# **Jenkins - Installation**

Jenkins is one of the most popular, if not the most popular, continuous integration (CI) and continuous deployment tool available.

go to <https://pkg.jenkins.io/> web page and download Jenkins rpm file using wget command .

To use the CentOS repository, run the following command:

sudo wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat-stable/jenkins.repo

sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io.key

Now we need to install Jenkins on our machine using the command:

yum install jenkins

Check jenkins port no in below file:

# vi /etc/sysconfig/Jenkins

Jenkins requires Java in order to run. To install the Open Java Development Kit (OpenJDK) run the following:

wget --no-cookies --no-check-certificate --header "Cookie: gpw\_e24=http%3A%2F%2Fwww.oracle.com%2Ftechnetwork%2Fjava%2Fjavase%2Fdownloads%2Fjdk8-downloads-2133151.html; oraclelicense=accept-securebackup-cookie;" "http://download.oracle.com/otn-pub/java/jdk/8u171-b11/512cd62ec5174c3487ac17c61aaa89e8/jdk-8u171-linux-x64.rpm

sudo rpm –import http://download.oracle.com/otn-pub/java/jdk/8u171-b11/512cd62ec5174c3487ac17c61aaa89e8/jdk-8u171-linux-x64.rpm

yum install java

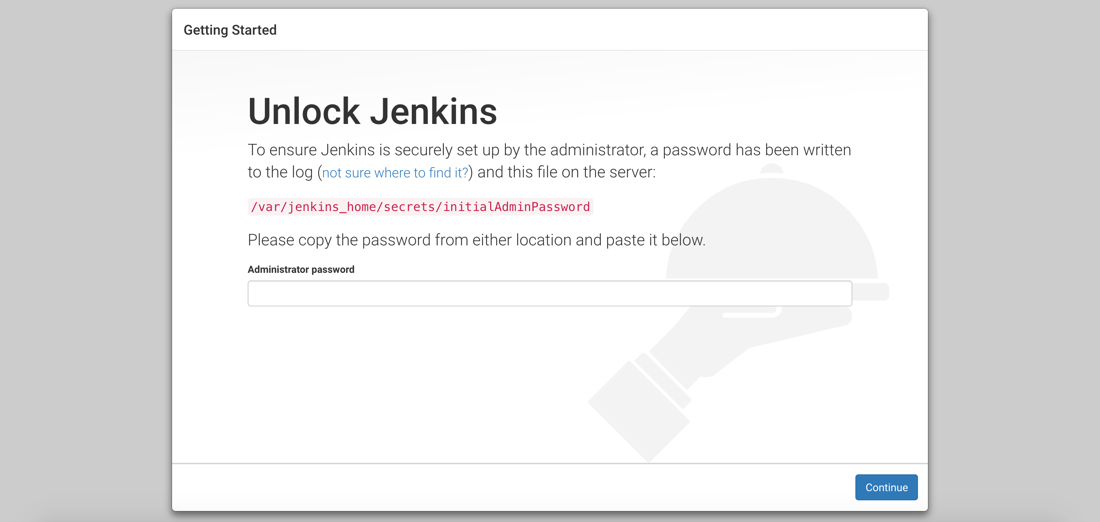
Start Jenkins service on your machine using the commands,

# service start jenkins (OR) # systemctl start jenkins.service

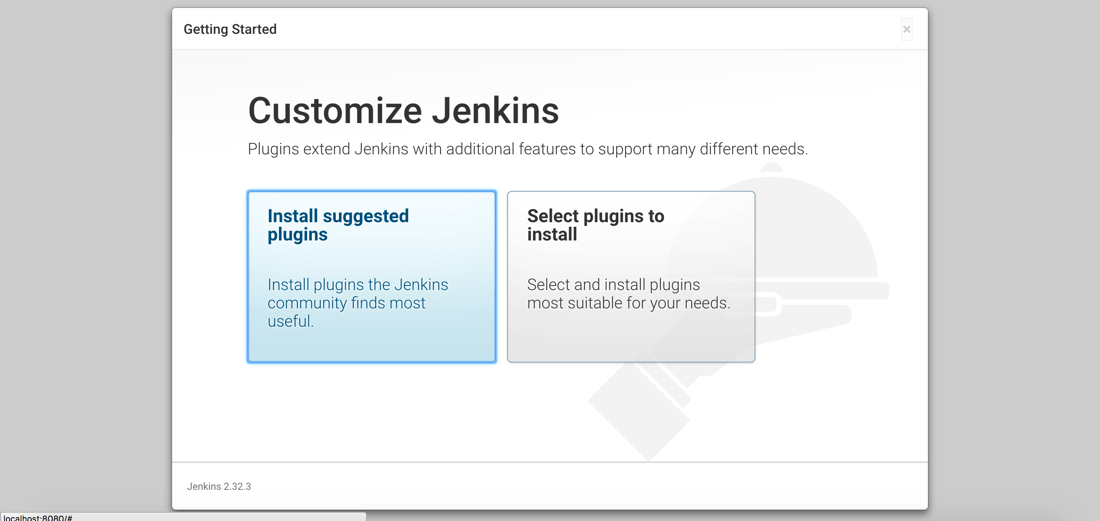
After a few minutes, Jenkins will be running. Make sure you note the generated password that shows up in the Terminal or Command Prompt as you’ll need it during the setup.

**Configuring Jenkins and Installing the Plugin Dependencies**

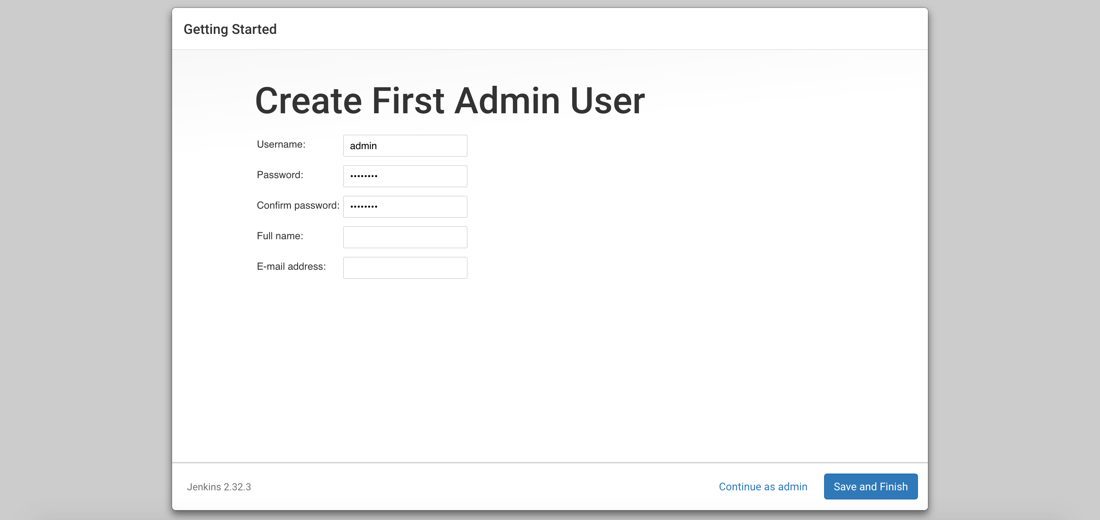
Navigate to [**http://your IP address:8080**](http://localhost:8080/) in your browser to start the configuration process. The first thing you see should look something like the following.



enter the generated password to move onto the next screen. The next screen should prompt you to decide how you want to install available plugins. The next screen looks as below:



It may take some time to install all the plugins depending on your internet connection. Once the plugins have installed, you’ll be prompted to create an admin user.

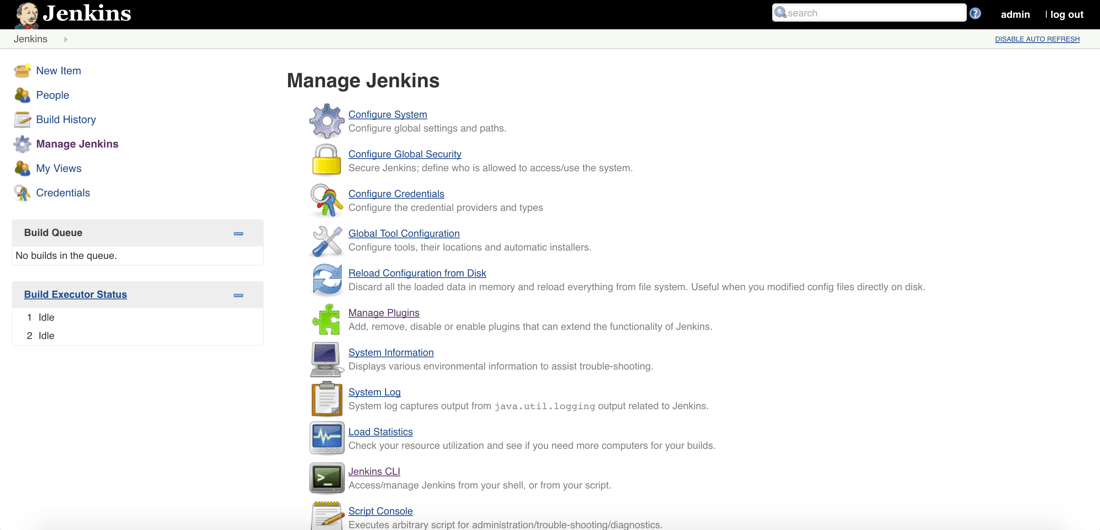


You can choose to create an administrative user or skip and use the generated password for everything.

Jenkins is configured and ready to be used. You’ll notice that no jobs have been created .

First we should install all the missing plugins which will be used for the deployment of our containers.

Choose **Manage Jenkins** and then choose **Manage Plugins** from the list.



**Creating a job in Jenkins to build jar file using GIT repository:**

Prerequisites:

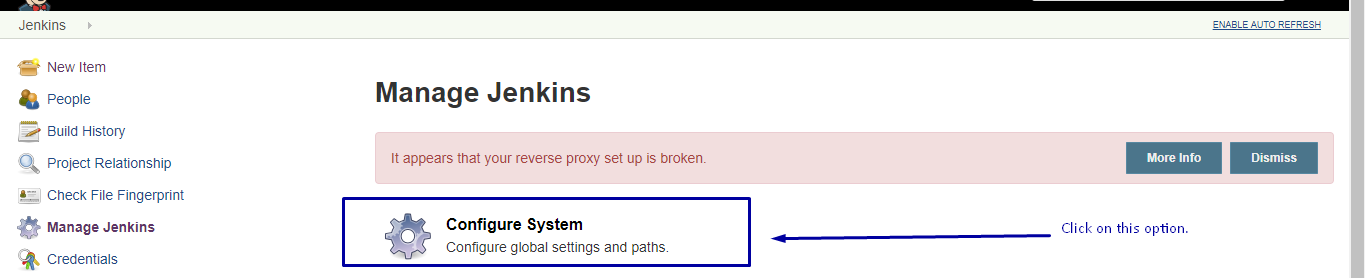
1.GIT plug-in needs to be installed by going to Manage jenkins → Manage Plugins → Available. Search for GIT plug-in and click on check box and do install without restart.

2.Install “Hudson post build task” plugin as mentioned above.

3.Git and Maven software needs to be installed on machine where jenkins present.

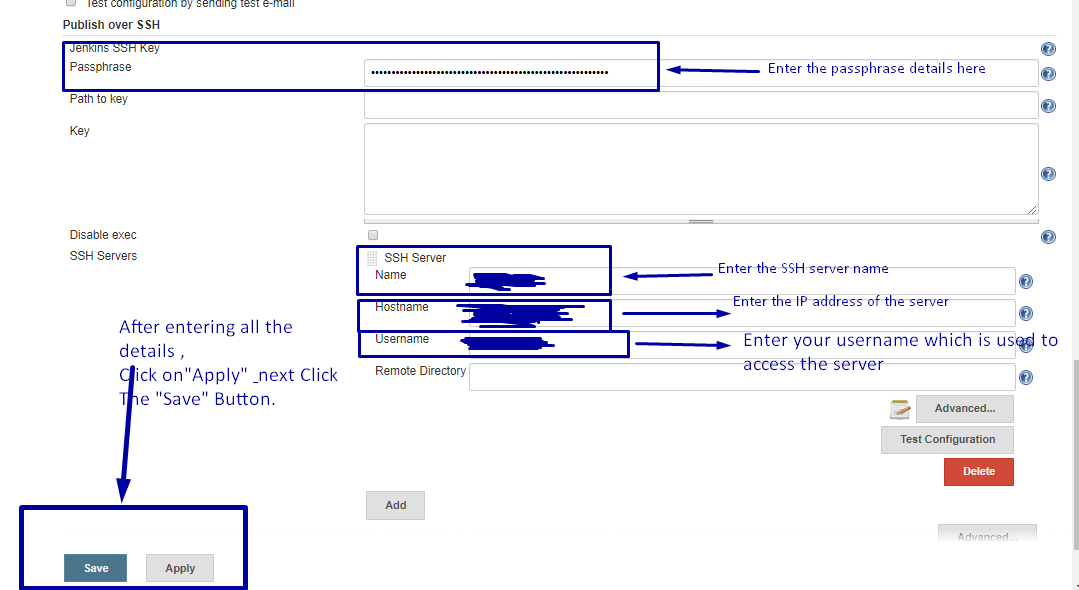
4.We Also Need to install “Publish over SSH” Plugin if we Send files or execute commands over SSH.

5.Now come back to the “Manage Jenkins” page and click on “Configure System” Option.



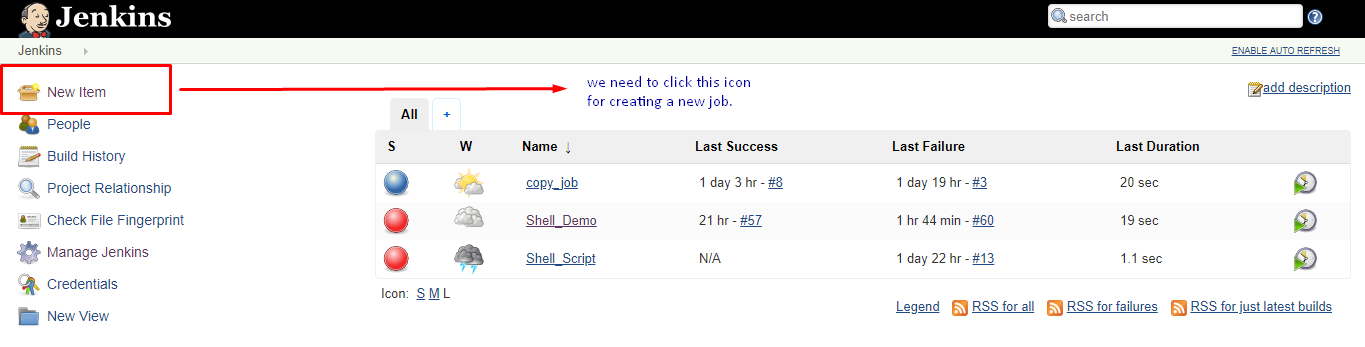
6. Under the “Configure System” Page, Straight away scroll down to the “Publish Over SSH” Section Of the page.

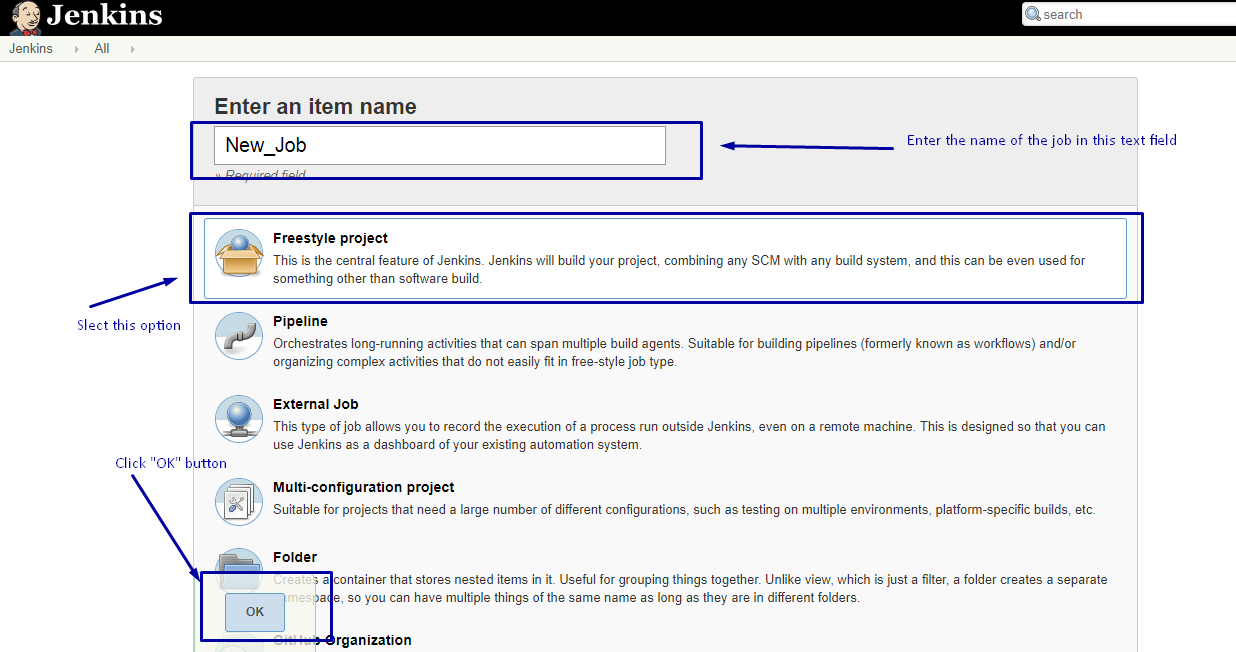
7. Enter the necessary details in the “Publish Over SSH” Section As shown below in the Screenshot. Now Click on “Apply” & then “Save” Button.



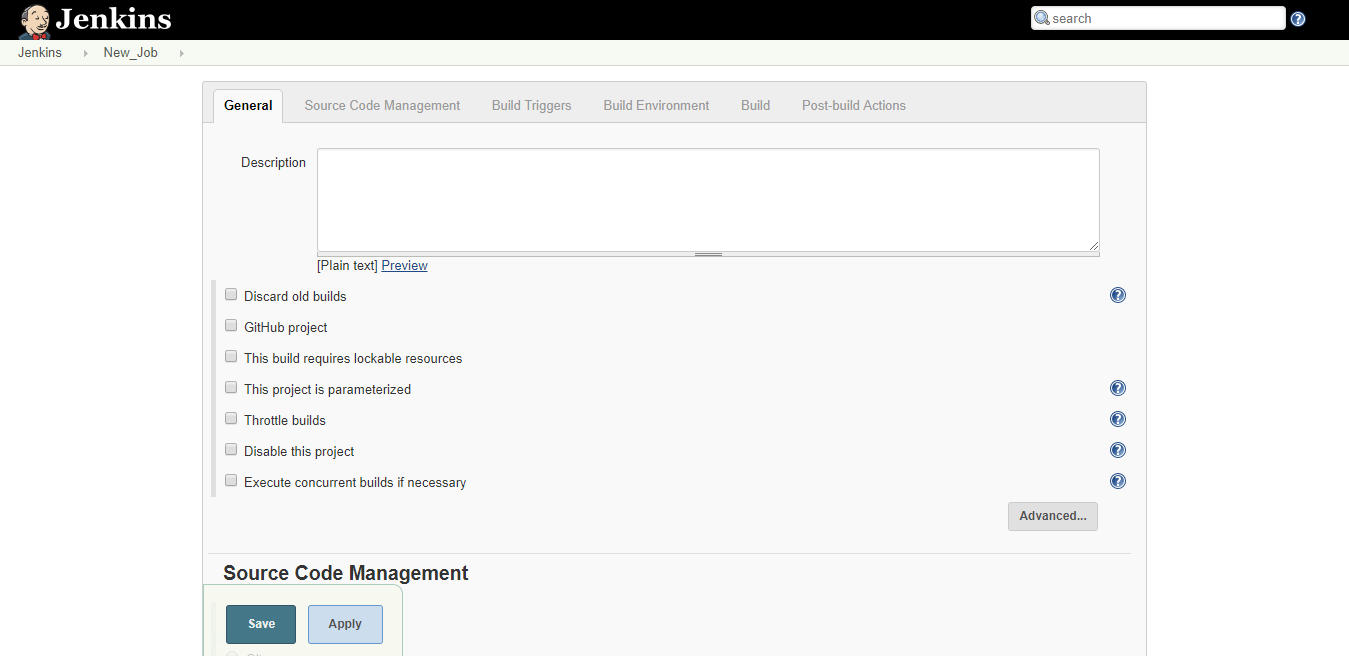
Creating a new Jenkins job:

2.1. Create a job by clicking on “New Item”. Now, Choose” free style project” option and give name to job. Click “Ok” Button.





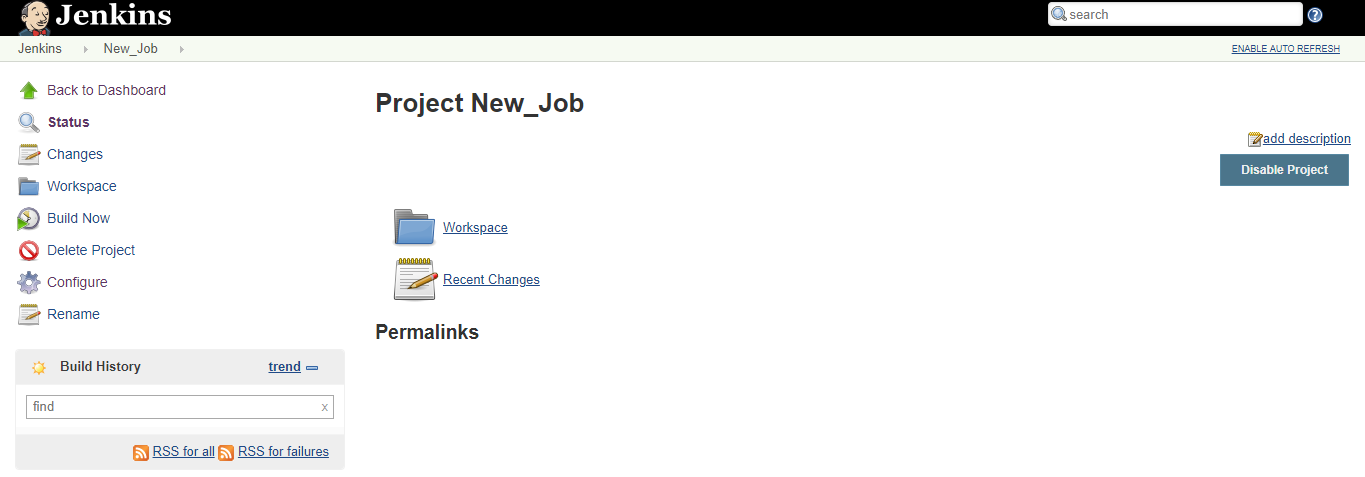
You will Be redirected to the next screen, As shown below.



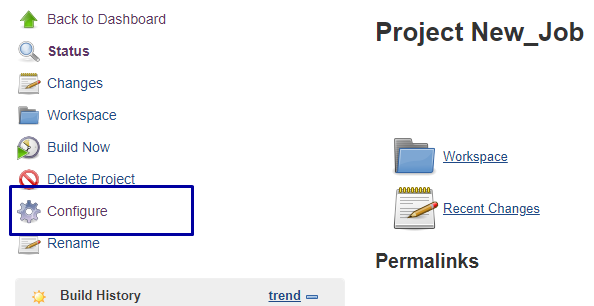
2.2. Now Once again go back to the “Jenkins” Dashboard.

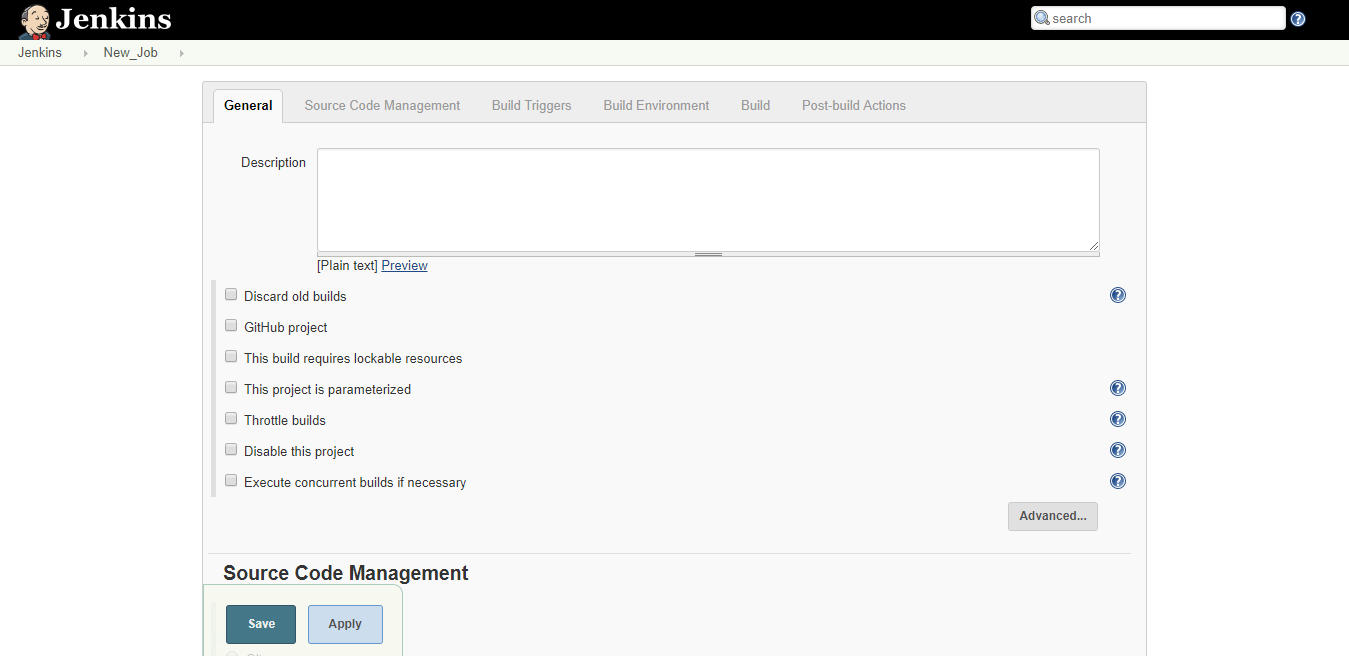
Click on the newly created job.

The following screen is displayed with a number of options.



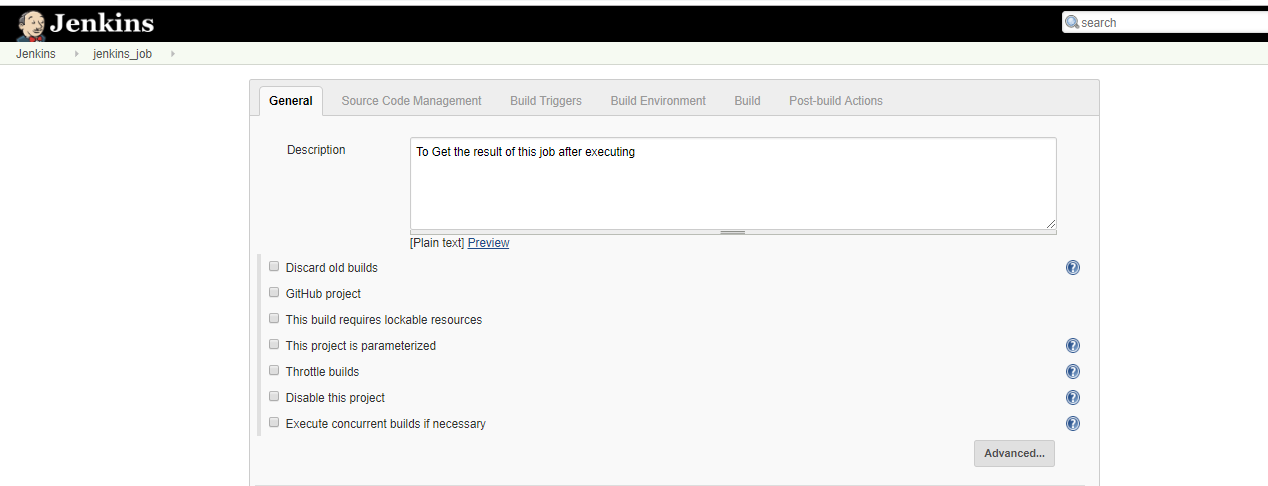
2.3. Now Click on “configure”.





The following screen appears.

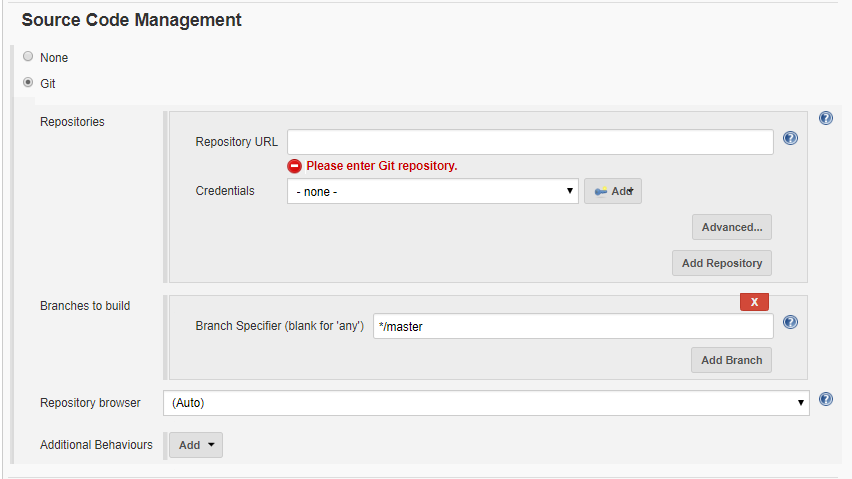
2.4. Now under “General” Section, You can Describe about what is going to be achieved with this job.



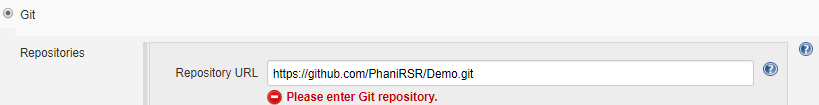
2.5. Now Straight away move/Scroll down To “Source Code Management” Section.

Two Options along with Radio Buttons are present, Namely, “None” & “ Git” Respectively.

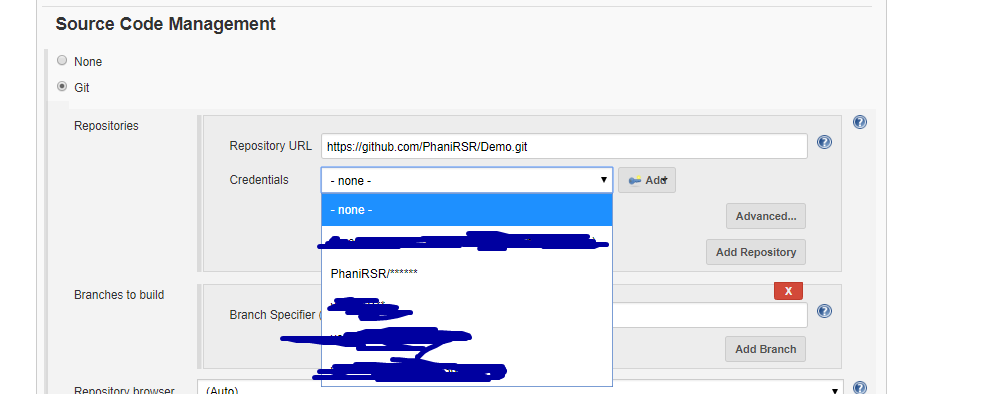
2.6. Select “Git” Option. Following will be displayed.



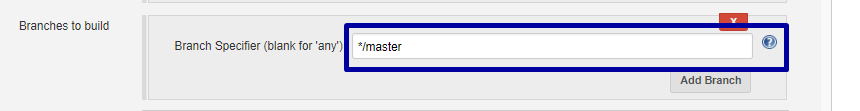
1. Here we need to enter the Git “Repository URL” address.



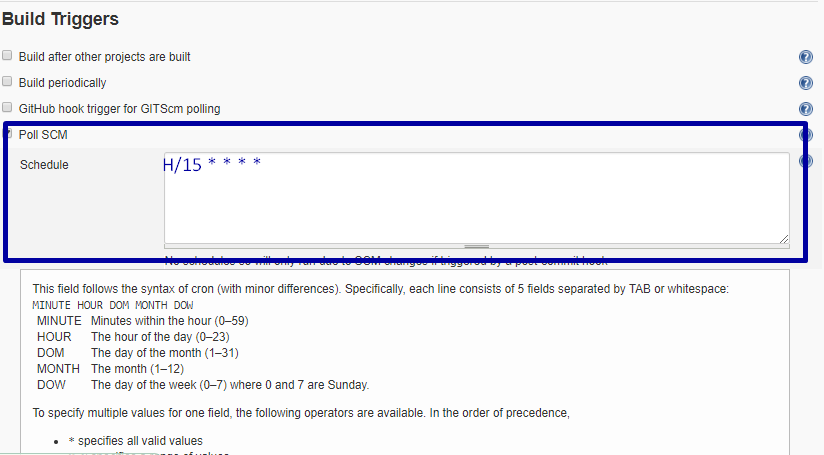
1. Under Credentials we need to provide the Git Username and Password.



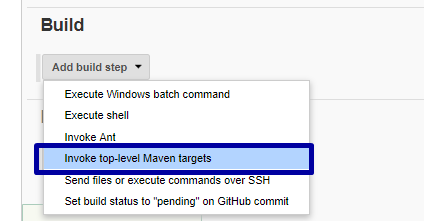
1. Under “Branches To Build” Specify the branch in Git to be checked .



2.7. Scroll down to the “Build Triggers” Section & select “Poll SCM” Option . Enter “H/15 \* \* \* \*” or any option of your choice.

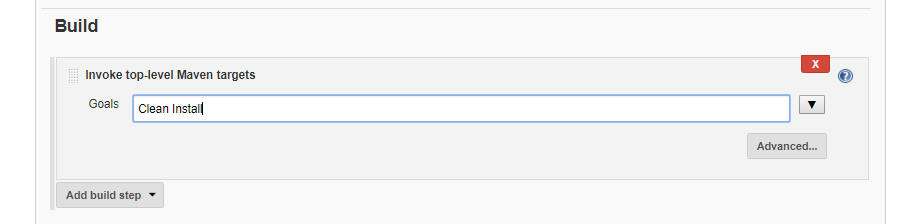


2.8. Now Scroll Down To “Build” Section And click on “ Add Build Step” option.

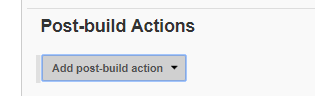


Select the “Invoke top-level Maven targets” Option the drop-down box.

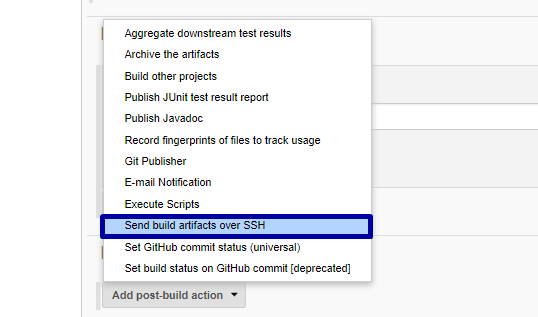
2.9. Enter “Clean Install” in The “Goals” Text Field, as shown below.



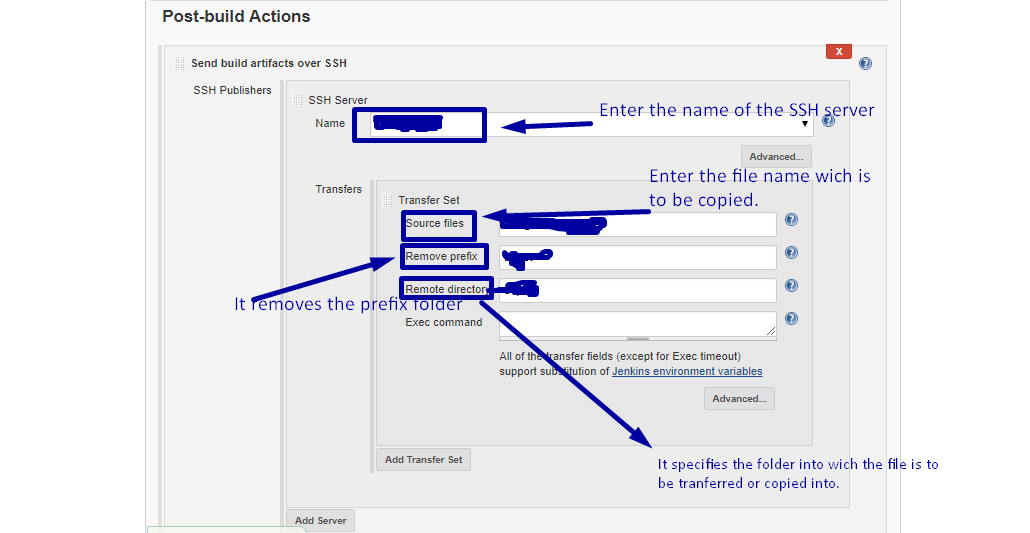
2.10. Now Scroll Down to “Post Build Actions” Section click on the “Add Post-Build Action” Button.



Now We Select “Send Build Artifacts Over SSH” option in the drop-down box.

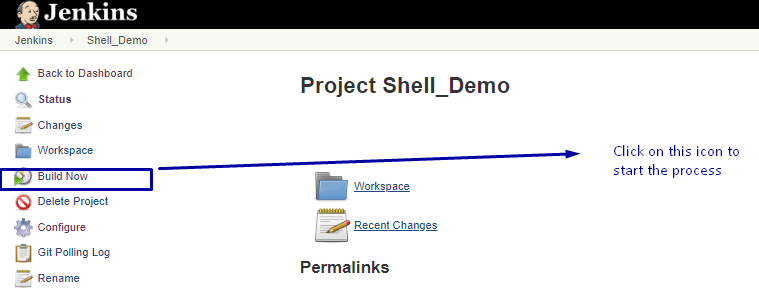


2.11. Under “Send Build Artifacts Over SSH” section, Do as shown In the below ScreenShot.

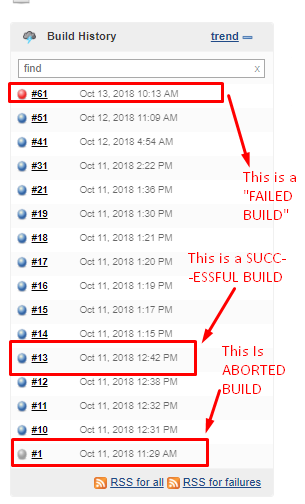


2.12. Now After making all the configurations needed for building the job. Click on “Apply” and following click the “Save” Button.

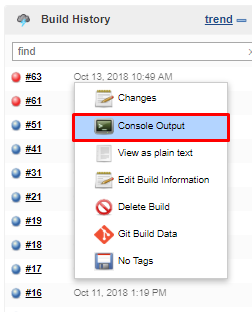
2.13. Now click On “Build Now” Icon to start the build process.



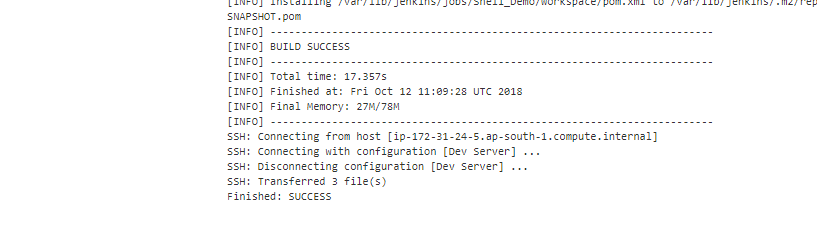
Observe the “Build History” Dialog Box, Which Looks Like this.



Click on the Build number & select “Console Output” Option.



2.14. Check for the text “SUCCESS” At the end of the Build Process.



**Creating a job in Jenkins to build jar file using AWS Code Commit:**

Prerequisites:

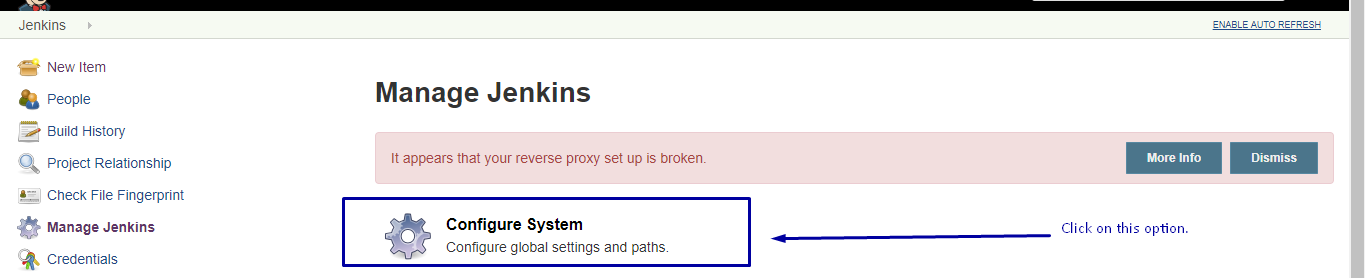
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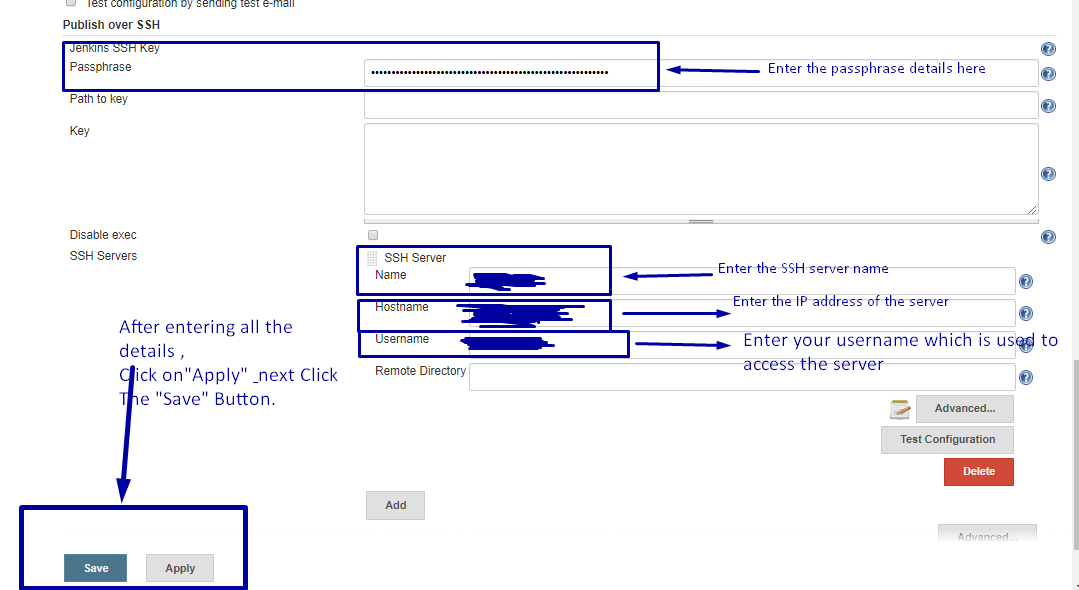
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5.Now come back to the “Manage Jenkins” page and click on “Configure System” Option.



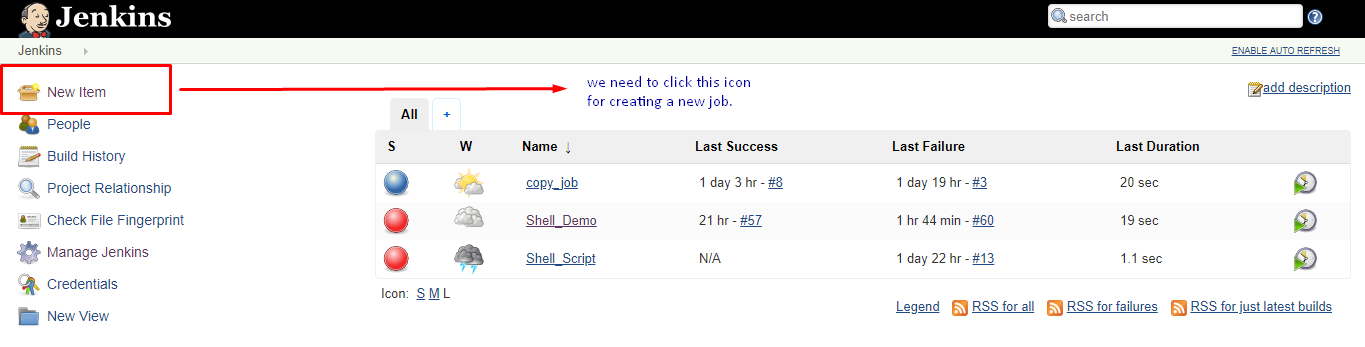
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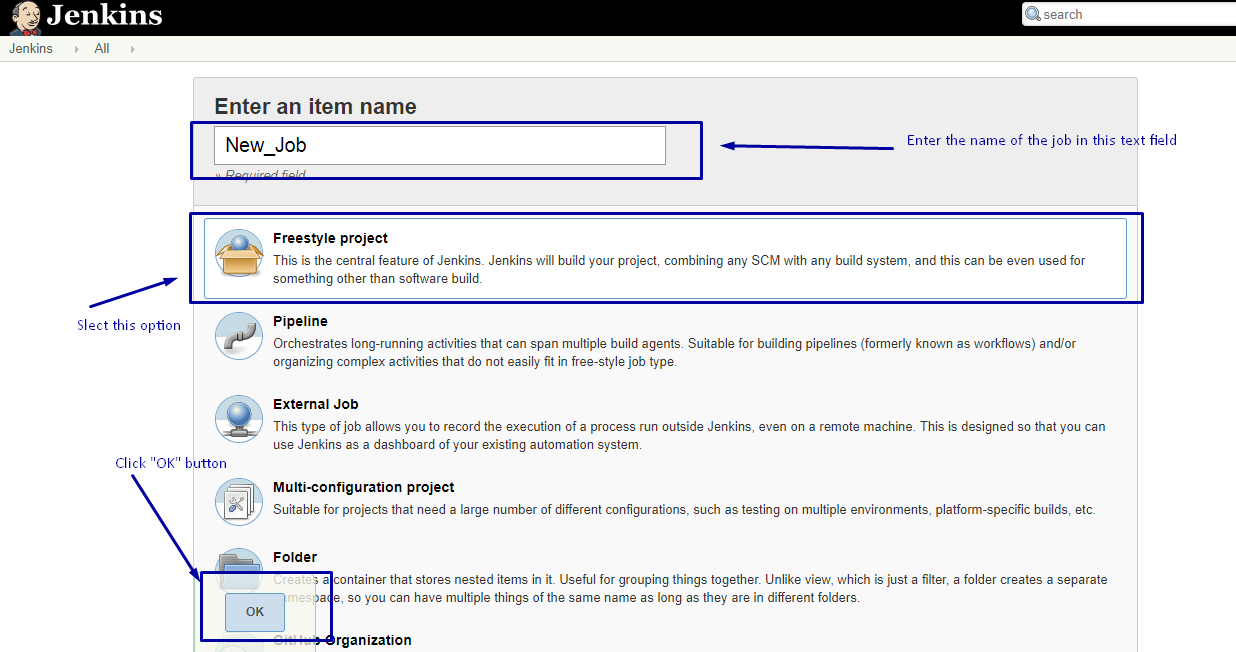
7. Enter the necessary details in the “Publish Over SSH” Section As shown below in the Screenshot. Now Click on “Apply” & then “Save” Button.



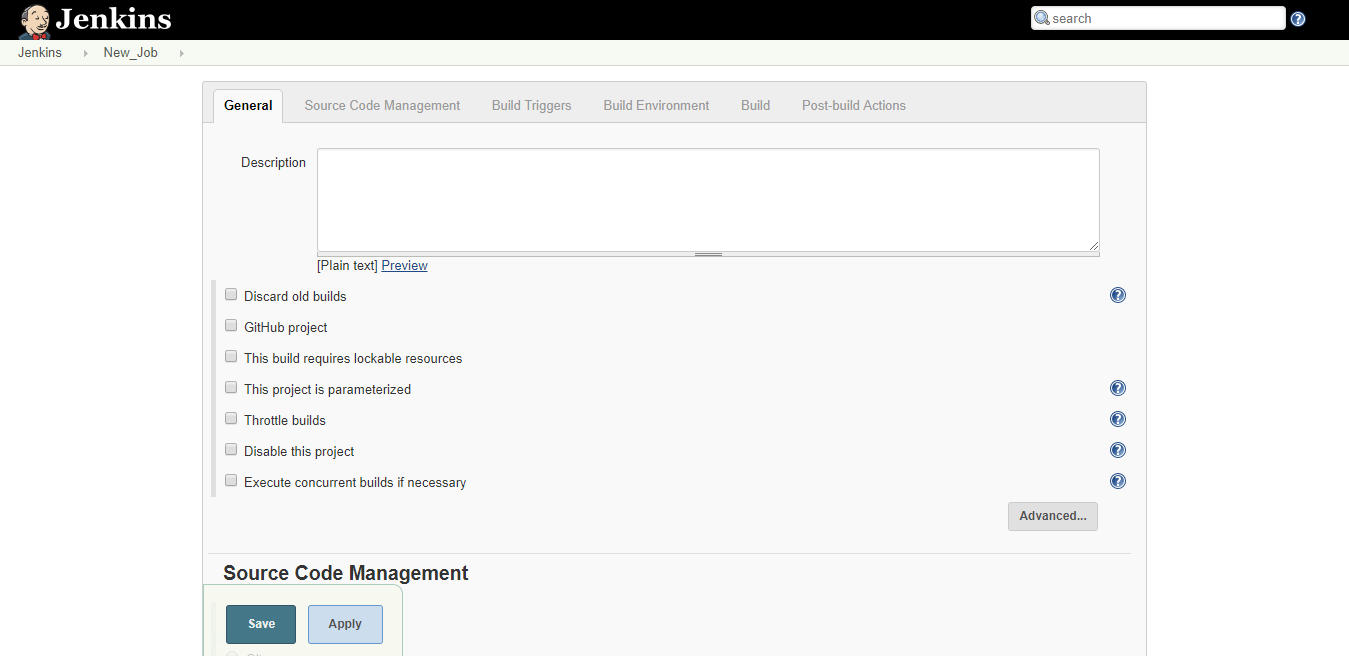
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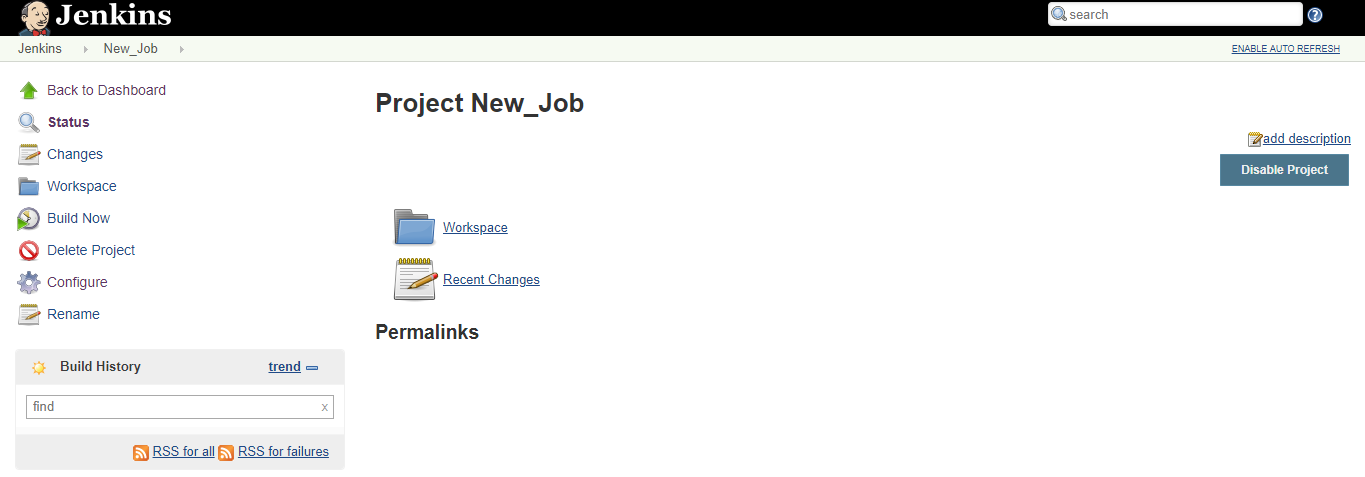
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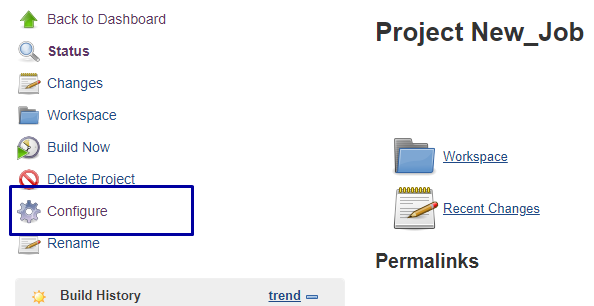
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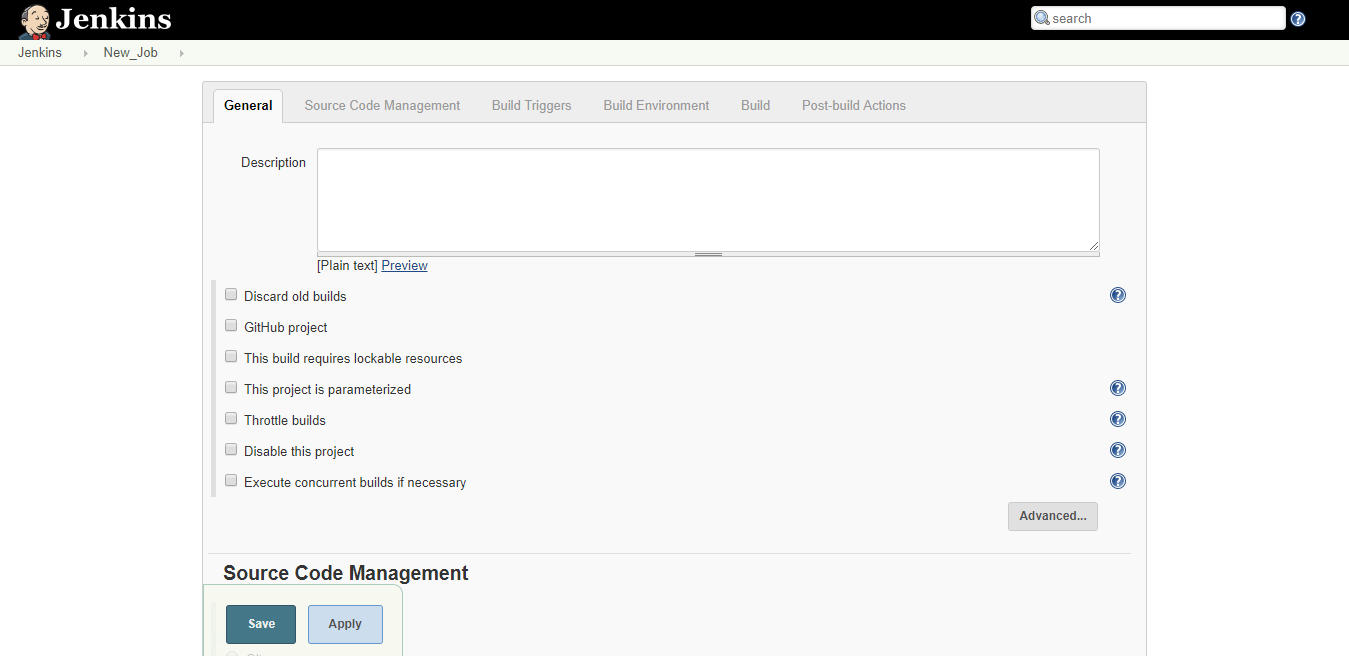
Click on the newly created job.

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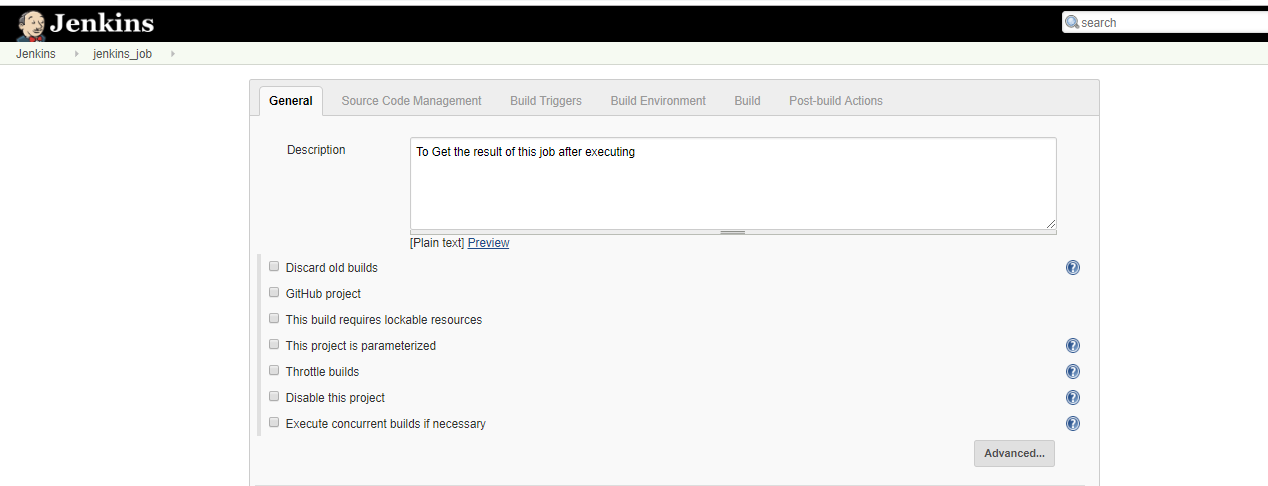
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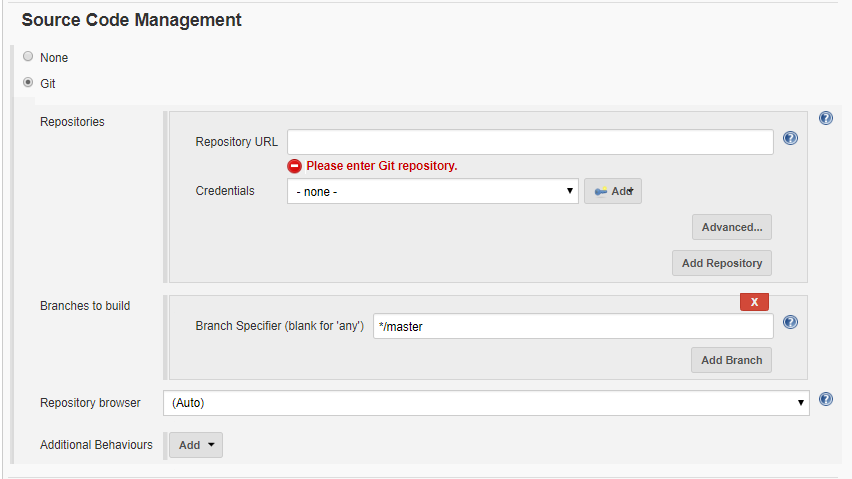
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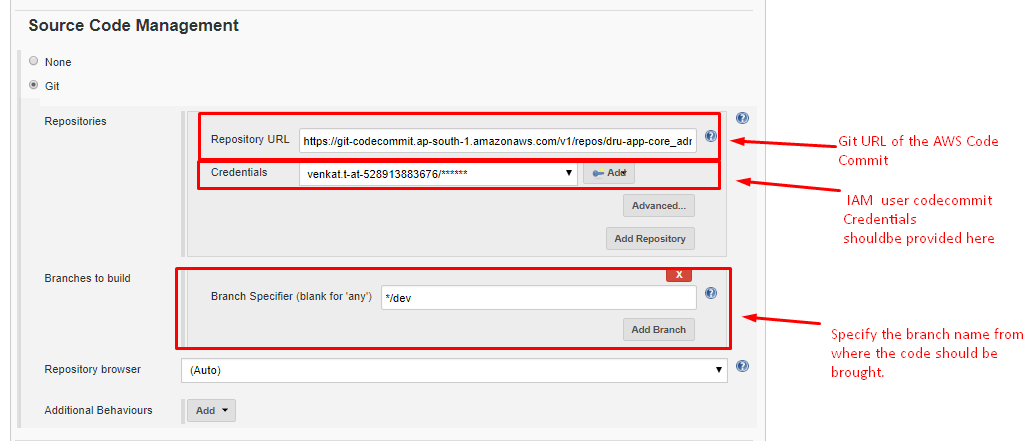
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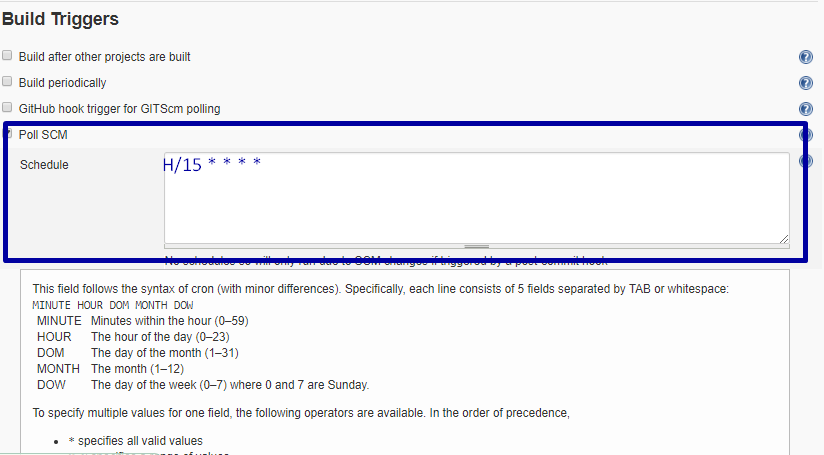
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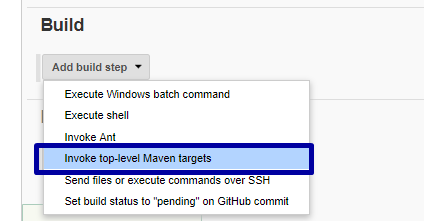
1. Under “Git” Repositories Give The Git URL of the AWS Codecommit & also Provide the AWS IAM user Code Commit Credentials(IAM- IDENTITY & ACCESS MANAGEMENT) as shown below.



Scroll down to the “Build Triggers” Section & select “Poll SCM” Option . Enter “H/15 \* \* \* \*” or any option of your choice.

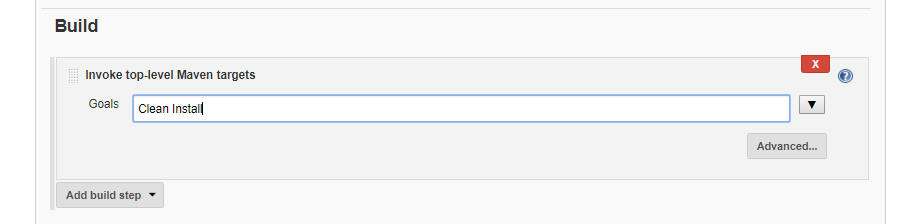


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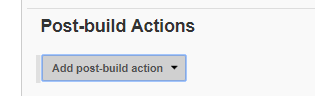


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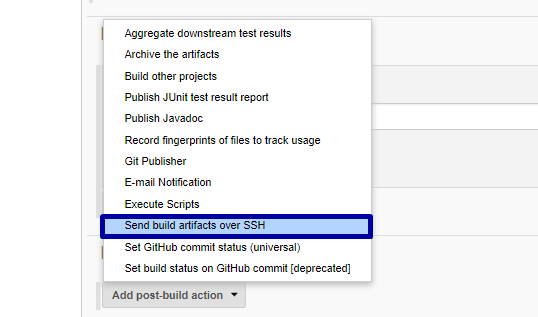
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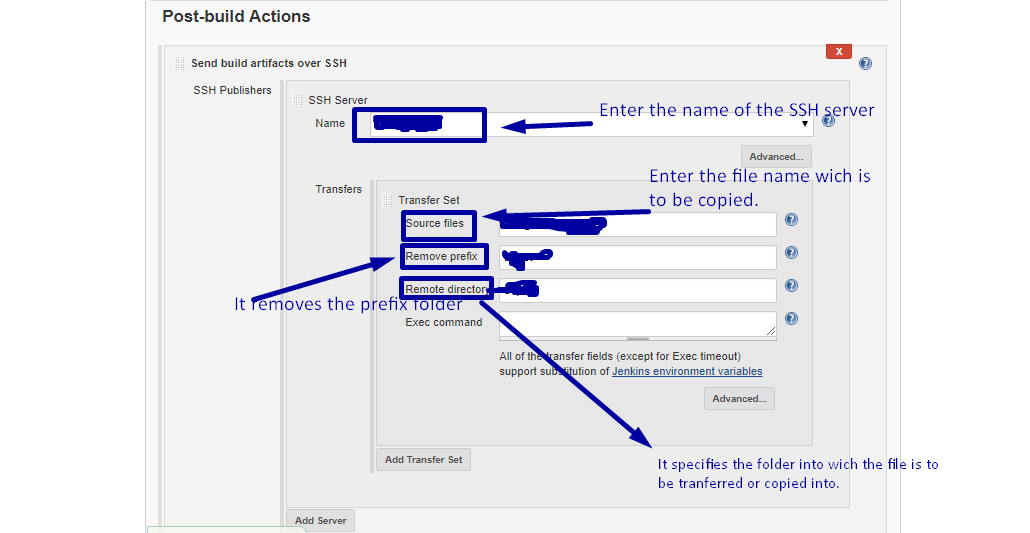
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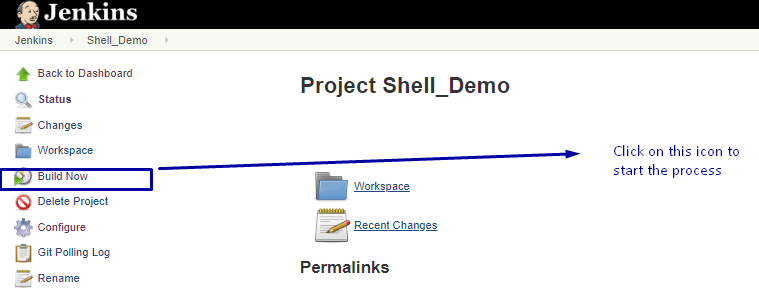


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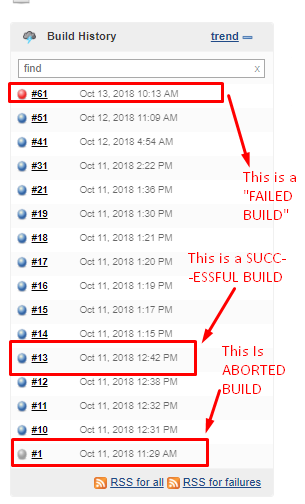


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2.13. Now click On “Build Now” Icon to start the build process.



Observe the “Build History” Dialog Box, Which Looks Like this.



Click on the Build number & select “Console Output” Option.

