IBM Bluemix Lab

- Java Cache Web Application

Tony Yang



Today's Lab includes...

- Part 1: Setup accounts and prerequisites
- Part 2: Start your first APP on Bluemix
- Part 3: Cloud Foundry CLI
- Part 4: Modify APP using DevOps



Lab #0: Pre-requisites

- 1. Create Bluemix account (IBM ID)
- 2. Register IBM DevOps Services and link to Jazz ID
- 3. Install the cf command line interface



Login IBM Bluemix:

http://www.bluemix.net









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Register for your free service

Create an (2) IBM id to get started.

Already have an IBM id?

Asterisk (*) denotes required field.

bm_nccu03@yahoo.com.tw	bm_nccu03@yahoo.com.tw
NCCU03	Yang
******	******
0968487856	
TAIWAN	\checkmark
Please enter a security question that question. Occasionally, you may be	at only you can answer. Then, enter the answer to the a sked to answer this question to confirm your identity.
bluemix	bluemix

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Registration has been completed



Registration Complete

Check your email to activate your account.

You should receive your confirmation email in a few minutes. If you have any issues, click the following link to get help: https://developer.ibm.com/bluemix/support/

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Check the e-mail notification from IBM Bluemix





Validate your account

IBM Bluemix

收件者 NCCU03 Yang

此信包含被封鎖的圖片。顯示相片

Hi NCCU03,

Thank you for signing up for a subscription to **IBM Bluemix Trial** using the following organization account: NCCU03 Yang's Company. This n with the opportunity to try the full services, as a proof of concept before your purchase.

Please validate this email address in the next 28 days (by Jun 8, 2015) to use the service. You only need to do this once and it's just for you.

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Once your email address is validated:

Trial Subscription Duration (30 days) Activated: May 11, 2015 | Expires: Jun 10, 2015 This service is governed by the following Terms and Conditions. For future reference, use these links:

Launch Service | Get Support | Learn About

Regards,

IBM Bluemix Team

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Use your IBM ID to sign-in



One key, many possibilities.

Your IBM id provides access to services, communities, support, online purchasing, and much more.

Create IBM id

Sign in

BM id (user@company.c	:om)
Password	

Forgot password?



Help and FAQ

IBM Employees: Sign in with your intranet ID. Link your Intranet ID and IBM id



Congratulations!





Register IBM DevOps Services and link to Jazz ID



Login IBM DevOps Services:

https://hub.jazz.net/





IBM Bluemix DevOps Services

EXPLORE FEATURES HELP → BLOG FORUM

UP LOG IN

DevOps Made Easy

Integrated Agile Planning, Coding, Building, Deploying

Sign up for free

Connect with Bluemix DevOps Services: 😕 💿 🚹



Use your IBM ID to log in to DevOps Services

	Sign Up Create an IBM id Already have an IBM id? Log in to start the	2 Log in 3 Pick an alias
IBM Bluemix [™] DevOps Services	First name	Last name
Why register? Enhance your Bluemix experience. Develop and deploy software in the cloud. Code with the Web IDE in your browser.	Create password	Re-enter password
	Country of Residence	✓ Affiliation
Push your applications to <u>Bluemix</u> , IBM's cloud platform. Ask questions and get answers in our forum. Get started by forking projects or following a tutorial.	Please enter a security question that on question. Occasionally, you may be ask	nly you can answer. Then, enter the answer to the ted to answer this question to confirm your identity.
earn more	Security question	Security question answer

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One key, many possibilities.

Your IBM id provides access to services, communities, support, online purchasing, and much more.

Create IBM id

Sign in

IBM id (user@company.com)

Password

Forgot password?

Sign in

Help and FAQ

IBM Employees: Sign in with your intranet ID. Link your Intranet ID and IBM id

Contact Privacy Terms of use Accessibility





IBM Bluemix[™] DevOps Services

Enhance your Bluemix experience. Develop and deploy software in the cloud. Code with the Web IDE in your browser. Push your applications to <u>Bluemix</u>, IBM's cloud platform. Ask questions and get answers in our forum. Get started by forking projects or following a tutorial.

Learn more



Before you get started, we need to associate your IBM id with an alias. An alias is a unique, publicly visible short name used in Git repository paths, Track & Plan, and desktop and command line clients.

•	nccu01	





Success!

✓ You are now ready to start using Bluemix[™] DevOps Services

IBM id: bm_nccu01@yahoo.com.tw

Alias: nccu01

Important: When signing in from desktop and command line clients such as Git and Team Concert, use your alias with your IBM password. <u>Why?</u>

Continue



Install CloudFoundry (cf) Command Line Interface



Download cf Command Line Interface

https://github.com/cloudfoundry/cli/releases

(請下載適合您作業系統的Installer)



Latest release

⊗ v6.11.2 • 2a26d55

CF version v6.11.2

simonleung8 released this 14 days ago · 19 commits to master since this release

CF version v6.11.2

Installers

- · Debian 32 bit
- Debian 64 bit
- Redhat 32 bit
- · Redhat 64 bit
- · Mac OS X 64 bit
- Windows 32 bit
- · Windows 64 bit







We are ready!

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Lab #1: Create a Java Cache Web Application on Bluemix



Step 1: Login Bluemix





Step 2: select "CATALOG" tab





Step 3: Select "Java Cache Web Starter" in Boilerplates





Step 4: Name your application and click "CREATE"

	.java liberty Liberty for Java™	Data Cache Moni	toring and	Create an app: Name javaCache-garylin Host: javaCache-gary . mybluem	nix.net
Starter IBM	Quickly get started with Java and Java™	the IBM Data Cache service	. Powered by Liberty for	Selected Plans: Liberty for Java™	
This sample application demonstrates how to use the BM DataCache Service Java Native API with the Java Web untime on IBM Cloud.			VIEW DOCS	Default Data Cache	•
VERSION 0.0	Pick a plan	Monthly prices shown	are for country or region: <u>Taiwan</u>	Monitoring and Analytics	
TYPE Boilerplate	Plan Features	for 30 days (375 GR-hours free)	Price	Free	



Step 5: Check your application status





Step 6: Play with your new application on Bluemix

Grid Ope	rations:			
Key:	name			
Value:	Gary			
Put suc	ccessfull.			
	Get	Put	Delete	
Grid Entri	es:			
Key		Value		
F		Con		-63





Lab #1 completed!

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Lab #2: Use cf Command Line Interface



Step 1: Click on the Java Web Application you just created

	IBM Bluemix			DASHBOARD	CATALOG	PRICING	DOCS	COMMUNITY	26	Ø	ð
.fh	ORG: garylinibmtest	♦						≣≡	Type to s	search	0,
	Create a Space				\sim			1111111111111			
de	ý .		1000 512MB	512MB				2/10			
	APPS (1)		out of 2GB		\checkmark			SERVICES			
4	SERVICES (1)			AF	PP HEALTH						
			Applications								_
			+ CREATE AN APP	java javaCac	aCache-gar he-garylin.myblu	ylin emix.net					
				Running	¢.	₫ ★					



Step 2: Click "View Quick Start"

	javaCache-gary	¢ lin
VIEW QUICK START	ROUTES: javaCache-garylin.myblue	mix.net ADD GIT
.java liberty LIBERTY FOR JAVA™	instances:	APP HEALTH RESTART Vour app is running.
MEMORY QUOTA: 512 (MB per Instance)	AVAILABLE MEMORY: 1.500GB	ACTIVITY LOG No activity available
ADD A SE	ERVICE	Estimate the cost of this app



Step 3: Download the Java Web Application package



IBM Bluemix

Step 4: Please follow the steps listed in Quick Start





Extract the package and cd to the directory

● 車服 ● 57	/STEM (C:) > download	*					
፤(E) 檢視(V)	工具(T) 說明(H)						
詞 開啟 🔹	· 燒錄 新增資料夾						
ŧ	名稱	^	修改	日期 類	型		
	🧾 javaCache-gar	/lin.zip 開題	2014 2(O)	4/11/02下午 匷	縮的 (zipp		
位置		在新 名 Sky	f視窗開啟(E) Drive Pro	•			
		解圖	琶縮全部(T)				
		Git:	ect Left Side to Ci Init Hans	ompare		_	
)▼ <mark>→</mark> ◆ 電腦 → 1 編輯(E) 檢視(V)	SYSTEM (C:)) download) 工具(T) 說明(H)	javaCache-garylin 🕨		c: \>cd C:\download\javaCache-garylin
			理 ▼ 加入至螟	體櫃 ▼ 共用對象 ▼ 爆	錄 新增資料夾	_	C:\download\javaCache-garylin>
			的最愛 下載 眞面 最近的位置 證櫃 文件 音樂 視訊 圖片 選 SYSTEM (C)	 settings bin dep-jar src WebContent .classpath .project build.xml cacheSampleJavi instructions.md manifest.yml README.txt 	aNativeAPIs.war	2014/11/02 2014/11/02 2014/11/02 2014/11/02 2014/11/02 2014/11/02 2014/11/02 2014/11/02 2014/11/02 2014/11/02 2014/11/02	
			EOS_DIGITAL (E:) Andy MT Wu (\\lsc0	002.tv			



Summary of cf commands used

- Connect to Bluemix API end point cf api
- Log into Bluemix
 cf login
- Setup organization and space target (optional) cf target
- Deploy your application cf push



Demo (if time permits)

• Use Eclipse to update and re-build the code, and use cf command to push it to Bluemix.



Lab #2 completed!

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Lab #3: Modify and Deploy Application using IBM DevOps Services



Step 1: Click on the sample application on the DASHBOARD tab





Step 2: Click "ADD GIT"

		*		
VIEW QUIC	K START	ROUTES: jav	<u>aCache-qarylin.mybluemix.net</u>	ADD GIT
.java 11berty LIBERTY FOR JAVA™	INSTANCES:	MEMORY QUOTA: 512 (MB per Instance)	AVAILABLE MEMORY: 1.500GB (?) RESET SAVE	APP HEALTH RESTART Vour app is running. STOP ACTIVITY LOG
ADD A SERVICE			Data Cache javaCache-garylin-D	No activity available
BIND A S	SERVICE	Show Credentials	(b) free	Estimate the cost of this app



Step 3: Input IBM ID information

Create Git Repository



Please confirm your identity to continue.

Powered by JazzHub | Terms of Use



Step 4: Continue to create git repository

Create Git Repository

?

Press **Continue** to create a Git repository associated with the **javaCache-garylin** application. Pushing changes to this repository will trigger automatic deployment to the application.

Populate the repository with the starter application package and enable build and deploy.





×

Step 5: Confirm success.

Create Git Repository

✓

Success! The Git repository for your application has been created. The application starter code is now being added to the repository. The application will then be deployed and restarted.





X

Step 6: Click "EDIT CODE" to connect to the JazzHub





Step 7: On the JazzHub web editor, find WebContent > index.html





Step 8: Change the content of the <h1> title (Hint: use Ctrl-F to search for "h1")

🗸 garylinibmtest javaCache-garylin 📩	64	<pre>document.getElementById('value').value = "";</pre>
s git	66	<pre>} document.getElementById('echo').innerHTML = result;</pre>
· 3.	67	}
> settings	68	<pre>sendRequest('all');</pre>
	69	}
> DIII	70	3
> dep-jar	A 71 72	1
> src	73	<pre>ajaxRequest.open("GET", "/ecaas?operation=" + operation + "&key=" + key + pixRequest.cond(null);</pre>
	74	ajaxkequest.send(nutr);
✓ WebContent	76	1
N 055	77	function getClicked() {
1000	78	if(hasInputKey())
> META-INF	79	<pre>sendRequest('get');</pre>
	80	}
> WEB-INF	81	<pre>function putClicked() {</pre>
D	82	if(hasInputKey())
x index.html	83	sendRequest('put');
B	84	
.cfignore	00	function deletecticked() {
D	87	indemost ('delate');
Classpath	88	3
	89	(/scrint>
	90	
	91	<body onload="load();"></body>
D .project	92	<11>
	93	Welcome to <pre>cpan clacc="blue">Java Web Starter</pre> on Bluemix!
🖸 build.xml	94	
	95	*** Modified using IBM DevOps Services ***
	96	
D instructions and	9/	<pre></pre>
	90	<pre>cutv class = description 20015 Sample demonstrates now to use the Java Native chp /></pre>
Discounts	100	<pre>(div class="container" style="color: black")</pre>
O LICENSE.IXI	101	<h2>Grid Operations:</h2>



Step 9: Save the changes using File > Save





Step 10: Switch to "Git Repository" view





Step 11: View the changes, add comment, and COMMIT





Step 12: Click FETCH to sync with remote master





Step 13: PUSH the outgoing changes to remote repository





Step 13 (cont'd)

IB	DevOps Services	Push [OK] master => origin/r	Result: naster			
o 🎦	arylinibmtest javaCache-garylin	Processing char Processing changes:	nges: refs: 1 refs: 1, done			
0	REPOSITORY: garylinibmtest java	Cache-garylin 🗡 🛛 REFI	ERENCE: master =>	origin/master 💙		
♦	Active Branch (master)	▽ *	SYNC	rking Directory Changes		
	Working Directory Chang	ges				
ه	Nothing to commit.	Push commits a		and tags from your local branch into the remote branch		
۲	✓ OUTGOING (0)		PUSH~	Amend previous commit 🛛 Add Change-ID to		
	No Changes					



Step 14: Switch to BUILD & Deploy

garylinntu ja	avaCache-garylin-1		E	DIT CODE TRACK & PLAN BUILT	& DEPLOY
		OFF SIMPLE	ADVANCED	REQU	EST DEPLOY
Warning: Yo won't be dep into the repo	u are deploying a Java W loyed. You can build Jav yourself.	/AR file as part of your application. If you modify a apps using ADVANCED Build & Deploy, or you	the Java source you'll need I can rebuild the WAR using	to rebuild the WAR file or your desktop tools and commit the	changes new WAR file
Git URL	https://hub.jazz.net/git/	garylinntu/javaCache-garylin-1			
Deploy from:	refs/heads/master 🔻				
Deploy to:	javaCache-garylin-1	javaCache-garylin-1.mybluemix.net			
	CONFIGURE				REFRESH
Status	Result	Comment	Committer	Started	Logs
0	OK	change title text for demo	Gary Lin	Less than one minute ago	Log



Step 15: Request a build and auto deploy it to Bluemix

Note: It may take some time to complete the build and deployment.

eline				
Git Repo master Latest Commit: change title text for demo	Ø	dev US South No deployments	Ø	
Builder Ant	_	javaCache-gary Runni	ng 🔵	add a stage
REQUEST BUILD		No build info		
Last Build Show Histo	ry			



Step 15: Request a build and auto deploy it to Bluemix (cont'd)

Note: It may take some time to complete the build and deployment.

OF	FF SIMPLE ADVANCED	
ipeline		
Git Repo master Latest Commit: change title text for demo	dev US South ⊘ Deployment 1 Success	
Builder Ant REQUEST BUILD	javaCache-gary Running Deployed 3 minutes ago Build 1	add a st
Build 1		



Step 16: Check your changes on Bluemix

sample demo	onstrates how to	use the Java Native AP	I to access the Data C	ache se
Grid Oper	ations:			
Key:	Input key			
Value:				
	Get	Put	Delete	



Lab #3 completed!

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Next step

- Start play with the Starters and Services on Bluemix
 - Click "VIEW DOCS" to find all the information you need
- Visit COMMUNITY resource to interesting samples, discussions, Q&As, and related events.





