



Fatima Jinnah Women University

Opening Portals of Excellence Through Higher Education

CLOUD COMPUTING LAB 8

AWS: Account Setup, IAM, VPC Inventory, EC2, Docker & Gitea

Submitted to: Engr. Waqas Saleem

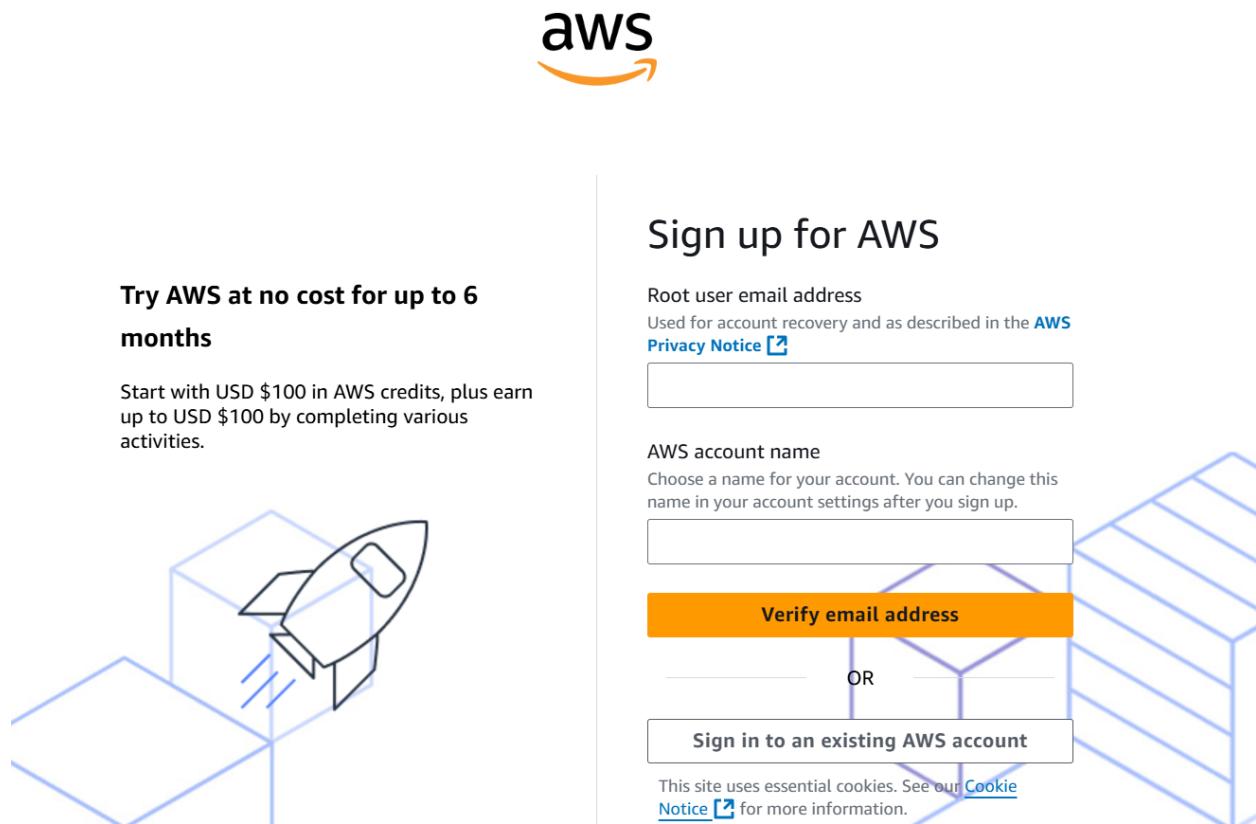
Engr. Muhammad Shahzad

Submitted by: Maham Saleem

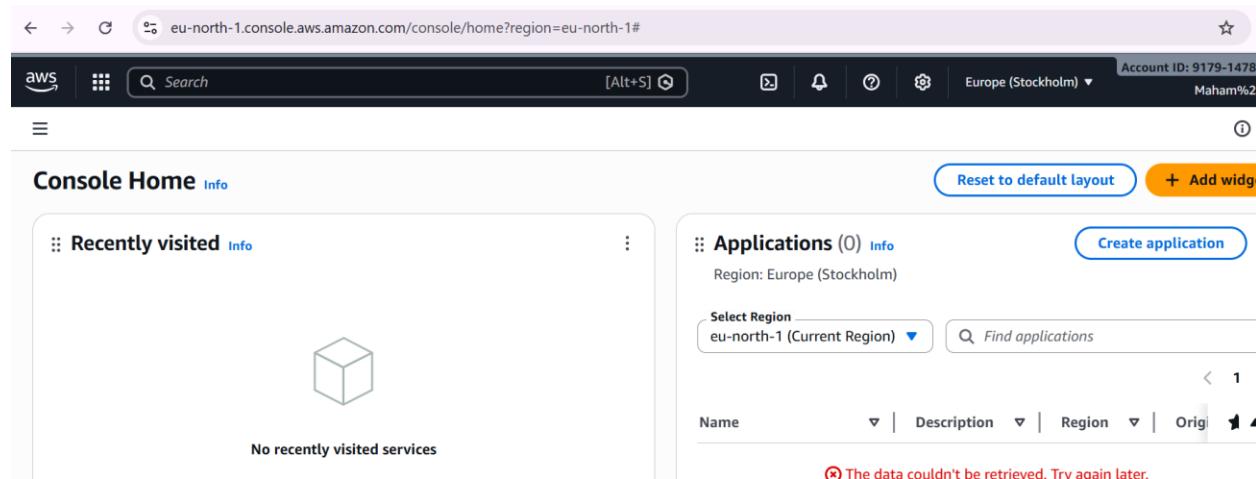
Registration no.: 2023-BSE-035

Task 1 — AWS Root Account + UAE Region

task1_open_signup_page.png



task1_signed_up_confirmation.png



task1_root_signed_in.png

The screenshot shows the AWS CloudWatch Metrics console. At the top, there are navigation icons (refresh, back, forward) and account information: Account ID: 9179-1478-5599, Region: Europe (Stockholm), and User: Maham%20Saleem. Below the header are two buttons: "Reset to default layout" and "+ Add widgets". The main section is titled "Applications (0)" with an "Info" link. It displays the message "Region: Europe (Stockholm)". A "Create application" button is available. On the right, there is a three-dot menu icon. Below the main title, there is a "Select Region" dropdown set to "us-north-1 (Current Region)".

task1_enable_region_me-central-1.png

The screenshot shows the "AWS Regions" configuration page. A green banner at the top states: "from the region selector located in the top navigation bar." Below is a table listing various AWS regions with their current status:

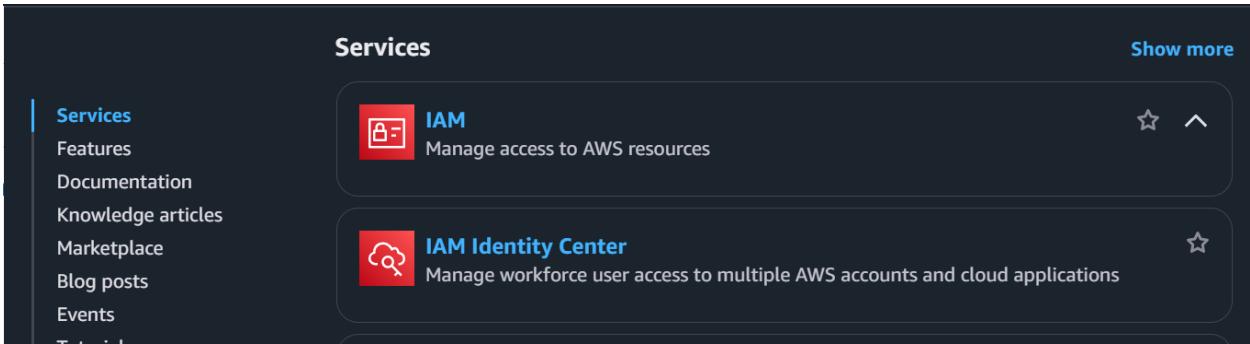
Region	Status
Asia Pacific (Thailand)	Disabled
Canada (Calgary)	Disabled
Europe (Zurich)	Disabled
Europe (Milan)	Disabled
Europe (Spain)	Disabled
Israel (Tel Aviv)	Disabled
Middle East (UAE)	Enabled
Middle East (Bahrain)	Disabled
Mexico (Central)	Disabled
Asia Pacific (Tokyo)	Enabled by default
Asia Pacific (Seoul)	Enabled by default

task1_summary.png

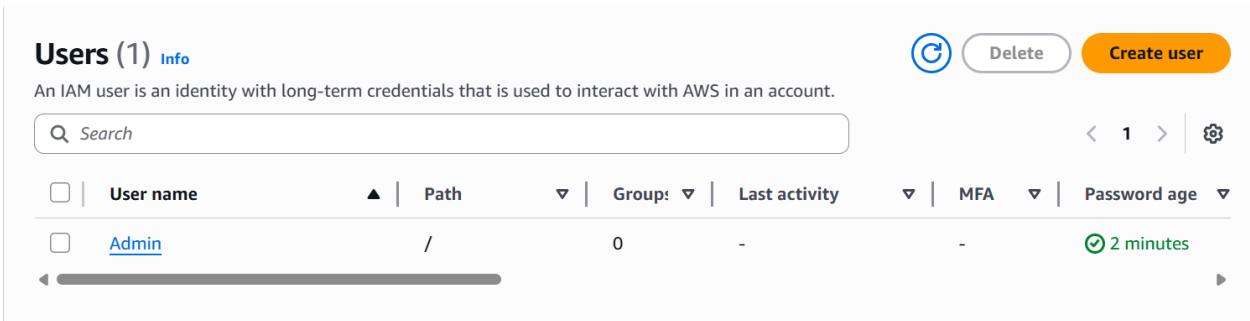
The screenshot shows the AWS CloudWatch Metrics console summary page. The top navigation bar includes icons for refresh, back, forward, and search, along with account information: Account ID: 9374-5164-7605, Region: Global, and User: MahamSaleem. The main content area is currently empty.

Task 2 — IAM Admin + Lab8User

task2_open_iam_console.png



task2_admin_create_confirmation.png



task2_admin_csv_and_signin_url.png

A screenshot of Microsoft Excel showing a CSV file titled 'Admin_credentials.csv'. The file contains two rows of data: Row 1 has columns A and B, with 'User name' in A1 and 'Console sign-in URL' in B1. Row 2 has columns A and B, with 'Admin' in A2 and a long URL in B2 starting with 'https://917914785599.signin.aws.amazon.com/console'. The Excel ribbon is visible at the top, and the formula bar shows 'User name' in cell A1.

task2_admin_console_after_login.png

The screenshot shows the AWS Lambda Applications console. At the top, it displays "Applications (0)" and a "Create application" button. Below this, it shows the region as "Europe (Stockholm)". There are filters for "Select Region" set to "eu-north-1 (Current Region)" and a search bar with "Find applications". A pagination indicator shows "1" of 1 page. The main area is titled "No applications" with the sub-instruction "Get started by creating an application." A prominent "Create application" button is located at the bottom.

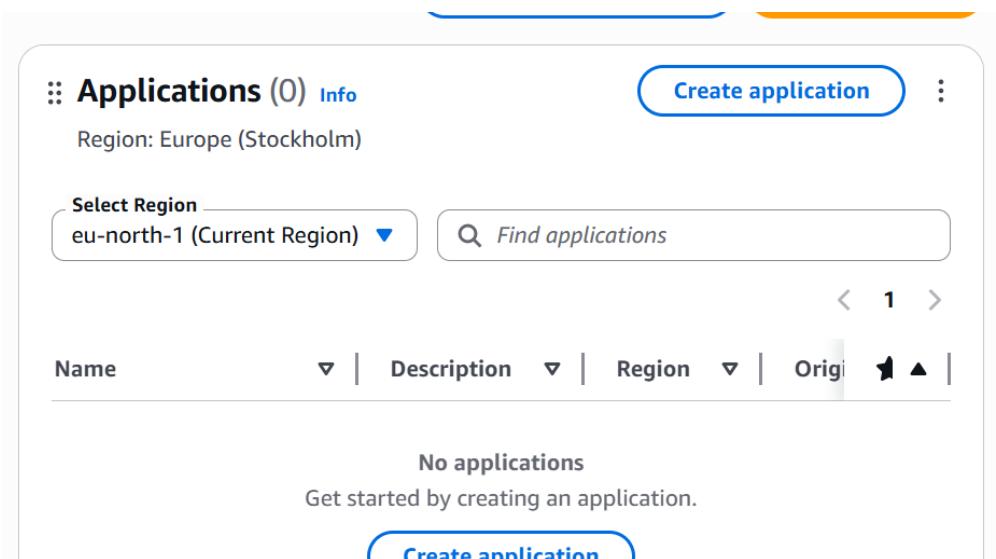
task2_create_lab8user_and_csv.png

The screenshot shows the AWS Lambda User Management console. It lists two users: "Admin" and "Lab8User". The "Admin" user has a path "/" and a group ID of 0. The "Lab8User" user also has a path "/" and a group ID of 0. The table includes columns for "User name", "Path", "Group", and "Last active". A navigation bar with "1" of 1 page and a settings gear icon is visible at the top right.

task2_lab8user_csv_saved.png

Today	
Lab8User_credentials	29/12/2025 12:45 am
Admin_credentials	29/12/2025 12:28 am

task2_lab8user_logged_in.png

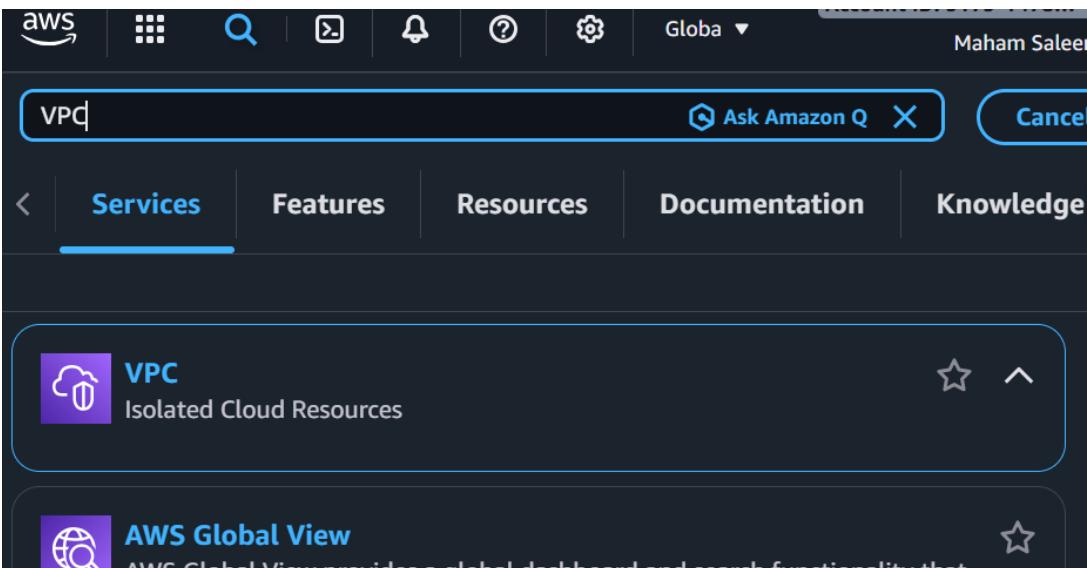


task2_summary.png

Users (2)											Info			
An IAM user is an identity with long-term credentials that is used to interact with AWS in an account.														
<input type="text"/> Search														
User name	Path	Group:	Last activity	MFA	Password age	Console last sign-in	Access							
Admin	/	0	-	-	23 minutes	-	-							
Lab8User	/	0	-	-	4 minutes	-	-							

Task 3 — Inspect VPC resources (in UAE me-central-1)

task3_open_vpc_console.png



task3_vpcs_list.png

Your VPCs

VPCs VPC encryption controls

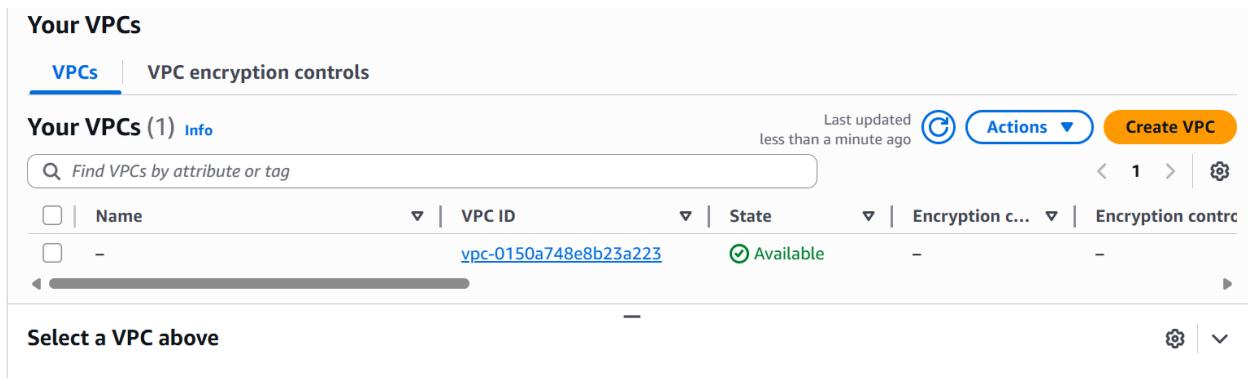
Your VPCs (1) [Info](#)

Last updated less than a minute ago

Actions Create VPC

Name	VPC ID	State	Encryption c...	Encryption contrc
-	vpc-0150a748e8b23a223	Available	-	-

Select a VPC above



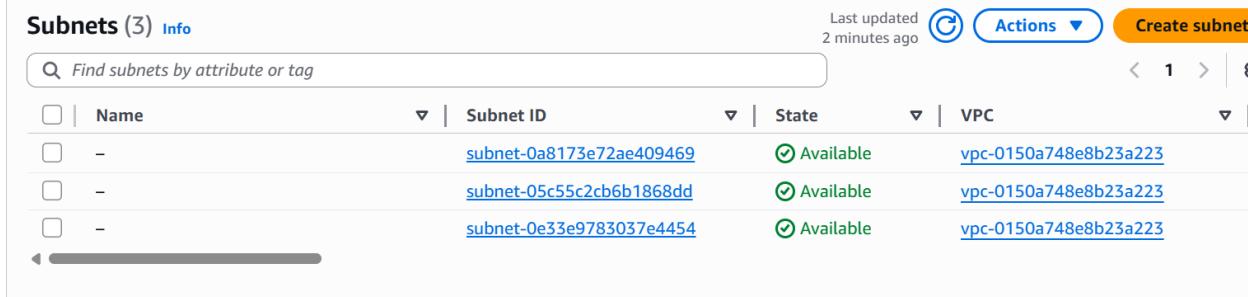
task3_subnets_list.png

Subnets (3) [Info](#)

Last updated 2 minutes ago

Actions Create subnet

Name	Subnet ID	State	VPC
-	subnet-0a8173e72ae409469	Available	vpc-0150a748e8b23a223
-	subnet-05c55c2cb6b1868dd	Available	vpc-0150a748e8b23a223
-	subnet-0e33e9783037e4454	Available	vpc-0150a748e8b23a223



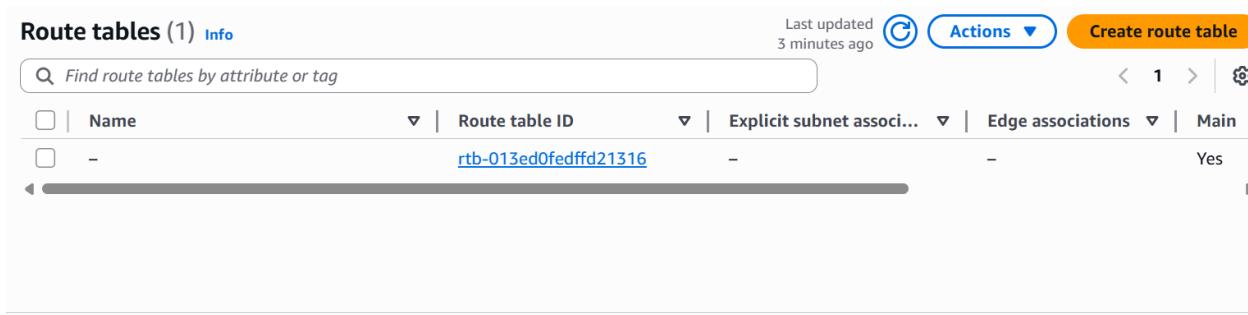
task3_route_tables_list.png

Route tables (1) [Info](#)

Last updated 3 minutes ago

Actions Create route table

Name	Route table ID	Explicit subnet assoc...	Edge associations	Main
-	rtb-013ed0fedffd21316	-	-	Yes



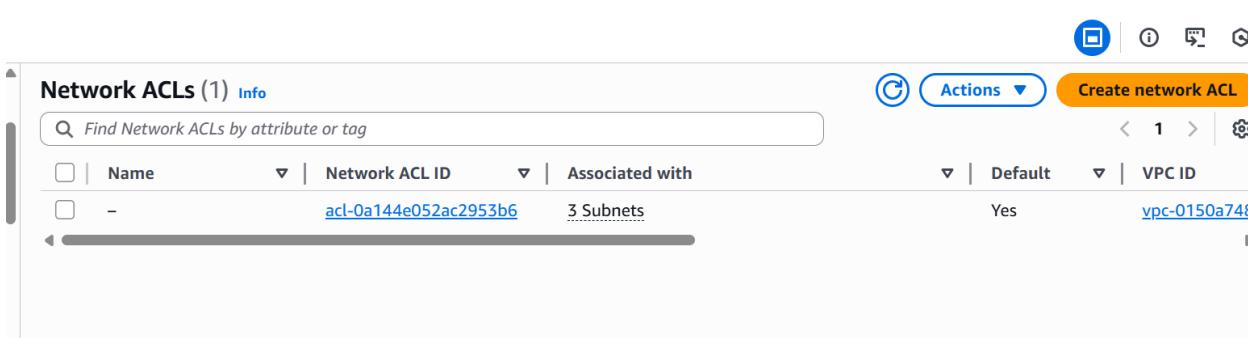
task3_network_acls_list.png

Network ACLs (1) [Info](#)

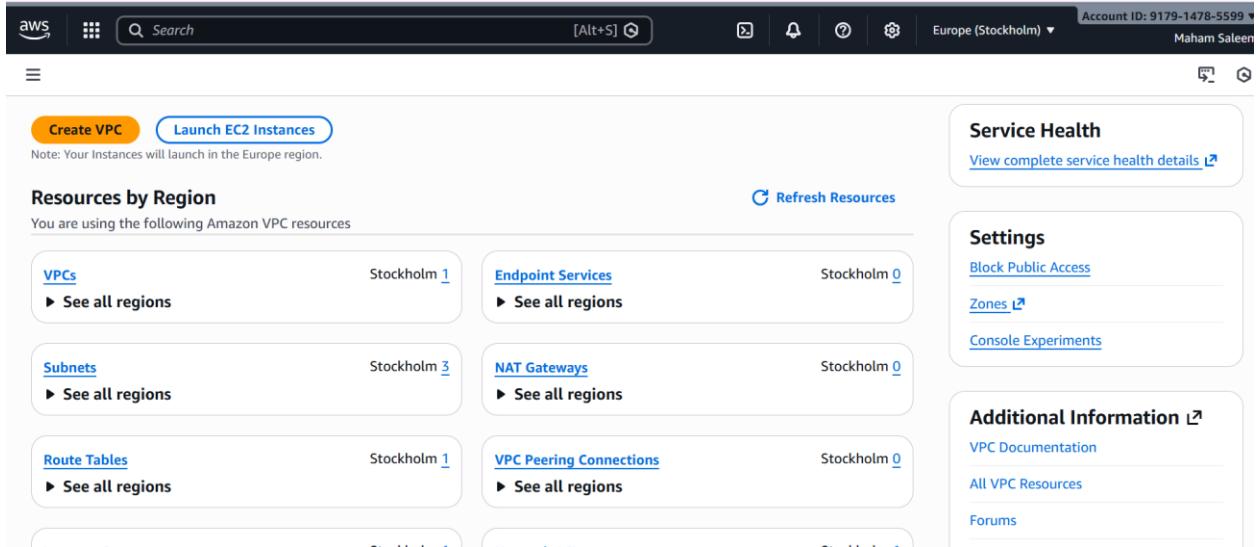
Find Network ACLs by attribute or tag

Actions Create network ACL

Name	Network ACL ID	Associated with	Default	VPC ID
-	acl-0a144e052ac2953b6	3 Subnets	Yes	vpc-0150a748

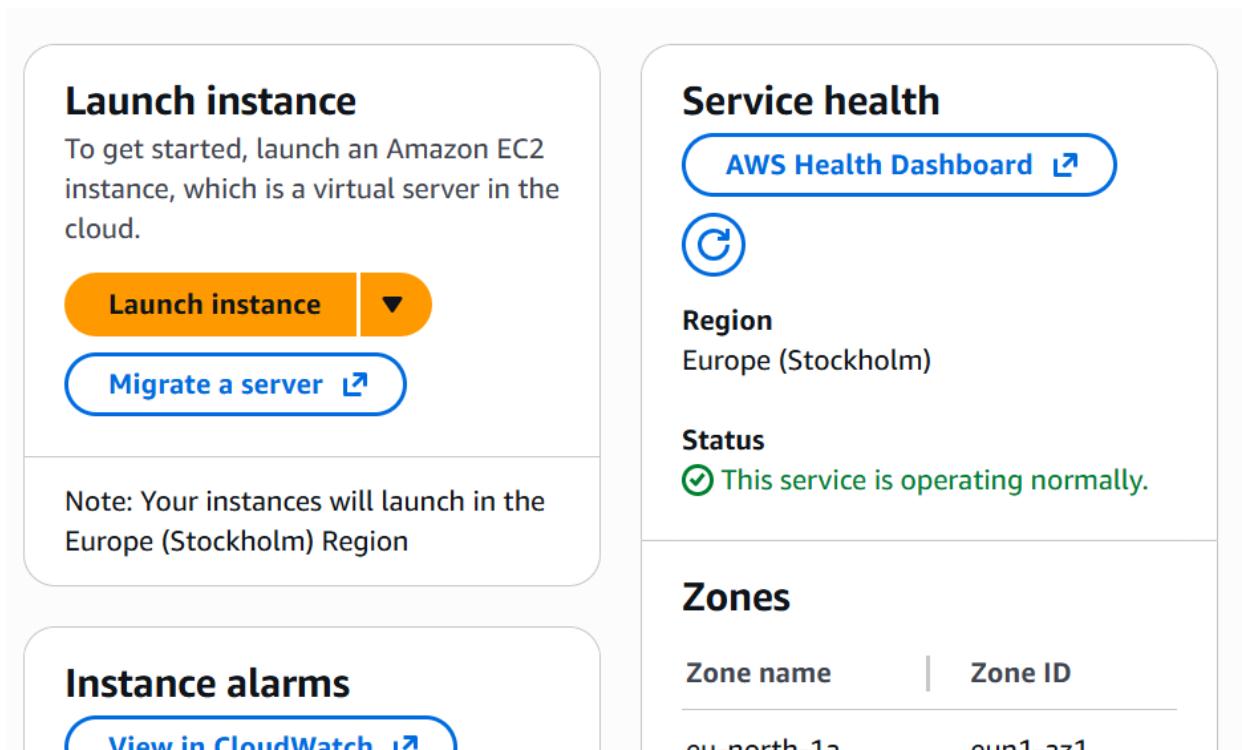


task3_summary.png

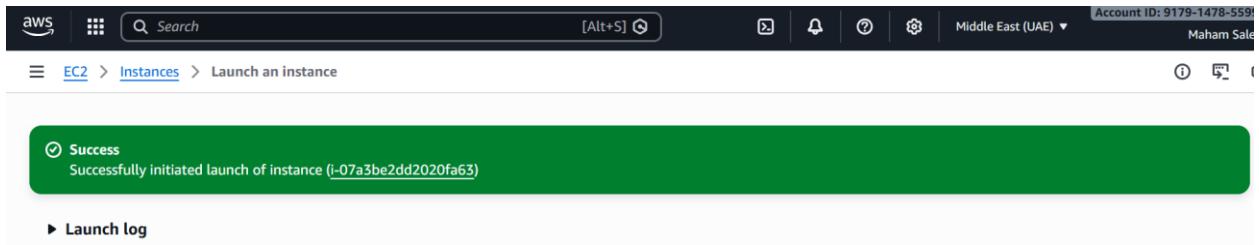


Task 4 — Launch EC2, SSH, install Docker & Docker Compose, deploy Gitea

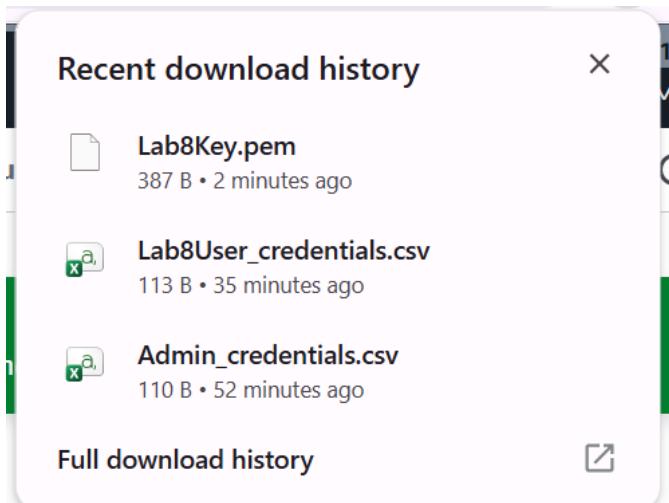
task4_open_ec2_console.png



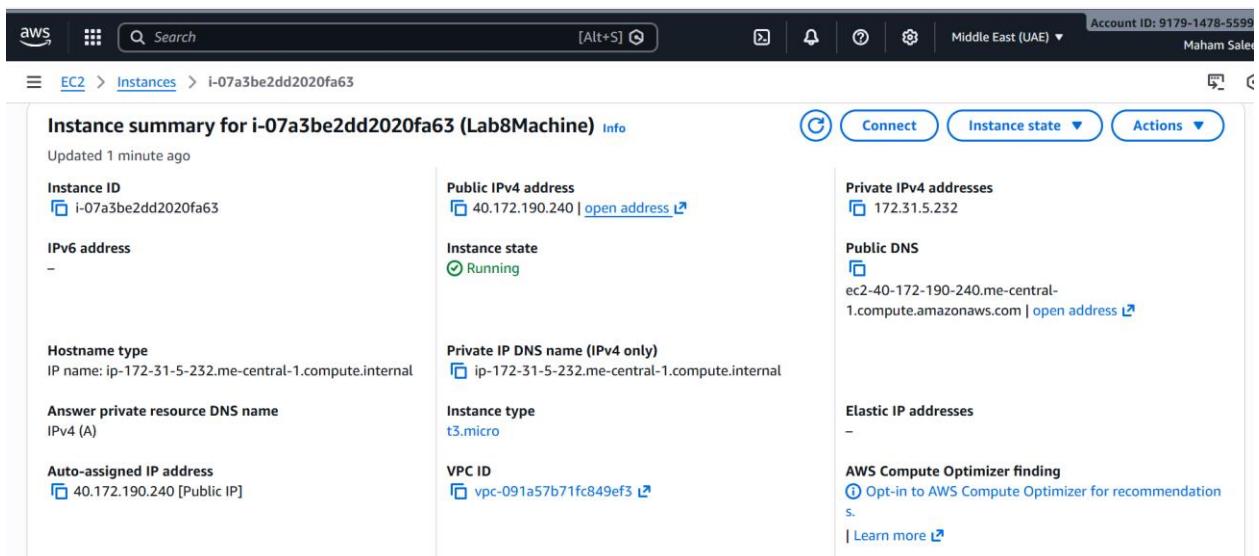
task4_launch_instance_config.png



task4_keypair_download.png



task4_instance_running_console.png



task4_ssh_from_windows_to_ec2.png

```
ec2-user@ip-172-31-5-232:~ x + v

Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\Hp Probook> ssh -i "C:\Users\Hp Probook\Downloads\Lab8Key.pem" ec2-user@40.172.190.240
The authenticity of host '40.172.190.240 (40.172.190.240)' can't be established.
ED25519 key fingerprint is SHA256:UpxwufKEXkaWuclyUDLMCb9mVHgrfuuk47PH1ymZJs0.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '40.172.190.240' (ED25519) to the list of known hosts.

#_
~\_ #####_      Amazon Linux 2023
~~ \_#####\_
~~   \###|
~~     \#/ ___ https://aws.amazon.com/linux/amazon-linux-2023
~~       V~' '-->
~~     /
~~ ._. /-
~~   /_/
~~   /m'/_
[ec2-user@ip-172-31-5-232 ~]$ |
```

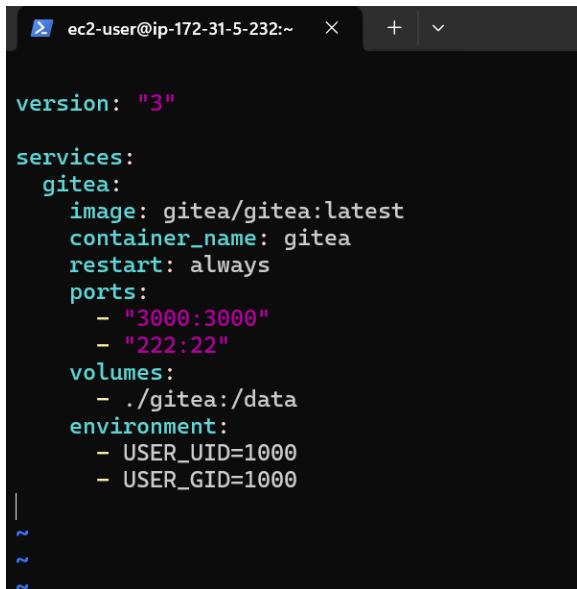
task4_ec2_install_docker_compose_started.png

```
Verifying : libcgroup-3.0-1.amzn2023.0.1.x86_64 6/11
Verifying : libnetfilter_conntrack-1.0.8-2.amzn20 7/11
Verifying : libnfnetwork-1.0.1-19.amzn2023.0.2.x8 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-2.1.5-1.amzn2023.0.1.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
libnfnetwork-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-172-31-5-232 ~]$ sudo mkdir -p /usr/local/lib/docker/c
li-plugins
```

task4_vim_compose_yaml_paste.png



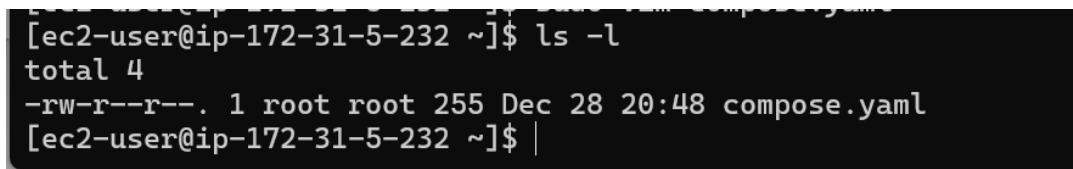
```
ec2-user@ip-172-31-5-232:~ % + ^

version: "3"

services:
  gitea:
    image: gitea/gitea:latest
    container_name: gitea
    restart: always
    ports:
      - "3000:3000"
      - "222:22"
    volumes:
      - ./gitea:/data
    environment:
      - USER_UID=1000
      - USER_GID=1000

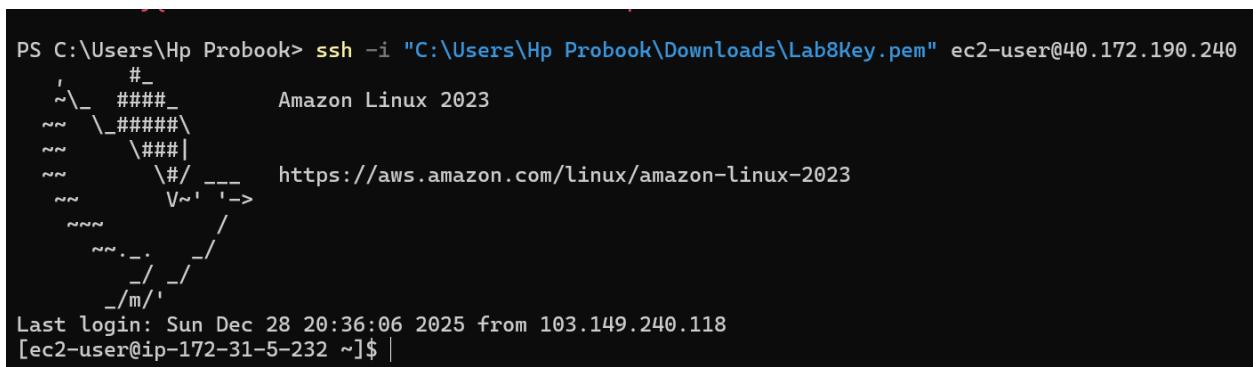
~
~
~
```

task4_compose_yaml_saved_ls.png



```
[ec2-user@ip-172-31-5-232 ~]$ ls -l
total 4
-rw-r--r--. 1 root root 255 Dec 28 20:48 compose.yaml
[ec2-user@ip-172-31-5-232 ~]$ |
```

task4_usermod_and_groups_before_after.png



```
PS C:\Users\Hp Probook> ssh -i "C:\Users\Hp Probook\Downloads\Lab8Key.pem" ec2-user@40.172.190.240
  _#_
  ~\_ #####_          Amazon Linux 2023
  ~~ \_#####\_
  ~~ \|##|_
  ~~   \#/ --- https://aws.amazon.com/linux/amazon-linux-2023
  ~~     V~' '-->
  ~~~   /
  ~~ .-. /_
  ~~ /_ /_
  _/m/|_|

Last login: Sun Dec 28 20:36:06 2025 from 103.149.240.118
[ec2-user@ip-172-31-5-232 ~]$ |
```

task4_docker_compose_up.png

```
[+] up 4/7itea/gitea:latest [=====] 40.9MB / 75.48MB Pulling 4.7
[+] up 5/7itea/gitea:latest [=====] 51.89MB / 75.48MB Pulling 4.8
[+] up 5/7itea/gitea:latest [=====] 63.79MB / 75.48MB Pulling 4.9
[+] up 5/7itea/gitea:latest [=====] 63.79MB / 75.48MB Pulling 5.0
[+] up 5/7itea/gitea:latest [=====] 63.79MB / 75.48MB Pulling 5.1
[+] up 5/7itea/gitea:latest [=====] 63.79MB / 75.48MB Pulling 5.2
[+] up 5/7itea/gitea:latest [=====] 63.79MB / 75.48MB Pulling 5.3
[+] up 5/7itea/gitea:latest [=====] 63.79MB / 75.48MB Pulling 5.4
[+] up 5/7itea/gitea:latest [=====] 63.79MB / 75.48MB Pulling 5.5
[+] up 5/7itea/gitea:latest [=====] 63.79MB / 75.48MB Pulling 5.6
[+] up 5/7itea/gitea:latest [=====] 63.79MB / 75.48MB Pulling 5.7
[+] up 5/7itea/gitea:latest [=====] 63.79MB / 75.48MB Pulling 5.8
[+] up 5/7itea/gitea:latest [=====] 63.79MB / 75.48MB Pulling 5.9
[+] up 6/7itea/gitea:latest [=====] 68.79MB / 75.48MB Pulling 6.0
  "Image gitea/gitea:latest [=====] 75.48MB / 75.48MB Pulling 6.1[+] up 9/bbdb57d9          Pull complete      0.9s
✓Image gitea/gitea:latest Pulled          6.1s
✓2d35ebdb57d9    Pull complete          0.9s
✓9f4e672c1f34    Pull complete          1.7s
✓4da94b3cc809    Pull complete          1.8s
✓8e016ece0bd3    Pull complete          1.8s
✓346e493cb6cb    Pull complete          2.8s
✓95215379f1d1    Pull complete          2.9s
✓Network ec2-user_default Created          0.2s
✓Container gitea   Created              0.2s
[ec2-user@ip-172-31-5-232 ~]$ |
```

task4_security_group_allow_3000.png

sg-0d0473a0740de73e5 - Lab8SecurityGroup						
<input type="text"/> Search		Security group rule ID	IP version	Type	Protocol	Port range
<input type="checkbox"/>	Name	sgr-05cc4dd0c7e992df0	IPv4	SSH	TCP	22
<input type="checkbox"/>	-	sgr-0425fa45ac38d4c69	IPv4	Custom TCP	TCP	3000

task4_gitea_install_page.png

Sign In

Username or Email Address *

Password [Forgot password?](#)

Remember This Device

[Sign In](#)

or

 [Sign in with OpenID](#)

task4_gitea_create_repo.png

The screenshot shows the Gitea interface for creating a new repository. At the top, there are navigation links: Issues, Pull Requests, Milestones, Explore, and a notifications bell icon. Below that, the repository name 'MahamSaleem / Lab-8' is displayed, along with tabs for Code, Issues, Packages, Projects, and Wiki. A 'Quick Guide' section provides instructions for cloning the repository via 'New File', 'Upload File', 'HTTP', or 'SSH' (with the URL <http://40.172.190.240:3000/MahamSaleem/Lab-8.git>). Another section titled 'Creating a new repository on the command line' contains the following command:

```
touch README.md  
git init  
git checkout -b main  
git add README.md  
git commit -m "first commit"
```

task4_summary.png

This screenshot displays two windows side-by-side. On the left is the Gitea interface for creating a new repository, identical to the one shown in the previous screenshot. On the right is the AWS Management Console showing the 'Security Groups' page for an EC2 instance. The security group 'Lab8SecurityGroup' is selected, showing its details: Name (sg-0d0473a0740de73e5), Security group ID (sg-0d0473a0740de73e5), and Description (Lab8SecurityGroup). Other security groups listed include 'sg-054a875562a86e9ca' (default).

Cleanup — Remove resources to avoid charges

cleanup_terminate_instance.png

The screenshot shows the AWS Instances page. A green success message at the top states: 'Successfully initiated termination (deletion) of i-07a3be2dd2020fa63'. The main table lists one instance: 'Lab8Machine' (Instance ID: i-07a3be2dd2020fa63, State: Shutting-down, Type: t3.micro, Status checks: 3/3 checks passed). The 'Actions' dropdown menu is open, indicating the instance is being terminated.

cleanup_delete_volumes_snapshots.png

The screenshot shows two related AWS management console pages: 'Volumes Info' and 'Snapshots Info'. Both pages are titled 'Info' and show a message 'You currently have no volumes/snapshots in this region'. The 'Volumes Info' page includes a 'Create volume' button. The 'Snapshots Info' page includes a 'Create snapshot' button.

cleanup_delete_security_group_and_keypair.png

The screenshot shows the 'Security Groups' page under the EC2 service. It displays a green success notification: 'Security group (sg-0d0473a0740de73e5 | Lab8SecurityGroup) successfully deleted'. Below the notification, there are buttons for 'Actions', 'Create security group', and a search bar.

The screenshot shows the 'Key pairs' page under the EC2 service. It displays a green success notification: 'Successfully deleted 1 key pair'. Below the notification, there are buttons for 'Actions', 'Create key pair', and a search bar. The main table header includes columns for Name, Type, Created, Fingerprint, and ID. A message at the bottom states 'No key pairs to display'.

cleanup_iam_users_deleted.png



cleanup_summary.png

