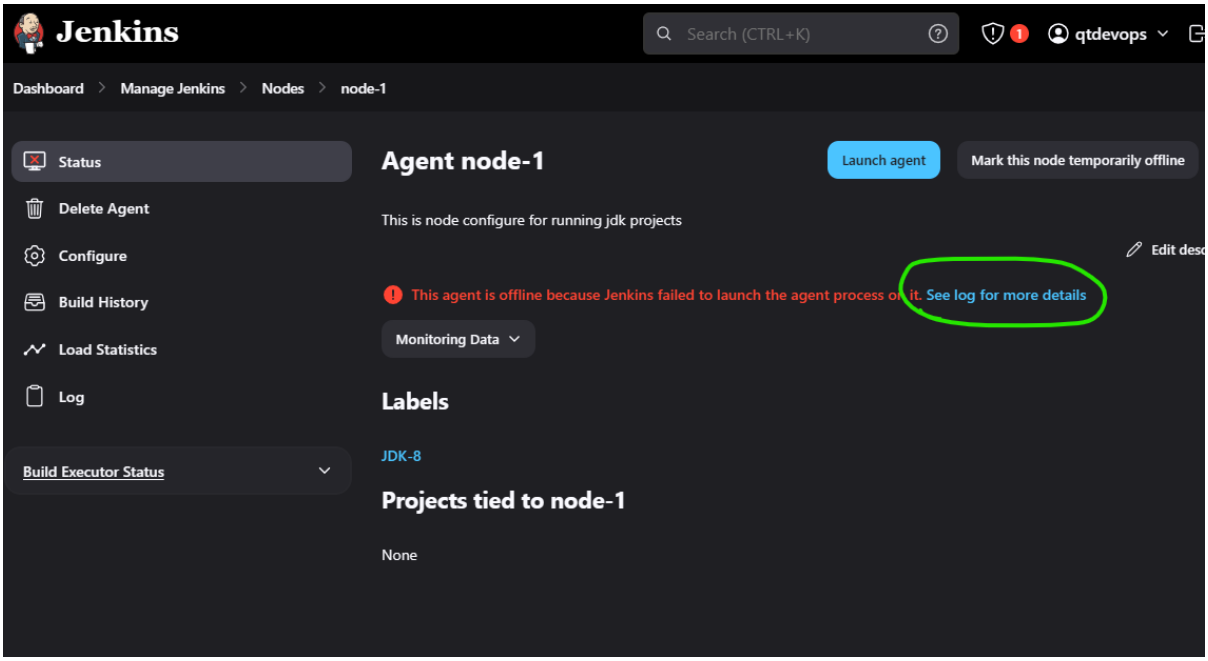
- Navigate to Manage Jenkins => Nodes => New Node




Jenkins
Search (CTRL+K)
Dashboard > Manage Jenkins > Nodes > New node
New node
Node name
node-1
Type
Permanent Agent
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.
Create


Dashboard > Manage Jenkins > Nodes >
Only build jobs with label expressions matching this node
Launch method
Launch agents via SSH
Host
10.0.0.5
Credentials
devops/****** (Devops Service Account)
+ Add
Host Key Verification Strategy
Non verifying Verification Strategy
Advanced
Save

- Agent is not configure due to



- To fix this install jdk-11 and ensure you follow classroom recording
- Do the same activity as exercise.

Exercise

- Create a jenkins server and run any of
  - spring petclinic
  - nopcommerce
  - gameoflife