

如何透過Travis CI與Heroku達成 CI/CD (以JAVA為例)



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CI/CD

Continuous **I**ntegration

Continuous **D**elivery

Continuous **D**eployment

持續驗證系統開發結果
整合自動化發佈或部署

Build Stages

一個階段做完後才做下一個階段

Current Branches Build History Pull Requests > Build #35 More options



∞

deploy-stage Update README.md

↻ Commit 7501c0a

🔗 Compare 6e8514b..7501c0a

🔗 Branch deploy-stage



 Sven Fuchs authored  GitHub committed

⌚ #35 created


⌚ Running for -

✕ Cancel build

Test

∞ # 35.1	 </> Ruby	📦 no environment variables set	⌚ -	✕
🔗 # 35.2	 </> Ruby	📦 no environment variables set	⌚ -	✕

Deploy

∞ # 35.3	 </> Ruby	📦 no environment variables set	⌚ -	✕
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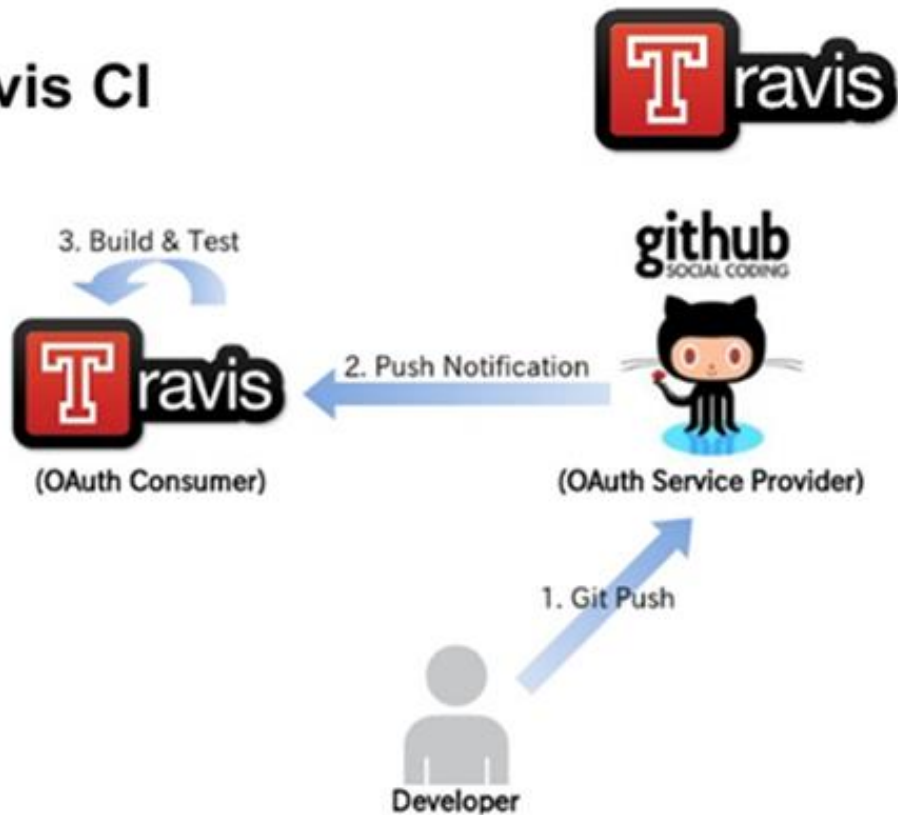
CI with Github



Travis CI

流程圖

Travis CI



教學-1

- ▶ 用Github帳號註冊Travis CI
- ▶ 和Github同步，並選擇你的專案

成功可以看到這個畫面

The screenshot displays the Travis CI web interface. At the top, there's a navigation bar with links to Dashboard, Changelog, Documentation, and Help. Below this, a search bar is present. The main content area shows the repository 'gn01868184 / JavaCICD' with a 'build passing' status. On the left, a list of repositories is shown, including 'gn01868184/JavaCICD' (29 builds) and 'gn01868184/GitExample' (6 builds). The right side shows details for the 'master' branch, indicating a successful build (#29 passed) with a commit hash 'fe515c2'. Below this, the 'Job log' is visible, showing 'Worker information' and 'Build system information'.

教學-2

- ▷ 新增並設定 .travis.yml 到專案中([使用不同script](#))
- ▷ push後他會自動執行Travis專案

```
1 language: java
2
3 jdk:
4   - openjdk11
```

```
junit4/2.12.4/surefire-junit4-2.12.4.pom
1027 [INFO] Downloaded from google-maven-central: https://maven-central.storage-download.googleapis.com/maven2/org/apache/maven/surefire/surefire-
junit4/2.12.4/surefire-junit4-2.12.4.pom (2.4 kB at 5.5 kB/s)
1028 [INFO] Downloading from google-maven-central: https://maven-central.storage-download.googleapis.com/maven2/org/apache/maven/surefire/surefire-
providers/2.12.4/surefire-providers-2.12.4.pom
1029 [INFO] Downloaded from google-maven-central: https://maven-central.storage-download.googleapis.com/maven2/org/apache/maven/surefire/surefire-
providers/2.12.4/surefire-providers-2.12.4.pom (2.3 kB at 23 kB/s)
1030 [INFO] Downloading from google-maven-central: https://maven-central.storage-download.googleapis.com/maven2/org/apache/maven/surefire/surefire-
junit4/2.12.4/surefire-junit4-2.12.4.jar
1031 [INFO] Downloaded from google-maven-central: https://maven-central.storage-download.googleapis.com/maven2/org/apache/maven/surefire/surefire-
junit4/2.12.4/surefire-junit4-2.12.4.jar (37 kB at 336 kB/s)
1032
1033 -----
1034 T E S T S
1035 -----
1036 Running ntou.cs.SimpleTest
1037 Tests run: 4, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.161 sec
1038
1039 Results :
1040
1041 Tests run: 4, Failures: 0, Errors: 0, Skipped: 0
1042
1043 [INFO] -----
1044 [INFO] BUILD SUCCESS
1045 [INFO] -----
1046 [INFO] Total time: 3.165 s
1047 [INFO] Finished at: 2020-11-05T02:18:49Z
1048 [INFO] -----
1049 The command "mvn test -B" exited with 0.
1050
1051
1052 Done. Your build exited with 0.
```

測試成功



gn01868184 / JavaCICD



build passing

點這裡取得通過貼紙

Current

Branches

✓ master 修

Commit

Compare

Branch m

gn01868



JDK: ope

AMD64

Status Image

BRANCH

master

FORMAT

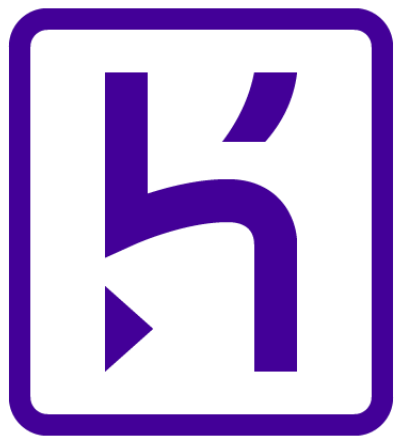
Markdown

RESULT

`[![Build Status](https://travis-ci.com/gn01868184/JavaCICD.svg?branch=master)](https://travis-ci.com/gn01868184/JavaCICD)`

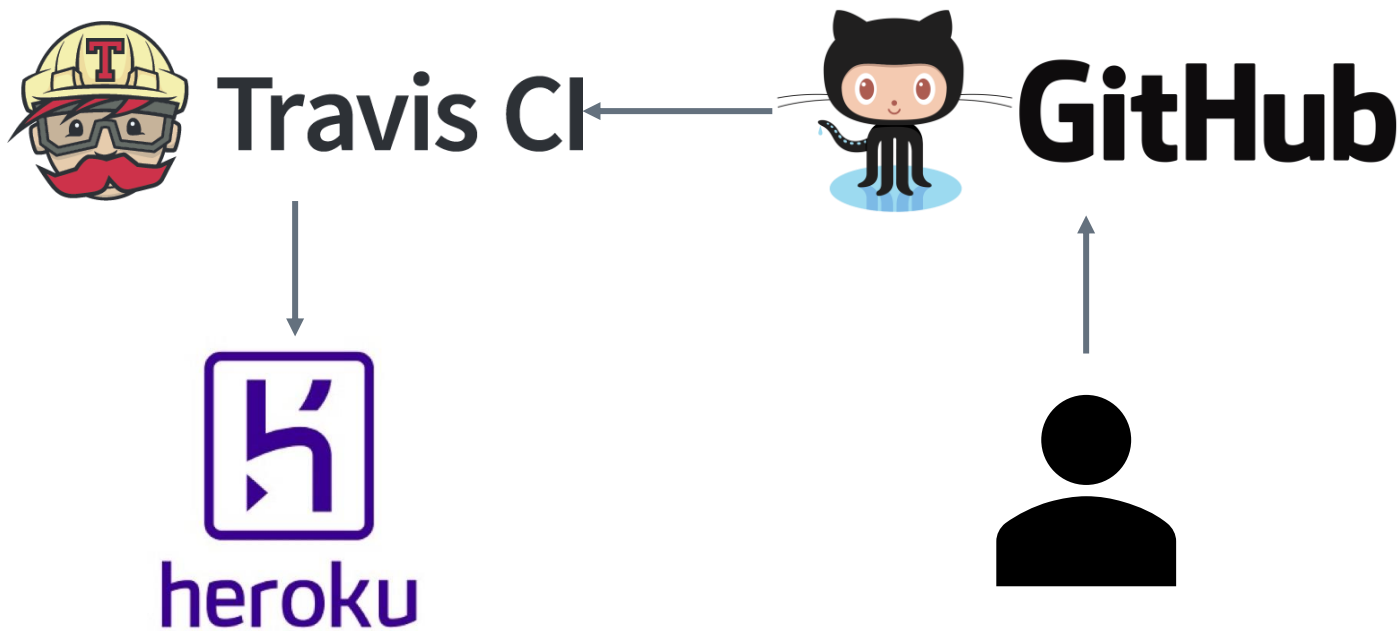
選擇格式並貼到README.md

一個每天可以用18小時的免費雲端



HEROKU

流程圖





教學-1

- ▷ 註冊Heroku
- ▷ 在Heroku上建立一個新的App
- ▷ 在App設定_Deploy裡連結Github帳戶、Github repo和啟動CI等待功能。

Deployment method

 Heroku Git
Use Heroku CLI



 GitHub
Connected 


 Container Registry
Use Heroku CLI



連結GitHub

App connected to GitHub

Code diffs, manual and auto deploys are available for this app.


Connected to  [gn01868184/JavaCICD](#) by  [gn01868184](#) Disconnect...



 Releases in the [activity feed](#) link to GitHub to view commit diffs


 Automatically deploys from  master

Automatic deploys

Enables a chosen branch to be automatically deployed to this app.

 You can now change your main deploy branch from "master" to "main" for both manual and automatic deploys, please follow the instructions [here](#).

 Automatic deploys from  master are enabled

Every push to  master will deploy a new version of this app. **Deploys happen automatically:** be sure that this branch in GitHub is always in a deployable state and any tests have passed before you push. [Learn more](#).


☒ Wait for CI to pass before deploy
Only enable this option if you have a Continuous Integration service configured on your repo.

Disable Automatic Deploys

打勾等待CI通過後才部署


教學-2


- ▶ 創建並設定Heroku的資訊檔 Procfile
- ▶ push


 master ▾

JavaCICD / Procfile




Go to file ...

 gn01868184 Update Procfile ✓

Latest commit 2680950 7 days ago  History

 1 contributor

1 lines (1 sloc) | 71 Bytes

RawBlame

1 web: java -cp target/classes:target/dependency/* ntou.cs.HelloWorld

成功畫面

← → ↻ 🏠 java-cicd.herokuapp.com

🌐 應用程式 Facebook YouTube 📺 Slides Carnival - Fr... 📧 Gmail 🗣️ 翻譯 🌐 Google 雲端硬碟 📅 Meeting | Trello 🦊 Projects · Dashboa... 🐙 GitHub 📝 我的筆記 - HackMD

加法:

$$1 + 1 = 2$$

減法:

$$1 - 1 = 0$$

乘法:

$$3 * 5 = 15$$

除法:

$$8 / 2 = 4$$