

MiCloud



Simon @ MiCloud



We are... MiCloud



Come in We're
HIRING

前情提要

很久很久以前...

時代不同，面對資料的態度也不同...



- 存得起來的，叫做Storage（儲存）
- 看得到的，叫做Data（資料）
- 看得懂的，叫做Information（資訊）
- 用得出來的，才能夠叫做Intelligent（智慧）

和沛科技 CEO & Founder - 翟本喬

資料...就是應該被儲存...

- POS data
- Log data
- User behavior
- Data Warehouse
- Transactions



貌似正常的人

上班服裝示意圖



工程師上班服裝示意圖



看似無意義的log

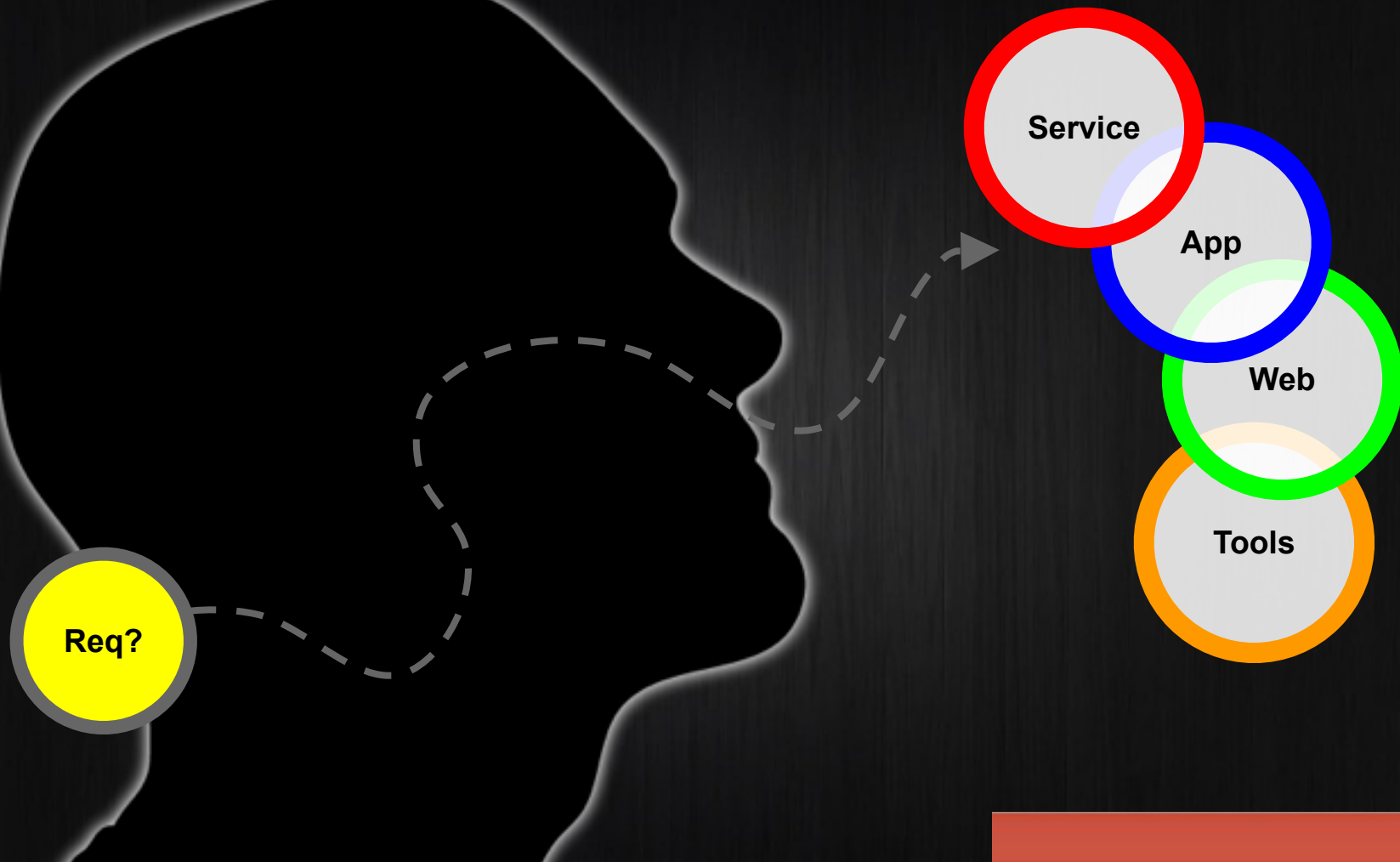
```

204.2.166.124 -- [01/Dec/2013:04:09:57-0500] "GET /resources/metrics/pageReport/v1/gp:mobile:home?p1=gp%3Amobile%3Ahome&p2=http%3A%2F%
23.67.252.126 -- [01/Dec/2013:04:09:57-0500] "GET /browse/product.do?cid=8798 HTTP/1.1" 302 - www.acme.com 192.237.217.88 629
23.67.252.143 -- [01/Dec/2013:04:09:57-0500] "GET /browse/InvalidIdNoResults.do?requestedurl=http%3A%2F%2Fwww.acme.com%2Fbrowse%2Fproduct
204.2.166.124 -- [01/Dec/2013:04:09:57-0500] "GET /resources/personalization/v1/5FBC52987115D4BECC1F016863104872?mdsId=91471340&cid=f"
23.67.252.126 -- [01/Dec/2013:04:09:58-0500] "GET /webcontent/0006/931/865/cn6931865.jpg HTTP/1.1" 200 40152 www.acme.com 108.52.206.6
204.2.166.124 -- [01/Dec/2013:04:09:58-0500] "GET /acmeoutlet HTTP/1.1" 404 1820 www.acme.com 41.33.170.110 1
216.246.75.45 -- [01/Dec/2013:04:09:58-0500] "GET /webcontent/0006/744/059/cn6744059.jpg HTTP/1.1" 200 757 www.acme.com 108.52.206.63
216.246.75.45 -- [01/Dec/2013:04:09:58-0500] "GET /webcontent/0006/931/519/cn6931519.jpg HTTP/1.1" 200 714 www.acme.com 108.52.206.63
216.246.75.45 -- [01/Dec/2013:04:09:58-0500] "GET /webcontent/0006/773/850/cn6773850.jpg HTTP/1.1" 200 740 www.acme.com 108.52.206.63
204.2.166.124 -- [01/Dec/2013:04:09:58-0500] "GET /webcontent/0006/864/099/cn6864099.jpg HTTP/1.1" 200 769 www.acme.com 108.52.206.63
216.246.75.45 -- [01/Dec/2013:04:09:58-0500] "GET /webcontent/0006/931/587/cn6931587.jpg HTTP/1.1" 200 687 www.acme.com 108.52.206.63
216.246.75.45 -- [01/Dec/2013:04:09:58-0500] "GET /webcontent/0006/744/049/cn6744049.jpg HTTP/1.1" 200 762 www.acme.com 108.52.206.63
23.67.252.126 -- [01/Dec/2013:04:09:58-0500] "GET /webcontent/0006/744/062/cn6744062.jpg HTTP/1.1" 200 739 www.acme.com 108.52.206.63
216.246.75.78 -- [01/Dec/2013:04:09:58-0500] "GET /webcontent/0006/931/537/cn6931537.jpg HTTP/1.1" 200 689 www.acme.com 108.52.206.63
216.246.75.78 -- [01/Dec/2013:04:09:58-0500] "GET /browse/productData.do?pid=768199&vid=1&scid=768199002&actFtr=false&locale=en_US&interi
  
```

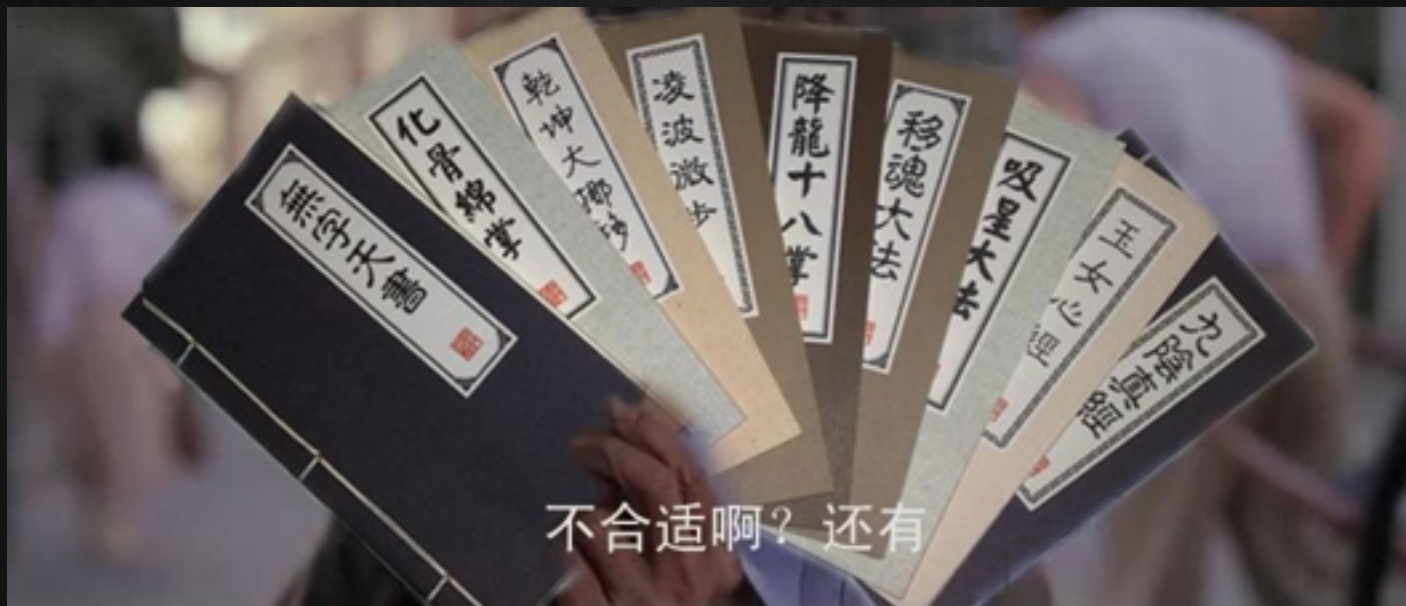


接下來，我們要開幹了！





絕世武功秘笈...





我們需要的是

- 一個存取的方式
- 越簡單越好...
- 輕量...
- 快速...

天下武功，唯快不破...



Google BigQuery - 秘笈

4.3 TB

68 billion rows



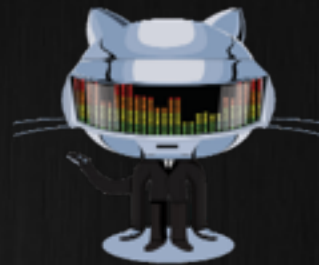
24 GB

121 million rows

Node.js - 武功



select repository language from



372211



259329



223470

Google bigquery

COMPOSE QUERY

Query History

Job History

Arecord Cloud

- dataset_name
- earthquake_dataset
- gama
- lab
- test
- publodata:samples

New Query

```
1 select repository.language, count(*) as total
2 from publodata:samples.github_nested
3 where repository.language is not null
4 group by repository.language
5 order by total desc
6 limit 100;
```

RUN QUERY

Save Query

Save View

Enable Options

Query complete (2.6s elapsed, cached)

Query Results 10:01am, 21 Jun 2014

Download as CSV

Save

Row	repository_language	total
1	JavaScript	372211
2	Ruby	259329
3	Java	223470
4	Python	193720
5	C	186949
6	PHP	177854
7	C++	102954

First < Prev Rows 1-7 of 85 Next > Last

合體！！！！

絕世武功秘笈



But...人生最厲害就是這個BUT！

Hello Google!

Login Required :)



WTF... =_ =

Node.js & OAuth & Google

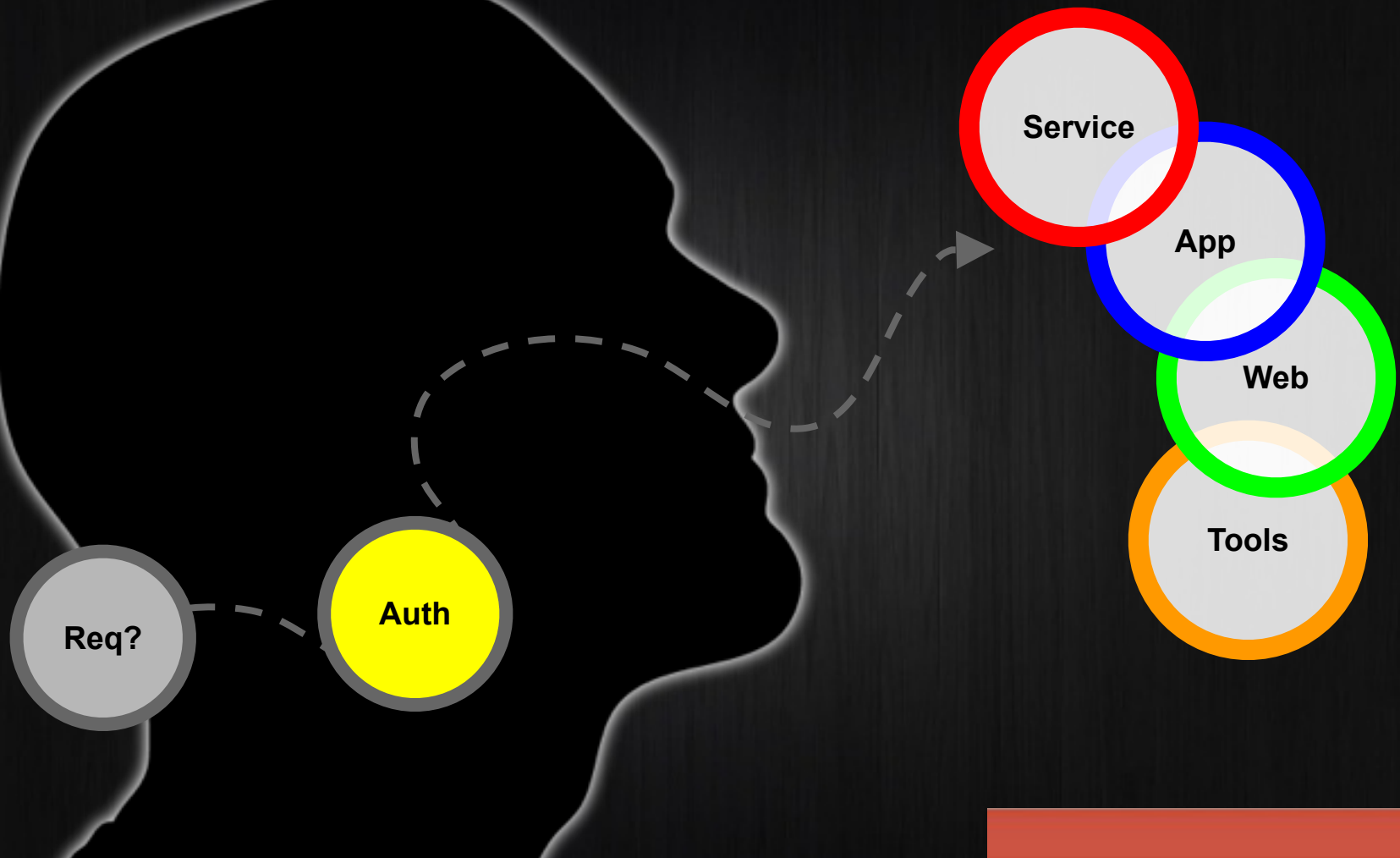
Hello Google!

What do u want =_ =



Authenticate with
OAuth2.0





\$ npm search oauth

```

oauth          Library for interacting with OAuth 1.0, 1.0A, 2 and Echo... -mc
oauth-1.0a     OAuth 1.0a Request
oauth-2.0      OAuth 2.0 Request
oauth-bn       Fork of the Libr
oauth-client   OAuth 1.0 (RFC 58
oauth-douban   A oauth plugin o
oauth-evanp    Library for inter
oauth-flow     Middleware for ex
oauth-gmail    nodejs oauth wrap
oauth-jesse    Jesse's fork of a
oauth-js       Library for inter
oauth-lite     Lightweight OAuth
oauth-playground
oauth-proxy    An HTTP proxy tha
oauth-revenge  Sexy OAuth 1.0 C
oauth-server   Server, supportin
oauth-shim     OAuth2 shim for O
oauth-sign     OAuth 1 signing.
oauth-signature
oauth-toolkit  RFC5849 complaint
oauth-tunnel   Tunnel integratio
oauth-type-webserver
oauth1-client  Node OAuth1 client
oauth2         OAuth2 multi prov
oauth2-cg      OAuth2 Client Crea
oauth2-client  A library providi
oauth2-device  Google OAuth 2.0
oauth2-oob     OAuth2 OOB server
oauth2-provider A simple customi
oauth2-server  Node library providing the bases to implement an OAuth2_
oauth2-token   Parse OAuth 2.0 tokens.
oauth2-warpp   OAuth2 client library for Node.js
oauth2.js      node js client lib for oauth2 use with express
oauth2-provider
oauth2n        OAuth 2.0 provider toolkit for nodeJS
oauth2orize    OAuth 2.0 Authorization Server Module
oauth2orize-chain
oauth2orize-jwt-bearer
oauth2orize-redelegate
oauth2request  OAuth 2.0 authorization server toolkit for Node.js.
oauth2resource Chained token exchange for OAuth2orize.
oauth2server   JSON Web Token (JWT) Bearer Token Exchange Middleware for...
oauth2ui       Token redelegation exchange for OAuth2orize.
oauth_nonce   Wrapper for Request JS with OAuth2 Client Flow
oauthd         Middleware for authorizing API access against OAuth2Server
authenticate   OAuth 2.0 Server
authenticity   OAuth2Server Default User Interface
authflow       Because it was annoying enough to find
authic         OAuth that just works.
authic-google  oauthenticate =====
authic-weibo   simple oauth2 implementation for use with restify or any...
authic-youku   CLI OAuth flow helper
authio         Yet another beautiful wrapped mikeal/request with OAuth 2.0_
authlogin      Yet another beautiful wrapped mikeal/request with OAuth 2.0_
authorize      Yet another beautiful wrapped mikeal/request with OAuth 2.0_
authrequest    OAuth that just works ! This is the Node.js SDK for...
authsimple      jsOAuth's submodule for signing http requests
authstream     git://github.com/idottv/oauthsimple.git
authware       streams from oauth
               Connect.js middleware for OAuth 1.0a / 2.0

```

google-api-utility模組開發歷程



透過初始化設定之後，
即可以直接進行api呼叫動作

1. 設定檔抽離
2. 結合request模組進行API呼叫

google-api-utility module

基本資訊

- <https://github.com/peihsinsu/google-api-utility>

安裝

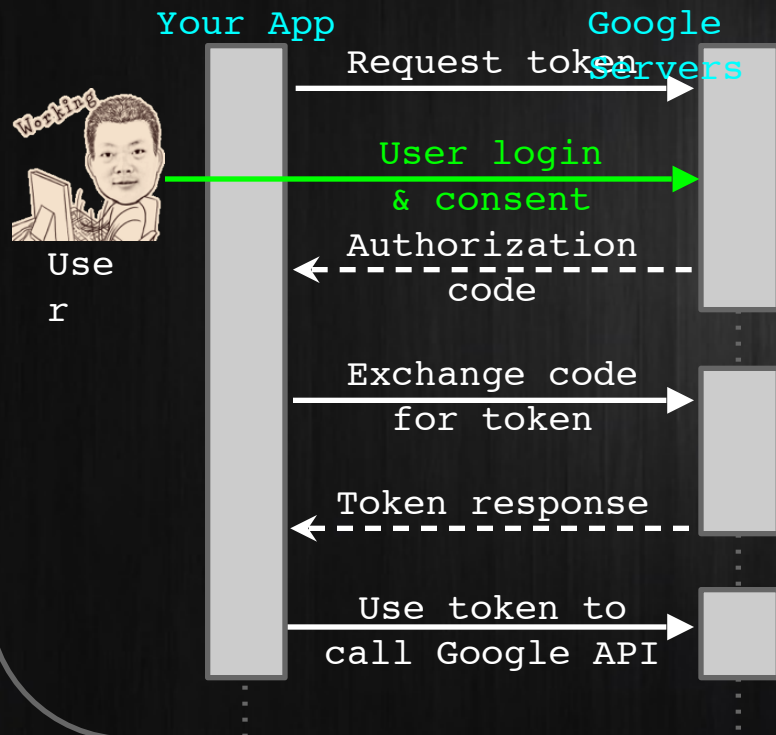
- `npm install google-api-utility`

操作

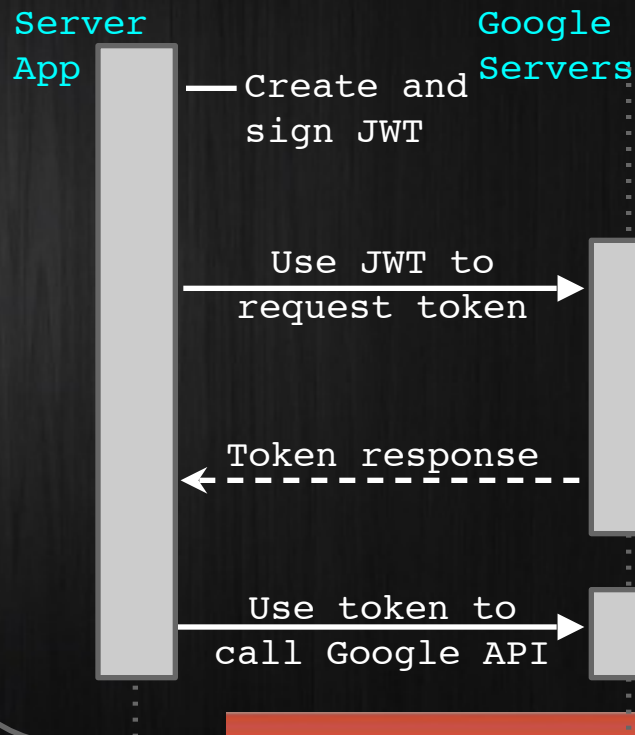
- `apiutil.init(config)`
- `apiutil.request(options, callback)`

Google OAuth2

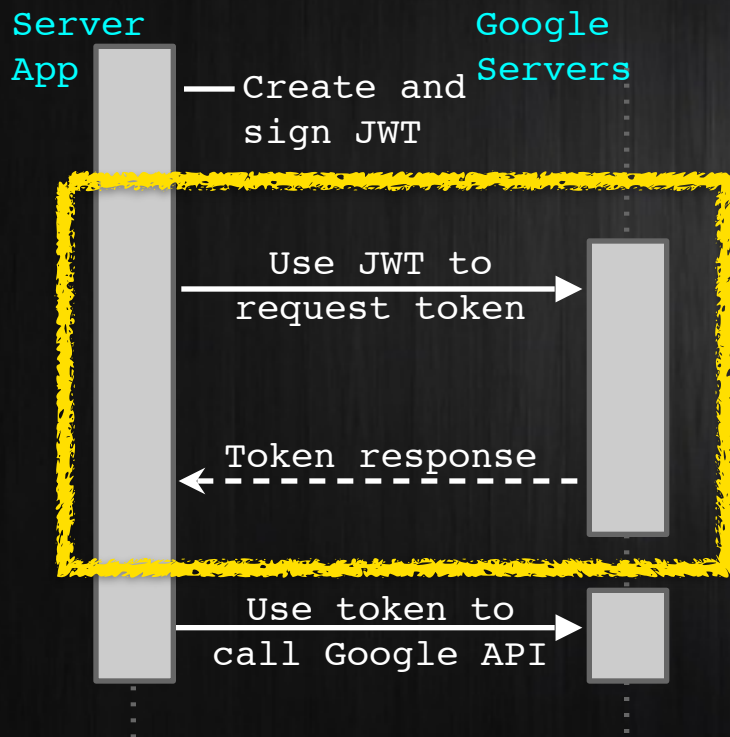
Web Server Application



Service Account



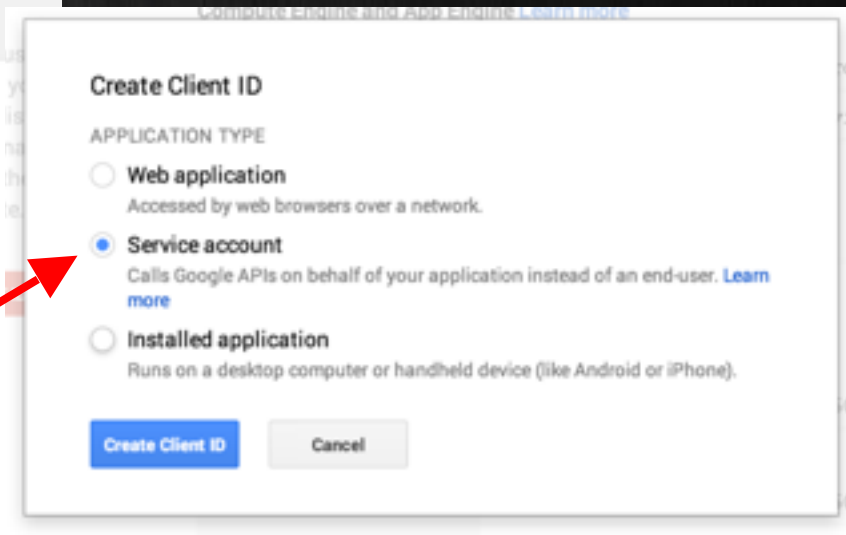
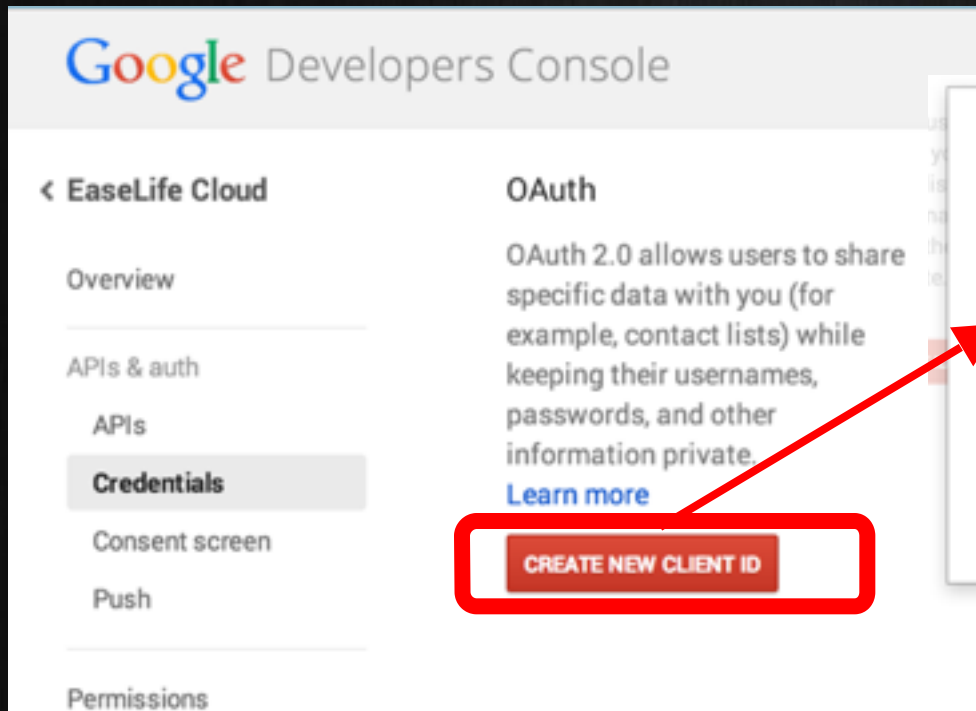
Service Account



- Configures
- Authenticate can be cache and auto refresh
- Others... Request... Request... Request...

免不了麻煩....

Service Owner在Google的設定



Prepare Authentications

Service Account

Client ID	4[REDACTED] [REDACTED].apps.googleusercontent.com
Email address	420100748602[REDACTED] [REDACTED].gserviceaccount.com
Public key fingerprints	[REDACTED]

Generate new keyDownload JSONDelete

Generate key.pem

```
$ openssl pkcs12 -in privatekey.p12 -out privatekey.pem -nocerts  
$ openssl rsa -in privatekey.pem -out key.pem
```

OR

```
$ openssl pkcs12 -in privatekey.p12 -nodes -nocerts > key.pem
```

使用範例 - 初始化

```
var auth = require('google-api-utility')
```

```
auth.init({
```

此處需要綁定所欲呼叫的API
相關授權之Scope位置

```
  scope: 'https://www.googleapis.com/auth/bigquery https://  
www.googleapis.com/auth/cloud-platform',
```

```
  client_secret: '/path-to-client_secret.json',
```

```
  key_pem: '/path-to-key.pem'
```

```
});
```

設定client_secret.json
與相關pem檔案位置，供jwt
運算使用

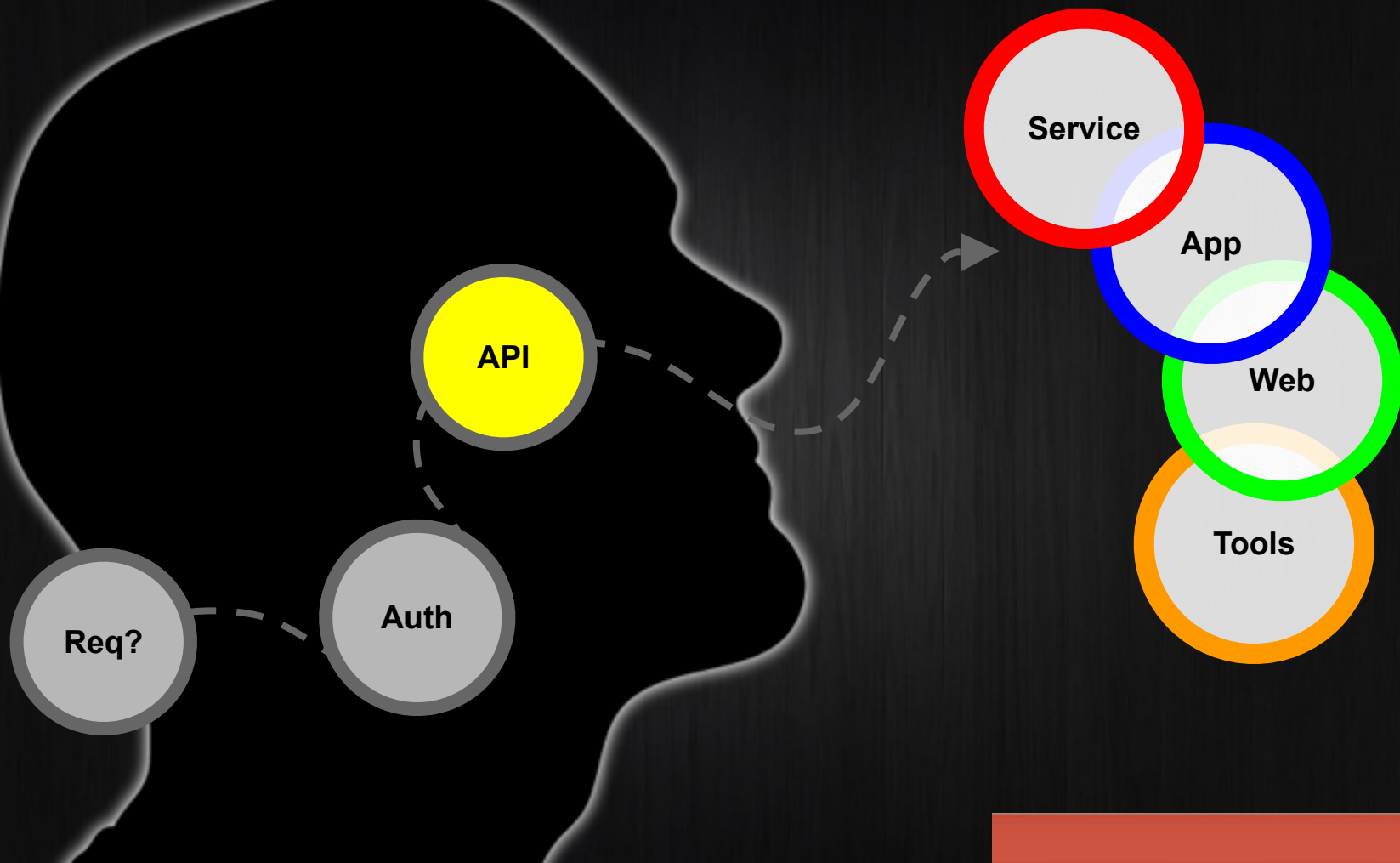
使用範例 - 呼叫BigQuery

```
var request = auth.request;
```

結合原request模組之
function，供api呼叫使用

```
var bqurl = 'https://www.googleapis.com/bigquery/v2/projects/%s/  
datasets';request({  
  url: util.format(bqurl, project),  
  method: 'GET'  
}, function(err, req, doc){  
  // implements  
});
```

同原request模組操作方式



Google API Explore

[HTTPS://developers.google.com/apis-explorer/](https://developers.google.com/apis-explorer/)

The image displays two screenshots of the Google API Explorer interface, illustrating the process of exploring and selecting API versions.

Left Screenshot (Services View):

- Search Bar:** Search for services, methods, and recent requests...
- Left Sidebar:**
 - Services:** Selected tab.
 - All Versions:** Tab to view different versions of a service.
 - Request History:** Tab to view recent requests.
- API List:**

Service	Version	Description
Ad Exchange Buyer API	v1.2	Lets you manage
Ad Exchange Seller API	v1	Gives Ad Exchan ability to generate
Admin Reports API	reports_v1	Allows the admin about the usage,
AdSense Host API	v4.1	Limited Availabl generation, ad co capabilities.
AdSense Management API	v1.3	Gives AdSense p generate reports
APIs Discovery Service	v1	Lets you discover APIs are availabl
BigQuery API	v2	A data platform fo
Blogger API	v3	Limited Availabl
Books API	v1	Lets you search f
Calendar API	v3	Lets you manipul
Cloud SQL Administration API	v1beta1	API for Cloud SQ
Cloud Storage API	v1beta2	Lets you store an

Right Screenshot (All Versions View):

- Search Bar:** Search for services, methods, and recent requests...
- Left Sidebar:**
 - Services:** Tab to view a list of services.
 - All Versions:** Selected tab for the Ad Exchange Buyer API.
 - Request History:** Tab to view recent requests.
- API List (Ad Exchange Buyer API):**

Service	Version	Description
Ad Exchange Buyer API	v1	Lets you manage your Ad Exchange Buyer account.
Ad Exchange Buyer API	v1.1	Lets you manage your Ad Exchange Buyer account.
Ad Exchange Buyer API	v1.2	[Default] Lets you manage your Ad Exchange Buyer account.
Ad Exchange Seller API	v1	[Default] Gives Ad Exchange seller users access to their inventory and the ability to generate reports
Admin Directory API	directory_v1	Apps Directory API lets you view and manage enterprise resources like user, groups, OrgUnit, devices.
Admin Reports API	reports_v1	[Default] Allows the administrators of Google Apps customers to fetch reports about the usage, collaboration, security and risk for their users.
AdSense Host API	v4.1	[Limited Availability] [Default] Gives AdSense Hosts access to report generation, ad code generation, and publisher management capabilities.
AdSense Management API	v1	Gives AdSense publishers access to their inventory and the ability to generate reports
AdSense Management API	v1.1	Gives AdSense publishers access to their inventory and the ability to generate reports
AdSense Management API	v1.2	Gives AdSense publishers access to their inventory and the ability to generate reports
AdSense Management API	v1.3	[Default] Gives AdSense publishers access to their inventory and the ability to generate reports

Google API Explore - Query

Loading...Q

APIs Explorer←⚙

 **Services**

 All Versions

 Request History

Learn more about using the BigQuery API by reading the [documentation](#).

Services > **BigQuery API v2** > `bigquery.datasets.list`Authorize requests using OAuth 2.0: ☐ OFF 

projectId	arecord-cloud-project	Project ID of the datasets to be listed (string)
all		Whether to list all datasets, including hidden ones (boolean)
maxResults		The maximum number of results to return (integer)
pageToken		Page token, returned by a previous call, to request the next page of results (string)
fields		Selector specifying which fields to include in a partial response. Use fields editor

bold red = required

Google API Explore - Auth

The screenshot shows the Google API Explorer interface. On the left, a sidebar contains 'Services', 'All Versions', and 'Request History'. The main area displays the 'BigQuery API v2' service. A modal dialog titled 'Select OAuth 2.0 scopes:' is open in the center. It explains that scopes grant different levels of access and lists several scopes with checkboxes. The 'https://www.googleapis.com/auth/cloud-platform' scope is selected and highlighted by a yellow callout box labeled 'Operation Scope'. To the right of the dialog, a red box highlights the 'Authorize requests using OAuth 2.0' toggle, which is currently set to 'OFF'. The background shows a 'Request' section with a 'bigquery.datasets.list' endpoint and a 'Request' button.

Select OAuth 2.0 scopes:

Scopes are used to grant an application different levels of access to data on behalf of the end user. Each API may declare one or more scopes. [Learn more about OAuth 2.0](#)

BigQuery API declares the following scopes. Select which ones you want to grant to APIs Explorer.

- ☒ <https://www.googleapis.com/auth/bigquery>
View and manage your data in Google BigQuery
- ☐ <https://www.googleapis.com/auth/bigquery.insertdata>
New Service
- ☒ <https://www.googleapis.com/auth/cloud-platform>
View and manage your data across Google Cloud Platform services
- ☐ https://www.googleapis.com/auth/devstorage.full_control
Manage your data and permissions in Google Cloud Storage
- ☐ https://www.googleapis.com/auth/devstorage.read_only
View your data in Google Cloud Storage
- ☐ https://www.googleapis.com/auth/devstorage.read_write
Manage your data in Google Cloud Storage

Add additional scopes (optional):

Authorize **Cancel**

Authorize requests using OAuth 2.0: **OFF**

Operation Scope

Google API Explore - Response

bigquery.datasets.list executed one hour ago time to execute: 1665 ms

Request

```
GET https://www.googleapis.com/bigquery/v2/projects/arecord-cloud-project/datasets?key={YOUR_API_KEY}

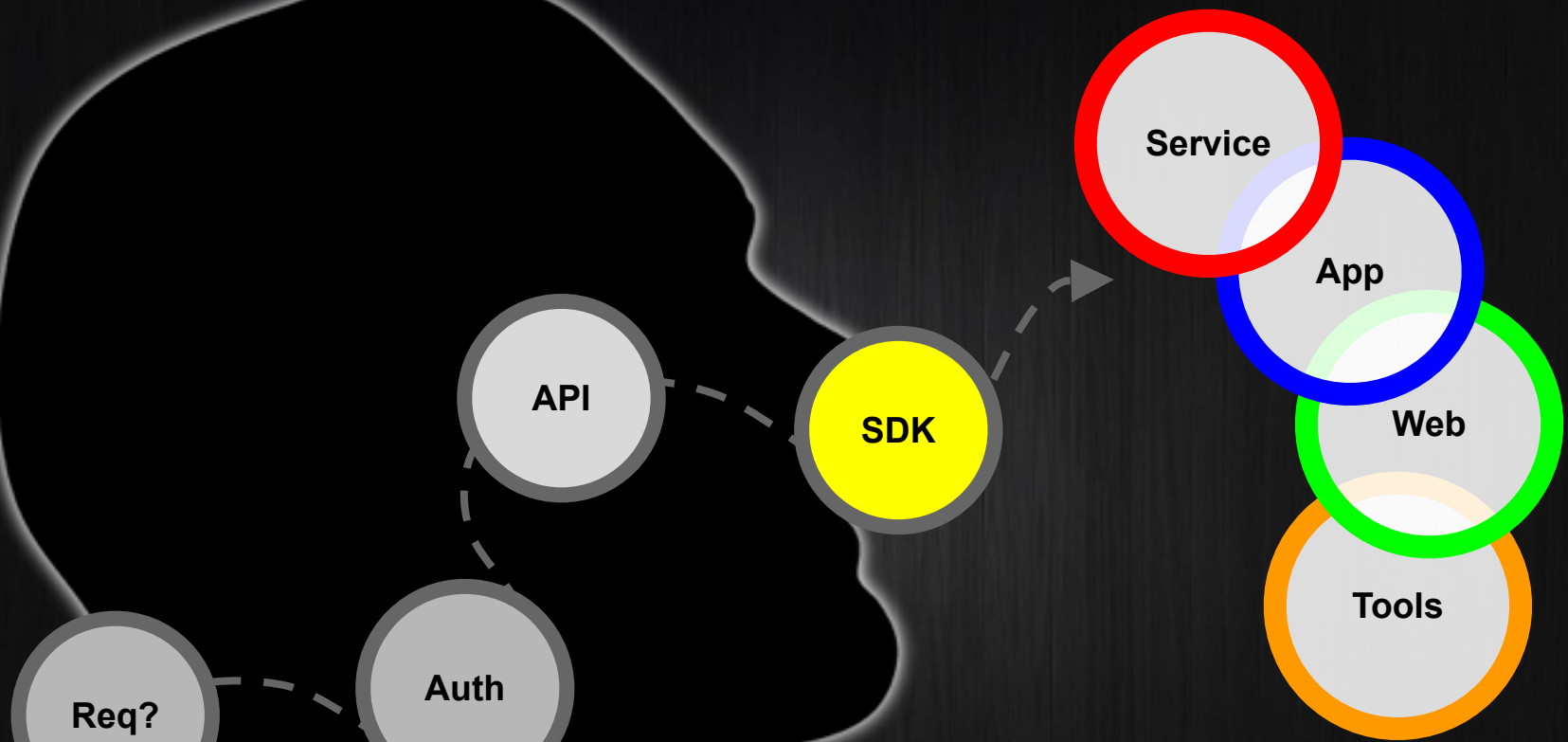
Authorization: Bearer ya29.HQDD9n54_VAXpiEAAABOv3b4IaZlHDyJAhogwqFQ9wyuE2kcKhMMvV9EhFaXrP4u6HEJwfe20_FtHuBfXNY
X-JavaScript-User-Agent: Google APIs Explorer
```

Response

200 OK

- Show headers -

```
-{
  "kind": "bigquery#datasetList",
  "etag": "\"Lzzvn-6pMKKW2lFiYvgGULCNLEE/viYv4LWmN8arSO4i0VRWGNn8tag\"",
  "datasets": [
    -{
      "kind": "bigquery#dataset",
      "id": "arecord-cloud-project:dataset_name",
      "datasetReference": {
        "datasetId": "dataset_name",
        "projectId": "arecord-cloud-project"
      },
    },
  ],
}
```



Idea...

- bigquery.**init**({...configurations...})
- bigquery.**[what].[do]**(...)
 - bigquery.**dataset.list**(....)
 - bigquery.**table.load**(..., callback)

bigquery module

基本資訊

- <https://github.com/peihsinsu/bigquery>

安裝

- `npm install bigquery`

操作

- `bigquery.init(config)`
- `bigquery.[category].[operation](options, callback)`

重新包裝 - bigquery模組

```
var bq = require('bigquery')
, prjId = 'your-bigquery-project-id';

bq.init({
  client_secret: '/path/to/client_secret.json',
  key_pem: '/path-to-key.pem'
});

bq.dataset.list(prjId, function(e,r,d){
  if(e) console.log(e);
  console.log(JSON.stringify(d));
});
```

透過bq呼叫某個操作之下的function

bigquery模組可參考：<https://github.com/peihsinsu/bigquery>

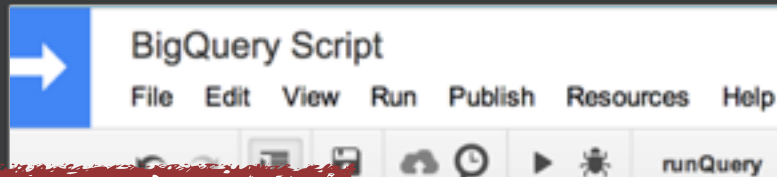
Source Code...

```
var util = require('util')
, auth = require('google-api-utility')
, request = auth.request
, _ = require('underscore')
exports.init = auth.init;
exports.job = {
  token: '',
  listds : function(project, cb){
    var bqurl = 'https://www.googleapis.com/bigquery/v2/projects/%s/datasets';
    request({
      url: util.format(bqurl, project),
      method: 'GET'
    }, cb?cb:auth.commonCb);
  }, ... (skip)
}
```

封裝相同類別的api在一起
ex: job相關的放在job物件中



NOT ONLY Node.js Love JavaScript.....



```
data[i] = new Array(cols.length);
for (var j = 0; j < cols.length; j++) {
    data[i][j] = cols[j].v;
}
}
sheet
    .getRange(2, 1, rows.length, cols.length)
    .setValues(data);

Logger.log('Results spreadsheet: ' +
    spreadsheet.getUrl());
} else {
    Logger.log('No rows returned.');
```

Code.gs x

```
1 function runQuery() {
2     // Replace this value with your project ID
3     // Developers Console project ID
4     var projectId = 'easelife';
5
6     var request = {
7         query: // 'SELECT TOP(100) repository.language as lang, count(*) as count
8               'select repository.language as lang, count(*) as count
9               ' from publicdata:samples.github_nested where repository.language = lang, count(*) as count
10            };
11
12     Logger.log("start query: " + request.query);
```

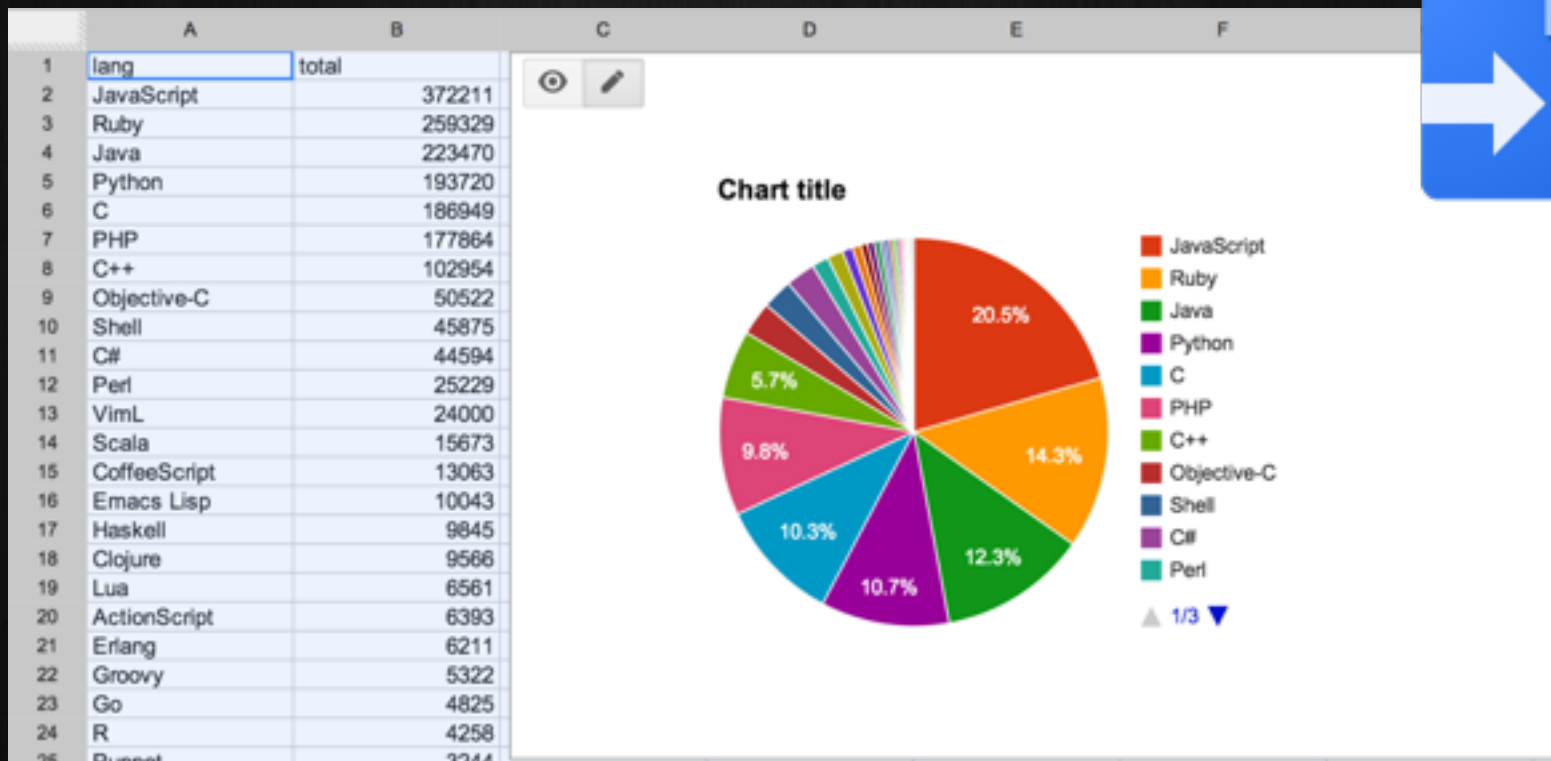
```
ry.language as lang, count(*) as count
a:samples.github_nested where repository.language = lang, count(*) as count
```

```
query....");
= BigQuery.Jobs.query(request);
query....");
results.jobReference.jobId;
job id query....", jobId);

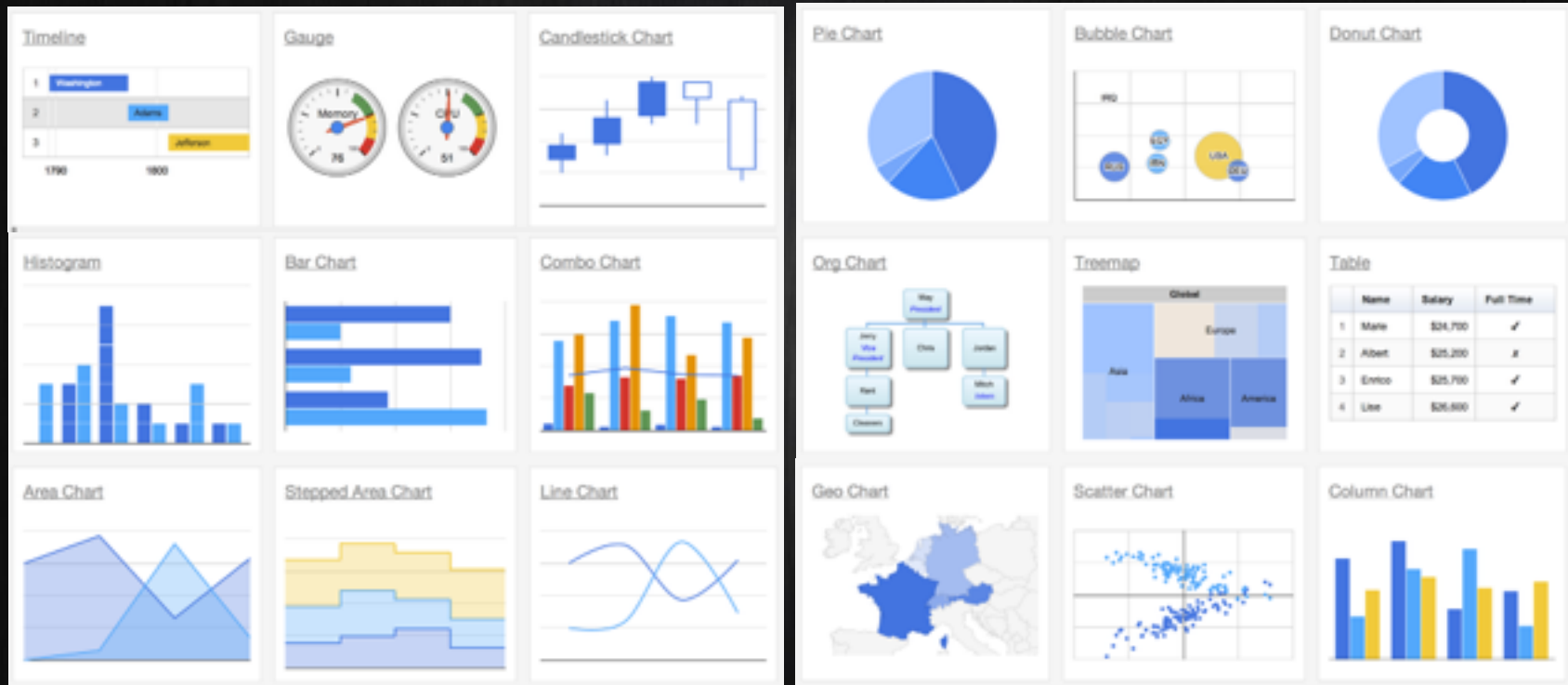
of the Query Job.
500;
ts.jobComplete) {
```



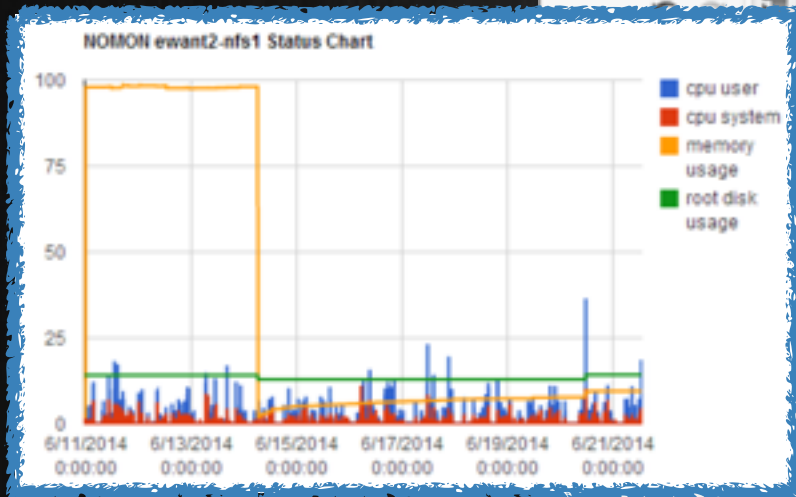
The fancy integrate with Sheet



More and more chart....



Charting in Apps Script



nomon script

File Edit View Run Publish Resources Help

Select function ▾

* Code.gs

```
49
50 function test() {
51   addLineChart('ewant-gcp-haproxy')
52 }
53
54 function addLineChart(sheet) {
55   var chart = sheet.newChart()
56   .setChartType(Charts.ChartType.LINE)
57   .addRange(sheet.getRange("B1:B967"))
58   .addRange(sheet.getRange("E1:E967"))
59   .addRange(sheet.getRange("F1:F967"))
60   .addRange(sheet.getRange("G1:G967"))
61   .addRange(sheet.getRange("H1:H967"))
62   .setOption('title', 'NOMON ' + sheet.getName() + ' Status Chart')
63   .setOption('animation.duration', 500)
64   .setPosition(2,9,0,0)
65   .build();
66
67   sheet.insertChart(chart);
68 }
69
```




Google provided node.js tool

The screenshot shows the GitHub repository page for `google / google-api-nodejs-client`. The repository is public and has 146 watchers, 1,393 stars, and 197 forks. It contains 245 commits, 1 branch, 20 releases, and 21 contributors. The description states: "Google's officially supported Node.js client library for accessing Google APIs, it comes with OAuth 2.0 support." The current branch is `master`. A recent merge pull request #175 from `ryanseys/contributing` is shown, authored by `rakyll` 22 hours ago. The commit hash is `9dd2851dc8`. The file list includes `examples`, `lib`, `test`, `.gitignore`, `.npmignore`, and `.travis.yml`. The right sidebar shows links to Code, Issues (42), Pull Requests (5), Pulse, Graphs, and Network. The SSH clone URL is `git@github.com:google/google-api-nodejs-client`. The page also mentions that the repository can be cloned using HTTPS, SSH, or Subversion.

PUBLIC  **google / google-api-nodejs-client**

Unwatch 146 Unstar 1,393 Fork 197

Google's officially supported Node.js client library for accessing Google APIs, it comes with OAuth 2.0 support.

245 commits 1 branch 20 releases 21 contributors

 branch: master **google-api-nodejs-client** / 

Merge pull request #175 from ryanseys/contributing

 **rakyll** authored 22 hours ago latest commit 9dd2851dc8 

 examples	Merge pull request #156 from Alaneor/fix-cert-conversion-example	on Mar 26
 lib	Update gapitoken to version 0.1.2	on Mar 20
 test	Update gapitoken to version 0.1.2	on Mar 20
 .gitignore	1. reflector the whole path/uri generation	on Dec 8, 2013
 .npmignore	Adding discovery cache path to npmignore.	on Jun 10, 2013
 .travis.yml	Removing node 0.6 runtime.	on Apr 17, 2013

Code

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SSH clone URL

git@github.com:google/google-api-nodejs-client 

You can clone with HTTPS, SSH, or Subversion. 

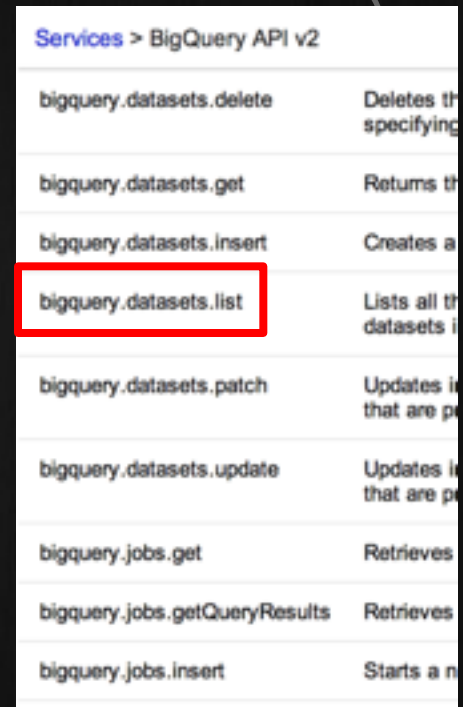
Operation with googleapis

```
var googleapis = require('googleapis');

var jwt = new googleapis.auth.JWT(
  '429100748.....hv3@developer.gserviceaccount.com',
  '/path/to/key.pem',
  null,
  [
    'https://www.googleapis.com/auth/bigquery',
    'https://www.googleapis.com/auth/cloud-platform'
  ]
);
```

Operation with googleapis

```
jwt.authorize(function(err, tokens) {  
  googleapis.discover('bigquery', 'v2').execute(function(e, client) {  
    if(e)  
      console.log(e);  
    else  
      client.bigquery.datasets.list(param).withAuthClient(jwt)  
        .execute(  
          function(err, response) {  
            if(err) console.log(err);  
            console.log(JSON.stringify(response));  
          });  
        });  
  });  
});
```



Services > BigQuery API v2

bigquery.datasets.delete	Deletes th specifying
bigquery.datasets.get	Returns th
bigquery.datasets.insert	Creates a
bigquery.datasets.list	Lists all th datasets i
bigquery.datasets.patch	Updates i that are p
bigquery.datasets.update	Updates i that are p
bigquery.jobs.get	Retrieves
bigquery.jobs.getQueryResults	Retrieves
bigquery.jobs.insert	Starts a n

```
var googleapis = require('googleapis');

var jwt = new googleapis.auth.JWT(
  '429100748693-raa9kf1eh0pnp1gdj5asep69e8g60hv3@developer.gserviceaccount.com',
  '/tmp/test/privatekey.pem',
  null,
  ['https://www.googleapis.com/auth/bigquery', 'https://www.googleapis.com/auth/cloud-platform']
);

jwt.authorize(function(err, tokens) {
  if (err) {
    console.log(err);
    return;
  }
  var param = {projectId: 'easelifes-gcp-project'};
  googleapis.discover('bigquery', 'v2').execute(function(e, client) {
    if(e)
      console.log(e);
    else
      client.bigquery.datasets.list(param).withAuthClient(jwt).execute(function(err, response) {
        if(err) console.log(err);
        console.log(JSON.stringify(response));
      });
  });
});
```

Full Code

HTTP://OpenNodes.arecord.us



The screenshot shows the OpenNodes website. The header includes navigation links: 首頁, Node.js 實戰教學手冊, Node.js 台灣社群, 關於作者, and social media icons for Like (46), Share (630), and Tweet (8). The main content area has a Google Custom Search bar. Below the search bar, there are sections for Node.js basics, HTTP(S) Modules, Async Modules, Web Framework, and Network. The main heading is "OPENNODES" with the subtitle "Open your way to Node.js". The text describes the site as a collection of Node.js basics, concepts, and NPM packages. It also includes a section for "Node.js是啥" (What is Node.js) and "NPM是啥" (What is NPM).

Node.js基礎介紹
Node.js入門, 函數與判斷, Node.js與環境, FileSystem, Exec, Socket, REPL, Closure, JSON操作, Node.js與Bash運用, 學習資源介紹, Loop in non-Block, Timeout & Interval, Std IO Pipe,

HTTP(S) Modules
request, restify, rest-client, connect, soap,

Async Modules
step, node-promise, q, async,

Web Framework
Express, Express流程控制, Express Session:connect-couchdb, Ejs, Socket.io,

Network
domain, native-dns, zombie, phantomjs, jsdom, cheerio, nodemailer,

OPENNODES

Open your way to Node.js

我們想蒐集常用使用的一些Node.js基本使用、觀念、NPM套件等資訊於此了解使用Node.js。

Node.js是啥

Node.js對我來說, 他就如C, Java, .Net一樣(當然還有許多程式語言啦, 算功能。透過制定出來的許多協定, 如FTP, Socket, DNS, HTTP... , 而方式來提供Web端動態呼叫; Java的世界, 使用Servlet建置Web動態程序, 其以HTTP(S)與Socket服務上實作最為亮眼。再加上基本語法相近於Python易入手。唯一差別的就是...怎麼去熟悉與使用Library... , 我想這是所有程式碼而強大, 更透過NPM(Node Package Management)啟播與成整, ~

NPM是啥

NPM - Node Package Management系統, 類似於yum, apt-get或Ruby!

Sample

Copy

Run!

OR





<http://micloud.tw>
<http://about.me/peihsinsu>

