

## Assignment 2 – Developing a highly available Photo Album website

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Lab session: Friday 4:30-6:30

### INTRODUCTION

In this we are making our website from Assignment 1b more Highly available Photo Album website by creating additional IAM roles to enable EC2, Lambda, and S3 to interact with each other, Restrict access to S3 using S3 bucket policy, Create a custom AMI, Create an auto scaling group across multiple Availability Zones with policies for scaling up and down, elastic load balancer to distribute service requests, Access control and traffic limitations by using AWS NACLs.

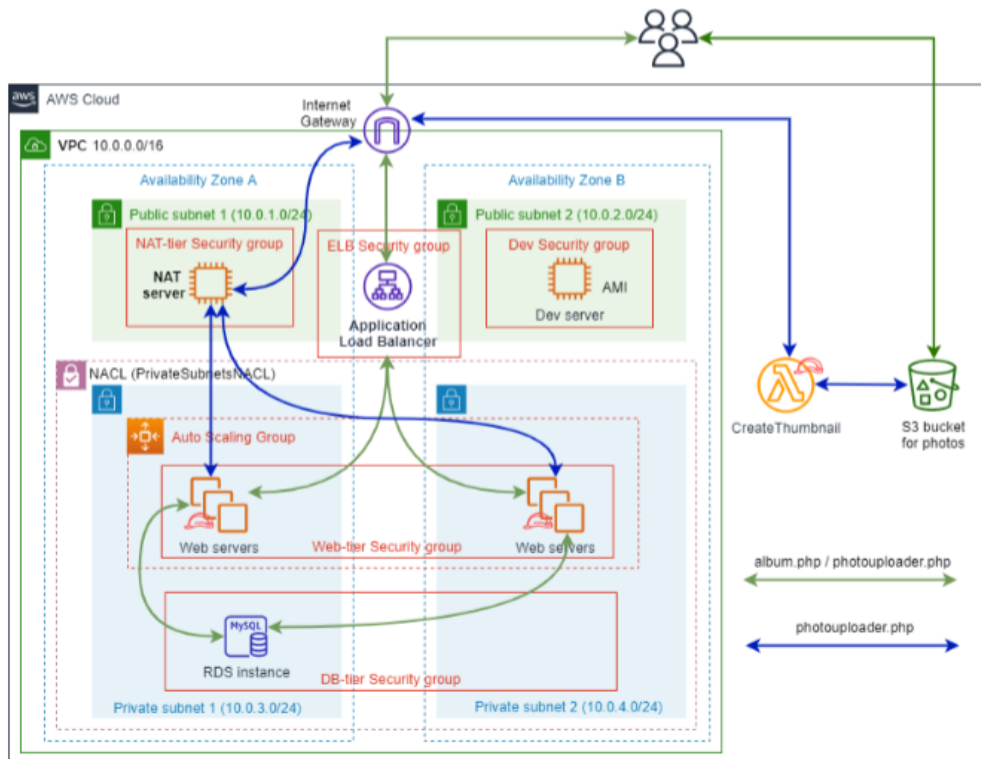


Fig 1.1 Cloud Architecture

Creating a VPC with subnets as specified in the task pdf.

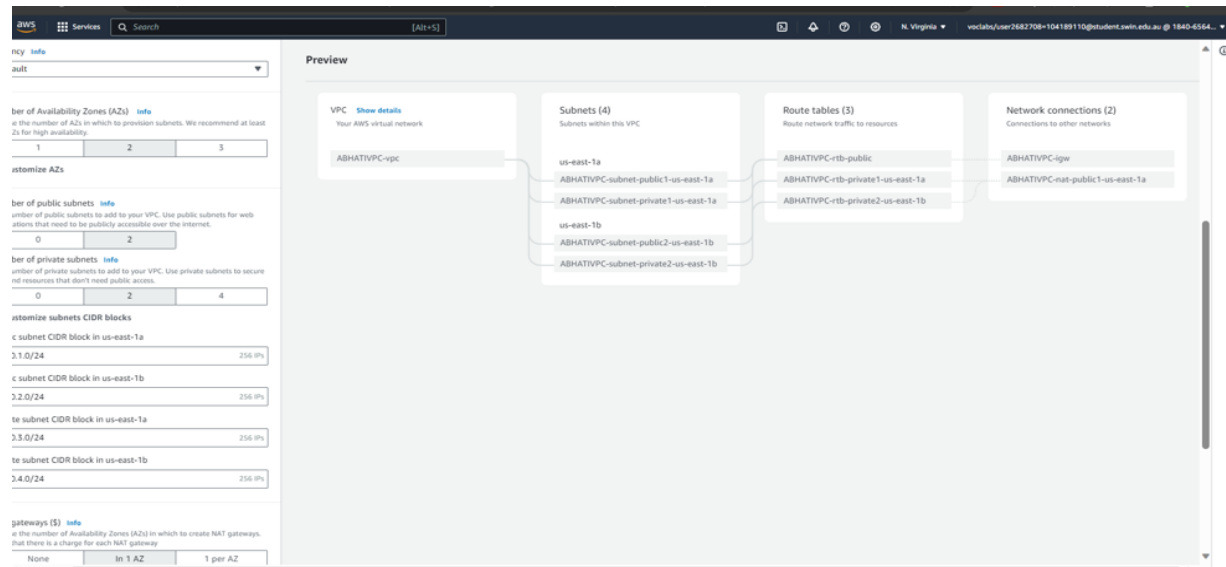


Fig1.2 Creating VPC

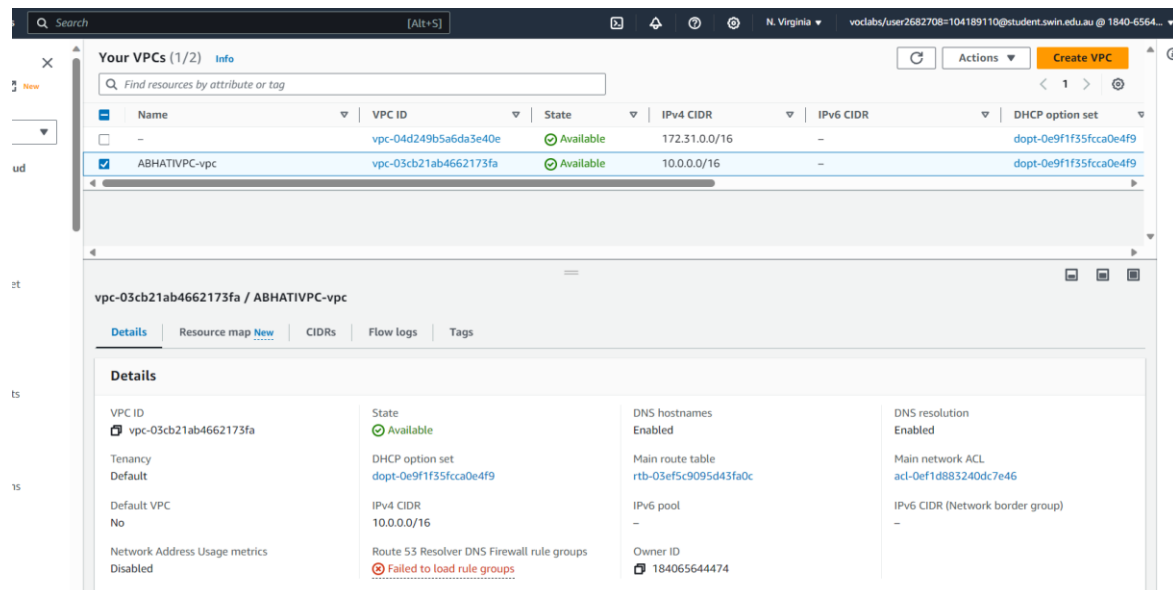
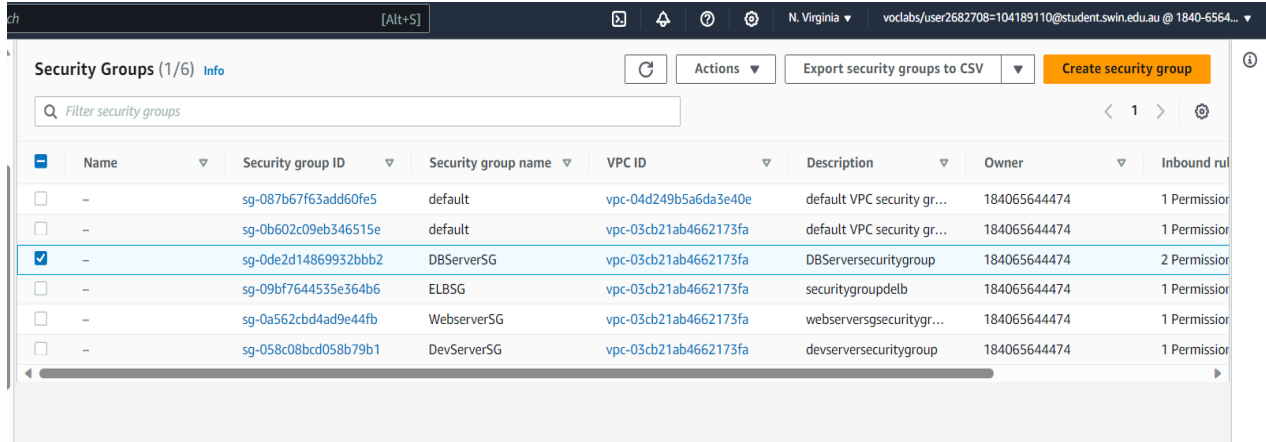


Fig 1.3 VPC checked

Created 5 Security Groups - ELBSG, WebServerSG, DBServerSG, NATServerSG, DevServerSG

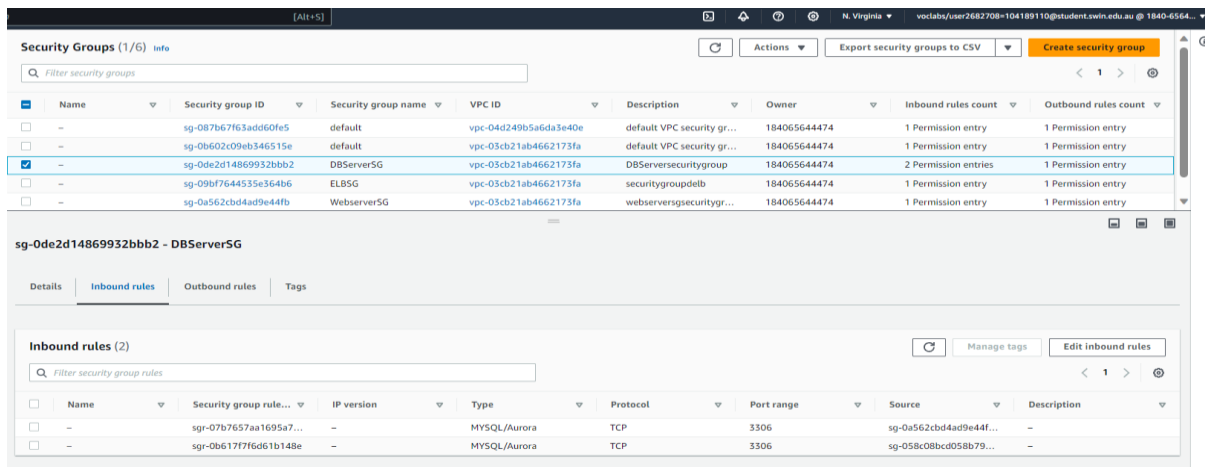


The screenshot shows the AWS Management Console interface for Security Groups. The table lists the following security groups:

Name	Security group ID	Security group name	VPC ID	Description	Owner	Inbound rules
-	sg-087b67f63add60fe5	default	vpc-04d249b5a6da3e40e	default VPC security gr...	184065644474	1 Permission
-	sg-0b602c09eb346515e	default	vpc-03cb21ab4662173fa	default VPC security gr...	184065644474	1 Permission
-	sg-0de2d14869932bbb2	DBServerSG	vpc-03cb21ab4662173fa	DBServersecuritygroup	184065644474	2 Permission
-	sg-09bf7644535e364b6	ELBSG	vpc-03cb21ab4662173fa	securitygroupdelb	184065644474	1 Permission
-	sg-0a562cbd4ad9e44fb	WebserverSG	vpc-03cb21ab4662173fa	webserversecuritygr...	184065644474	1 Permission
-	sg-058c08bcd058b79b1	DevServerSG	vpc-03cb21ab4662173fa	devserversecuritygroup	184065644474	1 Permission

Fig 1.4 All security groups

## Security groups



The screenshot shows the details of the security group **sg-0de2d14869932bbb2 - DBServerSG**. The **Inbound rules** tab is selected, showing the following rules:

Name	Security group rule...	IP version	Type	Protocol	Port range	Source	Description
-	sg-07b7657aa1695a7...	-	MySQL/Aurora	TCP	3306	sg-0a562cbd4ad9e44f...	-
-	sg-0b6177f76d61b148e	-	MySQL/Aurora	TCP	3306	sg-058c08bcd058b79...	-

Fig 1.5 DB Server SG inbound from dev/web server

Security Groups (1/6) Info

Filter security groups

Name	Security group ID	Security group name	VPC ID	Description	Owner	Inbound rules count	Outbound rules count
-	sg-0b602c09eb346515e	default	vpc-03cb21ab4662173fa	default VPC security gr...	184065644474	1 Permission entry	1 Permission entry
-	sg-0de2d14869932bbb2	DBServerSG	vpc-03cb21ab4662173fa	DBServersecuritygroup	184065644474	2 Permission entries	1 Permission entry
-	sg-09bf7644535e364b6	ELBSG	vpc-03cb21ab4662173fa	securitygroupelb	184065644474	1 Permission entry	1 Permission entry
-	sg-0a562cbd4ad9e44fb	WebserverSG	vpc-03cb21ab4662173fa	webserversecuritygr...	184065644474	1 Permission entry	1 Permission entry
-	sg-058c08bcd058b79b1	DevServerSG	vpc-03cb21ab4662173fa	devserversecuritygroup	184065644474	1 Permission entry	1 Permission entry

sg-09bf7644535e364b6 - ELBSG

Details Inbound rules Outbound rules Tags

Inbound rules (1/1)

Filter security group rules

Name	Security group rule...	IP version	Type	Protocol	Port range	Source	Description
-	sgr-03fbf5430a50a4e37	IPv4	HTTP	TCP	80	0.0.0.0/0	-

Fig 1.6 Elb SG Inbound rule

Security Groups (1/6) Info

Filter security groups

Name	Security group ID	Security group name	VPC ID	Description	Owner	Inbound rules count	Outbound rules count
-	sg-0b602c09eb346515e	default	vpc-03cb21ab4662173fa	default VPC security gr...	184065644474	1 Permission entry	1 Permission entry
-	sg-0de2d14869932bbb2	DBServerSG	vpc-03cb21ab4662173fa	DBServersecuritygroup	184065644474	2 Permission entries	1 Permission entry
-	sg-09bf7644535e364b6	ELBSG	vpc-03cb21ab4662173fa	securitygroupelb	184065644474	1 Permission entry	1 Permission entry
-	sg-0a562cbd4ad9e44fb	WebserverSG	vpc-03cb21ab4662173fa	webserversecuritygr...	184065644474	1 Permission entry	1 Permission entry
-	sg-058c08bcd058b79b1	DevServerSG	vpc-03cb21ab4662173fa	devserversecuritygroup	184065644474	1 Permission entry	1 Permission entry

sg-0a562cbd4ad9e44fb - WebserverSG

Details Inbound rules Outbound rules Tags

Inbound rules (1/1)

Filter security group rules

Name	Security group rule...	IP version	Type	Protocol	Port range	Source	Description
-	sgr-049f0824985f0fedd	-	HTTP	TCP	80	sg-09bf7644535e364...	-

Fig1. 7 Web Server SG inbound

Security Groups (1/6) Info

Filter security groups

Name	Security group ID	Security group name	VPC ID	Description	Owner	Inbound rules count	Outbound rules count
-	sg-0b602c09eb346515e	default	vpc-03cb21ab4662173fa	default VPC security gr...	184065644474	1 Permission entry	1 Permission entry
-	sg-0de2d14869932bbb2	DBServerSG	vpc-03cb21ab4662173fa	DBServersecuritygroup	184065644474	2 Permission entries	1 Permission entry
-	sg-09bf7644535e364b6	ELBSG	vpc-03cb21ab4662173fa	securitygroupelb	184065644474	1 Permission entry	1 Permission entry
-	sg-0a562cbd4ad9e44fb	WebserverSG	vpc-03cb21ab4662173fa	webserversecuritygr...	184065644474	1 Permission entry	1 Permission entry
-	sg-058c08bcd058b79b1	DevServerSG	vpc-03cb21ab4662173fa	devserversecuritygroup	184065644474	1 Permission entry	1 Permission entry

sg-058c08bcd058b79b1 - DevServerSG

Details Inbound rules Outbound rules Tags

Inbound rules (1/1)

Filter security group rules

Name	Security group rule...	IP version	Type	Protocol	Port range	Source	Description
-	sgr-03ce6d19edbd415d...	IPv4	All traffic	All	All	0.0.0.0/0	-

Fig1.8 Dev server SG Inbound

## Nat Gateway

The screenshot displays the AWS Management Console for NAT Gateways. At the top, there's a search bar and a table of NAT gateways. The table has columns for Name, NAT gateway ID, Connectivity type, State, State message, Primary public IP address, Primary private IP address, Primary network interface ID, and VPC. One gateway is listed: ABHATVPC-nat-pu... with ID nat-0015e7ee892255a30, Public connectivity, Available state, and associated with VPC vpc-03cb21ab4662173fa.

Below the table, the details for the selected NAT gateway are shown. The details include:

- NAT gateway ID:** nat-0015e7ee892255a30
- NAT gateway ARN:** arn:aws:ec2:us-east-1:184065644474:natgateway/nat-0015e7ee892255a30
- VPC:** vpc-03cb21ab4662173fa / ABHATVPC-vpc
- Connectivity type:** Public
- Primary public IPv4 address:** 3.227.40.0
- Subnet:** subnet-0406315ead3f55116 / ABHATVPC-subnet-public1-us-east-1a
- State:** Available
- Primary private IPv4 address:** 10.0.1.233
- Created:** Saturday, October 7, 2023 at 13:42:39 GMT+11
- State message:** -
- Primary network interface ID:** eni-00e13ae0da0de9764
- Deleted:** -

Fig1.9 Nat Gateway configuration

## EC-2 Dev Server Created

The screenshot shows the AWS Management Console for EC2 instances. At the top, there's a search bar and a table of instances. The table has columns for Name, Instance ID, Instance state, Instance type, Status check, Alarm status, Availability Zone, Public IPv4 DNS, Public IPv4 address, Elastic IP, and IPv6 IPs. Three instances are listed: DevServer (i-00337db3a3cc9a4e5), Web Server (i-02def807738117e08), and another Web Server (i-03feb9846301bd086). All are in a Running state.

Below the table, the details for the selected instance (i-00337db3a3cc9a4e5) are shown. The details include:

- Instance ID:** i-00337db3a3cc9a4e5 (DevServer)
- IPv6 address:** -
- Hostname type:** IP name: ip-10-0-2-33.ec2.internal
- Answer private resource DNS name:** -
- Auto-assigned IP address:** 3.237.71.129 [Public IP]
- IAM Role:** LabRole
- IMDSv2:** Optional
- Public IPv4 address:** 3.237.71.129 [open address]
- Instance state:** Running
- Private IP DNS name (IPv4 only):** ip-10-0-2-33.ec2.internal
- Instance type:** t2.micro
- VPC ID:** vpc-03cb21ab4662173fa (ABHATVPC-vpc)
- Subnet ID:** subnet-0d1e4f1a9b6d7f4ea (ABHATVPC-subnet-public2-us-east-1b)
- Private IPv4 addresses:** 10.0.2.33
- Public IPv4 DNS:** ec2-3-237-71-129.compute-1.amazonaws.com [open address]
- Elastic IP addresses:** -
- AWS Compute Optimizer finding:** Opt-in to AWS Compute Optimizer for recommendations. | Learn more
- Auto Scaling Group name:** -

Fig 1.10 Dev server

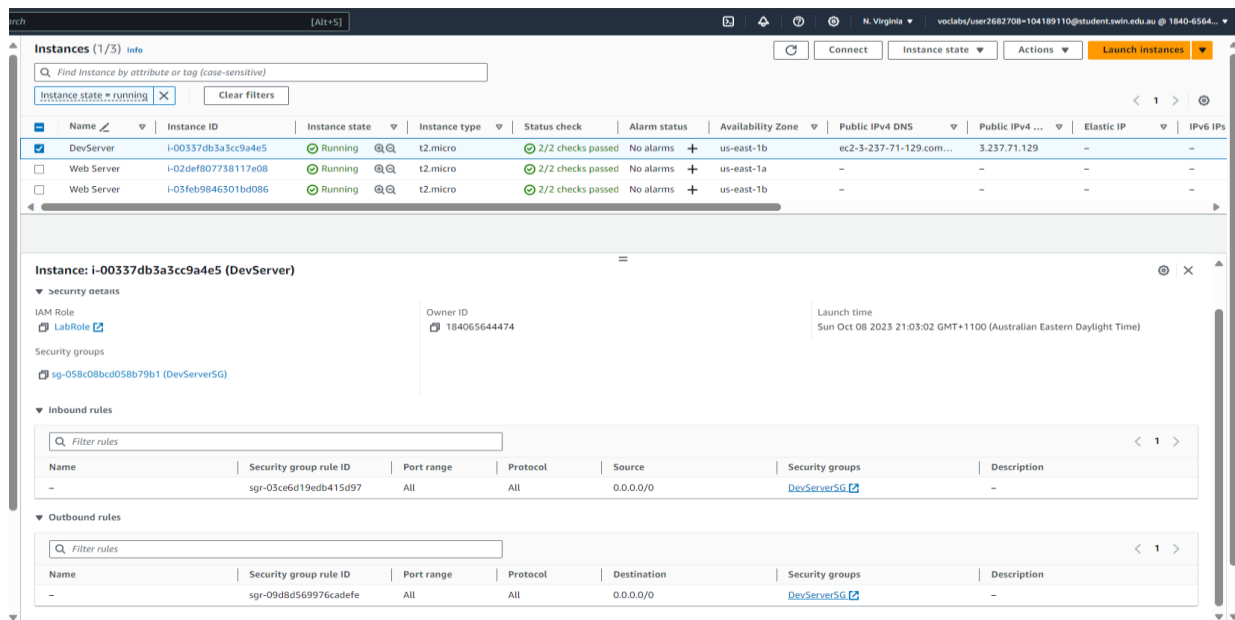


Fig 2.1 Inbound Outbound rules

## S3 bucket

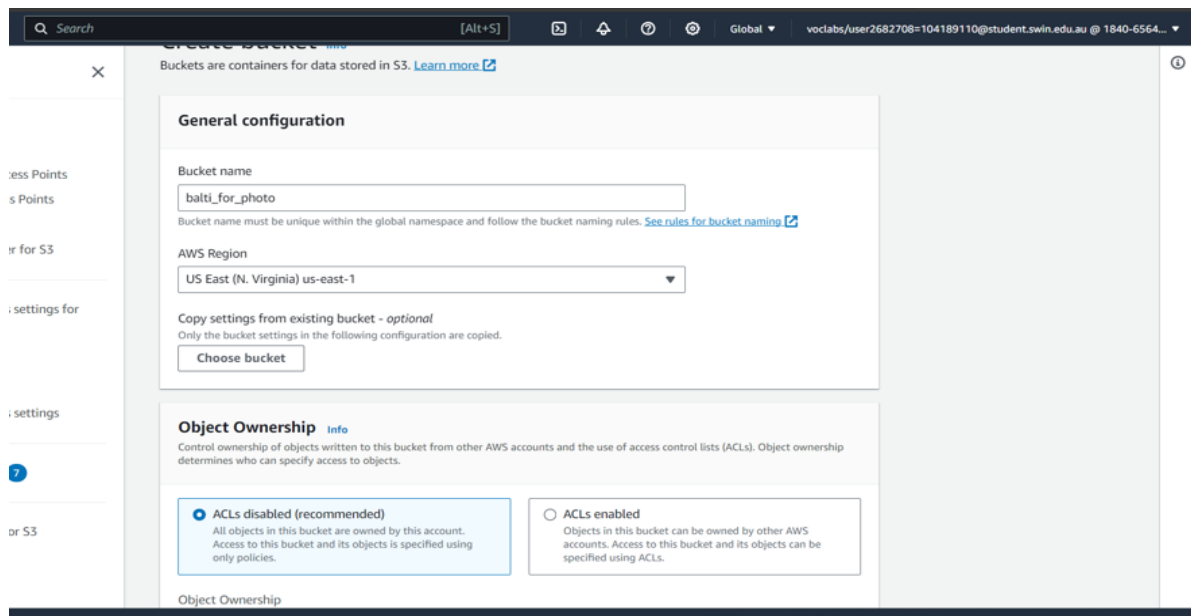


Fig 2.2 Buck creation

[Alt+S]

Global

voclabs/user2682708=104189110@student.swin.edu.au @ 1840-6564...

Amazon S3 > Buckets

▼ Account snapshot

View Storage Lens dashboard

Last updated: Oct 4, 2023 by Storage Lens. Metrics are generated every 24 hours. [Learn more](#)

Total storage	Object count	Average object size	You can enable advanced metrics in the "default-account-dashboard" configuration.
2.0 MB	2	1.0 MB	

Buckets (1) Info

Refresh

Copy ARN

Empty

Delete

Create bucket

Buckets are containers for data stored in S3. [Learn more](#)

Find buckets by name

< 1 > ⚙️

Name	AWS Region	Access	Creation date
○ baltiforphotos	US East (N. Virginia) us-east-1	Public	October 7, 2023, 13:57:09 (UTC+11:00)

Fig 2.3 Bucket created

[Alt+S]

Global

voclabs/user2682708=104189110@student.swin.edu.au @ 1840-6564...

Block all public access

⚠ Off

► Individual Block Public Access settings for this bucket

Bucket policy

Edit

Delete

The bucket policy, written in JSON, provides access to the objects stored in the bucket. Bucket policies don't apply to objects owned by other accounts. [Learn more](#)

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "AllowELBInstances",
      "Effect": "Allow",
      "Principal": "*",
      "Action": [
        "s3:GetObject",
        "s3:PutObject"
      ],
      "Resource": "arn:aws:s3:::baltiforphotos/*",
      "Condition": {
        "StringLike": {
          "aws:Referer": "http://abhati-lb-1258611399.us-east-1.elb.amazonaws.com/"
        }
      }
    }
  ]
}
```

Copy

Fig 2.4 Bucket policy to make only ELB be able to access it

## RDS database created

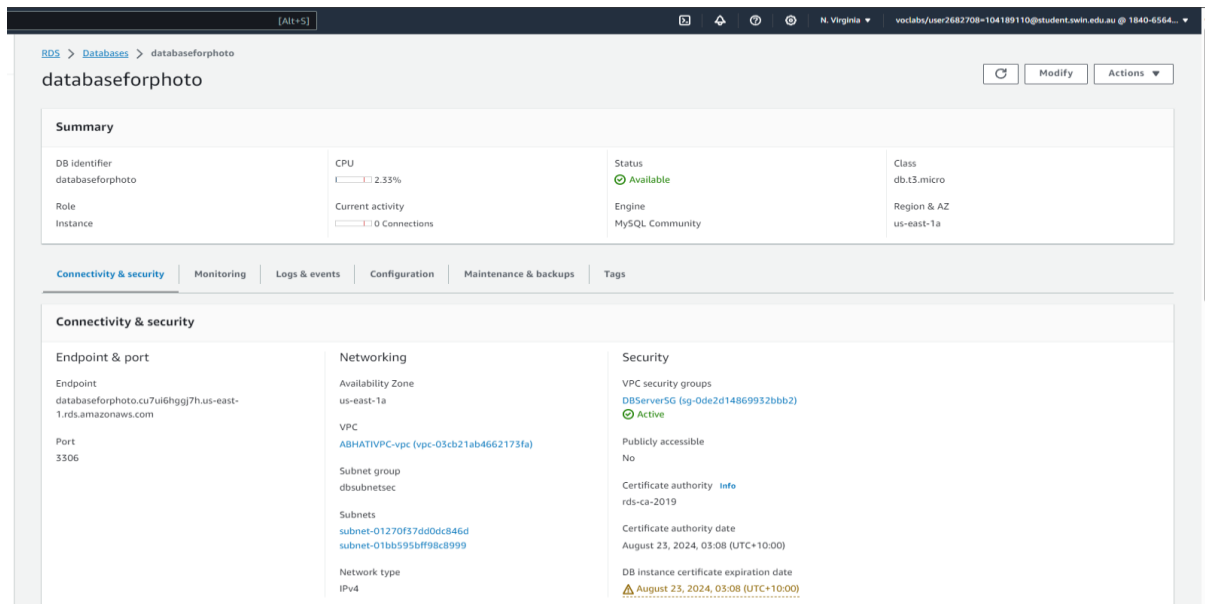


Fig 2.5 Created and working correctly

SSH into ec2 to do the install of phpmyadmin and install of AWS SDK.

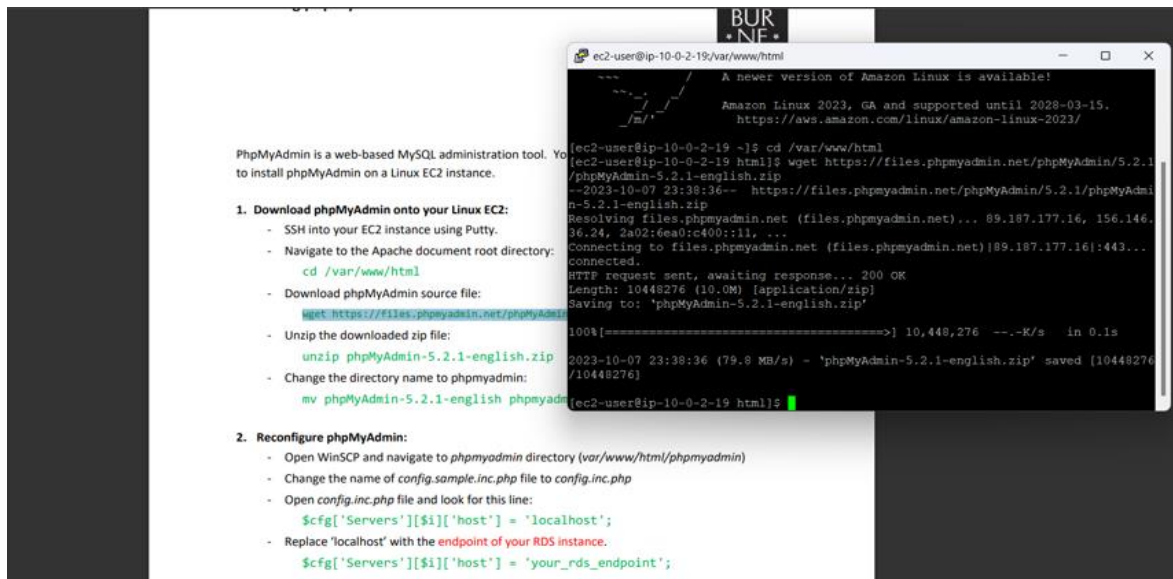


Fig 2.6 PHP install



```
constants.php
C:\Users\> aarya > Desktop > Asg 2 Cloud > photoalbum > constants.php > ...
51 define('TUTORIAL_SESSION', 'Friday 4:30');
52
53 // [ACTION REQUIRED] name of the S3 bucket that stores images
54 define('BUCKET_NAME', 'baltiforphotos');
55 // [ACTION REQUIRED] region of the above bucket
56 define('REGION', 'us-east-1');
57 define('S3_BASE_URL', 'https://'.BUCKET_NAME.'.s3.amazonaws.com/');
58
59 // [ACTION REQUIRED] name of the database that stores photo meta-data (note that this is not the DB identifier of the RDS instance)
60 define('DB_NAME', 'photoalbum');
61 // [ACTION REQUIRED] endpoint of RDS instance
62 define('DB_ENDPOINT', 'databaseforphoto.cu7u16hggj7h.us-east-1.rds.amazonaws.com');
63 // [ACTION REQUIRED] username of your RDS instance
64 define('DB_USERNAME', 'admin');
65 // [ACTION REQUIRED] password of your RDS instance
66 define('DB_PWD', 'admin123');
67
68 // [ACTION REQUIRED] name of the DB table that stores photo's meta-data
69 define('DB_PHOTO_TABLE_NAME', 'photo_metadata');
70 // The table above has 5 columns:
71 // [ACTION REQUIRED] name of the column in the above table that stores photo's titles
72 define('DB_PHOTO_TITLE_COL_NAME', 'title');
73 // [ACTION REQUIRED] name of the column in the above table that stores photo's descriptions
74 define('DB_PHOTO_DESCRIPTION_COL_NAME', 'description');
75 // [ACTION REQUIRED] name of the column in the above table that stores photo's creation dates
76 define('DB_PHOTO_CREATIONDATE_COL_NAME', 'creationdate');
77 // [ACTION REQUIRED] name of the column in the above table that stores photo's keywords
78 define('DB_PHOTO_KEYWORDS_COL_NAME', 'keywords');
79 // [ACTION REQUIRED] name of the column in the above table that stores photo's links in S3
80 define('DB_PHOTO_S3REFERENCE_COL_NAME', 'reference');
```

Fig 2.7 Edit the constansts file

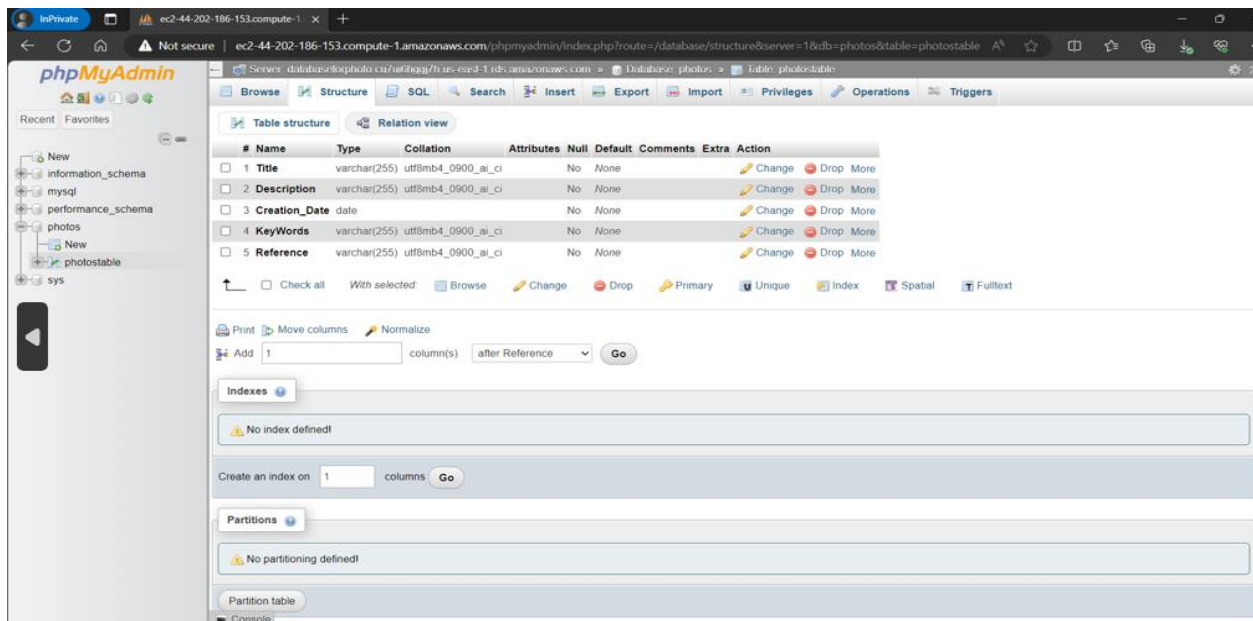


Fig 2.8 Table Creation

## Creation of AWS Lambda

The screenshot shows the 'Create new function' wizard in the AWS Lambda console. The 'Author from scratch' option is selected. The 'Function name' is 'CreateThumbnail'. The 'Runtime' is 'Python 3.11'. The 'Architecture' is 'arm64'. The 'Permissions' section shows the 'Change default execution role' dropdown expanded, with 'Create a new role with basic Lambda permissions' selected. The 'Execution role' section shows 'Create a new role with basic Lambda permissions' selected. The 'Existing role' section shows 'LabRole' selected.

Services Search [Alt+S] N. Virginia voclabs/user2682708=104189110@student.swin.edu.au @ 1840-6564...

**nbda** X

**Author from scratch**  
Start with a simple Hello World example.

**Use a blueprint**  
Build a Lambda application from sample code and configuration presets for common use cases.

**Container image**  
Select a container image to deploy for your function.

**Basic information**

**Function name**  
Enter a name that describes the purpose of your function.  
CreateThumbnail  
Use only letters, numbers, hyphens, or underscores with no spaces.

**Runtime** Info  
Choose the language to use to write your function. Note that the console code editor supports only Node.js, Python, and Ruby.  
Python 3.11

**Architecture** Info  
Choose the instruction set architecture you want for your function code.  
☐ x86\_64  
☒ arm64

**Permissions** Info  
By default, Lambda will create an execution role with permissions to upload logs to Amazon CloudWatch Logs. You can customize this default role later when adding triggers.

**Change default execution role**

**Execution role**  
Choose a role that defines the permissions of your function. To create a custom role, go to the [IAM console](#).

☐ Create a new role with basic Lambda permissions  
☒ Use an existing role

Fig 2.9 Config

The screenshot shows the 'Permissions' step of the 'Create new function' wizard. The 'Change default execution role' dropdown is expanded, showing 'Execution role' and 'Existing role' sections. The 'Execution role' section shows 'Create a new role with basic Lambda permissions' selected. The 'Existing role' section shows 'LabRole' selected. The 'Advanced settings' section shows 'Enable Code signing' and 'Enable function URL' options.

Choose the instruction set architecture you want for your function code.  
☐ x86\_64  
☒ arm64

**Permissions** Info  
By default, Lambda will create an execution role with permissions to upload logs to Amazon CloudWatch Logs. You can customize this default role later when adding triggers.

**Change default execution role**

**Execution role**  
Choose a role that defines the permissions of your function. To create a custom role, go to the [IAM console](#).

☐ Create a new role with basic Lambda permissions  
☒ Use an existing role  
☐ Create a new role from AWS policy templates

**Existing role**  
Choose an existing role that you've created to be used with this Lambda function. The role must have permission to upload logs to Amazon CloudWatch Logs.  
LabRole  
View the [LabRole](#) role on the IAM console.

**Advanced settings**

☐ **Enable Code signing** Info  
Use code signing configurations to ensure that the code has been signed by an approved source and has not been altered since signing.

☐ **Enable function URL** Info  
Use function URLs to assign HTTP(S) endpoints to your Lambda function.

Fig 2.10 Lab role

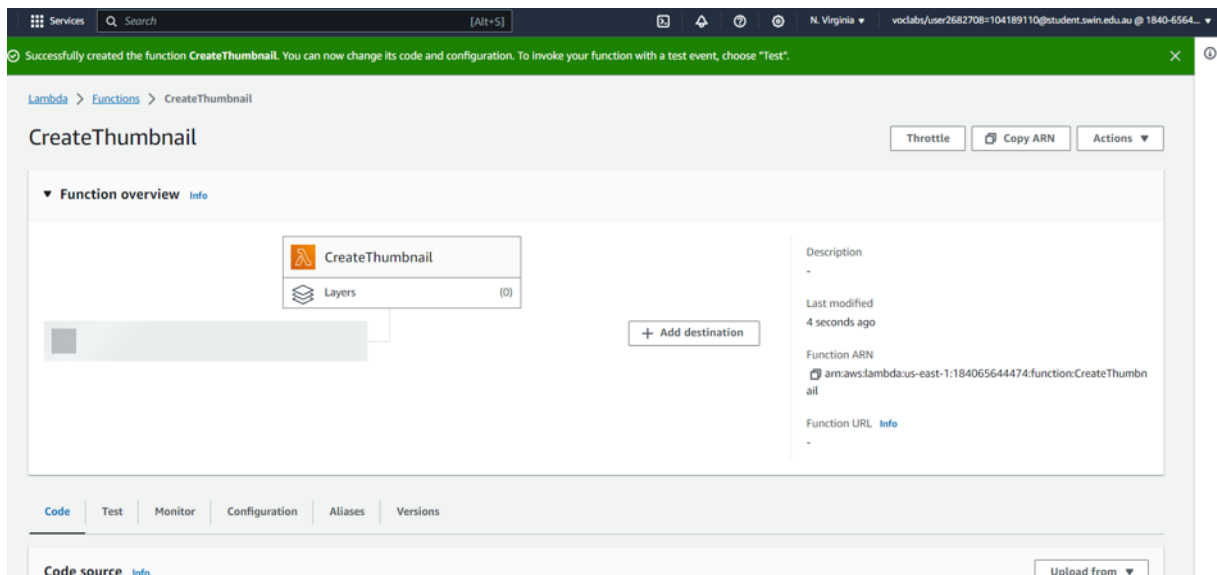


Fig 3.1 Created Successfully

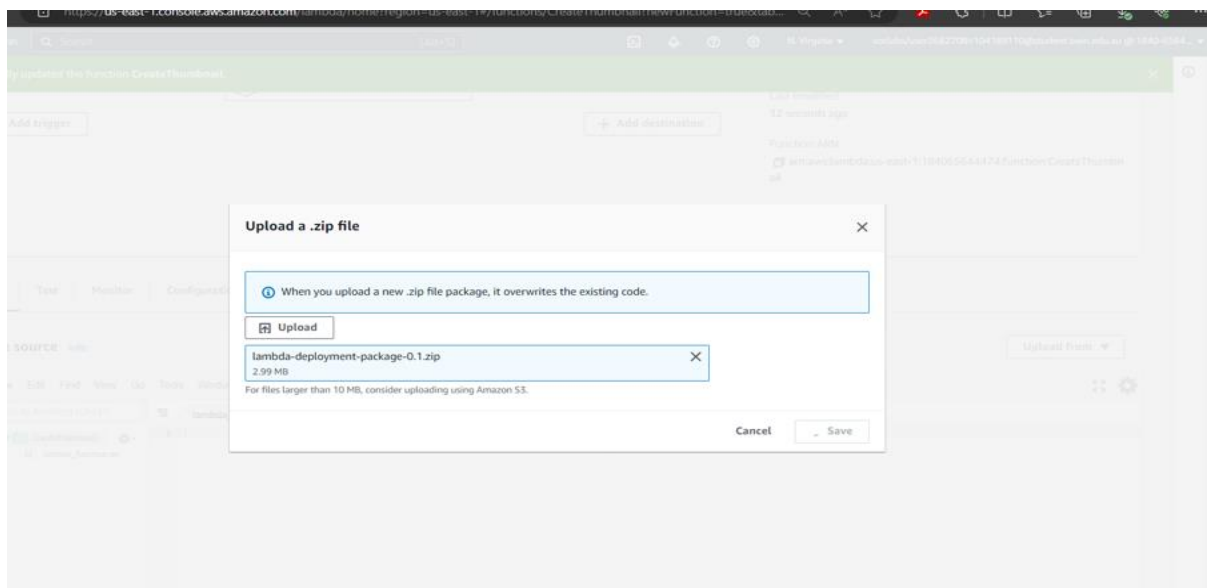


Fig 3.2 Upload lambda zip code file

## NACL Configuration

[Alt+S] You have successfully updated outbound rules for acl-0dfcce1fd0bbfdf1e / PrivatSubnetNACL

VPC > Network ACLs > acl-0dfcce1fd0bbfdf1e / PrivatSubnetNACL

### acl-0dfcce1fd0bbfdf1e / PrivatSubnetNACL

Actions

**Details** info

Network ACL ID acl-0dfcce1fd0bbfdf1e	Associated with 2 Subnets	Default No	VPC ID vpc-03cb21ab4662173fa / ABHATVPC-vpc
Owner 184065644474			

Inbound rules   Outbound rules   Subnet associations   Tags

**Inbound rules (3)**

Filter inbound rules

Edit inbound rules

< 1 > ⚙

Rule number	Type	Protocol	Port range	Source	Allow/Deny
1	All ICMP - IPv4	ICMP (1)	All	0.0.0.0/0	Deny
2	All traffic	All	All	0.0.0.0/0	Allow
*	All traffic	All	All	0.0.0.0/0	Deny

Fig 3.3 Inbound Rule

[Alt+S] You have successfully updated outbound rules for acl-0dfcce1fd0bbfdf1e / PrivatSubnetNACL

VPC > Network ACLs > acl-0dfcce1fd0bbfdf1e / PrivatSubnetNACL

### acl-0dfcce1fd0bbfdf1e / PrivatSubnetNACL

Actions

**Details** info

Network ACL ID acl-0dfcce1fd0bbfdf1e	Associated with 2 Subnets	Default No	VPC ID vpc-03cb21ab4662173fa / ABHATVPC-vpc
Owner 184065644474			

Inbound rules   **Outbound rules**   Subnet associations   Tags

**Outbound rules (3)**

Filter outbound rules

Edit outbound rules

< 1 > ⚙

Rule number	Type	Protocol	Port range	Destination	Allow/Deny
1	All ICMP - IPv4	ICMP (1)	All	0.0.0.0/0	Deny
2	All traffic	All	All	0.0.0.0/0	Allow
*	All traffic	All	All	0.0.0.0/0	Deny

Fig 3.4 Outbound Rule

[Alt+S] N. Virginia voclabs/user2682708-104189110@student.swin.edu.au @ 1840-6564...

You have successfully updated outbound rules for acl-0dfcce1fd0bbfdf1e / PrivatSubnetNACL

VPC > Network ACLs > acl-0dfcce1fd0bbfdf1e / PrivatSubnetNACL

## acl-0dfcce1fd0bbfdf1e / PrivatSubnetNACL

Details Info

Network ACL ID acl-0dfcce1fd0bbfdf1e	Associated with 2 Subnets	Default No	VPC ID vpc-03cb21ab4662173fa / ABHATIVPC-vpc
Owner 184065644474			

Inbound rules
Outbound rules
Subnet associations
Tags

Subnet associations (2)
Edit subnet associations

Filter subnet associations

Name	Subnet ID	Associated with	Availability Zone	IPv4 CIDR	IPv6 CIDR
ABHATIVPC-subnet-private1-us-ea...	subnet-01270f37dd0dc846d	acl-0dfcce1fd0bbfdf1e / PrivatSubnetN...	us-east-1a	10.0.3.0/24	-
ABHATIVPC-subnet-private2-us-ea...	subnet-01bb595bf98c8999	acl-0dfcce1fd0bbfdf1e / PrivatSubnetN...	us-east-1b	10.0.4.0/24	-

Fig 3.5 Subnet Association

## Load Balancer

groups

EC2 > Target groups > ABhati-TG

## ABhati-TG

Details

arn:aws:elasticloadbalancing:us-east-1:184065644474:targetgroup/ABhati-TG/6b77f6daf253639c

Target type Instance	Protocol : Port HTTP: 80	Protocol version HTTP1	VPC vpc-03cb21ab4662173fa
IP address type IPv4	Load balancer ABhati-LB		

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

► 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)
Deregister
Register targets

Filter targets

<input type="checkbox"/>	Instance ID	Name	Port	Zone	Health status	Health status details
<input type="checkbox"/>	i-03feb9846301bd086	Asg2	80	us-east-1b	healthy	
<input type="checkbox"/>	i-02def807738117e08	Asg2	80	us-east-1a	healthy	

Fig 3.6 Load Balancing Target Healthy Instance

roups

EC2 > Load balancers > ABhati-LB

ABhati-LB

Details

Load balancer type

Application

Scheme

Internet-facing

Status

Active

Hosted zone

Z355XDOTRQ7X7K

VPC

vpc-03cb21ab4662173fa

Availability Zones

subnet-0d1e4f1a9b6d7f4ea us-east-1b (use1-az1)

subnet-0406315ead3f55116 us-east-1a (use1-az2)

IP address type

IPv4

Date created

October 8, 2023, 23:04 (UTC+11:00)

Load balancer ARN

arn:aws:elasticloadbalancing:us-east-1:184065644474:loadbalancer/app/ABhati-LB/4dc6e30cfe85e1f

DNS name

ABhati-LB-1258611399.us-east-1.elb.amazonaws.com (A Record)

Listeners and rules

Network mapping

Security

Monitoring

Integrations

Attributes

Tags

Listeners and rules (1)

A listener checks for connection requests on its configured protocol and port. Traffic received by the listener is routed according to the default action and any additional rules.

Filter listeners

Protocol:Port

Default action

Rules

ARN

Security policy

Default SSL/TLS certificate

Tags

HTTP:80

Forward to target group

- ABhati-TG 1 (100%)
- Group-level stickiness: Off

1 rule

ARN

Not applicable

Not applicable

0 tags

Fig 3.7 Configuration

Security Group

roups

EC2 > Load balancers > ABhati-LB

ABhati-LB

Details

Load balancer type

Application

Scheme

Internet-facing

Status

Active

Hosted zone

Z355XDOTRQ7X7K

VPC

vpc-03cb21ab4662173fa

Availability Zones

subnet-0d1e4f1a9b6d7f4ea us-east-1b (use1-az1)

subnet-0406315ead3f55116 us-east-1a (use1-az2)

IP address type

IPv4

Date created

October 8, 2023, 23:04 (UTC+11:00)

Load balancer ARN

arn:aws:elasticloadbalancing:us-east-1:184065644474:loadbalancer/app/ABhati-LB/4dc6e30cfe85e1f

DNS name

ABhati-LB-1258611399.us-east-1.elb.amazonaws.com (A Record)

Listeners and rules

Network mapping

Security

Monitoring

Integrations

Attributes

Tags

Security groups (1)

A security group is a set of firewall rules that control the traffic to your load balancer.

Security Group ID

Name

Description

sg-09bf7644535e364b6

ELBSG

securitygroupdelb

Fig 3.8 Security group associated

Auto scaling

[Alt+S]

N. Virginia

voclabs/user2682708-104189110@student.swin.edu.au @ 1840-6564...

Launch Templates (1/1) info

Actions Create launch template

Search

Launch Template ID	Launch Template Name	Default Version	Latest Version	Create Time	Created By
lt-00a692fa249b121ae	LaunchTemplate-Webserver	1	1	2023-10-08T12:10:03.000Z	arn:aws:sts::184065644474:assumed-role/voclabs/user2682708-104189110@student.swin.edu...

LaunchTemplate-Webserver (lt-00a692fa249b121ae)

Launch template name

LaunchTemplate-Webserver

Default version

1

Owner

arn:aws:sts::184065644474:assumed-role/voclabs/user2682708-104189110@student.swin.edu.au

Details

Versions

Template tags

Launch template version details

Actions Delete template version

Version

1 (Default)

Description

-

Date created

2023-10-08T12:10:03.000Z

Created by

arn:aws:sts::184065644474:assumed-role/voclabs/user2682708-104189110@student.swin.edu.au

Instance details

Storage

Resource tags

Network interfaces

Advanced details

AMI ID

ami-0e8d423f27308baaa

Instance type

t2.micro

Availability Zone

-

Key pair name

ASG3

Security groups

-

Security group IDs

sg-0a562cbd4ad9e44fb

Fig3.9 Launch template

[Alt+S]

N. Virginia

voclabs/user2682708-104189110@student.swin.edu.au @ 1840-6564...

EC2 > Auto Scaling groups > Webserver-AutoScaling

Webserver-AutoScaling

Details Activity Automatic scaling Instance management Monitoring Instance refresh

Group details

Edit

Auto Scaling group name

Webserver-AutoScaling

Desired capacity

2

Status

-

Amazon Resource Name (ARN)

arn:aws:autoscaling:us-east-1:184065644474:autoScalingGroup:24027cc5-ae09-4637-b2a2-e600a6d1bbbbb:autoScalingGroupName/Webserver-AutoScaling

Date created

Sun Oct 08 2023 23:14:16 GMT+1100 (Australian Eastern Daylight Time)

Minimum capacity

2

Maximum capacity

3

Launch template

Edit

Launch template

lt-00a692fa249b121ae LaunchTemplate-Webserver

AMI ID

ami-0e8d423f27308baaa

Instance type

t2.micro

Owner

arn:aws:sts::184065644474:assumed-role/voclabs/user2682708-104189110@student.swin.edu.au

Version

Default

Security groups

-

Security group IDs

sg-0a562cbd4ad9e44fb

Create time

Sun Oct 08 2023 23:10:03 GMT+1100 (Australian Eastern Daylight Time)

Description

-

Storage (volumes)

-

Key pair name

ASG3

Request Spot Instances

No

View details in the launch template console

Fig 3.10 Group Detail

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP	IPv6 IPs
<input type="checkbox"/>	DevServer	i-00337db3a3cc9a4e5	Running	t2.micro	2/2 checks passed	No alarms	us-east-1b	ec2-3-237-71-129.com...	3.237.71.129	-	-
<input type="checkbox"/>	Web Server	i-02def807738117e08	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	-	-	-	-
<input type="checkbox"/>	Web Server	i-03feb9846301bd086	Running	t2.micro	2/2 checks passed	No alarms	us-east-1b	-	-	-	-

Fig 4.1 Successful launch of instances

## NAT Gateway

Name	NAT gateway ID	Connectivity...	State	State message	Primary public I...	Primary private ...	Primary network...	VPC
ABHATIVPC-nat-pu...	nat-0015e7ee892255a30	Public	Available	-	3.227.40.0	10.0.1.233	eni-00e13ae0da0d...	vpc-03cb21ab4662173fa /

nat-0015e7ee892255a30 / ABHATIVPC-nat-public1-us-east-1a			
Details	Secondary IPv4 addresses	Monitoring	Tags
<b>NAT gateway ID</b> nat-0015e7ee892255a30 <b>NAT gateway ARN</b> arn:aws:ec2:us-east-1:184065644474:natgateway/nat-0015e7ee892255a30 <b>VPC</b> vpc-03cb21ab4662173fa / ABHATIVPC-vpc	<b>Connectivity type</b> Public <b>Primary public IPv4 address</b> 3.227.40.0 <b>Subnet</b> subnet-0406315ead3f55116 / ABHATIVPC-subnet-public1-us-east-1a	<b>State</b> Available <b>Primary private IPv4 address</b> 10.0.1.233 <b>Created</b> Saturday, October 7, 2023 at 13:42:39 GMT+11	<b>State message</b> - <b>Primary network interface ID</b> eni-00e13ae0da0de9764 <b>Deleted</b> -

Fig 4.2 Nat Gateway Configuration



Working Upload photos

## Photo uploader

**Photo title:**

**Select a photo (Select PNG file for best result):**  No file chosen

**Description:**

**Date:**

**Keywords (comma-delimited, e.g. keyword1, keyword2, ...):**

[Photo Album](#)

Fig 4.3 Photo Uploader

← ↻ 🏠 ⚠ Not secure | abhati-lb-1258611399.us-east-1.elb.amazonaws.com/photoalbum/album.php

**Student name:** Aaryan

**Student ID:** 104189110

**Tutorial session:** Friday 4:30

**Uploaded photos:**

[Upload more photos](#)


Photo	Name	Description	Creation date	Keywords
	morrabin	atc	2023-10-09	atc control

Fig 4.4 Photo Album website

S3 Bucket Check

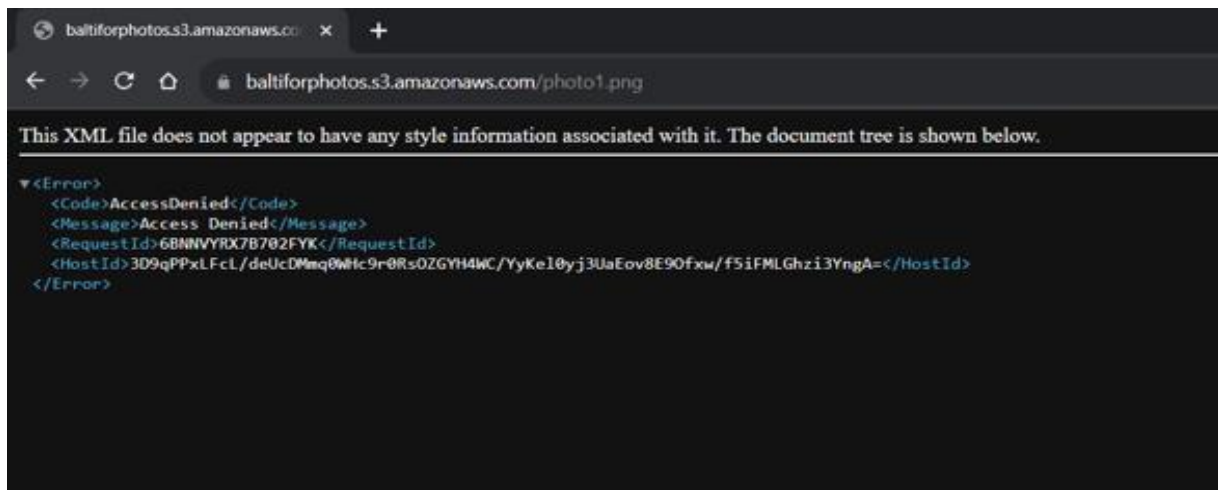


Fig 4.5 Public Access Blocked

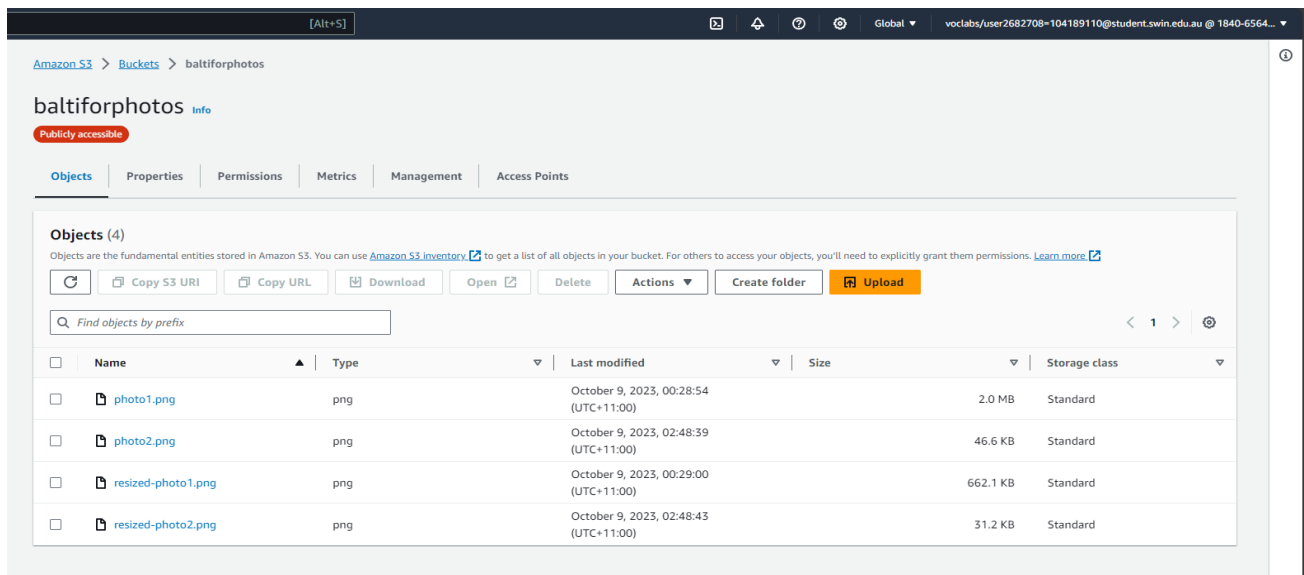


Fig 4.6 Show photos uploaded to S3 bucket and resized as per Lambda Thumbnail

Link album - [Photo Album \(abhati-lb-1258611399.us-east-1.elb.amazonaws.com\)](https://photoalbum.abhati-lb-1258611399.us-east-1.elb.amazonaws.com)

Link Photo uploader - [Photo Album \(abhati-lb-1258611399.us-east-1.elb.amazonaws.com\)](https://photoalbum.abhati-lb-1258611399.us-east-1.elb.amazonaws.com)