

launch_ec2.py •

DevelopingOnAWS > launch_ec2.py

```
1  import boto3
2  import logging
3
4  def create_ec2_instance():
5      """
6      This program uses a Python function and boto3 to create an EC2 instance with the name ec2-created-by-python.
7      - Provide an on Linux 2 AMI
8      - Use t3.micro instance type
9      - Use best practices, logging handle exception, us variables, use main, doc strings etc.
10
11      """
12
13      # Configure logging
14      logging.basicConfig(level=logging.INFO, format='%(asctime)s - %(levelname)s - %(message)s')
15
16      # Define constants
17      AMI_ID = 'ami-0166fe664262f664c' # Amazon Linux 2 AMI ID for your N. Virginia region
18      INSTANCE_TYPE = 't3.micro'
19      INSTANCE_NAME = 'ec2-created-by-python'
20
21  def create_ec2_instance():
22      """
23      Creates an EC2 instance using the specified parameters.
24      """
25      ec2_client = boto3.client('ec2')
26      try:
27          logging.info("Creating EC2 instance...")
28          response = ec2_client.run_instances([
29              ImageId=AMI_ID,
30              InstanceType=INSTANCE_TYPE,
31              MinCount=1,
32              MaxCount=1,
33              TagSpecifications=[
34                  {
35                      'ResourceType': 'instance',
36                      'Tags': [
37                          {'Key': 'Name', 'Value': INSTANCE_NAME}
38                      ]
39                  }
40              ]
41          )
42          instance_id = response['Instances'][0]['InstanceId']
43          logging.info(f"EC2 instance created successfully with Instance ID: {instance_id}")
44          return instance_id
45      except Exception as e:
46          logging.error(f"An error occurred while creating the EC2 instance: {e}")
47          return None
48
49  def main():
50      """
51      Main function to create an EC2 instance.
52      """
53      instance_id = create_ec2_instance()
54      if instance_id:
55          logging.info(f"Instance {instance_id} is up and running!")
56
57  if __name__ == "__main__":
58      main()
```

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

Michael's-iMac:DevelopingOnAWS michaelbullock$ python3 launch_ec2.py
2024-11-18 22:36:31,766 - INFO - Found credentials in shared credentials file: ~/.aws/credentials
2024-11-18 22:36:32,029 - INFO - Creating EC2 instance...
2024-11-18 22:36:33,333 - INFO - EC2 instance created successfully with Instance ID: i-0df43663d8412c10e
2024-11-18 22:36:33,334 - INFO - Instance i-0df43663d8412c10e is up and running!
```

← → ↺

🔒 https://us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#instances:v=3;\$case=tags:true;client=false;\$regex=tags:false;client=false

🌟 ⚙️ 📄 📌 🏠 ☰

aws Services 🔍 Search [Option+S]

📌 ⚙️ 🔔 ⚙️ ⚙️ N. Virginia mbcs_devopts

Dashboard ×

EC2 Global View

Events

▼ Instances

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Instances (1/1) info

Last updated 1 minute ago

Connect

Instance state ▼

Actions ▼

Launch instances ▼

🔍

🔍 Find Instance by attribute or tag (case-sensitive)

All states ▼

< 1 > ⚙️ 🖨️

✓	Name ↗	Instance ID	Instance state ▼	Instance type ▼	Status check	Alarm status	Availability Zone ▼	Public IPv4 DNS	Public IP
✓	ec2-created-by-python	i-0df43663d8412c10e	🟢 Running 🔍 🔍	t3.micro	🔄 Initializing	View alarms +	us-east-1c	ec2-54-81-48-4.comput...	54.81...