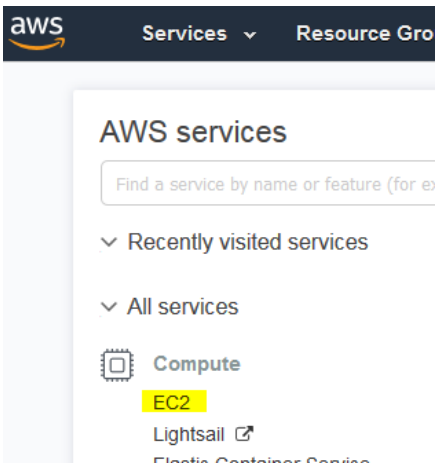
UNIPI Computer Engineering Lecture - 25th October 2018

Amazon AWS EC2 Management Hands-on

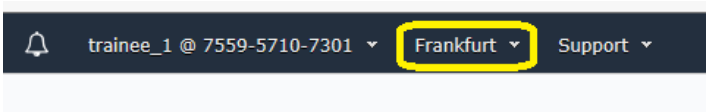
Exercise 1: Create an EC2 machine instance.

1) Go to EC2 Console Dashboard

Click on the “EC2” link available into the “All services” section:

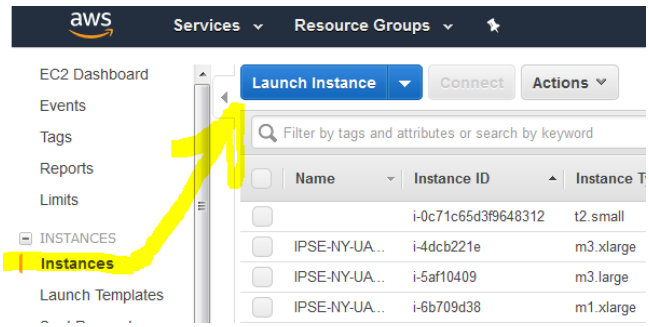


2) Select the “Frankfurt” region



3) Launch an EC2 machine instance

Click on the "Launch Instance" link:



- EC2 Configuration: Step 1

Choose "Amazon Linux AMI 2018.03.0 (HVM), SSD Volume Type"

Click on “Select”

- EC2 Configuration: Step 2

Choose "t2.small" or "t2.medium"

Click on "Next: configure Instance Details"

- EC2 Configuration: Step 3

Set the field “VPC”: “training_lab_vpc”

Set the field “Subnet”: “training_lab_subnet_eu-central-1a"

Set the field ”Auto-assign Public IP”: "Enable"

Click on "Next: Add Storage"

- EC2 Configuration: Step4

Click on "Next: Add Tags"

- EC2 Configuration: Step 5

Set the field “Key”: “billing-code”

Set the field “Value”: “trainee_<identifier>”

Click on "Next: Configure Security Group"

- EC2 Configuration - Step 6

Select an existing security group: "training_lab_sec_group"

Click on "Review and Launch"

- EC2 Configuration - Step 7

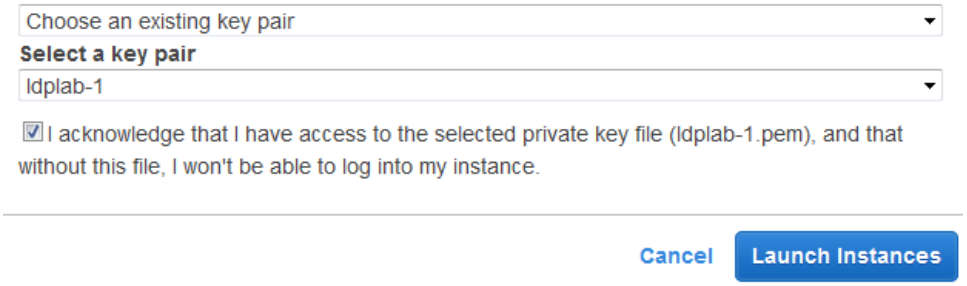
(Ignore the warning on “IAM role”, due to user permissions)

Click on “Launch”

Select an existing key pair: "Choose an existing key pair"

Select a key pair: “trainee_<identifier>”

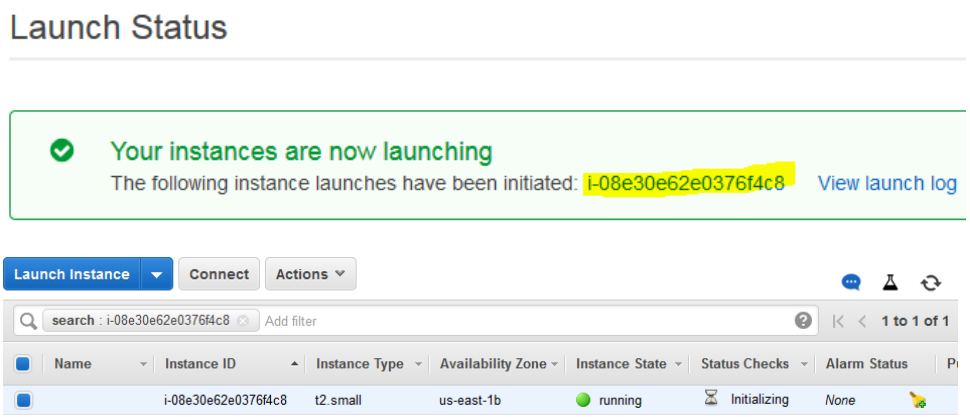
Click “I acknowledge that I have access...”:



Click on “Launch Instances”

4) Monitor the status of the launched EC2 instance

Click on the instance id shown into the “Launch Status” web page:

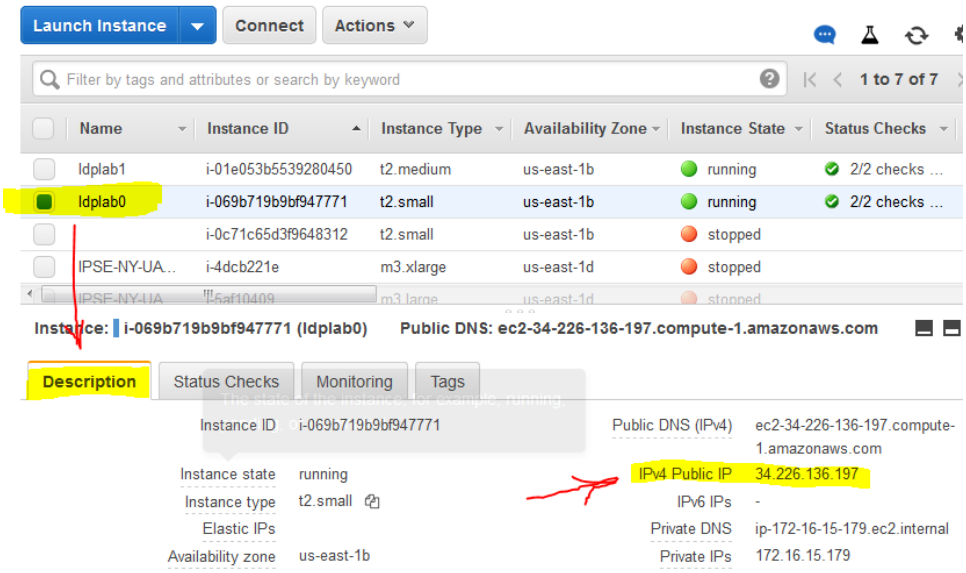


Exercise 2: Establish an SSH connection to the EC2 instance.

1) Retrieve the public IP address of the running EC2 instance.

Find your EC2 instance into the AWS EC2 console and click on it.

Below the instances list you will see a window with multiple tabs. Click on the "**Description"** tab and retrieve the "**IPv4 Public IP**" address.



2) Retrieve your SSH private key.

Your SSH private key is available for download into your S3 folder, as "id_rsa" file.

3) Connect to the EC2 instance via SSH connection.

Linux environment:

- chmod 400 id_rsa
- $ ssh -i <path-to-your-private-ssh-key> ec2-user@<ec2-public-ip-address>

Uploading files to remote machine:

- scp -C -i ./id_rsa <my_file> ec2-user@<ec2-public-ip-address>:/home/ec2-user

Windows environment:

A free client is MobaXterm (https://mobaxterm.mobatek.net/download-home-edition.html)

- Select Session – SSH
- Remote host: <ec2-public-ip-address>
- Username: ec2-user
- Advanced SSH Settings – Use Private key: <path-to-your-private-key>

- Ok to complete Session Settings and start the SSH connection

Uploading files to remote machine: MobaXterm provides automatically a sftp connection.

Exercise 3: Run a web application into the EC2 instance

1) Download locally the “run_2048_game.sh” script available into the S3 bucket

2) Upload the script file to the ec2-machine

3) Enable execution of the script file

$ chmod +x run_2048_game.sh

4) Execute the script file

$ ./run_2048_game.sh

5) Play the game by using your web browser accessing to http://<public_ip_of_ec2_instance>