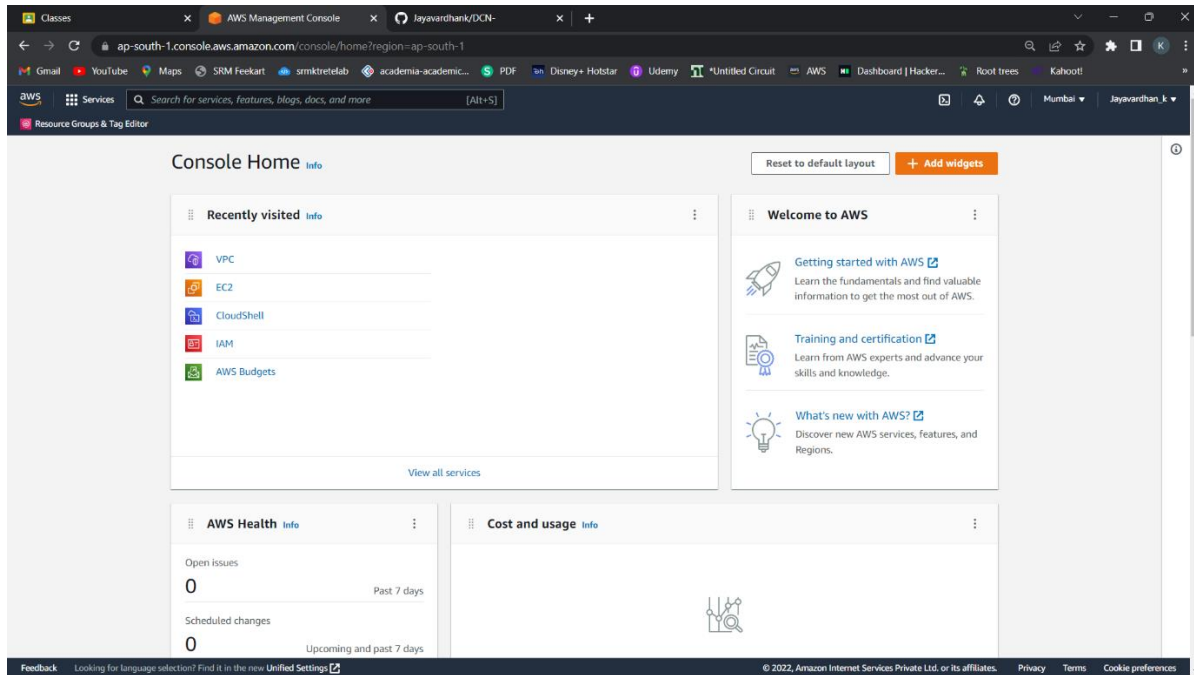
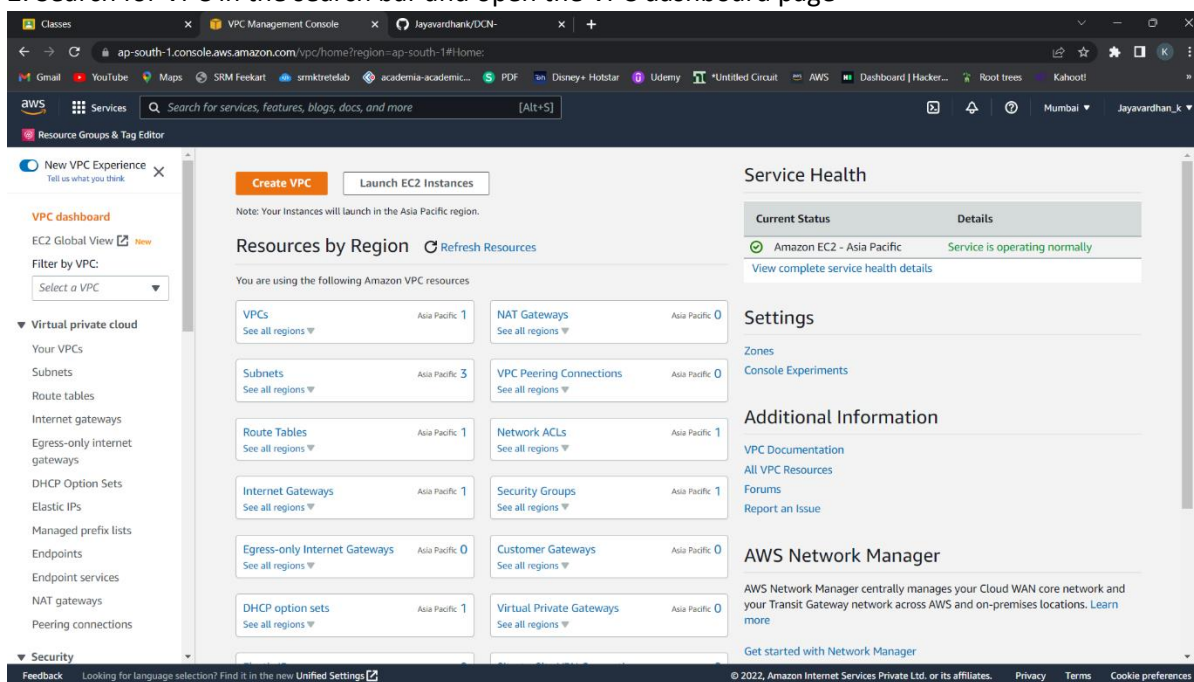


Experiment 3 - Configuring Virtual Private Cloud VPC & Troubleshoot a VPC AIM: To configure a Virtual Private Cloud VPC & Troubleshoot a VPC

PROCEDURE: 1. Firstly, open the AWS console homepage on browser (<https://aws.amazon.com/console/>).



2. Search for VPC in the search bar and open the VPC dashboard page



3. To create a new VPC, click “Create VPC” and go to the Create VPC page

The screenshot shows the AWS Management Console 'Create VPC' page. The browser address bar indicates the URL: `ap-south-1.console.aws.amazon.com/vpc/home?region=ap-south-1#CreateVpccreateMode=vpcWithResources`. The page title is 'Create VPC' with an 'Info' icon. A blue notification box at the top states: 'Introducing the new create VPC experience. We've designed the new create VPC to make it easier to use. The changes include a new visualization of the resources that will be created. Let us know what you think.' Below this, the 'VPC settings' section on the left includes 'Resources to create' (with 'VPC and more' selected), 'Name tag auto-generation' (with 'Auto-generate' checked and 'EXP 3' entered), and 'IPv4 CIDR block'. The 'Preview' section on the right shows a diagram of the VPC resources: 'EXP 3 -vpc' is connected to four subnets ('ap-south-1a' and 'ap-south-1b'), which are then connected to three route tables ('EXP 3 -rtb-public', 'EXP 3 -rtb-private1', and 'EXP 3 -rtb-private2').

4. Select the following configurations with appropriate VPC name

The screenshot shows the 'Preview' section of the AWS Management Console. The browser address bar indicates the URL: `ap-south-1.console.aws.amazon.com/vpc/home?region=ap-south-1#CreateVpccreateMode=vpcWithResources`. The 'Preview' section displays a diagram of the VPC resources: 'EXP 3 -vpc' is connected to four subnets ('ap-south-1a' and 'ap-south-1b'), which are then connected to three route tables ('EXP 3 -rtb-public', 'EXP 3 -rtb-private1', and 'EXP 3 -rtb-private2'). Additionally, the 'Network connections (2)' section shows connections to 'EXP 3 -igw' and 'EXP 3 -vpce-s3'.

5. Click on “Create VPC” button and wait for your VPC to be created.

The screenshot shows the AWS VPC Management Console for a VPC named 'vpc-07c94d3d76db11120 / EXP 3 -vpc'. The left sidebar contains navigation links for VPC dashboard, EC2 Global View, and various VPC resources. The main content area displays the VPC details in a table format.

Details info			
VPC ID	State	DNS hostnames	DNS resolution
vpc-07c94d3d76db11120	Available	Enabled	Enabled
Tenancy	DHCP option set	Main route table	Main network ACL
Default	dopt-0ba07958046fc4a65	rtb-0187c5273eb621300	acl-0745e1c3066865ba3
Default VPC	IPv4 CIDR	IPv6 pool	IPv6 CIDR (Network border group)
No	10.0.0.0/16	-	-
Network mapping unit metrics	Route 53 Resolver DNS Firewall rule groups	Owner ID	
Disabled	-	637418542154	

CIDRs info				
Address type	CIDR	Network Border Group	Pool	Status
IPv4	10.0.0.0/16	-	-	Associated

6. Click on “View VPC” to view your VPC details

The screenshot shows the AWS VPC Management Console with a success message overlay. The message states: 'Creating VPC Resources. Thank you for using the new create VPC experience. Let us know what you think.' Below the message is a list of details for the created VPC.

- Success
- Details
 - Create VPC: vpc-07c94d3d76db11120
 - Enable DNS hostnames
 - Enable DNS resolution
 - Verifying VPC creation: vpc-07c94d3d76db11120
 - Create S3 endpoint: vpce-0576ea45781a7429e
 - Create subnet: subnet-087083803486c29d0
 - Create subnet: subnet-05e73bac31cbb9142
 - Create subnet: subnet-007a18e487491da6c
 - Create subnet: subnet-09498ef00c19f98bd
 - Create internet gateway: igw-09da54a744cf831cb
 - Attach internet gateway to the VPC
 - Create route table: rtb-000121076ebb1263b
 - Create route
 - Associate route table
 - Associate route table
 - Create route table: rtb-0e3b327d9d2d44fd1
 - Associate route table
 - Create route table: rtb-037ee4418b7c5a5b7
 - Associate route table
 - Verifying route table creation
 - Associate S3 endpoint with private subnet route tables: vpce-0576ea45781a7429e

7. Click on “Subnets” in the left side menu to view subnets of your VPC.

The screenshot shows the AWS Management Console interface for the 'Subnets' page. The left-hand navigation pane is visible, with 'Subnets' highlighted under the 'Virtual private cloud' section. The main content area displays a table of subnets for a specific VPC. The table includes columns for Name, Subnet ID, State, VPC, IPv4 CIDR, IPv6 CIDR, and Available. Below the table, there is a 'Select a subnet' section with three icons for different subnet types.

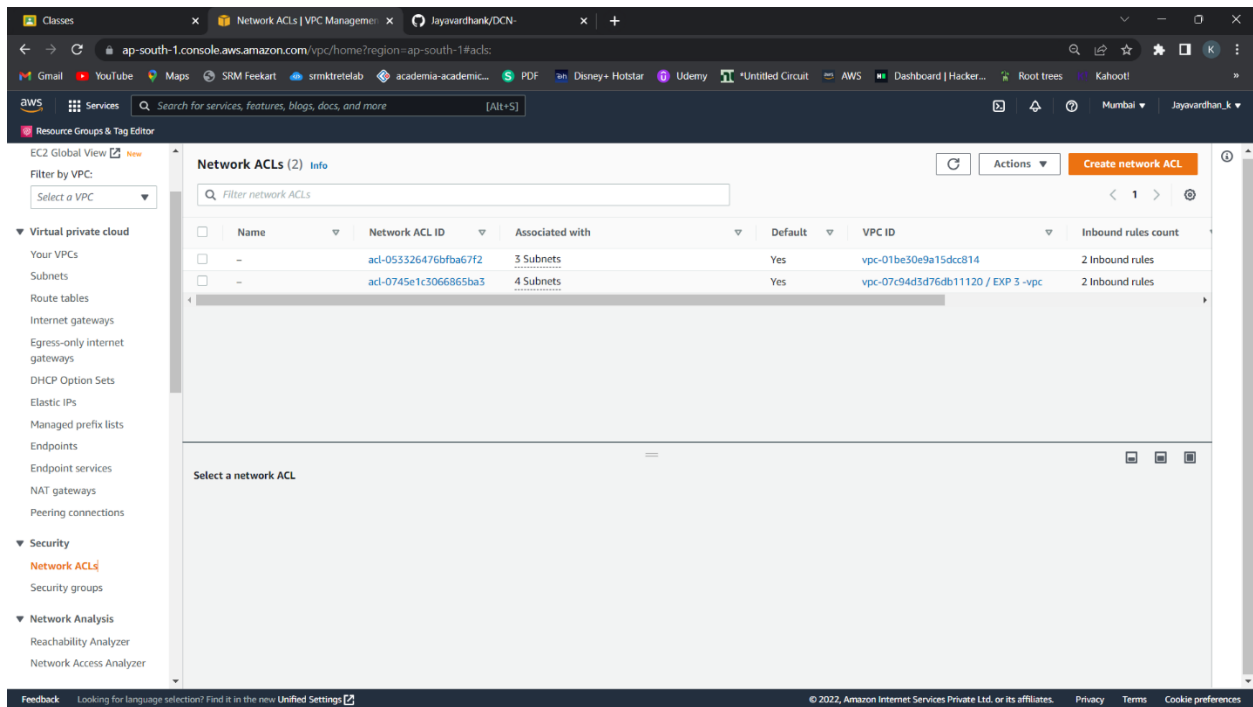
Name	Subnet ID	State	VPC	IPv4 CIDR	IPv6 CIDR	Available
-	subnet-01538d63a77af755e	Available	vpc-01be30e9a15dcc814	172.31.16.0/20	-	4091
-	subnet-0f33efaf062ef5828	Available	vpc-01be30e9a15dcc814	172.31.0.0/20	-	4091
EXP 3 -subnet-priv...	subnet-007a18e487491da6c	Available	vpc-07c94d3d76db11120 EX...	10.0.128.0/20	-	4091
EXP 3 -subnet-priv...	subnet-09498ef00c19f98bd	Available	vpc-07c94d3d76db11120 EX...	10.0.144.0/20	-	4091
-	subnet-01b18b29f9c85c437	Available	vpc-01be30e9a15dcc814	172.31.32.0/20	-	4091
EXP 3 -subnet-publ...	subnet-05e73bac31cbb9142	Available	vpc-07c94d3d76db11120 EX...	10.0.16.0/20	-	4091
EXP 3 -subnet-publ...	subnet-087083803486c29d0	Available	vpc-07c94d3d76db11120 EX...	10.0.0.0/20	-	4091

8. Click on “Route Tables” in the left side menu to view route tables of your VPC.

The screenshot shows the AWS Management Console interface for the 'Route Tables' page. The left-hand navigation pane is visible, with 'Route tables' highlighted under the 'Virtual private cloud' section. The main content area displays a table of route tables for a specific VPC. The table includes columns for Name, Route table ID, Explicit subnet associat..., Edge associations, Main, VPC, and Owner ID. Below the table, there is a 'Select a route table' section with three icons for different route table types.

Name	Route table ID	Explicit subnet associat...	Edge associations	Main	VPC	Owner ID
-	rtb-0187c5273eb621300	-	-	Yes	vpc-07c94d3d76db11120 EX...	637418542154
EXP 3 -rtb-public	rtb-000121076ebb1263b	2 subnets	-	No	vpc-07c94d3d76db11120 EX...	637418542154
EXP 3 -rtb-private1...	rtb-0ebb327d9d2d44fd1	subnet-007a18e487491...	-	No	vpc-07c94d3d76db11120 EX...	637418542154
-	rtb-083e0b6ed439cdcab	-	-	Yes	vpc-01be30e9a15dcc814	637418542154
EXP 3 -rtb-private2...	rtb-037ee4418b7c5a5b7	subnet-09498ef00c19f9...	-	No	vpc-07c94d3d76db11120 EX...	637418542154

9) Click on “Network ACL’s” in the left side menu to view ACLs of your VPC



RESULT:

A Virtual Private Cloud (VPC) was successfully created and troubleshooted.