

Lab: Continuous Integration with GitHub using GitHub Plugin and Webhook

Generic Pre-Requisites: -

Jenkins server should be set up. If already set up, take the IP dedicated for your group. If not set, please coordinate with trainer for the same. Use the credentials provided by Trainer for login into Jenkins

Specific Pre-requisites:

1) GitHub plugin should be installed.

- i) **GitHub Integration:** This provides configurations fields required for Jenkins and GitHub Integration.

Note: It is already installed in Jenkins used in Training. To know how to install the plugin, follow instructions given in document **Installing Plugins in Jenkins**

Steps:

1. Open Jenkins on browser
2. Configure GitHub webhook, follow the steps mentioned in [Configure GitHub Webhook for Jenkins](#)
3. Configure Jenkins for GitHub, follow the steps mentioned in [Configure Jenkins for GitHub](#)
4. Click on **New Item** on Jenkins Dashboard
5. Enter **Name** such as <yourname>_gitwebhookintegration
6. Select **Freestyle project**
7. Click **OK**
8. Under Source Code Management section, Select **Git** radio button
 - a. Enter Repository URL - <Git repo>
(Note: Sample Git Repository URL for Training is <https://github.com/LovesCloud/jenkinsgithubintegrationdemo>)
9. Under Build Triggers section, Select **GitHub hook trigger for GITScm polling** checkbox
10. Click **Save**
11. On GitHub end, if you are the owner of the git repo, edit a file and commit the changes.
12. Open the Jenkins and observe that the build is triggered automatically as soon as you committed the file in GitHub in your repo.
13. Click on the latest triggered build number
14. View the Console Output

The complete log of the steps involved in successful building of job are displayed.

Configure GitHub Webhook for Jenkins

1. Open GitHub
2. Navigate to Git Repo;
3. Navigate to Settings of repository
4. Click Webhook
5. Click Add Webhook
6. Enter Payload URL-http://<Public IP of Jenkins Server>:8080/github-webhook/
7. Click Save Webhook

Configure Jenkins for GitHub

1. Navigate to Manage Jenkins ->Open Configure System
2. In GitHub section, Select Add GitHub Server->GitHub Server
 - a. Enter **Name**-Git Server
 - b. Click on the Advanced... button present below the Add GitHub Server drop down
 - c. Select Additional actions->Manage additional github actions->Select Convert login and password to token
 - d. Select **from login and password** radio button
 - e. Enter your GitHub login credentials
 - f. Click **Create token credentials** button
 - g. Scroll up and select the generated token in the **Credentials** field

Note: If by any chance, token is not populated in dropdown, Save the Configure System page and Open again, scroll down to see generated token is now available in Credentials field.

3. Click **Save** on Configure System