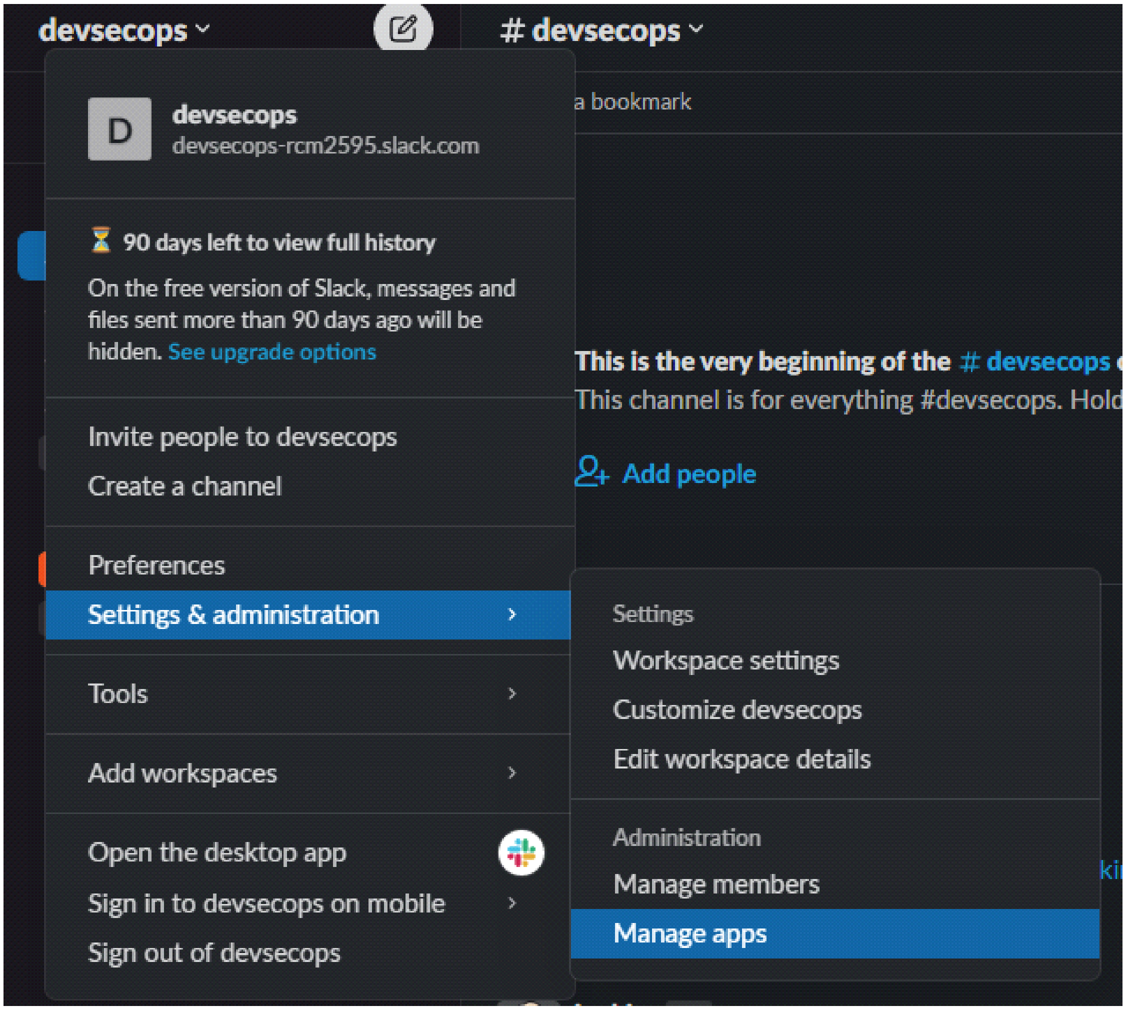
Slack jenkins alert

Now we will create a notification to slack after building the project.
In slack workspace, go to Settings & administration - manage apps



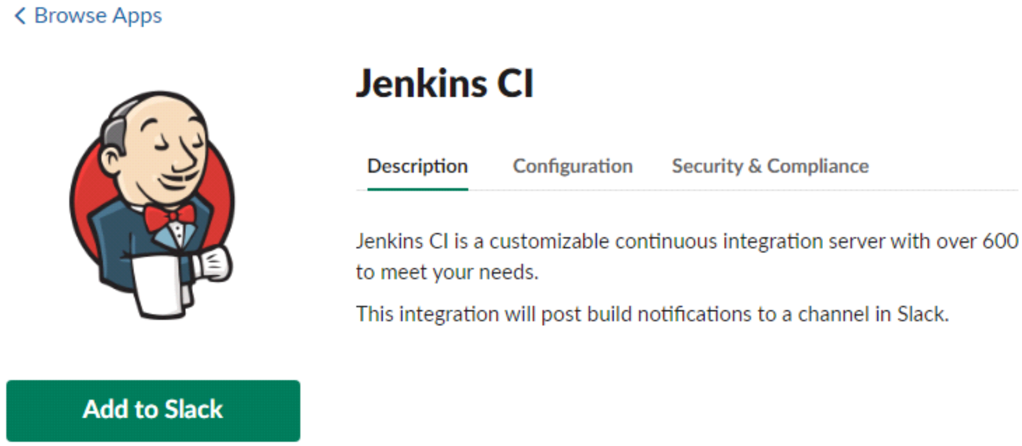
⏳ 90 days left to view full history

On the free version of Slack, messages and files sent more than 90 days ago will be hidden. See upgrade options

This is the very beginning of the # devsecops

This channel is for everything #devsecops. Hold

Search Jenkins CI and add to slack.

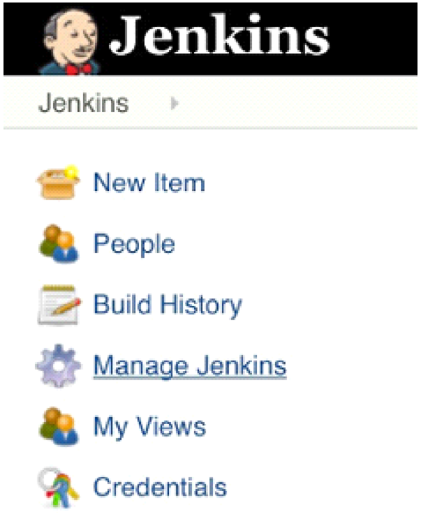


Jenkins CI is a customizable continuous integration server with over 600 to meet your needs.

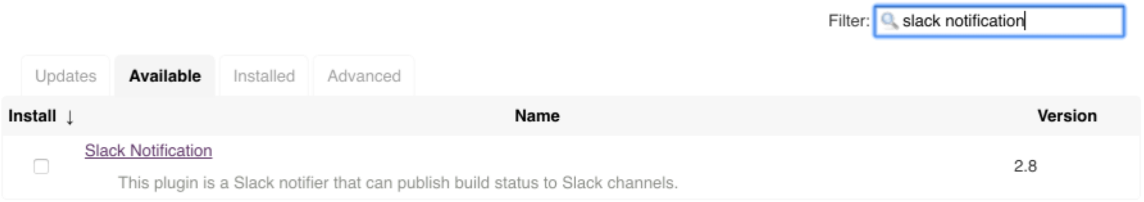
This integration will post build notifications to a channel in Slack.

Setup Instructions

Step 1
In your Jenkins dashboard, click on **Manage Jenkins** from the left navigation.



Step 2
Click on **Manage Plugins** and search for **Slack Notification** in the **Available** tab. Click the checkbox and install the plugin.



Install ↓	Name	Version
□	Slack Notification This plugin is a Slack notifier that can publish build status to Slack channels.	2.8

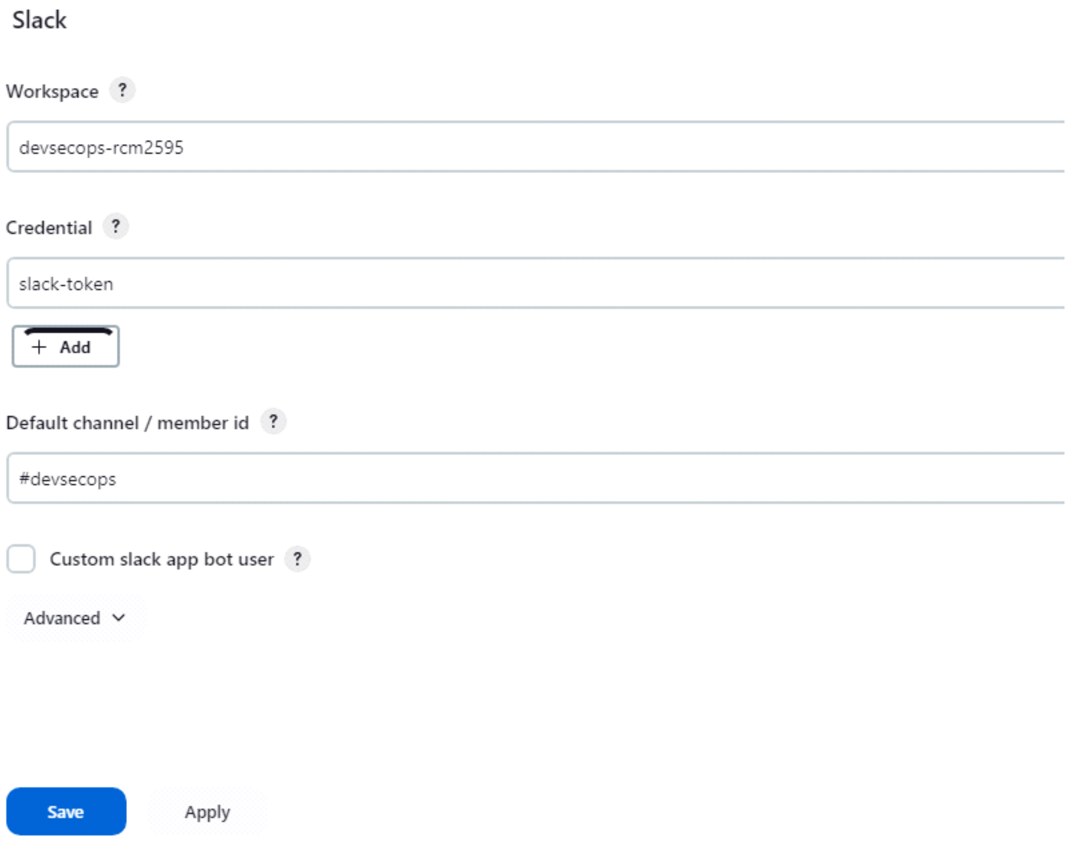
Step 3
After it's installed, click on **Manage Jenkins** again in the left navigation, and then go to **Configure System**. Find the **Global Slack Notifier Settings** section and add the following values:

- **Team Subdomain:** devsecops-rcm2595
- **Integration Token Credential ID:** Create a secret text credential using BX2nTsWQSqRz4cu37UiVxzLj as the value

The other fields are optional. You can click on the question mark icons next to them for more information. Press **Save** when you're done.
Note: Please remember to replace the Integration Token in the screenshot below with your own.

We will create an entry in the workspace field as devsecops-rcm2595 this is the Team Subdomain provided after installing the jenkins app

Next we create a credential named slack-token with the secret text BX2nTsWQSqRz4cu37UiVxzLj which has been provided.
default channel is the channel to receive notifications on slack



Slack

Workspace ?

devsecops-rcm2595

Credential ?

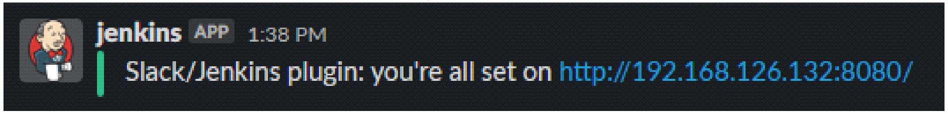
slack-token

Default channel / member id ?

#devsecops

☐ Custom slack app bot user ?

Run test and we can have this message in slack

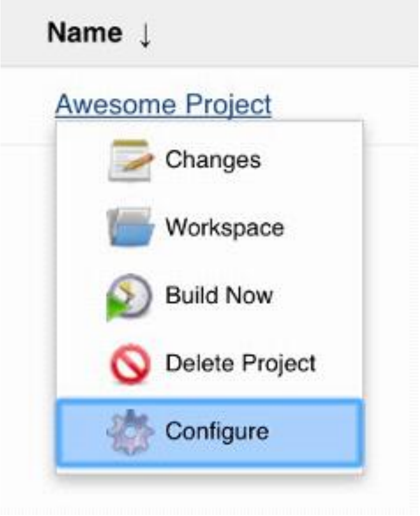


jenkins APP 1:38 PM

Slack/Jenkins plugin: you're all set on http://192.168.126.132:8080/

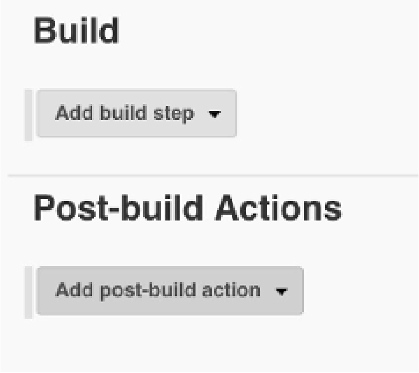
Step 4

For each Project that you would like receive notifications for, choose **Configure** from the project's menu.



Step 5

Then you'll need to add **Slack Notifications** to the **Post-build Actions** for this project.

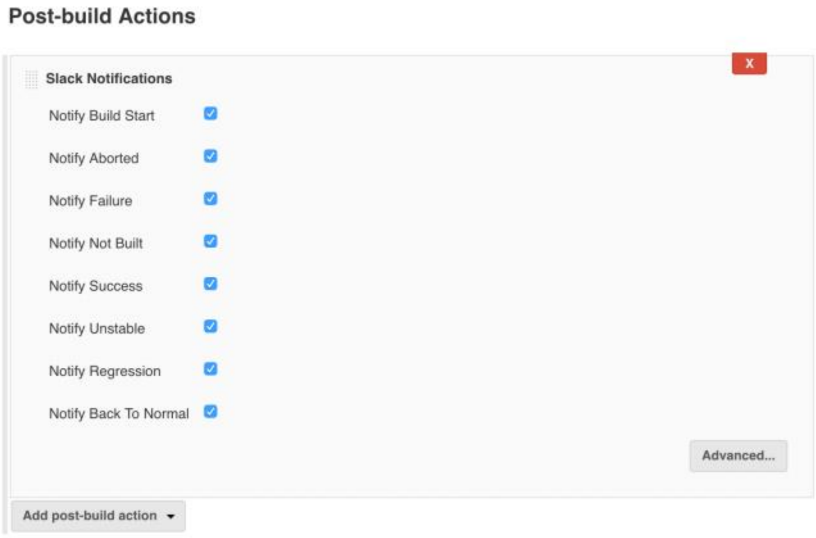


Build

Post-build Actions

Step 6

In the **Slack Notifications** section, choose the events you'd like to be notified about.



Post-build Actions

Slack Notifications

Notify Build Start ☑

Notify Aborted ☑

Notify Failure ☑

Notify Not Built ☑

Notify Success ☑

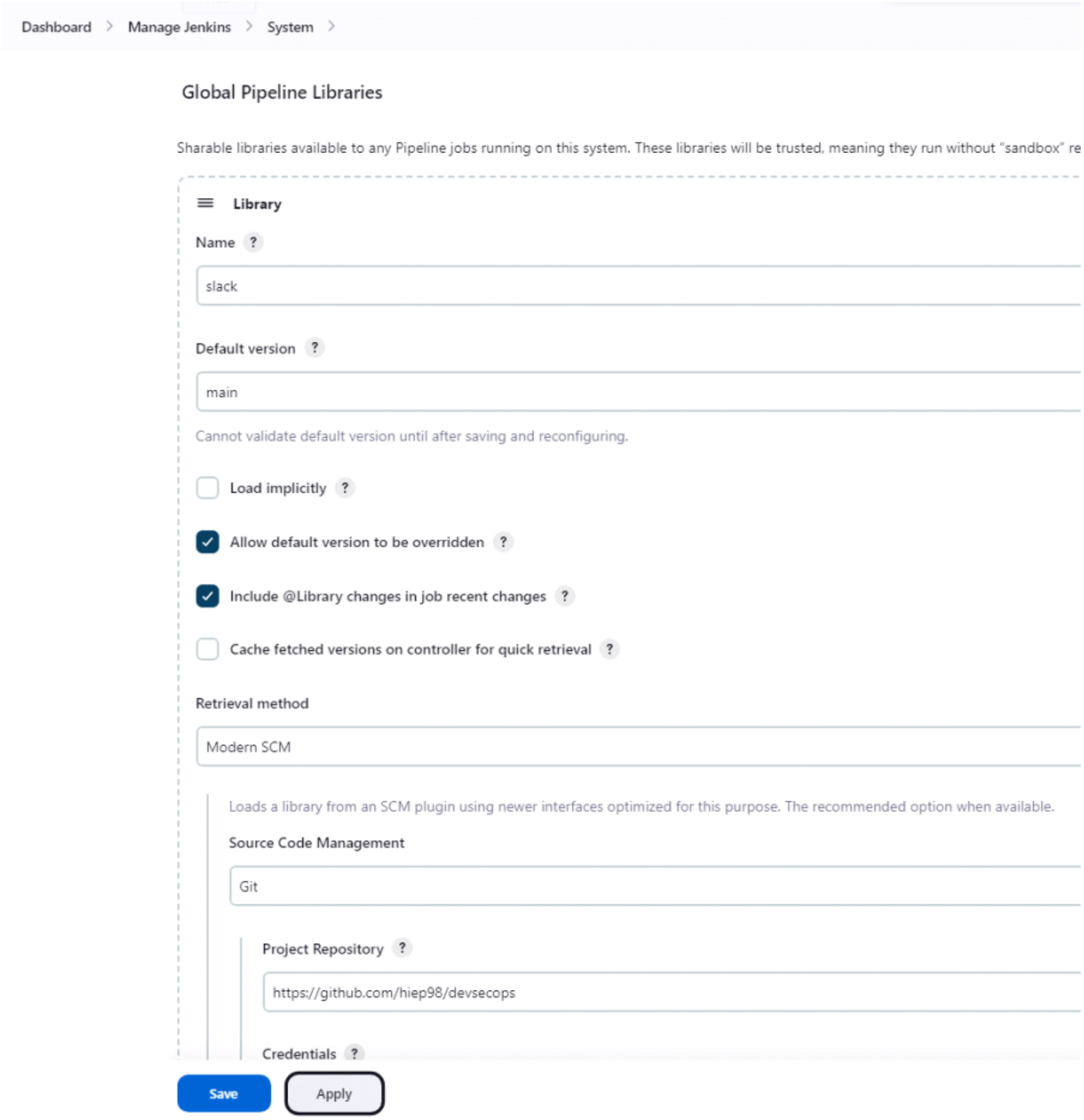
Notify Unstable ☑

Notify Regression ☑

Notify Back To Normal ☑

Now, we will create Shared Libraries to customize the message to send to slack.

1. Go to your Jenkins dashboard and click on "Manage Jenkins".
2. Click on "Configure System".
3. Scroll down to the "Global Pipeline Libraries" section and click on the "Add" button.
4. In the "Name" field, enter a name for your library (for example, "slack-library").
5. In the "Default Version" field, enter the default version of your library (for example, "main").
6. In the "Modern SCM" section, select the source code management system you are using for your library (for example, "Git").
7. Enter the repository URL for your library in the "Project Repository" field (for example, " https://github.com/myusername/my-slack-library.git").
8. Click on "Save" to save your changes.



Dashboard > Manage Jenkins > System >

Global Pipeline Libraries

Sharable libraries available to any Pipeline jobs running on this system. These libraries will be trusted, meaning they run without "sandbox" re

Library

Name ?

slack

Default version ?

main

Cannot validate default version until after saving and reconfiguring.

□ Load implicitly ?

☑ Allow default version to be overridden ?

☑ Include @Library changes in job recent changes ?

□ Cache fetched versions on controller for quick retrieval ?

Retrieval method

Modern SCM

Loads a library from an SCM plugin using newer interfaces optimized for this purpose. The recommended option when available.

Source Code Management

Git

Project Repository ?

https://github.com/hiep98/devsecops

Credentials ?

Now, you can use your new global pipeline library in your Jenkins pipelines to send custom messages to Slack. You need add @Library('slack') _ on the top of jenkins pipeline and here is script.

```
@Library('slack') _
 always {
     sendNotification currentBuild.result
   }
 }
```

This is a Jenkinsfile that uses a shared library called ‘slack’ and sends a notification with the current build result.

The ‘@Library’ annotation is used to specify the name of the shared library to use. The underscore character (‘_’) specifies the default version of the library to use.

The ‘always’ block is a pipeline step that will always be executed regardless of whether the previous steps have failed or succeeded. It sends a notification with the current build result using the ‘sendNotification’ function.

The 'currentBuild.result' variable is used to access the result of the current build in Jenkins. It can be used to determine if there were any test failures or if the build was successful.

For example, in your Jenkinsfile, you are using the ‘sendNotification’ function to send a notification with the current build result. The ‘currentBuild.result’ variable is used to get the result of the current build and pass it as an argument to the ‘sendNotification’ function.

Now we create file sendNotification.groovy in vars folder to custom slack notification.

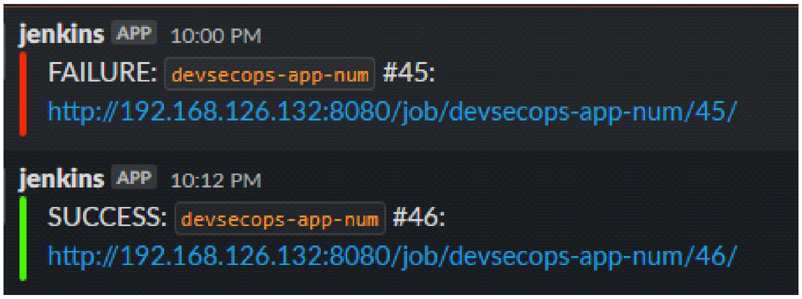
```
def call(String buildStatus = 'STARTED') {
 buildStatus = buildStatus ?: 'SUCCESS'
 def color
 if (buildStatus == 'SUCCESS') {
  color = '#47ec05'
 } else if (buildStatus == 'UNSTABLE') {
  color = '#d5ee0d'
 } else {
  color = '#ec2805'
 }
 def msg = "${buildStatus}: `${env.JOB_NAME}` #${env.BUILD_NUMBER}:\n${env.BUILD_URL}"
 slackSend(color: color, message: msg)
}
```

This is a Groovy script file that includes a function called "call". The function takes a string argument called "buildstatus" and if no value is specified, it defaults to "started".

The function then checks the value of "buildstatus" and assigns a color based on its value. If "buildstatus" is equal to "success", then the color "#47ec05" is assigned. If "buildstatus" is equal to "unstable", then the color "#d5ee0d" is assigned. Otherwise, the color "#ec2805" is assigned.

The function then creates a message string that contains the value of `buildStatus`, the name of the job (`env.JOB_NAME`), the build number (`env.BUILD_NUMBER`) and the build URL (`env.BUILD_URL`) using Groovy's string interpolation feature[1]. Finally, it calls another function named `slackSend` with two parameters: `color` and `message`. The function sends a notification message to Slack with the specified color and message.

You can see result below



```
jenkins APP 10:00 PM
FAILURE: devsecops-app-num #45:
http://192.168.126.132:8080/job/devsecops-app-num/45/

jenkins APP 10:12 PM
SUCCESS: devsecops-app-num #46:
http://192.168.126.132:8080/job/devsecops-app-num/46/
```

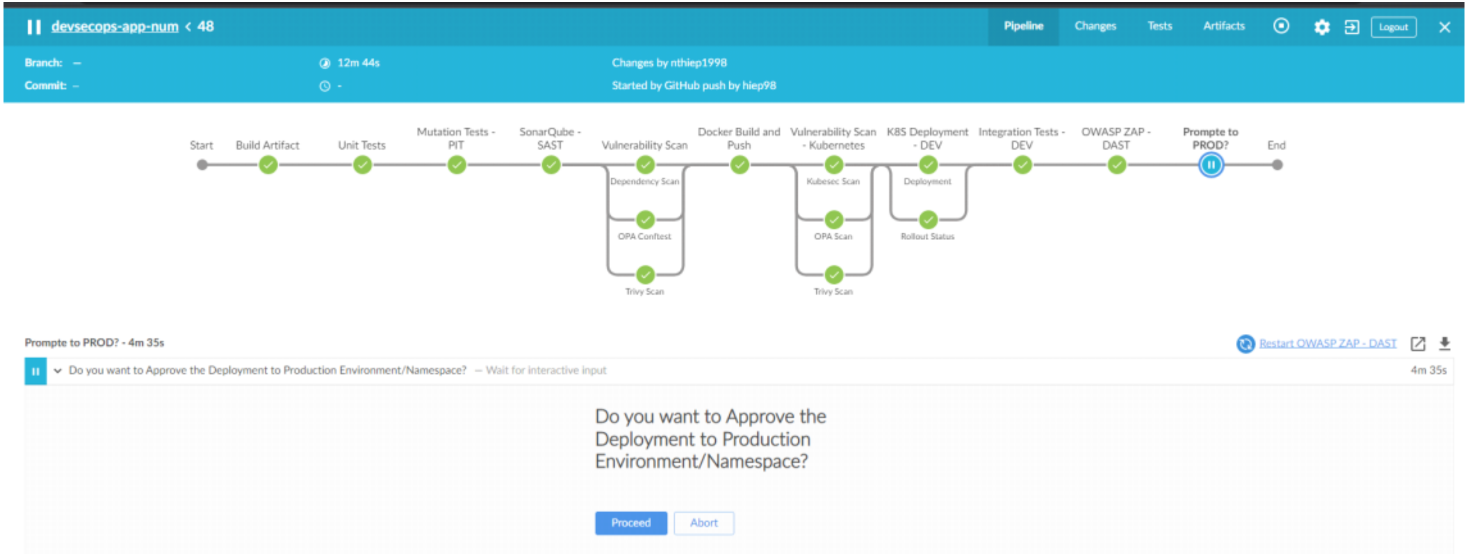
Reference: [Extending with Shared Libraries (jenkins.io)](#)
https://e.printstacktrace.blog/jenkins-pipeline-environment-variables-the-definitive-guide/
https://stackoverflow.com/questions/39140191/how-to-send-slack-notification-after-a-jenkins-pipeline-build-failed

Next, we go to with manual approve the Deployment to Production

```
stage('Prompte to PROD?') {
    steps {
      timeout(time: 2, unit: 'DAYS') {
        input 'Do you want to Approve the Deployment to Production Environment/Namespace?'
      }
    }
  }
```

This stage is a timeout step that waits for 2 days for a user input. The user input is asking for approval to deploy the code to the production environment or namespace. If the user approves the deployment within the timeout period, the pipeline continues to the next stage, which is likely a stage that triggers the actual deployment to production. If the user does not approve the deployment within the timeout period, the pipeline will fail because the deployment was not approved. This stage adds an important layer of safety to the pipeline to ensure that code changes are not accidentally or haphazardly deployed to production without proper review and approval.

Now run build and you can you notification like below



devsecops-app-num < 48

Branch: –
Commit: –
12m 44s
-
Changes by nthiep1998
Started by GitHub push by hiep98

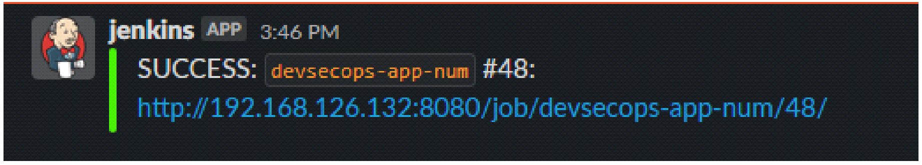
Prompte to PROD? - 4m 35s

Do you want to Approve the Deployment to Production Environment/Namespace? — Wait for interactive input 4m 35s

Do you want to Approve the Deployment to Production Environment/Namespace?

Proceed Abort

You can select proceed and have slack notification like below



jenkins APP 3:46 PM

SUCCESS: devsecops-app-num #48: http://192.168.126.132:8080/job/devsecops-app-num/48/