

Semester 2 exam project report:

Browser accessing the ALB DNS name

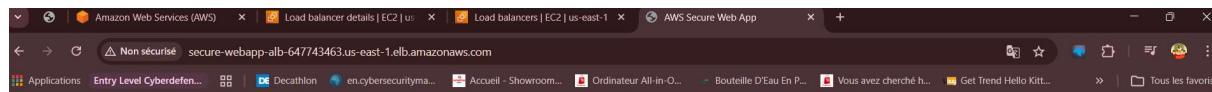


Maryame Diom - Secure AWS Cloud Project

Hostname: ip-10-0-2-144

Private IP: 10.0.2.144

This page was deployed automatically using Ansible through our bastion host.



Maryame Diom - Secure AWS Cloud Project

Hostname: ip-10-0-2-113

Private IP: 10.0.2.113

This page was deployed automatically using Ansible through our bastion host.

ALB target group showing healthy instances on the AWS console

Screenshot of the AWS EC2 Target Groups console showing the configuration of a target group named "web-target-group".

Target groups (1/1)

Name	ARN	Port	Protocol	Target type	Load balancer	VPC ID
web-target-group	arn:aws:elasticloadbalancing:us-east-1:9750-5004-1392:targetgroup/web-target-group/5e0675f5	80	HTTP	Instance	secure-webapp-alb	vpc-0675f5

Target group: web-target-group

IP address type	Load balancer
IPv4	secure-webapp-alb

Total targets	Healthy	Unhealthy	Unused	Initial	Draining
2	2	0	0	0	0
0 Anomalous					

Distribution of targets by Availability Zone (AZ)

Select values in this table to see corresponding filters applied to the Registered targets table below.

Targets | **Monitoring** | **Health checks** | **Attributes** | **Tags**

Registered targets (2)

Instance ID	Name	Port	Zone	Health status	Health status details	Administ...	Overrid...
i-0837639bb6774565f	web-server-2	80	us-east-1a (us...)	Healthy	-	No override.	No over...
i-00ada7b6277c13ef1	web-server-1	80	us-east-1a (us...)	Healthy	-	No override.	No over...

EC2 console showing all 3 instances

Instances (1/3) Info

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4
web-server-2	i-0837639bb6774565f	Running	t3.micro	3/3 checks passed	...	us-east-1a	-
bastion-host	i-0004a92a7099561d8	Running	t3.micro	3/3 checks passed	...	us-east-1a	-
web-server-1	i-0ada7b6277c13ef1	Running	t3.micro	3/3 checks passed	...	us-east-1a	-

i-0004a92a7099561d8 (bastion-host)

Details Status and alarms Monitoring Security Networking Storage Tags

Instance summary

Ansible playbook

```

maryame@DESKTOP-457DK6Q:~/secure-webapp
GNU nano 7.2                                         setup web.yml

name: Configure web servers
hosts: webservers
become: yes

tasks:
- name: Update apt cache
  apt:
    update_cache: yes

- name: Install NGINX
  apt:
    name: nginx
    state: present

- name: Ensure NGINX is running
  service:
    name: nginx
    state: started
    enabled: yes

- name: Deploy custom index.html
  copy:
    dest: /var/www/html/index.html
    content: |
      <html>
        <head>
          <title>AWS Secure Web App</title>
        </head>
        <body>
          <h1>Maryame Dior - Secure AWS Cloud Project</h1>
          <h2>Hostname: {{ ansible_hostname }}</h2>
          <h3>Private IP: {{ ansible_default_ipv4.address }}</h3>
          <p>This page was deployed automatically using Ansible through our bastion host.</p>
        </body>
      </html>

```

SSH from Bastion to webserver

```

ubuntu@ip-10-0-2-144: ~
maryanne@DESKTOP-4570K6Q:~/secure-webapp$ ssh bastion
Welcome to Ubuntu 24.04.3 LTS (GNU/Linux 6.14.0-1018-aws x86_64)

 * Documentation: https://help.ubuntu.com
 * Management: https://landscape.canonical.com
 * Support: https://ubuntu.com/pro

System information as of Fri Feb 13 02:04:19 UTC 2026

System load: 0.0 Temperature: -273.1 °C
Usage of /: 31.8% of 6.71GB Processes: 112
Memory usage: 25% Users logged in: 0
Swap usage: 0% IPv4 address for ens5: 10.0.1.182

* Ubuntu Pro delivers the most comprehensive open source security and
  compliance features.

  https://ubuntu.com/aws/pro

Expanded Security Maintenance for Applications is not enabled.

83 updates can be applied immediately.
38 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

Last login: Fri Feb 13 01:55:24 2026 from 196.207.222.55
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-10-0-1-182:~$ chmod 400 secure-webapp-key.pem
ubuntu@ip-10-0-1-182:~$ ssh -i secure-webapp-key.pem ubuntu@10.0.2.144
Welcome to Ubuntu 24.04.3 LTS (GNU/Linux 6.14.0-1018-aws x86_64)

 * Documentation: https://help.ubuntu.com
 * Management: https://landscape.canonical.com
 * Support: https://ubuntu.com/pro

System information as of Fri Feb 13 02:04:40 UTC 2026

System load: 0.0 Temperature: -273.1 °C
Usage of /: 30.0% of 6.71GB Processes: 113
Memory usage: 25% Users logged in: 0
Swap usage: 0% IPv4 address for ens5: 10.0.2.144

Expanded Security Maintenance for Applications is not enabled.

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```

```

ubuntu@ip-10-0-1-182:~$ chmod 400 secure-webapp-key.pem
ubuntu@ip-10-0-1-182:~$ ssh -i secure-webapp-key.pem ubuntu@10.0.2.144
Welcome to Ubuntu 24.04.3 LTS (GNU/Linux 6.14.0-1018-aws x86_64)

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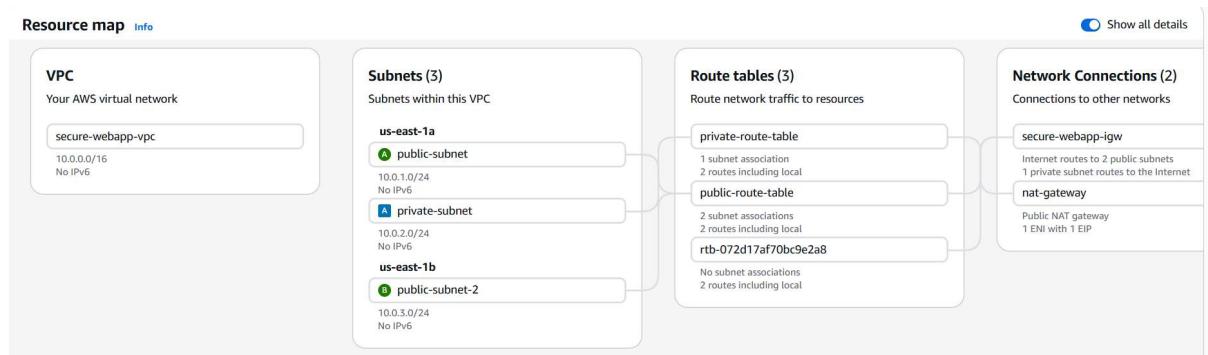
Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

Failed to connect to https://changelogs.ubuntu.com/meta-release-lts. Check your Internet connection or proxy settings

Last login: Fri Feb 13 01:03:37 2026 from 10.0.1.182
ubuntu@ip-10-0-2-144:~$ hostname -I
10.0.2.144
ubuntu@ip-10-0-2-144:~$ 

```

Project Ressource map



Link to Medium Article:

[Medium article](#)