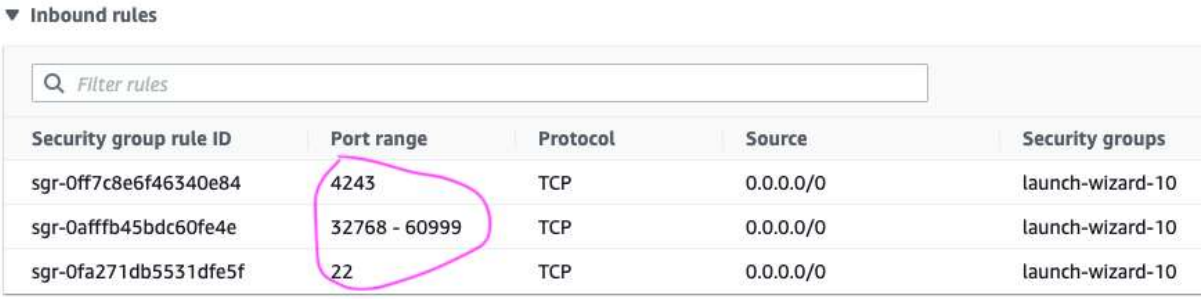
JENKINS MASTER SLAVE CONFIGURATION

This article shows how to setup slave nodes using Docker and integrate with Jenkins Master.

Pre-requisites:

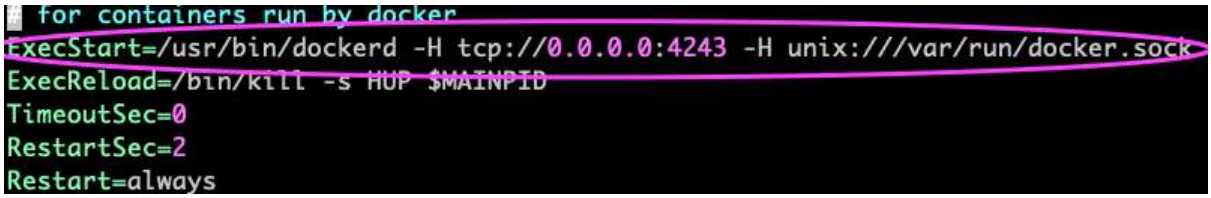
- Jenkins Master is already setup and running
- port 8080 opened in Jenkins EC2's firewall rule
- Setup Docker host. Creating another EC2 instance is recommended to serve as a Docker Host.
- port 4243 opened in docker host machine
- 32768 - 60999 opened in docker host machine



Step 1 - Configure Docker Host with Remote API

Login to Docker host machine. Open docker service file. Search for ExecStart and replace that line with the following.

sudo vi /lib/systemd/system/docker.service



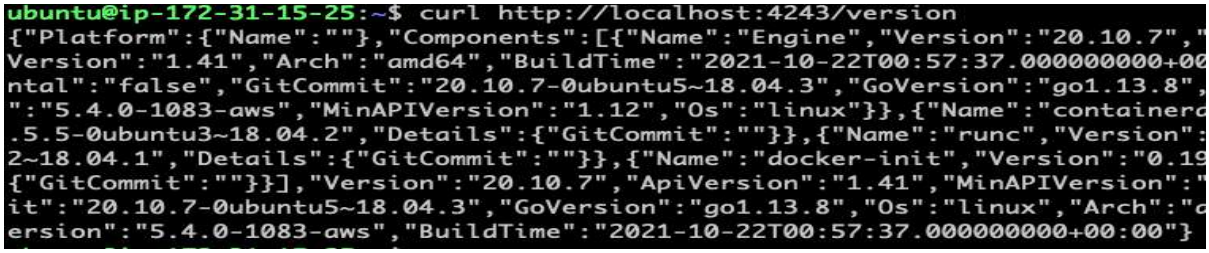
You can replace with below line:
ExecStart=/usr/bin/dockerd -H tcp://0.0.0.0:4243 -H unix:///var/run/docker.sock

Restart Docker service

sudo systemctl daemon-reload
sudo service docker restart

Validate API by executing below curl command

curl http://localhost:4243/version



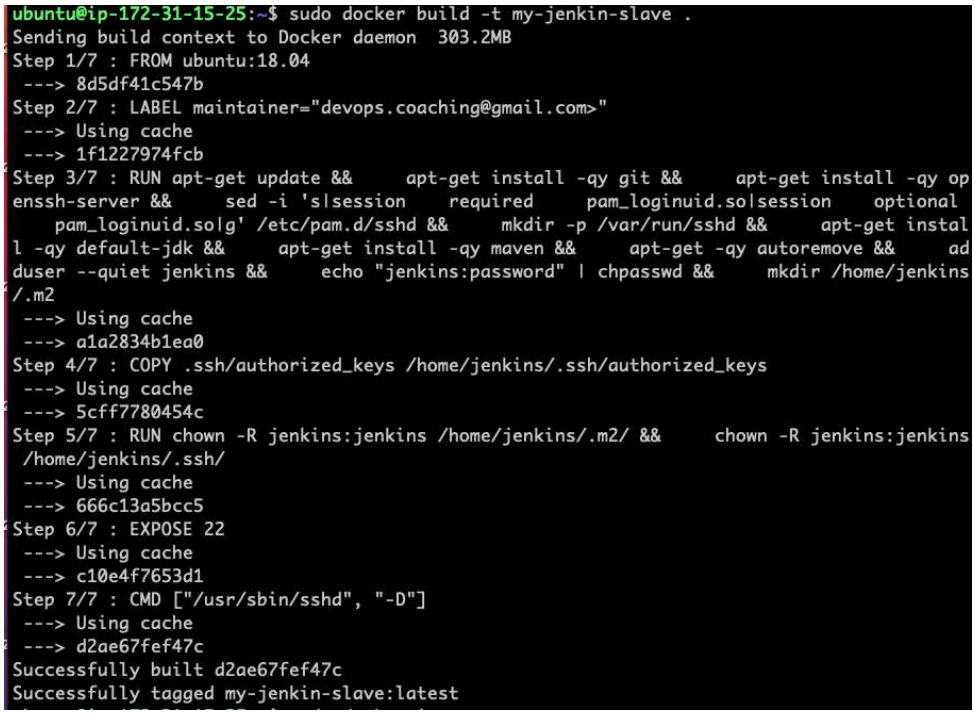
Step 2 - Build Jenkins slave Docker image

Download Dockerfile from below repo.

git clone https://github.com/sushant-technocirrus/jenkins-slave.git ;
cd jenkins-docker-slave

Build Docker image

sudo docker build -t my-jenkins-slave .



- Perform below command to see the list of docker images:

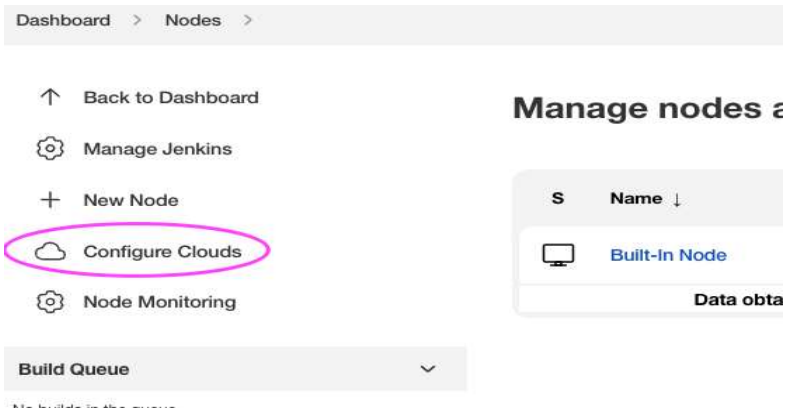
sudo docker images

```
ubuntu@ip-172-31-15-25:~$ sudo docker images
REPOSITORY          TAG       IMAGE ID       CREATED          SIZE
my-jenkins-slave    latest    d2ae67fef47c   40 minutes ago   857MB
ubuntu              18.04     8d5df41c547b   10 days ago      63.1MB
```

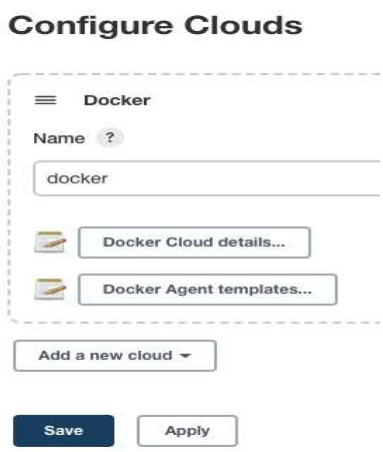
Step 3 - Configure Jenkins Server with Docker plug-in

- Now login to Jenkins Master. Make sure you install Docker plug-in in Jenkins.

- Now go to Manage Jenkins -> Configure Nodes Cloud



- Click on Docker Cloud Details

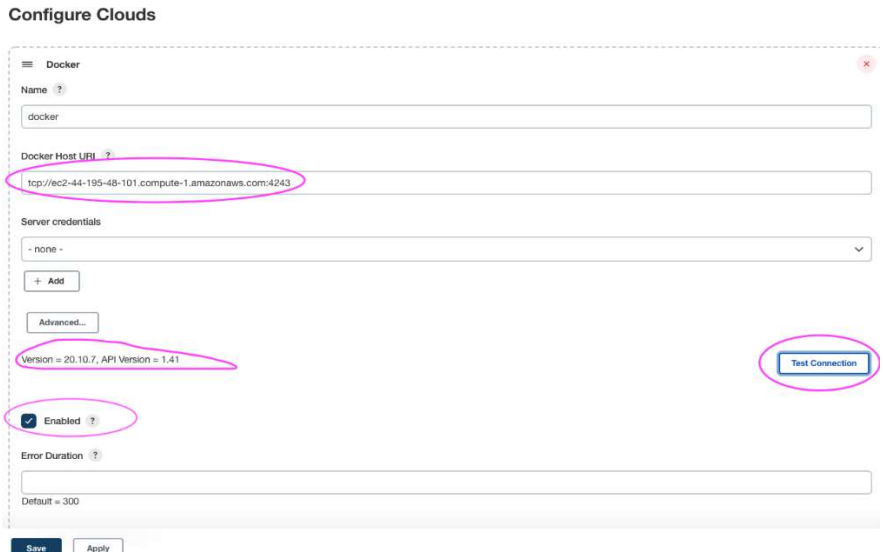


Enter docker host dns name or ip address

tcp://:<docker_host_dns>:4243

Make sure Enabled is selected

Now click on Test Connection to make sure connecting with docker host is working.



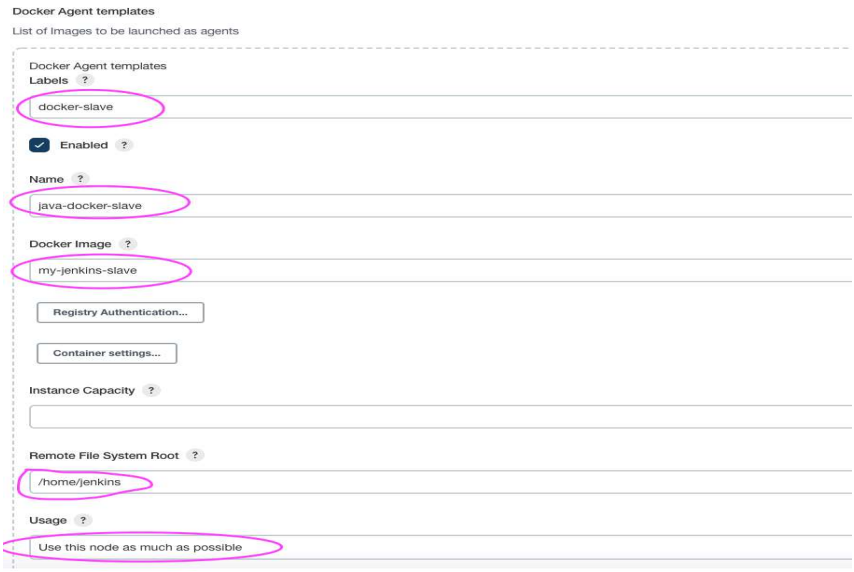
Step 4 - Configure Docker Agent Templates

Now click on Docker Agent templates:

Enter label as "docker-slave" and give some name

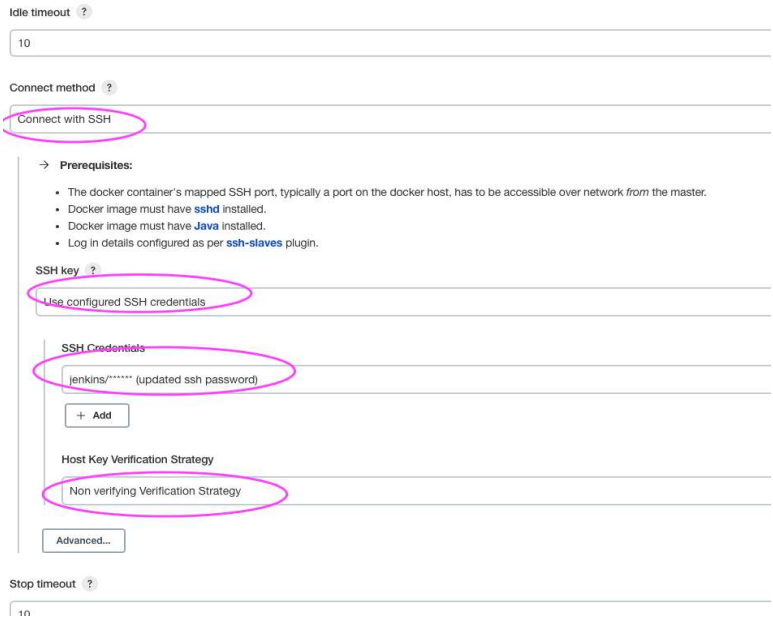
Click on Enabled

Now enter the name of the docker image you have built previously in docker host.
enter /home/jenkins as Remote file system root

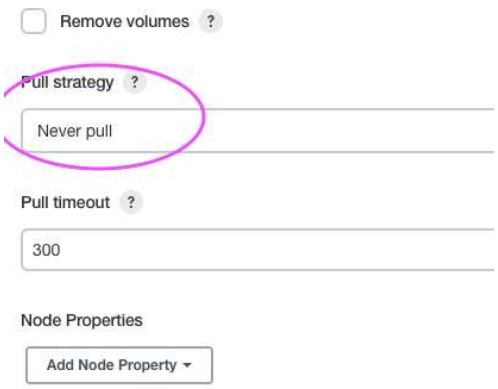


Choose Connect with SSH as connection method:

Enter SSH credentials per your Dockerfile - jenkins/password



choose Never Pull as pull strategy as we have already image stored in DockerHost.



Click on Save.

Step 5 - Create build job in Jenkins

Now Create a pipeline job in Jenkins with below pipeline code:

```
pipeline {
    agent {
        label "docker-slave"
    }
    stages {
        stage('Hello') {
            steps {
                echo 'Hello World'
            }
        }
    }
}
```

Click Apply and Save.

Now build the job. Now you will see output like below: