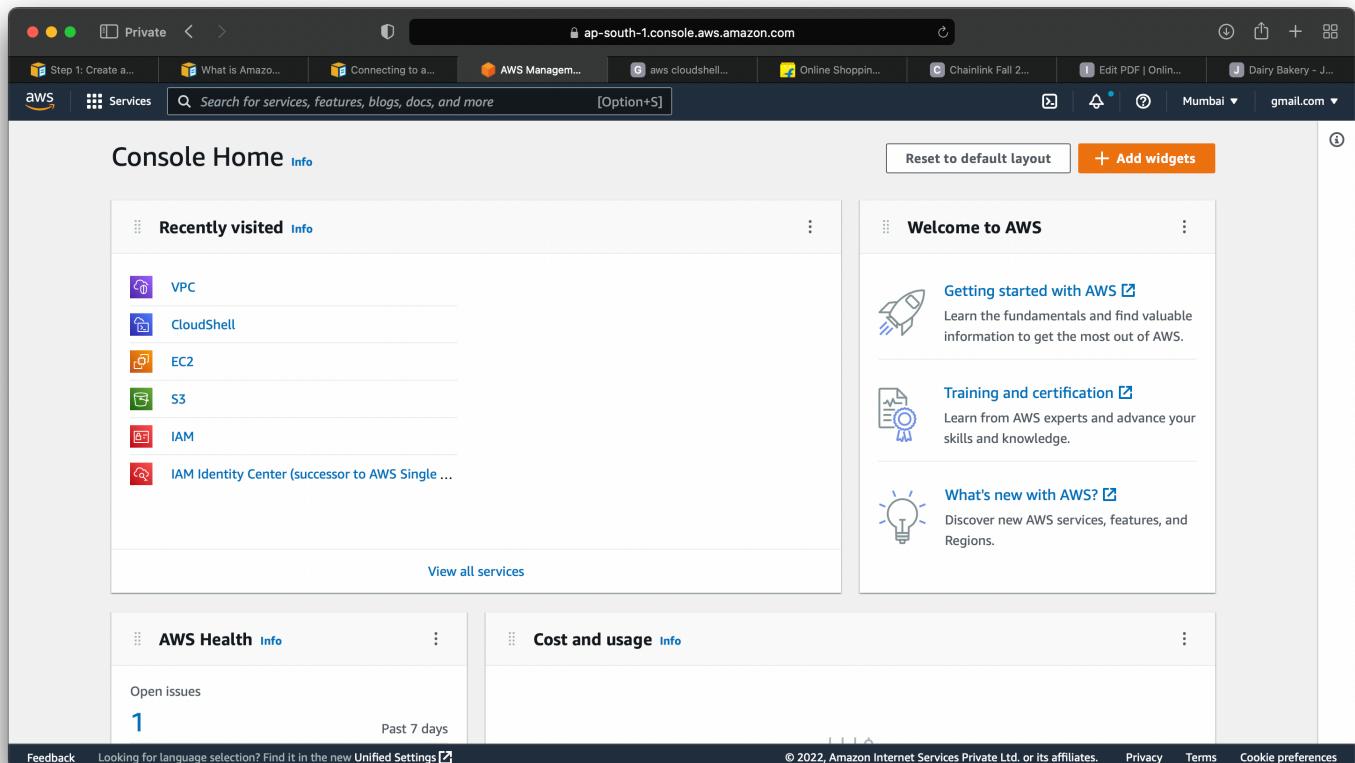


Experiment 3 - Configuring Virtual Private Cloud VPC & Troubleshoot a VPC

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/>).



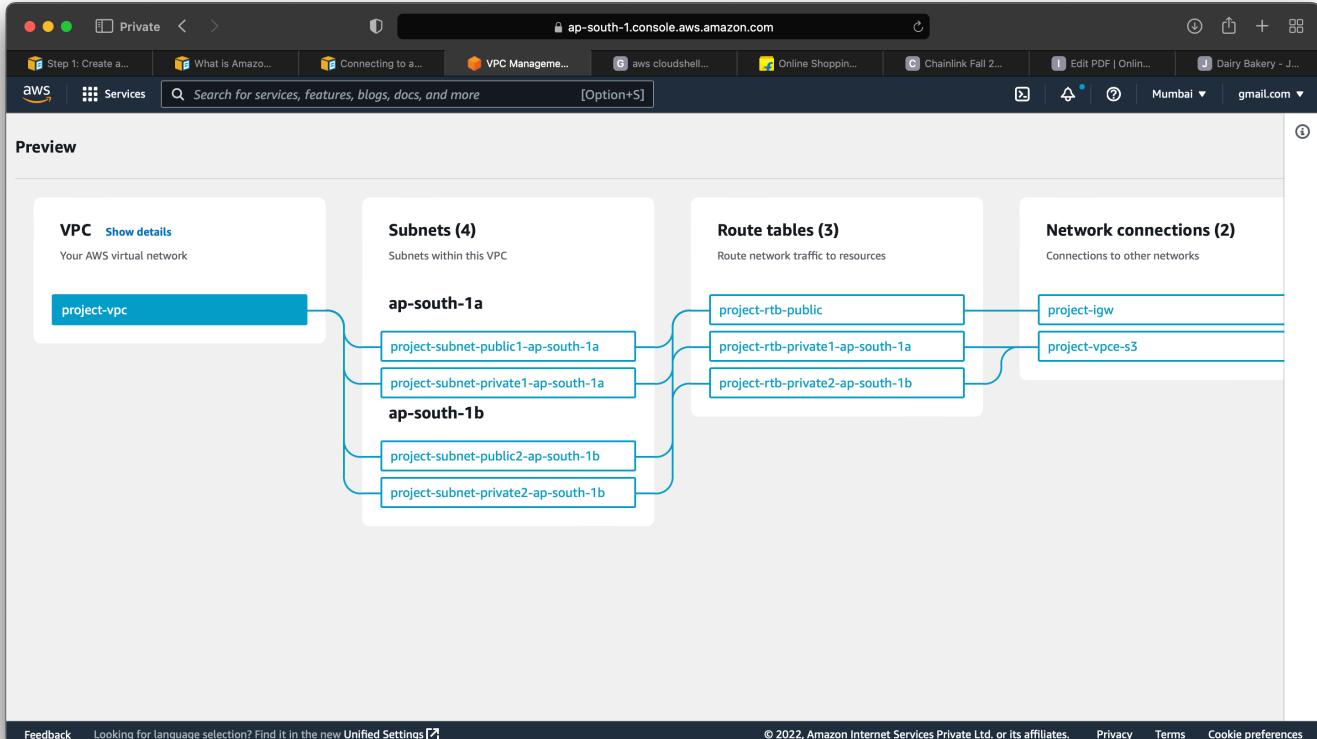
2. Search for VPC in the search bar and open the VPC dashboard page.

The screenshot shows the AWS VPC Management Dashboard. On the left, there's a sidebar with navigation links like 'VPC dashboard', 'Virtual private cloud', and 'Security'. The main area displays 'Resources by Region' with sections for VPCs, Subnets, Route Tables, Internet Gateways, and more. A 'Service Health' section indicates that 'Amazon EC2 - Asia Pacific' is operating normally. There are also 'Settings' and 'Additional Information' sections, along with links to 'AWS Network Manager' and 'VPC Documentation'.

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

The screenshot shows the 'Create VPC' page. In the 'VPC settings' section, there are options for 'Resources to create' (radio buttons for 'VPC only' and 'VPC and more', with 'VPC and more' selected), 'Name tag auto-generation' (checkbox for 'Auto-generate' with 'project' entered), and 'IPv4 CIDR block' (input field showing '10.0.0.16' and '65,536 IPs'). The 'Preview' section shows a network diagram with a central 'VPC' node labeled 'project-vpc', connected to four 'Subnets (4)' nodes labeled 'ap-south-1a', 'ap-south-1b', 'project-subnet-public1-ap-south-1a', and 'project-subnet-private1-ap-south-1a'. These subnets are further connected to 'Route tables' nodes labeled 'project-rtt'.

4. Select the following configurations with appropriate VPC name.

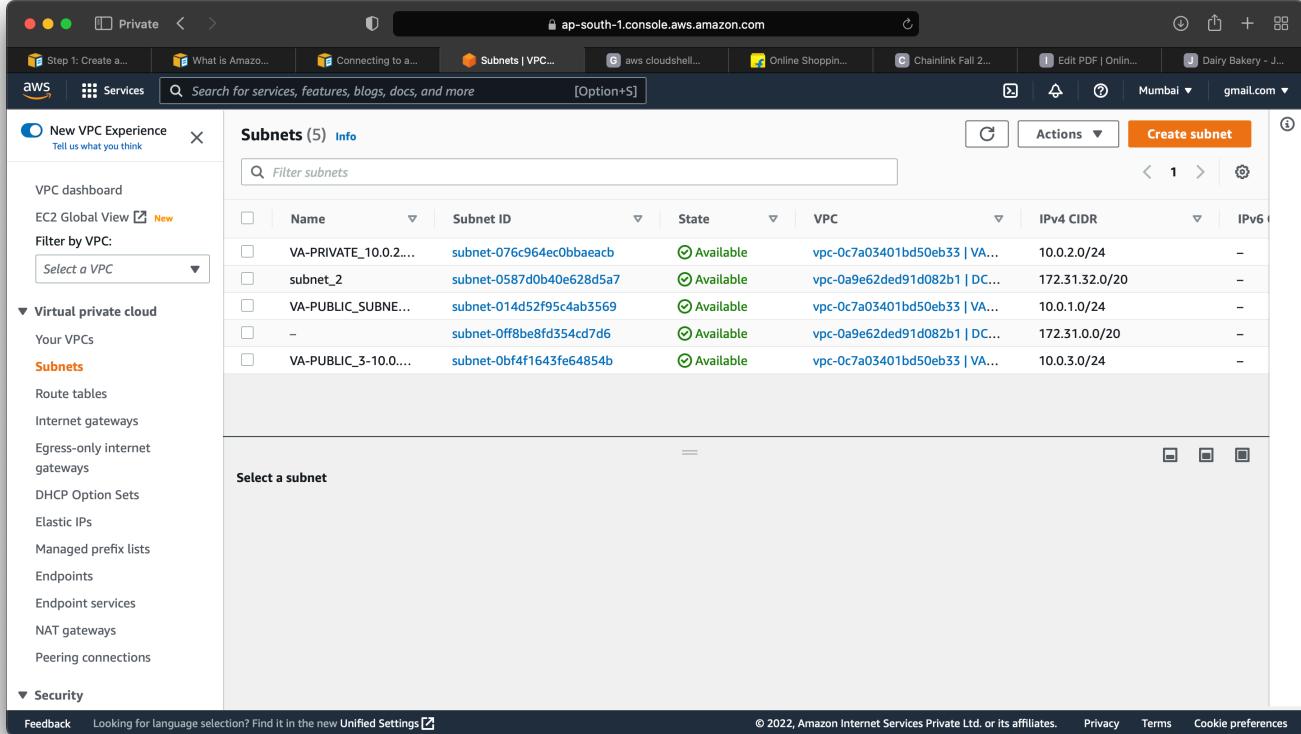


5. Click on “Create VPC” button and wait for your VPC to be created.
6. Click on “View VPC” to view your VPC details.

VPC ID	State	DNS hostnames	DNS resolution
vpc-0a9e62ded91d082b1	Available	Enabled	Enabled

CIDRs	Flow logs	Tags
IPv4	172.31.0.0/16	-

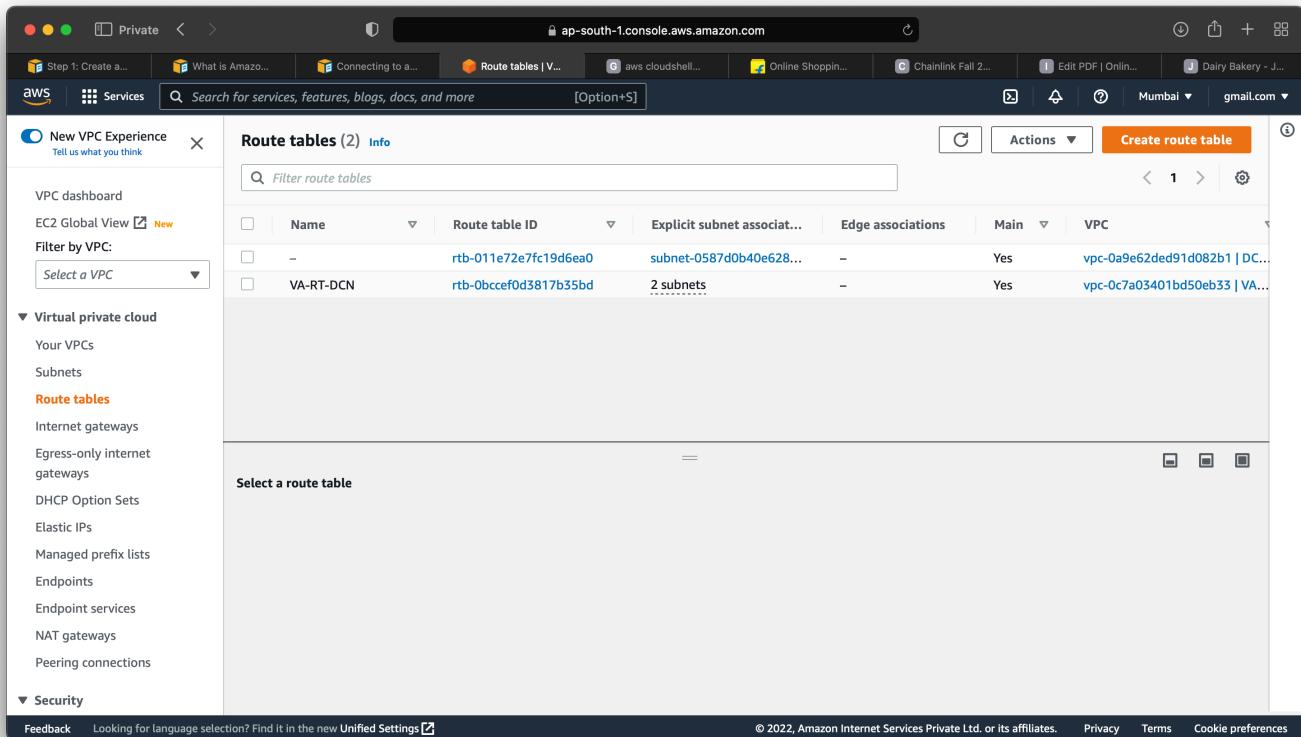
7. Click on “Subnets” in the left side menu to view subnets of your VPC.



The screenshot shows the AWS VPC Subnets page. On the left, there's a navigation sidebar with options like VPC dashboard, EC2 Global View, Filter by VPC, Virtual private cloud (Your VPCs, Subnets selected), Route tables, Internet gateways, Egress-only internet gateways, DHCP Option Sets, Elastic IPs, Managed prefix lists, Endpoints, Endpoint services, NAT gateways, Peering connections, and Security. The main content area has a title "Subnets (5) Info" and a table with columns: Name, Subnet ID, State, VPC, IPv4 CIDR, and IPv6 CIDR. The table contains five rows: VA-PRIVATE_10.0.2..., subnet_2, VA-PUBLIC_SUBNE..., -, and VA-PUBLIC_3-10.0.... Each row shows an "Available" state, a specific VPC ID, and a range of IP addresses. Below the table is a section titled "Select a subnet" with three small icons.

Name	Subnet ID	State	VPC	IPv4 CIDR	IPv6 CIDR
VA-PRIVATE_10.0.2....	subnet-076c964ec0bbaeacb	Available	vpc-0c7a03401bd50eb33 VA...	10.0.2.0/24	-
subnet_2	subnet-0587d0b40e628d5a7	Available	vpc-0a9e62ded91d082b1 DC...	172.31.32.0/20	-
VA-PUBLIC_SUBNE...	subnet-014d52f95c4ab3569	Available	vpc-0c7a03401bd50eb33 VA...	10.0.1.0/24	-
-	subnet-0ffbbe8fd354cd7d6	Available	vpc-0a9e62ded91d082b1 DC...	172.31.0.0/20	-
VA-PUBLIC_3-10.0....	subnet-0bf4f1643fe64854b	Available	vpc-0c7a03401bd50eb33 VA...	10.0.3.0/24	-

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



The screenshot shows the AWS Route Tables page. The left sidebar is identical to the previous screenshot, showing the "Subnets" option under "Virtual private cloud". The main content area has a title "Route tables (2) Info" and a table with columns: Name, Route table ID, Explicit subnet associat..., Edge associations, Main, and VPC. The table contains two rows: an unnamed route table with ID rtb-011e72e7fc19d6ea0 and VA-RT-DCN with ID rtb-0bcccef0d3817b35bd. Both route tables are associated with subnet-0587d0b40e628d5a7 and are marked as "Main". Below the table is a section titled "Select a route table" with three small icons.

Name	Route table ID	Explicit subnet associat...	Edge associations	Main	VPC
-	rtb-011e72e7fc19d6ea0	subnet-0587d0b40e628...	-	Yes	vpc-0a9e62ded91d082b1 DC...
VA-RT-DCN	rtb-0bcccef0d3817b35bd	2 subnets	-	Yes	vpc-0c7a03401bd50eb33 VA...

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

The screenshot shows the AWS Management Console with the URL ap-south-1.console.aws.amazon.com. The left sidebar is collapsed, showing the main navigation bar with services like Step 1: Create a..., What Is Amazon..., Connecting to a..., Network ACLs (selected), aws cloudshell..., Online Shopping..., Chainlink Fall 2..., Edit PDF | Online..., Dairy Bakery - J..., Mumbai, and gmail.com. The main content area is titled "Network ACLs (3) Info". It displays a table with three rows of network ACLs:

Name	Network ACL ID	Associated with	Default	VPC ID
-	acl-0ea9c729e31159b70	2 Subnets	Yes	vpc-0a9e62ded91d082b1 / DCN VPC
-	acl-027798666527c79f1	-	Yes	vpc-08df82c6ef59999f1 / test vpc
-	acl-0ad4ab4940ac99edf	3 Subnets	Yes	vpc-0c7a03401bd50eb33 / VA-VPC

Below the table, there is a section titled "Select a network ACL" with three small icons. At the bottom of the page, there are links for Feedback, Unified Settings, © 2022, Amazon Internet Services Private Ltd. or its affiliates., Privacy, Terms, and Cookie preferences.

RESULT-

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