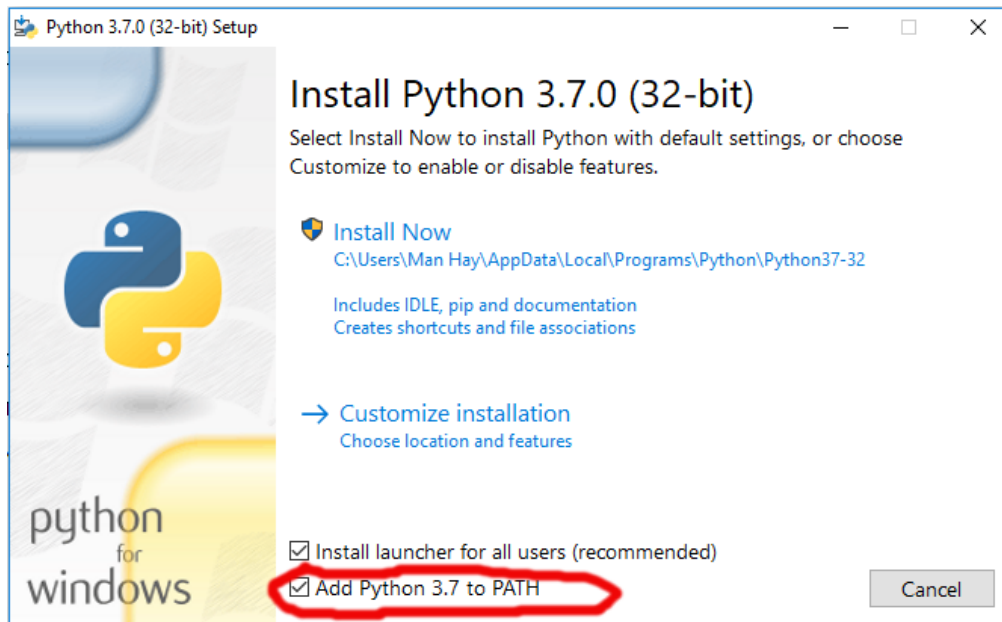


Cron tab tự động tạo VPS Oracle Cloud với python hoặc php thì theo link này <https://github.com/hitrov/oci-arm-host-capacity>

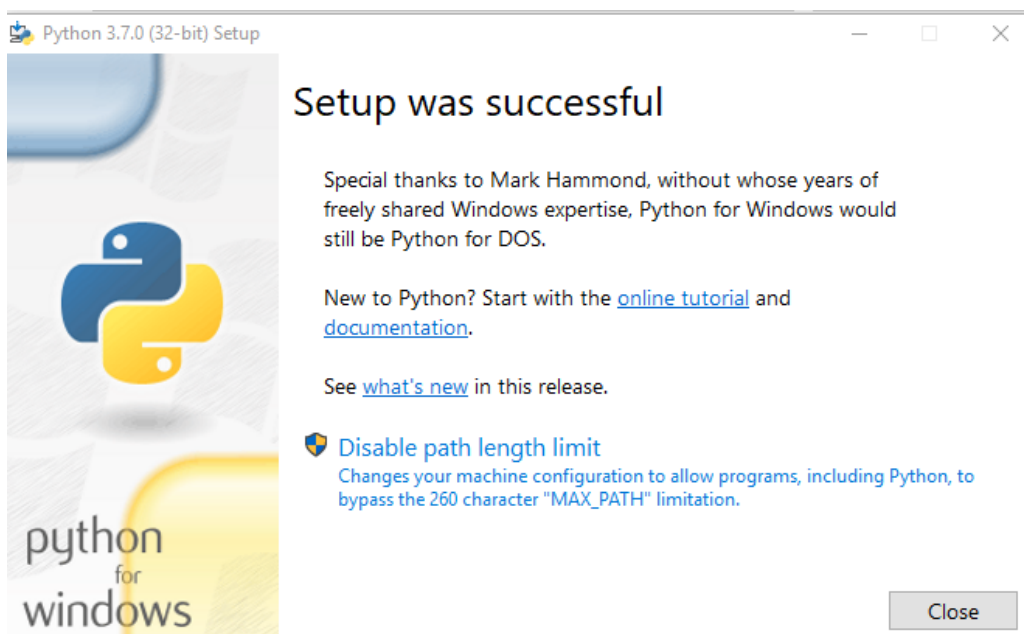
1. Tải và cài đặt Python

- tải tại đây: <https://www.python.org/downloads/windows/>

- khi cài đặt, nhớ check nút Add python... to PATH):

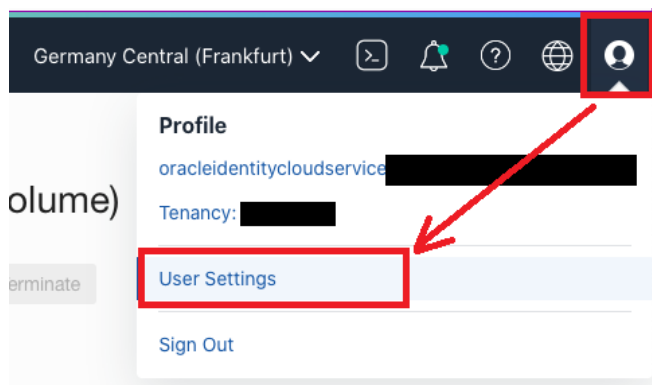


Select the “Disable path length limit”, this will allow Python to use long path names, after this you are done with the installation.

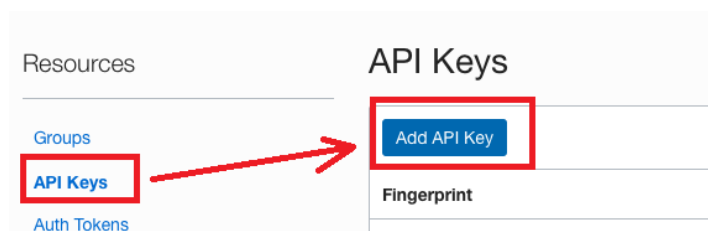


1. Generating API key

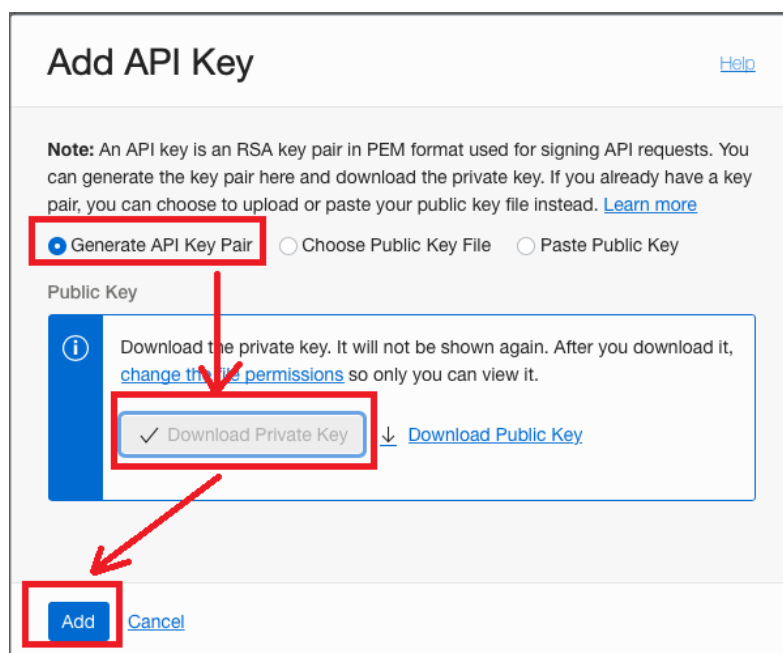
- After logging in to OCI Console, click profile icon and then "User Settings"



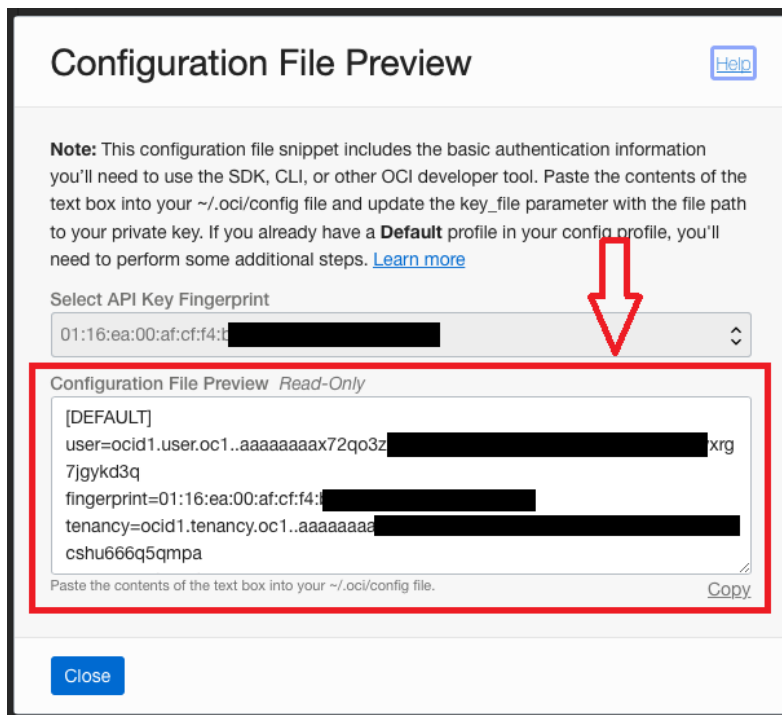
- Go to Resources -> API keys, click "Add API Key" button



- Make sure "Generate API Key Pair" radio button is selected, click "Download Private Key" and then "Add".



- Copy the contents from textarea and save it to file with a name "config". I put it together with *.pem file in newly created directory C:\oci_auto-main






- Cài đặt `pip install requests` và `pip install oci`

```
C:\oci_auto-main>pip install oci
Collecting oci
  Downloading oci-2.53.1-py2.py3-none-any.whl (12.2 MB)
    | 12.2 MB 1.7 MB/s
Collecting cryptography<=3.4.7,>=3.2.1
  Downloading cryptography-3.4.7-cp36-abi3-win_amd64.whl (1.6 MB)
    | 1.6 MB ...
Collecting pyOpenSSL<=19.1.0,>=17.5.0
  Downloading pyOpenSSL-19.1.0-py2.py3-none-any.whl (53 kB)
    | 53 kB 1.0 MB/s
Collecting python-dateutil<3.0.0,>=2.5.3
  Downloading python_dateutil-2.8.2-py2.py3-none-any.whl (247 kB)
    | 247 kB ...
Collecting circuitbreaker<2.0.0,>=1.3.1
  Downloading circuitbreaker-1.3.2.tar.gz (7.9 kB)
  Preparing metadata (setup.py) ... done
```

- Script gồm 3 file: config, oci_auto.py, oci_private_key.pem, tải tại đây:

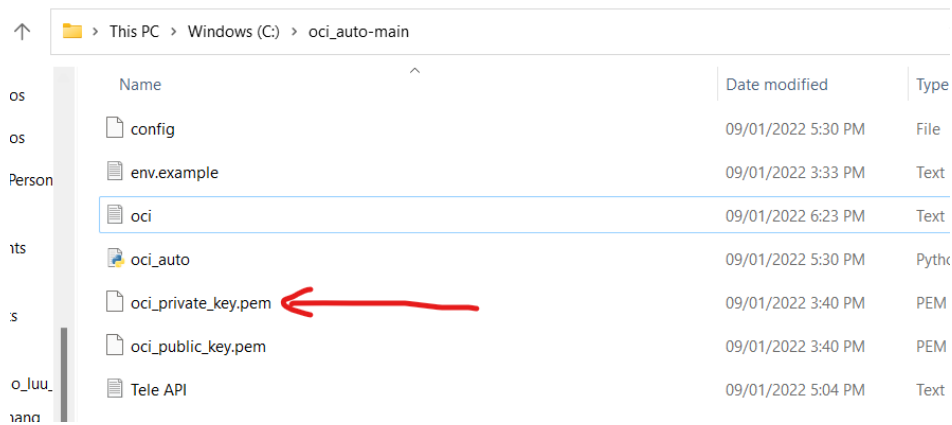
https://github.com/chacuavip10/oci_auto

 config	OCI > User setting > API Keys
 oci_auto.py	change file name
 oci_private_key.pem	Download key from OCI > User setting > API Keys

Trong đó:

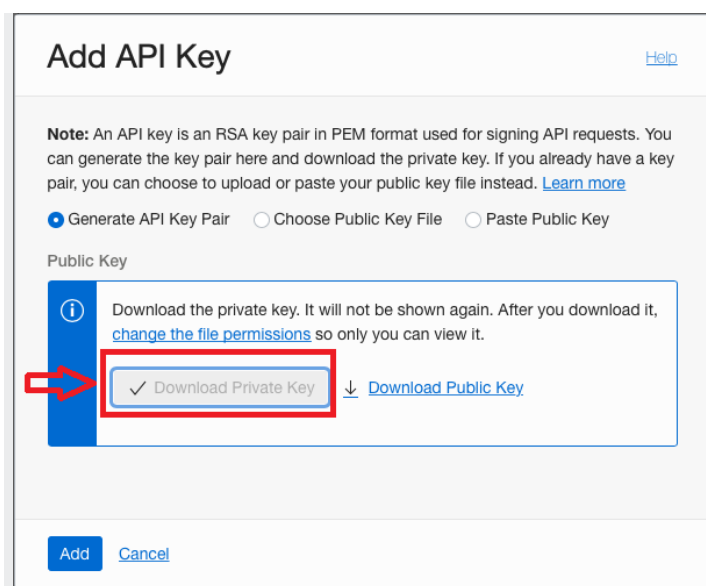
+ file config: là nội dung phần configuration file preview ở bước API trước

+ file oci_private_key.pem: là file tải về từ API key (Download private key), ghi đè hoặc đổi tên như file trong thư mục cho dễ nhận biết.



Name	Date modified	Type
config	09/01/2022 5:30 PM	File
env.example	09/01/2022 3:33 PM	Text
oci	09/01/2022 6:23 PM	Text
oci_auto	09/01/2022 5:30 PM	Python
oci_private_key.pem	09/01/2022 3:40 PM	PEM
oci_public_key.pem	09/01/2022 3:40 PM	PEM
Tele API	09/01/2022 5:04 PM	Text

+ file `oci_auto.py`: các tham số trong script python chính lấy theo hướng dẫn của github php



Add API Key [Help](#)

Note: An API key is an RSA key pair in PEM format used for signing API requests. You can generate the key pair here and download the private key. If you already have a key pair, you can choose to upload or paste your public key file instead. [Learn more](#)

☒ Generate API Key Pair
 ☐ Choose Public Key File
 ☐ Paste Public Key

Public Key

Download the private key. It will not be shown again. After you download it, [change the file permissions](#) so only you can view it.

☒ Download Private Key
 [Download Public Key](#)

+ file `oci_auto.py`: các tham số trong script python lấy theo hướng dẫn của github php

- Các tham số Instance cần thiết:

Tạo 1 instance mới từ cửa sổ OCI Console (Menu -> Compute -> Instances -> Create Instance)

Change image và shape như VM.Standard.A1.Flex "Always Free Eligible":

Create Compute Instance

Placement[Edit](#)

Availability Domain: AD-2 Always Free Eligible**Capacity Type:** On-demand capacity
Fault Domain: Let Oracle choose the best fault domain

Image and shape[Collapse](#)


A [shape](#) is a template that determines the number of CPUs, amount of memory, and other resources allocated to an instance. The image is the operating system that runs on top of the shape.

Image

Oracle Linux Cloud Developer 8
Image build: 2021.06.18-0

Change Image

Shape

 VM.Standard.A1.Flex Always Free Eligible
Virtual Machine, 4 core OCPU, 24 GB memory, 4 Gbps network bandwidth

Change Shape

ARMs can be created anywhere within your home region.

Điều chỉnh đoạn Networking, set "Do not assign a public IPv4 address". Nếu chưa có sẵn VNIC/subnet, hãy tạo VM.Standard.E2.1.Micro trước khi bắt đầu bước này.

Networking[Collapse](#)

[Networking](#) is how your instance connects to the internet and other resources in the Console. To make sure you can [connect to your instance](#), assign a public IP address to the instance.

Network

☒ Select existing virtual cloud network ☐ Create new virtual cloud network ☐ Enter subnet OCID

Virtual cloud network in **(root)** [\(Change Compartment\)](#)

vcn-

Subnet

☒ Select existing subnet ☐ Create new public subnet

Subnet in **petitprops (root)** [\(Change Compartment\)](#)

subnet- (Regional)

Public IP Address

☐ Assign a public IPv4 address ☒ Do not assign a public IPv4 address

[Show advanced options](#)

"Add SSH keys" bỏ qua cái này, chọn No SSH keys. Trước khi nhấn "Create"....

Create Compute Instance

Add SSH keys

Generate an [SSH key pair](#) to connect to the instance using SSH, or upload a public key that you already have.

☐ Generate a key pair for me ☐ Upload public key files (.pub) ☐ Paste public keys ☒ No SSH keys



If you don't provide SSH keys, you will not be able to connect to the instance using SSH.

Boot volume

Your [boot volume](#) is a detachable device that contains the image used to boot your compute instance.

☐ Specify a custom boot volume size

[Volume performance](#) varies with volume size. Default boot volume size: 50.0 GB

☒ Use in-transit encryption

[Encrypts data](#) in transit between the instance, the boot volume, and the block volumes.

☐ Encrypt this volume with a key that you manage

By default, Oracle manages the keys that encrypt this volume, but you can choose a key from a vault that you have access to if you want greater

[Learn more about managing your own encryption keys](#)

[Show advanced options](#)

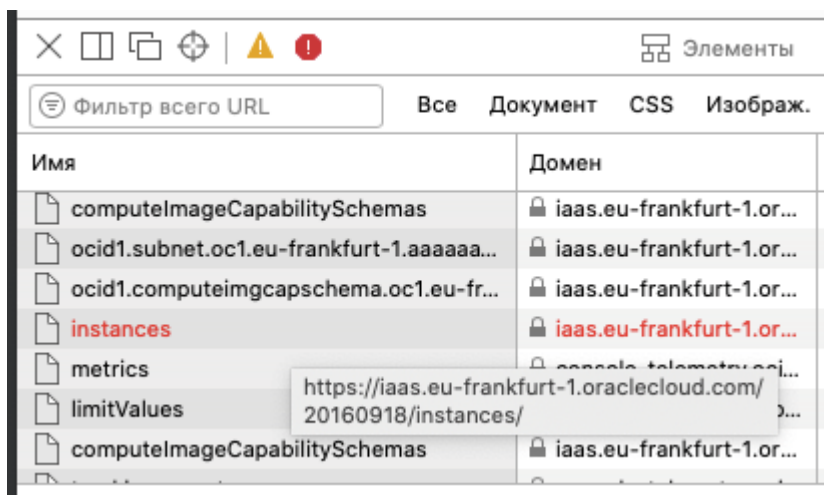
Create

Save as Stack

Cancel

...trên web, mở dev tools -> network tab. Nhấn nút "Create" và đợi cho tới khi dòng chữ báo lỗi "Out of capacity" xuất hiện. Tìm /instances API (dòng màu đỏ)

+ **Trên chrome: Ctrl + Shift + I (nhấn qua tab Network)**



+ **Trên Firefox: Ctrl + Shift + E (nhấn qua tab Network)**

Instances | Oracle Cloud Infrastr... | firefox dev tool network tab - 1 x +

← → ↻ 🏠 <https://cloud.oracle.com/compute/instances/create?region=ap-singapore-1>

Oracle Cloud G-010S-A

🔍 Your Free Trial has ended. You can continue to use Always Free resources. Unless you [upgrade](#), other resources will be removed, which might result in data loss.

☰ ORACLE Cloud Search for resources, services, and documentation

Create compute instance

[Show advanced options](#)

Out of capacity for shape VM.Standard.A1.Flex in availability domain jlc:AP-SINGAPORE-1-AD-1. If you specified a fault domain, try creating the instance without specifying a more about host capacity.

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🔍 Inspector 📄 Console 🛠️ Debugger ⬆️ Network {} Style Editor 🎧 Performance 🗄️ Memory 📁 Storage 🧑 Accessibility 🧩 Application

🗑️ Filter URLs

Status	Method	Domain	File	Initiator	Type	Transferred	Size	Headers
200	OPTIONS	iaas.ap-singapore-1.oraclecloud.com	/20160918/instances/	fetch	plain	1.46 kB	44 B	
500	POST	iaas.ap-singapore-1.oraclecloud.com	/20160918/instances/	vendors-main.589918...	json	688 B	69 B	POST https://iaas-
200	OPTIONS	iaas.ap-singapore-1.oraclecloud.com	a0f573d7-791c-4f53-98bd-f5b91556a8cd	fetch	plain	1.46 kB	44 B	
200	GET	iaas.ap-singapore-1.oraclecloud.com	a0f573d7-791c-4f53-98bd-f5b91556a8cd	vendors-main.589918...	json	2.38 kB	1.7 kB	Status Version Transferred Referrer Policy
200	GET	iaas.ap-singapore-1.oraclecloud.com	availablePlugins?compartmentId=ocid1.tenancy.oc1..aaaaaaa7x...	vendors-main.589918...	json	1.46 kB	87 B	▼ Response Header Access-Control
200	GET	iaas.ap-singapore-1.oraclecloud.com	availablePlugins?compartmentId=ocid1.tenancy.oc1..aaaaaaa7x...	vendors-main.589918...	json	1.46 kB	87 B	Access-Control
200	GET	iaas.ap-singapore-1.oraclecloud.com	availablePlugins?compartmentId=ocid1.tenancy.oc1..aaaaaaa7x...	vendors-main.589918...	json	1.46 kB	87 B	
200	GET	iaas.ap-singapore-1.oraclecloud.com	availablePlugins?compartmentId=ocid1.tenancy.oc1..aaaaaaa7x...	vendors-main.589918...	json	1.46 kB	87 B	

...và nhấn chuột phải vào dòng đó chọn -> copy as curl. Dán tạm nội dung này ra 1 file text.

Out of capacity for shape VM.Standard.A1.Flex in availability domain jlc:AP-SINGAPORE-1-AD-1. If you specified a fault domain, try creating the instance without specifying a more about host capacity.

[Terms of Use and Privacy](#) [Cookie Preferences](#)

🔍 Inspector 📄 Console 🛠️ Debugger ⬆️ Network {} Style Editor 🎧 Performance 🗄️ Memory

🗑️ Filter URLs

Status	Method	Domain	File	Initiator
200	OPTIONS	iaas.ap-singapore-1.oraclecloud.com	/20160918/instances/	fetch
500	POST	iaas.ap-singapore-1.oraclecloud.com	/20160918/instances/	vendors-main.589918...
200	OPTIONS	iaas.ap-singapore-1.oraclecloud.com	a0f573d7-791c-4f53-98bd-f5b91556a8cd	vendors-main.589918...
200	GET	iaas.ap-singapore-1.oraclecloud.com	a0f573d7-791c-4f53-98bd-f5b91556a8cd	vendors-main.589918...
200	GET	iaas.ap-singapore-1.oraclecloud.com	availablePlugins?compartmentId=ocid1.tenancy.oc1..aaaaaaa7x...	vendors-main.589918...
200	GET	iaas.ap-singapore-1.oraclecloud.com	availablePlugins?compartmentId=ocid1.tenancy.oc1..aaaaaaa7x...	vendors-main.589918...

Copy Save All As HAR Resend Copy URL Copy POST Data Copy as cURL (Windows)

Từ khóa tìm kiếm trong text của cURL	Nội dung tương ứng
compartmentId	ocid1.tenancy.oc1..aaaaaaa7x.....
availabilityDomain	jlc:AP-SINGAPORE-1-AD-1
imageId	ocid1.image.oc1.ap-singapore-1.aaaaaaaab2ljo....xxx
subnet_id	ocid1.subnet.oc1.ap-singapore-1.aaaaaaaak.....

Từ thông tin nội dung trong file text cURL ở bước trước, chỉnh sửa nội dung file `oci_auto.py` tương ứng như sau:

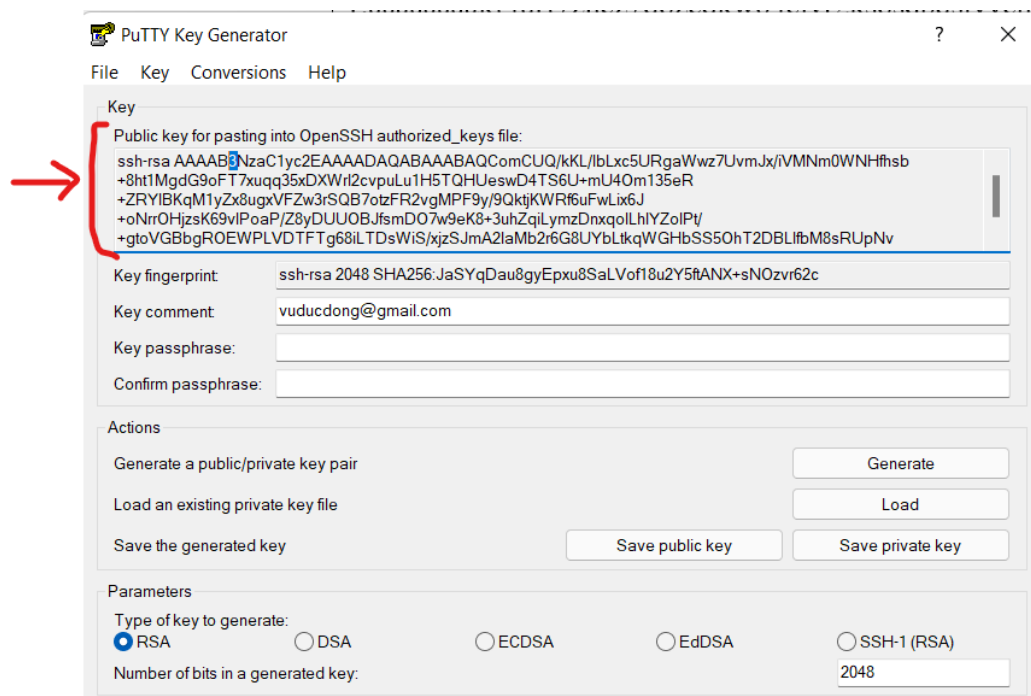
+ `ocpus = 4` (số CPU của VPS cần tạo, bạn cần thay vào nếu muốn tạo các mức 1, 2 hoặc 3, nếu như trước đó đã tạo sẵn VPS nào đó rồi)

+ `instance_display_name = 'ubuntu-sg-oci'` //tùy chọn tên theo ý thích

```
##### SCRIPT SETTING, CHANGE THIS #####
# Script Setting, change this (Each VM.Standard.A1.Flex ocpus = 6 GB memroy)
# instance_type = "VM.Standard.A1.Flex"
# OCI API_KEY and other parameter: https://github.com/hitrov/oci-arm-host-capacity (intercept request from web console)
ocpus = 4
memory_in_gbs = ocpus*6
wait_s_for_retry = 30
instance_display_name = 'ubuntu-sg-oci'
compartment_id = 'ocidl.tenancy.ocl1.*****'
domain = "rhNU:AP-*****" # availability_domain
image_id = "ocidl.image.ocl.ap-singapore-1.*****"
subnet_id = 'ocidl.subnet.ocl.ap-singapore-1.*****'
```

+ `ssh_key = "ssh-rsa *****"`

Tạo ssh key từ PuttyGen, rồi thay vào tương ứng



+ điền `bot_api = '*****'` và `chat_id = '*****'` theo hướng dẫn để nhận thông báo khi tạo thành công.

```
# Telegram setting
# https://medium.com/@ManHay_Hong/how-to-create-a-telegram-bot-and-send-messages-with-python-4cf314d9fa3e
# Create bot with BotFather, get the API key
# Start the bot via conversation/chat with command /start
# Get chat id: https://api.telegram.org/bot<yourtoken>/getUpdates if not get chat_id, chat some thing to the bot and retry
# Start a chat with your bot, add [get_id_bot](https://telegram.me/get_id_bot), and issue the '/my_id' command
session = requests.Session()
bot_api = '*****'
chat_id = '*****'
```

Mở ứng dụng Telegram, tìm BotFather, rồi nhấn nút Start


```

:\oci_auto-main>python oci_auto.py
INFO] 2022-01-09 17:26:07,414 - #####
INFO] 2022-01-09 17:26:07,414 - Script to spawn VM.Standard.A1.Flex instance
INFO] 2022-01-09 17:26:07,414 - Start spawning instance VM.Standard.A1.Flex - 4 ocpus - 24 GB
INFO] 2022-01-09 17:26:07,414 - Loading OCI config
INFO] 2022-01-09 17:26:07,414 - Initialize service client with default config file
INFO] 2022-01-09 17:26:07,613 - Instance to create: VM.Standard.A1.Flex - 4 ocpus - 24 GB
INFO] 2022-01-09 17:26:07,613 - Check current instances in account
INFO] 2022-01-09 17:26:07,615 - Note: Free upto 4xVM.Standard.A1.Flex instance, total of 4 ocpus and 24 GB of memory
INFO] 2022-01-09 17:26:08,541 - 3 instance(s) found!
INFO] 2022-01-09 17:26:08,541 - instance-20211208-0654 - VM.Standard.A1.Flex - 2 ocpu(s) - 12.0 GB(s) | State: RUNNING
INFO] 2022-01-09 17:26:08,541 - instance-20211208-0655 - VM.Standard.A1.Flex - 1 ocpu(s) - 6.0 GB(s) | State: TERMINATED
INFO] 2022-01-09 17:26:08,541 - instance-20211208-0656 - VM.Standard.A1.Flex - 1 ocpu(s) - 6.0 GB(s) | State: TERMINATED
INFO] 2022-01-09 17:26:08,541 - Current: 1 active VM.Standard.A1.Flex instance(s) (including RUNNING OR STOPPED)
INFO] 2022-01-09 17:26:08,541 - Total ocpus: 2 - Total memory: 12 (GB) || Free 2 ocpus - Free memory: 12 (GB)
CRITICAL] 2022-01-09 17:26:08,541 - Total maximum resource exceed free tier limit (Over 4 ocpus/24GB total). **SCRIPT STOPPED**

:\oci_auto-main>python oci_auto.py
INFO] 2022-01-09 17:30:18,265 - #####
INFO] 2022-01-09 17:30:18,265 - Script to spawn VM.Standard.A1.Flex instance
INFO] 2022-01-09 17:30:18,265 - Start spawning instance VM.Standard.A1.Flex - 2 ocpus - 12 GB
INFO] 2022-01-09 17:30:18,281 - Loading OCI config
INFO] 2022-01-09 17:30:18,281 - Initialize service client with default config file
INFO] 2022-01-09 17:30:18,390 - Instance to create: VM.Standard.A1.Flex - 2 ocpus - 12 GB
INFO] 2022-01-09 17:30:18,390 - Check current instances in account
INFO] 2022-01-09 17:30:18,391 - Note: Free upto 4xVM.Standard.A1.Flex instance, total of 4 ocpus and 24 GB of memory
INFO] 2022-01-09 17:30:19,224 - 3 instance(s) found!
INFO] 2022-01-09 17:30:19,224 - instance-20211208-0654 - VM.Standard.A1.Flex - 2 ocpu(s) - 12.0 GB(s) | State: RUNNING
INFO] 2022-01-09 17:30:19,224 - instance-20211208-0655 - VM.Standard.A1.Flex - 1 ocpu(s) - 6.0 GB(s) | State: TERMINATED
INFO] 2022-01-09 17:30:19,224 - instance-20211208-0656 - VM.Standard.A1.Flex - 1 ocpu(s) - 6.0 GB(s) | State: TERMINATED
INFO] 2022-01-09 17:30:19,224 - Current: 1 active VM.Standard.A1.Flex instance(s) (including RUNNING OR STOPPED)
INFO] 2022-01-09 17:30:19,224 - Total ocpus: 2 - Total memory: 12 (GB) || Free 2 ocpus - Free memory: 12 (GB)
INFO] 2022-01-09 17:30:19,224 - Precheck pass! Create new instance VM.Standard.A1.Flex: 2 opus - 12 GB
INFO] 2022-01-09 17:30:20,194 - Out of host capacity. Retry in 30s
INFO] 2022-01-09 17:30:51,405 - Out of host capacity. Retry in 30s

```

Sau khi tạo thành công VPS, thì cập nhật lại ssh key (nếu chưa đổi trong file oci_auto.py và cần assign public ip để ssh từ xa)

Resources

Metrics
Attached Block Volumes
Attached VNICS
Boot Volume
Console Connection

Attached VNICS

A [virtual network interface card \(VNIC\)](#) lets an instance connect to a virtual cloud network (VCN) and determines how the instance connects with endpoints inside and outside the VCN.

Create VNIC

Name	Subnet or VLAN ⁽ⁱ⁾	State	FQDN ⁽ⁱ⁾	VLAN Tag	MAC Address
Instance-VNIC (Primary)	Subnet - subnet-1549	● Attached	Instance-2... Show Copy		02:00:17 ⋮

Resources

Metrics
IPv4 Addresses

IPv4 Addresses

Assign Secondary Private IP Address

Private IP Address	Public IP Address	Fully Qualified Domain Name	Assigned
10.0.0.221 (Primary IP)	(Not Assigned)	Instance-2... Show Copy	Sun, Jul 11

Copy Private IP OC
Edit
View Tags

Chọn ephemeral và click "Update"

Edit Private IP Address

PRIVATE IP ADDRESS *READ-ONLY*

10.0.0.221

Must be from 10.0.0.2 to 10.0.0.254. Cannot be in current use.

HOSTNAME *OPTIONAL*

instance-

No spaces. Only letters, numbers, and hyphens. 63 characters max.

FQDN ⓘ: instance- .subnet .vcr .oraclevcn.com

PUBLIC IP TYPE

☐ NO PUBLIC IP

☒ EPHEMERAL PUBLIC IP

The public IP's lifetime is bound to the lifetime of the private IP. You can unassign it from this private IP but not reassign it elsewhere. [Learn more.](#)

☐ RESERVED PUBLIC IP

You control the public IP's lifetime. You can unassign it or reassign it to another private IP in the same region. [Learn more.](#)

Ephemeral Public IP Address:

EPHEMERAL PUBLIC IP NAME *OPTIONAL*

Update

[Cancel](#)