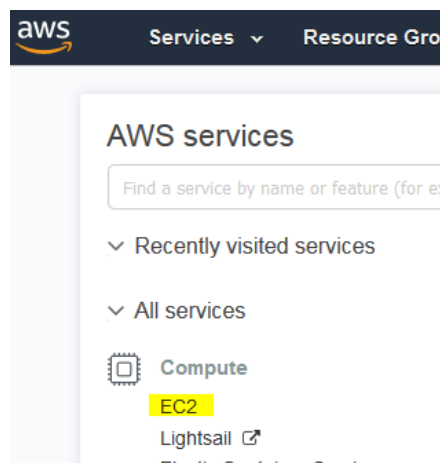


Amazon AWS EC2 Management Hands-on

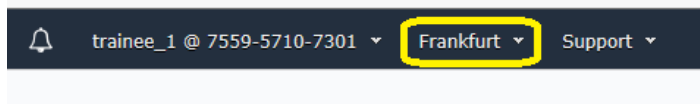
Exercise 1: Create an EC2 machine instance.

1) Go to EC2 Console Dashboard

Click on the "EC2" link available into the "All services" section:

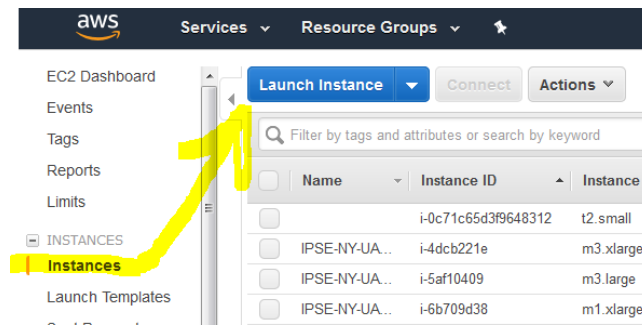


2) Select the "Frankfurt" region



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...”:

Choose an existing key pair

Select a key pair

Idplab-1

☒ I acknowledge that I have access to the selected private key file (Idplab-1.pem), and that without this file, I won't be able to log into my instance.

Cancel

Launch Instances

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:

Launch Status

✓

Your instances are now launching

The following instance launches have been initiated: **i-08e30e62e0376f4c8** [View launch log](#)

Launch Instance

Connect

Actions

...

...

...

search : i-08e30e62e0376f4c8

Add filter

?

<

<

1 to 1 of 1

	Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Pi
		i-08e30e62e0376f4c8	t2.small	us-east-1b	running	Initializing	None	

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.

The screenshot shows the AWS Management Console interface. At the top, there are buttons for 'Launch Instance', 'Connect', and 'Actions'. Below these is a search bar and a table of EC2 instances. The table has columns for Name, Instance ID, Instance Type, Availability Zone, Instance State, and Status Checks. The instance 'Idplab0' with ID 'i-069b719b9bf947771' is highlighted in yellow. Below the table, the 'Description' tab is selected, showing details for the instance. The 'IPv4 Public IP' is highlighted in yellow and has a red arrow pointing to it. The value is '34.226.136.197'.

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks
Idplab1	i-01e053b5539280450	t2.medium	us-east-1b	running	2/2 checks ...
Idplab0	i-069b719b9bf947771	t2.small	us-east-1b	running	2/2 checks ...
	i-0c71c65d3f9648312	t2.small	us-east-1b	stopped	
IPSE-NY-UA...	i-4dc2221e	m3.xlarge	us-east-1d	stopped	
IPSE-NY-IA...	i-5af10409	m3.large	us-east-1d	stopped	

Instance: i-069b719b9bf947771 (Idplab0) Public DNS: ec2-34-226-136-197.compute-1.amazonaws.com

Instance ID	Public DNS (IPv4)
i-069b719b9bf947771	ec2-34-226-136-197.compute-1.amazonaws.com

Instance state	IPv4 Public IP
running	34.226.136.197

Instance type	IPv6 IPs
t2.small	-

Elastic IPs	Private DNS
	ip-172-16-15-179.ec2.internal

Availability zone	Private IPs
us-east-1b	172.16.15.179

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>