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RA: 324155609

1) Iniciando o Lab:

```
Start Lab

Region: us-east-1
Lab ID: arn:aws:cloudformation:us-east-1:827177776496:stack/c183209a4717025112032108t1w827177776496/4d9ec5c0-caf3-11f0-b11f-120777143c8f
Creation Time: 2025-11-26T10:11:17-0800

Start session at: 2025-11-26 10:11:19
Remaining session time: 03:00:00(180 minutes)

Lab status: in creation
```

2) Criando nova instância:

Name	ID da Instância	Estado da Inst...	Tipo de inst...	Verificação de stal	Status do alarm...	Zona de dispon...	DNS IPv4 público	Endereço IP...	IP elástico	IPs IPv6	Monito
<input checked="" type="checkbox"/> vmpython	i-04d5c3801cd2fb82a	Executando	t2.micro	2/2 verificações a	Exibir alarms +	us-east-1d	ec2-13-217-228-19.co...	13.217.228.19	-	-	disabled
<input type="checkbox"/> Bastion Host	i-08a771b3155f570c2	Executando	t2.micro	2/2 verificações a	Exibir alarms +	us-east-1a	ec2-54-239-45-89.com...	34.239.45.89	-	-	disabled

3) Conectado na instância:

```
C:\Users\tiago\Downloads>ssh -i "Linux-202i.1.pem" ec2-user@ec2-13-217-228-19.compute-1.amazonaws.com
  _#
 /_ #####
 ~ \#####
 ~ \###|
 ~ \#/ --- https://aws.amazon.com/linux/amazon-linux-2023
 ~ V~' '-->
 ~ /
 ~ .- /-
 / /-
 _/m/
 [ec2-user@ip-172-31-28-79 ~]$ |
```

4) Docker instalado:

```
Running scriptlet: container-selinux-4:2.242.0-1.amzn2023.noarch                                         10/11
Running scriptlet: docker-25.0.13-1.amzn2023.0.2.x86_64                                         11/11
Installing      : docker-25.0.13-1.amzn2023.0.2.x86_64                                         11/11
Running scriptlet: docker-25.0.13-1.amzn2023.0.2.x86_64                                         11/11
Created symlink /etc/systemd/system/sockets.target.wants/docker.socket → /usr/lib/systemd/system/docker.socket.

Running scriptlet: container-selinux-4:2.242.0-1.amzn2023.noarch                                         11/11
Running scriptlet: docker-25.0.13-1.amzn2023.0.2.x86_64                                         11/11
Verifying       : container-selinux-4:2.242.0-1.amzn2023.noarch                                         1/11
Verifying       : containerd-2.1.4-1.amzn2023.0.2.x86_64                                         2/11
Verifying       : docker-25.0.13-1.amzn2023.0.2.x86_64                                         3/11
Verifying       : iptables-libs-1.8.8-3.amzn2023.0.2.x86_64                                         4/11
Verifying       : iptables-nft-1.8.8-3.amzn2023.0.2.x86_64                                         5/11
Verifying       : libcgroup-3.0-1.amzn2023.0.1.x86_64                                         6/11
Verifying       : libnetfilter_conntrack-1.0.8-2.amzn2023.0.2.x86_64                                         7/11
Verifying       : libnftnl-1.0.1-19.amzn2023.0.2.x86_64                                         8/11
Verifying       : libnftnl-1.2.2-2.amzn2023.0.2.x86_64                                         9/11
Verifying       : pigz-2.5-1.amzn2023.0.3.x86_64                                         10/11
Verifying       : runc-1.3.3-2.amzn2023.0.1.x86_64                                         11/11

Installed:
  container-selinux-4:2.242.0-1.amzn2023.noarch                                         containerd-2.1.4-1.amzn2023.0.2.x86_64
  docker-25.0.13-1.amzn2023.0.2.x86_64                                         iptables-libs-1.8.8-3.amzn2023.0.2.x86_64
  iptables-nft-1.8.8-3.amzn2023.0.2.x86_64                                         libcgroup-3.0-1.amzn2023.0.1.x86_64
  libnetfilter_conntrack-1.0.8-2.amzn2023.0.2.x86_64                                         libnftnl-1.0.1-19.amzn2023.0.2.x86_64
  libnftnl-1.2.2-2.amzn2023.0.2.x86_64                                         pigz-2.5-1.amzn2023.0.3.x86_64
  runc-1.3.3-2.amzn2023.0.1.x86_64

Complete!
[ec2-user@ip-172-31-28-79 ~]$ |
```

5) Startando o docker:

```
[ec2-user@ip-172-31-28-79 ~]$ sudo service docker start
Redirecting to /bin/systemctl start docker.service
[ec2-user@ip-172-31-28-79 ~]$ |
```

6) Instalando python e frameworks:

```
Transaction Summary
=====
Install 2 Packages

Total download size: 1.9 M
Installed size: 11 M
Is this ok [y/N]: y
Downloading Packages:
(1/2): libcrypt-compat-4.4.33-7.amzn2023.x86_64.rpm           1.9 MB/s |  92 kB   00:00
(2/2): python3-pip-21.3.1-2.amzn2023.0.14.noarch.rpm          22 MB/s | 1.8 MB   00:00
-----
Total                                         17 MB/s | 1.9 MB   00:00

Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing :                                                 1/1
  Installing : libcrypt-compat-4.4.33-7.amzn2023.x86_64          1/2
  Installing : python3-pip-21.3.1-2.amzn2023.0.14.noarch        2/2
  Running scriptlet: python3-pip-21.3.1-2.amzn2023.0.14.noarch 2/2
  Verifying   : libcrypt-compat-4.4.33-7.amzn2023.x86_64          1/2
  Verifying   : python3-pip-21.3.1-2.amzn2023.0.14.noarch        2/2

Installed:
  libcrypt-compat-4.4.33-7.amzn2023.x86_64                  python3-pip-21.3.1-2.amzn2023.0.14.noarch

Complete!
```

```
Collecting markupsafe>=2.1.1
  Downloading markupsafe-3.0.3-cp39-cp39-manylinux2014_x86_64.manylinux_2_17_x86_64.manylinux_2_28_x86_64.whl (20 kB)
Collecting werkzeug>=3.1.0
  Downloading werkzeug-3.1.3-py3-none-any.whl (224 kB)
    ██████████ | 224 kB 61.1 MB/s
Collecting itsdangerous>=2.2.0
  Downloading itsdangerous-2.2.0-py3-none-any.whl (16 kB)
Collecting click>=8.1.3
  Downloading click-8.1.8-py3-none-any.whl (98 kB)
    ██████████ | 98 kB 13.0 MB/s
Collecting importlib-metadata>=3.6.0
  Downloading importlib_metadata-8.7.0-py3-none-any.whl (27 kB)
Collecting blinker>=1.9.0
  Downloading blinker-1.9.0-py3-none-any.whl (8.5 kB)
Collecting zipp>=3.20
  Downloading zipp-3.23.0-py3-none-any.whl (10 kB)
Installing collected packages: zipp, markupsafe, werkzeug, jinja2, itsdangerous, importlib-metadata, click, blinker, flask
Attempting uninstall: markupsafe
  Found existing installation: MarkupSafe 1.1.1
  Uninstalling MarkupSafe-1.1.1:
    Successfully uninstalled MarkupSafe-1.1.1
Attempting uninstall: jinja2
  Found existing installation: Jinja2 2.11.3
  Uninstalling Jinja2-2.11.3:
    Successfully uninstalled Jinja2-2.11.3
Successfully installed blinker-1.9.0 click-8.1.8 flask-3.1.2 importlib-metadata-8.7.0 itsdangerous-2.2.0 jinja2-3.1.6 markupsafe-3.0.3 werkzeug-3.1.3 zipp-3.23.0
```

```
[ec2-user@ip-172-31-28-79 ~]$ sudo pip3 install gunicorn
Collecting gunicorn
  Downloading gunicorn-23.0.0-py3-none-any.whl (85 kB)
    ██████████ | 85 kB 5.7 MB/s
Collecting packaging
  Downloading packaging-25.0-py3-none-any.whl (66 kB)
    ██████████ | 66 kB 8.9 MB/s
Installing collected packages: packaging, gunicorn
Successfully installed gunicorn-23.0.0 packaging-25.0
```

7) Criação do diretório API:

```
[ec2-user@ip-172-31-28-79 ~]$ mkdir projetos
[ec2-user@ip-172-31-28-79 ~]$ cd projetos
[ec2-user@ip-172-31-28-79 projetos]$ mkdir api
[ec2-user@ip-172-31-28-79 projetos]$ cd api
[ec2-user@ip-172-31-28-79 api]$ |
```

8) Colando e salvando o código em [main.py](#):



The screenshot shows a terminal window titled "GNU nano 8.3" with the file "main.py" open. The code in the editor is:

```
from flask import Flask
app = Flask(__name__)
@app.route('/api', methods=['GET'])
def handler():
    return 'Esta é a nossa API', 200
if __name__ == "__main__":
    app.run(host="0.0.0.0", port=int("5000"), debug=True)
```

At the bottom of the terminal window, there is a menu bar with various keyboard shortcuts for navigating and modifying the file.

9) Modificando o requirements.txt:



The screenshot shows a terminal window titled "GNU nano 8.3" with the file "requirements.txt" open. The content of the file is:

```
click==8.1.8
docutils==0.16
Flask==3.1.2
gunicorn==23.0.0
importlib_metadata==8.7.0
itsdangerous==2.2.0
Jinja2==3.1.6
lockfile==0.12.2
MarkupSafe==3.0.3
PySocks==1.7.1
python-daemon==2.3.0
werkzeug==3.1.3
zipp==3.23.0
```

At the bottom of the terminal window, there is a menu bar with various keyboard shortcuts for navigating and modifying the file.

10) Criado o arquivo dockerfile:



```
ec2-user@ip-172-31-28-79:~/ | + - x
GNU nano 8.3                               dockerfile
FROM python:3
COPY . /work
WORKDIR /work
EXPOSE 5000
RUN pip3 install --no-cache-dir -r requirements.txt
CMD gunicorn --workers 2 --bind 0.0.0.0:5000 main:app

[ Wrote 6 lines ]
^G Help      ^O Write Out    ^F Where Is     ^K Cut          ^T Execute     ^C Location   M-U Undo
^X Exit      ^R Read File    ^\ Replace      ^U Paste        ^J Justify     ^V Go To Line M-E Redo
M-A Set Mark M-6 Copy
```

11) Concluido a build do docker:

```
>> => transferring context: 2B                                         0.0s
>> [internal] load build context                                     0.0s
>> => transferring context: 8908                                     0.0s
>> [1/4] FROM docker.io/library/python:3@sha256:edf6433343f65f94707985869aeaafe8beadaeae11c4bc02068fcfa52dce28d 24.4s
>> => resolve docker.io/library/python:3@sha256:edf6433343f65f94707985869aeaafe8beadaeae11c4bc02068fcfa52dce28dd 0.0s
>> => sha256:edf6433343f65f94707985869aeaafe8beadaeae11c4bc02068fcfa52dce28dd 10.95kB / 10.95kB 0.0s
>> => sha256:936d907e9a6c5749833463d200ff283faacf6d603d458892d2e52215918db5d 6.49kB / 6.49kB 0.0s
>> => sha256:53c88f1dfeb79b2f207f7f1a03a45e0dc5ed208b9f496de16b98f81189dc0392 49.29MB / 49.29MB 1.4s
>> => sha256:ff2e6e687b6ce78177a4cac678dd533c8e72b97469f030783b6bb491f681fd4c 67.78MB / 67.78MB 2.3s
>> => sha256:da6cc0443346c30914c68d265b8dba465cb85708c572d97846122fd036edc003 2.32kB / 2.32kB 0.0s
>> => sha256:ea668646f447b181fe300ae6756351b6167aa2578be449b167ba79ed4926798 25.61MB / 25.61MB 0.9s
>> => sha256:7c40a3fafe768445154c32b7b35d5535b201d3bd04f94a0c408f8e98f9ed98ad6 235.98MB / 235.98MB 5.7s
>> => extracting sha256:53c88f1dfeb79b2f207f7f1a03a45e0dc5ed208b9f496de16b98f81189dc0392 4.7s
>> => sha256:85694cfea2c4df425b9947a149670940f0625182653d556ed9c541e0cb1f292 6.08MB / 6.08MB 1.7s
>> => sha256:d7d82d76b698080549e693e4b53493dc29835ae4ac836fb2aa2d6ef513e9008c 29.22MB / 29.22MB 2.9s
>> => sha256:50475ada0cb12c5af6c0c7c3188df0354108a5096b87a1ba0ca5a34e1150d3 250B / 250B 2.4s
>> => extracting sha256:ea668646f447b181fe300ae6756351b6167aa2578be449b167ba79ed4926798 1.1s
>> => extracting sha256:f22e6e687b6ce78177a4cac678dd533c8e72b97469f030783b6bb491f681fd4c 3.6s
>> => extracting sha256:7c40a3fafe768445154c32b7b35d5535b201d3bd04f94a0c408f8e98f9ed98ad6 11.0s
>> => extracting sha256:85694cfea2c4df425b9947a149670940f0625182653d556ed9c541e0cb1f292 0.4s
>> => extracting sha256:d7d82d76b698080549e693e4b53493dc29835ae4ac836fb2aa2d6ef513e9008c 1.3s
>> => extracting sha256:50475ada0cb12c5af6c0c7c3188df0354108a5096b87a1ba0ca5a34e1150d3 0.0s
>> [2/4] COPY . /work                                              0.0s
>> [3/4] WORKDIR /work                                           0.0s
>> [4/4] RUN pip3 install --no-cache-dir -r requirements.txt   6.0s
>> => exporting to image                                         0.4s
>> => exporting layers                                         0.4s
>> => writing image sha256:057f1337b827821c624d2c10fdfaf3e691aa33ff0e11afb9884eab11bcd2e84 0.0s
>> => naming to docker.io/library/my.api                         0.0s
[ec2-user@ip-172-31-28-79 api]$ |
```

12) Executando container:

```
[ec2-user@ip-172-31-28-79 api]$ sudo docker run --name main -p 5000:5000 my-api
[2025-11-26 20:14:37 +0000] [8] [INFO] Starting gunicorn 23.0.0
[2025-11-26 20:14:37 +0000] [8] [INFO] Listening at: http://0.0.0.0:5000 (8)
[2025-11-26 20:14:37 +0000] [8] [INFO] Using worker: sync
[2025-11-26 20:14:37 +0000] [9] [INFO] Booting worker with pid: 9
[2025-11-26 20:14:37 +0000] [10] [INFO] Booting worker with pid: 10
|
```