

Task Day 2:

1. Create VPC

The screenshot shows the 'Details' tab of a VPC configuration. Key details include:

VPC ID	State	DNS hostnames	DNS resolution
vpc-08a73f9c4f738cc6f	Available	Disabled	Enabled
Tenancy	DHCP options set	Main route table	Main network ACL
Default	dopt-0c0afa6b31159b442	rtb-0fc3f494f78758de3	acl-04a1c801f1196c21e
Default VPC	IPv4 CIDR	IPv6 pool	IPv6 CIDR (Network border group)
No	10.0.0.0/16	-	-
Route 53 Resolver DNS Firewall rule groups	Owner ID		
-	663628946494		

Below the main table, there are tabs for 'CIDRs', 'Flow logs', and 'Tags'. The 'CIDRs' tab is selected.

2. Create 2 subnets (pub, private)

The screenshot shows the 'Subnets (2/2)' list. The table includes columns for Name, Subnet ID, State, VPC, and IPv4 CIDR. Two subnets are listed:

Name	Subnet ID	State	VPC	IPv4 CIDR
private	subnet-086caeee92ec3b6ed	Available	vpc-0653fa335425b02ea my...	192.168.128.0/17
pub	subnet-03d1317951739654b	Available	vpc-0653fa335425b02ea my...	192.168.0.0/17

3. Create IGW, RT, NAT GW

⌚ Internet gateway igw-015b425722a7abba1 successfully attached to vpc-0653fa335425b02ea

VPC > Internet gateways > igw-015b425722a7abba1

igw-015b425722a7abba1 / my-igw

Actions ▾

Details Info

Internet gateway ID
igw-015b425722a7abba1

State
Attached

VPC ID
vpc-0653fa335425b02ea | my-vpc

Owner
663628946494

Tags

Manage tags

Search tags

< 1 >

Key	Value
Name	my-igw

rtb-0edd02e4ffa1bc375 / my-rt

Actions ▾

Details Info

Route table ID
rtb-0edd02e4ffa1bc375

Main
No

Explicit subnet associations

Edge associations

VPC
vpc-0653fa335425b02ea | my-vpc

Owner ID
663628946494

Routes

Subnet associations

Edge associations

Route propagation

Tags

Routes (1)

Edit routes

Filter routes

Both

< 1 >

Destination

Target

Status

Propagated

192.168.0.0/16

local

Active

No

VPC > NAT gateways > nat-02bc68e371bdd2ee8

nat-02bc68e371bdd2ee8 / my-natgw

Delete

Details Info

NAT gateway ID
nat-02bc68e371bdd2ee8

Connectivity type
Public

State
Available

State message Info
-

Elastic IP address
3.223.97.172

Private IP address
192.168.43.20

Network interface ID
eni-0b628050472e28122

VPC
vpc-0653fa335425b02ea / my-vpc

Subnet
subnet-03d1317951739654b / pub

Created
Wednesday, March 16, 2022, 15:16:04 GMT+3

Deleted
-

4. Create 2 SGs (public_sg, private_sg)

The screenshot shows the AWS Security Groups page. The top navigation bar includes 'VPC' and 'Actions'. The main title is 'sg-07aaa9d715109118e - public_sg'. Below the title is a 'Details' section with the following data:

Security group name public_sg	Security group ID sg-07aaa9d715109118e	Description allow access to public subnet	VPC ID vpc-0653fa335425b02ea
Owner 663628946494	Inbound rules count 0 Permission entries	Outbound rules count 1 Permission entry	

Below the details are three tabs: 'Inbound rules' (highlighted in orange), 'Outbound rules', and 'Tags'.

The screenshot shows the AWS Security Groups page. The top navigation bar includes 'VPC' and 'Actions'. The main title is 'sg-07072e56a7a36669d - private_sg'. Below the title is a 'Details' section with the following data:

Security group name private_sg	Security group ID sg-07072e56a7a36669d	Description allow access to private subnet	VPC ID vpc-0653fa335425b02ea
Owner 663628946494	Inbound rules count 0 Permission entries	Outbound rules count 1 Permission entry	

Below the details are three tabs: 'Inbound rules' (highlighted in orange), 'Outbound rules', and 'Tags'.

5. Create 2 instances (one in pub, one in private), and attach them to SG (public_sg, private_sg) in sequence.

public-instance i-0bb617c58190f5327 Running t2.micro Initializing No alarms us-east-1b

Instance: i-0bb617c58190f5327 (public-instance)

Security

Security details

IAM Role	Owner ID	Launch time
-	663628946494	Wed Mar 16 2022 15:31:47 GMT+0300 (+03)
Security groups		
sg-07aaa9d715109118e (public_sg)		

Inbound rules

public-instance i-0bb617c58190f5327 Running t2.micro Initializing No alarms us-east-1b

Instance: i-0bb617c58190f5327 (public-instance)

Networking

Networking details

Public IPv4 address	Private IPv4 addresses	VPC ID
-	192.168.23.217	vpc-0653fa335425b02ea (my-vpc)
Public IPv4 DNS	Private IP DNS name (IPv4 only)	Subnet ID
-	ip-192-168-23-217.ec2.internal	subnet-03d1317951739654b (pub)
IPV6 addresses	Secondary private IPv4 addresses	Availability zone
-	-	us-east-1b
Carrier IP addresses (ephemeral)	Outpost ID	Use RBN as guest OS hostname

private-instance i-0e1668d46d145e43e Running t2.micro - No alarms us-east-1b

Instance: i-0e1668d46d145e43e (private-instance)

Security

Security details

IAM Role	Owner ID	Launch time
-	663628946494	Wed Mar 16 2022 15:35:22 GMT+0300 (+03)
Security groups		
sg-07072e56a7a36669d (private_sg)		

Inbound rules

private-instance i-0e1668d46d145e43e Running t2.micro - No alarms us-east-1b

Instance: i-0e1668d46d145e43e (private-instance)

Networking

Networking details

Public IPv4 address	Private IPv4 addresses	VPC ID
-	192.168.128.188	vpc-0653fa335425b02ea (my-vpc)
Public IPv4 DNS	Private IP DNS name (IPv4 only)	Subnet ID
-	ip-192-168-128-188.ec2.internal	subnet-086caeee92ec3b6ed (private)
IPV6 addresses	Secondary private IPv4 addresses	Availability zone
-	-	us-east-1b

6. Connect to your public EC2 from your local server

```
[Downloads — ec2-user@ip-192-168-74-192:~ — ssh -i Bayader.pem ec2-user@54.209.7.113 — 103...]
[bayaderalomari@Bayaders-MacBook-Pro downloads % ssh -i "Bayader.pem" ec2-user@54.209.7.113
The authenticity of host '54.209.7.113 (54.209.7.113)' can't be established.
ED25519 key fingerprint is SHA256:RiztU2v/Vjp3ToVYb6Ztk03c1LDUs0IuCvk7KK7Z+wM.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '54.209.7.113' (ED25519) to the list of known hosts.

      _ _|_ )
      _| ( _/_ /   Amazon Linux 2 AMI
      ___\_\_\_\_|

https://aws.amazon.com/amazon-linux-2/
-bash: warning: setlocale: LC_CTYPE: cannot change locale (UTF-8): No such file or directory
[ec2-user@ip-192-168-74-192 ~]$ ]
```

7. Connect to private server from public server

```
[Downloads — ec2-user@ip-192-168-74-192:~ — ssh -A ec2-user@54.209.7.113 — 103...]
[bayaderalomari@Bayaders-MacBook-Pro downloads % ssh -A ec2-user@54.209.7.113
Last login: Fri Mar 18 12:33:54 2022 from 93.112.199.17

      _ _|_ )
      _| ( _/_ /   Amazon Linux 2 AMI
      ___\_\_\_\_|

https://aws.amazon.com/amazon-linux-2/
-bash: warning: setlocale: LC_CTYPE: cannot change locale (UTF-8): No such file or directory
[[ec2-user@ip-192-168-74-192 ~]$ ssh -A ec2-user@192.168.128.188

      _ _|_ )
      _| ( _/_ /   Amazon Linux 2 AMI
      ___\_\_\_\_|

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-192-168-128-188 ~]$ ]
```