

COS80001 SDCC

Assignment 2 Report

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Screenshots showing successful completion of the assignment requirements are attached on the following pages.

AWS VPC Subnets

<input type="checkbox"/>	Name	Subnet ID	State	VPC	IPv4 CIDR	Available IPv4	Availability Zone	Route table	Network ACL	D
<input type="checkbox"/>	Public Subnet 2	subnet-03538c76643bcc10	available	vpc-00c068c280d3d7ba2...	10.0.2.0/24	249	ap-southeast-2b	rtb-0f430ed2bcb8cf75c Public Route Table	acl-0432dbf965082b3a9	N
<input type="checkbox"/>	Private Subnet 2	subnet-05c454bf2a7c828a9	available	vpc-00c068c280d3d7ba2...	10.0.4.0/24	249	ap-southeast-2b	rtb-0174afbd14d85310b Private Route Table	acl-0432dbf965082b3a9	N
<input type="checkbox"/>	Private Subnet 1	subnet-06a035b2f8df07af9	available	vpc-00c068c280d3d7ba2...	10.0.3.0/24	250	ap-southeast-2a	rtb-0174afbd14d85310b Private Route Table	acl-0432dbf965082b3a9	N
<input type="checkbox"/>	Public Subnet 1	subnet-090d187746cc82423	available	vpc-00c068c280d3d7ba2...	10.0.1.0/24	249	ap-southeast-2a	rtb-0f430ed2bcb8cf75c Public Route Table	acl-0432dbf965082b3a9	N

Figure 1 Subnets page for AMcWhaeVPC

AWS VPC RouteTable

<input type="checkbox"/>	Name	Route Table ID	Explicitly Associat	Main	VPC
<input type="checkbox"/>	Private Route Table	rtb-0174afbd14d853...	2 Subnets	Yes	vpc-00c068c280d3d7ba2 AMcWhae...
<input type="checkbox"/>		rtb-55568433	0 Subnets	Yes	vpc-4191d926
<input checked="" type="checkbox"/>	Public Route Table	rtb-0f430ed2bcb8cf7...	2 Subnets	No	vpc-00c068c280d3d7ba2 AMcWhae...

rtb-0f430ed2bcb8cf75c | Public Route Table

Summary

Routes

Subnet Associations

Route Propagation

Tags

Edit

View: All rules

Destination	Target	Status	Propagated
10.0.0.0/16	local	Active	No
0.0.0.0/0	igw-013ac26b370acaad8	Active	No

Figure 2 Route Table Page for AMcWhaeVPC

Security Groups

Web_tier_sg

Filter All security groups

Search Security Groups and th

<input type="checkbox"/>	Name tag	Group ID	Group Name	VPC	Description
<input checked="" type="checkbox"/>	web_tier_sg	sg-0030be702...	web_tier_sg	vpc-00c068c280d3d7ba2 A...	WebSecurityGroup
<input type="checkbox"/>	nat_sg	sg-0f4a75fa4d...	nat_sg	vpc-00c068c280d3d7ba2 A...	nat_sg
<input type="checkbox"/>	elb_sg	sg-09f1710746...	elb_sg	vpc-00c068c280d3d7ba2 A...	Security group for the elastic load balancer
<input type="checkbox"/>	db_tier_sg	sg-053804726...	db_tier_sg	vpc-00c068c280d3d7ba2 A...	DatabaseSecurityGroup
<input type="checkbox"/>		sg-063f66e8a7...	default	vpc-00c068c280d3d7ba2 A...	default VPC security group
<input type="checkbox"/>		sg-07856099a...	WebServer-SG	vpc-4191d926	Web Server Security Group
<input type="checkbox"/>		sg-0a579dd2fb...	rds-launch-wizard	vpc-00c068c280d3d7ba2 A...	Created from the RDS Management Con...
<input type="checkbox"/>		sg-e5c9559d	default	vpc-4191d926	default VPC security group

sg-0030be702c0f5fd6d | web_tier_sg

Summary

Inbound Rules

Outbound Rules

Tags

Edit

Type	Protocol	Port Range	Source	Description
HTTP (80)	TCP (6)	80	sg-09f17107468cc6bff	
HTTP (80)	TCP (6)	80	sg-0f4a75fa4d2b1b600	
SSH (22)	TCP (6)	22	sg-09f17107468cc6bff	

Figure 3 Security groups with Web_tier_sg inbound rules

Nat_sg

sg-0f4a75fa4d2b1b600 | nat_sg

Summary

Inbound Rules

Outbound Rules

Tags

Edit

Type	Protocol	Port Range	Source	Description
HTTP (80)	TCP (6)	80	0.0.0.0/0	

Figure 4 Nat_sg inbound rules

Elb_sg

sg-09f17107468cc6bff | elb_sg

Summary

Inbound Rules

Outbound Rules

Tags

Edit

Type	Protocol	Port Range	Source	Description
HTTP (80)	TCP (6)	80	0.0.0.0/0	
SSH (22)	TCP (6)	22	0.0.0.0/0	

Figure 5 Elb_sg inbound rules

Db_tier_sg

sg-053804726776cb479 | db_tier_sg

Summary

Inbound Rules

Outbound Rules

Tags

Edit

Type	Protocol	Port Range	Source	Description
SSH (22)	TCP (6)	22	sg-0030be702c0f5fd6d	
MySQL/Aurora (3306)	TCP (6)	3306	sg-0030be702c0f5fd6d	

Figure 6 db_tier_sg inbound rules

EC2 Instances

Description

<input type="checkbox"/>	Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6 IPs
<input checked="" type="checkbox"/>	Web Instance	i-01b71411b22580def	t2.micro	ap-southeast-2b	● running	✓ 2/2 checks ...	None		-	-
<input type="checkbox"/>	Web Instance	i-0f371973a2a7215d2	t2.micro	ap-southeast-2a	● running	✓ 2/2 checks ...	None		-	-
<input checked="" type="checkbox"/>	Web Server	i-0f7625786c89bceac	t2.micro	ap-southeast-2b	● stopping		None	ec2-54-252-157-148.ap-...	54.252.157.148	-
<input type="checkbox"/>	NAT Instance	i-0fe4336ed7f4a8c93	t2.micro	ap-southeast-2a	● running	✓ 2/2 checks ...	None	ec2-13-238-136-9.ap-so...	13.238.136.9	-
<input type="checkbox"/>	Assignment 1...	i-00492f4fa099acdc5	t2.micro	ap-southeast-2b	● stopped		None		-	-

Instance: **i-01b71411b22580def (Web Instance)** Private IP: 10.0.4.167

Description

Status Checks

Monitoring

Tags

Instance ID	i-01b71411b22580def	Public DNS (IPv4)	-
Instance state	running	IPv4 Public IP	-
Instance type	t2.micro	IPv6 IPs	-
Elastic IPs		Private DNS	ip-10-0-4-167.ap-southeast-2.compute.internal
Availability zone	ap-southeast-2b	Private IPs	10.0.4.167
Security groups	web_tier_sg view inbound rules view outbound rules	Secondary private IPs	
Scheduled events	No scheduled events	VPC ID	vpc-00c068c280d3d7ba2
AMI ID	A2 Web Server AMI (ami-0e8a071c96e0de95d)	Subnet ID	subnet-05c454bf2a7c828a9
Platform	-	Network interfaces	eth0
IAM role	S3AlbumAccessRole	Source/dest. check	True
Key pair name	FirstKeyPair	T2/T3 Unlimited	Disabled
Owner	761311932585	EBS-optimized	False
Launch time	October 3, 2018 at 2:07:38 AM UTC+10 (less than one hour)	Root device type	ebs
Termination protection	False	Root device	/dev/xvda
Lifecycle	normal	Block devices	/dev/xvda
Monitoring	detailed	Elastic GPU	-
Alarm status	None	Elastic GPU type	-
Kernel ID	-	Elastic GPU status	-

Figure 7 EC2 Instance Page showing description tag for web instance

Tags

Instance: **i-01b71411b22580def** (Web Instance) Private IP: 10.0.4.167

Description

Status Checks

Monitoring

Tags

Add/Edit Tags

Key	Value	
Name	Web Instance	Hide Column
StudentId	101801822	Show Column
StudentName	Alexander McWhae	Show Column
aws:autoscaling:groupName	Assignment2 Scaling Group	Show Column

Figure 8 Tags tab of Web Instance

RDS Instance Page



	DB instance ▲	Engine ▼	Status ▼	CPU	Current activity ▼	Maintenance ▼	Class ▼	VPC	Multi-AZ ▼
	database1b	MySQL	 available	<div><div></div></div> 1.17%	<div><div></div></div> 0 Connections	none	db.t2.micro	vpc-00c068c280d3d7ba2	No

Figure 9 RDS Instance Page

ELB Configuration

Name

DNS name

State

VPC ID

Availability Zones

Type

Created At

Monitoring

Assignment2-ELB

Assignment2-ELB-31807513...

active

vpc-00c068c280d3d7ba2

ap-southeast-2b, ap-so...

application

October 3, 2018 at 12:45:08 ...

Load balancer:

Assignment2-ELB

Description

Listeners

Monitoring

Tags

Basic Configuration

Name:

Assignment2-ELB

ARN:

arn:aws:elasticloadbalancing:ap-southeast-2:761311932585:loadbalancer/app/Assignment2-ELB/36f6e25c9aeb25be

DNS name:

Assignment2-ELB-31807513.ap-southeast-2.elb.amazonaws.com

(A Record)

Scheme:

internet-facing

Type:

application

Availability Zones:

subnet-03538c76643bcc10 - ap-southeast-2b ,
subnet-090d187746cc82423 - ap-southeast-2a

Creation time:

October 3, 2018 at 12:45:08 AM UTC+10

Hosted zone:

Z1GM3OXH4ZPM65

State:

active

VPC:

vpc-00c068c280d3d7ba2

IP address type:

ipv4

AWS WAF Web ACL:

Edit availability zones

Security

Security groups:

sg-09f17107468cc6bff, elb_sg

• Security group for the elastic load balancer

Edit security groups

Figure 10 ELB Configuration

AutoScaling Configuration

<input type="checkbox"/>	Name	Launch Configuration	Instances	Desired	Min	Max	Availability Zones	Default Cooldown	Health Check Gra
<input type="checkbox"/>	Assignment2 ...	Assignment2-Config	2	2	2	6	ap-southeast-2b, ap-southea...	300	300

Auto Scaling Group: Assignment2 Scaling Group

Details

Activity History

Scaling Policies

Instances

Monitoring

Notifications

Tags

Scheduled Actions

Lifecycle Hooks

Launch Template

-

Launch Template Version

-

Launch Configuration

Assignment2-Config

Service-Linked Role

arn:aws:iam::761311932585:role/aws-service-role/autoscaling.amazonaws.com/AWSServiceRoleForAutoScaling

Classic Load Balancers

Target Groups

Assignment2-Group

Desired Capacity

2

Min

2

Max

6

Health Check Type

ELB

Health Check Grace Period

300

Termination Policies

Default

Creation Time

Wed Oct 03 00:53:17 GMT+1000 2018

Availability Zone(s)

ap-southeast-2b, ap-southeast-2a

Subnet(s)

subnet-05c454bf2a7c828a9,subnet-06a035b2f8df07af9

Default Cooldown

300

Placement Groups

Suspended Processes

Enabled Metrics

GroupMinSize, GroupDesiredCapacity, GroupStandbyInstances, GroupInServiceInstances, GroupMaxSize, GroupTerminatingInstances, GroupPendingInstances, GroupTotalInstances

Instance Protection

Figure 11 Autoscaling Configuration

IAM

Policy

Policies > S3AlbumAccessPolicy

Summary

Policy ARNarn:aws:iam::761311932585:policy/S3AlbumAccessPolicy

DescriptionAllows access to list and write to the bucket

Permissions

Policy usage

Policy versions

Access Advisor

< Back

S3

Policy summary

{ } JSON

Edit policy

Q Filter

Action (5 of 70) <a>Show remaining 65	Resource
List (3 of 3 actions)	
<a>HeadBucket	All resources
<a>ListAllMyBuckets	All resources
<a>ListBucket	BucketName string like admcwhae
Read (1 of 31 actions)	
<a>GetObject	BucketName string like admcwhae, ObjectPath string like All
Write (1 of 30 actions)	
<a>PutObject	BucketName string like admcwhae, ObjectPath string like All

Figure 12 IAM Role for S3AlbumAccessPolicy

Roles

☐ S3AlbumAccessRole

Allows EC2 instances to call AWS services on your behalf.

AWS service: ec2

Figure 13 S3AlbumAccessRole

S3 Bucket Policy

Bucket policy editor ARN: arn:aws:s3:::admcmwhae

Type to add a new policy or edit an existing policy in the text area below.

```
1 {  
2   "Version": "2008-10-17",  
3   "Id": "PolicyForCloudFrontPrivateContent",  
4   "Statement": [  
5     {  
6       "Sid": "1",  
7       "Effect": "Allow",  
8       "Principal": {  
9         "AWS": "arn:aws:iam::cloudfront:user/CloudFront Origin Access Identity E1QEF70D03ULN0"  
10      },  
11      "Action": "s3:GetObject",  
12      "Resource": "arn:aws:s3:::admcmwhae/*"  
13    }  
14  ]  
15 }
```

Figure 14 S3 Bucket Policy for admcmwhae

[Upload.php](#)

[Form Details](#)

Photo uploader

Student ID: 101801822

Name: Alex McWhae

Photo title:	<input type="text" value="OscarJacket"/>
Select a photo:	<input type="button" value="Browse..."/> IMG_3542.JPG
Description:	<input type="text" value="Oscar wearing his jacket"/>
Date:	<input type="text" value="06 / 08 / 2018"/>
Keywords (seperated by a semicolon, e.h. keyword1; keyword2; etc.):	<input type="text" value="oscar;jacket"/>
<input type="button" value="Upload"/>	

[Photo Upload](#)

[Photo Search](#)

Figure 15 Upload form with fields filled in

[Form Submission](#)

Photo uploader

Student ID: 101801822

Name: Alex McWhae

Photo title:	<input type="text"/>
Select a photo:	<input type="button" value="Browse..."/> No file selected.
Description:	<input type="text"/>
Date:	<input type="text" value="dd / mm / yyyy"/>
Keywords (seperated by a semicolon, e.h. keyword1; keyword2; etc.):	<input type="text"/>
<input type="button" value="Upload"/>	
File uploaded!	

[Photo Upload](#)

[Photo Search](#)

Figure 16 Result of form submission

Getphotos.php

Form details

Photo Search

Keyword: Title: Date Range: -

[Photo Upload](#)
[Photo Search](#)

Figure 17 Form details for getphotos.php

Results

Photo Search

Keyword: Title: Date Range: -

Searched parameters, date1: 2018-01-01, keyword: oscar, date2: 2018-10-02



Title: DogsBed

Description: Arlo, Oscar, Buckley lying on the bed

Date: 2018-07-14

Keywords: arlo, oscar, buckley, bed



Title: OscarJacket

Description: Oscar wearing his jacket

Date: 2018-08-06

Keywords: oscar, jacket

[Photo Upload](#)

[Photo Search](#)

Figure 18 Results of search