標題：from github to docker hub

目標：from (github or azure repo) to (jenkins or azure build pipeline) to docker hub

所以包含 4 條路徑

1. Github -> jenkins -> docker hub
2. Github -> azure build pipeline -> docker hub
3. Azure repo -> jenkins -> docker hub
4. Azure repo -> azure build pipeline -> docker hub

本課程主要 base on 以下課程，增加上傳到 docker hub的部分，另外也請了解簡單的 docker command

教學課程：在 Azure 中的 Linux VM 上以 Jenkins、GitHub 及 Docker 建立開發基礎結構

來自 <<https://docs.microsoft.com/zh-tw/azure/virtual-machines/linux/tutorial-jenkins-github-docker-cicd>>

另外請準備帳號 for github, azure devops, docker hub

重點：

1. How to trigger build
2. How to get code

TODO：

1. Code form bitbucket
2. Add azure release pipeline

Sample code:

<https://github.com/wellscho/nodejs-docs-hello-world.git>

Please clone to your github repository

1. Github -> jenkins -> docker hub
   1. Use the cloned sample code
   2. 新增作業，建置Free-Style軟體專案

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Jenkins 
Pipeline 
Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or 
organizing complex activities that do not easily fit in free-style job type. 
Folder 
Creates a container that stores nested items in it. Useful for grouping things together. Unlike view, which is just a filter, a folder creates a separate 
namespace, so you can have multiple things of the same name as long as they are in different folders 
nch Pipeline 
a set of Pipeline projects according to detected branches in one SCM repository. 
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1. 設定组態
   1. General

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https://github.com/wellscho/nodejs-docs-hello-world" 
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1. 原始碼管理

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A simple nodejs application for docs 
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34 commits 
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9 contributors 
Create new file Upload files 
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This branch is 11 commits ahead of Azure-Samples:master. 
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we 
Update index.js 
Use Git or checkout with SVN using the web URL. 
https : //github.com/wellscho/nodeis-docs-I 
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1. 建置觸發程序

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Script 
Build after other projects are built 
Build when a change is pushed to TFS/Team Services 
Build when a change is pushed to a TFS pull request 
GitHub hook trigger for GITScm polling 
SCM 
Delete workspace before build starts 
O use secret text(s) or file(s) 
Provide Configuration files 
O Abort the build if its stuck 
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1. 建置環境不用設
2. 建置

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Provide Configuration files 
Abort the build if its stuck 
Inspect build log for published Gradle build scans 
Provide Node & npm bin} folder to PATH 
With Ant 
Execute NodeJS script 
Invoke Gradle script 
Provide Configuration files 
Run with timeout 
Set build pending status in TFS/Team Services 
Set build status to "pending" on GitHub commit 
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Shell 
docker build - -tag helloworId:$BUILD NUMBER 
"qb195S123" 
docker login 
"wellscho" 
docker tag helloworld: $81JILD NUMBER wellscho/heIIoworId:$81JILD NUMBER 
docker push wellscho/helloworld 
# the following are for testing in the jerkins server, could just run it in other machine 
#docker stop helloworld docker rm helloworld 
ocker run 
--name helloworld -p 1337 :1337 helloworId:$81JILD NIJMBER node /var/www/index.js 
Apply 
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//如果你同時實驗本課程多個路徑，請將每個路徑的docker hub repository做不同命名，例如：將下面script的helloworld變更為helloworld1

docker build --tag helloworld:$BUILD\_NUMBER .

docker login -u "wellscho" -p "qbl955123"

docker tag helloworld:$BUILD\_NUMBER wellscho/helloworld:$BUILD\_NUMBER

docker push wellscho/helloworld

# the following are for testing in the jenkins server, could just run it in other machine

#docker stop helloworld && docker rm helloworld

#docker run --name helloworld -p 1337:1337 helloworld:$BUILD\_NUMBER node /var/www/index.js &

1. 建置後動作不用設

也可將建置的部分工作移到建置後動作

1. 實驗，更改github的code，請記得commit

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require(' ) ; 
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const sen.eer = 
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response . 
World Wells 1337 2019/10/1 ø8:øal! m); 
response 
process.env.PORT Il 1337; 
const port 
server. listen(port); 
console. running at http://localhost:%d% 
port) ; 
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Commit changes 
Update index.js 
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看Jenkins內專案的建置歷程的Console Output

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Console Output 
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a No Tags 
Started by GitHub push by wellscho 
Running as SYSTEM 
Building in workspace /var/Iib/jenkins/workspace/Fron•GithubToDockerhub 
no credentials specified 
> git rev-parse 
-is-inside-work-tree # timeout—IO 
Fetching changes from the remote Git repository 
> git config remote.origin.url https://github.com/wellscho/nodejs-docs-hello-world.gi_t # timeout=la 
Fetching upstream changes from https://github.com/wellscho/nodejs-docs-hello-world.git 
> git - -version # timeout=IO 
> git fetch 
https://github.com/wellscho/nodeis-docs-hello-world.gig +refs/heads/* 
- tags 
- -progress 
> git rev-parse # timeout=IØ 
> git rev-parse refs/remotes/origin/origin/masterA{commit} # timeout=IØ 
Checking out Revision db75435481aad09973b9e3ØIf5208a32e14d5f67 (refs/ remotes/origin/master) 
> git config core. sparsecheckout # timeout=la 
> sit checkout -f db75435481aada9973b9e3e1f52a8a32e14d5f67 
Commit message: 
"Update Docket-file" 
> git rev-list - -no-walk f 55882a296c22d475b728fede45eea28c4b473c4 # timeout=IØ 
[FromGithubToDockerhub] $ / bin/sh -xe /tmp/jenkins3669548662866319766. sh 
+ docker build - -tag helloworId7:3 
Sending build context to Docker daemon 222.7k8 
step 1/5 
FROM node: alpine 
- > ef7d474eab14 
step 2/5 : WORKDIR /var/wwv' 
--> Using cache 
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Preparing 
31ca1b59b128: 
Preparing 
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3: digest: sha256: 941%ff82a9d253ae62øø53449bfff14bfc26føfIafcøøb8458aa538ca8618be size: 
+ docker stop helloworId7 
helloworId7 
+ docker rm helloworId7 
helloworId7 
+ docker run 
--name helloworId7 -p 1337:1337 helloworId7:3 node /var/www/index.is 
Server running at http://IocaIhost:1337 
Process leaked file descriptors. See for more information 
Finished: SUCCESS 
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cloud.docker.com/u/wellscho/repository/docker/'uellscho/helloworld7 
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Timeline 
Collaborators 
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Docker commands 
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Public View 
6 wellscho/helloworld7 
This repository does not have a description 
@ Last pushed: 7 minutes ago 
Tags 
This repository contains 3 tag(s). 
3 
2 
To push a new tag to this repository, 
docker push wellscho/he110wor1d7 : tagname 
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模擬由docker hub下載此image並執行它，找一台VM w/ dcoker installed，嘗試跑此image，記得要加上docker hub的 account和image的tag，例如：wellscho/helloworld7:3

azureuser@myVM:~$ docker run --name helloworld7 -p 1337:1337 wellscho/helloworld7:3 node /var/www/index.js &

[1] 53858

azureuser@myVM:~$ Unable to find image 'wellscho/helloworld7:3' locally

3: Pulling from wellscho/helloworld7

e7c96db7181b: Pull complete

95b3c812425e: Pull complete

778b81d0468f: Pull complete

28549a15ba3e: Pull complete

786461657918: Pull complete

1a5d9d753993: Pull complete

e469bb9f11a7: Pull complete

0a54df239230: Pull complete

Digest: sha256:94106ff82a9d253a0620053449bfff14bfc26f0f1afc00b8458aa538ca8618b0

Status: Downloaded newer image for wellscho/helloworld7:3

Server running at <http://localhost:1337>

azureuser@myVM:~$

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路徑 1 結束

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   1. New azure builds pipeline

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use the classic editor to create a pipeline without YAML. 
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Pipelines 
A You selected a public repository, but this is not a public project. Go to project settings to change the visibility of the project. 
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Node. js 
Build general Node.is project with rpm. 
Node.js Express Web App to Linux on Azure 
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Build Node.is project that uses Vue. 
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Build Node.is project using the webpack CLL 
Node.js "ith React 
Build Node.is project that uses React. 
Node.js React Web App to Linux on Azure 
Build Node.is React and deploy it to Azure as a Linux web app. 
Node.js "ith Angular 
Build Node.is project that uses Angular. 
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修改 pipeline YAML

steps:

- task: Docker@2

displayName: Build an image

inputs:

repository: helloworld8

tags: $(Build.BuildId)

command: build

Dockerfile: Dockerfile

- script: |

echo "enter script"

docker images

docker login -u "wellscho" -p "qbl955123"

docker tag helloworld8:$(Build.BuildId) wellscho/helloworld8:$(Build.BuildId)

docker push wellscho/helloworld8:$(Build.BuildId)

displayName: 'upload docker image'

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wellscho.nodejs-docs-hello-world (1) 
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O wellscho/nodejs-docs-hello-world / azure-pipelines-lyml * 
https://docs.microsoft.com/azure/devops/pipelines/languages/javascript 
trigger : 
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pool : 
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steps : 
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P Search 
Variables 
Tasks 
Search tasks 
.NET core 
Build: test, package, or publish a dotnet appl... 
Android signing 
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App Center distribute 
Distribute app builds to testers and users via... 
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Save and run

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Logs Summa l'} Tests 
Job 
Pool: Azure Pipelines • Agent: Hosted Agent 
Prepare job • succeeded 
Initialize job • succeeded 
Checkout succeeded 
guild an image • succeeded 
upload docker image • succeeded 
Post-job: Checkout • succeeded 
Finalize Job • succeeded 
All logs 
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New in Docker Hub: Personal Access Tokens. Learn more > 
Explore Repositories Organizations 
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IJsing Oof 1 private repositories. Get more 
Public View 
6 wellscho/helloworld8 
This repository does not have a description 
@ Last pushed: a few seconds ago 
Tags 
This repository contains 2 tag(s). 
49 
48 
To push a new tag to this repository, 
docker push wellscho/he110wor1d8: tagname 
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模擬由docker hub下載此image並執行它，找一台VM w/ dcoker installed，嘗試跑此image，記得要加上docker hub的 account和image的tag，例如：wellscho/helloworld8:51

azureuser@myVM:~$ docker run --name helloworld8 -p 1337:1337 wellscho/helloworld8:51 node /var/www/index.js &

[1] 57550

azureuser@myVM:~$ Unable to find image 'wellscho/helloworld8:51' locally

51: Pulling from wellscho/helloworld8

e7c96db7181b: Pull complete

95b3c812425e: Pull complete

778b81d0468f: Pull complete

28549a15ba3e: Pull complete

701871014cc0: Pull complete

5d3440baa11a: Pull complete

198a78c74a21: Pull complete

9e5c24c706f4: Pull complete

Digest: sha256:5d6cb23805adfe762f42c729f1e6045eecb04d0fb452766c3cd9627a00a33b30

Status: Downloaded newer image for wellscho/helloworld8:51

Server running at <http://localhost:1337>

azureuser@myVM:~$

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路徑 2 結束

1. Azure repo -> jenkins -> docker hub
   1. Import repository

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or push an existing repository from command line 
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git push -u origin --all 
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Import successful! 
Congratulations! Your https://github.com/wellscho/nodejs-docs-hello-world repository has been 
successfully imported. 
If you are not automatically redirected to your repository page Click here ta 
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1. 新增作業Jenkins，建置Free-Style軟體專案

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Jenkins 
Pipeline 
Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or 
organizing complex activities that do not easily fit in free-style job type. 
Folder 
Creates a container that stores nested items in it. Useful for grouping things together. Unlike view, which is just a filter, a folder creates a separate 
namespace, so you can have multiple things of the same name as long as they are in different folders 
nch Pipeline 
a set of Pipeline projects according to detected branches in one SCM repository. 
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1. 設定组態
   1. General

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1. 原始碼管理

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Script 
Build after other projects are built 
Build when a change is pushed to TFS/Team Services 
Build when a change is pushed to a TFS pull request 
GitHub hook trigger for GITScm polling 
SCM 
Delete workspace before build starts 
O use secret text(s) or file(s) 
Provide Configuration files 
O Abort the build if its stuck 
hed Gradle build scans 
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1. 建置環境不用設
2. 建置

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Provide Configuration files 
Abort the build if its stuck 
Inspect build log for published Gradle build scans 
Provide Node & npm bin} folder to PATH 
With Ant 
Execute NodeJS script 
Invoke Gradle script 
Provide Configuration files 
Run with timeout 
Set build pending status in TFS/Team Services 
Set build status to "pending" on GitHub commit 
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docker build - -tag helloworId:$BUILD NUMBER 
"qb195S123" 
docker login 
"wellscho" 
docker tag helloworld: $81JILD NUMBER wellscho/heIIoworId:$81JILD NUMBER 
docker push wellscho/helloworld 
# the following are for testing in the jerkins server, could just run it in other machine 
#docker stop helloworld docker rm helloworld 
ocker run 
--name helloworld -p 1337 :1337 helloworId:$81JILD NIJMBER node /var/www/index.js 
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2019/10/1 

//如果你同時實驗本課程多個路徑，請將每個路徑的docker hub repository做不同命名，例如：將下面script的helloworld變更為helloworld1

docker build --tag helloworld:$BUILD\_NUMBER .

docker login -u "wellscho" -p "qbl955123"

docker tag helloworld:$BUILD\_NUMBER wellscho/helloworld:$BUILD\_NUMBER

docker push wellscho/helloworld

# the following are for testing in the jenkins server, could just run it in other machine

#docker stop helloworld && docker rm helloworld

#docker run --name helloworld -p 1337:1337 helloworld:$BUILD\_NUMBER node /var/www/index.js &

1. 建置後動作不用設

也可將建置的部分工作移到建置後動作

1. Let azure repo trigger jenkins

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Service hook

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Sewice hooks 
Dashboards 
Boards 
Project configuration 
Team configuration 
GitHub connections 
Pipelines 
Agent pools 
Parallel jobs 
Settings 
Test management 
Settings / Overview 
Project details 
Name 
test4 
Description 
Process 
Basic 
Visibility 
e Private 
This determines who can view this project. Learn more about project visibility. 
Save 
Project administrators 
https://éeuazurecom/welIschoog65/test4/_settings/sericeHaoks 
-F 02:48 
2019/10/1 

New service hook subscription, choose Jenkins, set trigger

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GitHub connections 
Pipelines 
Agent pools 
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devops - Google„ 
Amazon Web Ser.'__. 
/ Service hooks 
NEW SERVICE HOOKS SUBSCRIPTION 
Service Hooks 
Service 
Integrate with ßur 
Select a service to integrate with. Discover more integrations 
+ Create subscript; 
Azure Service Bus 
Azure Storage 
Bamboo 
Campfire 
Flowdock 
Grefane 
HipChat 
HockeyApp 
Jenkins 
Microsoft Teams 
MyGet 
Office 365 
Slack 
App Center 
App Center alloms you to automate the lifecycle of 
your iOS, Android, Windows, and macOS apps 
Connect your repo end within minutes build in the 
cloud, test on thousands of real devices, distribute to 
beta testers and app stores, end monitor real-world 
usage with crash and analytics data, ell in one place. 
Supported events: 
Work item updated 
Supported actions: 
Send notification 
Learn more about this service 
Previous 
T est 
Finish 
Cancel 
-F 02:49 
2019/10/1 

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Amazon Web Ser.'__. 
/ Service hooks 
Service Hooks 
Integrate with ßur 
+ Create subscript; 
devops - Google„ 
NEW SERVICE HOOKS SUBSCRIPTION 
Trigger 
Select an event to trigger on and configure any filters. 
Trigger on this type of event 
Code pushed 
O Remember that selected events are visible to users of the 
target service, even if they don't have permission to View the 
related artifact. 
FILTERS 
Repository O 
test4 
Branch O 
[Any] 
Pushed by e member of group: O 
optional 
optional 
optional 
T est 
02:50 
2019/10/1 

Set Jenkins base URL, e.g. <http://52.187.1.232:8080/>, set username, password or token, Build (Build is the 作業名稱 of the Jenkins 作業，choose it form the 下拉選單)

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GitHub connections 
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Agent pools 
Parallel jobs 
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Test management 
Settings 
/ Service hooks 
Service Hooks 
Integrate with ßur 
+ Create subscripti 
NEW SERVICE HOOKS SUBSCRIPTION 
Perform this action 
Trigger generic build 
Triggers a generic Jenkins build, invoking the Jenkins build URL 
Secure, HTTPS endpoints ere recommended due to the potential 
for private date in the event payload. Learn more. 
SETTINGS 
Jenkins bese URL O 
http://52.187.1.232:8080/ 
user name O 
admin 
user API token (or password) O 
guild O 
hollowworldfromazure2 
Integration level O 
Devops plugin for Jenkins 
Build token O 
O Accepts parameters @ 
Previous 
required 
required 
required 
required 
optional 
optional 
T est 
02:54 
2019/10/1 

Set Jenkins, cancel "Prevent Cross Site Request Forgery exploits", otherwise the above step will show error “Error 403 No valid crumb was included in the request ”

o 
SE Vv 
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Jenkins 
O 52.187.1.232:8080/conflgureSecurity/ 
(user0114481_.. Amazon Web Ser.'__. 
devops 
Agents 
TCP port for inbound agents 
CSRF Protection 
o 
CSRF 
Plugin Manager 
_ Google„ 
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Bookmarks 
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homel 
o 
Allow anonymous read access 
O 
O 
Plain text 
Treats all input as plain text HTML unsafe characters like < and & are escaped to their respective character entities 
Agent protocols... 
o 
Use browser for metadata download 
Apply 
10:05 
2019/9/29 

Test, close, and click "finish"

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Parallel jobs 
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Test management 
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NEW SERVICE eaa«s SUBSCRIPTION 
Service Hooks 
tor pnvate data In the event 
Integrate 
TEST NOTIFICATION 
Jenkins (Trigger generic build) 
Summary Request Respo nse 
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Message 
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Jamal Hartnett pushed updates to Fabrikam-Fiber-Git:master. 
Previous 
Next 
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02:54 
2019/10/1 

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Agent pools 
Parallel jobs 
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/ Service hooks 
Service Hooks 
Integrate with yn:rur favorite services by them when events happen in your project. 
X History 
Consumer 
Jenkins 
Event 
• Code pushed 
Repository test4 
Action 
Trigger generic build 
Server. 52.187.1.232, Build: hall... 
Wells Cho 
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attempted 
02:55 
2019/10/1 

1. 實驗，更改azure repo的code，請記得commit

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dev.azure.com/wellsch00965/_git/test4?path=%2Findex.js&version=G8master 
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Contents Highlight changes Commit.. 
require(• http• ) ; 
const http 
const server = 
response 
response 
const port 
Discard 
azure-pipelines-lyml 
azure-pipelines.yml 
Dockerfile 
JS index.js 
LICENSE 
package.json 
process.json 
README.md 
startscript.sh 
web.config 
Il 
http.createserver((reguest, response) { 
.writeHead(2øa, {"Content-Type": "text/ plain")) ; 
World Wells 1337 2319/13/1 14:43! 
process .env.PORT Il 1337; 
semwer. listen(port) ; 
console. running at http://localhost:%t", port); 
Fork Clone 
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看Jenkins內專案的建置歷程的Console Output

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hollowworldfromazure2 
#2 
Started by user wells Cho 
Running as SYSTEM 
ERROR: Error while eying to update pending status in TFS/Team Services 
java . lang . NullPointerException 
Console Output 
View as plain text 
Delete build #2' 
Git auild Data 
a No Tags 
at 
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hudson . plugins . tfs . util. TeamSta tus . addStatus (Teamstatus . java : 87) 
hudson . plugins . tfs . util. TeamStatus . createFnmRun (Teamstatus . java: 66) 
hudson . pl ugins . tfs . TeamPendingStatusauiIdStep . . java : 44) 
hudson . plugins . tfs . listeners . JenkinsRunListener . onstarted (JenkinsRunListener. java : 35 ) 
hudson . model . listeners . Runl_istener . fireStarted(RunListener . java : 238) 
hudson . model . Run . execute(Run . java : 1813) 
hudson . model . FreeStyle8uiId . run(FreeStyIe8uiId . java :43) 
hudson . model . ResourceCon troll er . execute (ResourceControI ler . java : 97) 
hudson . model . Executor . run( Executor . java :429 ) 
Building in workspace /var/Iib/jenkins/workspace/hoIIoemorIdfromazure2 
using credential øc647095-6873-446g-8414-f859373f0371 
> git rev-parse 
-is-inside-work-tree # timeout=IØ 
Fetching changes from the remote Git repository 
> git config remote.origin.url https://weIIschDØ965@dev.azure.com/weIIschDØ965/test4/ git/test4 * timeout=le 
Fetching upstream changes from https://weIIschoe965@dev.azure . com/weIIschoe965/test4/ *it/ test4 
> git 
- -version # timeout=IO 
using GIT ASKPASS to set credentials 
> git fetch 
https://weIIschoØ965@dev.azure.com/weIIsch00965/test4/ git/test4 +refs/heads/*: refs/ remotes/origin/* 
-- tags --progress 
> git rev-parse b9d7a2291e6c786bd14bøb8592653d861be181c8A{commit} # timeout=IØ 
> git branch -a -v 
-no-abbrev 
-contains b9d7a2291e6c786bd14bøb8592653d861be181c8 # timeout-le 
Checking out Revision b9d7a2291e6c786bd14bøb8592653d861be181c8 (origin/master) 
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flb5933fe4b5. 
• Waiting 
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2: digest: sha256: 5eb13b82cgøc6bb4665Ø85ad7281f642dcIeecd6f96dada8672d4ecIb4c68e9c size: 
+ docker stop helloworId9 
helloworId9 
+ docker rm helloworId9 
helloworId9 
+ docker run 
--name helloworId9 -p 1337:1337 helloworIdg:2 node /var/www/index.is 
Server running at http://IocaIhost:1337 
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Process leaked file descriptors. See for more information 
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hudson . plugins . tfs . util. TeamStatus . (Teamstatus . java: 66) 
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hudson . plugins . tfs . listeners . JenkinsRunListener . oncompleted( JenkinsRunListener . java : 48) 
hudson . model . listeners . Runl_istener . fireCompIeted (RunListener . java : 209) 
hudson . model . Run . execute(Run . java : 180) 
hudson . model . FreeStyle8uiId . run(FreeStyIe8uiId . java :43) 
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hudson . model . Executor . run( Executor . java :429) 
Finished: SUCCESS 
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Hello World Wells 1337 2019/10/1 14:55! 
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看docker hub是否有此image

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cloud.docker.com/repositoy/docker/wellscho/helloworldg 
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& dockerhub 
New in Docker Hub: Personal Access Tokens. Learn more > 
Explore Repositories Organizations 
Get Help 
wellscho 
Repositories 
General 
wellscho / helloworld9 
Tags 
Builds 
Timeline 
Collaborators 
Webhooks 
0 2 minutes ago 
0 2 minutes ago 
Settings 
Docker commands 
IJsing Oof 1 private repositories. Get more 
Public View 
6 wellscho/helloworld9 
This repository does not have a description 
@ Last pushed: 2 minutes ago 
Tags 
This repository contains 2 tag(s). 
2 
To push a new tag to this repository, 
docker push wellscho/helloworldg: tagname 
03.00 
2019/10/1 

模擬由docker hub下載此image並執行它，找一台VM w/ dcoker installed，嘗試跑此image，記得要加上docker hub的 account和image的tag，例如：wellscho/helloworld7:3

azureuser@myVM:~$ docker run --name helloworld7 -p 1337:1337 wellscho/helloworld9:2 node /var/www/index.js &

[1] 83144

azureuser@myVM:~$ Unable to find image 'wellscho/helloworld9:2' locally

2: Pulling from wellscho/helloworld9

e7c96db7181b: Pull complete

95b3c812425e: Pull complete

778b81d0468f: Pull complete

28549a15ba3e: Pull complete

7f91d670b1c3: Pull complete

26d61a0cdf84: Pull complete

ffa8fc94ea2d: Pull complete

9eeae9239039: Pull complete

Digest: sha256:5eb13b82c90c6bb4665085ad7281f642dc1eecd6f96dada8672d4ec1b4c68e9c

Status: Downloaded newer image for wellscho/helloworld9:2

Server running at <http://localhost:1337>

azureuser@myVM:~$

跑此image之前

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路徑 3 結束

1. Azure repo -> jenkins -> docker hub
   1. Import repository

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test4 
4. 
Clone to your computer 
H T-rps 
SSH https://wellsch00965@dev.azure.cam/wellschoog65nest4/_gitnest4 
Generate Git credentials 
OR 
Clone in VS Code 
(D Having problems authenticating in Git? sure to get the latest version of Git for Windows or our plugins for IntelliJ, Eclipse Android Studio or Windows command line. 
or push an existing repository from command line 
HTTPS 
ssæ 
git rernote add origin https://Wellsch00965@dev.azure.com/wellscha)965/test4/_git/test4 
git push -u origin --all 
or import a repository 
Import 
or initialize with a README or gitignore 
Add a README 
Add a .gitignare: None 
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git push -u origin --all 
or import a repository 
Import 
Import a Git repository 
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docs- hello-world 
C) Requires authorization 
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or initialize with a README or gitignore 
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Import successful! 
Congratulations! Your https://github.com/wellscho/nodejs-docs-hello-world repository has been 
successfully imported. 
If you are not automatically redirected to your repository page Click here ta 
navigate to code view. 
01:24 
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1. New build pipeline, choose azure repo

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dev.azure.com/wellsch00965/test5/_apps/hub/ms.vss-build-web.ci-designer-hub 
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Connect 
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Review 
Where is your code? 
Azure Repos Git YAML 
o 
Free private Git repositories, pull requests, and code search 
Bitbucket Cloud YAM 
Fasted Atlassian 
GitHub YAML 
Fome to the world's largest communit•,' of developers 
GitHub Enterprise Sen.'er YAML 
The self-hosted version of Gitkub Enterprise 
Other Git 
Anv generic Git repository 
Subversion 
Centralized version control b}' Apache 
use the classic editor to create a pipeline without YAML. 
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Review your pipeline YAML 
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la 
# node . js 
# Build 0 a 0 node.js with 
# Add steps that analyze save build artifacts, and omore: 
https://docs.microsoft.com/azure/devops/pipelines/languages/javascript 
trigge r : 
master 
pool : 
vmlmage : ' ubuntu-latest 
steps : 
Settings 
0 Docker@2 
displayName: Build an image 
inputs: 
repository : helloworId4 
tags: $(8uiId.auiIdId) 
connand: build 
Dockerfile: Docket-file 
Variables 
Show assistant 
03:12 
2019/10/1 

修改 pipeline YAML

steps:

- task: Docker@2

displayName: Build an image

inputs:

repository: helloworlda

tags: $(Build.BuildId)

command: build

Dockerfile: Dockerfile

- script: |

echo "enter script"

docker images

docker login -u "wellscho" -p "qbl955123"

docker tag helloworlda:$(Build.BuildId) wellscho/helloworlda:$(Build.BuildId)

docker push wellscho/helloworlda:$(Build.BuildId)

displayName: 'upload docker image'

Save and run

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*20191001.1 
#20191001.1: Update azure-pipelines-l.yml for Azure Pipelines 
Menuelly run tad?)' et yæg:26 by Wells Cho O wellscho/nodejs-docs-hella-world master 8016844 
Logs Summa l'} Tests 
Job 
Pool: Azure Pipelines • Agent: Hosted Agent 
Prepare job • succeeded 
Initialize job • succeeded 
Checkout succeeded 
guild an image • succeeded 
upload docker image • succeeded 
Post-job: Checkout • succeeded 
Finalize Job • succeeded 
All logs 
started: 2019/10/1 
1m 2s 
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Check docker hub

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Repositories wellscho / helloworlda 
New in Docker Hub: Personal Access Tokens. Learn more > 
Explore Repositories Organizations 
Timeline 
Collaborators 
Webhooks 
Settlngs 
Dockercommands 
Using 0 Of 1 private repositories. Get more 
PublicView 
General 
Tags 
Builds 
wellscho/helloworlda 
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○ Last pushed: a few se 【 ands ago 
Tags 
This repository contains 2 tag(s). 
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52 
TO push a new tag to this repository, 
docker push wellscho/helloworlda : tagname 
○ a few seconds ago 
○ 6 minutes ago 
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模擬由docker hub下載此image並執行它，找一台VM w/ dcoker installed，嘗試跑此image，記得要加上docker hub的 account和image的tag，例如：wellscho/helloworld8:51

azureuser@myVM:~$ docker run --name helloworlda -p 1337:1337 wellscho/helloworlda:53 node /var/www/index.js &

[1] 84788

azureuser@myVM:~$ Unable to find image 'wellscho/helloworlda:53' locally

53: Pulling from wellscho/helloworlda

e7c96db7181b: Pull complete

95b3c812425e: Pull complete

778b81d0468f: Pull complete

28549a15ba3e: Pull complete

35dbbb76de99: Pull complete

96d540ffee56: Pull complete

e32b062834e1: Pull complete

824da91968a2: Pull complete

Digest: sha256:57898dd41eea49e1084c514530501f522c02311b1531b384ee68df758e9fa921

Status: Downloaded newer image for wellscho/helloworlda:53

Server running at <http://localhost:1337>

azureuser@myVM:~$

跑此image之前

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