

Name : Zuha Irfan

Roll No : 2023-BSE-073

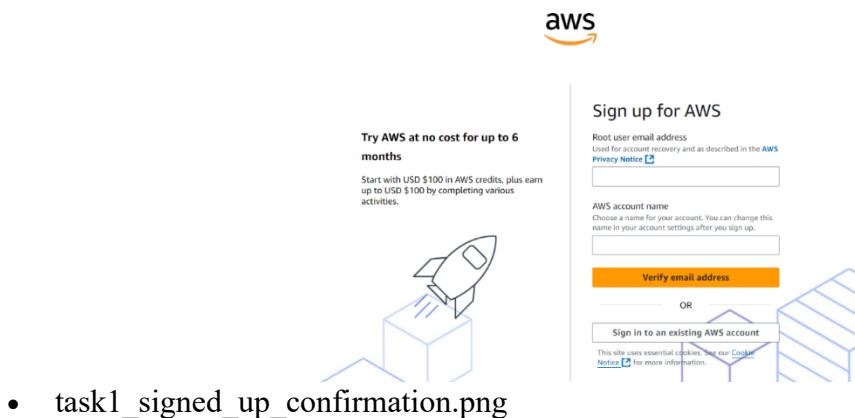
Subject: Cloud Computing

Semester & Section : V-B

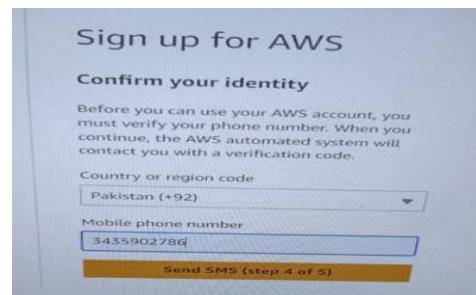
Lab : 08

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

- task1_open_signup_page.png



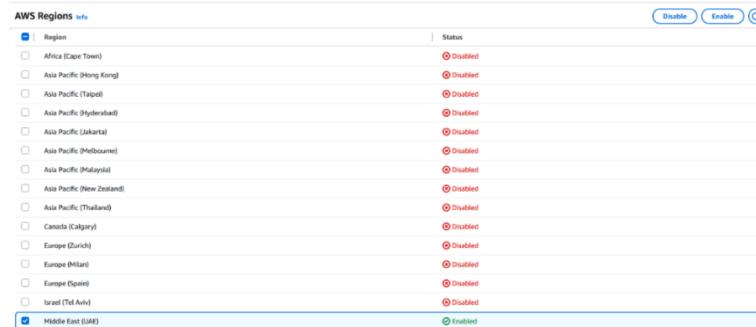
- task1_signed_up_confirmation.png



- task1_root_signed_in.png



- task1_enable_region_me-central-1.png

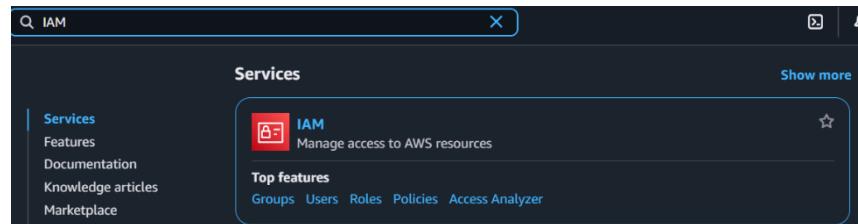


- task1_summary.png

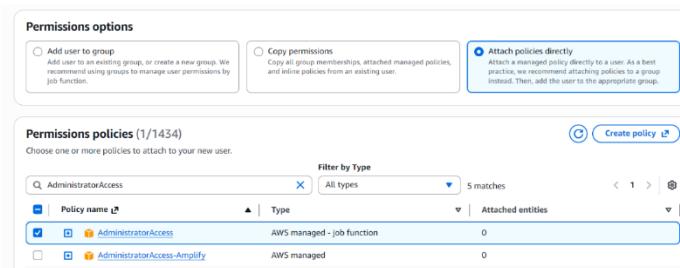
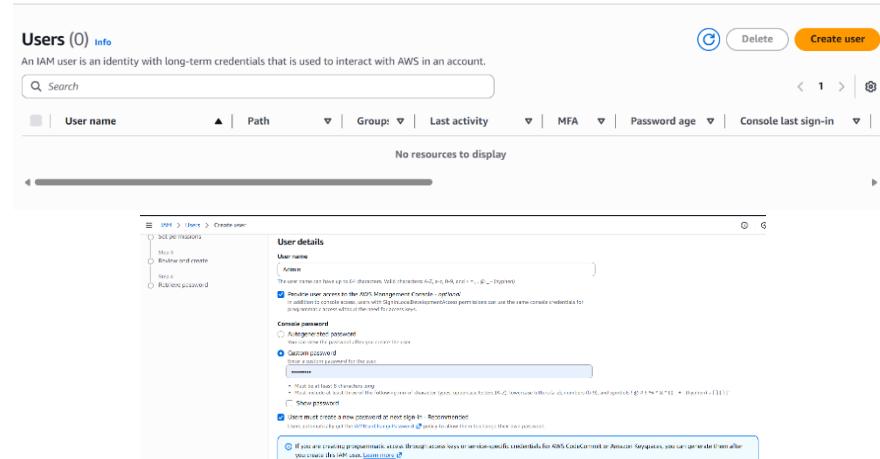


Task 2 — Create IAM Admin and Lab8User with console access

- task2_open_iam_console.png



- task2_admin_create_confirmation.png



Retrieve password

You can view and download the user's password below or email users instructions for signing in to the AWS Management Console. This is the only time you can view and download this password.

Console sign-in details		Email sign-in instructions
Console sign-in URL	https://051942114323signinaws.amazon.com/console	
User name	Admin	
Console password	<input type="password"/> Show	
Cancel Download.csv file Return to users list		

- task2_admin_csv_and_signin_url.png

Name	Date modified	Type	Size
Today			
Admin_credentials.csv	12/9/2025 6:20 PM	Microsoft Excel Com...	1 KB

Admin_credentials.csv
111 B • 33 minutes ago

File icon: CSV

File details:
User details
 User name: Admin
 Create password type: Custom password
 Require password reset: No
Permissions summary
 Name: AdminAccess
 Type: AWS managed - job function
 Used as: Permissions policy
 Policies: AdminAccess
Tags
 Tags are key-value pairs you can add to AWS resources to help identify, organize, or search for resources. Choose any tags you want to associate with this user.
 No tags associated with this resource.
 Add new tag
 You can add up to 50 tags.
 Cancel Previous Create user

- task2_admin_console_after_login.png

IAM user sign in

Account ID or alias (Don't have?)

Remember this account

IAM username

Password

Show Password [Having trouble?](#)

Sign in

Amazon Lightsail
Lightsail is the easiest way to get started on AWS
[Learn more »](#)

aws

>Password reset successful

Password reset

Your IAM User (Admin) password has been reset successfully.

Continue to sign in

- task2_create_lab8user_and_csv.png

User details

User name: Lab8User
 Provide user access to the AWS Management Console - optional
 Console password: Custom password
 Attach policies directly

Set permissions

Permissions options: Add user to group, Copy permissions, Attach policies directly (selected)
 Permissions policies (1/1434): AccessAnalyzerServiceRolePolicy (AWS managed), AdministratorAccess (AWS managed - job function) (selected), IAMUserChangePassword (AWS managed)

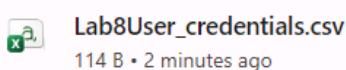
Review and create

User details: User name Lab8User, Console password type Custom password, Require password reset Yes
 Permissions summary: AdministratorAccess (AWS managed - job function), IAMUserChangePassword (AWS managed)

Retrieve password

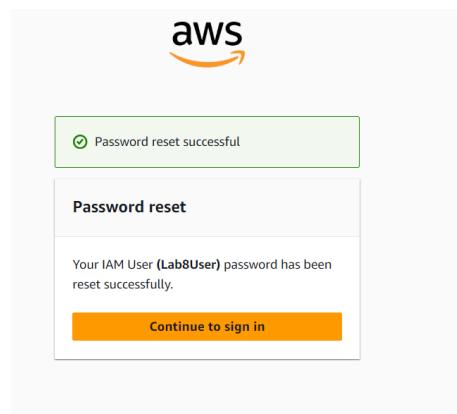
Console sign-in details: Console sign-in URL https://051942114323.signin.aws.amazon.com/console, User name Lab8User, Console password ***** (Show)

- task2_lab8user_csv_saved.png



▼ Today			
	Lab8User_credentials.csv	12/9/2025 6:52 PM	Microsoft Excel Com... 1 KB

- task2_lab8user_logged_in.png

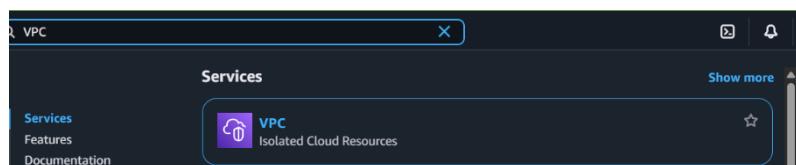


- task2_summary.png

Users (2) Info								
An IAM user is an identity with long-term credentials that is used to interact with AWS in an account.								
	User name	Path	Group	Last activity	MFA	Password age	Console last sign-in	
	Admin	/	0	38 minutes ago	-	28 minutes	38 minutes ago	Delete
	Lab8User	/	0	8 minutes ago	-	7 minutes	8 minutes ago	Create user

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

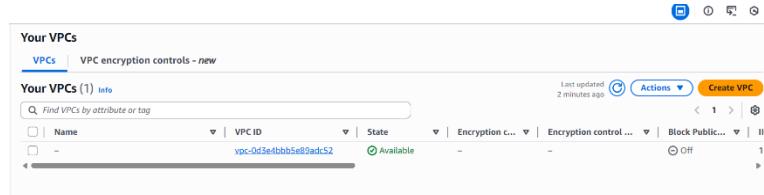
- task3_open_vpc_console.png



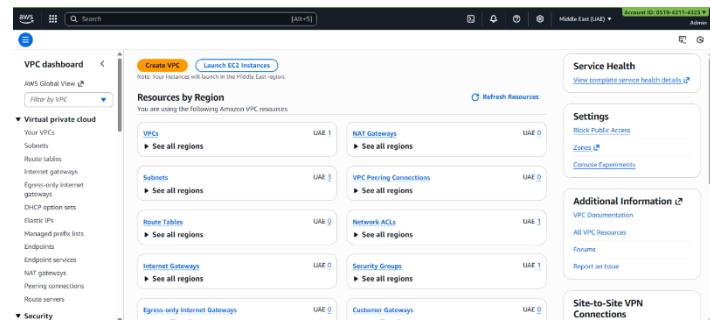
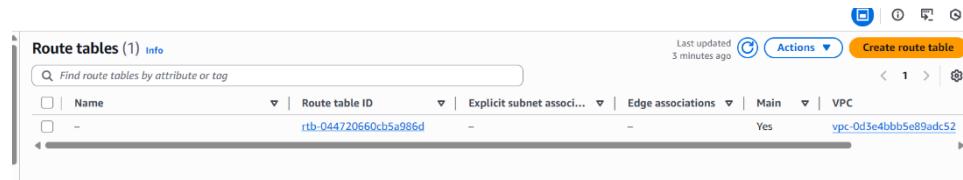
- task3_vpcs_list.png

Subnets (3) Info						
Last updated 2 minutes ago						
	Name	Subnet ID	State	VPC	Actions	Create subnet
	-	subnet-06bd2cc7001fc0311	Available	vpc-0d3e4bbb5e89adc52	Off	172.31.0.0/;
	-	subnet-0d8ceb3ac9aebf97	Available	vpc-0d3e4bbb5e89adc52	Off	172.31.16.0,
	-	subnet-00bf67309a526e531	Available	vpc-0d3e4bbb5e89adc52	Off	172.31.32.0,

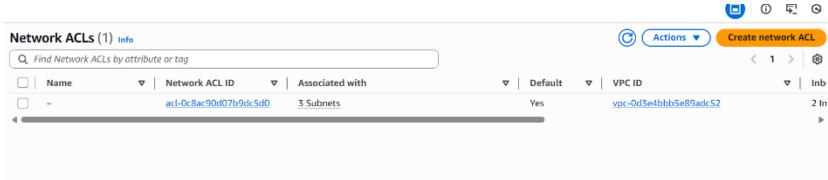
- task3_subnets_list.png



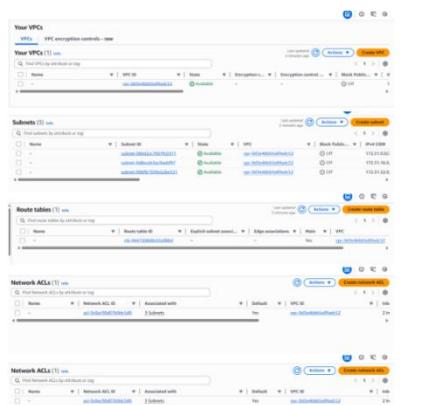
- task3_route_tables_list.png



- task3_network_acls_list.png

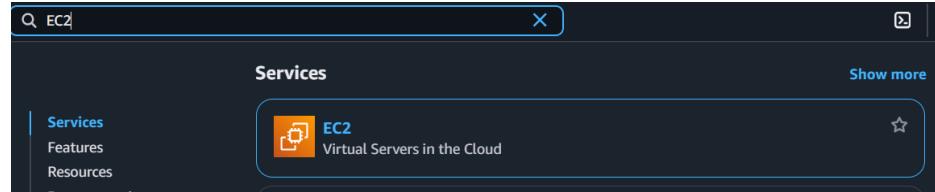


- task3_summary.png



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

- task4_open_ec2_console.png



- task4_launch_instance_config.png

Create key pair

Key pair name
Key pairs allow you to connect to your instance securely.

Lab8Key

The name can include up to 255 ASCII characters. It can't include leading or trailing spaces.

Key pair type

RSA
RSA encrypted private and public key pair

ED25519
ED25519 encrypted private and public key pair

Private key file format

.pem
For use with OpenSSH

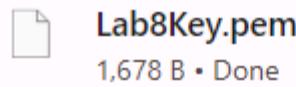
.ppk
For use with PuTTY

⚠️ When prompted, store the private key in a secure and accessible location on your computer. You will need it later to connect to your instance. [Learn more ↗](#)

Create key pair

The screenshot shows the AWS Lambda provider configuration page. At the top, it displays provider details: Architecture (64-bit (x86)), Boot mode (uefi-preferred), AMI ID (ami-05524d6658fcf35b6), Publish Date (2025-12-03), Username (ec2-user), and a green 'Verified provider' badge. Below this, the 'Instance type' section is expanded, showing the selected t3.micro instance type. It provides detailed information about the instance: Family (t3), 2 vCPU, 1 GiB Memory, Current generation: true, On-Demand Ubuntu Pro base pricing: 0.016 USD per Hour, On-Demand Linux base pricing: 0.0125 USD per Hour, On-Demand RHEL base pricing: 0.0413 USD per Hour, On-Demand SUSE base pricing: 0.0125 USD per Hour, and On-Demand Windows base pricing: 0.0217 USD per Hour. There are buttons for 'All generations' and 'Compare instance types'. A note at the bottom states 'Additional costs apply for AMIs with pre-installed software'.

- task4_keypair_download.png



- task4_instance_running_console.png

The screenshot shows the AWS EC2 Instances page. It lists a single instance named 'Lab8Machine' with the following details: Instance ID (i-074c60b7cd74cf542), Instance state (Running), Instance type (t3.micro), Status check (3/3 checks passed), Alarm status (View alarms), Availability Zone (me-central-1c), and Public IP (ec2-151). The 'Actions' dropdown menu is open, showing options like Connect, Stop, Start, and Terminate.

- task4_ssh_from_windows_to_ec2.png

The screenshot shows the 'Launch an instance' success page. It displays a green success message: 'Successfully initiated launch of instance (i-074c60b7cd74cf542)'. Below this, there is a 'Launch log' button.

- task4_ec2_install_docker_compose_started.png

The screenshot shows a terminal session on an Amazon Linux 2023 instance. The user runs several commands to install Docker Compose:

```

PS C:\Users\S Y S> ssh -i "C:\Users\S Y S\Downloads\Lab8Key.pem" ec2-user@158.252.7.110
The authenticity of host '158.252.7.110 (158.252.7.110)' can't be established.
ED25519 key fingerprint is SHA256:ogr6FY+kC08qpQ0PS2ya5D/v7C3+C6uoD2hwjBGR+F5.
This host key is known by the following other names/addresses:
  C:\Users\S Y S\.ssh/known_hosts:4: 158.252.28.89
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '158.252.7.110' (ED25519) to the list of known hosts.

[ec2-user@ip-172-31-13-206 ~]$ 

```

Afterwards, the user runs:

```

[ec2-user@ip-172-31-13-206 ~]$ sudo mkdir -p /usr/local/lib/docker/cli-plugins
[ec2-user@ip-172-31-13-206 ~]$ sudo curl -SL https://github.com/docker/compose/releases/latest/download/docker-compose-linux-x86_64 -o /usr/local/lib/docker/cli-plugins/docker-compose
% Total    % Received % Xferd  Average Speed   Time   Time  Current
          Dload  Upload Total Spent   Left Speed
0     0    0    0    0    0    0 --:--:--:--:--:--:--:--:--:--:--:--:0
0     0    0    0    0    0    0 --:--:--:--:--:--:--:--:--:--:--:0
100 29.8M 100 29.8M  0    46.8M  0 --:--:--:--:--:--:46.8M
[ec2-user@ip-172-31-13-206 ~]$ sudo chmod +x /usr/local/lib/docker/cli-plugins/docker-compose
[ec2-user@ip-172-31-13-206 ~]$ sudo systemctl start docker
[ec2-user@ip-172-31-13-206 ~]$ docker --version
Docker version 25.0.13, build 0bab087
[ec2-user@ip-172-31-13-206 ~]$ docker compose version
Docker Compose version 2.10.0
[ec2-user@ip-172-31-13-206 ~]$ sudo vim compose.yaml
[ec2-user@ip-172-31-13-206 ~]$ docker compose up -d
empty compose file

```

- task4 vim compose yaml paste.png

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

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```

```
[ec2-user@ip-172-31-13-206 ~]$ docker compose up -d  
[+] up 9/9  
✓ Image gitea/gitea:latest Pulled  
✓ Network ec2-user_default Created  
✓ Container gitea Created
```

- task4 compose yaml saved ls.png

```
[ec2-user@ip-172-31-13-206 ~]$ ls -l  
total 0  
-rwxr--r-- 1 root root 0 Dec  9 18:36 compose.yaml
```

- task4 usermod and groups before after.png

```
[ec2-user@ip-172-31-13-206 ~]$ groups
sudo usermod -aG docker $USER
groups
ec2-user adm wheel systemd-journal
ec2-user adm wheel systemd-journal

[ec2-user adm wheel systemd-journal]
[ec2-user@ip-172-31-13-206 ~]$ exit
logout
Connection to 158.252.7.110 closed.
```

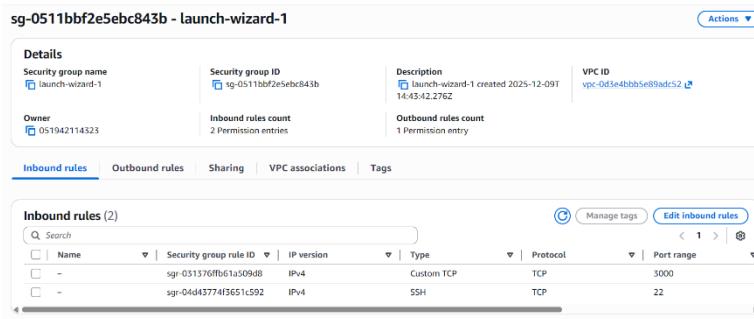
```
PS C:\Users\S Y S> ssh -i "C:\Users\S Y S\Downloads\Lab8Key.pem" ec2-user@158.252.7.110
  _\_ #####_          Amazon Linux 2023
~~ \_\_#####\
~~ \###|
~~ \#/ ___> https://aws.amazon.com/linux/amazon-linux-2023
~~ \~\_\_>
~~ .-.-/-
~~ /-/
~/m''

Last login: Tue Dec  9 18:08:45 2025 from 116.71.162.191
[ec2-user@ip-172-31-13-206 ~]$ groups
ec2-user adm wheel systemd-journal docker
```

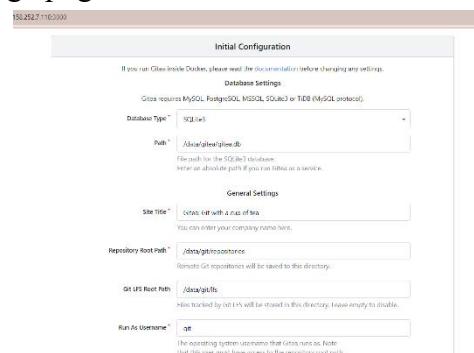
- task4_docker_compose_up.png

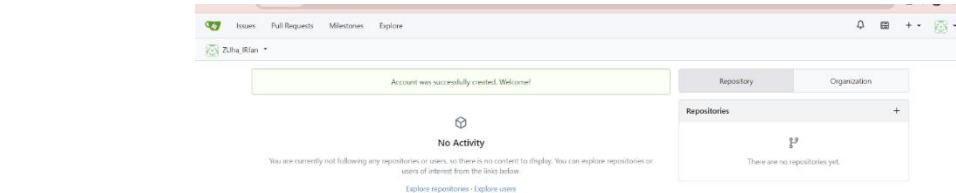
```
[ec2-user@ip-172-31-13-206 ~]$ cd ~
docker compose up -d
empty compose file
```

- task4_security_group_allow_3000.png

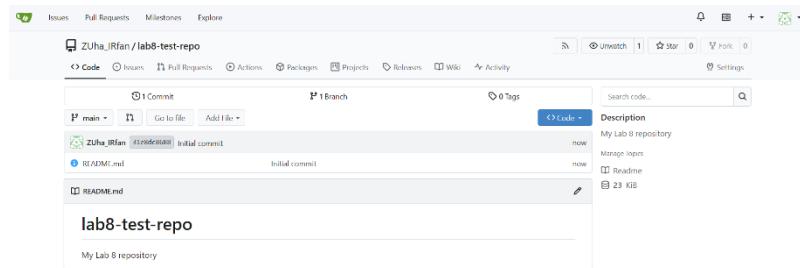


- task4_gitea_install_page.png





- task4_gitea_create_repo.png



- task4_summary.png

This screenshot shows the AWS CloudWatch Metrics Insights interface. It displays an "Instance summary for i-074c60b7cd74cf542 (Lab8Machine) [live]". The summary includes details like Instance ID (i-074c60b7cd74cf542), Public IPv4 address (158.252.7.10), and Private IP (ip-172-51-13-206). It also lists Auto-assigned resources (Amazon Linux 2), VPC ID (vpc-0511bf2e5ebc843b), and IAM Role (lambda-role). The "Inbound rules" tab of a security group (sg-0511bf2e5ebc843b) is shown, listing two rules: one for port 3000 (Custom TCP) and another for port 22 (TCP). Below this, a screenshot of the Gitea repository "ZUha_Rfan/lab8-test-repo" is shown again.

Cleanup — Remove resources to avoid charges

- cleanup_terminate_instance.png

Successfully removed termination protection for instance i-074c60b7cd74cf542. The instance can be deleted.

Instances (1/1) Info

Find Instance by attribute or tag (case-sensitive)

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public
Lab8Machine	i-074c60b7cd74cf542	Running	t3.micro	5/5 checks passed	View alarms +	me-central-1c	ec2-151

Successfully deleted volume vol-0a51ba744c4de032b.

Volumes Info

Last updated less than a minute ago

Choose filter set

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot ID	Source volume ID
You currently have no volumes in this region							

Successfully initiated termination (deletion) of i-074c60b7cd74cf542

Instances (1/1) Info

Find Instance by attribute or tag (case-sensitive)

Instance ID = i-074c60b7cd74cf542

Clear filters

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public
You currently have no instances in this region							

- cleanup_delete_volumes_snapshots.png

Snapshots Info

Last updated 1 minute ago

Owned by me

Name	Snapshot ID	Full snapshot size	Volume size	Description
You currently have no snapshots in this Region.				

- cleanup_delete_security_group_and_keypair.png

Security group (sg-0511bbf2e5ebc843b | launch-wizard-1) successfully deleted

Security Groups (2) Info

Find security groups by attribute or tag

Name	Security group ID	Security group name	VPC ID	Description
-	sg-0511bbf2e5ebc843b	launch-wizard-1	vpc-0d3e4bbb5e89adc52	launch-wizard-
-	sg-041b54cf71131aac8	default	vpc-0d3e4bbb5e89adc52	default VPC sec

Successfully deleted 1 key pairs

Key pairs Info

Find Key Pair by attribute or tag

Name	Type	Created	Fingerprint	ID
No key pairs to display				

- cleanup_iam_users_deleted.png

User "Lab8User" deleted.

Users (1/2) Info

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

Search

User name	Path	Group	Last activity	MFA	Password age	Console last sign-in
Admin	/	0	5 hours ago	-	6 hours	5 hours ago
Lab8User	/	0	5 hours ago	-	5 hours	5 hours ago

- cleanup_summary.png

Resource search results (9)

[Export 9 resources to CSV](#)[Manage tags of selected resources](#)

Choose up to 500 resources for which you want to edit tags.

 Filter resources< 1 >

<input type="checkbox"/>	Identifier	Tag: Name	Service	Type	Region	Tags
<input type="checkbox"/>	dopt-00bd5a27d71...	(not tagged)	EC2	DHCPOptions	me-central-1	-
<input type="checkbox"/>	igw-034b6746e0a4...	(not tagged)	EC2	InternetGateway	me-central-1	-
<input type="checkbox"/>	acl-0c8ac90d07b9d...	(not tagged)	EC2	NetworkAcl	me-central-1	-
<input type="checkbox"/>	rtb-044720660cb5...	(not tagged)	EC2	RouteTable	me-central-1	-
<input type="checkbox"/>	sg-041b54cf71131...	(not tagged)	EC2	SecurityGroup	me-central-1	-
<input type="checkbox"/>	subnet-06bd2cc70...	(not tagged)	EC2	Subnet	me-central-1	-
<input type="checkbox"/>	subnet-0d8ecb3ac...	(not tagged)	EC2	Subnet	me-central-1	-
<input type="checkbox"/>	subnet-00bf67309...	(not tagged)	EC2	Subnet	me-central-1	-
<input type="checkbox"/>	vpc-0d3e4bbb5e89...	(not tagged)	EC2	VPC	me-central-1	-

