

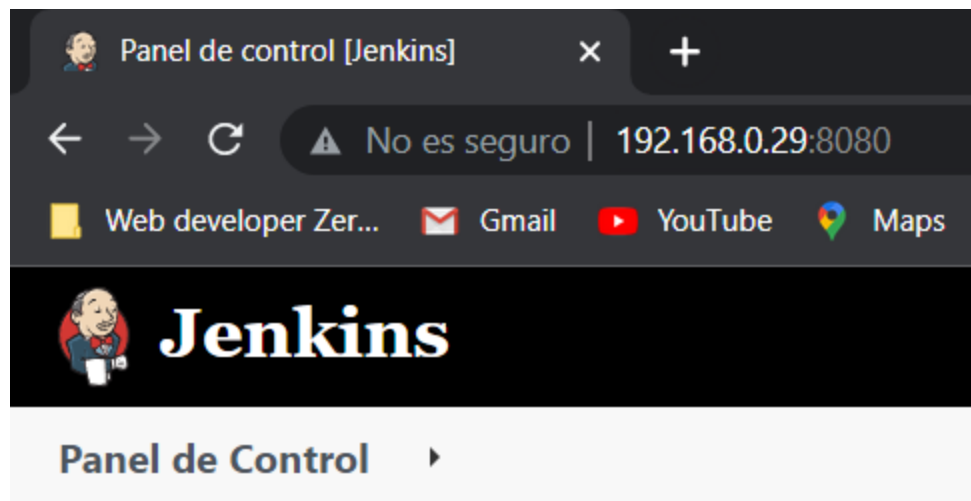
JENKINS INSIDE DOCKER CONTAINER, INTEGRATION WITH GITHUB

I am using an Ubuntu VM that has docker installed, inside a docker container is a Jenkins image running, in this tutorial I document the steps to integrate Jenkins and github. Jenkins will pull the repository after any commit to any branch on the remote repository on github and it will execute a .js file with node after the pulling. My Ubuntu VM has the ip 192.168.0.29 and the user gustavo in the sudoers group

On ubuntu

```
>sudo docker run -p 8080:8080 -p 50000:50000 -v jenkins_home:/var/jenkins_home jenkins/jenkins:lts-jdk11 (Run jenkins image in a container)
```

Now if I go to 192.168.0.29:8080 I can see the jenkins gui:



Then I create a Job

Enter an item name

» *Required field*



Crear un proyecto de estilo libre

Esta es la característica principal de Jenkins, la de ejecutar el proyecto cualquier modo de construcción o ejecución (make, ant, mvn, rake, sci como ejecutar cualquier proceso que requiera monitorización.

Then I configurate the Job

- ☐ Desechar ejecuciones antiguas ?
 - ☐ Esta ejecución debe parametrizarse ?
 - ☒ GitHub project
- Project url** ?

Configurar el origen del código fuente

☐ Ninguno

☒ Git ?

Repositories ?

Repository URL ?

`https://github.com/Gust99/devops-jala-foundation.git`

Credentials ?

- none - ▼

 Add ▼

Branches to build ?

Branch Specifier (blank for 'any') ?

`*/master`

Add Branch

Disparadores de ejecuciones

- ☐ Lanzar ejecuciones remotas (ejem: desde 'scripts') ?
- ☐ Construir tras otros proyectos ?
- ☐ Ejecutar periódicamente ?
- ☒ GitHub hook trigger for GITScm polling ?
- ☐ Consultar repositorio (SCM) ?

Entorno de ejecución

- ☐ Delete workspace before build starts
- ☐ Use secret text(s) or file(s) ?
- ☐ Provide Configuration files ?
- ☒ Abortar la ejecución si se atasca

Estrategia de timeout ?

Absoluta

Tiempo máximo en minutos ?

1

- ☒ Add timestamps to the Console Output
- ☐ Inspect build log for published Gradle build scans
- ☒ Provide Node & npm bin/ folder to PATH

NodeJS Installation

14.19.1

Specify needed nodejs installation where npm installed package

npmrc file

- use system default -

Cache location

Default (~/.npm or %APP DATA%\npm-cache)

Ejecutar

 Ejecutar linea de comandos (shell)

?

Comando

```
node a.js|
```

In order to execute .js files with node I installed a node plugin for jenkins

NodeJS Plugin 1.5.1

NodeJS Plugin executes **NodeJS** script as a build step.
[Report an issue with this plugin](#)

Configurations for the plugin

NodeJS

instalaciones de NodeJS

Añadir NodeJS



NodeJS

Nombre

14.19.1

☒ Instalar automáticamente ?



Install from nodejs.org

Versión

NodeJS 14.19.1 ▼

Use of ngrok

Ngrok will let my Ubuntu VM to be accessible from Internet, I need this to let github communicate with my local jenkins server

```
>sudo tar xvf ~/Downloads/ngrok-v3-stable-linux-amd64.tgz -C /usr/local/bin
```

```
>curl -s https://ngrok-agent.s3.amazonaws.com/ngrok.asc | sudo tee
/etc/apt/trusted.gpg.d/ngrok.asc >/dev/null &&
echo "deb https://ngrok-agent.s3.amazonaws.com buster main" | sudo tee
/etc/apt/sources.list.d/ngrok.list &&
sudo apt update && sudo apt install ngrok

>ngrok config add-authtoken <token>

>ngrok http 8080
```

```
gustavo@ubuntu2010: ~
ngrok

Session Status      online
Account             gustavo (Plan: Free)
Version             3.0.2
Region              United States (us)
Latency             calculating...
Web Interface       http://127.0.0.1:4040
Forwarding           https://07db-181-188-160-162.ngrok.io -> http://localhost:8080

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

Now the forwarding url represents the url of my local Ubuntu VM, is the url that will let github connect to my jenkins server

Github webhooks

Inside github in settings/webhooks I configurated a webhook, the payload url field has the ngrok url and /github-webhook/

Webhooks / Manage webhook

Settings

Recent Deliveries

We'll send a POST request to the URL below with details of any subscribed event in the format you'd like to receive (JSON, `x-www-form-urlencoded`, etc). More information in the [documentation](#).

Payload URL *


`https://07db-181-188-160-162.ngrok.io/github-webhook/`

Content type

`application/x-www-form-urlencoded` ▾

Secret

SSL verification

 By default, we verify SSL certificates when delivering payloads.

☒ **Enable SSL verification** ☐ **Disable (not recommended)**

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.

After that if from my windows I push a commit to master branch then github should send the repository to my local jenkins ubuntu server and jenkins should execute the a.js file, this file prints the first 30 fibonacci numbers.

From windows push to github master branch

```
MINGW64:/c/Users/Usuario/Desktop/BOOTCAMP/DEVOPS/vagrant
08835ce..e029b9c  master -> master

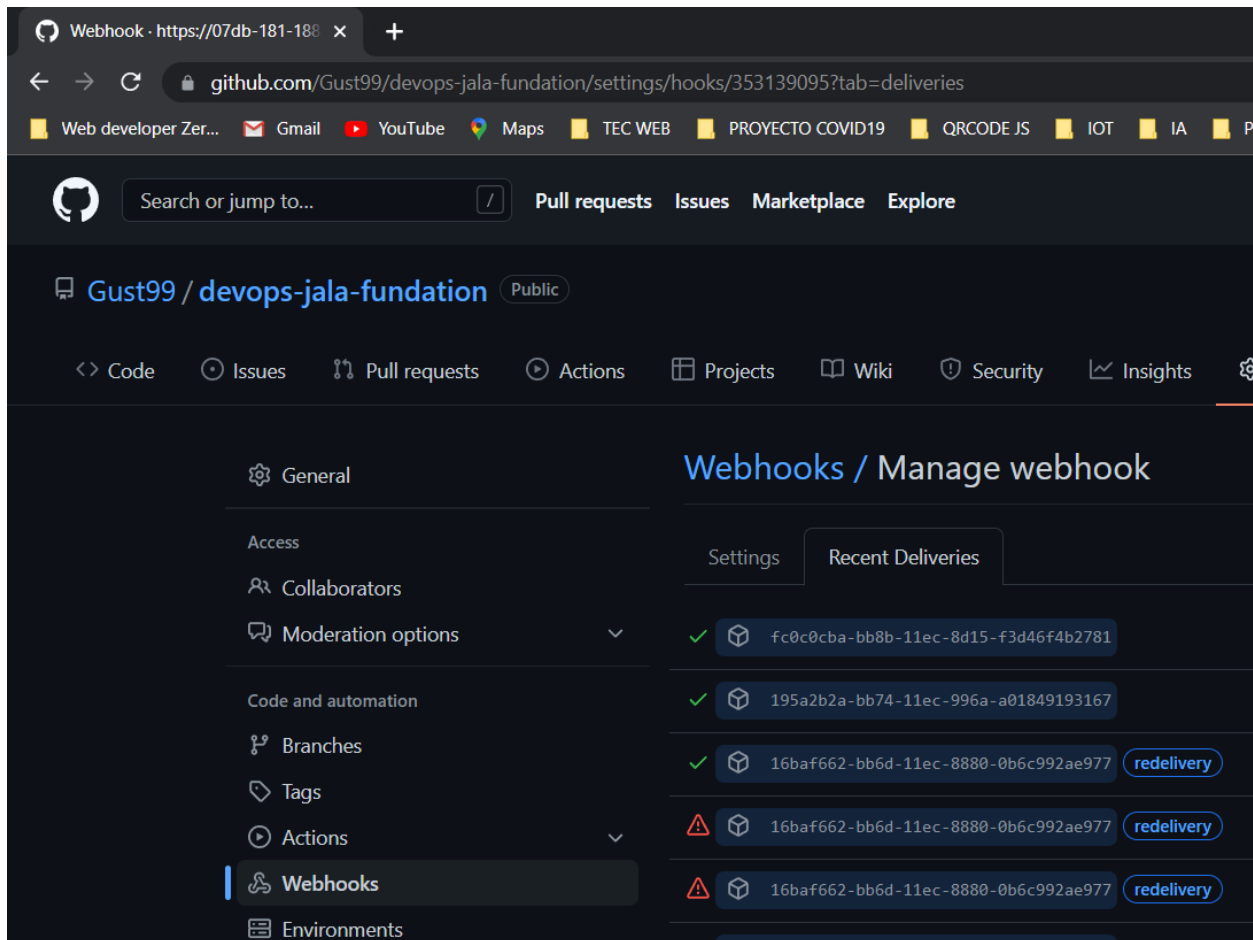
Usuario@LAPTOP-902IJ86V MINGW64 ~/Desktop/BOOTCAMP/DEVOPS/vagrant (master)
$ nano a.js

Usuario@LAPTOP-902IJ86V MINGW64 ~/Desktop/BOOTCAMP/DEVOPS/vagrant (master)
$ git add .

Usuario@LAPTOP-902IJ86V MINGW64 ~/Desktop/BOOTCAMP/DEVOPS/vagrant (master)
$ git commit -m "Fibonacci"
[master 7135a75] Fibonacci
1 file changed, 1 insertion(+), 1 deletion(-)

Usuario@LAPTOP-902IJ86V MINGW64 ~/Desktop/BOOTCAMP/DEVOPS/vagrant (master)
$ git push origin master
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 16 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 288 bytes | 96.00 KiB/s, done.
Total 3 (delta 2), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (2/2), completed with 2 local objects.
To https://github.com/Gust99/devops-jala-foundation.git
e029b9c..7135a75  master -> master
```

Github will send the repository to my local jenkins server



Then from jenkins inside the Job I should see the output

node2 #1 Console [Jenkins] x +

← → ↻ No es seguro | 192.168.0.29:8080/job/node2/1/console

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Jenkins

Panel de Control ▶ node2 ▶ #1

📈 Volver al proyecto

🔍 Estatus

📝 Cambios

🖥️ Console Output

📄 View as plain text

✅ Salida de consola

20:45:12 Started by GitHub push by Gust99

20:45:12 Running as SYSTEM

20:45:12 Building in workspace /var/jenkins_home/workspace/node2

20:45:12 The recommended git tool is: NONE

20:45:12 No credentials specified

20:45:12 Cloning the remote Git repository

node2 #1 Console [Jenkins] x +

← → ↻ No es seguro | 192.168.0.29:8080/job/node2/1/console

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Panel de Control ▶ node2 ▶ #1 ▼

Timestamps [View as plain text](#)

☒ System clock time

☒ Use browser timezone

☐ Elapsed time

☐ None

```

20:45:14 > git config core.sparsecheckout # timeout=10
20:45:14 > git checkout -f 7135a751bd0a9917372e7290f17bf0f9b00d4a14 # timeout=10
20:45:14 Commit message: "Fibonacci"
20:45:14 First time build. Skipping changelog.
20:45:14 [node2] $ /bin/sh -xe /tmp/jenkins10407415488946017444.sh
20:45:14 + node a.js
20:45:14 Fibonacci
20:45:14 1
20:45:14 1
20:45:14 2
20:45:14 3
20:45:14 5
20:45:14 8
20:45:14 13
20:45:14 21
20:45:14 34
20:45:14 55
20:45:14 89
20:45:14 144
20:45:14 233
20:45:14 377
20:45:14 610
20:45:14 987
20:45:14 1597
20:45:14 2584
20:45:14 4181
20:45:14 6765
20:45:14 10946
20:45:14 17711
20:45:14 28657
20:45:14 46368
20:45:14 75025
20:45:14 121393
20:45:14 196418

```

```
20:45:14 17711
20:45:14 28657
20:45:14 46368
20:45:14 75025
20:45:14 121393
20:45:14 196418
20:45:14 317811
20:45:14 514229
20:45:14 832040
20:45:14 Finished: SUCCESS
```

I used the repository in which the devops classes homework has to be uploaded, in the image below you can see the a.js file that Jenkins executes after a push to master branch on github

