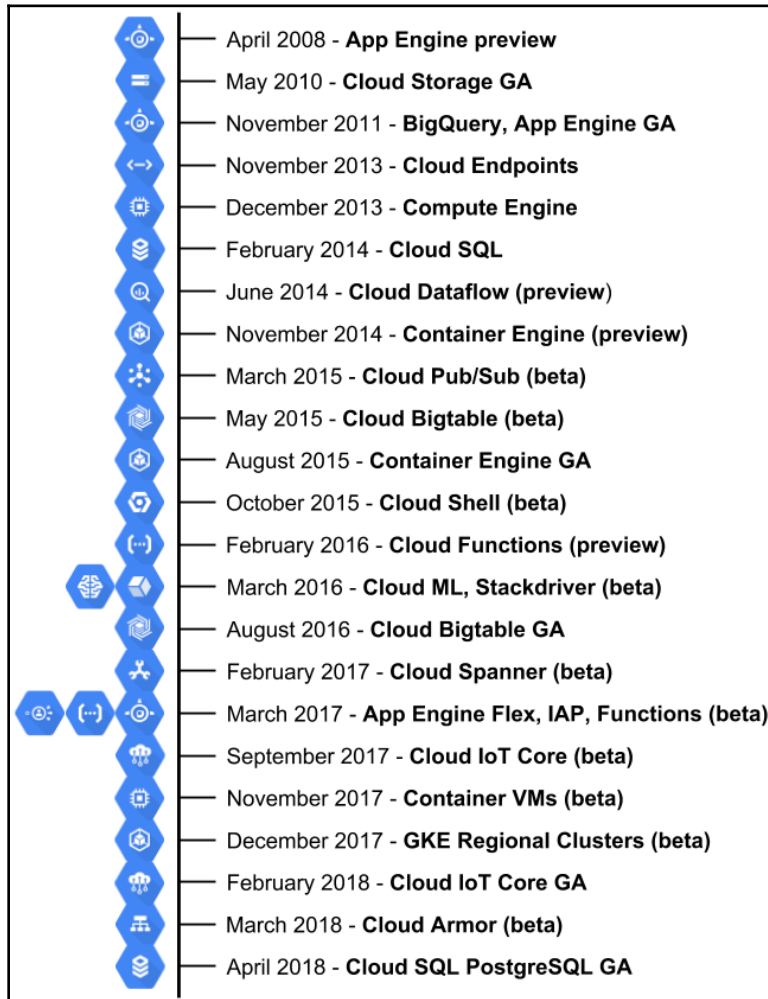








































Chapter 1: Why GCP?



Compute						
	Compute Engine	Kubernetes Engine	App Engine	Cloud Functions		
Management						
	Cloud Console	Stackdriver	Trace	Logging	Debugger	Monitoring
Networking						
	Cloud Load Balancing	Cloud CDN	Cloud DNS	Firewall Rules	Cloud Interconnect	Cloud VPN
Storage & Databases						
	Cloud Bigtable	Cloud Datastore	Cloud Spanner	Cloud SQL	Cloud Storage	
Big Data						
	BigQuery	Cloud Dataflow	Cloud Dataprep	Cloud Dataproc	Cloud IoT Core	Cloud Pub/Sub
Identity & Security						
	Cloud IAM	Cloud Endpoints	VPC	Identity Aware Proxy	KMS	Data Loss Prevention
Machine Learning						
	Cloud ML	Natural Language API	Cloud Speech API	Cloud Vision API	Cloud Translate API	

Chapter 2: The Google Cloud Console

Select

Search projects and folders

Create project +

Recent All

New Project

i You have 22 projects remaining in your quota. [Learn more.](#)

Project name **?**

Example Project Name

Your project ID will be example-project-name-202018 **?** [Edit](#)

Create Cancel

Billing

This project has no billing account

This project is not linked to a billing account

Link a billing account or **Manage billing accounts**

Google Cloud Platform Packt GCP Book

DASHBOARD ACTIVITY CUSTOMIZE

Project info

Project name
Packt GCP Book

Project ID
packt-gcp-book

Project number
251416247095

→ Go to project settings

Resources

Compute Engine
1 instance

API APIs

Requests (requests/sec)

→ Go to APIs overview

Google Cloud Platform status

All services normal

→ Go to Cloud status dashboard

Billing

Estimated charges \$0.00
For the billing period Nov 1 – 16, 2017

→ View detailed charges

Compute Engine

Error Reporting

Downloads

Cloud Partners

Terms of service

Privacy

Project settings

Try an interactive tutorial

Estimated charges USD \$0.00

```
packt-gcp-book x +
Welcome to Cloud Shell! Type "help" to get started.
tedh_gcp@packt-gcp-book:~$
```

Cloud Shell

File Edit View Tools

Root (8085-dot-31...

gcp-for-developers

- chapter_02
- chapter_04
- chapter_06
- chapter_07
- chapter_08
- chapter_09
- misc
- README.md
- src

README.md

```
1 # Google Cloud Platform for Deve
2
3 This repository contains exercisiz
4
5 \[Packt Link\]\(https://dz13w8afd
6
7
8 Many of these exercsizes can be c
9
10 \[Open in Cloud Shell\]\(https://
11
12
13 ## Useful Links
14
15 Here are some quick links for us
16
17
18
```

Google Cloud Platform for Developers

This repository contains exercsizes and examples used in the book *Google Cloud Platform for Developers*.

PACKT
PUBLISHING

Cloud Shell x Cloud Shell +

PACKT
PUBLISHING

Welcome to the Cloud Shell Code Editor! Many of the exercsizes in this book can be completed right here in the Cloud Shell.

```
packt-gcp-book x +
tedh_gcp@packt-gcp-book:~$ cat example.groovy
println "Groovy script running successfully..."

tedh_gcp@packt-gcp-book:~$ groovy example.groovy
-bash: groovy: command not found
tedh_gcp@packt-gcp-book:~$ docker run --rm -v `pwd`:/app groovy groovy /app/example.groovy
Groovy script running successfully...
tedh_gcp@packt-gcp-book:~$
```

Q Google Cloud Tools Category: All

Sort by: name

Google Cloud Tools TOOLS INTEGRATION 26,953 ★★★★★ one week ago

TOOLS INTEGRATION

Google Cloud Tools

Install

★★★★★ 26953 downloads

Updated 11/6/17 v17.11.1

Provides support for developing Google App Engine applications. Features include:

- Debug Java applications running in the Google cloud from inside IDEA.
- Code inspections for App Engine standard environment Java code.
- Run and debug applications on a local development server.
- Deploy to the App Engine standard and flexible environments.

HTTP Proxy Settings... Manage repositories...

Close

Chapter 3: APIs, CLIs, IAM, and Billing

compute.instances.list executed one minute ago time to execute: 186 ms

Request

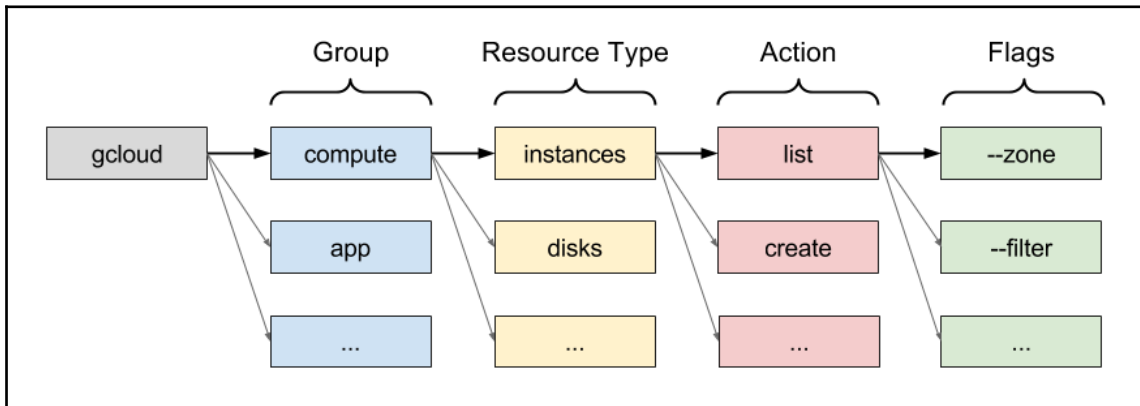
```
GET https://www.googleapis.com/compute/v1/projects/packt-gcp-book/zones/us-east1-b/instances?key={YOUR_API_KEY}
```

Response

```
200
- Show headers -
- {
  "kind": "compute#instanceList",
  "id": "projects/packt-gcp-book/zones/us-east1-b/instances",
  "items": [
    - {
      "kind": "compute#instance",
      "id": "2303860527549630907",
      "creationTimestamp": "2017-11-16T21:44:53.255-08:00",
      "name": "instance-1",
      "description": "",
      "tags": {
        "fingerprint": "42WmSpB8rSM="
      },

```

Use this resource in one of the following methods:
compute.instances.insert



```

tedh_gcp@packt-gcp-book:~$ gcloud auth list
Credentialed Accounts
ACTIVE ACCOUNT
*      tedh.gcp@gmail.com

To set the active account, run:
  $ gcloud config set account `ACCOUNT`

tedh_gcp@packt-gcp-book:~$ gcloud auth activate-service-account --key-file cloudsql-client-key.json
Activated service account credentials for: [example-cloudsql-client@packt-gcp-book.iam.gserviceaccount.com]
tedh_gcp@packt-gcp-book:~$ gcloud auth list
Credentialed Accounts
ACTIVE ACCOUNT
*      example-cloudsql-client@packt-gcp-book.iam.gserviceaccount.com
      tedh.gcp@gmail.com

To set the active account, run:
  $ gcloud config set account `ACCOUNT`

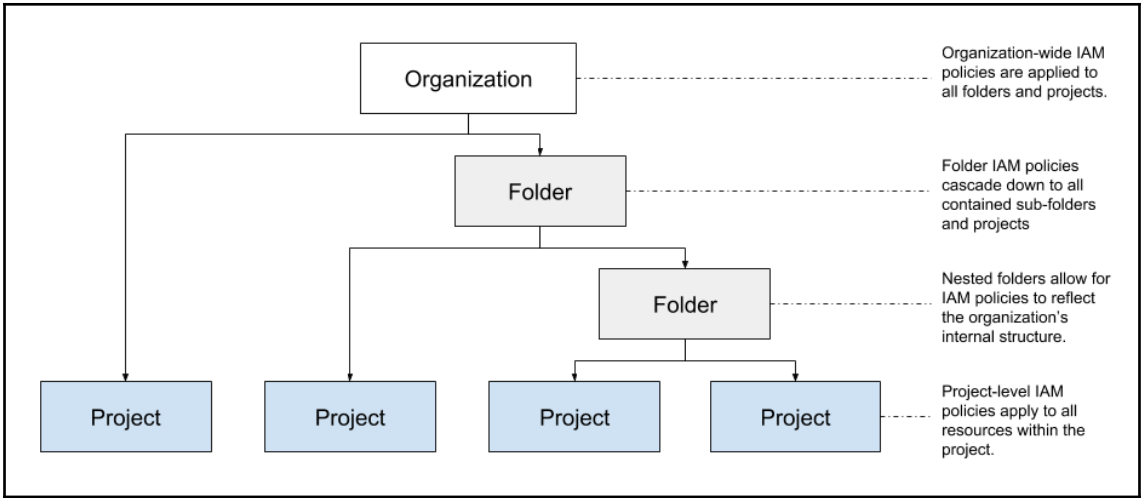
tedh_gcp@packt-gcp-book:~$ █

```

```
tedh_gcp@packt-gcp-book:~$ gcloud components list
```

```
Your current Cloud SDK version is: 180.0.0
The latest available version is: 180.0.1
```

Components			
Status	Name	ID	Size
Update Available	Cloud SDK Core Libraries	core	7.5 MiB
Not Installed	Cloud Bigtable Command Line Tool	cbt	4.1 MiB
Not Installed	Cloud Bigtable Emulator	bigtable	3.5 MiB
Not Installed	Emulator Reverse Proxy	emulator-reverse-proxy	14.5 MiB
Not Installed	Google Container Local Builder	container-builder-local	3.7 MiB
Installed	App Engine Go Extensions	app-engine-go	98.1 MiB
Installed	BigQuery Command Line Tool	bq	< 1 MiB
Installed	Cloud Datalab Command Line Tool	datalab	< 1 MiB
Installed	Cloud Datastore Emulator	cloud-datastore-emulator	17.7 MiB
Installed	Cloud Datastore Emulator (Legacy)	gcd-emulator	38.1 MiB
Installed	Cloud Pub/Sub Emulator	pubsub-emulator	33.2 MiB
Installed	Cloud Storage Command Line Tool	gsutil	3.3 MiB
Installed	Google Container Registry's Docker credential helper	docker-credential-gcr	2.2 MiB
Installed	gcloud Alpha Commands	alpha	< 1 MiB
Installed	gcloud Beta Commands	beta	< 1 MiB
Installed	gcloud app Java Extensions	app-engine-java	118.4 MiB
Installed	gcloud app PHP Extensions	app-engine-php	
Installed	gcloud app Python Extensions	app-engine-python	6.2 MiB
Installed	kubect1	kubect1	12.3 MiB



Create service account

Service account name 

Role 

Service account ID

Furnish a new private key

Downloads a file that contains the private key. Store the file securely because this key can't be recovered if lost.

Key type

JSON

Recommended

P12

For backward compatibility with code using the P12 format

Enable G Suite Domain-wide Delegation

Allows this service account to be authorized to access all users' data on a G Suite domain without manual authorization on their part. [Learn more](#)

CANCEL CREATE

<input checked="" type="checkbox"/>	 inventory-management	inventory-management@packt-gcp-book.iam.gserviceaccount.com	1dd810851e1d61755111e49824536c850f122aaf	
-------------------------------------	---	---	--	---

Estimate ¹

App Engine standard environment instances



Instances: 2,920 per month

\$103.44

Cloud Storage

Iowa



Multi-Regional: 1,000 GB

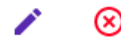
Class A operations: 1 million

Class B operations: 50 million

\$51.00

Cloud SQL Second Generation

db-n1-standard-1 [HA](#)



of instances: 1

Location: Iowa

730.0 total hours per month

Storage: 20.0 GB

Backup: 20.0 GB

[Sustained Use Discount](#): 30%

\$107.02

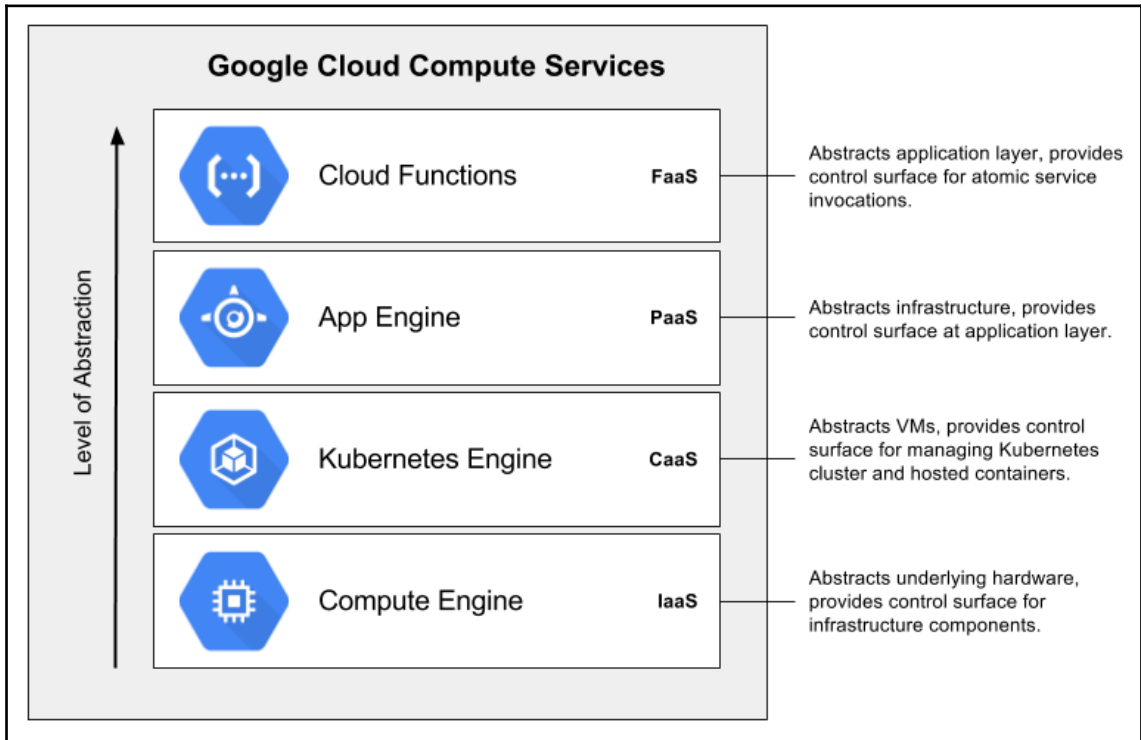
Total Estimated Cost: \$261.46 per 1 month

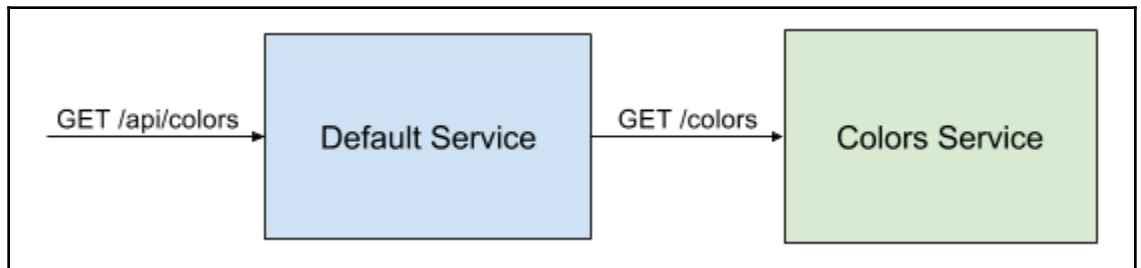
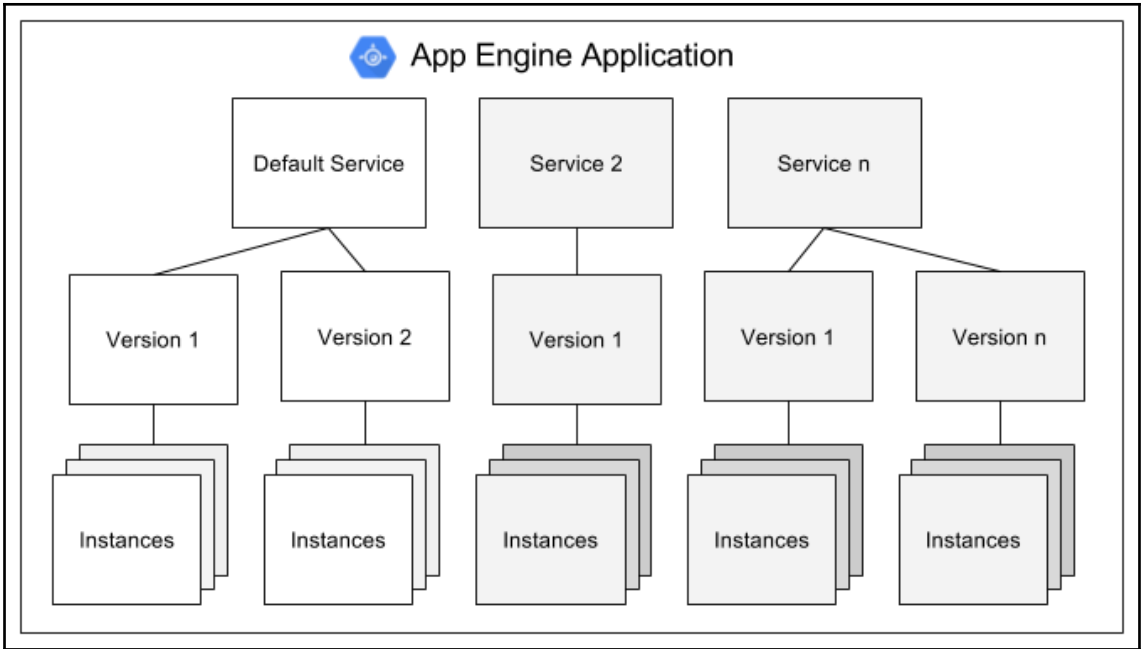
Adjust Estimate Timeframe



EMAIL ESTIMATE

Chapter 4: Google App Engine





Google App Engine Development SDK 1.9.64

dev-None

Instances

	Instances	Latency (ms)	QPS	Total Requests	Runtime
<ul style="list-style-type: none"> Datastore Viewer Datastore Indexes Datastore Stats Interactive Console 	<ul style="list-style-type: none"> colors eeb0a9deb0d6fa9cc19c43380bcf6eafa19b default ea3b86ed762861e5a5becd7f28ba0a1ee194 	<ul style="list-style-type: none"> 0.0 0.0 0.0 	<ul style="list-style-type: none"> 0.00 0.00 0.00 	<ul style="list-style-type: none"> 0 0 0 	<ul style="list-style-type: none"> go python27

Split traffic by


IP address ?

Cookie ?

Random ?

Traffic allocation

20171231t170752 will receive the remaining 50 % ✕

20171226t182706  50 % ✕

+ Add version

App Engine Colors

Poll rate:  5 polls/second

blue: 57 [instances: 1] (Go 1.8 on App Engine standard environment)

red: 51 [instances: 1] (Java 8 on App Engine standard environment)

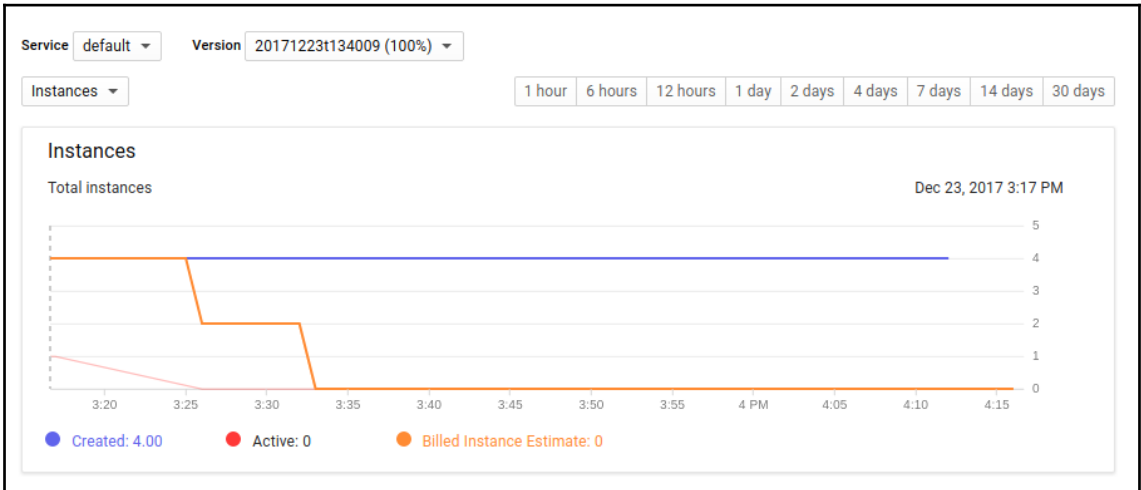
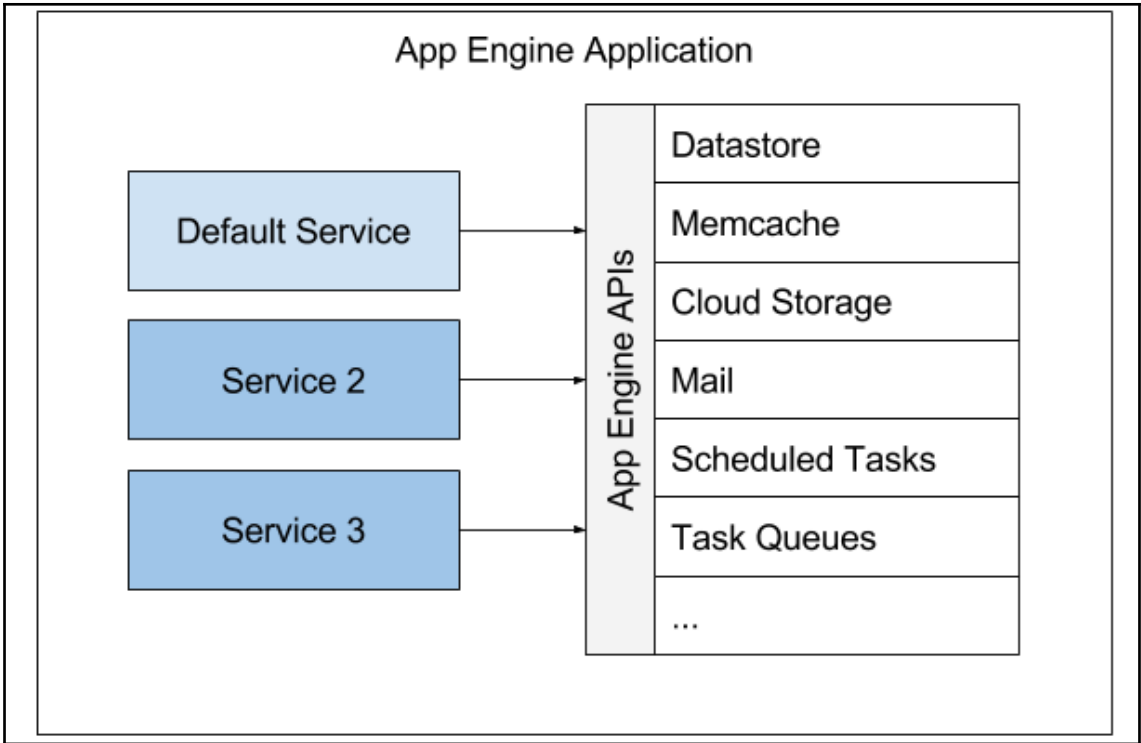
App Engine Colors

Poll rate:  5 polls/second

blue: 68 [instances: 1] (Go 1.8 on App Engine standard environment)

green: 61 [instances: 1] (Dockerized Node.JS on App Engine flexible environment)

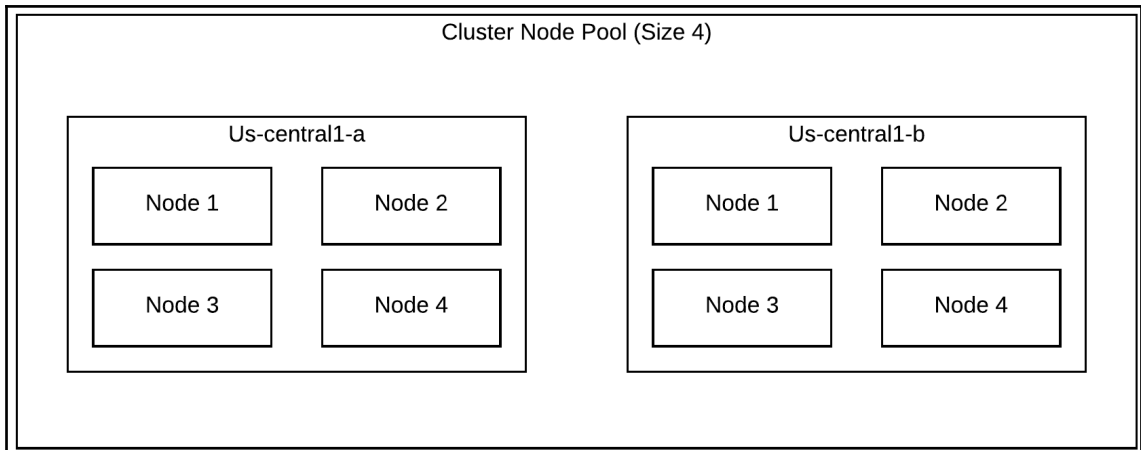
red: 66 [instances: 1] (Java 8 on App Engine standard environment)



Chapter 5: Google Kubernetes Engine

The screenshot shows the Google Cloud Platform interface for an Instance Group named `gke-cluster-1-pool-1-295c7db9-grp`. The page includes a navigation sidebar on the left with options like VM Instances, Instance groups, Instance templates, Disks, Snapshots, Images, TPUs, Committed use discounts, Metadata, Health checks, Zones, Operations, Quotas, and Settings. The main content area displays the Instance Group details, including the zone (`us-central1-a`), template (`gke-cluster-1-pool-1-295c7db9`), and autoscaling status (`Off`). A CPU utilization graph shows a peak in CPU usage around 8:45 PM on April 15, 2018. Below the graph is a table of group members with columns for Name, Creation time, Template, Internal IP, External IP, and Connect.

Name	Creation time	Template	Internal IP	External IP	Connect
<input type="checkbox"/> <code>gke-cluster-1-pool-1-295c7db9-dk28</code>	Apr 15, 2018, 7:45:33 PM	<code>gke-cluster-1-pool-1-295c7db9</code>	10.128.0.10	35.188.60.100	SSH
<input type="checkbox"/> <code>gke-cluster-1-pool-1-295c7db9-n69j</code>	Apr 15, 2018, 7:41:10 PM	<code>gke-cluster-1-pool-1-295c7db9</code>	10.128.0.8	35.193.31.192	SSH
<input type="checkbox"/> <code>gke-cluster-1-pool-1-295c7db9-vvzm</code>	Apr 15, 2018, 7:45:33 PM	<code>gke-cluster-1-pool-1-295c7db9</code>	10.128.0.9	130.211.147.156	SSH



Kubernetes Engine

← Service details
 REFRESH
 EDIT
 DELETE
 KUBECTL ▾

- Kubernetes clusters
- Workloads
- Discovery & load balancing
- Configuration
- Storage

✔ **nginx-1-service**

Overview | Details | Events | YAML

Cluster	cluster-1
Namespace	default
Labels	app : nginx-1
Type	LoadBalancer
External endpoints	35.188.66.199:80

LoadBalancer

Cluster IP	10.11.248.202
Load balancer IP	35.188.66.199
Load balancer	a82d67d23410f11e8b0a142010a80012

Deployments

Name	Status	Pods
nginx-1	✔ OK	0/1

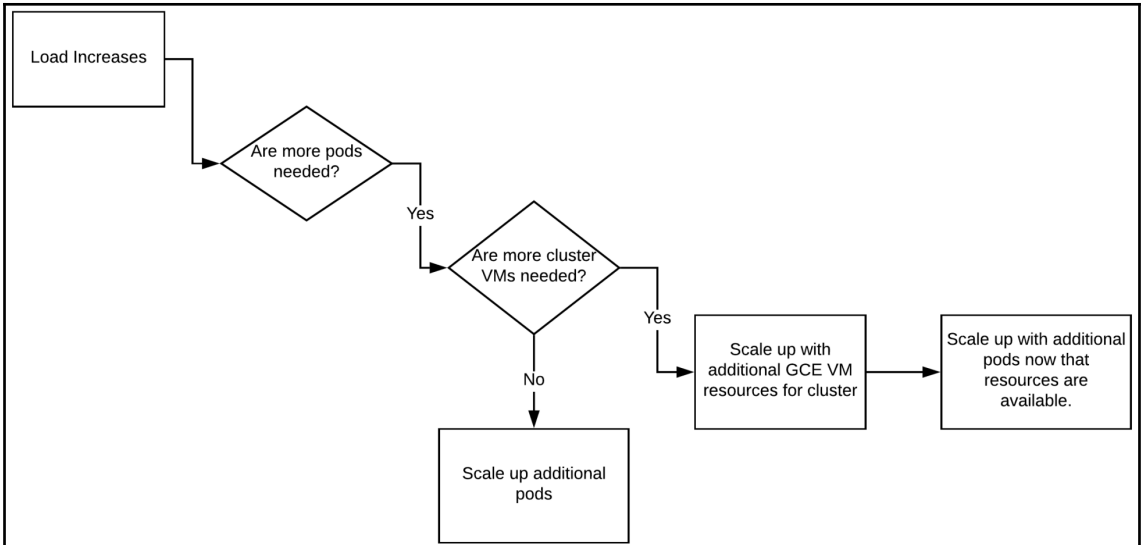
Serving pods

Name ^	Status	Restarts	Created on
nginx-1-97dd4c589-8grnr	✔ Running	0	Apr 15, 2018, 8:43:59 PM
nginx-1-97dd4c589-wzqxq	⚠ Running	0	Apr 15, 2018, 8:43:59 PM

Ports

Port	Node Port	Target Port	Protocol
80	30629	80	TCP

Cloud Launcher



Deployment details

Cluster: cluster-1
 Namespace: default
 Labels: app: nginx-1
 Replicas: 1 updated, 1 ready, 1 available, 0 unavailable
 Pod specification: Revision 1, containers: nginx

Active revisions

Revision	Name	Status	Summary	Created on
1	nginx-1-97dd4c589	OK	nginx: nginx:latest	May 20, 2018, 8:00 AM

Managed pods

Revision	Name	Status	Restarts	Created on
1	nginx-1-97dd4c589-6cmmc	Running	0	May 20, 2018, 8:00 AM

Services

No matching services

Expose

Autoscaler

Min/max replicas	1/5
Metric	CPU Utilization
Current/Target value	0%/80%

Autoscale
 Automatically scale the number of pods.

Minimum number of Pods (Optional)

Maximum number of Pods

Target CPU utilization in percent (Optional)

[CANCEL](#)
[DISABLE AUTOSCALER](#)
[AUTOSCALE](#)

Kubernetes Engine

Deployment details

nginx-2

CPU

Jun 6, 2018 6:35 PM

Cluster: cluster-1
Namespace: default
Labels: app: nginx-2
Replicas: 1 updated, 1 ready, 1 available
Pod specification: Revision 1, containers: n

Active revisions

Revision	Name	Status	Summary	Created on	Pods running/Pods total
1	nginx-2-5d6878978b	OK	nginx: nginx:latest	May 20, 2018, 7:26:13 PM	1/1

Expose

Expose a resource's Pods using a Kubernetes Service.

Port mapping

New port mapping

Port: 80 Target port: (Optional)

Protocol: TCP

Done Cancel

+ Add port mapping

Service type: Load balancer

CANCEL EXPOSE

←
Service details

↻ REFRESH
✎ EDIT
🗑 DELETE
🔗 KUBECTL ▾

● nginx-1-wh5pb:

● nginx-1-wh5pb:

Cluster	cluster-1
Namespace	default
Labels	app: nginx-1
Type	LoadBalancer
External endpoints	35.184.222.150:80 ↗

LoadBalancer

Cluster IP	10.11.255.101
Load balancer IP	35.184.222.150
Load balancer	a2cc2961369e211e8b23d42010a800fd

Deployments

Name	Status	Pods
nginx-1	✔ OK	0/1

Serving pods

Name ^	Status	Restarts	Created on
nginx-1-97dd4c589-6cmmc	✔ Running	0	May 20, 2018, 5:13:46 PM

Ports

Port	Node Port	Target Port	Protocol
80	31136	80	TCP

▶ Port forwarding

Chapter 7: Google Compute Engine

<input type="checkbox"/>	Name	Template	Zone	Internal IP	External IP	Connect
<input type="checkbox"/>	✔ hello-migs-86vv	hello-migs-template	us-east1-d	10.142.0.2	35.227.69.26 ↗	SSH ▾
<input type="checkbox"/>	✔ hello-migs-pqsn	hello-migs-template	us-east1-b	10.142.0.4	35.229.85.158 ↗	SSH ▾
<input type="checkbox"/>	✔ hello-migs-tjdn	hello-migs-template	us-east1-c	10.142.0.3	35.231.72.89 ↗	SSH ▾

Managed Instance Group

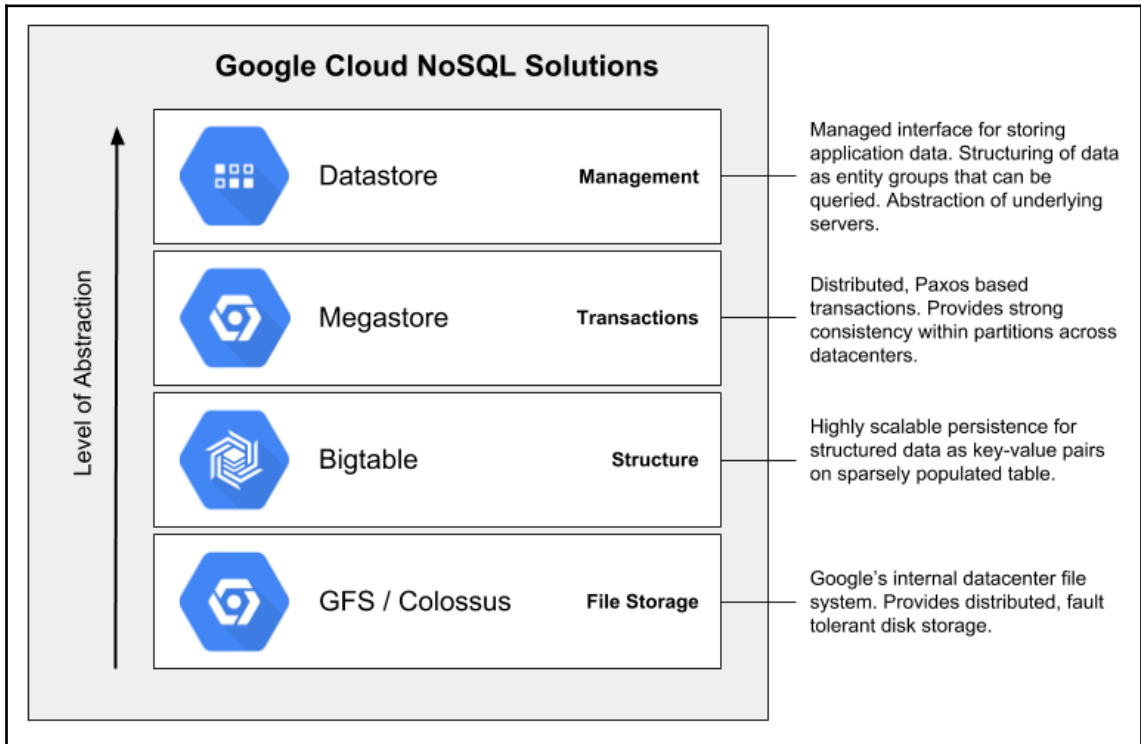
Template v1.0

Template	Target size ?	
hello-migs-template-v1 ▾	Currently 2 out of 3 instances	✕
hello-migs-template-v2 ▾	1 <input type="text"/> instance(s) ▾	✕
+ Add a second template for canary testing		

Managed Instance Group

Template v2.0

Chapter 8: NoSQL with Datastore and Bigtable



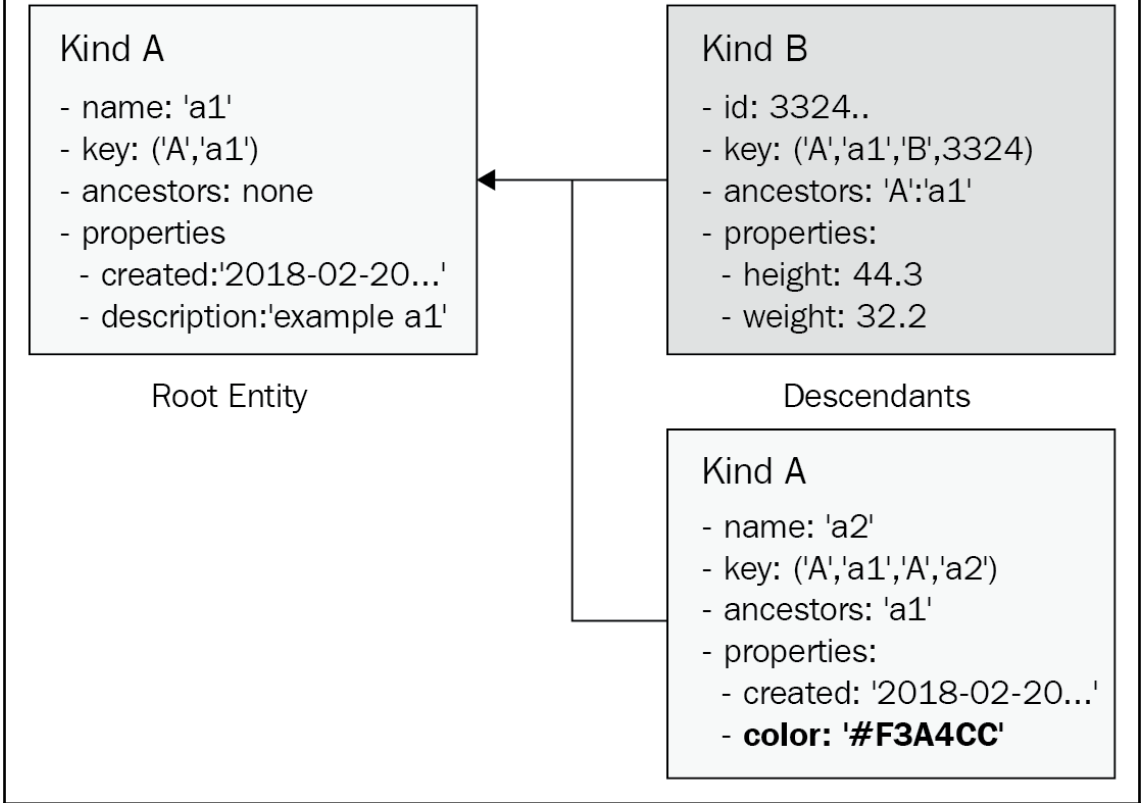
The image displays a world map with several location pins placed across different continents. The regions labeled on the map are NORTH AMERICA, SOUTH AMERICA, EUROPE, ASIA, AFRICA, and OCEANIA. The map also shows the Atlantic Ocean, Pacific Ocean, and Indian Ocean. The Google logo is visible in the bottom left corner of the map area. Below the map, there is a dropdown menu titled "Select a region" with "us-central" selected. The map data is attributed to ©2018.

Select a region

us-central

Map data ©2018 Terms of Use

Entity Group A:a1



Query by kind Query by GQL

Kind

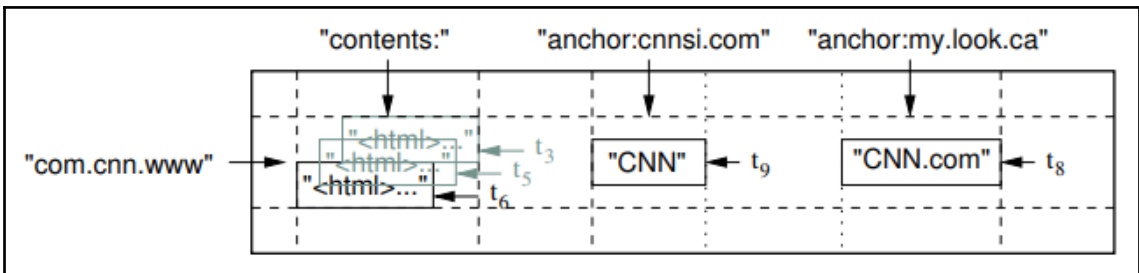
Employee Filter entities

<input type="checkbox"/> Name/ID	Parent ?
<input type="checkbox"/> id=5725107787923456	–
<input type="checkbox"/> id=5629499534213120	Key(Employee, 5725107787923456)
<input type="checkbox"/> id=5668600916475904	Key(Employee, 5725107787923456, Employee, 5629499534213120)
<input type="checkbox"/> id=5707702298738688	Key(Employee, 5725107787923456, Employee, 5629499534213120)
<input type="checkbox"/> id=5741031244955648	Key(Employee, 5725107787923456, Employee, 5629499534213120)

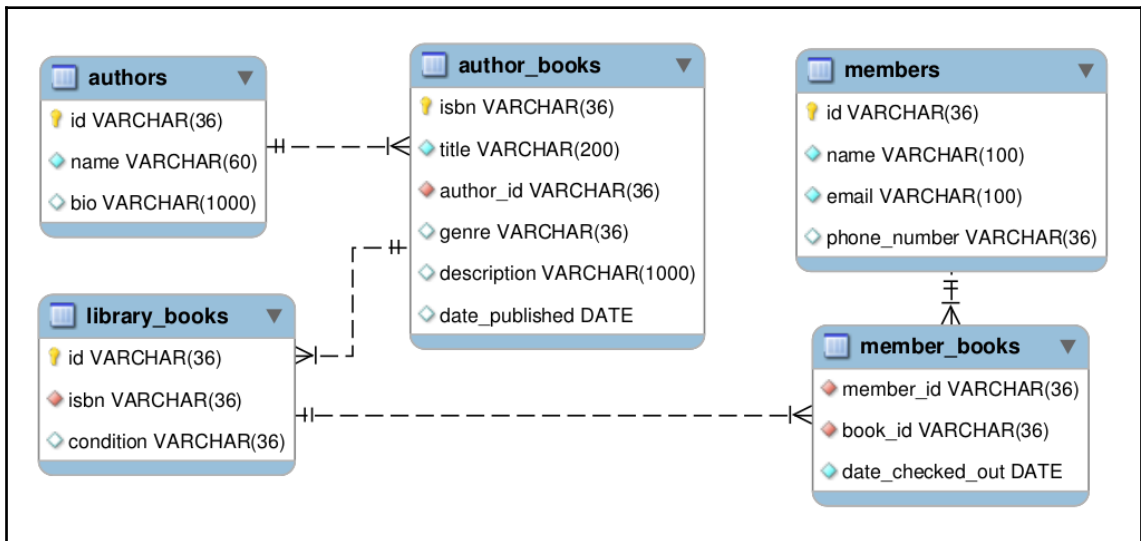
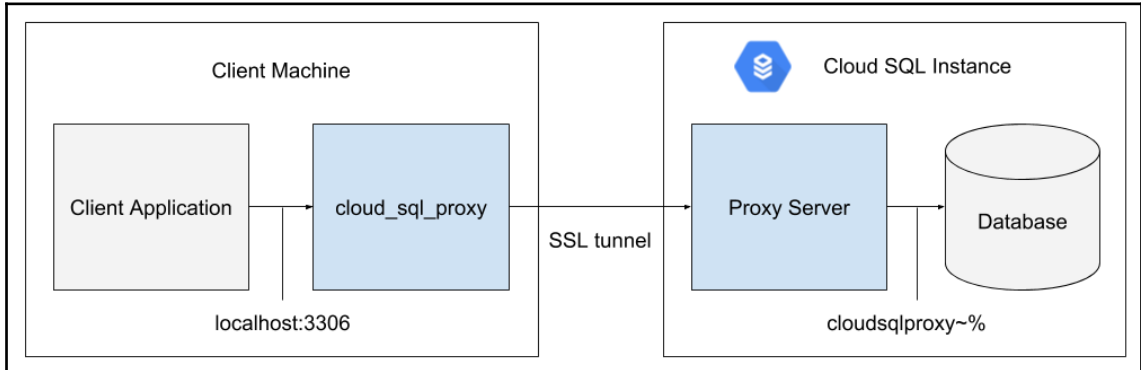
```
1 SELECT name FROM Employee WHERE title = 'Engineer' AND name > 'Bill King'
```

Run query Clear query GQL query help ↗

<input type="checkbox"/> Name/ID	Parent ?	name
<input type="checkbox"/> id=5741031244955648	Key(Namespace(*), Employee, 5725107787923456, Employee, 5629499534213120)	Luara Stevens



Chapter 9: Relational Data with Cloud SQL and Cloud Spanner



Choose a Cloud Storage file to import into your Cloud SQL instance. [Learn more](#)

Cloud Storage file [?]

chapter_09-cloud-sql/library-data-dump.sql

Format of import [?]

SQL

CSV

∨ [Show advanced options](#)

When you click Import, we will grant a Cloud SQL service account read access to your Cloud Storage file and the bucket that contains it. Your bucket and file permissions will reflect this access.

< ON SSL **BACKUPS** REPLICAS OPERATIONS >

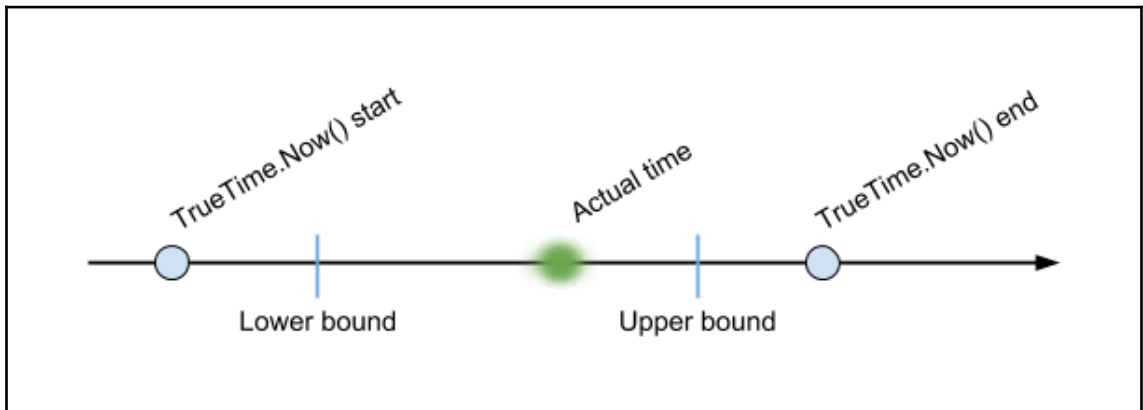
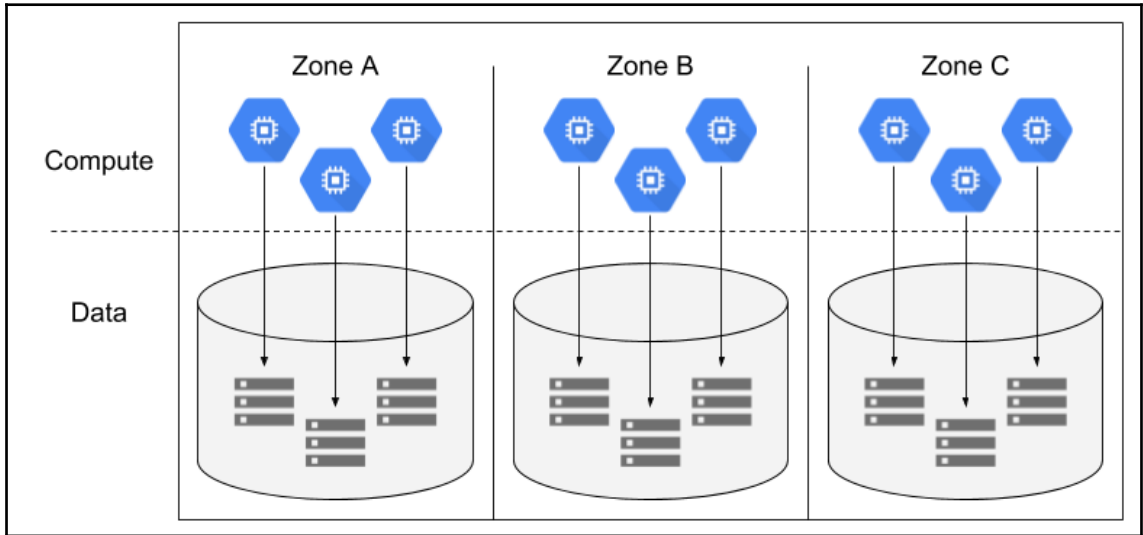
Restoring from a backup reverts your instance to its state at the backup's creation time.


To create a single backup on demand, click **Create backup**. To manage automated backups, click **Manage automated backups**. To restore from a backup, click the right-hand menu in a backup's row.

Creation time [?]	Type	Description	
Mar 18, 2018, 9:02:59 PM	On-demand	initial backup	⋮

Restore
Delete

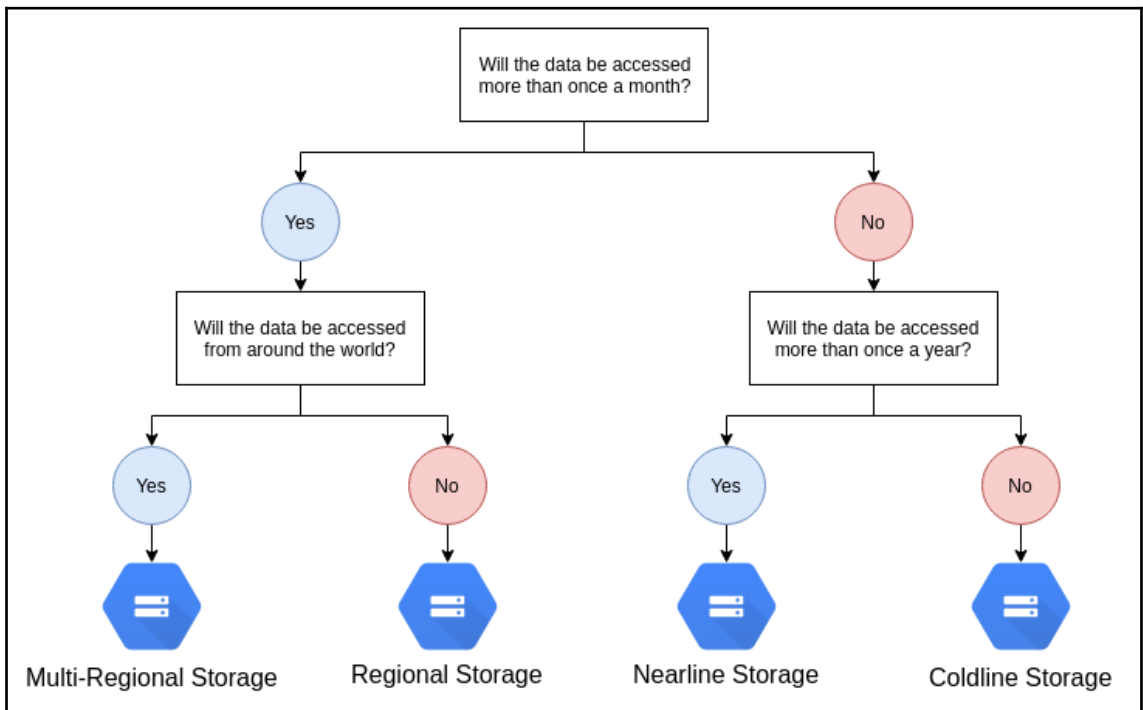
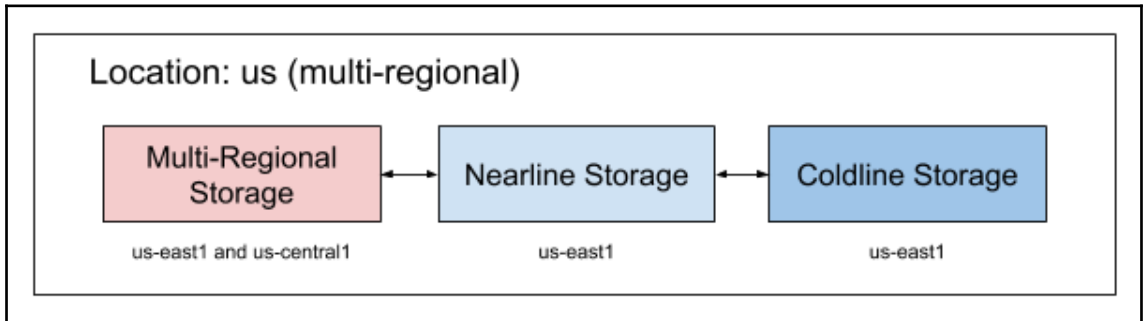
$$new_capacity = current_capacity + \text{floor}\left(\frac{current_capacity}{25}\right) + 5$$



Operator [?]	Rows returned	Executions [?]	Latency [?]
Serialize Result	10	1	9 ms
↑ Sort Limit ▾	10	1	9 ms
↑ Hash Aggregate ▾	499	1	9 ms
↑ Distributed union	499	1	9 ms
↑ Hash Aggregate ▾	499	1	9 ms
↑ Local distributed union	1914	1	8 ms
↗ Cross Apply: Input : Map	1914	1	8 ms
↳ Input Table Scan: Author ▾	500	1	2 ms
↳ Map Table Scan: AuthorBook ▾	1914	500	~0 ms 

Author(a)	name	bio		LibraryBook(a)	isbn	condition
AuthorBook(a, i)	title	genre	description	MemberBook(a, i)	member	checkout date
AuthorBook(a, j)	title	genre	description	MemberBook(a, j)	member	checkout date
Author(b)	name	bio		LibraryBook(b)	isbn	condition
AuthorBook(b, k)	title	genre	description	MemberBook(b, k)	member	checkout date

Chapter 10: Google Cloud Storage



Edit default storage class

Bucket name

hello-cloud-storage

Location

US

Default storage class

Multi-Regional

Use to stream videos and host hot web content.
Best for data accessed frequently around the world.

Regional

Disabled because bucket location is incompatible with this class.
Instead, switch to a different bucket. [Steps](#)

Nearline

Use to store rarely accessed documents.
Best for data accessed less than once per month.

Coldline

Use to store very rarely accessed documents.
Best for data accessed less than once per year.

● Off



● Off



Edit bucket permissions

Edit labels

Edit default storage class

● Off



● Off



● Off



Multi-Regional



30 days

Nearline



90 days

Coldline



- Hot data, active usage
- 99.95% availability
- Low read/write costs
- High storage cost

- Unlikely to be used
- 99.9% availability
- Low storage cost
- High read/write cost

- Archival purposes
- 99.9% availability
- Lowest storage cost
- Highest read/write cost

Share publicly



Customer-encrypted

Upload directly to GCS

Choose File Cloud Storage.png

Upload

Result



Upload time: 730ms

Upload URL: https://storage.googleapis.com/packt-gcp-book_10_01_uploads/Cloud%20Storage.png?Expires=1525060365&GoogleAccessId=packt-gcp-book%40appspot.gserviceaccount.com&Signature=ji

Result

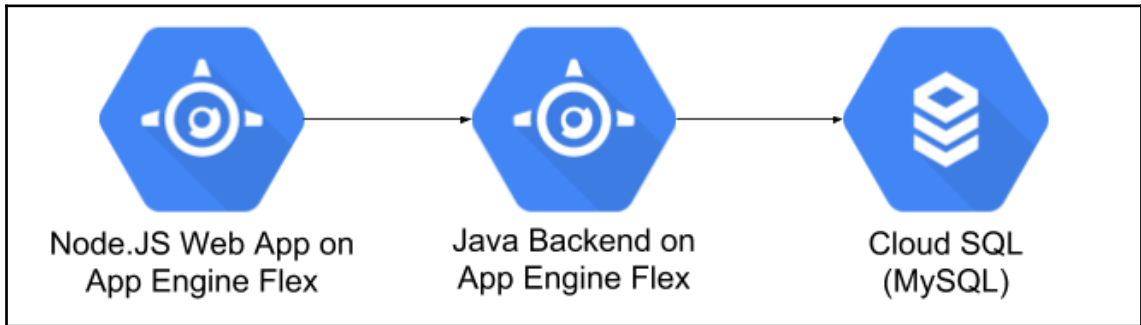


Cloud Vision API Labels:








- **tree** (score: 0.8930)
- **dog** (score: 0.8769)
- **woody plant** (score: 0.8748)
- **dog like mammal** (score: 0.8190)
- **dog breed** (score: 0.8173)
- **plant** (score: 0.7631)
- **woodland** (score: 0.7373)
- **dog crossbreeds** (score: 0.6225)
- **adventure** (score: 0.5613)
- **dog walking** (score: 0.5605)


Upload time: 580ms

Chapter 11: Stackdriver



Stackdriver Todos

- Get milk**
Pick up skim milk on the way home from work
15 minutes ago 
- Change garage light**
60-watt A19  
14 minutes ago
- Take dogs on a walk**
 
13 minutes ago
- Review pull requests**
 
a few seconds ago



Select or create a new Google Cloud Platform project to store your Stackdriver account settings and user permissions. The selection cannot be changed, but you can create other Stackdriver accounts later. [Learn more](#)

Google Cloud Platform project

Packt GCP Book




Create Account

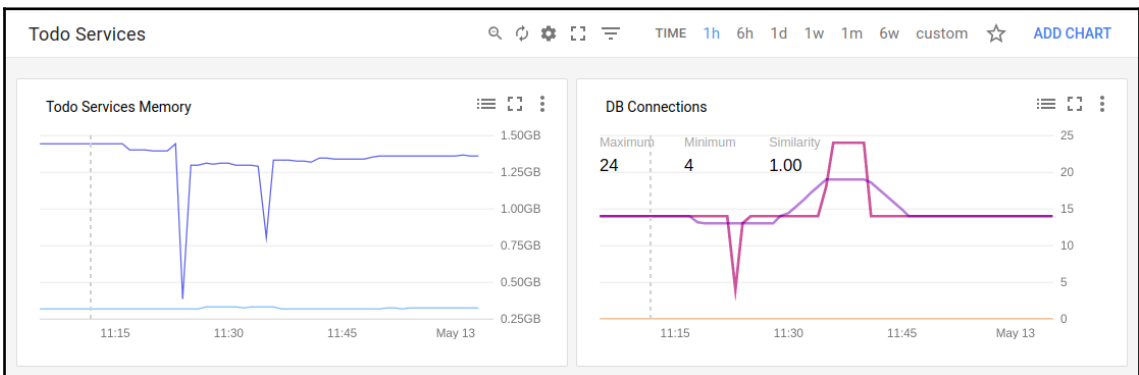
Cancel

```
2018-05-12 23:50:39.173 EDT DELETE 500 160 B 517 ms Chrome 66 /api/todos/2
26.124.252.82 - "DELETE /api/todos/2" 500 160 "https://todos-frontend-dot-packt-gcp-book-6_64.AppleWebKit/537.36 (KHTML, like Gecko) Chrome/66.0.3359.139 Safari/537.36"
▶ {...}
i 2018-05-12 23:50:38.664 EDT Deleting todo 2
!! 2018-05-12 23:50:38.678 EDT Failed to delete Todo:
    java.lang.RuntimeException: Deletion failed, bad code
        at com.pactpub.gcpfordevelopers.todo.TODOController
```

```
1 resource.type="gae_app"
2 logName=(
3 "projects/packt-gcp-book/logs/appengine.googleapis.com%2Fstdout"
4 OR "projects/packt-gcp-book/logs/appengine.googleapis.com%2Fstderr"
5 OR "projects/packt-gcp-book/logs/appengine.googleapis.com%2Fnginx.request"
6 OR "projects/packt-gcp-book/logs/appengine.googleapis.com%2Frequest_log")
7 labels."appengine.googleapis.com/instance_name"=
8     "aef-todos--frontend-20180508t032434-c2dv"
9
```

[Buckets](#) / [packt-gcp-book-todo-logs](#) / [appengine.googleapis.com](#) / [stdout](#) / [2018](#) / [05](#) / [12](#)

<input type="checkbox"/>	Name	Size	Type	Storage class
<input type="checkbox"/>	 21:00:00_21:59:59_S0.json	36.41 KB	application/json	Regional



Target

RESOURCE TYPE:

APPLIES TO:

Configuration

IF METRIC:

CONDITION:

THRESHOLD:

FOR:

! Policy Violation
Todos Cloud SQL

<p>Opened May 13, 6:46 PM</p> <p>Status Open</p> <p style="text-align: center; margin-top: 10px;">Acknowledge</p>	<p>Duration 5 minutes</p> <p>Message Questions for packt-gcp-book todos-db is above the threshold of 20 with a value of 21.55.</p>
---	---

Policy: Todos Cloud SQL

! Condition: Metric Threshold on Google Cloud SQL todos-db violates when: Client Queries Executed is above a threshold

Client Queries Executed

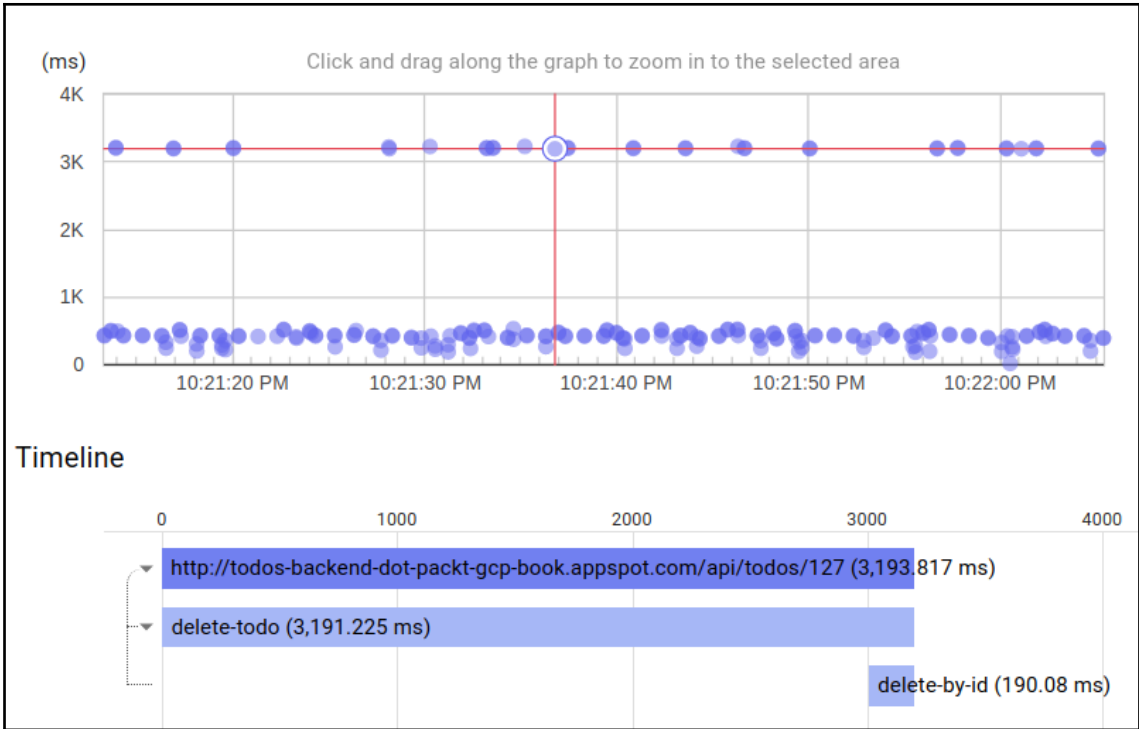
count/s

Time	Count/s
6:45	~15
6:46	~10
6:47	21.55
6:48	~15

RuntimeException: unknown error

com.packtpub.gcpfordevelopers.todo.TODOController.updateTodo ([TODOController.java:74](#))

<p>Resolution Status</p> <p>! Open</p> <p> Link to issue</p>	<p>Occurrences</p> <p>5,407</p> <p>5,407 (total)</p>	<p>Seen in</p> <p>todos-backend:2</p>
---	---	--



```

112     */
113     private void processTask(String task) {
114         for(String word : task.toLowerCase().split(" ")) {
115             String wordHash = Hashing.sha256()
116                 .hashString(word, StandardCharsets.UTF_8);
117             String invalidHash = "7edb360";
118             if (wordHash.startsWith(invalidHash)) {
119                 throw new RuntimeException("failed to process");
120             }
121         }
122     }

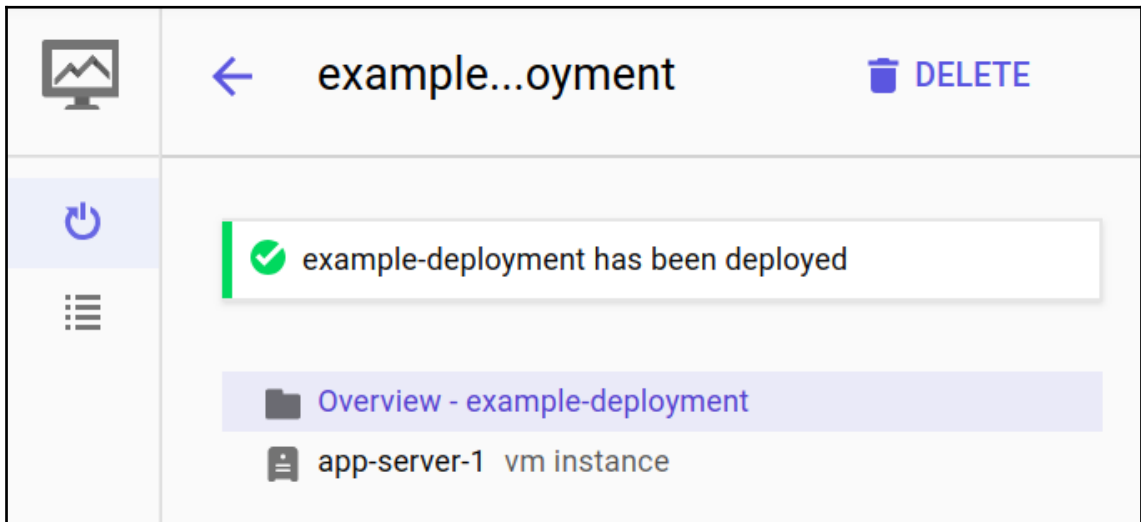
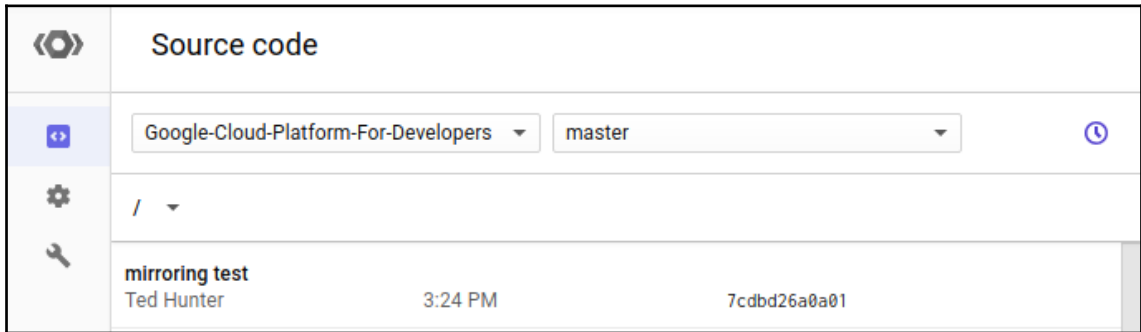
```

Variables 👍 👎

▶ this	
task	"Call the doctor"
wordHash	"7edb360f06acaef2c"
invalidHash	"7edb360"
word	"call"

Name	java.lang.Thread.sleep(long)		
File	Thread.java		
Values	total: 2.78 ms (2.05%), self: 2.78 ms (2.05%)		
root			
SimplePauseDetector\$SimplePauseDetectorThread.run			root
TimeServices.sleepNanos	root		Threa...
TimeUnit.sleep	Threa...		Defa...
Thread.sleep	Abstr...		Threa...
Thread.sleep			

Chapter 12: Change Management



example...oyment

example-deployment is in preview

- Overview - example-deployment
- app-server-1 vm instance
- app-server-2 vm instance

Previewing

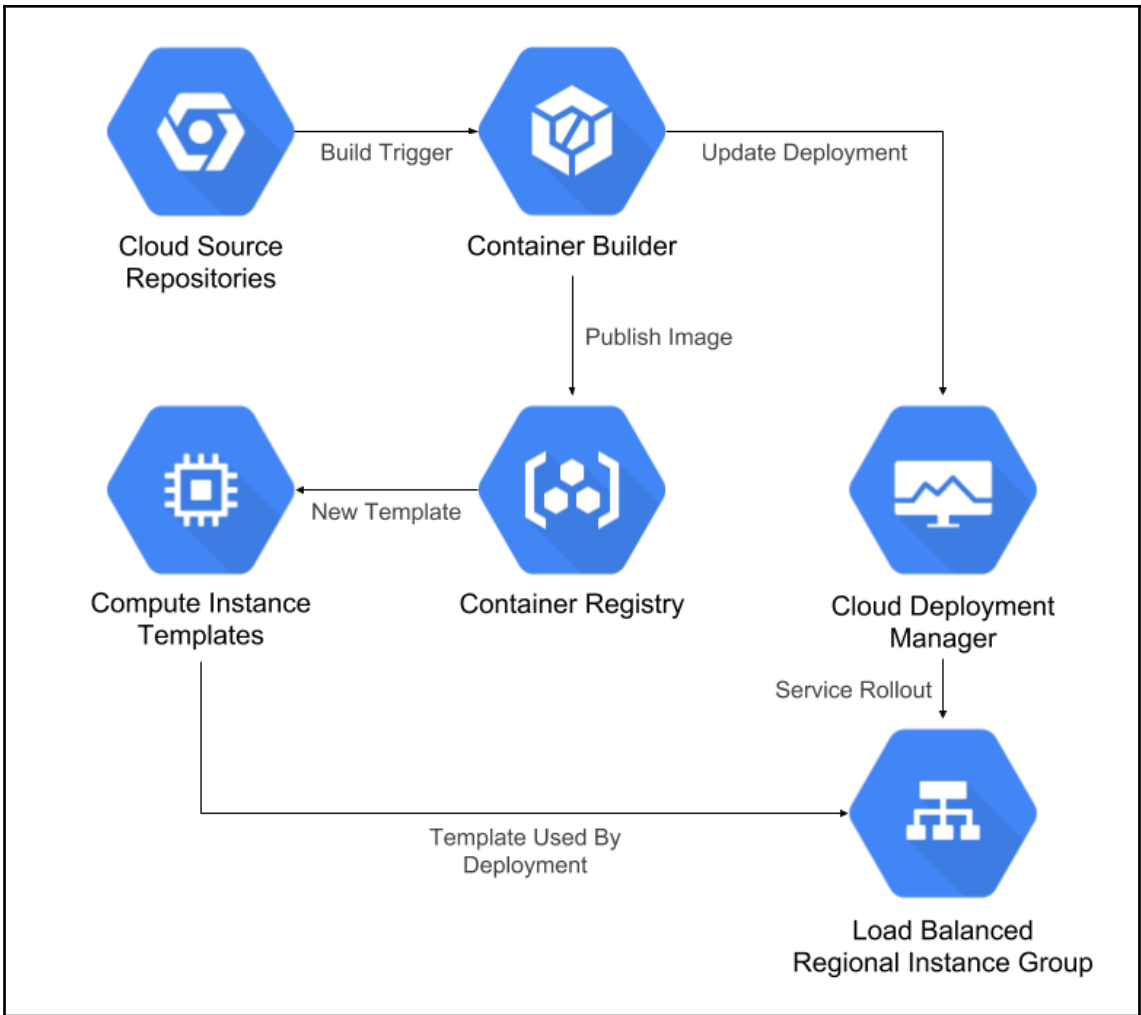
my-redmine has been deployed

Overview - my-redmine


- redmine redmine.jinja
 - redmine-vm-tmpl vm_instance.py
 - my-redmine-vm vm instance
 - generated-password-0 password.py
 - generated-password-1 password.py
 - software-status software_status.py
 - my-redmine-config config
 - my-redmine-software config waiter
 - my-redmine-tcp-80 firewall


Deployment properties

ID	7108705046499659056
Created On	2018-05-30 (01:17:19)
Manifest Name	manifest-1527657439087
Config	View
Imports	c2d_deployment_configuration.json common.py default.py marketplace_metadata.json password.py path_utils.jinja redmine.jinja redmine.jinja.display redmine.jinja.schema




Name (Optional)

app-server-deployment-trigger 

Trigger type 

Branch

Tag

Branch (regex) 


Matches the branch: master

master

Build configuration


Dockerfile
Specify the path within the Git repo

cloudbuild.yaml
Specify the path to a Cloud Build configuration file in the Git repo [Learn more](#)

cloudbuild.yaml location 

/ chapter_12/example_04/cloudbuild.yaml

Build information

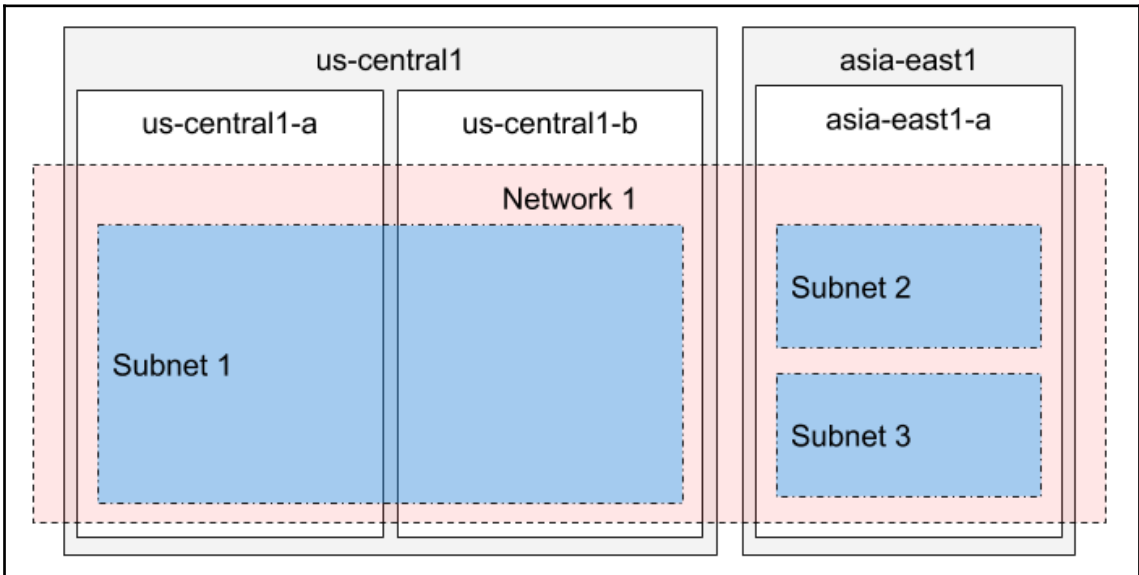
Status	 Build successful
Build id	24e11f45-5b3a-4160-bae6-ba695b5868ae
Image	—
Trigger	Push to master branch (app-server-deployment-trigger)
Source	Cloud Source Repository Google-Cloud-Platform-For-Developers
Git commit	a30b1f99a061aed827f63682554a7de57787d04b
Started	June 4, 2018 at 1:40:17 AM UTC-4
Build time	1 min 31 sec

"Hello from the simple-app-server instance group!"

Release Info:

Build ID	24e11f45-5b3a-4160-bae6-ba695b5868ae
Repository	Google-Cloud-Platform-For-Developers
Commit SHA	a30b1f9
Instance Name	app-server-instance-m6g0
Instance Zone	projects/4928492850394/zones/us-central1-f

Chapter 13: GCP Networking for Developers



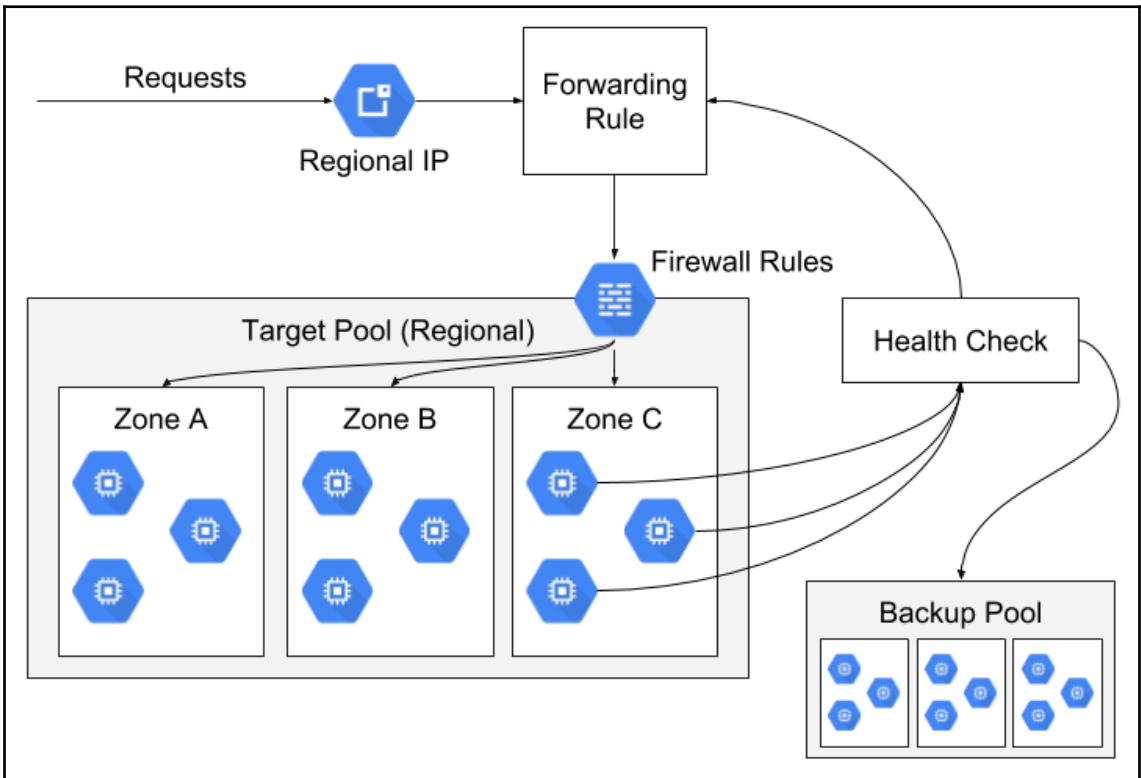
VPC networks [+ CREATE VPC NETWORK](#) [REFRESH](#)

Name	Region	Subnets	Mode	IP addresses ranges	Gateways
sample-custom		2	Custom		
	eu-west1	eu-west1-1		192.168.2.0/24	192.168.2.1
	us-east1	us-east1-1		192.168.1.0/24	192.168.1.1
sample-auto		16	Auto		
	us-central1	sample-auto		10.128.0.0/20	10.128.0.1
	eu-west1	sample-auto		10.132.0.0/20	10.132.0.1

All Dynamic Peering

network : sample-custom Filter routes X

<input type="checkbox"/> Name	Destination IP ranges	Priority	Instance tags	Next hop	Network
<input type="checkbox"/> default-route-85ab5517cd1a7869	192.168.8.0/24	1000	None	Virtual network	sample-custom
<input type="checkbox"/> default-route-8fb72bb44d3e37db	0.0.0.0/0	1000	None	Default internet gateway	sample-custom
<input type="checkbox"/> default-route-b4ee700b7afe8131	192.168.2.0/24	1000	None	Virtual network	sample-custom
<input type="checkbox"/> default-route-d34588bb8c818731	192.168.1.0/24	1000	None	Virtual network	sample-custom



<p style="text-align: center;">Hello from Google Compute Engine!</p> <p>Instance: simple-http-server-1 Zone: us-east1-b</p>	<p style="text-align: center;">Hello from Google Compute Engine!</p> <p>Instance: simple-http-server-2 Zone: us-east1-c</p>
--	--

us-east-tcp-unmanaged

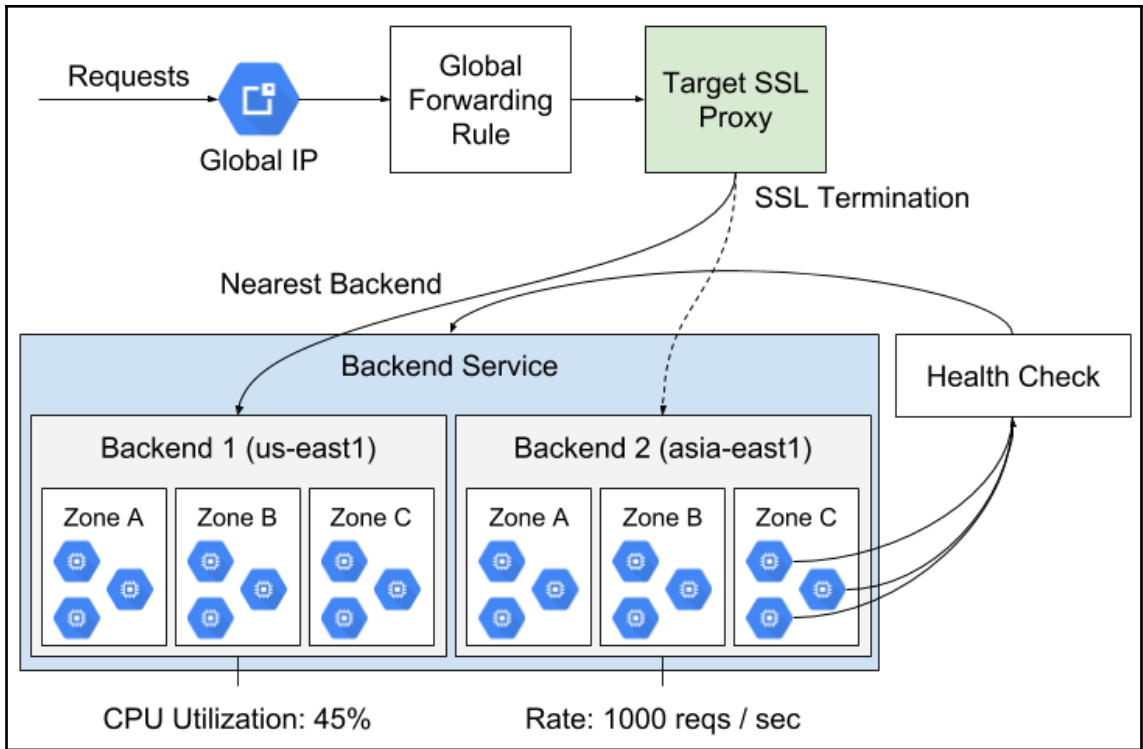
Frontend

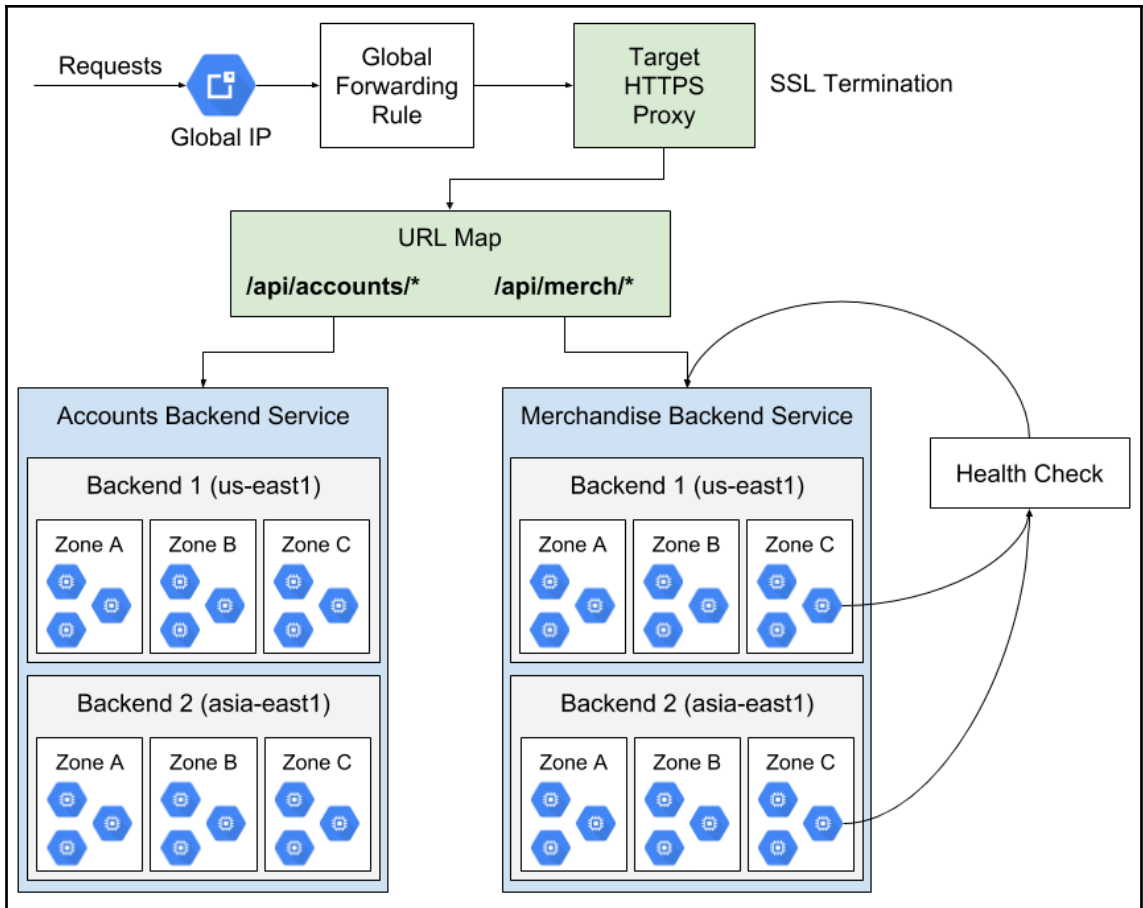
Protocol [^]	IP:Port	Network Tier [?]
TCP	35.231.31.212:80	Premium

Backend

Name: **us-east-tcp-unmanaged** Region: **us-east1** Session affinity: **None** Health check: **simple-http-get**

Instances [^]	35.231.31.212
simple-http-server-1	!
simple-http-server-2	✓





packt-gcp-book

DNS name: packt-gcp-book.com.

Record sets

Add record set

Delete record sets

<input type="checkbox"/> DNS name ^	Type	TTL (seconds)	Data
packt-gcp-book.com.	NS	21600	ns-cloud-e1.googledomains.com. ns-cloud-e2.googledomains.com. ns-cloud-e3.googledomains.com. ns-cloud-e4.googledomains.com.

Use custom name servers

NAME SERVER ?

ns-cloud-e1.googledomains.com



ns-cloud-e2.googledomains.com



ns-cloud-e3.googledomains.com

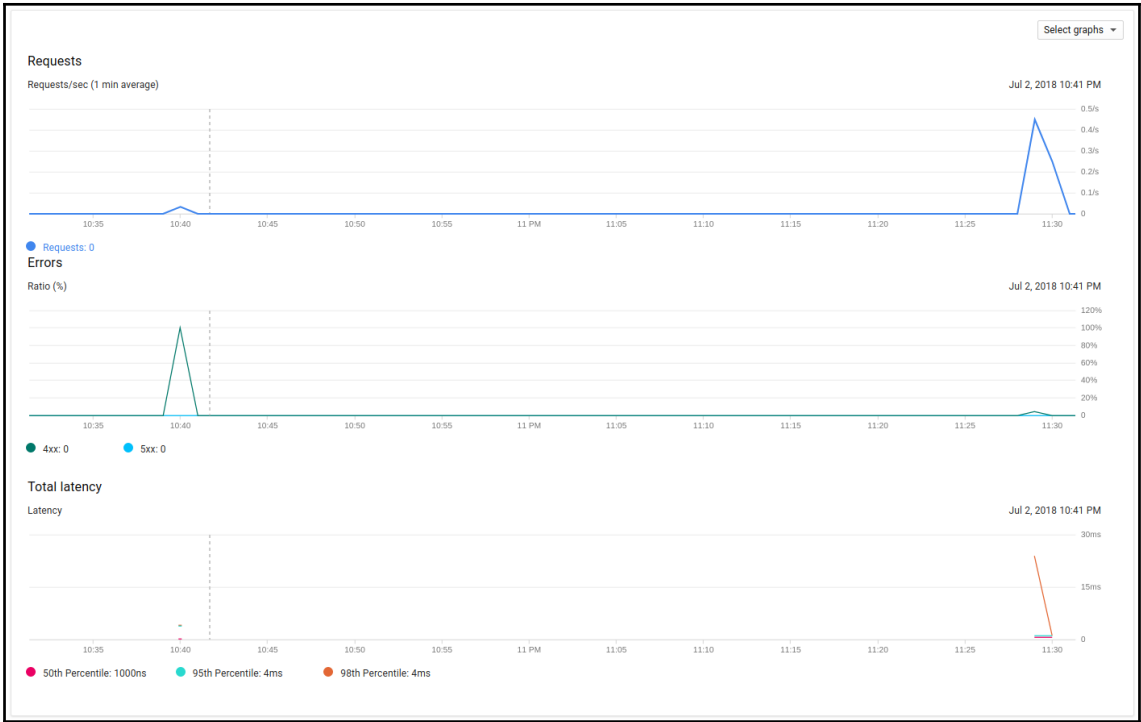


ns-cloud-e4.googledomains.com



Save

Cancel





Introduction

GUIDES

Getting Started

API REFERENCE

▼ /api/...

[cars](#) GET

[cars/{carId}](#) GET

RESOURCES

▼ Overview

Car

GET /api/cars

Gets all cars

HTTP request

```
https://used-cars-dot-packt-gcp-book.appspot.com/api/cars
```

Response Types

200: List of cars

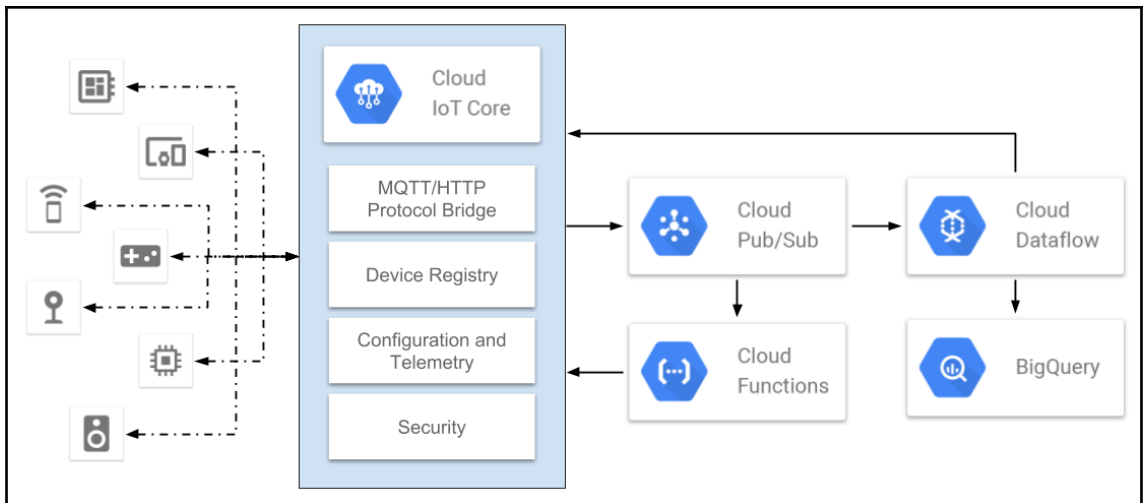
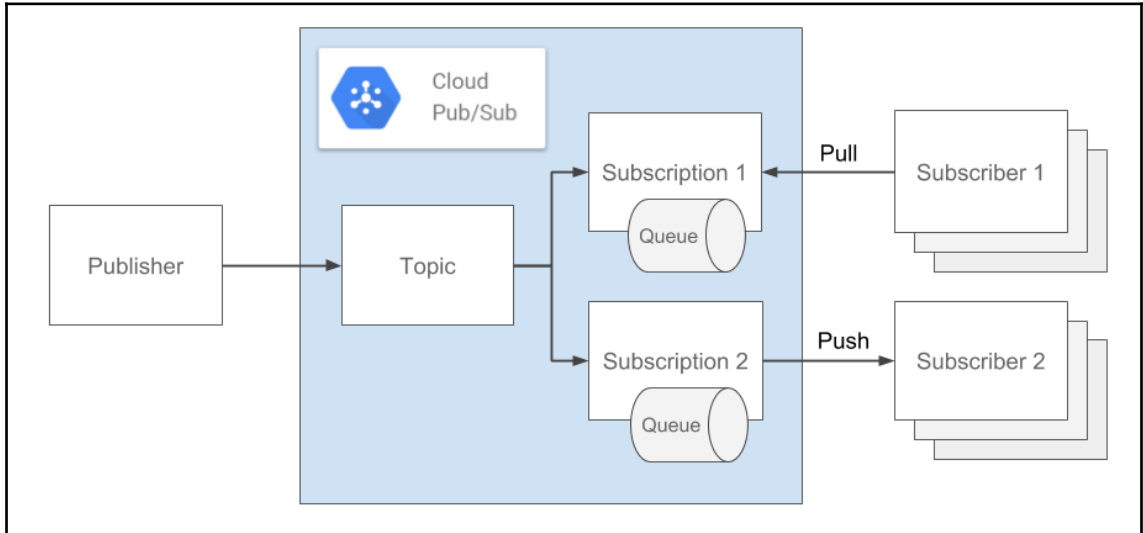
Body

```
array ^  
  object ^
```

make

string

Chapter 14: Messaging with Pub/Sub and IoT Core



Registry ID: weather-sensors

⚠️ Cloud IoT cannot read data for devices in this registry until you assign the registry a Pub/Sub telemetry topic. To select a topic, click **Edit registry** above.

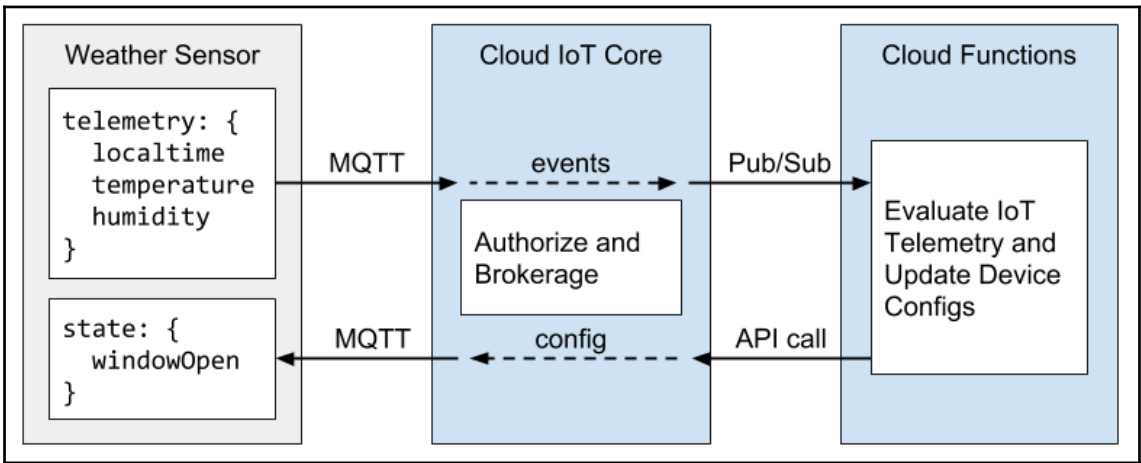
Region	us-central1
Protocol	MQTT HTTP

[Devices](#) [Certificates](#)

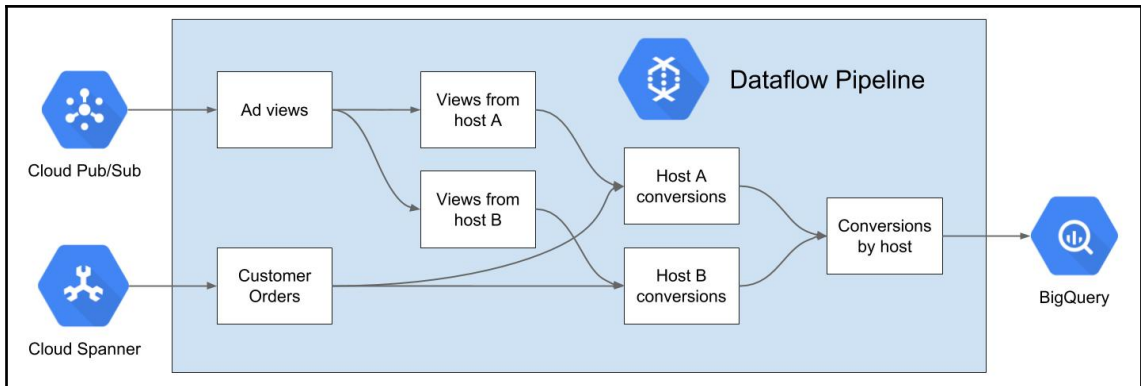
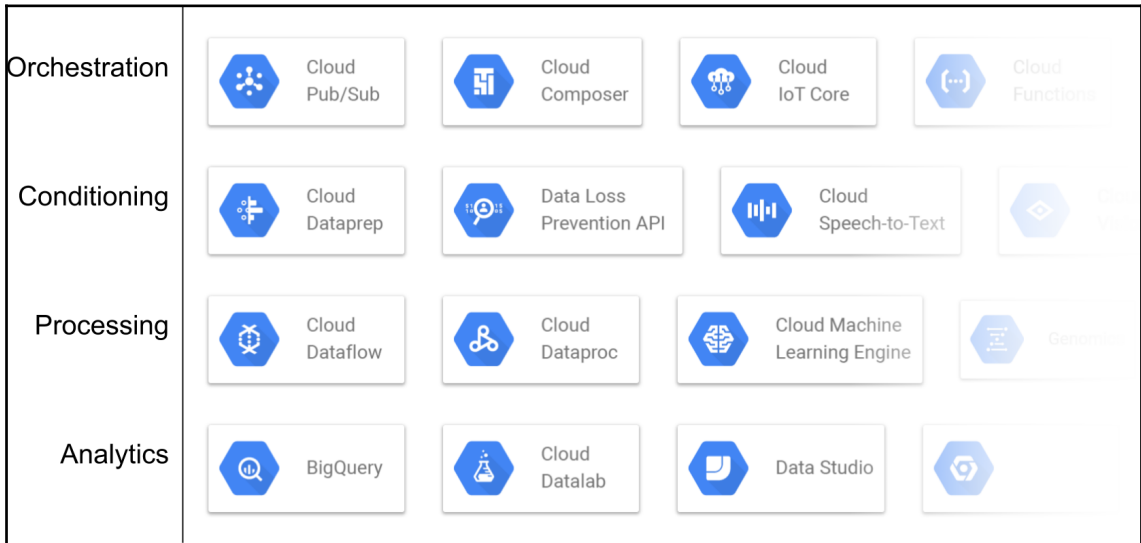
Add device ↻

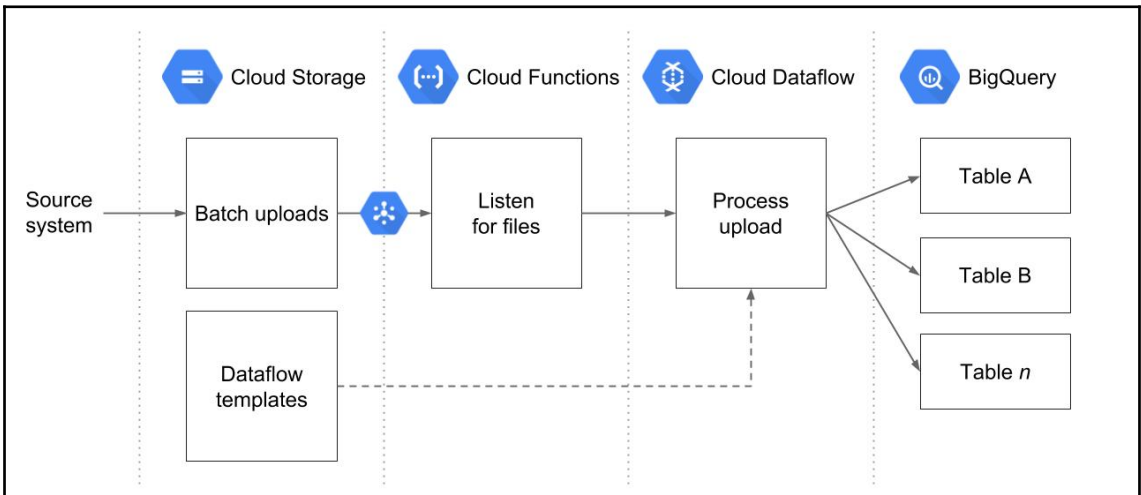
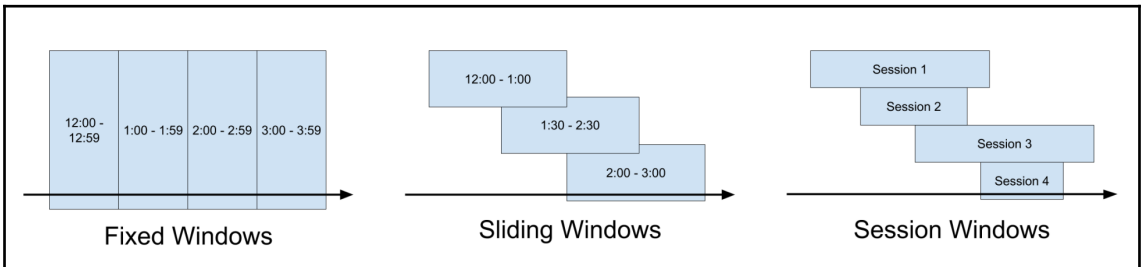
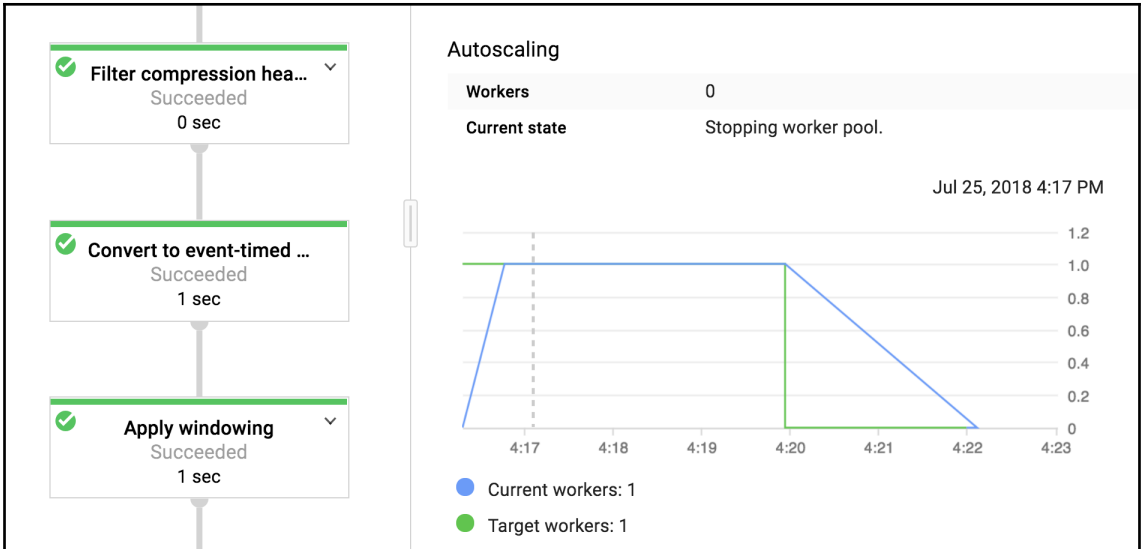
🔍 Enter exact device IDs separated by commas

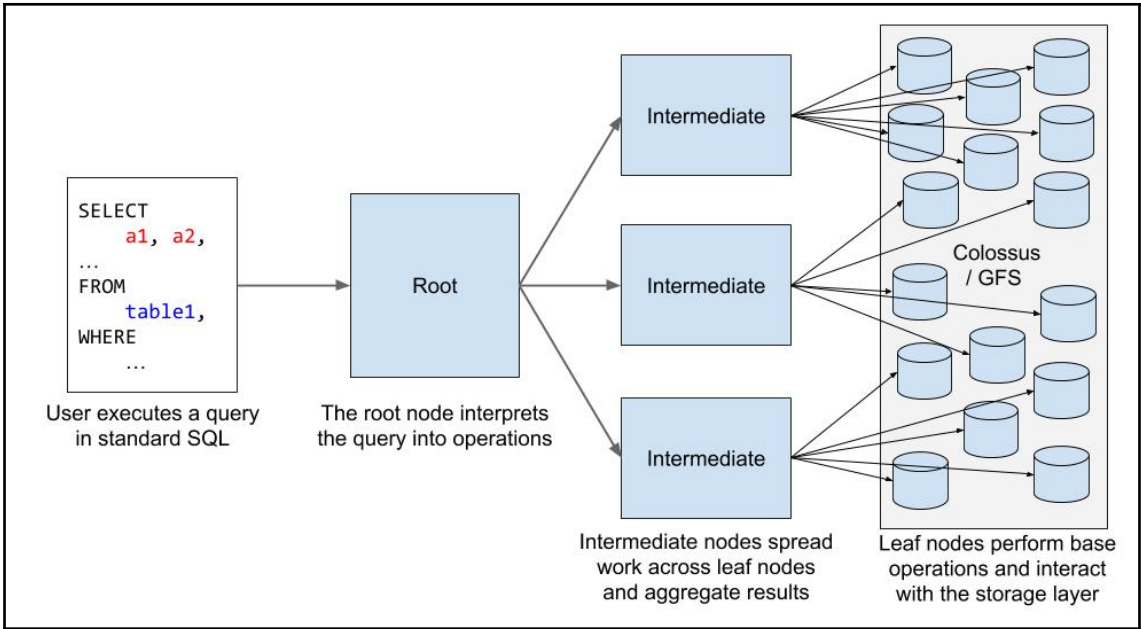
Device ID	Communication	Last seen
example-device-001	✔️ Allowed	—

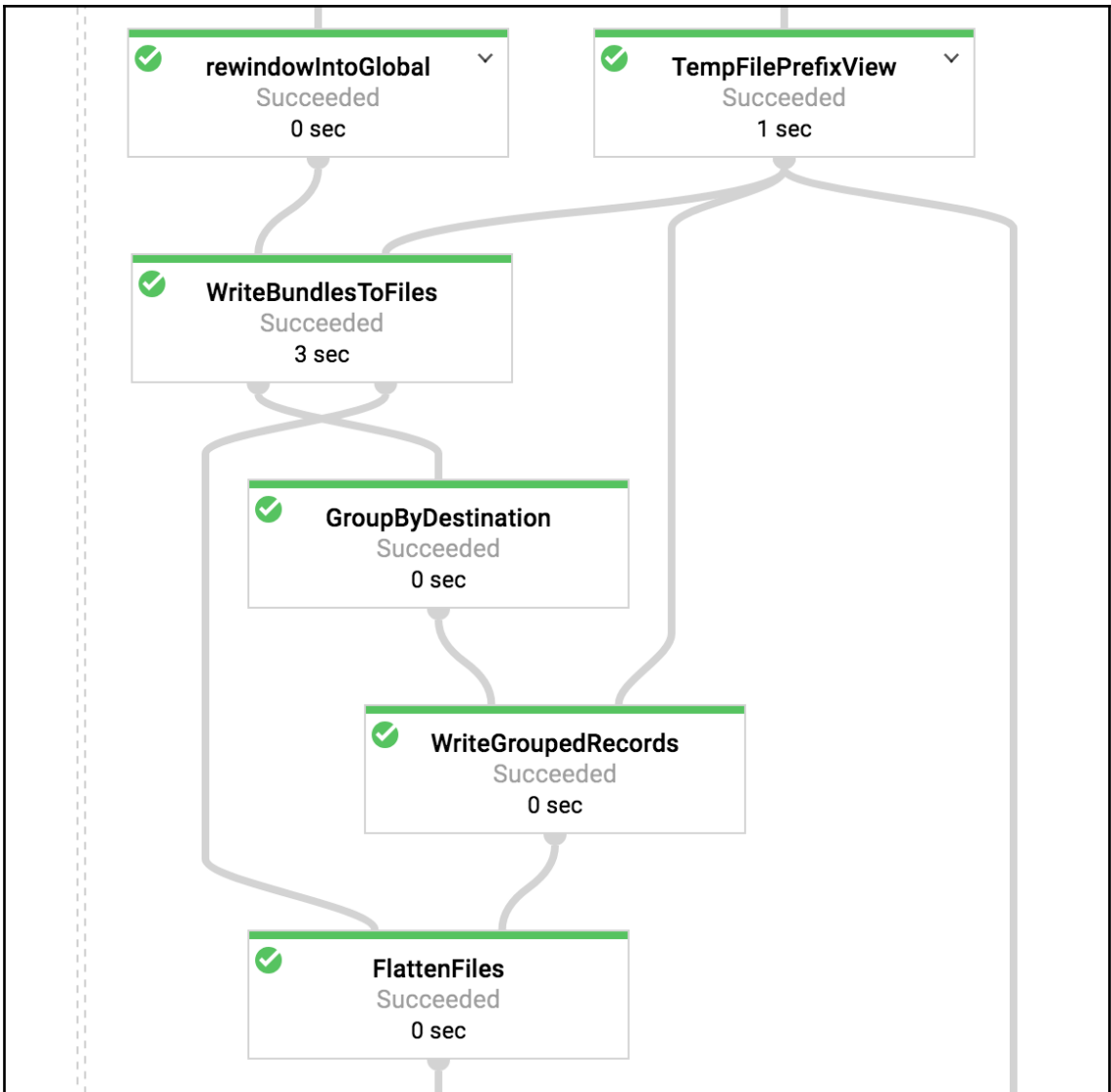


Chapter 15: Integrating with Big Data Solutions on GCP









Results		Details		Download as CSV	Download as JSON
Row	time	trends.word	trends.frequency		
6	2018-07-19 11:59:59.999 UTC	incubator	110		
		hyperlocal	107		
		deep-learning	106		
		big-data	103		
		next-gen	101		

[Table](#) [JSON](#)

[First](#) [< Prev](#) [Row 6 of 43](#) [Next >](#) [Last](#)

