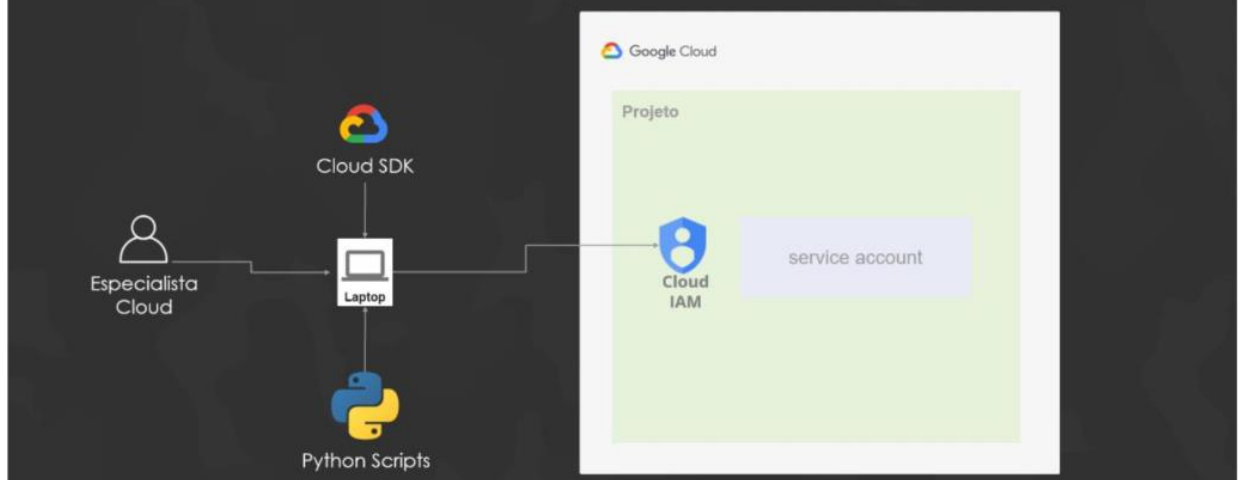


# ARQUITETURA DA SOLUÇÃO

BOOTCAMP GOOGLE CLOUD

AUTOMAÇÃO NA GOOGLE CLOUD UTILIZANDO PYTHON – IAM SERVICE ACCOUNTS – PARTE 1



## Requirements

- Install Python
  - Install SDK
- After install SDK update with commands below

- pip install - upgrade google-cloud-storage
- pip install - upgrade google-cloud-compute
- pip install - upgrade google-api-python-client
- pip install - upgrade oauth2client

- Creation Project in GCP

```
gcloud iam service-accounts create automation\  
  --description="TCB Bootcamper automation account"\  
  --display-name="automation"\  
  --project=project-bootcamp-89
```

Select a project

 NEW PROJECT

Search projects and folders

Q |

RECENT

STARRED

ALL

Name

ID

✓ ☆

Project-Bootcamp-02 ?

project-bootcamp-89

- Creation IAM Service and change roles

```
gcloud iam service-accounts create create automation \
  --description="TCB Bootcamper automation account" \
  --display-name="automation1"

gcloud iam roles describe roles/storage.admin
gcloud projects add-iam-policy-binding bootcamp-gcp-03 \
  --member="serviceAccount:automation@project-bootcamp-89.iam.gserviceaccount.com" \
  --role="roles/storage.admin"
```

- Creation key and download.

```
# get full email id of new service account
emailId=$(gcloud iam service-accounts list --filter="email ~ ^automation" --format='value(email)')
# download key for service account
gcloud iam service-accounts keys create automation.json --iam-account $emailId
```

- Creation, Upload and List Bucket

```
#Create bucket storage
gsutil mb gs://iam-service-account-2

Validando o bucket criado anteriormente
##Copy
gsutil cp "FileName"
##List
gsutil ls gs://iam-service-account-2
```

```
FelipePiton@Intrepid MINGW64 ~/Desktop/Bootcamp/GCP/Missão-1
$ python ./lista_storage.py bootcamp-gcp-felipepiton-efbcce1a4110.json
[<Bucket: iam-service-account-1>]
```

# Desafio SDK



After completing the module 2 Hands-on Project, your manager calls you to propose an extra challenge and he asks: "Would it be possible for this python script, making a small adjustment, to read all the virtual machines that are created there in the Google Cloud?" And now? Is it possible to read all virtual machines created on Google Cloud? How could it be that by making a small adjustment to the file, it would be possible to complete this challenge? Tip for creating the virtual machines: In the contents, Herbert teaches you how to create 3 virtual machines with just one command using gcloud and you can use this information to create the virtual machines .SDK Challenge.

Google Cloud Platform

Project-Bootcamp-02

Search products and resources

VM instances

CREATE INSTANCEIMPORT VMREFRESHSTART / RESUMESTOPSUSPENDRESETDELETECREATE SCHEDULEOPERATIONS

INSTANCES

INSTANCE SCHEDULE

VM instances are highly configurable virtual machines for running workloads on Google infrastructure. [Learn more](#)

Filter

Enter property name or value

Status	Name	Zone	Recommendations	In use by	Internal IP	External IP	Connect
<input type="checkbox"/>	instance-1	us-east1-b			10.142.0.2 (nic0)	34.139.9.111	SSH
<input type="checkbox"/>	instance-2	us-east1-b			10.142.0.3 (nic0)	34.139.143.173	SSH

Related actions

DISMISS

View billing report

View and manage your Compute Engine billing

Monitor VMs

View outlier VMs across metrics like CPU and network

Explore VM logs

View, search, analyze, and download VM instance logs

Set up firewall rules

Control traffic to and from a VM instance

Patch management

Schedule patch updates and view patch compliance on VM instances

```

1 # Some prerequisites are needed
2 # To execute in your gcloud environment run the line below
3 # python gcp_list_vms.py <your-key.json>
4 from pprint import pprint
5 from googleapiclient import discovery
6 from googleapiclient.discovery import build
7 from oauth2client.client import GoogleCredentials
8 from six.moves import input
9
10 import googleapiclient.discovery
11 import argparse
12 import os
13 os.environ["GOOGLE_APPLICATION_CREDENTIALS"] = "C:/Users/FelipePiton/Desktop/Felipe/Curso/Bootcamp/GCP/Missão-1/project-bootcamp-89-4c5ee838c44e.json"
14
15 # Project ID for this request.
16 project = "project-bootcamp-89"
17 zone = "us-east1-b"
18 compute = googleapiclient.discovery.build('compute', 'v1')
19 space = " "
20
21 def list_instances(compute, project, zone):
22     result = compute.instances().list(project=project, zone=zone).execute()
23
24     print("{}{:<7} {:<11} {:<13} {:<12} {:<12} {:<15} {:<8}".format('NAME', 'ZONE', 'MACHINE_TYPE', 'PREEMPTIBLE', 'INTERNAL_IP', 'EXTERNAL_IP', 'STATUS'))
25
26     for item in result['items']:
27         if item['status'] == "RUNNING":
28             var_name = item['name']
29             var_zone = item['zone']
30             var_machine_type = item['machineType']
31             var_preemptible = item['scheduling']['preemptible']
32             var_internal_ip = item['networkInterfaces'][0]['networkIP']
33             var_external_ip = "{}{:<14}".format(item['networkInterfaces'][0]['accessConfigs'][0]['natIP'])
34             var_status = item['status'].rjust(8)
35
36             print("{}{:<7} {:<11} {:<13} {:<12} {:<12} {:<15} {:<8}".format(var_name, var_zone.rsplit('/', 1)[-1], var_machine_type.rsplit('/', 1)[-1], str(var_preemptible), var_internal_ip, var_external_ip, var_status))
37
38     return result['items'] if 'items' in result else None
39 list_instances(compute, project, zone)
40

```

```

FelipePiton@Intrepid MINGW64 ~/Desktop/Felipe/Curso/Bootcamp/GCP/Missão-1
$ py ./gcp_list_vms.py
NAME      ZONE      MACHINE_TYPE  PREEMPTIBLE  INTERNAL_IP  EXTERNAL_IP    STATUS
instance-1 us-east1-b  e2-medium     False        10.142.0.2    34.139.9.111    RUNNING
instance-2 us-east1-b  e2-medium     False        10.142.0.3    34.139.143.173  RUNNING

FelipePiton@Intrepid MINGW64 ~/Desktop/Felipe/Curso/Bootcamp/GCP/Missão-1
$

```