

TASK-1

1. VPC Creation

The screenshot displays the AWS Management Console interface for VPCs in the us-east-1 region. The left sidebar shows navigation options under 'Virtual private cloud' and 'Security'. The main content area shows a list of VPCs with one VPC, 'vpctest', in an 'Available' state. Below the list, the details for 'vpc-0b7516caec034453b / vpctest' are shown, including its ID, state, DNS settings, and other configuration details.

Your VPCs (1/1) Info

| Name | Env | env | VPC ID | State | IPv4 CIDR | IPv6 C... | DHCP option set | Main r |
|---------|-----|-----|-----------------------|-----------|---------------|-----------|------------------------|--------|
| vpctest | Dev | - | vpc-0b7516caec034453b | Available | 172.18.0.0/16 | - | dopt-0141f1574c9926180 | rtb-09 |

vpc-0b7516caec034453b / vpctest

Details

| | | | |
|---|---|---|---|
| VPC ID vpc-0b7516caec034453b | State Available | DNS hostnames Disabled | DNS resolution Enabled |
| Tenancy Default | DHCP option set dopt-0141f1574c9926180 | Main route table rtb-096980ad505d2a969 / Default | Main network ACL acl-0e928c62dc35f5b5a |
| Default VPC No | IPv4 CIDR 172.18.0.0/16 | IPv6 pool - | IPv6 CIDR (Network border group) - |
| Network Address Usage metrics Disabled | Route 53 Resolver DNS Firewall rule groups - | Owner ID 342634125439 | |

2. Subnets

The screenshot displays the AWS Management Console interface for the us-east-1 region, specifically the Subnets page. The page title is "Subnets (4) Info". A search bar labeled "Filter subnets" is present. Below the search bar is a table listing four subnets:

| <input type="checkbox"/> | Name | Subnet ID | VPC | IPv4 CIDR | Available IPv4 a... | Availability Zone |
|--------------------------|------|--------------------------|--------------------------------|---------------|---------------------|-------------------|
| <input type="checkbox"/> | sub1 | subnet-0785a4eeb4c081eb | vpc-0b7516caec034453b vpc... | 172.18.0.0/24 | 250 | us-east-1a |
| <input type="checkbox"/> | sub2 | subnet-0756a31b485af80da | vpc-0b7516caec034453b vpc... | 172.18.1.0/24 | 251 | us-east-1b |
| <input type="checkbox"/> | sub3 | subnet-02e8e795898c17228 | vpc-0b7516caec034453b vpc... | 172.18.2.0/24 | 250 | us-east-1c |
| <input type="checkbox"/> | sub4 | subnet-0b65dfe956443e128 | vpc-0b7516caec034453b vpc... | 172.18.3.0/24 | 251 | us-east-1d |

Below the table, there is a section titled "Select a subnet" with a large empty box. The left sidebar contains navigation links for "Virtual private cloud" (VPC dashboard, EC2 Global View, Filter by VPC, Select a VPC), "Your VPCs", "Subnets", "Route tables", "Internet gateways", "Egress-only internet gateways", "Carrier gateways", "DHCP option sets", "Elastic IPs", "Managed prefix lists", "Endpoints", "Endpoint services", "NAT gateways", "Peering connections", "Security" (Network ACLs, Security groups), and "Network Analysis" (Reachability Analyzer, Network Access Analyzer). The bottom of the screen shows the Windows taskbar with various application icons and the system clock displaying 15:57 on 17/01/2023.

3. Route Table(1)

The screenshot displays the AWS Management Console interface for the 'Route tables (1/2)' page. The left sidebar shows the navigation menu with categories like Virtual private cloud, Security, and Network Analysis. The main content area shows the 'Route tables (1/2)' list with a table of route tables. The 'Default' route table is selected, and its details are shown below, including 'Explicit subnet associations (2)' and 'Subnets without explicit associations (0)'.

| Name | Route table ID | Explicit subnet associations | Main | VPC | Owner ID |
|---|-----------------------|------------------------------|------|---------------------------------|--------------|
| <input checked="" type="checkbox"/> Default | rtb-096980ad505d2a969 | 2 subnets | Yes | vpc-0b7516caec034453b vpctest | 342634125439 |
| <input type="checkbox"/> route-table-1 | rtb-04ae60f6a9dd0b6df | 2 subnets | No | vpc-0b7516caec034453b vpctest | 342634125439 |

rtb-096980ad505d2a969 / Default

Explicit subnet associations (2)

| Subnet ID | IPv4 CIDR | IPv6 CIDR |
|---------------------------------|---------------|-----------|
| subnet-0785a4eeb4c081eb / sub1 | 172.18.0.0/24 | - |
| subnet-0756a31b485af80da / sub2 | 172.18.1.0/24 | - |

Subnets without explicit associations (0)

The following subnets have not been explicitly associated with any route tables and are therefore associated with the main route table:

| Subnet ID | IPv4 CIDR | IPv6 CIDR |
|-----------|-----------|-----------|
|-----------|-----------|-----------|

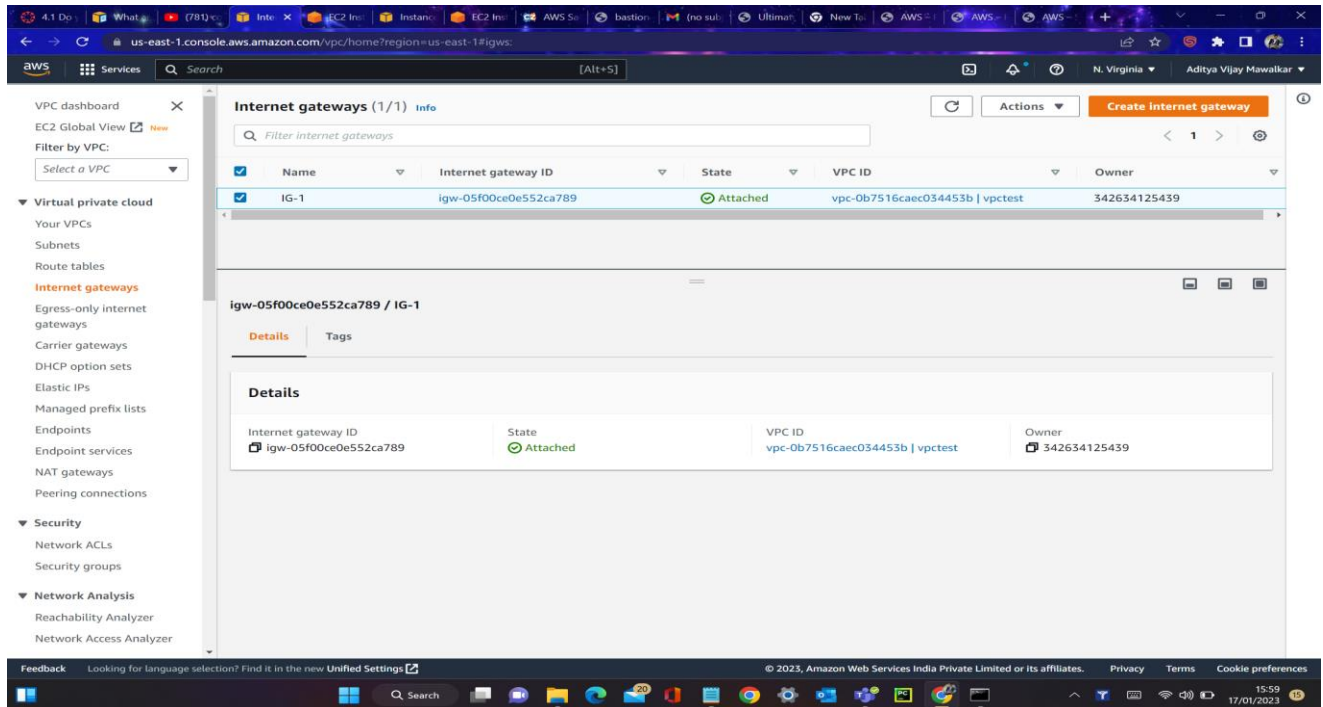
4. Route Table(2)

The screenshot displays the AWS Management Console interface for the 'Route tables (1/2)' page. The left sidebar shows the navigation menu with categories like Virtual private cloud, Security, and Network Analysis. The main content area shows a list of route tables. The 'route-table-1' is selected, and the 'Subnet associations' tab is active. The table below shows the explicit subnet associations for 'route-table-1'.

| Subnet ID | IPv4 CIDR | IPv6 CIDR |
|---------------------------------|---------------|-----------|
| subnet-02e8e795898c17228 / sub3 | 172.18.2.0/24 | - |
| subnet-0b65dfe956443e128 / sub4 | 172.18.3.0/24 | - |

Below the explicit associations, there is a section for 'Subnets without explicit associations (0)', indicating that no subnets are currently associated with this route table without explicit associations.

5. Internet Gateway



The screenshot shows the AWS Management Console interface for the 'us-east-1' region. The left sidebar contains navigation links for VPC dashboard, EC2 Global View, and various VPC services. The main content area is titled 'Internet gateways (1/1) Info'. It features a table with the following data:

| Name | Internet gateway ID | State | VPC ID | Owner |
|------|-----------------------|----------|---------------------------------|--------------|
| IG-1 | igw-05f00ce0e552ca789 | Attached | vpc-0b7516caec034453b vpctest | 342634125439 |

Below the table, the details for the selected gateway 'igw-05f00ce0e552ca789 / IG-1' are shown. The details section includes the following information:

- Internet gateway ID: igw-05f00ce0e552ca789
- State: Attached
- VPC ID: vpc-0b7516caec034453b | vpctest
- Owner: 342634125439

6. EC2 Instance (VM Jump Server)

The screenshot displays the AWS Management Console interface. The top navigation bar shows the user is logged in as 'Aditya Vijay Mawalkar' in the 'N. Virginia' region. The left sidebar contains navigation links for EC2 Dashboard, EC2 Global View, Events, Tags, Limits, Instances, Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Scheduled Instances, Capacity Reservations, Images, AMIs, AMI Catalog, Elastic Block Store, Volumes, Snapshots, Lifecycle Manager, and Network & Security.

The main content area shows the 'Instances (1/2)' page. A table lists two instances:

| Name | Instance ID | Instance state | Availability Zone | Private IP ad... | Subnet IDs |
|----------------|---------------------|----------------|-------------------|------------------|--------------------------|
| VM jump server | i-04569a66348ef6f7b | Running | us-east-1a | 172.18.0.39 | subnet-0785a4eecb4c081eb |
| VM-server | i-0744b856c65946e75 | Running | us-east-1c | 172.18.2.153 | subnet-02e8e795898c17228 |

The details for the 'Instance: i-04569a66348ef6f7b (VM jump server)' are shown below the table. The details are organized into sections: Details, Security, Networking, Storage, Status checks, Monitoring, and Tags.

Instance summary info

| Instance ID | Public IPv4 address | Private IPv4 addresses |
|--------------------------------------|--|------------------------|
| i-04569a66348ef6f7b (VM jump server) | 54.226.185.34 open address | 172.18.0.39 |

Instance details info

| IPV6 address | Instance state | Public IPv4 DNS |
|--------------|----------------|-----------------|
| - | Running | - |

Instance details info

| Hostname type | Private IP DNS name (IPv4 only) | Elastic IP addresses |
|--------------------------------------|---------------------------------|----------------------|
| IP name: ip-172-18-0-39.ec2.internal | ip-172-18-0-39.ec2.internal | - |

Instance details info

| Answer private resource DNS name | Instance type | AWS Compute Optimizer finding |
|----------------------------------|---------------|---|
| IPV4 (A) | t2.micro | Opt-in to AWS Compute Optimizer for recommendations. Learn more |

Instance details info

| Auto-assigned IP address | VPC ID | Auto Scaling Group name |
|---------------------------|---------------------------------|-------------------------|
| 54.226.185.34 [Public IP] | vpc-0b7516caec034453b (vpctest) | - |

Instance details info

| IAM Role | Subnet ID | |
|----------|---------------------------------|--|
| - | subnet-0785a4eecb4c081eb (sub1) | |

The bottom of the console shows the 'Feedback' section and the 'Looking for language selection? Find it in the new Unified Settings' link. The footer displays the copyright notice '© 2023, Amazon Web Services India Private Limited or its affiliates.' and links for 'Privacy', 'Terms', and 'Cookie preferences'. The system clock shows the time as 16:01 on 17/01/2023.

7. EC2 Instance (VM Server)

The screenshot displays the AWS Management Console interface for EC2 instances. The left sidebar shows navigation options like EC2 Dashboard, Events, Tags, Limits, and various instance types. The main content area shows a list of instances under the heading 'Instances (1/3)'. The 'VMJUMP-NEW' instance is highlighted, and its details are expanded in the 'Instance summary' tab. The details include the instance ID, public and private IP addresses, instance state (Running), private IP DNS name, instance type (t2.micro), VPC ID, Subnet ID, and IAM Role.

| Name | Instance ID | Instance state | Availability Zone | Private IP address | Subnet IDs |
|----------------|---------------------|----------------|-------------------|--------------------|--------------------------|
| VM jump server | i-04569a66348ef6f7b | Terminated | us-east-1a | - | - |
| VMJUMP-NEW | i-00524b211c939dd37 | Running | us-east-1a | 172.18.0.217 | subnet-0785a4eecb4c081eb |
| VM-server | i-0744b856c65946e75 | Running | us-east-1c | 172.18.2.153 | subnet-02e8e795898c17228 |

Instance: i-00524b211c939dd37 (VMJUMP-NEW)

Instance summary Info

| Details | Security | Networking | Storage | Status checks | Monitoring | Tags |
|---|---|---|--|---|----------------------|---------------------------|
| Instance ID i-00524b211c939dd37 (VMJUMP-NEW) | Public IPv4 address 184.72.191.65 open address | Private IPv4 addresses 172.18.0.217 | Instance state Running | Private IP DNS name (IPv4 only) ip-172-18-0-217.ec2.internal | Public IPv4 DNS - | Elastic IP addresses - |
| IPV6 address - | Instance type t2.micro | VPC ID vpc-0b7516caec034453b (vpctest) | AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations. Learn more | Auto Scaling Group name - | | |
| Hostname type IP name: ip-172-18-0-217.ec2.internal | Subnet ID subnet-0785a4eecb4c081eb (sub1) | | | | | |
| Answer private resource DNS name IPv4 (A) Auto-assigned IP address 184.72.191.65 [Public IP] | | | | | | |
| IAM Role - | | | | | | |


8. VM JUMP Server

```

C:\ec2-user@ip:172.18.0.217~
Microsoft Windows [Version 10.0.22621.1105]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Aditya Mawarikar> Downloads

C:\Users\Aditya Mawarikar> cd Downloads;ssh -i "my_key.pem" ec2-user@184.72.191.65
The authenticity of host '184.72.191.65 (184.72.191.65)' can't be established.
ED25519 key fingerprint is 5424561e816db981f703b7c49a954a481n1ecma956wbkig.
This key is not known by any user name.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '184.72.191.65' (ED25519) to the list of known hosts.

 Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/

[ec2-user@ip:172.18.0.217 ~]$ ping 172.18.2.153
PING 172.18.2.153 (172.18.2.153) 56(84) bytes of data.
64 bytes from 172.18.2.153: icmp_seq=1 ttl=255 time=1.52 ms
64 bytes from 172.18.2.153: icmp_seq=2 ttl=255 time=1.05 ms
64 bytes from 172.18.2.153: icmp_seq=3 ttl=255 time=1.03 ms
64 bytes from 172.18.2.153: icmp_seq=4 ttl=255 time=1.07 ms
64 bytes from 172.18.2.153: icmp_seq=5 ttl=255 time=0.967 ms
64 bytes from 172.18.2.153: icmp_seq=6 ttl=255 time=0.992 ms
^C
[1]+  Stopped                  ping 172.18.2.153
[ec2-user@ip:172.18.0.217 ~]$ vi my_key.pem
my_key.pem
[ec2-user@ip:172.18.0.217 ~]$ chmod 400 my_key.pem
[ec2-user@ip:172.18.0.217 ~]$ ls -l
total 4
-rw-r--r-- 1 ec2-user ec2-user 1680 Jan 17 10:53 my_key.pem
[ec2-user@ip:172.18.0.217 ~]$

```


9. VM Server

```

Select ec2-user@ip-172-18-2-153:~
Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-18-0-217 ~]$ ping 172.18.2.153
PING 172.18.2.153 (172.18.2.153) 56(84) bytes of data:
64 bytes from 172.18.2.153: icmp_seq=1 ttl=255 time=1.52 ms
64 bytes from 172.18.2.153: icmp_seq=2 ttl=255 time=1.06 ms
64 bytes from 172.18.2.153: icmp_seq=3 ttl=255 time=1.03 ms
64 bytes from 172.18.2.153: icmp_seq=4 ttl=255 time=1.07 ms
64 bytes from 172.18.2.153: icmp_seq=5 ttl=255 time=0.967 ms
64 bytes from 172.18.2.153: icmp_seq=6 ttl=255 time=0.992 ms
^C
[1]+  Stopped                  ping 172.18.2.153
[ec2-user@ip-172-18-0-217 ~]$ vi my_key.pem
[ec2-user@ip-172-18-0-217 ~]$ ls
my_key.pem
[ec2-user@ip-172-18-0-217 ~]$ chmod 400 my_key.pem
[ec2-user@ip-172-18-0-217 ~]$ ls -l
total 4
-r----- 1 ec2-user ec2-user 1680 Jan 17 10:53 my_key.pem
[ec2-user@ip-172-18-0-217 ~]$ ssh -i "my_key.pem" ec2-user@172.18.2.153
The authenticity of host '172.18.2.153 (172.18.2.153)' can't be established.
ECDSA key fingerprint is SHA256:0+JpGFnnoRP3q6qI3YH9jG7J1t3jIjQlgj44MF4VJ+Q.
ECDSA key fingerprint is MD5:61:2f:04:ef:f4:27:53:10:a4:01:6c:d7:28:e1:83:c9.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '172.18.2.153' (ECDSA) to the list of known hosts.
Last login: Tue Jan 17 09:58:15 2023 from 172.18.0.39

Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-18-2-153 ~]$
```