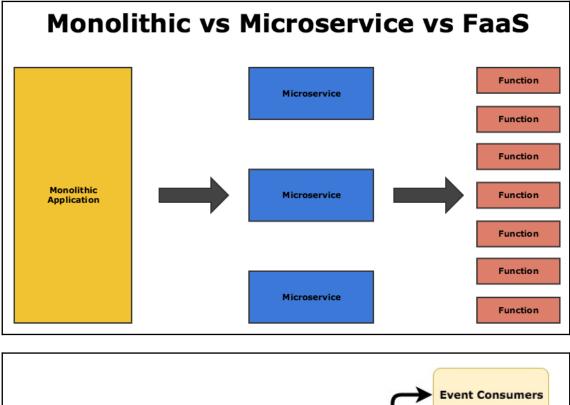
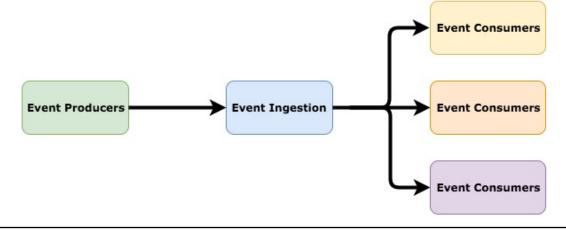
Table of Contents

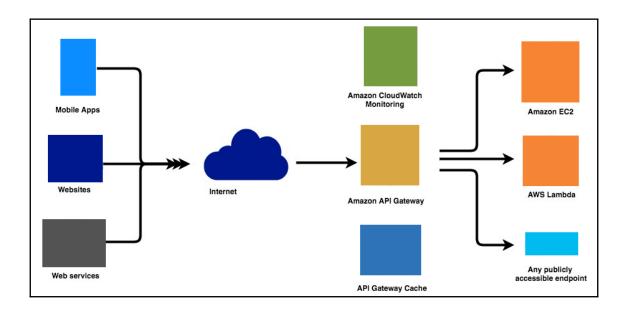
Index

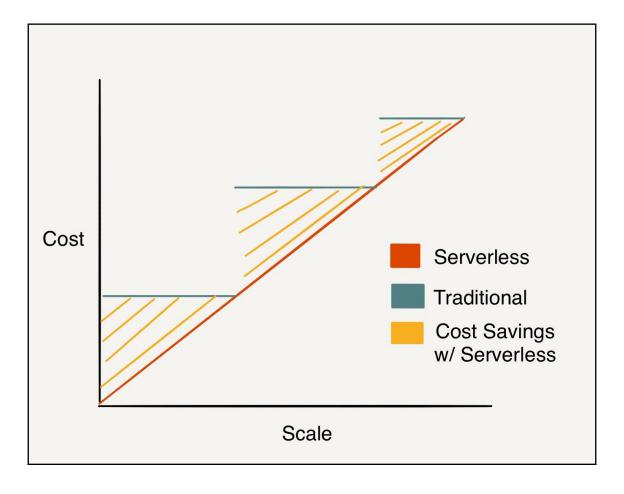
151

Chapter 1: What is Serverless Computing?

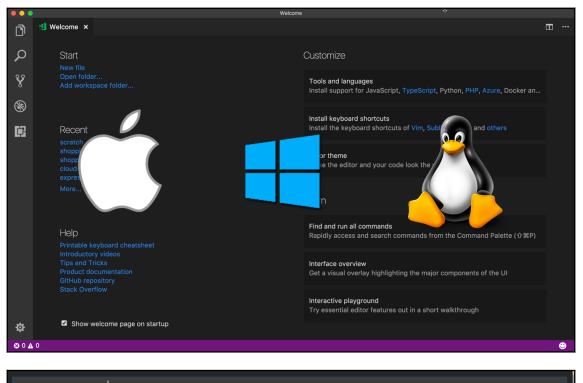








Chapter 2: Development environment, Tools, and SDKs



>shell command

Shell Command: Install 'code' command in PATH

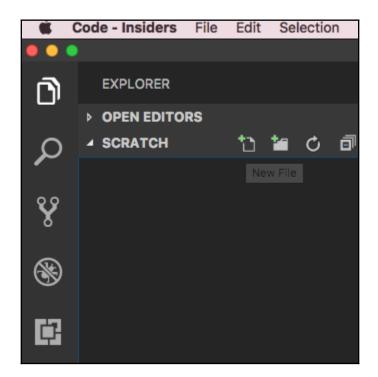
Shell Command: Uninstall 'code' command from PATH

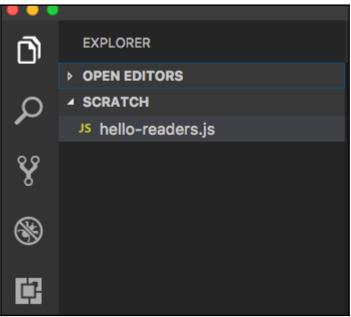
EXPLORER						{) package.json ×	ය [
A OPEN EDITORS LEFT T9 findModeLts vscode/src/vs/ Y CONTRIBUTING.md vscode RIGHT T9 contextmenuts vscode/src/ O package.json vscode v vs coope PROJECTS (WORKSPACE) Emention-bot t.travis.yml gyarnc appveyor.yml CONTRIBUTING.md gulpfile.js LICENSE.txt m pm-debug.log	3 * Lice 4 * 5 6 'use str 7 8 import * 9 import * 10 import * 11 import * 13 import * 14 import * 14 import * 16 import * 17 import * 18	right (c) Microsoft nsed under the MIT L ict'; as dom from 'vs/bas Widget } from 'vs/ IKeybindingService ICodedditor, IOver] FinD IDS } from 'vs FindReplaceState } CaseSensitiveCheckk RunOnceScheduler } IThemeService, IThe inputActiveOptionBo		1 100000000000000000000000000000000000	4 "distro" 5 "author" 6 "name" 7 }, 8 "private" 9 "private" 9 "scripts' 1 "test"; 2 "prein 3 "posti 4 "compil 5 "watch' 6 "monacc 7 "precow 8 "gulp" 9 "72"; 9 "updatc 1 "swokel	<pre>' "1.19.0", "610ca6990cab94b59; ["Microsoft Corporat ./out/main", : true, : "mode build/d : "gulp - max_old_spp : gulp - max_old_spp : true, : true, : true, : gulp - max_old_spp : true, : true, : true, : true, : true, : true, : gulp - max_old_spp : true, : true, : true, : true, : true, : true, : true, : gulp - max_old_spp : true, : true,</pre>	284327a3741a83 tion" hym/preinstall nym/postinsta max_old_space old_space_siz aonly-mon Lipfile.hygien ace_size=4096' uild/npm/updaf
() OSSREADMEjson () packagejson () productjson () READMEnd ≣ ThirdPartyNotices.txt () tsfmtjson () tsfmtjson	-a 11 -a 11 -a 2 -a 10 -a 11 -a 3 -a 11	(13/2017 3:32 PM 1/3/2017 3:51 AM 9/7/2017 11:46 AM (2//2017 2:14 PM /30/2017 4:18 PM /30/2017 4:18 PM /35/2017 2:14 PM /27/2017 2:14 PM /27/2017 2:14 PM	TERMINU 1133 LICENSE.txt 607/96 npm=debug.log 42422 OSRHADWE.jog 3699 package.json 369 package.json 3732 READWE.md 1866/05 ThirdPartyMart 1966/05 talint.json 10590 talint.json 203283 yarn.lock		Panel	1: powershell •	+ tì ∧ [

ı ۱	ost.contribution.ts extHostApiCommands.ts ×	•• buildfile.js × workbench.main.css	Preview 'README.md' × issue_template.md
ہ م	25 class ExtHostApiCommands { 27 28 private _commands: ExtHostCommands; 29 private disposables: IDisposable[] =	<pre>5 'use strict'; 6 7 function createModuleDescription(name, exclud 8 var result = {}; 1; 9 var excludes = ['vs/css', 'vs/nls'];</pre>	Visual Studio Code - Open Source
•>	30 31 constructor(commands: ExtHostCommands)	10 result.name = name;	build passing ⊘ build passing
8	32 thiscommands = commands; 33 34	12 excludes = excludes.concat(exclude); 13 }	VS Code is a new type of tool that combines the simplicity
Ē	35 registerCommands() { 36 this_register('vscode.executeWork 37 description: 'Execute all work	spe 17	of a code editor with what developers need for their core edit-build-debug cycle. Code provides comprehensive editing and debugging support, an extensibility model, anc lightweight integration with existing tools.
	38 args: [{ name: 'query', descri 39 returns: 'A promise that resol 40 41	es 19 var languageMainExcludes = ['vs/editor/co 20 var languageWorkerExcludes = ['vs/base/co	• • • • • • • • • • • • • • • • •
	42 thisregister('vscode.executeDefi 43 description: 'Execute all defi 44 args: [45 { name: 'uri', description	it 23 createModuleDescription('vs/workbench 24 createModuleDescription('vs/workbench	Construction C
	46 { name: 'position', description' 47], 48 returns: 'A promise that resol 49 });	ti 26 createModuleDescription('vs/workbench 27 createModuleDescription('vs/workbench es 28 createModuleDescription('vs/workbench	Accumulation Servers 1.1 (a) superts Servers 4.4 (b) superts Servers
	<pre>50 thisregister('vscode.executeHove 51 description: 'Execute all hove 52 args: [53 { name: 'uri', description</pre>	F 31 createModuleDescription('vs/workbench' 32 createModuleDescription('vs/workbench'	the vscode repository is where we do development and
	54 { name: 'position', description' 55], 56 returns: 'A promise that resol 57 });	ti 34 createModuleDescription('vs/workbench 35 createModuleDescription('vs/workbench es 36 createModuleDescription('vs/workbench	Submit bugs and feature requests and help us verify.
	58 this.register('vscode.executeDoct 59 description: 'Execute document 60 args: [Review source code changes Review the documentation and make pull requests
🔶 ma	aster 🗘 🕄 1 🛆 0		Ln 33, Col 6 Tab Size: 4 UTF-8 CRLF TypeScript 🙂

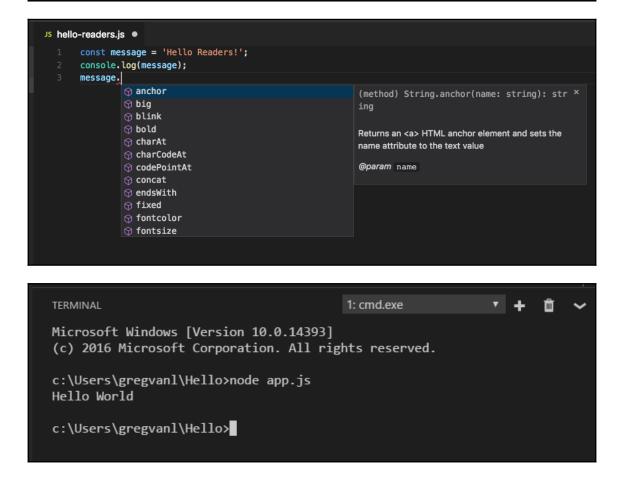
▲ Repositories				
EmployeePictureRepository.cs				
EmployeeRepository.cs	Open to the Side Ctrl+Enter			
IEmployeePictureRepository.cs	Reveal in Explorer			
IEmployeeRepository.cs	Open in Console			
ITeamRepository.cs	Select for Compare			
IVisitorPictureRepository.cs	Copy Ctrl+C			
IVisitorRepository.cs	сору			
IVisitRepository.cs	Rename F2			
TeamRepository.cs	Delete Del			

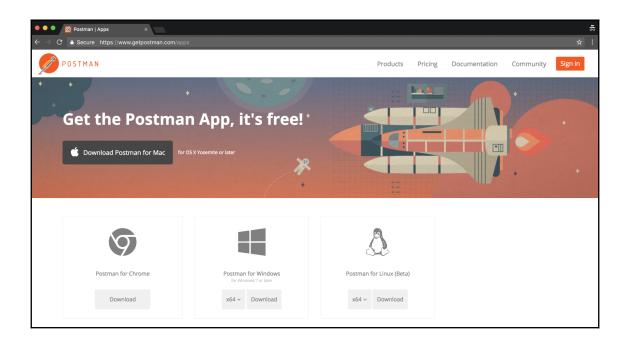
	💝 Install Node.js	
	Select a Destination	
IntroductionLicense	Select the disk where you want to install the Node.js software.	
 Destination Select Installation Type 		
 Installation 	The second se	
Summary	Macintosh HD 75.33 GB available 249.7 GB total	
nøde	Installing this software requires 59.3 MB of space. You have chosen to install this software on the disk "Macintosh HD".	
	Go Back Continue	





Js hell	lo-reade	rs.js •	
1	const	<pre>message = 'Hello Readers!';</pre>	
2	conso	le.	
		<pre>③ assert ③ clear ④ count ④ debug ④ dir ④ dirxml ④ error ④ exception ⑤ group ③ groupCollapsed ③ groupEnd ④ info</pre>	<pre>(method) Console.assert(test?: boolean, m × essage?: string,optionalParams: any []): void</pre>





UPDATE AVAILABLE (v4.10.7)

4.10.7 (Latest)

Bugfixes

· Fixed UI performance issue. [GitHub #2929]

4.10.6

Improvements

Added support for multiline cURL imports [GitHub #2883]

Bugfixes

- · Fixed an issue where slash was automatically added in variables while typing URLs. [GitHub #2914]
- Fixed an issue with multivalue keys in body during cURL generation [GitHub #2883]
- · Fixed an issue where Send and Download saved corrupted data [GitHub #2860]
- Fixed UI overlap issue in data editor. [GitHub #2877]
- Fixed an issue where app was opening with a blank tab for Chrome versions below 45. [GitHub #2868]
- · Fixed an issue where tests were ordered alphabetically [GitHub #2864]
- Fixed an issue where cookies with subdomains were not listed under response [GitHub #2885]
- · Fixed an issue where code generator fails to show array values in request raw body

4.10.5

Features

- · New Data Editor for faster editing of headers, params, body and environments
- · Autocomplete suggestions and tooltips for variables
- Support for logging into Postman Enterprise account
- · Postman Pro Restore collection to an earlier version via the activity feed

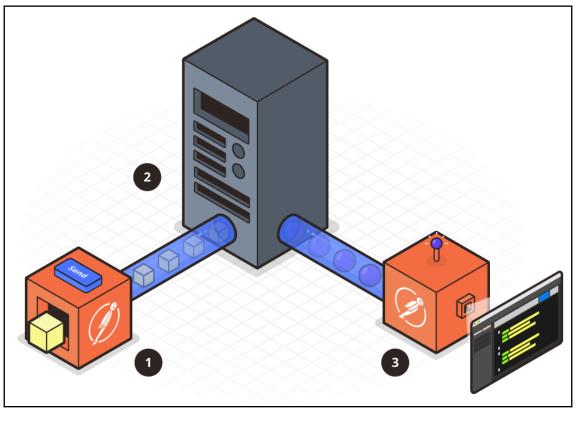
Improvements

Remind me later

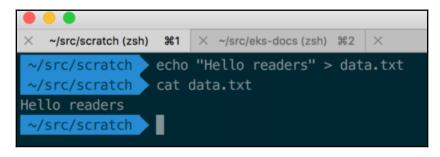
Update

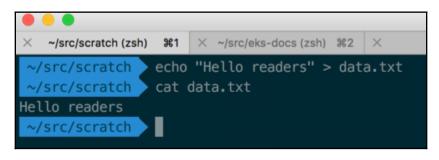
×

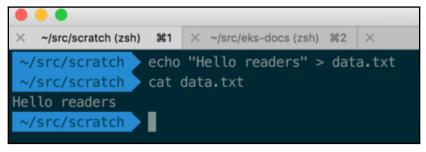
	Postman
Runner Import	Builder Team Library 🕑 💽 OFFLINE joyce+test 🗸 🌲 🗲 💙
C Filter History Collections	postman-echo.com/gr × + O to Environment v O to Env
Today GET postman-echo.com/get	GET postman-echo.com/get Params Send Save Authorization Headers Body Pre-request Script Tests Cookies Code
	Type No Auth Body Cookies (1) Headers (13) Tests Status: 200 OK Time: 632 ms Size: 794 B
	Pretty Raw Preview JSON Image: Constraint of the system 1 * ["args": {} "args": {} "args": {} 3 * "headers": { "host": "postman-echo.com", "concate", 6 * "postman-token: ""f/d091085-e2e5-4af4-a813-98c629b2cb01", "argser: "args"; "d091085-e2e5-4af4-a813-98c629b2cb01", 7 * "user-agent": "PostmanRuntime/3.0.11-hotfix.2", "accept": "sails.sid=s%3AG1B72G7GttxSBvqmr9dQGAX0kx00JCYJ 9 * "cookie": "sails.sid=s%3AG1B72G7GttxSBvqmr9dQGAX0kx00JCYJ .SozhMKdVX%2Fsm208hoJ2c90x2F20Qab1J0xq4Mi62yTQI", 10 * "accept-encoding": "gzip, deflate" " 11 }, "urul": "http://postman-echo.com/get"



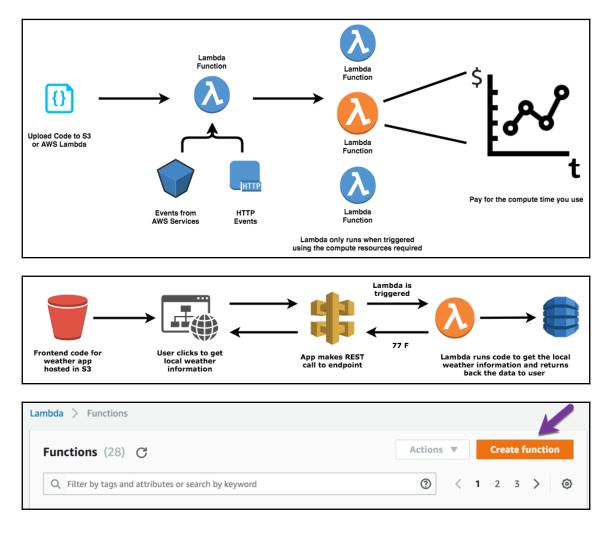
• • •					
imes ~/src/scratch (zsh) %1	imes ~/src/eks-docs (zsh) %2 $ imes$ ~/src/scratch (zsh) %3				
<pre>~/src/scratch > node creates3Bucket.js mys3bucketforthebook</pre>					
Successfully uploaded	<pre>data to mys3bucketforthebook/myBucketKey</pre>				







Chapter 3: Getting Started with AWS Lambda



Lambda > Functions > Create function			
Create function			
Author from scratch	0		
Start with a simple "hello world" example.			

Author from scratch Info
Name*
myHelloWorldFunction
Runtime*
Node.js 6.10
Role* Defines the permissions of your function. Note that new roles may not be available for a few minutes after creation. Learn more about Lambda execution roles.
Create new role from template(s)
Lambda will automatically create a role with permissions from the selected policy templates. Note that basic Lambda permissions (logging to CloudWatch) will automatically be added. If your function accesses a VPC, the required permissions will also be added.
Role name* Enter a name for your new role.
myHelloWorldFunction
Policy templates Choose one or more policy templates. A role will be generated for you before your function is created. Learn more about the permissions that each policy template will add to your role.
▼
S3 object read-only permissions X

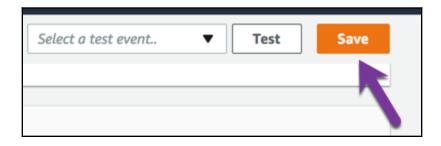
Code entry type		
Edit code inline		
Edit code inline		
Upload a .ZIP file		
Upload a file from Amazon S3		.js
index.js	1	exports.

I	Runtime	
	Node.js 6.10 🔻	
	C# (.NET Core 1.0)	
	C# (.NET Core 2.0)	
	Go 1.x	
С	Java 8	
Wq	Node.js 4.3	
	Node.js 6.10	
	Python 2.7	
	Python 3.6	

Handler Info

index.handler

Function code Info						
Code entry type Edit code inline	•	Runtime Node.js 6.10	▼	Handler Info index.handler		
A File Edit Find View Goto Tools Window				22 ()		
v ■ myHelloWorldFunction\$* • index.js	<pre>index.js × ① index.js × ① index.js × ① index.js // TOD0 implement callback(null, 'Hel index.js // TOD0 implement index.js //</pre>	nt, context, callback) \Rightarrow {				



Qualifiers v	Actions v	Select a test event	▼ Test	Save

Qualifiers v	Actions ▼ HelloWorldEvent ▼ Test Save
	Publish new version
	Create alias
	Delete function
	Export function

Publish new version from \$LATEST	×
Publishing a new version will save a "snapshot" of the code and configuration of the \$LATEST version. You will be u edit the new version's code. Please click to confirm.	nable to
Version description Hello World callback changes	
Cancel Put	blish

Qualifiers v	Actions v	Select a test event	▼ Test Save

Configure test event	×
A function can have up to 10 test events. The events are persisted so you can switch to another computer or web brow and test your function with the same events.	/ser
Create new test event	
O Edit saved test events	
Event template	
Hello World	
Event name	
HelloWorldEvent	
<pre>1 - { 2 "key3": "value3", 3 "key2": "value2", 4 "key1": "value1" 5 }</pre>	

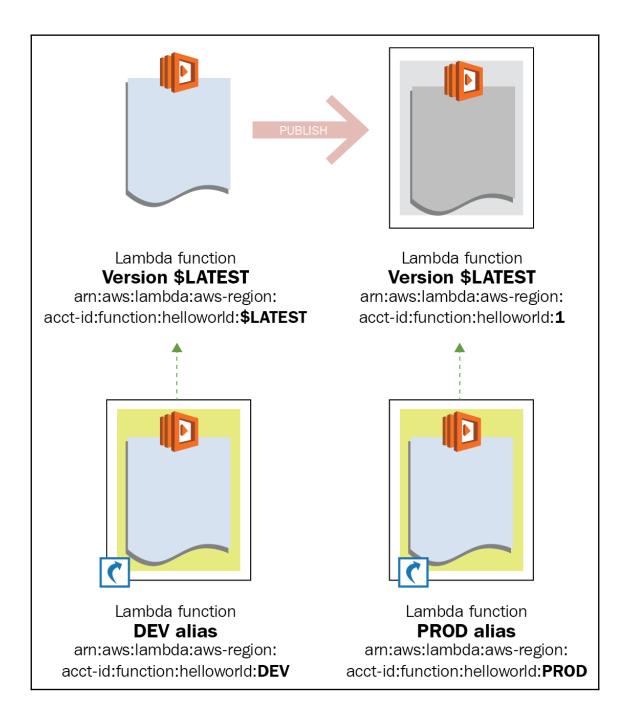
Version: 1 🔻	Actions v	HelloWorldEvent 🗕 🗸 🔻	Test	Save

0	Execution result: s Details	ucceeded (logs)				
	The area below shows t	the result returned by your function execu	ition. Learn more about returni	ing results from your function.		
	"Hello World"					
		8Ckd6JcOBewu2qd5rJ3+askVqklwngG41 13.10 ms 128 MB	IPiupVDZHFQ=	Request ID Billed duration Max memory used	3b5aec4b-15f7-11e8-a51a 100 ms 19 MB	a-a57906a6b29e
	Log output The area below shows t	the logging calls in your code. These corre	spond to a single row within th	ne CloudWatch log group correspond	ling to this Lambda function	1. Click here to view the CloudWatch
	END RequestId: 3b5d	o5aec4b-15f7-11e8-a51a-a57906a6b29e V 1ec4b-15f7-11e8-a51a-a57906a6b29e 3b5aec4b-15f7-11e8-a51a-a57906a6b29e		illed Duration: 100 ms Me	emory Size: 128 MB Max	x Memory Used: 19 MB

Basic settings		
Description		
Memory (MB) Info Your function is allocated CPU proportional to the memory configured.		
Timeout Info 0 min 3 sec		

Basic set	Basic settings						
Descriptio	'n						
	// 1						
Memory (MB) Inf]
			proportional to the	e memory o	configured.		
512 MB							
Timeout	Info						
1	min	30	sec				

Network
VPC Info
Select a VPC that your function will access.
vpc-3460524d (10.64.0.0/16) application
Subnets*
Select the VPC Subnets that Lambda should use to set up your VPC configuration. Format: "subnet-id (cidr-block) az name-tag".
subnet-173bed73 (10.64.192.0/21) us-east-1a Lambda_a 🛛 🗙
subnet-5986d875 (10.64.200.0/21) us-east-1b Lambda_b 🗙
Security Groups* Select the VPC Security Groups that Lambda should use to set up your VPC configuration. Format: "sg-id (sg-name) name-tag". The table below will show the inbound and outbound rules for the security groups you have selected.
▼
sg-f1bde381 (default) 🗙
When you enable VPC, your Lambda function will lose default internet access. If you require external internet access for your function, ensure that your security group allows outbound connections and that your VPC has a NAT gateway.



	Version: 2 🔺
Switch versions/aliases	VCI3IOII. 2 -
Filter versions/aliases	
Versions Aliases	
\$LATEST (2/19/2018)	
2 (2/19/2018) Hello World callback changes	
1 (2/18/2018) Hello World callback changes	

Actions v	HelloWorldEvent		
Publish new vers	sion		
Create alias			
Delete version			
Export function			

Create a new alias	\times					
An alias is a pointer to one or two versions. Select the version(s) you would like the alias to point to.						
Name*						
PROD						
Description						
Production version of the function						
Version*						
2 🔹						
You can shift traffic between two versions, based on weights (%) that you assign. Click here to learn more.						
Additional Version						
▼						
Cancel Creat	te					

Environment variables						
	You can define Environment Variables as key-value pairs that are accessible from your function code. These are useful to store configuration settings without the need to change function code. Learn more.					
	DATASTORE_NAME		Prod_helloWorld			
	Key] [Value			

Chapter 4: Triggers and events for AWS Lambda

Resources Actions -	●/ - GET - Setup	
✓ / GET	Choose the integration point for your new method.	
	Integration type 💿 Lambda Function 6	
	⊖ HTTP ❶	
	O Mock 🚯	
	O AWS Service 1	
	O VPC Link 🔁	
	Use Lambda Proxy integration 🗹 0	
	Lambda Region us-east-1	
	Lambda Function alexa-test-lambda	
	Use Default Timeout 🗹 🤂	

HTTP status regex	Method response statu	IS	Output model	Default mapping	
-	200			Yes	
ap the output from your HTTP endpo	int to the headers and outp	ut model of the 20	0 method response.		
HTTP status regex	default	0			
Content handling	Passthrough	† 0			
				Ca	incel S
Header Mappings					
Response header			Mapping value		
Access-Control-Allow-Origin			1+1		di ta
Body Mapping Templates					
Content-Type					
No mapping templates defined. will be passed through to the r					
Add mapping template					

O Custom IoT rule

IoT Button

Device Serial Number

The device serial number (DSN) of your button. This can be found on the back of the button. The DSN is 16 characters long, often starting

This will generate a certificate and keys for your button, which will be made available for you to download.

Generate certificate and keys

Lambda will add the necessary permissions for AWS IoT to invoke your Lambda function from this trigger. Learn more

Enable trigger

Enable the trigger now, or create it in a disabled state for testing (recommended).

loT type
Configure a custom IoT rule, or set up an IoT button.
O Custom IoT rule
🔘 IoT Button
Rule
Pick an existing rule, or create a new one.
Create a new rule
Rule name
Enter a name to uniquely identify your IoT rule.
Rule description
Provide an optional description for your rule.
D. Ja municipal de la constante
Rule query statement Create a SQL statement for this rule. For example, to set up your first dash button: SELECT * FROM 'iotbutton/+'.
create a SQL statement for this fute. For example, to set up your hist dash button, SELECT TROPP lotbutton, F.
Lambda will add the necessary permissions for AWS IoT to invoke your Lambda function from this trigger. Learn more
cambda witt add the necessary permissions for Aws for to invoke your cambda fanction nom this thyger. ceam more
Enable trigger
Enable the trigger now, or create it in a disabled state for testing (recommended).
Configure triggers

- - - -

Application ID

The Application ID for a skill can be found in the Alexa section of the Developer Portal, on the Skill Information tab.

Lambda will add the necessary permissions for Amazon Alexa to invoke your Lambda function from this trigger. Learn more

Enable trigger

Enable the trigger now, or create it in a disabled state for testing (recommended).

cloudfront					
The following restrictions and limits apply to Lambda@Edge functions: Runtime is Environment variables, the Dead Letter Queue (DLQ), and Amazon VPCs cannot be	•				
Distribution The CloudFront distribution that will send events to your Lambda function.					
E71UFDMZJZ495	Enter value				
Cache behavior Choose the cache behavior you would like this Lambda Function to be associated with. * ▼ CloudFront event ▼	Enter value]			
Choose one CloudFront event to listen for.					
Origin request					
Lambda associates this version of the function with the specified CloudFront trigger and replicates the function globally.					
Enable trigger and replicate					

Rule Pick an existing rule, or create a new one. New-EC2Resource-Event • Select or create a new rule Rule description Trigger a Lambda function anytime a new EC2 resource is created (EC2 instance, EBS volume, EBS Snapshot or AMI) Event pattern { "detail-type": ["AWS API Call via CloudTrail"], "detail": { "eventSource": ["ec2.amazonaws.com"], "eventName": ["RunInstances", Lambda will add the necessary permissions for Amazon CloudWatch Events to invoke your Lambda function from this trigger. Enable trigger Enable the trigger now, or create it in a disabled state for testing (recommended). \checkmark

Log group

Please select the CloudWatch Logs log group that serves as the event source. Log Events sent to the log group will trigger your Lambda received.

▼

/aws/ecs/fargate-test

Filter name

Choose a name for your filter.

myLambdaFilter

Filter pattern

Enter an optional filter pattern.

lambda

Lambda will add the necessary permissions for Amazon CloudWatch Logs to invoke your Lambda function from this

Enable trigger

Enable the trigger now, or create it in a disabled state for testing (recommended).

Repository name
Select the repository to add a trigger to.
flex-web-automation
T.:
Trigger name
Provide a name for the trigger that will invoke this function.
flex-web-automation-events
Events
Choose one or more events to listen for. If you choose "All repository events", you cannot choose other event types.
-
· · · · · · · · · · · · · · · · · · ·
All repository events X
Branch names
This trigger will be configured for all repository branches and tags by default. For a more specific configuration, choose up to 10 branches
choose specific branches.
▼
All branches X
Custom data
Custom data is additional contextual information used to distinguish this trigger from other triggers that run for the same event, refer to
different repositories. For example, you could include the channel ID # for a chat room used by your team to collaborate on development.
For example, an IRC channel ID #

Cognito identity pool

Select the Cognito identity pool. The Sync Trigger will be invoked whenever this identity pool dataset is synced.

Mobile_Analytics_shared_pool_do_not_modify

Lambda will add the necessary permissions for Amazon Cognito to invoke your Lambda function from

Enable trigger

Enable the trigger now, or create it in a disabled state for testing (recommended).

Event Source					
Build or customize an Event Pattern or set a Schedule to invoke Targets.					
Event Pattern ()	Schedule 1				
Fixed rate of	Select -				
Cron expression	07**?*				
	Next 10 Trigger Date(s)				
	1. Mon, 30 Apr 2018 07:00:00 GMT				
	2. Tue, 01 May 2018 07:00:00 GMT				
	3. Wed, 02 May 2018 07:00:00 GMT				
4. Thu, 03 May 2018 07:00:00 GMT					
5. Fri, 04 May 2018 07:00:00 GMT					
6. Sat, 05 May 2018 07:00:00 GMT					
	7. Sun, 06 May 2018 07:00:00 GMT				
	8. Mon, 07 May 2018 07:00:00 GMT				
	9. Tue, 08 May 2018 07:00:00 GMT				
	10. Wed, 09 May 2018 07:00:00 GMT				
Learn more about CloudWatch E	Events schedules.				

Add custom rule						
AWS Config evaluates your AWS resources against this rule when it is triggered.						
Name*]					
	A unique name for the rule. 64 characters max. No special characters or spaces.					
Description						
AWS Lambda function ARN*	arn:aws:lambda:us-east-1:142442222:function:config-test	0				
	C [*] Edit AWS Lambda function					
	AWS Config will gain permission to invoke the function by updating the function's access policy.					
Trigger						
AWS Config evaluates resources when the	AWS Config evaluates resources when the trigger occurs.					
AWS Config now triggers rules periodically without delivering a configuration snapshot. You can access configuration details captured by AWS Config in your rule. Learn more.						
Trigger type*	Configuration changes Periodic					
Scope of changes*	Resources Tags All changes					
Resources*	EC2: EIP ×]				
	Resource identifier (optional)]				

DynamoDB table

Select a DynamoDB table to listen for updates on.

ChangeRequestLog

Batch size

The largest number of records that will be read from your table's update stream at once.

100

Starting position

The position in the stream to start reading from. For more information, see ShardIteratorType in the Amazon

Latest

In order to read from the DynamoDB trigger, your execution role must have proper permission

Enable trigger

Enable the trigger now, or create it in a disabled state for testing (recommended).

 \checkmark

Kinesis stream

Select a Kinesis stream to listen for updates on.

spektr-test

Batch size

The largest number of records that will be read from your stream at once.

100

Starting position

The position in the stream to start reading from. For more information, see ShardIteratorType in the Amazon Kinesis API

Latest

In order to read from the Kinesis trigger, your execution role must have proper permissions.

Enable trigger

Enable the trigger now, or create it in a disabled state for testing (recommended).

Bucket

Please select the S3 bucket that serves as the event source. The bucket must be in the same region as the function.

binv2

Event type

Select the events that you want to have trigger the Lambda function. You can optionally set up a prefix or suffix for have multiple configurations with overlapping prefixes or suffixes that could match the same object key.

Object Created (All)

Prefix

Enter an optional prefix to limit the notifications to objects with keys that start with matching characters.

e.g. images/

Filter pattern

Enter an optional filter pattern.

e.g. .jpg

Lambda will add the necessary permissions for Amazon S3 to invoke your Lambda function from this

Enable trigger

Enable the trigger now, or create it in a disabled state for testing (recommended).

SNS topic

Select the SNS topic to subscribe to.

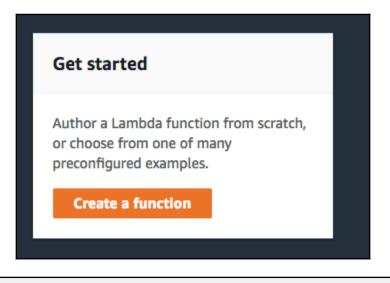
BlackjackNotifications

Lambda will add the necessary permissions for Amazon SNS to invoke your Lambda function

Enable trigger

Enable the trigger now, or create it in a disabled state for testing (recommended).

Chapter 5: Your first Serverless application on AWS





Blueprints Info			Export
keyword : hello-world 🛞			< 1 >
greengrass-hello-world	0	hello-world	0
Deploy this lambda to a Greengrass core where it will send a hello world message to a topic		A starter AWS Lambda function.	
python · greengrass · iot · hello world		nodejs	
r)			
hello-world-python	0	hello-world-python3	0
A starter AWS Lambda function.		A starter AWS Lambda function.	
python2.7		python3.6	
greengrass-hello-world-nodejs	0		
Deploy this lambda to a Greengrass core where it will send a hello world message to a topic			
nodejs6.10 · greengrass · iot · hello world			
		Car	cel Configure

lame	
myFirstHelloWorldFunction	
t ole lefines the permissions of your function. Note that new roles may no reation. <mark>Learn more</mark> about Lambda execution roles.	ot be available for a few minutes after
Create new role from template(s)	•
ambda will automatically create a role with permissions from the se ambda permissions (logging to CloudWatch) will automatically be a equired permissions will also be added. Cole name nter a name for your new role.	
myFirstHelloWorldFunction	

Function code Info		
Code entry type Edit code inline	Runtime Node.js 8.10	Handler Info index.handler
File Edit Find View Goto	o Tools Window 1∃ index.js × ⊕	23 ‡
index.js	<pre>console.log('Loading function'); exports.handler = async (event, of //console.log('Received event console.log('value1 =', event console.log('value2 =', event console.log('value3 =', event return event.key1; // Echo b // throw new Error('Something); </pre>	t:', JSON.stringify(event, null, 2)); t.key1); t.key2); t.key3); back the first key value

Configure test event
A function can have up to 10 test events. The events are persisted so you can switch to another computer or and test your function with the same events.
• Create new test event
 Edit saved test events
Event template
Hello World 🔹
Event name
myHelloWorldEvent
1 - { 2 "key3": "value3", 3 "key2": "value2", 4 "key1": "value1" 5 }

Actions v	myHelloWorldEvent	•	Test

Г

0	Execution result: succeeded (logs)	×
	The area below shows the result returned by your function execution. Learn more about returning results from your function.	
	"value1"	

Summary			
Code SHA-256	UMJK1Wkhd9I8dEwu55A8uafu7MqA/8	8 RyqsæistqØ uEcl=	ad69b14e-6392-11e8-8380- df2574fbd5d5
Duration	13.76 ms	Billed duration	100 ms
Resources configured	128 MB	Max memory used	46 MB
Log output			
	the logging calls in your code. These cor Lambda function. Click here to view the		
START RequestId: ad	d69b14e-6392-11e8-8380-df2574fbd5d5	Version: \$LATEST	
2018-05-29T22:50:20	6.510Z ad69b14e-6392-11e8-83	80-df2574fbd5d5 v	alue1 = value1
2018-05-29T22:50:20	6.510Z ad69b14e-6392-11e8-83	80-df2574fbd5d5 v	alue2 = value2
2018-05-29T22:50:20	6.510Z ad69b14e-6392-11e8-83	80-df2574fbd5d5 v	alue3 = value3
END RequestId: ad6	9b14e-6392-11e8-8380-df2574fbd5d5		
REPORT RequestId: d	ad69b14e-6392-11e8-8380-df2574fbd5d	5 Duration: 13.76 m	s Billed Duration: 100 ms
Memory Size: 128 M	B Max Memory Used: 46 MB		
L			

Clou	dWatch > Log Groups	> /aws/lambda/myFirstHelloWorldFunction > 2018/05/29/[\$LATEST]3011e8db00814db7bf11aa2113c95976
		Expand all Row
F	ilter events	all 30s 5m
	Time (UTC +00:00)	Message
	2018-05-29	
		No older events found at the moment. Retry.
•	22:50:26	2018-05-29T22:50:26.507Z ad69b14e-6392-11e8-8380-df2574fbd5d5 Loading function
•	22:50:26	START RequestId: ad69b14e-6392-11e8-8380-df2574fbd5d5 Version: \$LATEST
•	22:50:26	2018-05-29T22:50:26.510Z ad69b14e-6392-11e8-8380-df2574fbd5d5 value1 = value1
	22:50:26	2018-05-29T22:50:26.510Z ad69b14e-6392-11e8-8380-df2574fbd5d5 value2 = value2
•	22:50:26	2018-05-29T22:50:26.510Z ad69b14e-6392-11e8-8380-df2574fbd5d5 value3 = value3
•	22:50:26	END RequestId: ad69b14e-6392-11e8-8380-df2574fbd5d5
•	22:50:26	REPORT RequestId: ad69b14e-6392-11e8-8380-df2574fbd5d5 Duration: 13.76 ms Billed Duration: 100 ms Memory
		No newer events found at the moment. Retry.

Log output

The area below shows the logging calls in your code. These correspond to a single row within the CloudWatch log group Lambda function. Click here to view the CloudWatch log group.

```
START RequestId: 1c2dfc89-6396-11e8-a1f1-2fc280f13342 Version: $LATEST
2018-05-29T23:15:00.591Z 1c2dfc89-6396-11e8-a1f1-2fc280f13342 Received event: {
    "key3": "value3",
    "key2": "value2",
    "key1": "value1"
}
2018-05-29T23:15:00.591Z 1c2dfc89-6396-11e8-a1f1-2fc280f13342 value1 = value1
2018-05-29T23:15:00.591Z 1c2dfc89-6396-11e8-a1f1-2fc280f13342 value2 = value2
2018-05-29T23:15:00.591Z 1c2dfc89-6396-11e8-a1f1-2fc280f13342 value3 = value3
END RequestId: 1c2dfc89-6396-11e8-a1f1-2fc280f13342
```

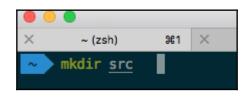
Version: \$LATEST v	Actions v
	Publish new version
	Create alias
	Delete function
	Export function

Publish new version from \$LATEST	×
Publishing a new version will save a "snapshot" of the code and configuration of the \$LATEST version. Yo edit the new version's code. Please click to confirm.	ou will be unable to
Version description	
v1.0.0	
Cancel	Publish

	Version: 2 🔺		
Switch versions	/aliases		
Filter version	ns/aliases		
Versions	Aliases		
\$LATEST (5/ A starter AWS Lar			
2 (5/29/2018) Snapshot created on June 1st 2018			

Actions	m	yHello
Publish new version		
Create alias		
Delete alias		
Export function		

Create a new alias	×
An alias is a pointer to one or two versions. Select the version(s) you would like the alias to point to. Name* prod	
Description Prod alias for the function	
Version*	
You can shift traffic between two versions, based on weights (%) that you assign. Click here to learn more. Additional Version	
Cancel	te



~/src Mkdir hello-world ~/src d hello-world ~/src/hello-world

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New Folder		Cancel Open

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EXPLORER	Js index.js × ! template.yaml	
OPEN EDITORS J5 index.js // template.yaml HELLO-WORLD J5 index.js // template.yaml // template.yaml	<pre>1 console.log('Loading function'); 2 exports.handler = async (event, context, 3 console.log('Received event:', JSON.s 4 const name = JSON.parse(event.body).n 5 const helloWorldMsg = `Hello World!, 6 const resp = { 7 statusCode: 200, 8 body: JSON.stringify(helloWorldMs 9 headers: { 10 'Content-Type': 'application/ 11 }, 12 }; 13 console.log(helloWorldMsg); 14 return resp;</pre>	tringify(event, null, 2)); ame; \${name}`; g),



~/src/hello-world sam local start-api

2018–06–17 21:37:24 Mounting HelloWorldFunction at http://127.0.0.1:3000/hello [POST] 2018–06–17 21:37:24 You can now browse to the above endpoints to invoke your functions. You do not eflected instantly/automatically. You only need to restart SAM CLI if you update your AWS SAM temp 2018–06–17 21:37:24 * Running on <u>http://127.0.0.1:3000/</u> (Press CTRL+C to quit)

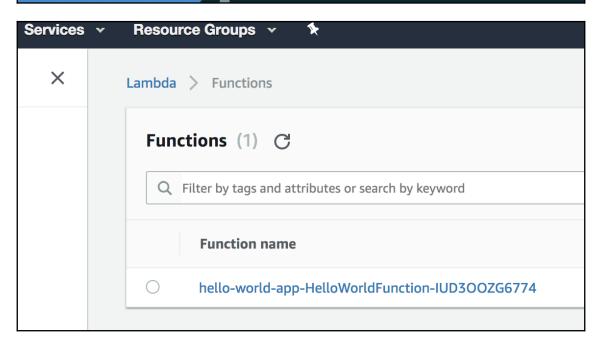
a	WS	Se	rvices	•	Res	our	ce (Grou	ps	•		۶			
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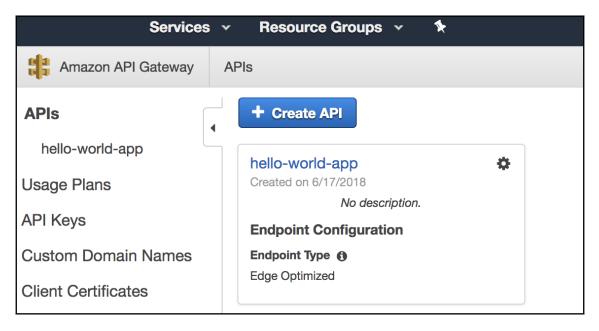


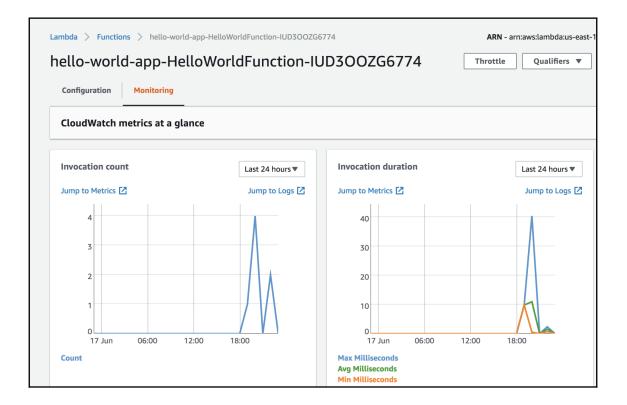
~/src/hello-world sam deploy \
 --template-file packaged.yaml \

- --stack-name hello-world-app $\$
- --capabilities CAPABILITY_IAM

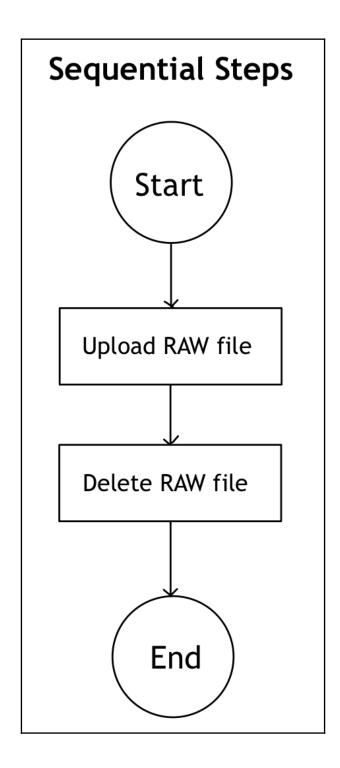
Waiting for changeset to be created.. Waiting for stack create/update to complete Successfully created/updated stack – hello-world-app ~/src/hello-world

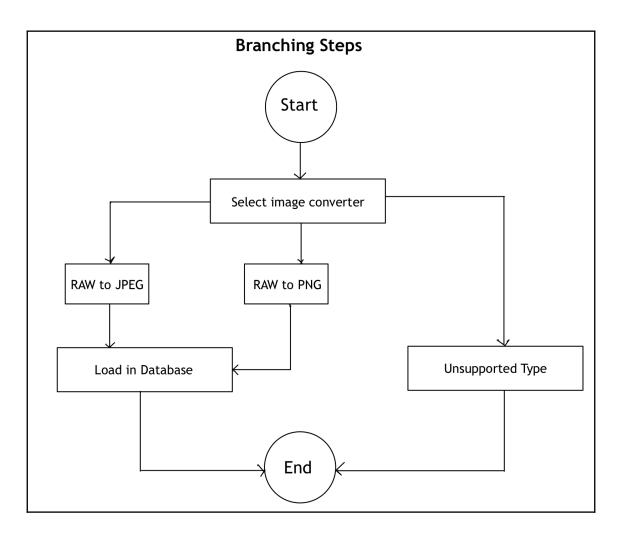


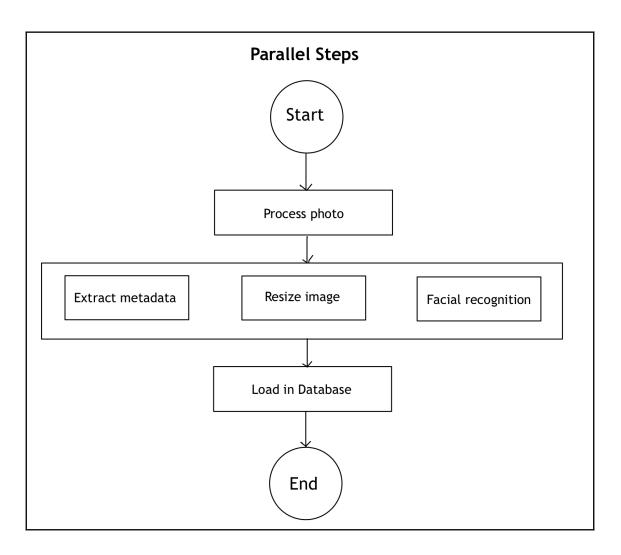


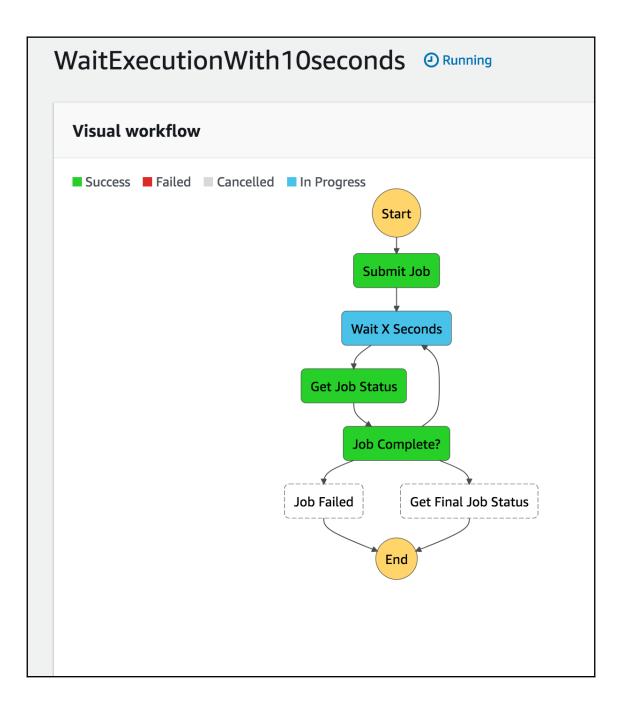


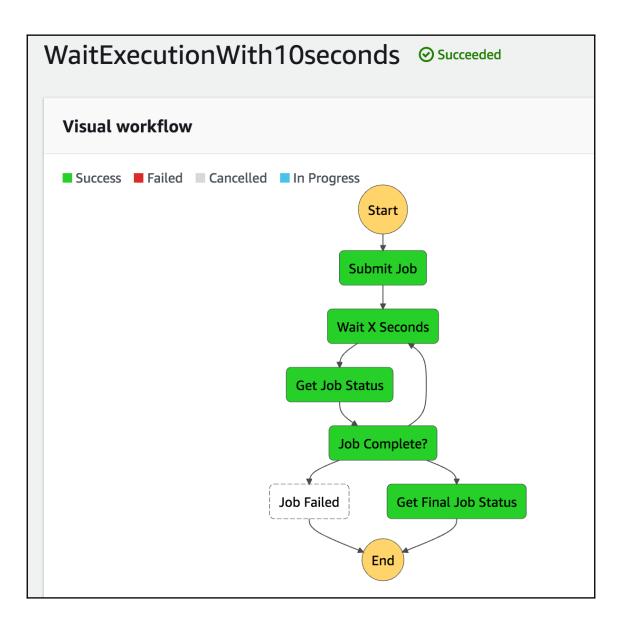
Chapter 6: Serverless Orchestration on AWS











Execut	ion event history				
ID	Туре	Step	Resource	Elapsed Time (ms)	Timestamp
▶ 1	ExecutionStarted		-	0	Jun 18, 2018 07:09:43.396 PM
▶ 2	TaskStateEntered	Submit Job	-	22	Jun 18, 2018 07:09:43.418 PM
▶ 3	LambdaFunctionScheduled	Submit Job	Lambda CloudWatch logs	22	Jun 18, 2018 07:09:43.418 PM
▶ 4	LambdaFunctionStarted	Submit Job	Lambda CloudWatch logs	68	Jun 18, 2018 07:09:43.464 PM
▶ 5	LambdaFunctionSucceeded	Submit Job	Lambda CloudWatch logs	1194	Jun 18, 2018 07:09:44.590 PM
▶ 6	TaskStateExited	Submit Job	-	1194	Jun 18, 2018 07:09:44.590 PM
▶ 7	WaitStateEntered	Wait X Seconds	-	1202	Jun 18, 2018 07:09:44.598 PM

Step Functions > State machines > Create state machine

Create state machine

Author from scratch Language (ASL) based on your needs.

Write a state machine using Amazon States

Sample Projects (2-10 minutes)

Get started quickly by using a sample project. If you're curious how Step Functions works, do this!

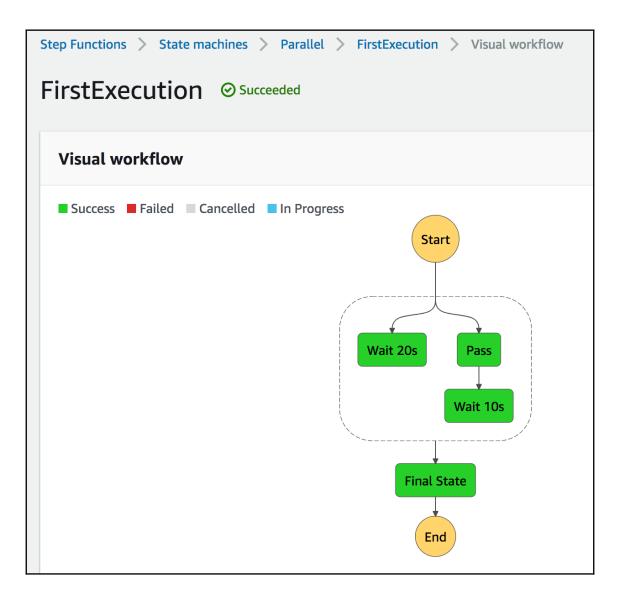
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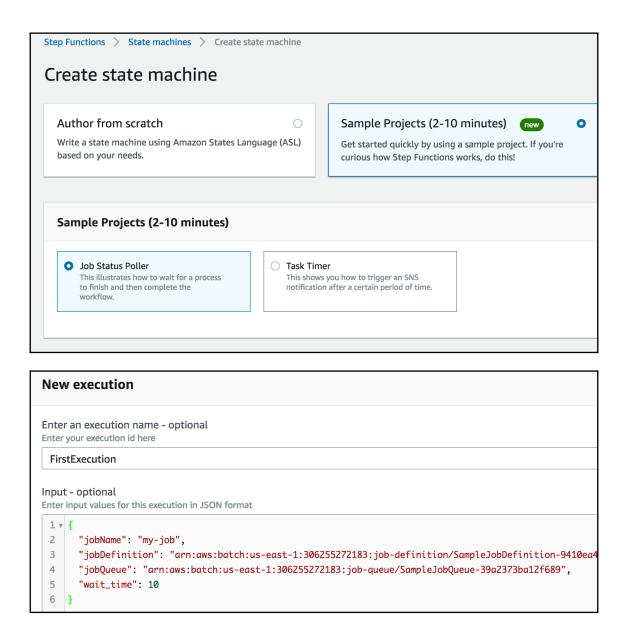
Templates

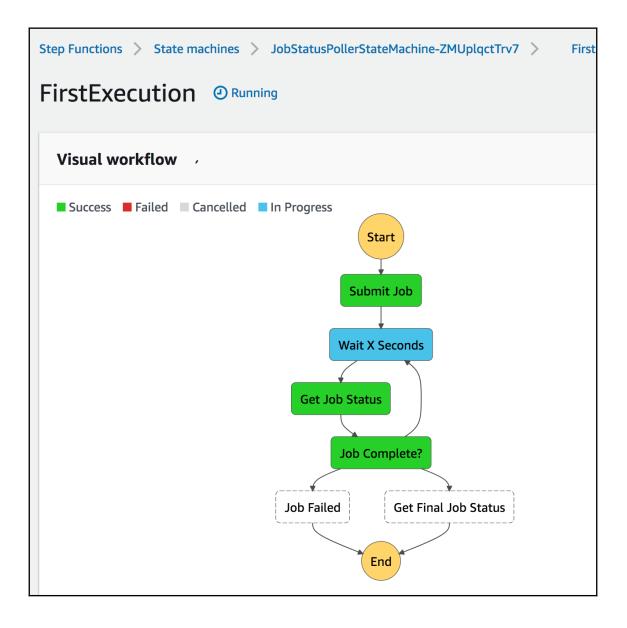
Get started quickly with a common Step Functions template.

0

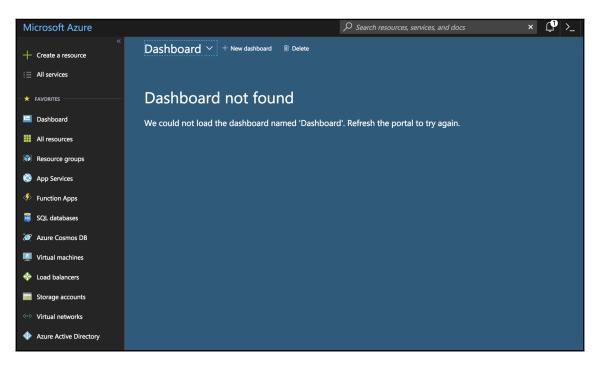
Select a template Each template implements a common pattern in the Amazon States Language. Use these as a starting point to create your own state machine. Learn more 🔀 Retry failure Hello world Wait state Parallel Delays the state machine from continuing for a specified time. An example of a Task state using a retry policy to handle Lambda Used to create parallel branches of execution in your state A basic example using a Pass state. failures. machine. Catch failure Choice state An example of a Task state using Catchers to handle Lambda Adds branching logic to a state machine. failures.

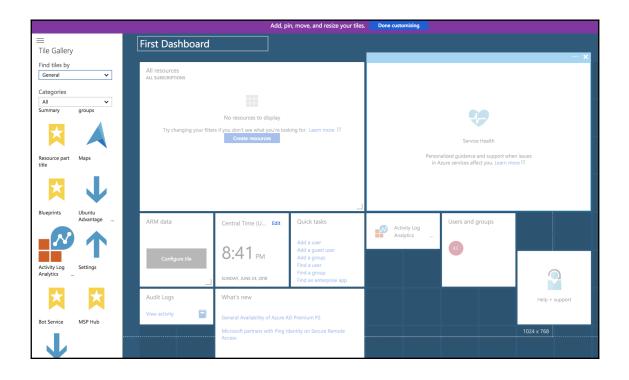


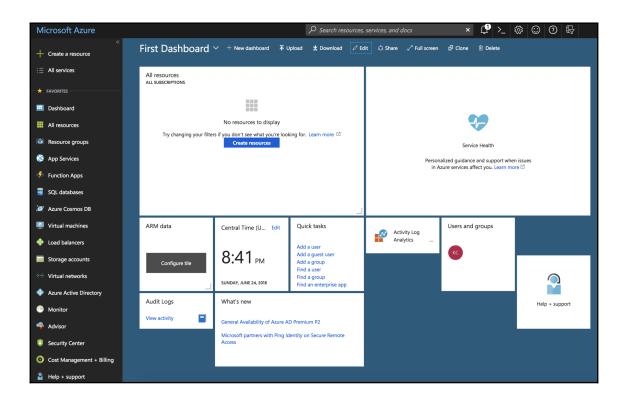


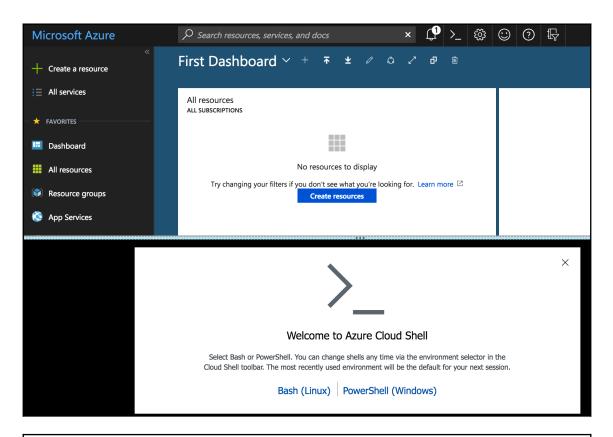


Chapter 7: Getting started with Azure Functions

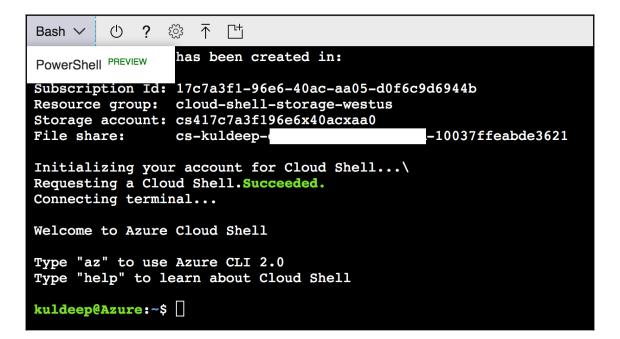








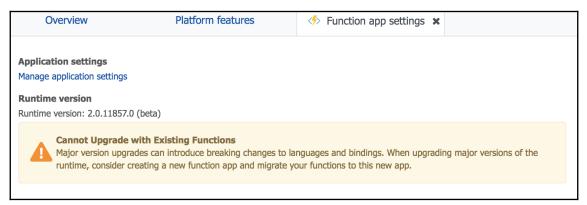
You have no storage mounted	×
Azure Cloud Shell requires an Azure file share to persist files. Learn more This will create a new storage account for you and this will incur a small monthly cost. <u>View pricing</u>	
* Subscription Free Trial V Show advanced settings	
Create storage Close	



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Azure Cosmos DB				ent. Scale based on demand a		
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Azure Active Directory						
Monitor						
🔷 Advisor						

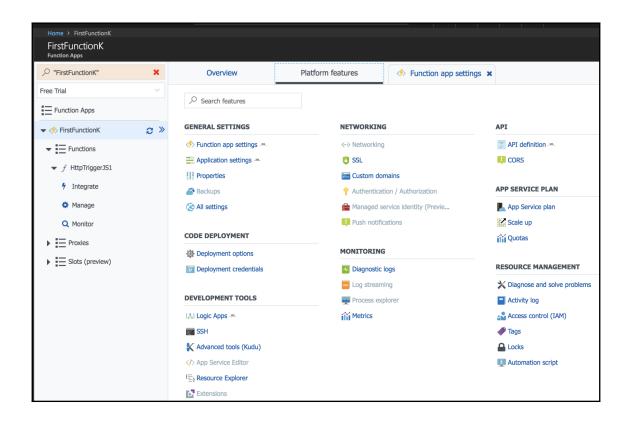
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۵	App Services	Slots (preview)	Subscription ID Location 17c7a3f1-96e6-40ac-aa05-d0f6c9d6944b Central US
\$	Function Apps		URL https://firstfunctionk.azurewebsites.net
1	SQL databases		App Service plan / pricing tier
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	Storage accounts		Function app settings
	Virtual networks		Application settings
•	Azure Active Directory		Application Insights
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4	Advisor		

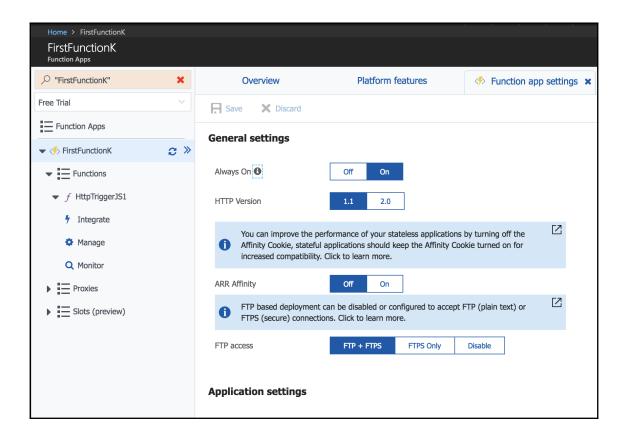


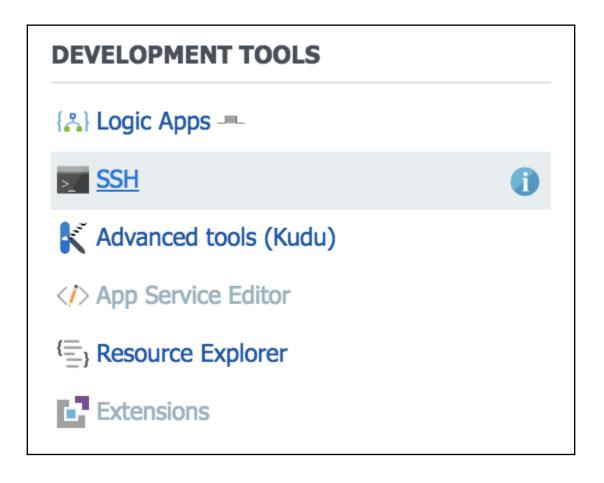
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Overview	Platform features	Function app settings ×						
Application settings Manage application settings Runtime version Runtime version: 2.0.11857.0 ((feeter)							
Cannot Upgrade with Existing Functions Major version upgrades can introduce breaking changes to languages and bindings. When upgrading major versions of the runtime, consider creating a new function app and migrate your functions to this new app.								
Read/Write Read Only Slots (preview)	Change the edit mode of your function app Read/Write Read Only							
Known issues: Logic apps integration with Functions does not work when Slots(preview) is enabled. Opting into this preview feature will reset any pre-existing secrets. Function secrets can be found under the 'Manage' node for each function.								
Host Keys (All functions)	VALUE	ACTION	IS					
_master	Click to show	ද් _ව Copy	C Re	enew				
default	Click to show	ද _් Cop	C Re	enew X Revoke				

Home > FirstFunctionK - HttpTriggerJS1						-
FirstFunctionK - HttpTriggerJS1 Function Apps						×
✓ "FirstFunctionK" X	A You're using a	prerelease version of	Azure Functions. Thanks for trying it out!			
Free Trial						
Function Apps	Function Stat	e				
	Enabled	Disabled	â Delete function			
▼						
▼ f HttpTriggerJS1	Function Keys					
🐓 Integrate	NAME	VALUE		ACTIONS		
🌣 Manage	default	Click to show		华 Copy	2 Renew	× Revoke
Q Monitor	Add no	ew function key				
Proxies						
Slots (preview)	Host Keys (All 1	unctions)				
	NAME	VALUE		ACTIONS		
	_master	Click to show		ළු Copy	C Renew	
	default	Click to show		අු Copy	2 Renew	× Revoke
	Add no	ew host key				







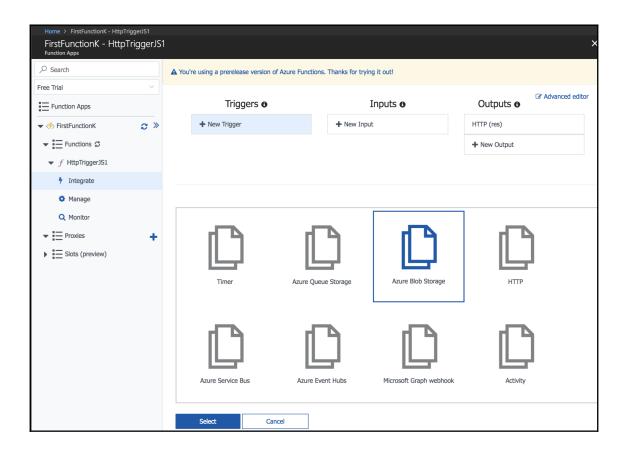
Environme	ent				
Build	71.10312.3298.0 (4b93e2f5a0)				
Site up time	00.01:11:42				
Site folder	/home				
Temp folder	/tmp/				
 REST API (works best when using a JSON viewer extension) App Settings Deployments Source control info Files Current Docker logs (Download as zip) 					

Home > FirstFunctionK FirstFunctionK Function Apps P "FirstFunctionK"	×	Overview	Platform features	Function app setting	gs x
Free Trial	~	>>> Search features			
 FirstFunctionK Functions f HttpTriggerJS1 Integrate Manage Monitor Proxies Slots (preview) 	<i>c</i> ≫	GENERAL SETTINGS	•	mains tion / Authorization ervice identity (Previe cations 5 logs ling	API Image: API definition Image: CORS APP SERVICE PLAN Image: App Service plan Image: Colore plan Image: Colo

Chapter 8: Triggers and Bindings for Azure Functions

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All subscriptions					
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▼				+ New Output	
▼ f HttpTriggerJS1					
🕈 Integrate					
🌣 Manage					
Q Monitor	HTTP trigger × delete				
Proxies	Allowed HTTP methods		Mode 🚯		
Slots (preview)	All methods	~	Standard		*
	Request parameter name		Route template		
	req		Route template		
	Authorization level 🚯				
	Function	~			

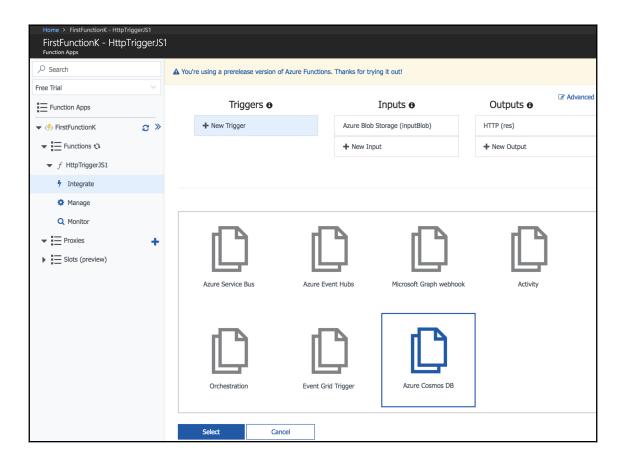
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▼ f HttpTriggerJS1	6 "direction": "in", 7 "name": "req"
🐐 Integrate	8 }, 9 {
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Slots (preview)	



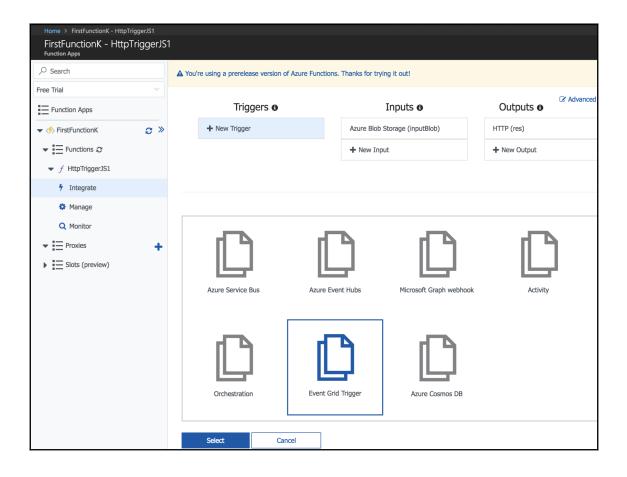
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▼ <i>✓ FirstFunctionK</i>	c »	+ New Trigger	+ New Input		HTTP (res)	
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• f HttpTriggerJS1						
🐐 Integrate						
🌣 Manage						
Q Monitor		Azure Blob Storage trigger				
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Slots (preview)		myBlob		mycontainer		
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\checkmark \blacksquare Functions \diamondsuit					+ New Output	
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Q Monitor	Г					
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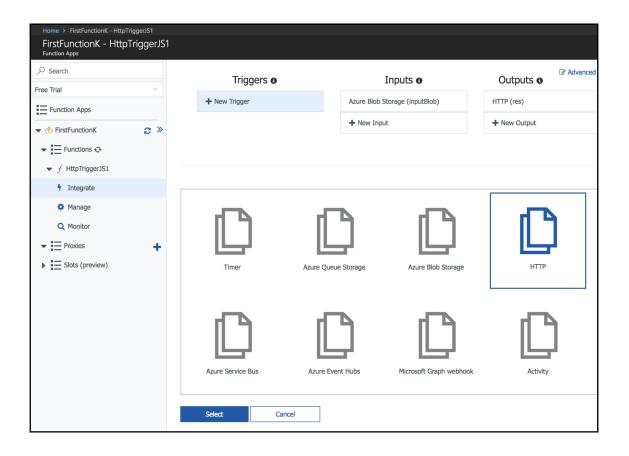
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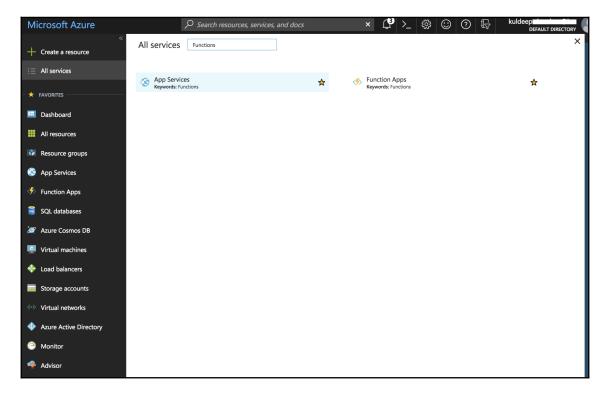
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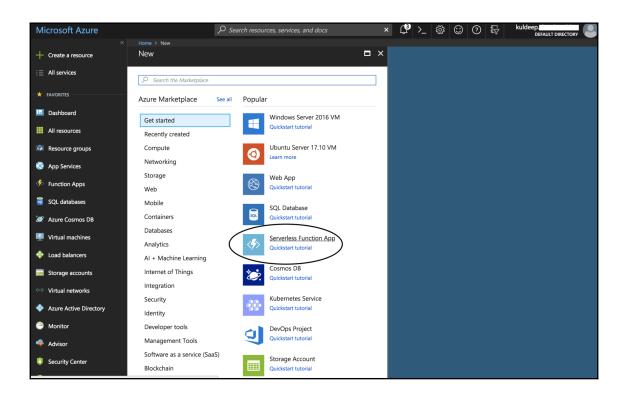
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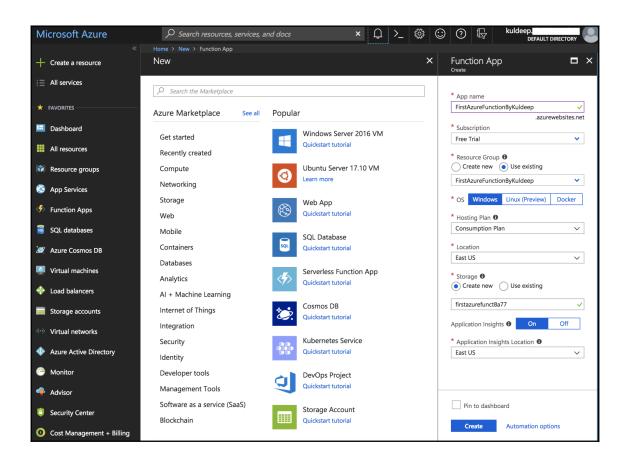
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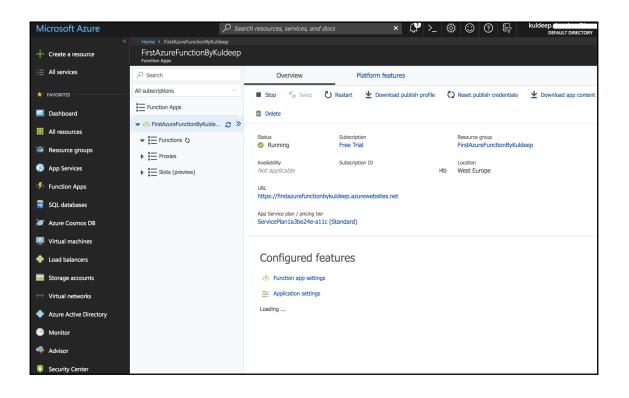
Chapter 9: Your first Serverless application on Azure



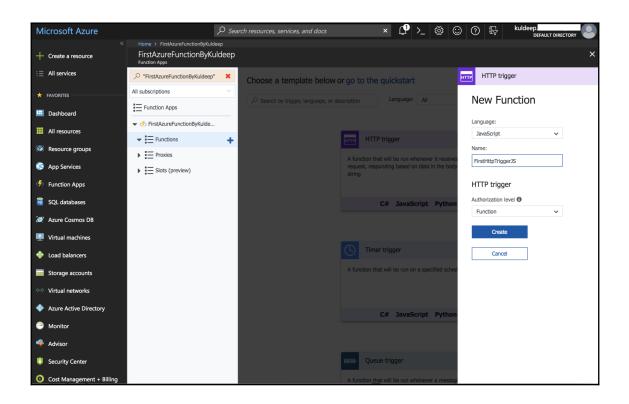
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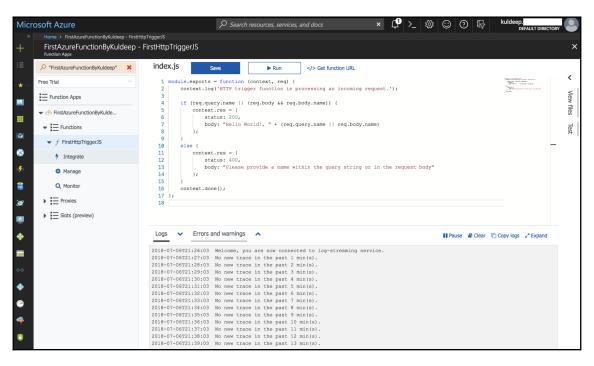






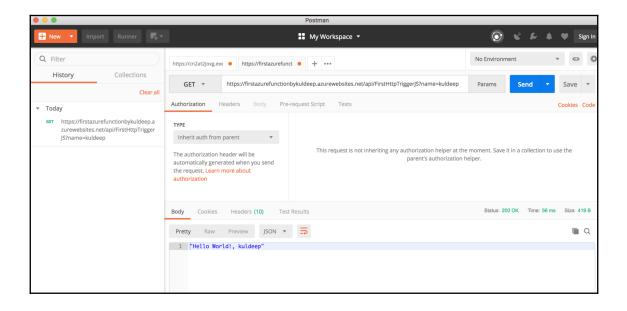
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* >	🌣 Manage	13 body: "Please provide a name within the query s' 14 }; 15 }	
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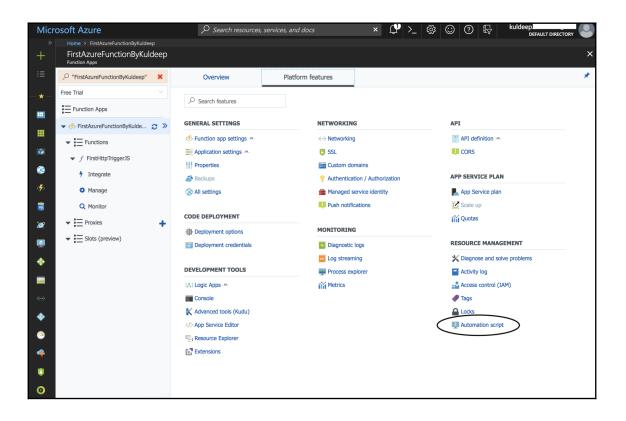
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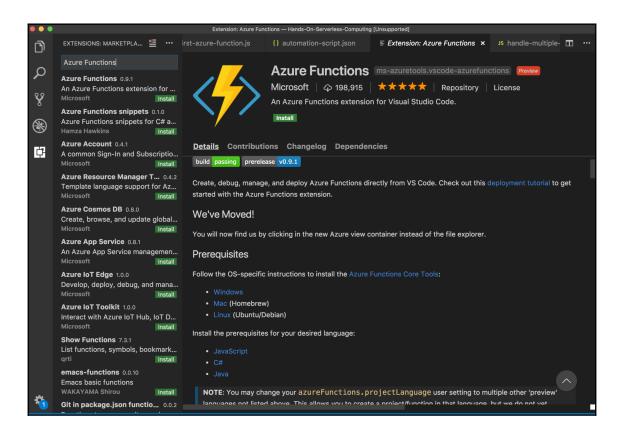
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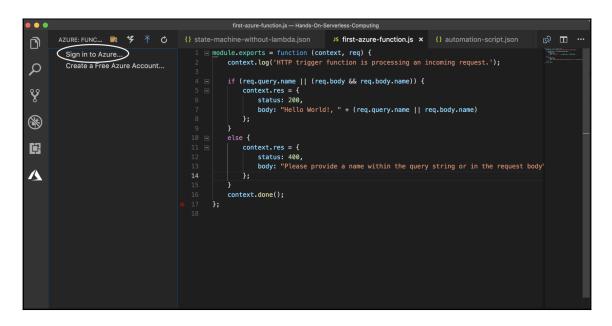
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Request Rate	+ → Request Duratio	n	+ Request Fa	ilure Rate	*•	8:02:28 PM Trace @93f8267fd05fefa Function started (Id=4fd594a1-f9b6-4d69-ad0f-9dc7c6f3d5b4)
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v/src func init MyLocalFunctionProj
Select a worker runtime:
1. dotnet
2. node
3. java
Choose option: 2
node
Writing .gitignore
Writing host.json
Writing local.settings.json
Writing /Users/kuldeepchowhan/src/MyLocalFunctionProj/.vscode/extensions.json
Initialized empty Git repository in /Users/kuldeepchowhan/src/MyLocalFunctionProj/.git/

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL	Azure Functions	\$ ×	₫	^	×
Using "JavaScript" as the project language Using "beta" as the project runtime Using "Verified" as the project templateFilter Writing project debug configuration Writing project settings Writing extension recommendations Verifying ".vscode" is not listed in gitignore Finished initializing for use with VS Code.					

~/src/MyLocalFunctionProj 🔰 master 🔰 func new
Select a language: Select a template:
1. Blob trigger
2. Cosmos DB trigger
3. Event Grid trigger
4. HTTP trigger
5. Queue trigger
6. SendGrid
7. Service Bus Queue trigger
8. Service Bus Topic trigger
9. Timer trigger
Choose option: 4
HTTP trigger
Function name: [HttpTriggerJS] FirstLocalFunctionJS
Writing /Users/kuldeepchowhan/src/MyLocalFunctionProj/FirstLocalFunctionJS/index.js
Writing /Users/kuldeepchowhan/src/MyLocalFunctionProj/FirstLocalFunctionJS/sample.dat
Writing /Users/kuldeepchowhan/src/MyLocalFunctionProj/FirstLocalFunctionJS/function.json

//src/MyLocalFunctionProj りmaster func host start
349343
%%%%%% Ø %%%%%% Ø
@ 1444444 @ @@ 1444444 @
900 999999 (U
66 WA 66
8
Hosting environment: Production
Content root path: /Users/kuldeepchowhan/src/MyLocalFunctionProj
Now listening on: http://0.0.0.0:7071
Application started. Press Ctrl+C to shut down.
[07/07/2018 04:35:29] Reading host configuration file '/Users/kuldeepchowhan/src/MyLocalFunctionProj/host.json'
[07/07/2018 04:35:29] Host configuration file read:
[07/07/2018 04:35:29] Starting Host (HostId=c02vm9f3htd5=325744205, InstanceId=df693c54=d742=463d=9006=317f0b40080f, Version=2.0.11888.0, ProcessId=41670, AppDomainId= 1, Debug=False, ConsecutiveErrors=0, StartupCount=1, FunctionsExtensionVersion=)
1, Debugg-raise, consecutive=frors=0, startupcont=1, runclinisetxensione=7 and raises and raises and runce and
(0)/0/2010 04:35:30) Reading Worker config for the language: node
(0)/0/2018 04:35:30] Start Process: node "/usr/local/Cellar/azure-functions-core-tools/2.0.1-beta.31/workers/node/dist/src/nodejsWorker.js"host 127.0.0.1port (
1823 — workerld 2b9ccd7-306c-48fc-9791-5036c9f4934f — requestId 0cf60970-1a45-49a6-82ac-a709028ea75c — arcdMaxMessageLength 134217728
[07/07/2018 04:35:30] Generating 1 job function(s)
[07/07/2018 04:35:30] Found the following functions:
[07/07/2018 04:35:30] Host.Functions.FirstLocalFunctionJS
[07/07/2018 04:35:30]
[07/07/2018 04:35:30] Host initialized (908ms)
[07/07/2018 04:35:30] Worker 2b9eced7-306c-48fc-9791-5036c9f4934f connecting on 127.0.0.1:61823
Listening on http://0.0.0.0:7071/
Hit CTRL-C to exit
Http Functions:
FirstLocalFunction35, http://localhort.7071/oni/FirstLocalFunction35

FirstLocalFunctionJS: http://localhost:7071/api/FirstLocalFunctionJS

[07/07/2018 04:35:30] (node:41677) [DEP0005] DeprecationWarning: Buffer() is deprecated due to security and usability issues. Please use the Buffer.alloc(), Buffer.all ocUnsafe(), or Buffer.from() methods instead. [07/07/2018 04:35:53] Host started (23630ms)

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History Collections	GET - http://localhost:7071/api/FirstLocalFunctionJS?name=kuldeep	Params	Send 🔻	Save 🔻
▼ Today	Authorization Headers Body Pre-request Script Tests		c	ookies Code
GET http://localhost:7071/api/FirstLocalFu nctionJS?name=kuldeep	TYPE Inherit auth from parent The authorization header will be automatically generated when you send the request. Learn more about authorization			in a
	Body Cookles Headers (4) Test Results	Status: 200 OK	Time: 753 ms	Size: 155 B
	Pretty Raw Preview Text 🔻 📅			Q
	1 Hello kuldeep			

Chapter 10: Getting started with Google Cloud Functions

0	Google Cloud Pla	atform		
	atform for free	Google	0	Access to all Cloud Platform Products Get everything that you need to build and run your apps, websites and services, including Firebase and
Country				the Google Maps API.
United States		•	\$	\$300 credit for free
Acceptances				Sign up and get \$300 to spend on Google Cloud Platform over the next 12 months.
Please email me upda feedback surveys and	tes regarding feature announcements, pe special offers.	erformance suggestions,	87	No autocharge after free trial ends We ask you for your credit card details to make sure
Yes	No			that you are not a robot. You won't be charged unless you manually upgrade to a paid account.
I have read and agree Required to continue	to the Zync Terms of Service Terms of Se	ervice.		
Yes	No			
I have read and agree Required to continue	to the Google Cloud Platform Free Trial T	erms of Service.		
Yes	No			
Agree and contin	ue			

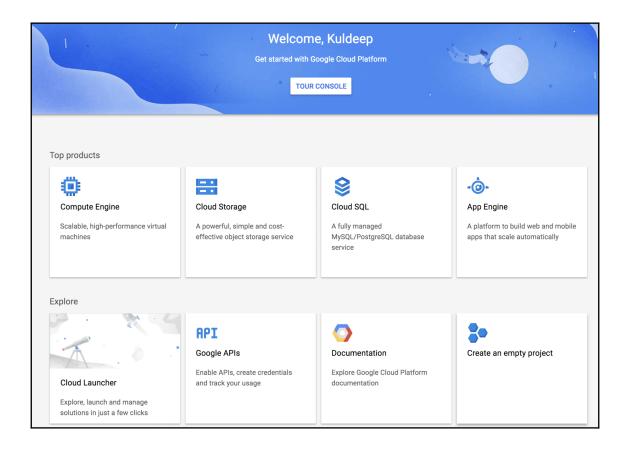
📀 Google Cloud Platform

Welcome, Kuldeep!

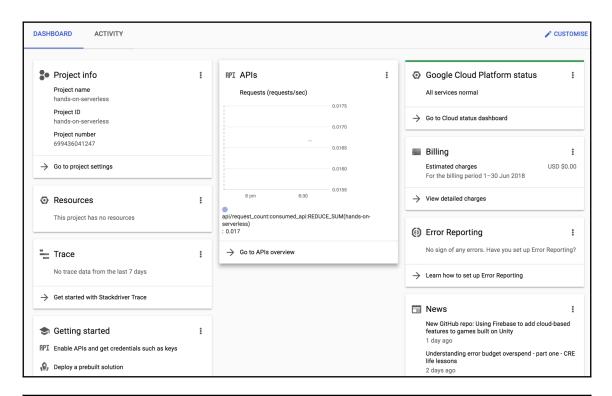
Thanks for signing up for the 12-month free trial.

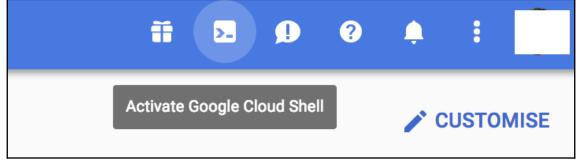
We've given you \$300 in free trial credit to spend. If you run out of credit, don't worry, you won't be billed until you give your permission.

GOT IT



	٩
New Project	
Project Name *	
hands-on-serverless	0
Project ID: hands-on-serverless. It cannot be changed later. EDIT	
Location *	
No organisation	BROWSE
Parent organisation or folder	
CREATE CANCEL	





Google Cloud Shell

Free, pre-installed with the tools that you need for the Google Cloud Platform. Learn more

us-central1-f f1-micro 10.240.57.1 104.154.76.241 RUNN example-vm-3 kuldeep chowhan@cloudshell:~\$ kuldeep chowhan@cloudshell:~\$ git clone https://github.com/GoogleCloud/appengine-example.g Cloning into 'appengine-example'... remote: Counting objects: 476, done. remote: Total 476 (delta 0), reused 0 (delta 0), pack-reused 476 Receiving objects: 100% (476/476), 432.65 KiB | 0 bytes/s, done. Checking connectivity... done. kuldeep_chowhan@cloudshell:~\$ cd appengine-example kuldeep chowhan@cloudshell:~/appengine-example\$ appcfg.py -A test-project update app.yaml 10:35 PM Host: appengine.google.com Configured for Google Cloud Real Linux environment Popular language support

Linux Debian-based OS

- 5 GB persisted home directory
- Add, edit and save files
- Google Cloud SDK
- Google App Engine SDK
 - DockerGit
 - Text editors
 - Build tools
 - View more
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- PythonJava
- Go
- Node.js

CANCEL START CLOUD SHELL



\equiv Google (Cloud Platform	• hands-on-serverless	-	Ĩ	Ļ	:
(···) Cloud Fu	nctions					
	Google Cloud Function asynchronous compu- single-purpose funct the need to manage a	unctions BETA ons is a lightweight, event-base ute solution that allows you to ions which respond to cloud ev a server or a runtime environm	create small, vents, without			

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()	Cloud Fund	ctions	Overvi	ew 🛨 C	CREATE FUNCTION	C REFRESH 📋 D	DELETE 🗖 CO	OPY				HIDE II	NFO PANE	EL
	-	Filter functions					Olumns •	helloWorld							
								LABELS							
		Name 🔨	Region	Trigger	Memory allocated	Executed function	Last deployed								
E		helloWorld	us-central1	HTTP trigger	256 MB	helloWorld	30/06/2018, 20:08	Labels help to or env:prod).	rganise yo	ur resourc	es (e.g. o	ost_cer	ntre:sale	s or	
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θ	IAM + ADD	- <u>e</u> remove						
• <u>•</u> 0		project hands-on-serverless this project and all of its resources. <u>Learn m</u>	iore 🛛					
	View By: MEMBERS F	OLES						
•	= Filter table						0	ш
0	Type Membe	r ↑	Name	Role	Inher	itance		
*	⊡ •⊒ 699430	5041247@cloudservices.gserviceaccount.co	om Google APIs Service Agent 🕑	Editor			/	Î
0	🗌 🖻 hands-	on-serverless@appspot.gserviceaccount.co	m App Engine default service account	Editor			/	Î
	L kuldee	p	Kuldeep Chowhan	Owner			1	Î
		-699436041247@gcf-admin- am.gserviceaccount.com	Google Cloud Functions Service Agent ?	Cloud Functions Service Agen	t		/	Î

≡	Google Cloud	Platform 🐤 hands-on-serverless 👻
0	IAM	ADD - REMOVE
+	Permissior	ns for project hands-on-serverless
	These permissio View By: MEMB	ns affect this project and all of its resources. Learn more 🖸
ନ୍ <u>ଲା</u>	= Filter tab	ble
•	🗌 Туре	Member 🛧
*		699436041247@cloudservices.gserviceaccount.com
		hands-on-serverless@appspot.gserviceaccount.com
3		kuldeep.
		service-699436041247@gcf-admin-robot.iam.gserviceaccount.com
3)		

	Add members to han	ds-on-serverless					
	Add members, roles to hands-on-serverless project Enter one or more members below. Then select a role for these members to grant them access to your resources. Multiple roles allowed. Learn more [2]						
	New members function-developer ×	0					
		must be associated with an active Google A					
Role	Select a role						
Editor	Q Type to filter		Î				
Cloud Functions Developer Read and write access to all f	unctions-related resources.	Cloud Functions Developer Cloud Functions Viewer					
	BigQuery	cloud r diretions viewer					
	Billing						
	Cloud Bigtable						
	Cloud Composer						
	Cloud DLP						
	Cloud Functions						
	Cloud IAP						
	MANAGE ROLES						

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0	IAM +	ADD - REMOVE								
3 II 0		s for project hands-on-serverless	3							
•	= Filter tab	le						0		
0	🗌 Туре	Member 个	Name	Role		Inherit	ance			
\$ (9)	[] 역	699436041247@cloudservices.gserviceaccount.com	Google APIs Service Agent	Editor				i	Î	
	□ ፵	hands-on-serverless@appspot.gserviceaccount.com	App Engine default service account	Editor				/	Î	
1)	□ ≛	kuldeep.	Kuldeep Chowhan	Owner				i	Î	
	□ ≛	kuldeep.(Cloud Functions Develo	per			ľ	Î	
	[9	service-699436041247@gcf-admin- robot.iam.gserviceaccount.com	Google Cloud Functions Service Agent	Cloud Functions Service	e Agent			ľ	Î	

	Google Cloud Platform	: ● ha	nds-on-serverless 🔻	
(…)	Cloud Functions	\	Create function	
Name	0			
func	tion-1			
128	3 MB			
256	MB			
512	2 MB			
1 G	В			
2 G	В			
URL https:	//us-central1-hands-on-serverless.cloud	functions	s.net/function-1	

Function to execute 📀	
helloWorld	
asia-northeast1	
europe-west1	
us-central1	
us-east1	
60	seconds

Chapter 11: Triggers and Events for Google Cloud Functions

≡	Google Cloud Platform	• hands-on-serv	verless 🔻	٩
(…)	Cloud Functions	← Create	function	
Name	0			
clou	d-storage-function		8	
Memo	pry allocated			
256	MB		•	
Trigg	ier			
	ud Storage bucket		-	
	Туре 📀			
	lise/Create		•	
Bucke	•t			
	hands-on-serverless		Browse	
	ce code			
🔾 ZI	line editor P upload			
	P from Cloud Storage loud Source repository			
index.	.js package.json			
1 2 3 4 5 6 7 8 9 10 11	<pre>* Triggered from a message on * * @param {!Object} event The (* @param {!Function} The call */ exports.processFile = (event, of console.log('Processing file; callback(); };</pre>	Cloud Functions ev back function.	vent.	

	Google Cloud Platform 💲 hands-on-serverless 👻	۹
(…)	Cloud Functions	
Name	0	
clou	d-pub-sub-topic	
Memo	ry allocated	
256	MB	
Trigg	or.	
Ciou	d Pub/Sub topic	
Торіс		
hand	is-on-serverless	
Sour	ce code	
	ine editor	
	P upload	
	P from Cloud Storage oud Source repository	
index.	js package.json	
1 2 3		
4 5	<pre>* @param {!Object} event The Cloud Functions event. * @param {!Function} The callback function.</pre>	
6 7 8 9	<pre>exports.subscribe = (event, callback) => { // The Cloud Pub/Sub Message object. const pubsubMessage = event.data;</pre>	
10 11 12 13 14	<pre>// We're just going to log the message to prove that // it worked. console.log(Buffer.from(pubsubMessage.data, 'base64').t</pre>	202
15 16	// Don't forget to call the callback.	

	Google Cloud Platform	🐌 ha	ands-on-serverless	→	٩
()	Cloud Functions	÷	Create funct	ion	
Name	0				
cloue	d-pub-sub-topic			8	
Memo	ry allocated				
256	MB			•	
Trigg	er				
HTT	P trigger			•	
Source Inl ZII	//us-central1-hands-on-serverless.cloudfi ce code line editor P upload P from Cloud Storage oud Source repository	unction	s.net/cioua-pub-sub-	торіс	
index. 1 2 3 4 4 5 6 6 7 8 9 9 10 11 12 13 14 15 16 17 18	<pre>/** * Responds to any HTTP request * * @param {lObject} req Cloud F * @param {lObject} res Cloud F */ exports.helloWorld = (req, res) // Example input: {"message": if (req.body.message === unde // This is an error case, a res.status(400).send('No met } else { // Everything is okay. console.log(req.body.message res.status(200).send('Succes } }; </pre>	unctio unctio "Hell fined) s "mes ssage e);	<pre>n request contex; n response conte; o!"} { sage" is required defined!');</pre>	t. xt. d.	

Chapter 12: Your First Serverless Application on Google Cloud

≡	Google Cloud Platform	hands-on-serverless	-	۹	Ĩ	>.	ø	?	۰	:	
(…)	Cloud Functions	Overview									
				s is a lightweight, event-based,							
		single-purpose the need to ma	function nage a s	solution that allows you to create small, swhich respond to cloud events, without erver or a runtime environment.							
		Create functi	on								

	Google Cloud Platform 💲 hands	on-serverless 🔻	٩	Ĩ	>	!	?	:	
(…)	Cloud Functions \leftarrow C	reate function							
Name	0								
first	HttpFunction								
Memo	ory allocated								
256	MB	•							
Trigg	er								
НТТ	P trigger	•							
URL https	//us-central1-hands-on-serverless.cloudfunctions.net	/firstHttpFunction							
Sour	ce code								
	line editor								
<u> </u>	P upload P from Cloud Storage								
O C	oud Source repository								
index	js package.json								
2		provide a "message							
34 5	* @param {!Object} req Cloud Function re								
6	<pre>*/ exports.helloWorldHttp = (req, res) => {</pre>								
10	if (req.body.message === undefined) {								
11	<pre>res.status(400).send('No message defi } else {</pre>	<pre>ined!');</pre>							
13 14 15	<pre>console.log(req.body.message);</pre>	g,body,message);							
16	} };								
15									

	Google Cloud Platform	🐌 ha	inds-on-serverless 🔻	٩	Ĩ	>	•	?	Ļ.	:	
()	Cloud Functions	÷	Create function								
index	js package.json										
2 3 4 5 6 7 8 9 10 11 12 13 14 14 15 16 17 18	<pre>* @param {lObject} reg Cloud H * @param {lObject} res Cloud H */ // Example input: {"message"; if (req.body.message === undd // This is an error case, a res.status(400).send('No me } else { // Everything is okay. console.log(req.body.messag res.status(200).send('Succe } };</pre>	<pre>function function res) == fined) fined) fineds fineds</pre>	<pre>n request context. n response context. > {]"} { sage" is required. defined!');</pre>								
	WorldHttp										
Regio	nced options		•								
Timeo	ut 🛛										
60			seconds								
	ion deployment might take a few minute	s. To bui	ld and test the function								
locall Crea	y, use the local emulator.										

	form 🚦 hands-or	-serverless 🔻	۹			ii D	9	?	٠	:
(···) Cloud Functions	Overview	+ CREATE	FUNCTION C	REFRESH 👕 DELETE	Г СОРҮ				HIDE INI	FO PANEL
= Filter functions				Columns 👻	firstHttpFunctio	n				
Name ^ Regio	n Trigger	Memory allocated	Executed function	Last deployed	LABELS					
Sector Stratter Strat	entral1 HTTP trigger	256 MB	helloWorldHttp	08/07/2018, 18:20	Labels help to organise env:prod).	your resour	ces (e.g. co	ost_cent	re:sales	or
					Кеу	,	/alue			
					deployment-tool		console-c	oud		\times
						+ Add	label			
					Save Discard chan	iges				

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(···) Cloud Functions	← Function details	n Edit	👕 DELETE	Сору		LOGS				
firstHttpFunction										
Version 1, deployed at 8 Jul 2018, 18:20:37 👻										
General Trigger Source Testing										
Invocations 👻			1 hour 6 hours	12 hours 1 da	y 2 days	4 days	7 day	s 14 c	days 3	0 days
Invocations/second 120 100 80 60 40 20 8 Jul, 18:15 6 ok: 0.4 9 error: 5.5761	8 Jul, 18:30 8 fatal: 0		8 Jul, 18:45		L 8	ul, 19:00			8 Jul, 1	9:11
Last deployed										
8 July 2018 at 18:20:37 UTC-5										
Region us-central1										
Memory allocated 256 MB										
Timeout 60 seconds										
Service account hands-on-serverless@appspot.gserviceaccount	.com									

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(···) Cloud Functions	details 🧪	EDIT 👕 DELETE	Го СОРУ	VIEW LOGS				
S firstHttpFunction								
Version 2, deployed at 8 Jul 2018, 19:43:20 👻								
General Trigger Source Testing								
Triggering event 📀								
<pre>1 {"message": "kuldeep"} 2</pre>								
Test the function								
Output	6							
Hello World!, kuldeep	Ľ							
Logs Showing up to 100 log entries								
See all logs for this function execution								
▶ 🔪 16:45:00.818 Function execution started								
16:45:00.964 kuldeep								
16:45:00.974 Function execution took 156 ms	, finished with statu	s code: 200						

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(···) Cloud Functions	🖍 EDIT	🝵 DELETE	Г СОРҮ	TIEW LO	DGS						
S firstHttpFunction											
Version 2, deployed at 8 Jul 2018, 19:43:20 👻											
General Trigger Source Testing											
Triggering event 💿											
<pre>1 {"nomessage": "kuldeep"} 2 </pre>											
Test the function											
Output											
No message defined in the request body!											
Logs Showing up to 100 log entries See all logs for this function execution											
16:53:37.568 Function execution started											
A 16:53:37.633 Function execution took 65 ms, finishe	d with status code:	400									

()	Cloud Fu	nctions		\	Function details
🔮 first	HttpFunctio	on			
Version	2, deployed	at 8 Jul 201	8, 19:43:20	•	
General	Trigger	Source	Testing		
Trigger ty	rpe				
HTTP trig	-				
URL					
https://u	s-central1-ha	Inds-on-ser	verless.cloud	function	s.net/firstHttpFunction

https	s://cn2at2joxg.e>	ke 😐 https://	/us-central1-ha	• + ••••	No	o Environme	ent		•	•
F	POST -	https://us-ce	entral1-hands-o	n-serverless.cloudfunctions.net/firstH	Ρ	arams	Send	•	Save	e 🔻
Auth	orization	Headers (1)	Body 鱼	Pre-request Script Tests					Cookie	s Code
	Кеу			Value		Description	••• E	ulk Edi	t Pre	esets 🔻
~	Content-Type	2		application/json						
	New key			Value		Descriptio	n			

	Postman	
🕂 New 🔻 Import Runner 📭 🔻	👪 My Workspace 👻	💽 📽 🖨 🔶 Sign In
Q Filter	https://cn2at2joxg.exe • https://us-central1-ha • + ••••	No Environment 🔻 📀 🌼
History Collections	POST • https://us-central1-hands-on-serverless.cloudfunctions.net/firstH	Params Send - Save -
Clear all	Authorization Headers (1) Body Pre-request Script Tests	Cookies Code
POST https://us-central1-hands-on-serverle	Key Value	Description •••• Bulk Edit Presets •
ss.cloudfunctions.net/firstHttpFuncti on	Content-Type application/json	
	New key Value	Description
	Body Cookles Headers (9) Test Results	Status: 200 OK Time: 124 ms Size: 379 B
	Pretty Raw Preview HTML -	Q.
	<i>i</i> 1 Hello World!, kuldeep	

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(···) Cloud Functions	← Function details	🖍 EDIT	🝵 DELETE	Гору	VIEW LOGS	>	
 firstHttpFunction Version 2, deployed at 8 Jul 2018, 19:43:20 General Trigger Source Testing 	Ŧ						
Invocations 👻			1 hour 6 hours	12 hours 1 day	2 days 4 days	7 days 14 da	ys 30 days
Invocations/second 0.2							
0.1							
8 Jul, 19:45	8 Jul, 20:00	1	8 Jul, 2	0:15		8	Jul, 20:37

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Ē	Stackdriver Logging	II, CREATE METRIC 🏦 CREATE E	XPORT C ►	
Ξ	Logs	Filter by label or text search		- 0
th	Logs-based metrics	Cloud Function, firstHttpFunction, us-central1	▼ All logs ▼ Any log level ▼ ① Last hour ▼ Jump to now ▼	
ı±	Exports	Showing logs from the last hour ending at 20:	41 (CDT) View	options 👻
	Logs ingestion	> 2018-07-08 19:43:15.872 CDT > 2018-07-08 19:43:15.876 CDT > 2018-07-08 19:43:15.876 CDT > 2018-07-08 19:43:16.5876 CDT > 2018-07-08 19:43:16.5876 CDT > 2018-07-08 19:43:16.582 CDT > 2018-07-08 19:43:16.532 CDT > 2018-07-08 19:43:16.532 CDT > 2018-07-08 19:43:16.856 CDT > 2018-07-08 19:43:16.856 CDT > 2018-07-08 19:43:17.061 CDT > 2018-07-08 19:43:17.064 CDT > 2018-07-08 19:43:17.064 CDT > 2018-07-08 19:43:10.095 CDT > 2018-07-08 19:43:10.094 CDT > 2018-07-08 19:45:00.944 CDT > 2018-07-08 19:45:00.944 CDT > 2018-07-08 <td>firstHttpTunction lr3m5iq6ht0h Function execution took 22 ms, finished with status code: 200 firstHttpTunction lr3miy8humwi Function execution started firstHttpTunction lr3miy8humwi Function execution took 7 ms, finished with status code: 200 firstHttpTunction lr3ms4c2dxas Function execution started firstHttpTunction lr3ms4c2dxas Function execution took 7 ms, finished with status code: 200 firstHttpTunction lr3ms4c2dxas Function execution took 5 ms, finished with status code: 200 firstHttpTunction lr3ms4c2dxas Function execution took 5 ms, finished with status code: 200 firstHttpTunction lr3ms0v6peg0t Function execution started firstHttpTunction lr3m0v6peg0t Function execution took 5 ms, finished with status code: 200 firstHttpTunction lr3m0v6peg0t Function execution took 5 ms, finished with status code: 200 firstHttpTunction lr3m0v6peg0t Function execution took 5 ms, finished with status code: 200 firstHttpTunction lr3m0o112dg Function execution took 5 ms, finished with status code: 200 Cloud Functions UpdateFunction us-centralifirstHttpFunction ("&type": "type.googleapis.com/google firstHttpTunction resmx%ismb6 Function execution took 156 ms, finished with status code: 200 firstHttpTunction resmx%ismb6 Function execution took 156 ms, finished with status code: 200 firstHttpTunction jplkglpakda3 Function execution took 65 ms, finished with status code: 200 firstHttpTunction jplkglpakda3 Function execution took 65 ms, finished with status code: 400 firstHttpTunction jplkglpakda3 Function execution took 65 ms, finished with status code: 400 firstHttpTunction jplkglpakda3 Function execution took 65 ms, finished with status code: 400 firstHttpTunction jplkglpakda3 Function execution started</td> <td></td>	firstHttpTunction lr3m5iq6ht0h Function execution took 22 ms, finished with status code: 200 firstHttpTunction lr3miy8humwi Function execution started firstHttpTunction lr3miy8humwi Function execution took 7 ms, finished with status code: 200 firstHttpTunction lr3ms4c2dxas Function execution started firstHttpTunction lr3ms4c2dxas Function execution took 7 ms, finished with status code: 200 firstHttpTunction lr3ms4c2dxas Function execution took 5 ms, finished with status code: 200 firstHttpTunction lr3ms4c2dxas Function execution took 5 ms, finished with status code: 200 firstHttpTunction lr3ms0v6peg0t Function execution started firstHttpTunction lr3m0v6peg0t Function execution took 5 ms, finished with status code: 200 firstHttpTunction lr3m0v6peg0t Function execution took 5 ms, finished with status code: 200 firstHttpTunction lr3m0v6peg0t Function execution took 5 ms, finished with status code: 200 firstHttpTunction lr3m0o112dg Function execution took 5 ms, finished with status code: 200 Cloud Functions UpdateFunction us-centralifirstHttpFunction ("&type": "type.googleapis.com/google firstHttpTunction resmx%ismb6 Function execution took 156 ms, finished with status code: 200 firstHttpTunction resmx%ismb6 Function execution took 156 ms, finished with status code: 200 firstHttpTunction jplkglpakda3 Function execution took 65 ms, finished with status code: 200 firstHttpTunction jplkglpakda3 Function execution took 65 ms, finished with status code: 400 firstHttpTunction jplkglpakda3 Function execution took 65 ms, finished with status code: 400 firstHttpTunction jplkglpakda3 Function execution took 65 ms, finished with status code: 400 firstHttpTunction jplkglpakda3 Function execution started	
			firstHttpFunction jplkwg4ut6gp Ruldeep firstHttpFunction jplkwg4ut6gp Function execution took 14 ms, finished with status code: 200	:
<1		1	No newer entries found matching current filter. Load newer logs	Ŷ

Your current Cloud SDK version is: 207.0.0 The latest available version is: 207.0.0

	Components		
Status	Name	ID	Size
Not Installed Not Installed	App Engine Go Extensions Cloud Bigtable Command Line Tool Cloud Bigtable Emulator Cloud Datalab Command Line Tool Cloud Datastore Emulator Cloud Datastore Emulator (Legacy) Cloud Pub/Sub Emulator Emulator Reverse Proxy Google Container Local Builder Google Container Registry's Docker credential helper gcloud Alpha Commands gcloud app Java Extensions gcloud app PHP Extensions gcloud app Python Extensions (Extra Libraries) kubectl	app-engine-go cbt bigtable datalab cloud-datastore-emulator gcd-emulator emulator-emulator emulator-reverse-proxy container-builder-local docker-credential-gcr alpha beta app-engine-java app-engine-pp app-engine-python app-engine-python-extras kubectl	512e 152.8 MiB 4.9 MiB 4.3 MiB < 1 MiB 18.0 MiB 38.1 MiB 33.4 MiB 14.5 MiB 4.4 MiB 1.8 MiB < 1 MiB < 1 MiB 118.6 MiB 21.9 MiB 6.1 MiB 28.5 MiB 14.8 MiB
Installed Installed Installed	BigQuery Command Line Tool Cloud SDK Core Libraries Cloud Storage Command Line Tool	bq core gsutil	< 1 MiB 7.7 MiB 3.5 MiB

To install or remove components at your current SDK version [207.0.0], run

\$ gcloud components install COMPONENT_ID

\$ gcloud components remove COMPONENT_ID

To update your SDK installation to the latest version [207.0.0], run:

\$ gcloud components update

Modify profile to update your \$PATH and enable shell command completion?

Do you want to continue (Y/n)? y

~ gcloud components install beta

Your current Cloud SDK version is: 207.0.0 Installing components from version: 207.0.0

These components will be installed.							
Name	Version	Size					
gcloud Beta Commands	2018.06.22	< 1 MiB					

For the latest full release notes, please visit: https://cloud.google.com/sdk/release_notes

```
Do you want to continue (Y/n)? y
```

— Creating update staging area

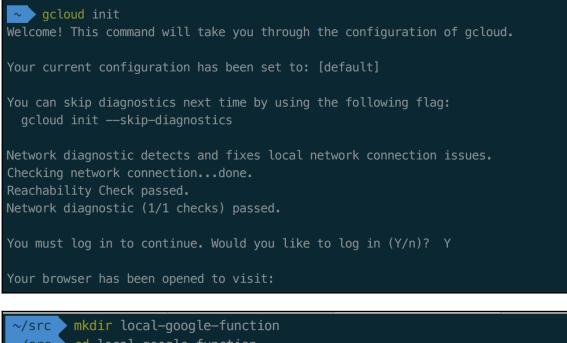
Installing: gcloud Beta Commands

Creating backup and activating new installation

Performing post processing steps...done.

Update done!





~/src d local_google_function

~/src/local-google-function > touch index.js

~/src/local-google-function > touch package.json

~/src/local-google-function ls

index.js package.json

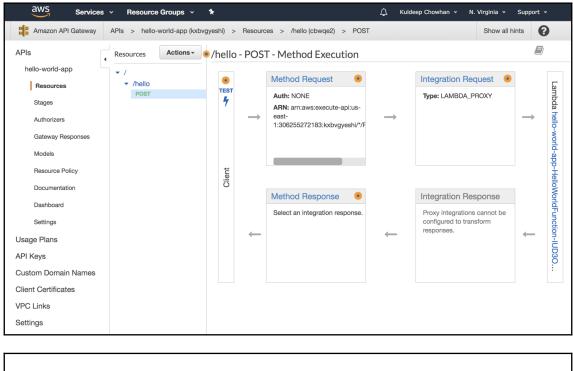
~/src/local-google-function

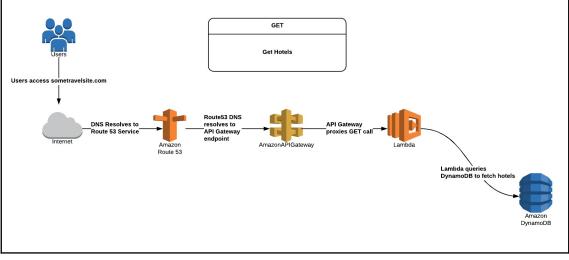
c/src/local-google-function gcloud beta functions deploy firstlocalFunction —trigger-http —entry-point helloWorldHttp Deploying function (may take a while - up to 2 minutes)...done. awailableMemoryMb: 256 entryPoint: helloWorldHttp httpSrigger: url: https://us-centrall-hands-on-serverless.cloudfunctions.net/firstlocalFunction labels: deployment-tool: cli_gcloud name: projects/hands-on-serverless/locations/us-centrall/functions/firstlocalFunction runtime: nodejs6 serviceAccountEmail: hands-on-serverless/locations/us-centrall/functions/firstlocalFunction sourceUploadUrl: https://storage.googleapis.com/gcf-upload-us-centrall-5d8722f2-6c28-4ae1-9fcc-712dbb90a1b8/a48c71df=e304-4b45-854a-1d1c157cea63.zip7GoogleAccessId=ser vice-699456012470gcf-admin-robot.iam gserviceaccount.com sourceUploadUrl: https://storage.googleapis.com/gcf-upload-us-centrall_5d872zf2-6c28-4ae1-9fcc-712dbb90a1b8/a48c71df=e304-4b45-854a-1d1c157cea63.zip7GoogleAccessId=ser vice-699456012470gcf-admin-robot.iam gserviceaccount.comt.Stpriseris=153111229565ignature=0KE13dirk%2Fgy%2F17MdxY%2Bzf7Xqz238HtAoeW4kFgHj]rQMs4BP0ABP23fETidc3YUbjMVZF RAas5cVdSD1J2Y8gsfA8Kryg3NnmHdotFkzFr40crn20qvemwfQLPrQ82ysKkp%2BteH0fcD1p1%2Fk2NlG3G79v8%2FbjBPPiryg%2F17MdxY%2Bzf7Xqz238HtAoeW4kFgHj]rQMs4BP0ABP23fETidc3YUbjMVZF RAas5cVdSD1JyKs6K8Kryg3NnmHdotFkzFr40crn20qvemwfQLPrQ82ysKkp%2BteH0fcD1p1%2Fk2NlG3G79v8%2FbjBPDiryg%2F17MdxY%2Bzf7Xq223BHtAoeW4kFgHjTkkl32cNJ6hsfMGvCl374Uqf3Kv L0UbuUULm.rnAm8f139xCIhD12BiXvugMV2h6ywB4B67sEaXdomcf7Ssqletij4ThtGpXINu02CHY3y1B%2BM22P9651uuedteZ2eCFyU5%2BGDBXg%3D%3D status: ACTIVE timeout: 60s updateTime: '2018-07-09T05:01:45Z' versionId: '2' */src/local-google_function

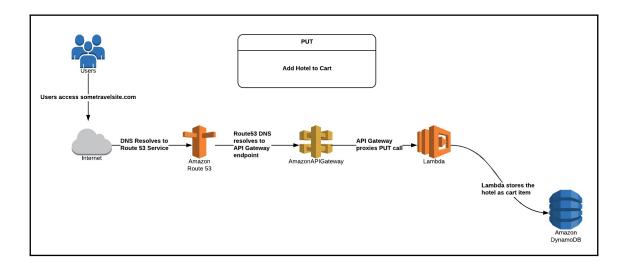
	orm 🐤 hands-on-serverl	ess 🗸 🔍				۶.	ø	?	۰	:	
(···) Cloud Functions	← Function o	letails	🖍 EDIT	🝵 DELETE	Гору	GS					
Code preview index.js package.json exports.helloWorldHttp if (rag.body.messag ; ras.status(400).s) else { console.log(reg.b	<pre>esting = (req, res) => { e === undefined) { end('No message defined in t </pre>										
Function to execute helloWorldHttp Download the source											

Chapter 13: Reference Architecture for a Web App

aws Services - Reso	ource Groups 👻 🔭	🗘 Kuldeep Chowhan 👻 N. Virginia 👻 Support 👻
Choose Import a certificate to import	an existing certificate instead of requesting a new one. Learn more	e. 1 Import a certificate
Request a certificate		
Choose the type of certificate you want, an	nd then choose Request a certificate	
 Request a public certificate 	 Request a public certificate from Amazon. By default, pub Learn more 	blic certificates are trusted by browsers and operating systems.
O Request a private certificate	- Request a private certificate from your organization's certi	ificate authority. Learn more
		Cancel Request a certificate







Chapter 14: Reference Architecture for a Real-time File Processing

aws Services - F	esource Groups 👻 🔦		🗘 Kuldeep	Chowhan 👻 Global 👻	Support 👻
Amazon S3 > kuldeepc					
Overview	Properties	Permissions	Management		
Q Type a prefix and press E	nter to search. Press ESC to clear.				
▲ Upload + Create fold	ler More ~			US East (N. Virginia	
				Viewing 1 to	1 >
□ Name 1=		Last modified $\uparrow \equiv$	Size ↑=	Storage class 1=	
C5afda7c3a9a40e0e	03c2ebd296977f8	Jun 17, 2018 7:05:24 PM GMT-0500	1013.0 B	Standard	
				Viewing 1 to	1 >

Bucket

Please select the S3 bucket that serves as the event source. The bucket must be in the same region as the function.

binv2

Event type

Select the events that you want to have trigger the Lambda function. You can optionally set up a prefix or suffix for have multiple configurations with overlapping prefixes or suffixes that could match the same object key.

Object Created (All)

Prefix

Enter an optional prefix to limit the notifications to objects with keys that start with matching characters.

e.g. images/

Filter pattern

Enter an optional filter pattern.

e.g. .jpg

Lambda will add the necessary permissions for Amazon S3 to invoke your Lambda function from this

Enable trigger

Enable the trigger now, or create it in a disabled state for testing (recommended).

aws s	ervices 🗸	Resource Groups	~ *	Д •	ReadOnly/I	*	Oregon 👻	Support 👻
SNS dashboard		opic details:	minion-trinity-	events				
Topics Applications		Publish to topic	Other topic actions -					
Subscriptions		Topic ARN	arn:aws:sns:us-west-2:	:mi				
Text messaging (SMS)		Topic owner						
		Region	us-west-2					
		Display name						
	S	ubscriptions						
		•						
		Create subscription	Request confirmations	Confirm subscription	Other subs	scription action	15 -	
	Fi	ilter						
		Subscription ID				Protocol	Endpoint	
		arn:aws:sns:us-wes	t-2:	9e2fd300-d841-4ec	d-a3ff-b4	lambda	arn:aws:lar	nbda:us-we
		arn:aws:sns:us-wes	t-2:	:464b99da-c64b-4f9	9-9f47-80	lambda	arn:aws:lar	nbda:us-we
		arn:aws:sns:us-wes	t-2:	:b255ce91-9666-4a4	0-8eae-e	lambda	arn:aws:lar	nbda:us-we
		arn:aws:sns:us-wes	t-2:	:07c1b409-978d-433	37-8944-0	lambda	arn:aws:lar	nbda:us-we
		arn:aws:sns:us-wes	t-2:	3fb95cce-a3e6-422	b-98a2-a	lambda	arn:aws:lar	nbda:us-we
		arn:aws:sns:us-wes	t-2:-	a8a5bea9-d8d9-41a	ae-a2a0-3	lambda	arn:aws:lar	nbda:us-we
		arn:aws:sns:us-wes	t-2:	5a729add-d755-43	19-84b5-ff	lambda	arn:aws:lar	nbda:us-we
		arn:aws:sns:us-wes	t-2:	03aa7808-fbb5-474	5-8cd4-6	sqs	arn:aws:so	s:us-west-2
		arn:aws:sns:us-wes		:734f2e22-1ba4-4eb		lambda		nbda:us-we
		arn:aws:sns:us-wes		:29409f44-1bf3-4d8		sqs		s:us-west-2
		arn:aws:sns:us-wes	L-2.	'de8d84c-447a-427	D-9400-0	lambda	arn:aws:lar	nbda:us-we

SNS topic

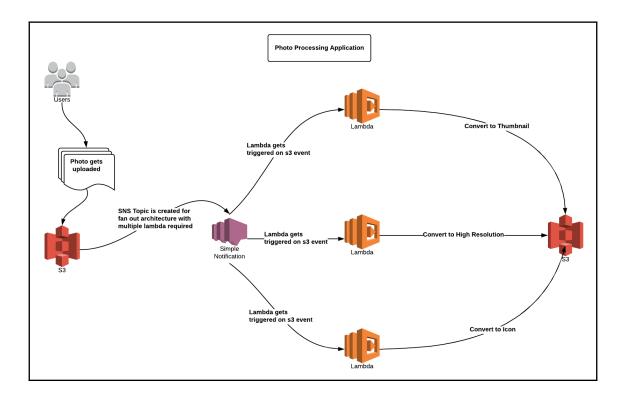
Select the SNS topic to subscribe to.

BlackjackNotifications

Lambda will add the necessary permissions for Amazon SNS to invoke your Lambda function

Enable trigger

Enable the trigger now, or create it in a disabled state for testing (recommended).



Index