

Cloud Computing Lab

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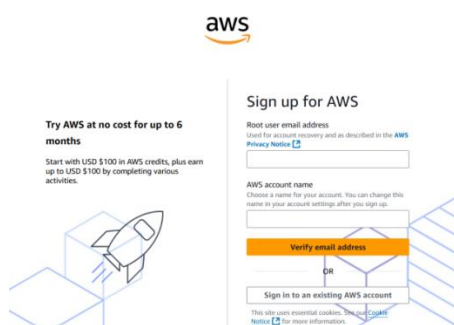
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2023-BSE-056

LAB 08

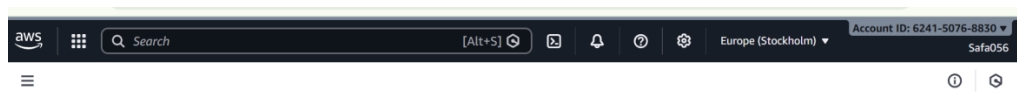
Task 1 — Create an AWS account and enable UAE (me-central-1)

- task1_open_signup_page.png

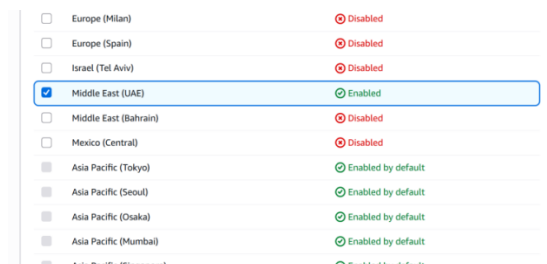


- task1_signed_up_confirmation.png

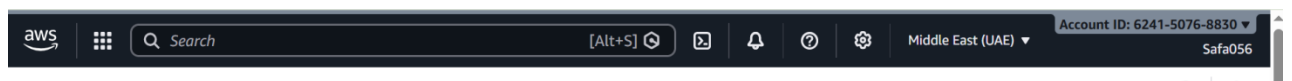
- task1_root_signed_in.png



- task1_enable_region_me-central-1.png

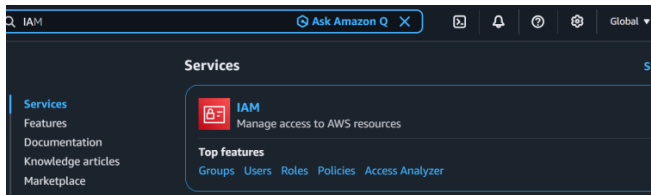


- task1_summary.png

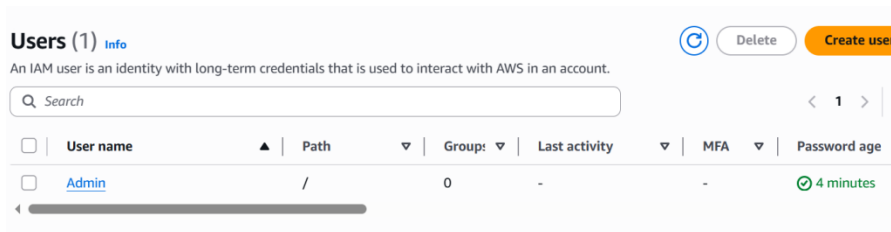


Task 2 — Create IAM Admin and Lab8User with console access

- task2_open_iam_console.png



- task2_admin_create_confirmation.png

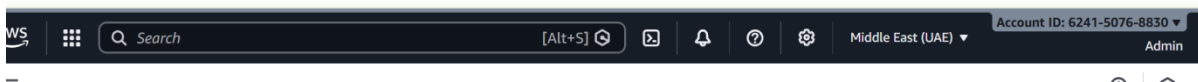


- task2_admin_csv_and_signin_url.png

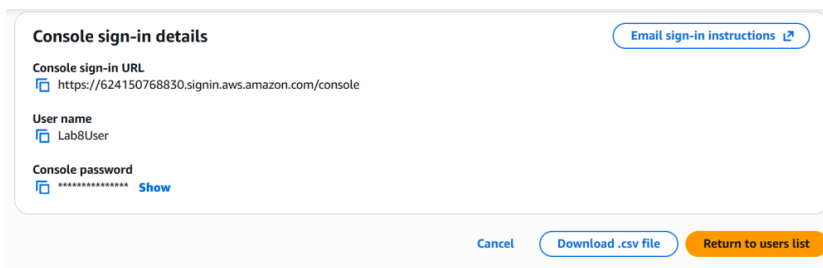
Admin_credentials - Microsoft Excel

User name	Password	Console sign-in URL
Admin	zSU34\$13	https://624150768830.signin.aws.amazon.com/console

- task2_admin_console_after_login.png



- task2_create_lab8user_and_csv.png



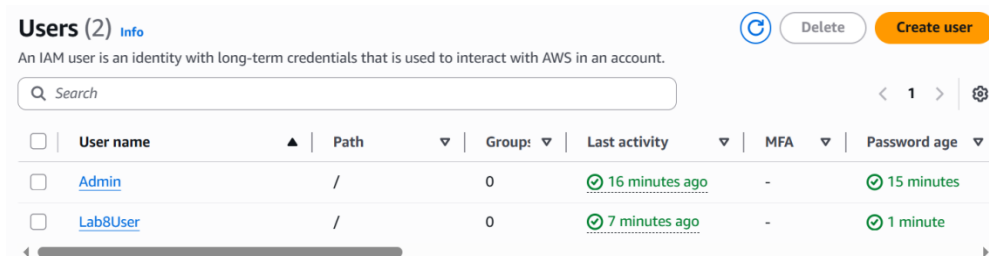
- task2_lab8user_csv_saved.png

User name	Password	Console sign-in URL
Lab8User	p76P14\$4	https://624150768830.signin.aws.amazon.com/console

- task2_lab8user_logged_in.png

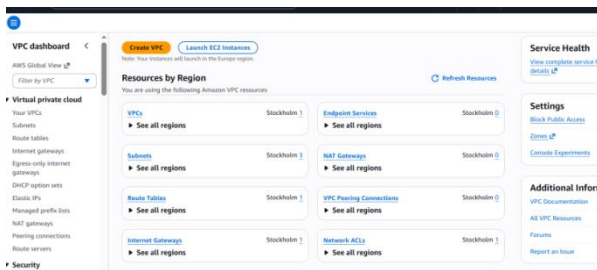


- task2_summary.png

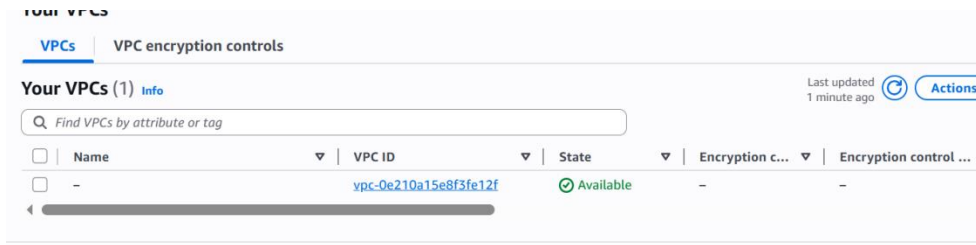


Task 3 — Inspect VPC resources (in UAE me-central-1)

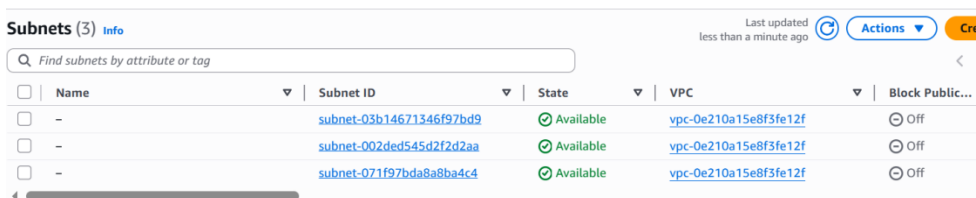
- task3_open_vpc_console.png



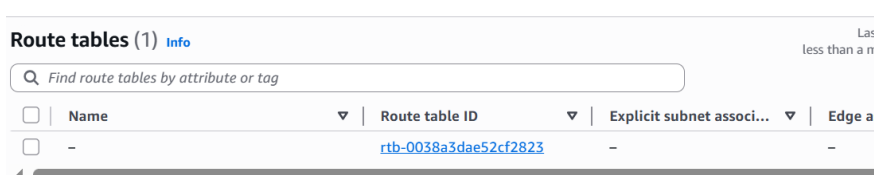
- task3_vpcs_list.png



- task3_subnets_list.png



- task3_route_tables_list.png



- 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)

Create VPC Launch EC2 Instances

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

Resources by Region

You are using the following Amazon VPC resources

Refresh 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 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

- task4_open_ec2_console.png

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Middle East (UAE)

EC2 Dashboard

EC2 Global View

Resources

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

Service health

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

Analyze your costs in Cost Explorer

Account attributes

Default VPC: vpc-0b0fc73026e628797

Settings

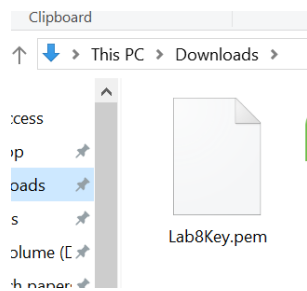
- task4_launch_instance_config.png

EC2 > Instances > Launch an instance

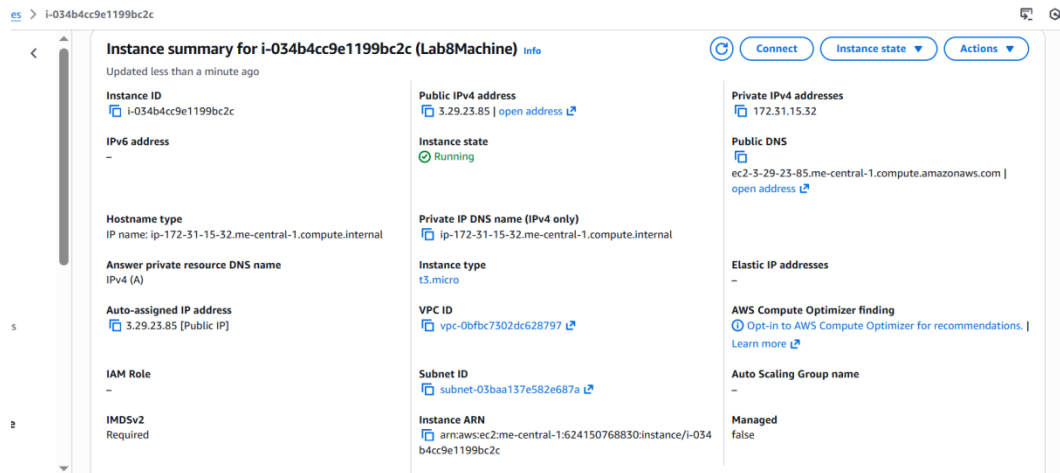
Success

Successfully initiated launch of instance ([i-034b4cc9e1199bc2c](#))

- task4_keypair_download.png



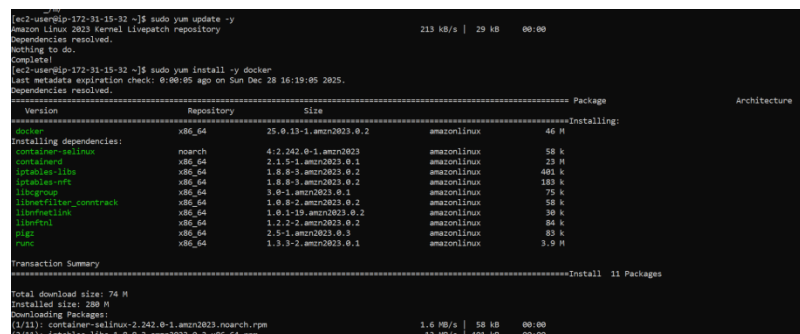
- task4_instance_running_console.png



- task4_ssh_from_windows_to_ec2.png



- task4_ec2_install_docker_compose_started.png



[illegible]

- task4_vim_compose_yaml_paste.png

```
Select ec2-user@ip-172-31-15-32:~$
```

```
networks:
  webnet:
    name: webnet

lines:
  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
          # #5 Gitea Tutorials : https://www.youtube.com/watch?v=daw2Cq48TUs
```

```
THREAT
```

- 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\Laptop>ssh -i Downloads\Lab8Key.pem ec2-user@3.29.23.85
```

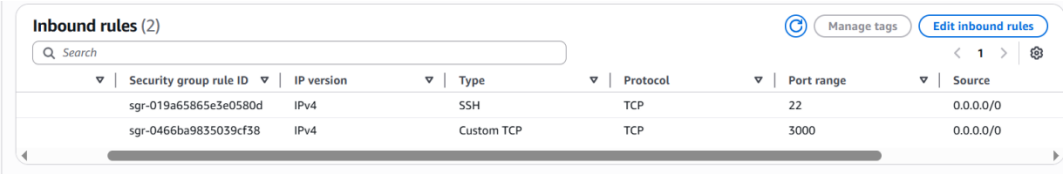
```
#  
#####  
~ \      Amazon Linux 2023  
~ / #####\  
~ |####|  
~ |##|  
~ |#/  
~ V~'--+>  
  
~~~~~  
_ _ _ _ _  
/m/_/_/_/
```

```
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  
adm sasl shadow sshlogd
```

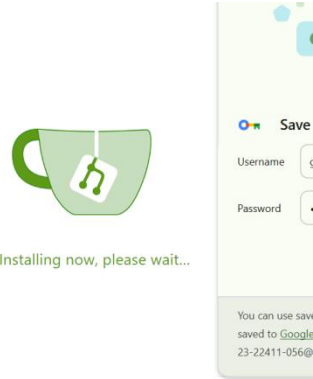
- task4_docker_compose_up.png

```
> 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
```

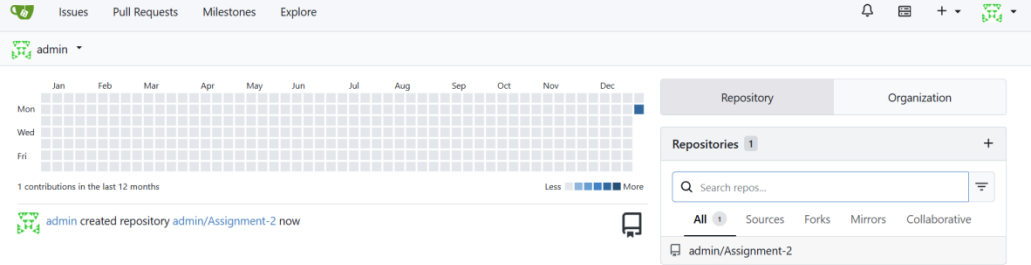
- task4_security_group_allow_3000.png



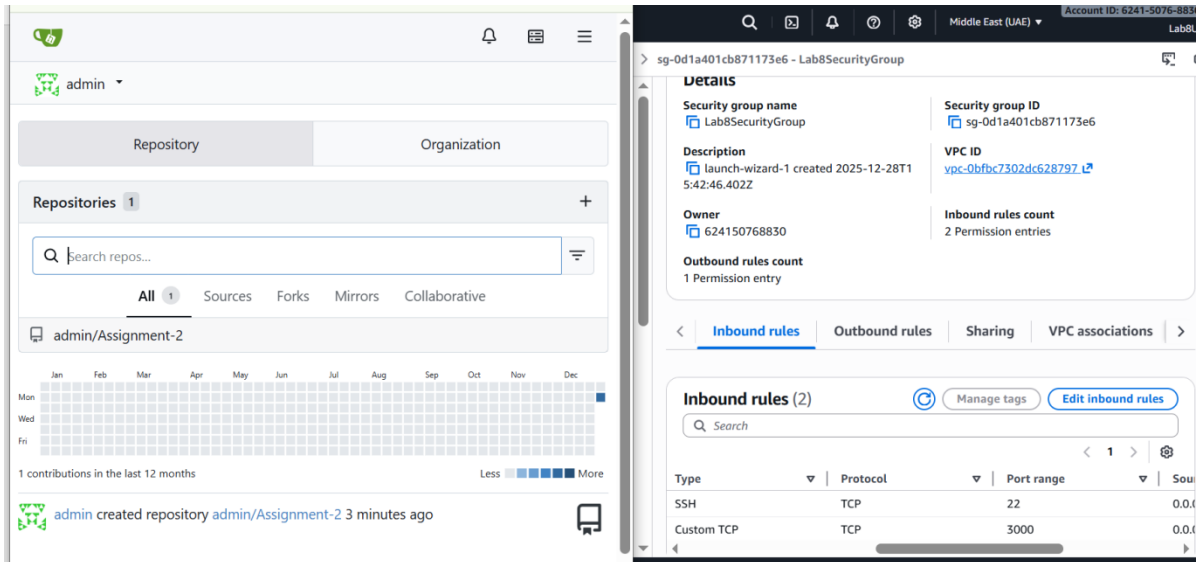
- task4_gitea_install_page.png



- task4_gitea_create_repo.png

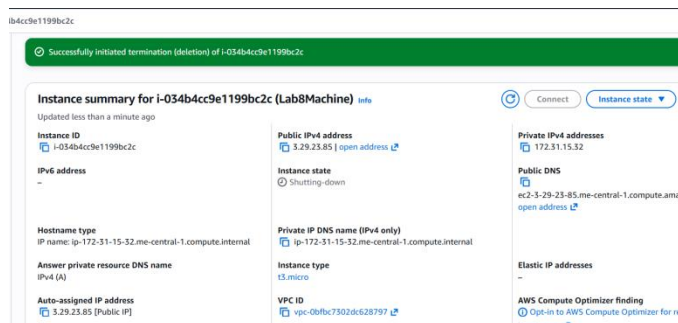


- task4_summary.png

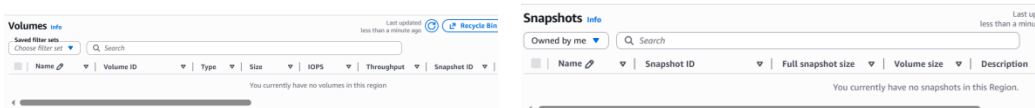


Cleanup — Remove resources to avoid charges

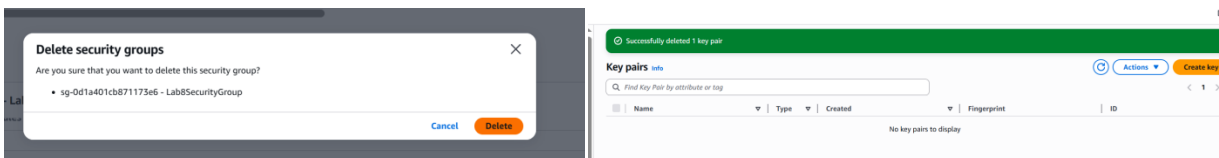
- cleanup_terminate_instance.png



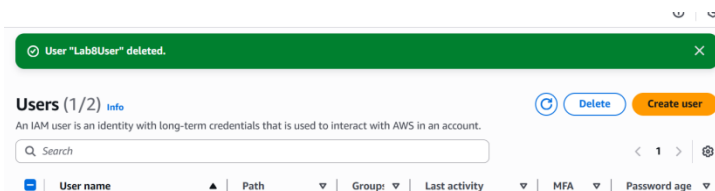
- cleanup_delete_volumes_snapshots.png



- cleanup_delete_security_group_and_keypair.png



- cleanup_iam_users_deleted.png



- cleanup_summary.png

✓ Users deleted.

Add MFA for root user - Enable multi-factor authentication (MFA) for the root user to improve security for this account.

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