

# **Integrating Git, Jenkins, Email etc**

## **Create a personal access token on GitHub**

1. Login to GitHub
2. Go to Profile -> Settings -> Developer Settings -> Personal access tokens -> Generate new token
3. Provide Name and Expiration
4. Select Scopes
  - a. repo
  - b. admin:repo\_hook
5. Generate token
6. Copy the token and save it as we will not be able to retrieve it again.

## **Install Git PullRequest Builder Plugin**

1. Login to Jenkins
2. Go to Dashboard -> Manage Jenkins -> Manage Plugins -> Available
3. Search for Git
4. Select the GitHub Pull Request Builder Plugin
5. Click on Install Without Restart
6. Wait for the installation to finish
7. Go back to the dashboard page

## **Configuring the Plugin**

1. Go to Manage Jenkins -> Configure System -> Github Pull Request Builder section
2. Select existing credentials to access GitHub. If no credentials are available, create new credentials
  - a. Credentials -> Add -> Jenkins
  - b. Select 'Kind' as Secret text
  - c. Under Secret provide the personal access token created
  - d. Provide Description. It should be unique and simple to identify, as this is what you will see when selecting credentials. Preferably a name.
3. Under credentials dropdown, select the credentials added above
4. Save the settings

## **Creating/Configuring a job**

1. Go to Jenkins Dashboard -> New Item
2. Provide a job name
3. Select Freestyle Project
4. Select OK
5. The job configuration page will open
6. Select Github project and provide the project url (The url we see in browser)  
Example: [https://github.com/vbhaskarbe/development\\_repo](https://github.com/vbhaskarbe/development_repo)

7. Under Source Code Management section, select Git
8. The Git configuration section will popup
9. Provide repository url (The url used to clone the repo)  
Example: [https://github.com/vbhaskarbe/development\\_repo.git](https://github.com/vbhaskarbe/development_repo.git)
10. Select Credentials (The credentials added in previous section should be available)
11. Under Advanced, set refspec to  
+refs/pull/\*:refs/remotes/origin/pr/\*
12. In Branch specifier enter `\${sha1}`
13. Under 'Build Triggers' section select GitHub Pull Request Builder
14. Provide the username of the user whose token we are using  
(In our case I used vbhaskarbe as I created the personal access token under your account.  
Without this Jenkins is not able to post status to PR)
15. Select 'Use github hooks for build triggering' option
16. Select 'Build every Pull request automatically without asking (Dangerous!)'  
As the option itself states, this is a dangerous setting. We can use various other options to only build specific PRs or matches.
17. Save the job

## **Configure webhooks on Git**

1. Login to GitHub
2. Goto your repository home page -> Settings -> Webhooks
3. Select Add Webhook
4. Under payload URL, provide the 'Jenkins URL Override' url we created above.  
Example: <http://3.108.191.237:8080/ghprbhook/>
5. Content Type => application/x-www-form-urlencoded
6. Leave the secret section blank (As we didn't provide any secret under plugin configuration)
7. Under which events to trigger, select 'Let me select individual events' (For now, since we are only building PRs)
8. Select the events
  - a. Pull request review comments
  - b. Pull requests
  - c. Pushes (This was selected by default, didn't change)
  - d. Issues
  - e. Issue Comments
9. Enable the 'Active' check
10. Add Webhook

For more information on GitHub Pull Request Builder Plugin configuration, default options to trigger or build a job and other options please check the Doc <https://plugins.jenkins.io/ghprb/>

Please try to raise a PR or add comments to trigger the job

## **To Enable email in Jenkins**

### ***Email - Enable below for your Google Account***

1. Enable access to less secured apps for your gmail account
2. Unlock captcha by going to this link <https://accounts.google.com/DisplayUnlockCaptcha> and click continue

For step 1, you can find it by searching. Or check this link  
[https://support.google.com/mail/answer/7126229?visit\\_id=637603221486917718-1790337054&rd=2#cantsignin&zipy=%2Ci-cant-sign-in-to-my-email-client](https://support.google.com/mail/answer/7126229?visit_id=637603221486917718-1790337054&rd=2#cantsignin&zipy=%2Ci-cant-sign-in-to-my-email-client)

### **Email - Configure Jenkins**

Manage Jenkins -> Configure System

Extended email notification settings (Install this plugin if not already installed)

Use the settings as required from the above support link

You need to give your Gmail username and password

SMTP Server : smtp.gmail.com,

SMTP Port : 587

<< Click on Advanced... option>>

SMTP Username: <Your\_Gmail\_userid>. Without @gmail.com

SMTP Password: <Your Gmail password>

Enable 'Use TLS' option – checkbox

Default User Email prefix : @gmail.com

Default recipients : <your full email id >

### **Email - Job Configuration**

In the Job configuration, we can add post build step to send email and configure it as required. By general email is sent only on failure. We can change it to 'Always' in advanced configuration settings.

Additionally install below Plugins to configure multiple dependent jobs...

1. Parameterized Trigger
2. Conditional Build step
3. Run Condition