

GitHub webhooks Integrate with Jenkins

If you want automate trigger the build jobs when the new commit push to github . In this particular scenario we will use three types of process to trigger a job in jenkins.

- Build periodically.
- Poll SCM
- web hooks.

In this tutorial we will learn how to integrate github webhooks into jenkins. In this scenario when the new changes pushed to github the jenkins job will be trigger automatically for particular jenkins job configure of the github repository.

prerequisites :

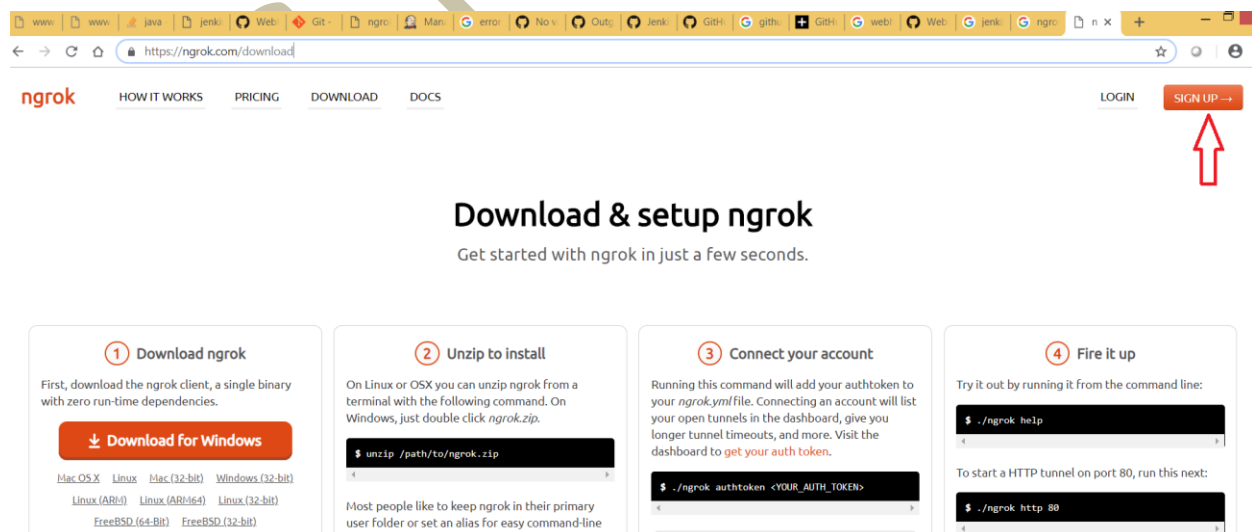
- jenkins should run in your machine.
- git hub account.
- git hub repository .

if you jenkins is running jenkins in your local machine like (localhost:8080) .you ip should be configure as a public ip or DNS or else you jenkins server could not connect with the github.

for this you can make it you localhost to public domain through NGROK. download ngrok into your machine run ngrok.exe file with your localhost and port.

<https://ngrok.com/download>

once downloaded successfully we need register with ngrok using below link.



Download & setup ngrok
Get started with ngrok in just a few seconds.

- 1 Download ngrok**
First, download the ngrok client, a single binary with zero run-time dependencies.
[Download for Windows](#)
[Mac OS X](#) [Linux](#) [Mac \(32-bit\)](#) [Windows \(32-bit\)](#)
[Linux \(ARM\)](#) [Linux \(ARM64\)](#) [Linux \(32-bit\)](#)
[FreeBSD \(64-bit\)](#) [FreeBSD \(32-bit\)](#)
- 2 Unzip to install**
On Linux or OSX you can unzip ngrok from a terminal with the following command. On Windows, just double click `ngrok.zip`.

```
$ unzip /path/to/ngrok.zip
```


Most people like to keep ngrok in their primary user folder or set an alias for easy command-line access.
- 3 Connect your account**
Running this command will add your auth token to your `ngrok.yml` file. Connecting an account will list your open tunnels in the dashboard, give you longer tunnel timeouts, and more. Visit the dashboard to [get your auth token](#).

```
$ ./ngrok authtoken <YOUR_AUTH_TOKEN>
```
- 4 Fire it up**
Try it out by running it from the command line:

```
$ ./ngrok help
```


To start a HTTP tunnel on port 80, run this next:

```
$ ./ngrok http 80
```

once signup successfully you will get a token along with running setp.

open the folder where you unzip the ngrok.exe. run below command.

```
> ngrok.exe authtoken <YOUR_AUTH_TOKEN>
```

if linux

```
./ngrok authtoken <YOUR_AUTH_TOKEN>
```

it will give result like below.

```
Authtoken saved to configuration file: C:\Users\ssreteam/.ngrok2/ngrok.yml
```

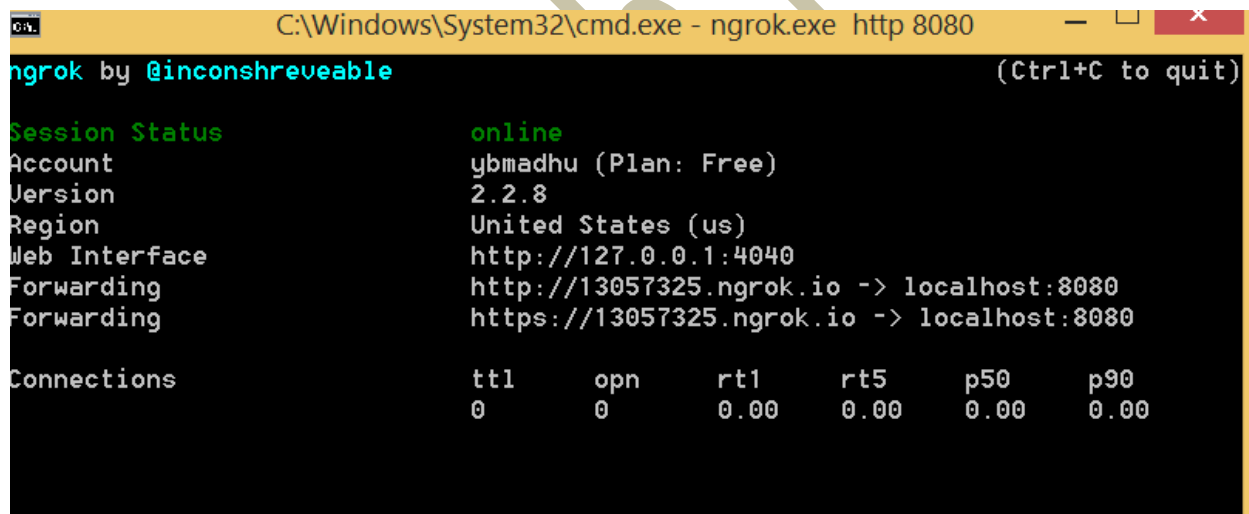
Now run the http and port number along with ngrok command like below.

```
> ngrok.exe http 80
```

if linux

```
./ngrok http 80
```

this will give output like below.



```
C:\Windows\System32\cmd.exe - ngrok.exe http 8080
ngrok by @inconshreveable (Ctrl+C to quit)

Session Status      online
Account             ybmadhu (Plan: Free)
Version             2.2.8
Region              United States (us)
Web Interface        http://127.0.0.1:4040
Forwarding           http://13057325.ngrok.io -> localhost:8080
Forwarding           https://13057325.ngrok.io -> localhost:8080

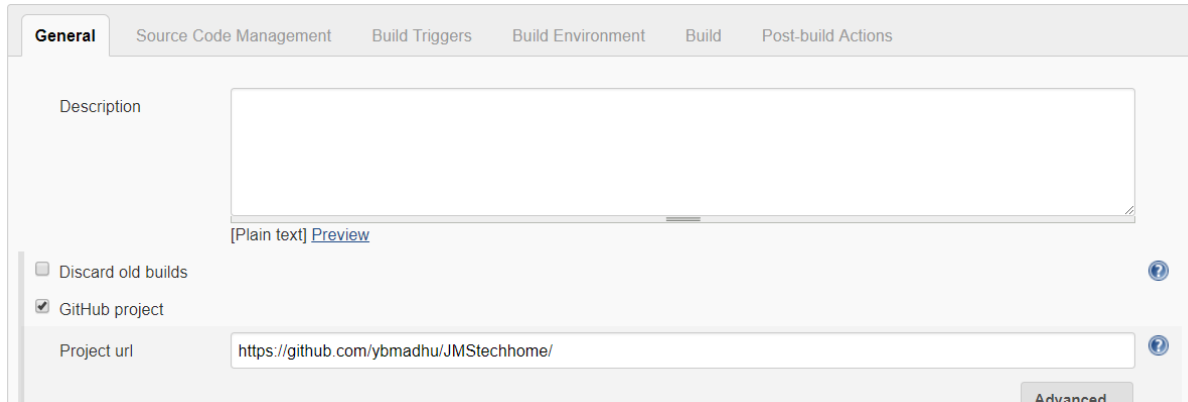
Connections         ttl    opn    rt1    rt5    p50    p90
                   0      0      0.00   0.00   0.00   0.00
```

if you to stop or quite press ctrl+c.

here **<http://13057325.ngrok.io>** this is out public domain of your system we need to configure this your in github weebhooks.

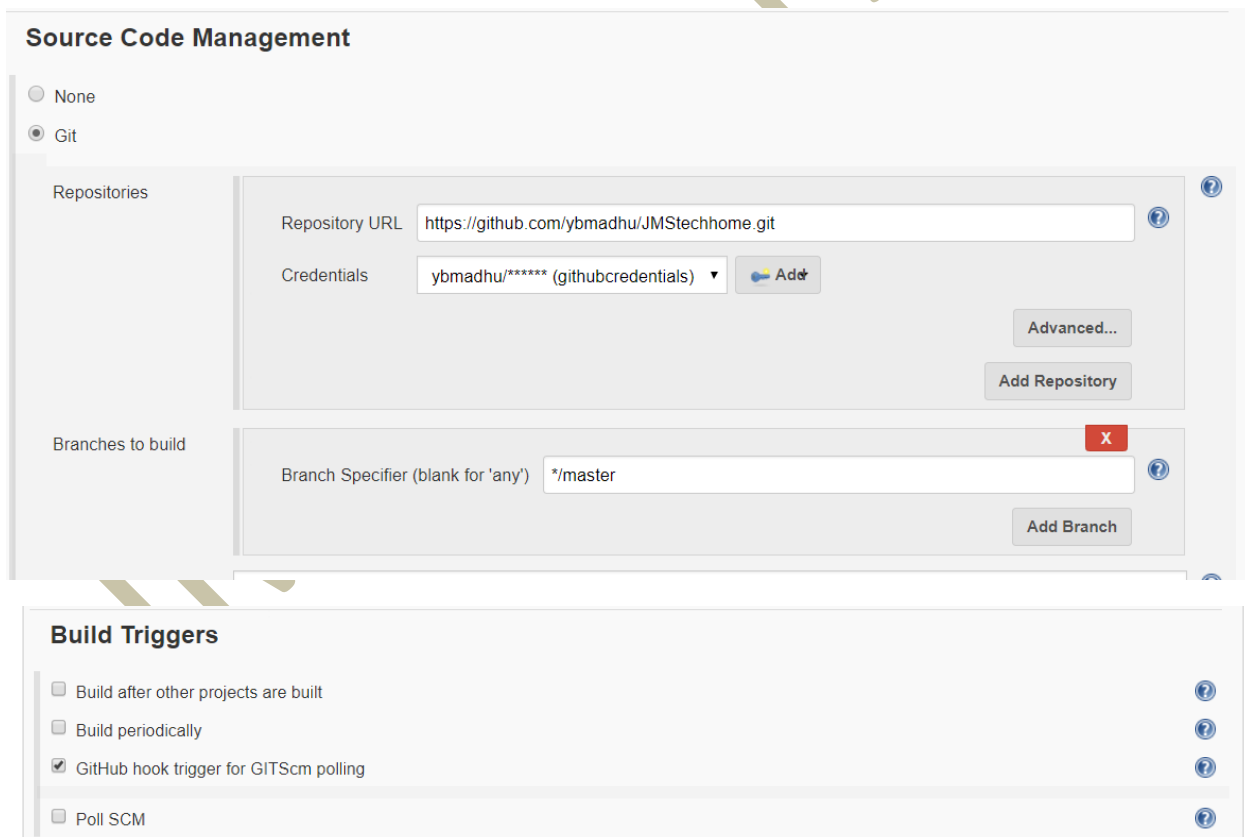
Now our Public DNS is ready lets move into the jenkins configuration.

goto jenkins home page select which project need to be trigger with hooks.open the project --> goto configure --> goto general section select github project enter the github project url without .git extention --> goto build trigger section select a check box **GitHub hook trigger for GITScm polling**.



The screenshot shows the 'General' tab of the Jenkins configuration interface. It includes a 'Description' text area, a 'Discard old builds' checkbox, a checked 'GitHub project' checkbox, and a 'Project url' field containing 'https://github.com/ybmadhu/JMStechhome/'. There are also 'Advanced...' and 'Add Repository' buttons.

if not configure earlier github and jenkins do it in scm section select and git and enter url of github repository and credentials of your github.



The screenshot shows two configuration tabs. The 'Source Code Management' tab has 'Git' selected, with a 'Repository URL' of 'https://github.com/ybmadhu/JMStechhome.git', 'Credentials' set to 'ybmadhu/* (githubcredentials)', and 'Branches to build' set to '*/master'. The 'Build Triggers' tab has 'GitHub hook trigger for GITScm polling' checked, with other options like 'Build after other projects are built', 'Build periodically', and 'Poll SCM' unchecked.

then apply and save the changes.

Now we need to modify the configure global security to allow CSRF.

Goto manage jenkins --> configure global security --> CSRF Protection --> deselect the **Prevent Cross Site Request Forgery exploits**.

Agent protocols...

CSRF Protection

☐ Prevent Cross Site Request Forgery exploits

CLI

Now goto github account and select repository which we are going to build with webhooks.

goto settings --> select webhooks --> enter the payload url we just created with ngrok.

and update the webhook.

`http://<jenkinsurl>/github-webhook/`

<> Code 0 Issues 0 Pull requests 0 Projects 0 Wiki Insights Settings 1

Options Collaborators Branches Webhooks 2 Integrations & services Deploy keys

Moderation Interaction limits

Webhooks / Manage webhook

We'll send a POST request to the URL below with details of any subscribed events. You can also specify which data format you'd like to receive (JSON, x-www-form-urlencoded, etc). More information can be found in [our developer documentation](#).

Payload URL * `http://13057325.ngrok.io/github-webhook/` 3

Content type application/x-www-form-urlencoded

Secret

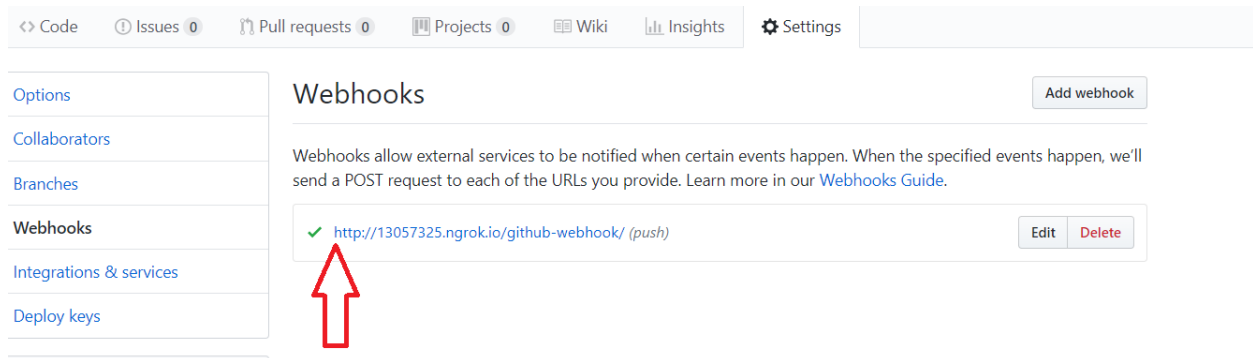
Which events would you like to trigger this webhook?

☒ Just the push event.
☐ Send me everything.
☐ Let me select individual events.

☒ Active
We will deliver event details when this hook is triggered

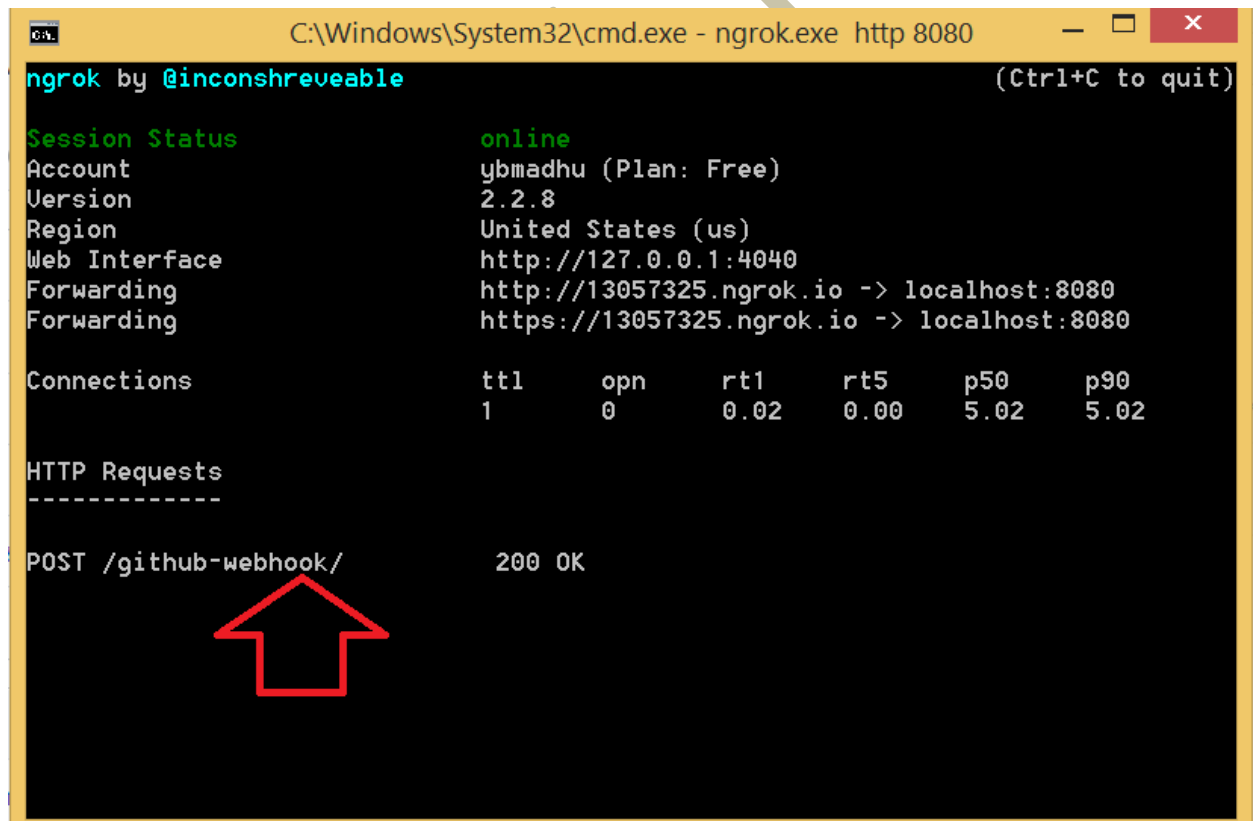
Update webhook Delete webhook

Now click webhook we can see the green tick mark it indicates you webhook successfully registered.



The screenshot shows the GitHub 'Webhooks' settings page. On the left is a sidebar with navigation links: Options, Collaborators, Branches, Webhooks (selected), Integrations & services, and Deploy keys. The main content area is titled 'Webhooks' and includes an 'Add webhook' button. Below this, a text block explains that webhooks allow external services to be notified of repository events. A single webhook is listed with a green checkmark icon, the URL 'http://13057325.ngrok.io/github-webhook/' (with '(push)' in parentheses), and 'Edit' and 'Delete' buttons. A red arrow points to the green checkmark.

Now change something in your repository using git bash or github and commit the code. Let's see if the trigger is built automatically in Jenkins or not and check the ngrok console output as well.



The screenshot shows a terminal window titled 'C:\Windows\System32\cmd.exe - ngrok.exe http 8080'. The output displays the ngrok interface, including session status (online), account information (ybmadhu, Plan: Free), version (2.2.8), region (United States), and forwarding URLs. A table of connections shows one active connection. Under the 'HTTP Requests' section, a POST request to '/github-webhook/' is shown with a '200 OK' status. A red arrow points to the '200 OK' status.

```
C:\Windows\System32\cmd.exe - ngrok.exe http 8080
ngrok by @inconshreveable (Ctrl+C to quit)

Session Status               online
Account                      ybmadhu (Plan: Free)
Version                      2.2.8
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                              https://13057325.ngrok.io -> localhost:8080

Connections                  ttl    opn    rt1    rt5    p50    p90
                              1      0      0.02   0.00   5.02   5.02

HTTP Requests
-----
POST /github-webhook/        200 OK
```

Done we are successfully configure the Jenkins and Github webhooks for automation the trigger a build.

JMS Tech Home