

Cloud Computing Lab

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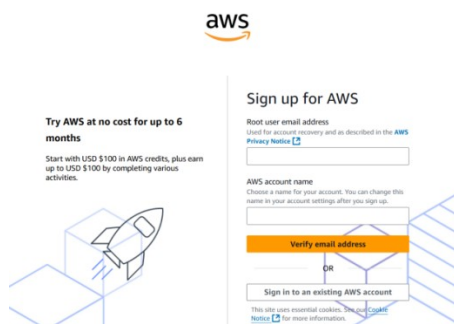
BSE-V B

2023-BSE-046

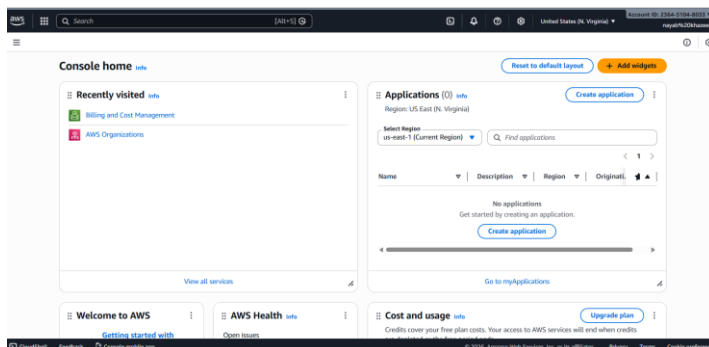
LAB 08

Task 1 — Create an AWS account and enable UAE (me-central-1)

- task1_open_signup_page.png



- task1_signed_up_confirmation.png



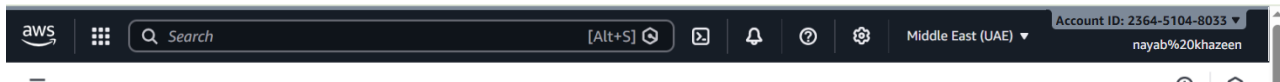
- task1_root_signed_in.png



- task1_enable_region_me-central-1.png

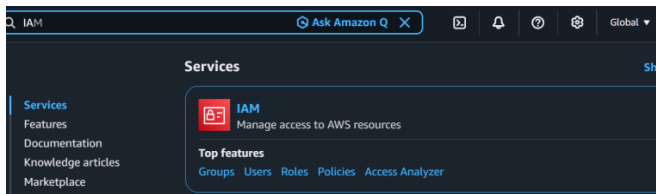
<input type="checkbox"/>	Europe (Milan)	Disabled
<input type="checkbox"/>	Europe (Spain)	Disabled
<input type="checkbox"/>	Israel (Tel Aviv)	Disabled
<input checked="" type="checkbox"/>	Middle East (UAE)	Enabled
<input type="checkbox"/>	Middle East (Bahrain)	Disabled
<input type="checkbox"/>	Mexico (Central)	Disabled
<input type="checkbox"/>	Asia Pacific (Tokyo)	Enabled by default
<input type="checkbox"/>	Asia Pacific (Seoul)	Enabled by default
<input type="checkbox"/>	Asia Pacific (Osaka)	Enabled by default
<input type="checkbox"/>	Asia Pacific (Mumbai)	Enabled by default
<input type="checkbox"/>	Asia Pacific (Singapore)	Enabled by default

- task1_summary.png

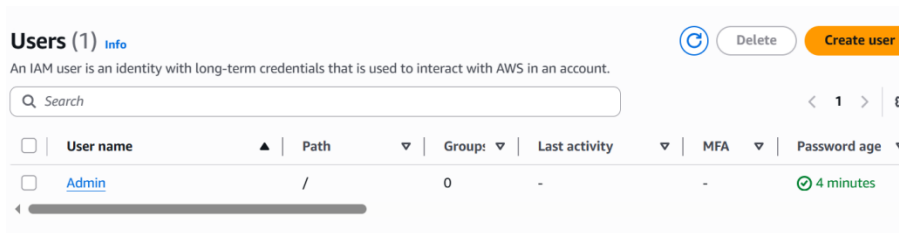


Task 2 — Create IAM Admin and Lab8User with console access

- task2_open_iam_console.png



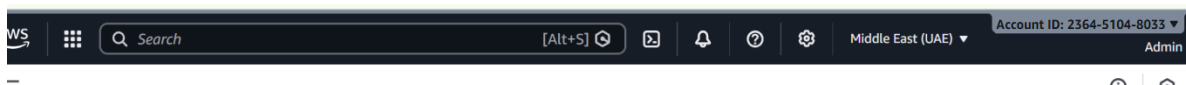
- task2_admin_create_confirmation.png



- task2_admin_csv_and_signin_url.png

User name	Password	Console sign-in URL
Admin	zSU34\$13	https://236451048033.signin.aws.amazon.com/console

- task2_admin_console_after_login.png



- task2_create_lab8user_and_csv.png

Console sign-in details

Email sign-in instructions

Console sign-in URL

<https://236451048033.signin.aws.amazon.com/console>

User name

[Lab8User](#)

Console password

Show

Cancel

Download .csv file

Return to users list

- task2_lab8user_csv_saved.png

	A	B	C	D	E	F	G	H	I
	User name	Password	Console sign-in URL						
	Lab8User	b'6P14S4	https://236451048033.signin.aws.amazon.com/console						

- task2_lab8user_logged_in.png

[Alt+S]

Europe (Stockholm)

Account ID: 2364-5104-8033

Lab8User

- task2_summary.png

Users (2)

Info

Delete

Create user

An IAM user is an identity with long-term credentials that is used to interact with AWS in an account.

Search

< 1 >

<input type="checkbox"/>	User name	Path	Group	Last activity	MFA	Password age
<input type="checkbox"/>	Admin	/	0	16 minutes ago	-	15 minutes
<input type="checkbox"/>	Lab8User	/	0	7 minutes ago	-	1 minute

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

- task3_open_vpc_console.png

VPC dashboard

Create VPC

Launch EC2 instances

Resources by Region

VPCs

See all regions

Subnets

See all regions

Route Tables

See all regions

Internet Gateways

See all regions

Elastic Fabric Services

See all regions

NAT Gateways

See all regions

VPC Peering Connections

See all regions

Network ACLs

See all regions

Service Health

Settings

Additional Inform

- task3_vpcs_list.png

Your VPCs

VPC encryption controls

Your VPCs (1)

Info

Last updated 1 minute ago

Actions

Find VPCs by attribute or tag

<input type="checkbox"/>	Name	VPC ID	State	Encryption c...	Encryption control ...
<input type="checkbox"/>	-	vpc-Oe210a15e8f3fe12f	Available	-	-

- task3_subnets_list.png

Subnets (3) [Info](#)

Find subnets by attribute or tag

Last updated less than a minute ago [Actions](#) [Create](#)

<input type="checkbox"/>	Name	Subnet ID	State	VPC	Block Public...
<input type="checkbox"/>	-	subnet-03b14671346f97bd9	Available	vpc-0e210a15e8f3fe12f	Off
<input type="checkbox"/>	-	subnet-002ded545d2f2d2aa	Available	vpc-0e210a15e8f3fe12f	Off
<input type="checkbox"/>	-	subnet-071f97bda8a8ba4c4	Available	vpc-0e210a15e8f3fe12f	Off

- task3_route_tables_list.png

Route tables (1) [Info](#)

Find route tables by attribute or tag

Last updated less than a minute ago

<input type="checkbox"/>	Name	Route table ID	Explicit subnet associ...	Edge a
<input type="checkbox"/>	-	rtb-0038a3dae52cf2823	-	-

- task3_network_acls_list.png

Network ACLs (1) [Info](#)

Find Network ACLs by attribute or tag

<input type="checkbox"/>	Name	Network ACL ID	Associated with	Default
<input type="checkbox"/>	-	acl-04d839ff2bfff69563	3 Subnets	Yes

- task3_summary.png

Search [Alt+S]

Middle East (UAE) Account ID: 2364

[Create VPC](#) [Launch EC2 Instances](#)

Note: Your instances will launch in the Middle East region.

Resources by Region Refresh Resources

You are using the following Amazon VPC resources

VPCs ▶ See all regions	UAE 1	Endpoint Services ▶ See all regions	UAE 0
Subnets ▶ See all regions	UAE 3	NAT Gateways ▶ See all regions	UAE 0
Route Tables ▶ See all regions	UAE 1	VPC Peering Connections ▶ See all regions	UAE 0
Internet Gateways ▶ See all regions	UAE 1	Network ACLs ▶ See all regions	UAE 1
Egress-only Internet Gateways ▶ See all regions	UAE 0	Security Groups ▶ See all regions	UAE 1

Service Health
[View complete service health details](#)

Settings
[Block Public Access](#)
[Zones](#)
[Console Experiments](#)

Additional Information
[VPC Documentation](#)
[All VPC Resources](#)
[Forums](#)
[Report an Issue](#)

Site-to-Site VPN Connections
Amazon VPC enables you to use your own isolated resources within the AWS cloud, then connect those resources directly to your own datacenter using industry-standard protocols.

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

- Ztask4_open_ec2_console.png

Search [Alt+S]

Middle East (UAE) Account ID: 2364

EC2

[Dashboard](#)
EC2 Global View [Events](#)

Instances
[Instances](#)
[Instance Types](#)
[Launch Templates](#)
[Spot Requests](#)
[Savings Plans](#)
[Reserved Instances](#)
[Dedicated Hosts](#)
[Capacity Reservations](#)

Images
[AMIs](#)
[AMI Catalog](#)

Resources [EC2 Global View](#)

You are using the following Amazon EC2 resources in the Middle East (UAE) Region:

Instances (running) 0	Auto Scaling Groups 0	Capacity Reservations 0
Dedicated Hosts 0	Elastic IPs 0	Instances 0
Key pairs 0	Load balancers 0	Placement groups 0
Security groups 1	Snapshots 0	Volumes 0

Launch instance
To get started, launch an Amazon EC2 instance, which is a virtual server in the cloud.
[Launch instance](#) [Migrate a server](#)

Note: Your instances will launch in the Middle East (UAE) Region

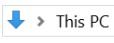
Service health [AWS Health Dashboard](#)

Region: Middle East (UAE)
Status: [This service is operating normally.](#)

EC2 cost
Date range: Past 6 months | Region: Global
Total cost: Data unavailable
Regions: Data unavailable
Data unavailable
[Analyze your costs in Cost Explorer](#)

Account attributes
Default VPC: [vpc-0bfb7303dc628797](#)
Settings

- ☰ [EC2](#) > [Instances](#) > Launch an instance
- ✔ **Success**
Successfully initiated launch of instance ([i-034b4cc9e1199bc2c](#))

- 

- [illegible]

- ```
C:\Users\sweng>ssh -i Downloads/Lab8Key.pem ec2-user@3.29.23.85
The authenticity of host '3.29.23.85 (3.29.23.85)' can't be established.
ED25519 key fingerprint is SHA256:4FV8UUH1wdpNQLuk4PkIXRYQK5ofhDw9K6BdKMFQ0ZE.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '3.29.23.85' (ED25519) to the list of known hosts.

#_
~_####_ Amazon Linux 2023
~~~ \_#####\
~~~~ \###|
~~~~ \#/ https://aws.amazon.com/linux/amazon-linux-2023
~~~~ V~'-'>
~~~~
~~~~_._/
~~~~/_/_/
~~~~/_/_/
~~~~/_/_/
```

[illegible]

- task4\_vim\_compose\_yaml\_paste.png

```
Select ec2-user@ip-172-31-15-32-
networks:
  webnet:

volumes:
  gitea_postgres:
    name: gitea_postgres
  gitea:
    name: gitea

networks:
  webnet:
    name: webnet
    # external: true
    #
    # # Gitea is not allowed to webhook to Jenkins follow these steps
    # # 1) Go to Gitea Container
    # # 2) cat /data/gitea/conf/app.ini
    # # 3) echo "[webhook]" >> /data/gitea/conf/app.ini
    # # 4) echo "ALLOWED_HOST_LIST = 192.168.65.2" >> /data/gitea/conf/app.ini
    # # Gitea Tutorials : https://www.youtube.com/watch?v=dml2Cqj8TUU
```

- task4\_compose\_yaml\_saved\_ls.png

```
[ec2-user@ip-172-31-15-32 ~]$ ls -l
total 8
-rw-r--r--. 1 root root 7127 Dec 28 16:26 compose.yaml
[ec2-user@ip-172-31-15-32 ~]$
```

- task4\_usermod\_and\_groups\_before\_after.png

```
[ec2-user@ip-172-31-15-32 ~]$ groups
ec2-user adm wheel systemd-journal
[ec2-user@ip-172-31-15-32 ~]$ sudo usermod -aG docker $USER
[ec2-user@ip-172-31-15-32 ~]$ groups
ec2-user adm wheel systemd-journal
[ec2-user@ip-172-31-15-32 ~]$ exit
logout
Connection to 3.29.23.85 closed.
```

C:\Users\sweng>ssh -i Downloads/Lab8Key.pem ec2-user@3.29.23.85

```
      _#_
~\_ ##### Amazon Linux 2023
~~~ \##### 
~~~  \#### 
~~~~ #/____ https://aws.amazon.com/linux/amazon-linux-2023
~~~~ V'-'>
~~~~
~~~~_.._/_
~~~~_m/'_/_
```

Last login: Sun Dec 28 16:17:06 2025 from 103.255.6.97  
[ec2-user@ip-172-31-15-32 ~]\$ groups  
ec2-user adm wheel systemd-journal docker

- task4\_docker\_compose\_up.png

```
> EOF
[ec2-user@ip-172-31-15-32 ~]$ sudo docker compose up -d
[+] up 15/18
[+] up 23/23 tgres:alpine [██████████] 112MB / 112MB Pulling 10.5s
 Image postgres:alpine Pulled 10.5s
 1074353eec0d Pull complete 1.0s
 51a9324a2bdc Pull complete 1.1s
 1e827ac0fa1e Pull complete 1.1s
 0629ac8b8cc5 Pull complete 1.8s
 2e50a444bddf Pull complete 7.1s
 4465107e1675 Pull complete 7.1s
 cc2ee20b6816 Pull complete 7.2s
 0dfdf86289dd1 Pull complete 7.2s
 98eccc0da868 Pull complete 7.2s
 b747867e61cb Pull complete 7.2s
 Image gitea/gitea:latest Pulled 10.6s
 2d35ebdb57d9 Pull complete 3.6s
 9f4e672c1f34 Pull complete 5.5s
 4da94b3cc809 Pull complete 5.6s
 8e016e0bd3 Pull complete 5.6s
 346e493cb6cb Pull complete 7.2s
 95215379f1d1 Pull complete 7.3s
 Network webnet Created 0.2s
 Volume gitea_postgres Created 0.0s
 Volume gitea Created 0.0s
 Container gitea_db Created 0.2s
 Container gitea Created 0.2s
```

- task4\_security\_group\_allow\_3000.png

| Inbound rules (2) |                        |            |            |          |            |           | Manage tags | Edit inbound rules |
|-------------------|------------------------|------------|------------|----------|------------|-----------|-------------|--------------------|
| Search            |                        |            |            |          |            |           | < 1 >       |                    |
|                   | Security group rule ID | IP version | Type       | Protocol | Port range | Source    |             |                    |
|                   | sgr-019a65865e3e0580d  | IPv4       | SSH        | TCP      | 22         | 0.0.0.0/0 |             |                    |
|                   | sgr-0466ba9835039cf38  | IPv4       | Custom TCP | TCP      | 3000       | 0.0.0.0/0 |             |                    |

- task4\_gitea\_install\_page.png



Installing now, please wait...

- task4\_gitea\_create\_repo.png

IssuesPull RequestsMilestonesExplore

admin

JanFebMarAprMayJunJulAugSepOctNovDec

Mon

Wed

Fri

1 contributions in the last 12 months

LessMore

admin created repository admin/Assignment-2 now

RepositoryOrganization

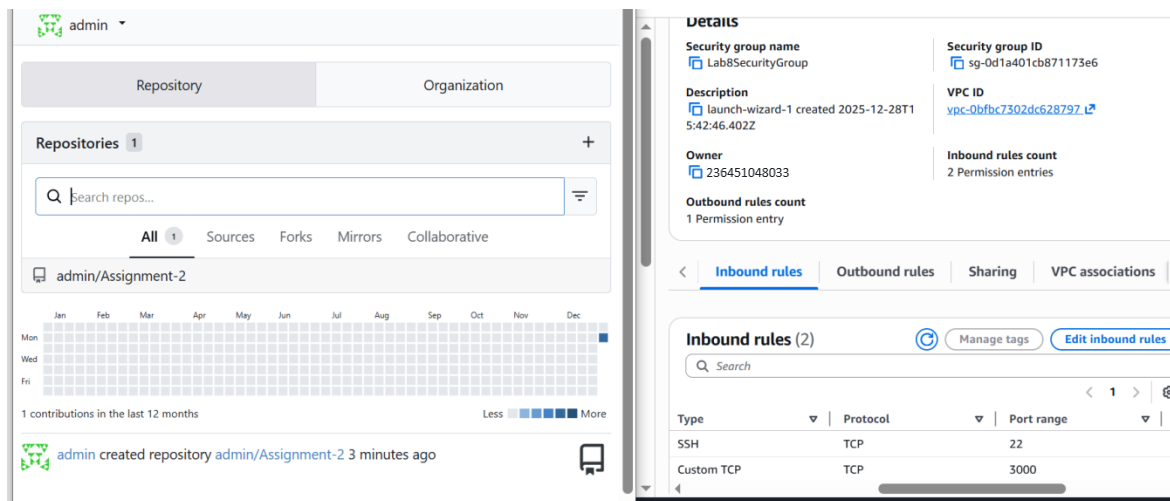
Repositories 1

Search repos...

AllSourcesForksMirrorsCollaborative

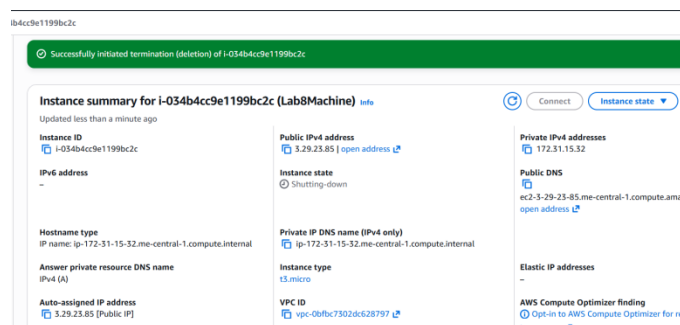
admin/Assignment-2

- task4\_summary.png

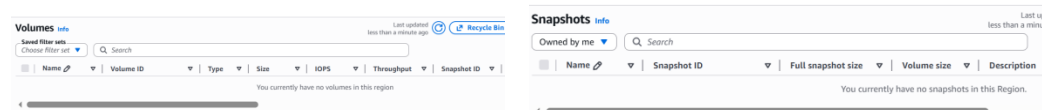


## Cleanup — Remove resources to avoid charges

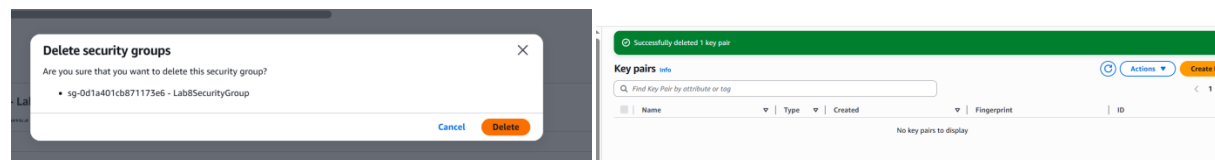
- cleanup\_terminate\_instance.png



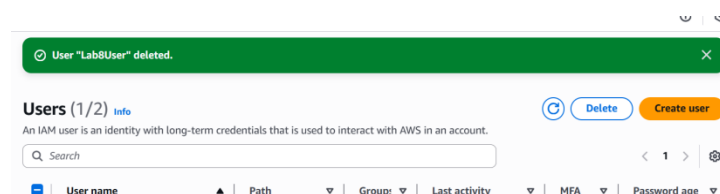
- cleanup\_delete\_volumes\_snapshots.png



- cleanup\_delete\_security\_group\_and\_keypair.png



- cleanup\_iam\_users\_deleted.png



- cleanup\_summary.png



✓ Users deleted.

✕

Add MFA

✓

Root user has no active access keys

Using access keys attached to an IAM user instead of the root user improves security.

**IAM resources**

Resources in this AWS Account

⌕

| User groups | Users | Roles | Policies | Identity providers |
|-------------|-------|-------|----------|--------------------|
| 0           | 0     | 3     | 0        | 0                  |