

## InnoMed Account

Group/Role	Role	User1	User2	User3	User4
System Administrator	Access All	Admin1	Admin2		
Database Administrator	Access DBS	Data1	Data2		
Monitor	Monitoring Infrastructure Resources	Monitor1	Monitor2	Monitor3	Monitor4

## Users, Groups, And Roles

Group/Role #	Group/Role Name	Permissions
System Administrator	Administrator	1.AWS Management Console access 2.Own user name and password
Database Administrator	Database Management	Combination of user name and password
Monitor	Monitor	Monitoring Infrastructure Resources
Role: InnoMed Application	App_manager	1. read and write to S3 Bucket

## VPC(InnoMed-VPC)

VPC Name: InnoMed-VPC

IPv4 CIDR Block: 10.200.0.0/20

Create VPC



A VPC is an isolated portion of the AWS cloud populated by AWS objects, such as Amazon EC2 instances. You must specify an IPv4 address range for your VPC. Specify the IPv4 address range as a Classless Inter-Domain Routing (CIDR) block; for example, 10.0.0.0/16. You cannot specify an IPv4 CIDR block larger than /16. You can optionally associate an Amazon-provided IPv6 CIDR block with the VPC.

**Name tag**  ⓘ

**IPv4 CIDR block\***  ⓘ

**IPv6 CIDR block\*** ☒ No IPv6 CIDR Block ⓘ  
☐ Amazon provided IPv6 CIDR block

**Tenancy**  ⓘ

Cancel

Yes, Create

vpc-08ff7b3072dad9464 | InnoMed

Summary

CIDR Blocks

Flow Logs

Tags

**VPC ID:** vpc-08ff7b3072dad9464 |  
InnoMed

**Network ACL:** [acl-0351428370b99c337](#)

**State:** available

**Tenancy:** Default

**IPv4 CIDR:** 10.200.0.0/20

**DNS resolution:** yes

**IPv6 CIDR:**

**DNS hostnames:** no

**DHCP options set:** [dopt-6f92e30b](#)

**ClassicLink DNS Support:** no

**Route table:** [rtb-03c472b15f5105cdc | Public Route Table](#)

VPC Name	Region	Purpose	Subnets	AZs	CIDR Range
InnoMod-VPC	N. Virginia	Null	4	us-east-1a, us-east-1f	10.200.0.0/20

## Subnet

### Application and Web subnet

Name	VPC	Subnet Type	AZ	Subnet Address
NAT-subnet-group1	InnoMod-VPC	Public	us-east-1a	10.200.0.0/24

Name	VPC	Subnet Type	AZ	Subnet Address
WEB-subnet-group1(Web)	InnoMod-VPC	Private	us-east-1a	10.200.2.0/24
APP-subnet-group1(App)	InnoMod-VPC	Private	us-east-1a	10.200.4.0/24
DB-subnet-group1(DB)	InnoMod-VPC	Private	us-east-1a	10.200.6.0/24
TestDev-subnet-group1(Test/Dev)	InnoMod-VPC	Private	us-east-1a	10.200.8.0/24
NAT-subnet-group2	InnoMod-VPC	Public	us-east-1f	10.200.1.0/24
WEB-subnet-group2(Web)	InnoMod-VPC	Private	us-east-1f	10.200.3.0/24
APP-subnet-group2(App)	InnoMod-VPC	Private	us-east-1f	10.200.5.0/24
DB-subnet-group2(App)	InnoMod-VPC	Private	us-east-1f	10.200.7.0/24
TestDev-subnet-group2(Test/Dev)	InnoMod-VPC	Private	us-east-1a	10.200.9.0/24

## Route Table

Name	VPC	Route	Subnet Associations
Public Route Table	InnoMod-VPC	Des: 10.200.0.0/20 Target: local / Des:0.0.0.0/0 Target:Internet Gateway	Public Subnet 1&2
Private Route Table 1	InnoMod-VPC	Des: 10.200.0.0/20 Target: local / Des:0.0.0.0/0 Target:NAT 1	Public Subnet 1&2
Private Route Table 2	InnoMod-VPC	Des: 10.200.0.0/20 Target: local / Des:0.0.0.0/0 Target:NAT 2	Public Subnet 1&2

## Internet Gateways

Name	VPC
InnoMed-Gateways	InnoMod-VPC

## NAT Gateways

Name	VPC	Subnets	Features	ID
Public Subnet 1	InnoMod-VPC	Public Subnet 1	New EIP	Recode ID
Public Subnet 2	InnoMod-VPC	Public Subnet 2	New EIP	Recode ID

## Network ACLs

Name	VPC	Subnets	Features	ID
ACL 1	InnoMod-VPC	Public Subnet 1 & Private Subnet 2		

## Security Group

Name	VPC	Subnets	Features	ID
Web-Security-Group	InnoMod-VPC			
App-Security-Group	InnoMod-VPC			
DB-Security-Group	InnoMod-VPC			
Configuration Server	InnoMod-VPC			

### DB-Security-Group

Type: MySQL/Aurora (3306)

Protocol: TCP(6)

Source: Click in the field and select Web-Security-Group

This is configuring the Database security group to permit inbound traffic on port 3306 from any EC2 instance that is associated with the Web-Security-Group

## Configuration Server

Inbound Rules:

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	

## Web Server

Inbound Rules:

Summary

**Inbound Rules**

Outbound Rules

Tags

Edit

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

## Auto Scaling Group

Tier	Launch Configuration	Group Name	Group Size	VPC	Subnets	ELB	Tags
Web	WebTier_configure	webTier					
App	AppTier_configure	Apptier					

### WebTier\_configure

Group Name: WebTier\_configure

Group Size: start with 2 instances

Network: InnoMod-VPC

Subnet: Both Private Subnet and Private Subnet 2

Target Groups: 1

Key: Name

Value: WebTier\_configure

## Instance Details

Tier	Tags/Name	OS	Type	Size	Justification	Number	User Data
Config	web-config	Linux	Null	8GB	Null	Null	Yes
Web	web-tier	Linux	Null	8GB	Group:Web Server	Null	Yes
App	app-tier	Linux	Null	8GB	Group:App Server		
DB	db-tier	Linux	Null	8GB			

### DB Instance

- For Use case, select Production - MySQL.
- DB instance class: db.t2.micro (The first option in the list)
- DB instance identifier: lab-db
- Master username: master
- Master password: lab-password
- Confirm password: lab-password

Advanced Setting:

- VPC: InnoMod-VPC
- Subnet group: db-subnet-group
- VPC security groups: Select existing VPC security groups
- Select VPC security groups: DB-Security-Group (VPC) and remove default (VPC)
- Database name: lab
- Backup retention period: 0 Days
- Enhanced monitoring: Disable enhanced monitoring

From: Lab 4

## Build a original VPC-Web-Server

## Create the Configuration Server

Network: InnoMed-VPC

Subnet: Public Subnet 1

Auto-assign Public IP: Enable

Advanced Details: Copy the followed thing

Add Tag: Key( Name ) Value( InnoMedConfiguration )

Select an existing security group: web-config

```
ssh -i <path and name of pem> ec2-user@<Public IP>
```

```
#!/bin/bash
sudo yum -y update
sudo yum -y install httpd php
sudo chkconfig httpd on
wget https://us-west-2-tcprod.s3.amazonaws.com/courses/AWS-100-CCA/v3.1.0/lab8-ha/script
sudo unzip phpapp.zip -d /var/www/html/
sudo service httpd start
```

```
#!/bin/bash
yum -y update
yum -y install httpd
chkconfig httpd on
service httpd start
echo "<html><h1>Hello From Your Web Server!</h1></html>" > /var/www/html/index.html
```

## Create Image

Name: Web server

## Create An Application Load Balancer

Choose: Application Load Balancer

Name: LB1

VPC: InnoMed-VPC

AZ: Choose all the public Subnets

Configure Security Group: Security group for the web servers(Only HTTP incoming traffic.)

Configure Routing: Name: Group 1

Healthy Threshold: 2

Interval 10 secondes