

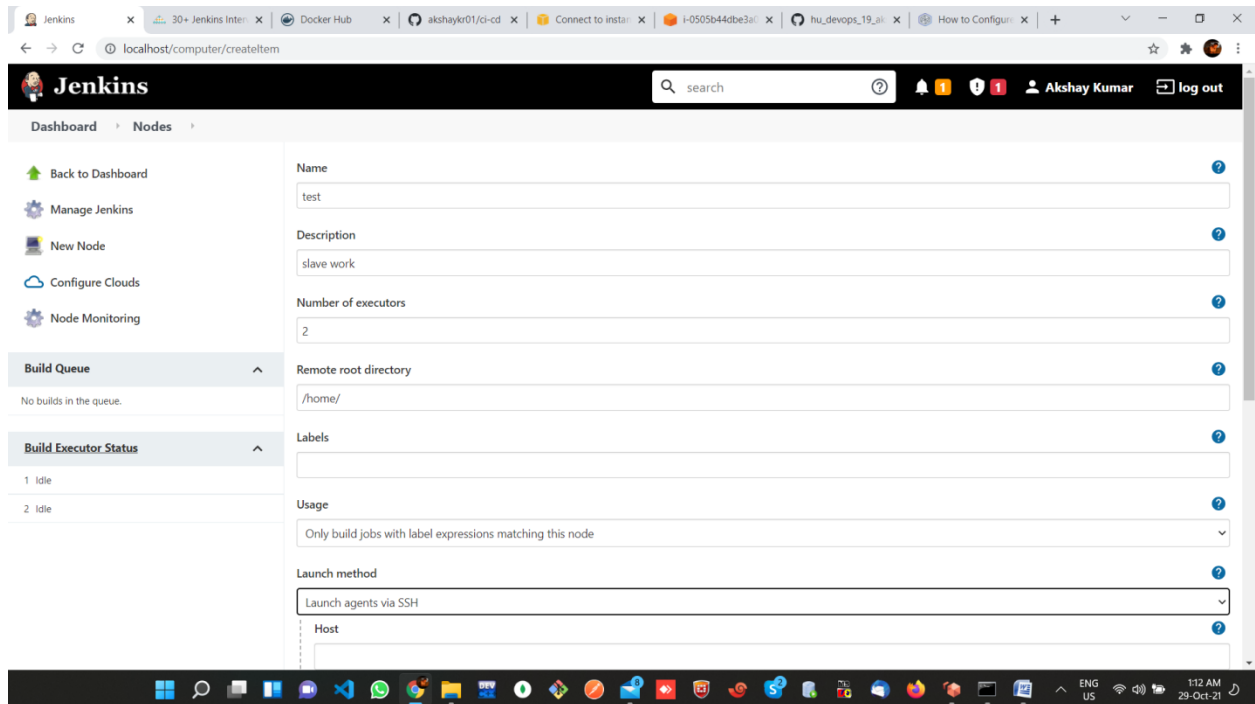
1. Create a master / slave configuration.

Install docker on the workspace.

Install Jenkins on the workspace

Answer: Create a simple pipeline that executes on the slave.

Following are the steps are done:





Pipeline for slave used as:

```
node('test'){  
    stage('stage1') {  
        sh "'echo stage1 steps'"  
    }  
    stage('stage2') {  
        sh "'echo stage2 steps'"  
    }  
    stage('stage3') {  
        sh "'echo stage3 steps'"  
    }  
}
```



2. Create a declarative pipeline to build docker images and push to Dockerhub.

Answer:

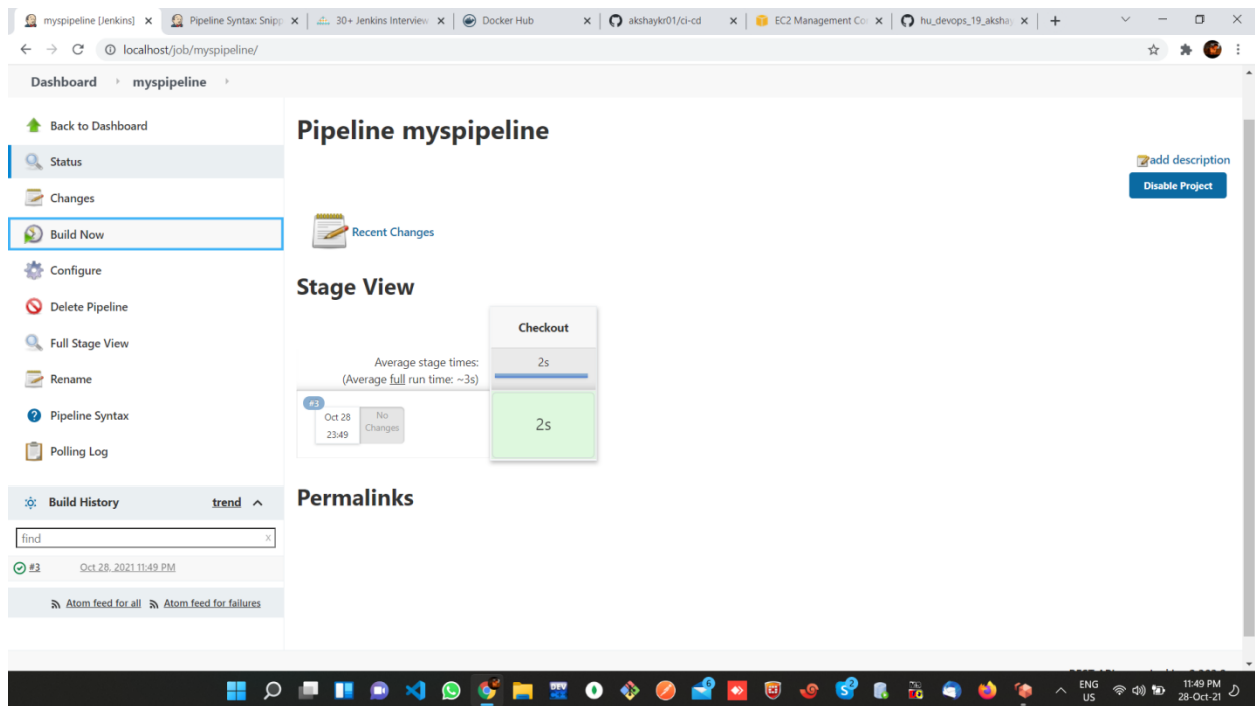
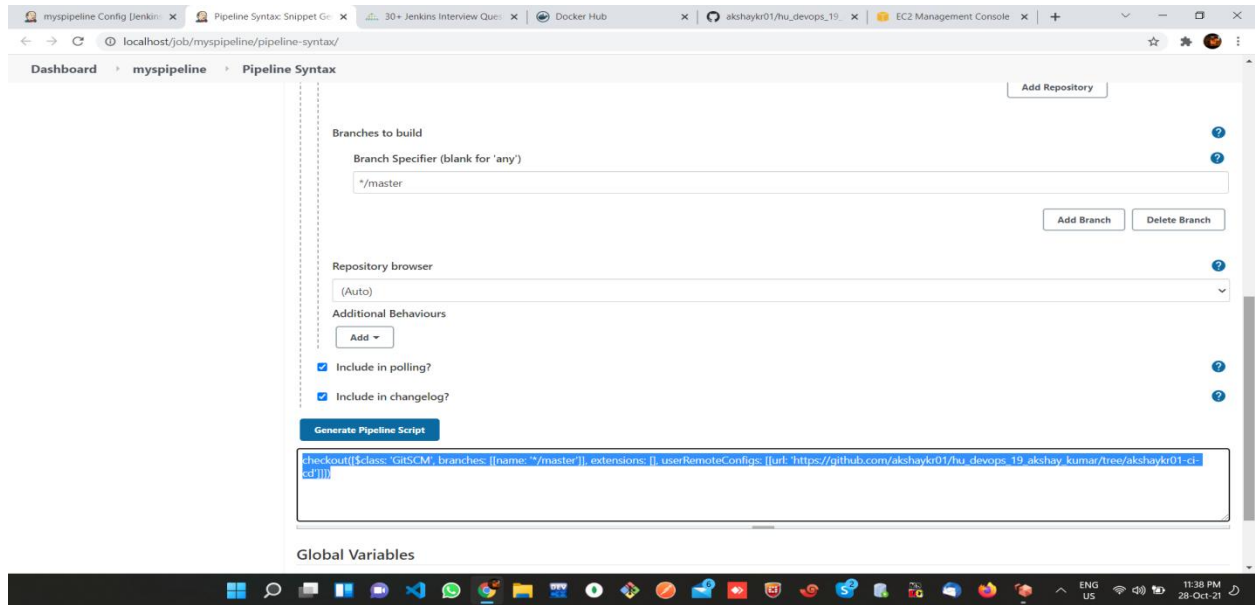
Different stages are being done for this. Like creating stages as checkout, build, push.

Showing the above using the screenshots:

The screenshot displays the Jenkins web interface for managing global credentials. The breadcrumb trail is: Dashboard > Credentials > System > Global credentials (unrestricted). The page title is "Global credentials (unrestricted)". Below the title, it states: "Credentials that should be available irrespective of domain specification to requirements matching." A table lists the credentials:

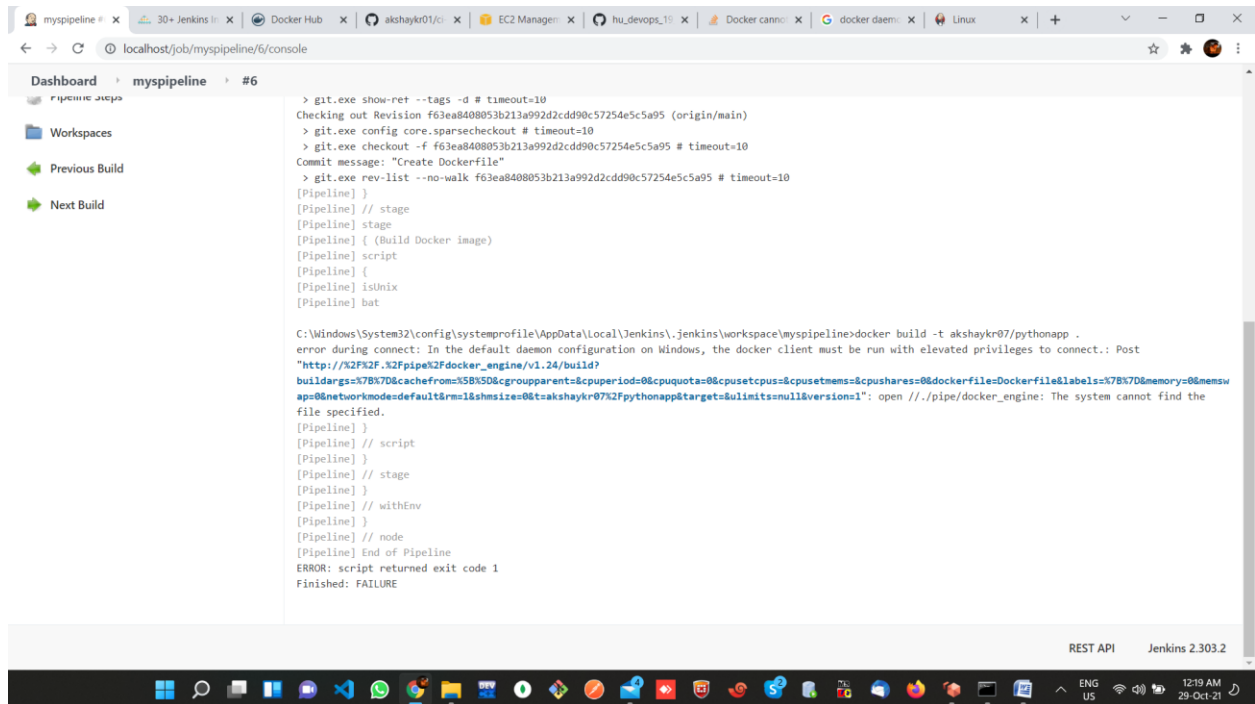
ID	Name	Kind	Description
 docker_id	akshaykr07/***** (docker_id)	Username with password	docker_id 

Below the table, there is a section for "Icon: S M L". At the bottom right of the page, it says "REST API" and "Jenkins 2.303.2". The Windows taskbar at the bottom shows the time as 11:17 PM on 28-Oct-21.



Due to problem in Docker daemon it is not going currently but I have the complete pipeline file.

Showing the problem of docker-daemon in my system.



The screenshot shows a Jenkins console output for a job named 'mypipeline' at build #6. The output displays the following commands and their results:

```
> git.exe show-ref --tags -d # timeout=10
Checking out Revision f63ea8408053b213a992d2cdd90c57254e5c5a95 (origin/main)
> git.exe config core.sparsecheckout # timeout=10
> git.exe checkout -f f63ea8408053b213a992d2cdd90c57254e5c5a95 # timeout=10
Commit message: "Create Dockerfile"
> git.exe rev-list --no-walk f63ea8408053b213a992d2cdd90c57254e5c5a95 # timeout=10
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Build Docker image)
[Pipeline] script
[Pipeline] {
[Pipeline] isUnix
[Pipeline] bat

C:\Windows\System32\config\systemprofile\AppData\Local\Jenkins\.jenkins\workspace\mypipeline>docker build -t akshaykr07/pythonapp .
error during connect: In the default daemon configuration on Windows, the docker client must be run with elevated privileges to connect.: Post
"http://K2F32F.X2Fpipe%2Fdocker_engine/v1.24/build?
buildargs=%7B%7D&cachefrom=%5B%5D&cgroupparent=&cpuquota=0&cpusetcpus=&cpusetmems=&cpushares=0&dockerfile=Dockerfile&labels=%7B%7D&memory=0&memsw
ap=0&networkmode=default&rm=1&shmsize=0&t=akshaykr07X2Fpythonapp&target=&ulimits=null&version=1": open //.pipe/docker_engine: The system cannot find the
file specified.
[Pipeline] }
[Pipeline] // script
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
ERROR: script returned exit code 1
Finished: FAILURE
```

The error message indicates that the Docker client is unable to connect to the Docker daemon on Windows. The error suggests that the Docker client must be run with elevated privileges to connect. The console output shows the Jenkins job failing with the error message "ERROR: script returned exit code 1".

2. Use an agent name as a label in multi stage pipeline and echo your name in each stage.

Answer:

For this given agent name as 'akshay' in the declarative pipeline and there used stages ti echo my name.

Here is the pipeline:

```
pipeline {  
    agent { label 'test' }  
  
    stages {  
        stage('Dev') {  
            steps {  
                echo 'Hello World'  
            }  
        }  
  
        stage('Prod') {  
            steps {  
                echo 'Hello World'  
            }  
        }  
    }  
}
```

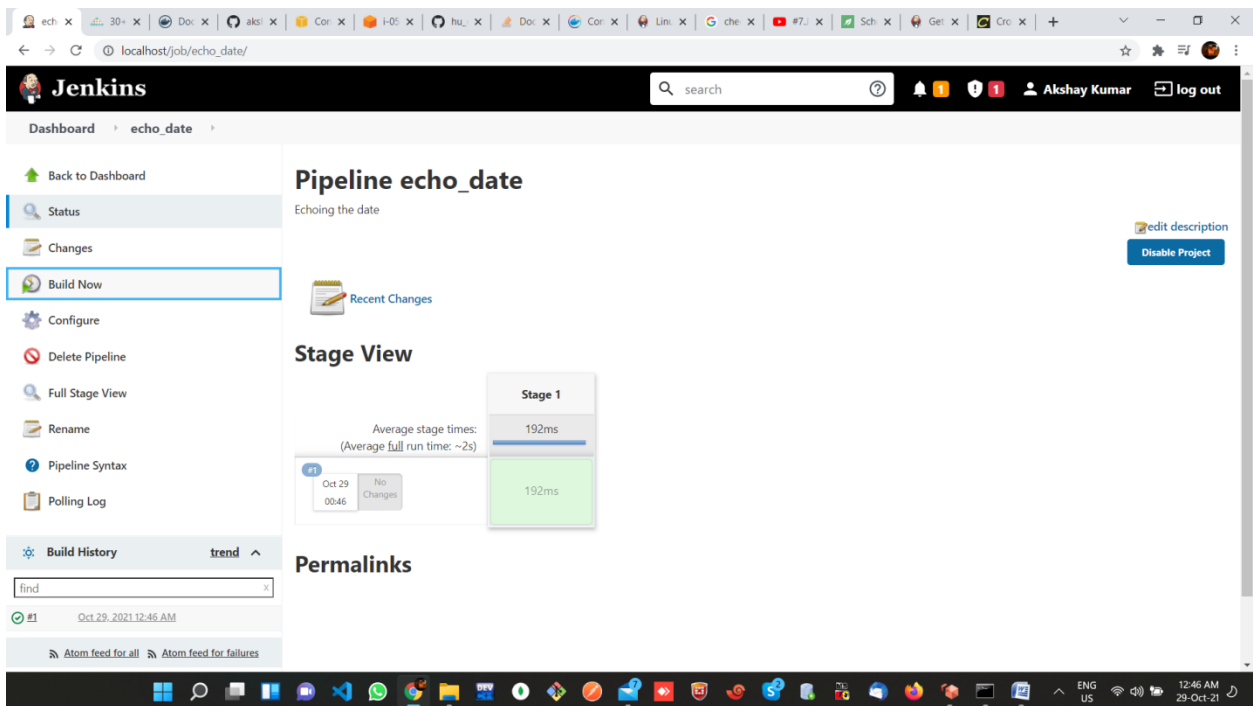




4. Schedule jobs to execute for every 5 hr and echo date.

Answer:

Giving screenshot in support of this:



We can see that build is successful.

Now showing the console.

The screenshot shows the Jenkins web interface in a browser. The top navigation bar includes the Jenkins logo, a search bar, and user information for 'Akshay Kumar'. The breadcrumb trail is 'Dashboard > echo-date > #1'. On the left sidebar, the 'Console Output' option is selected. The main content area displays the console output for build #1, which includes the following text:

```
Started by user Akshay Kumar
Running as SYSTEM
Building in workspace C:\WINDOWS\system32\config\systemprofile\AppData\Local\Jenkins\.jenkins\workspace\echo-date
[echo-date] $ cmd /c call C:\WINDOWS\TEMP\jenkins8851548254586592658.bat
C:\Windows\System32\config\systemprofile\AppData\Local\Jenkins\.jenkins\workspace\echo-date>echo Fri 10/29/2021
Fri 10/29/2021
C:\Windows\System32\config\systemprofile\AppData\Local\Jenkins\.jenkins\workspace\echo-date>exit 0
Finished: SUCCESS
```

At the bottom right of the interface, it says 'REST API' and 'Jenkins 2.303.2'. The Windows taskbar is visible at the very bottom of the image.

We can see the date in the console output.

Github link: [https://github.com/akshaykr01/hu\\_devops\\_19\\_akshay\\_kumar/tree/akshaykr01-ci-cd](https://github.com/akshaykr01/hu_devops_19_akshay_kumar/tree/akshaykr01-ci-cd)