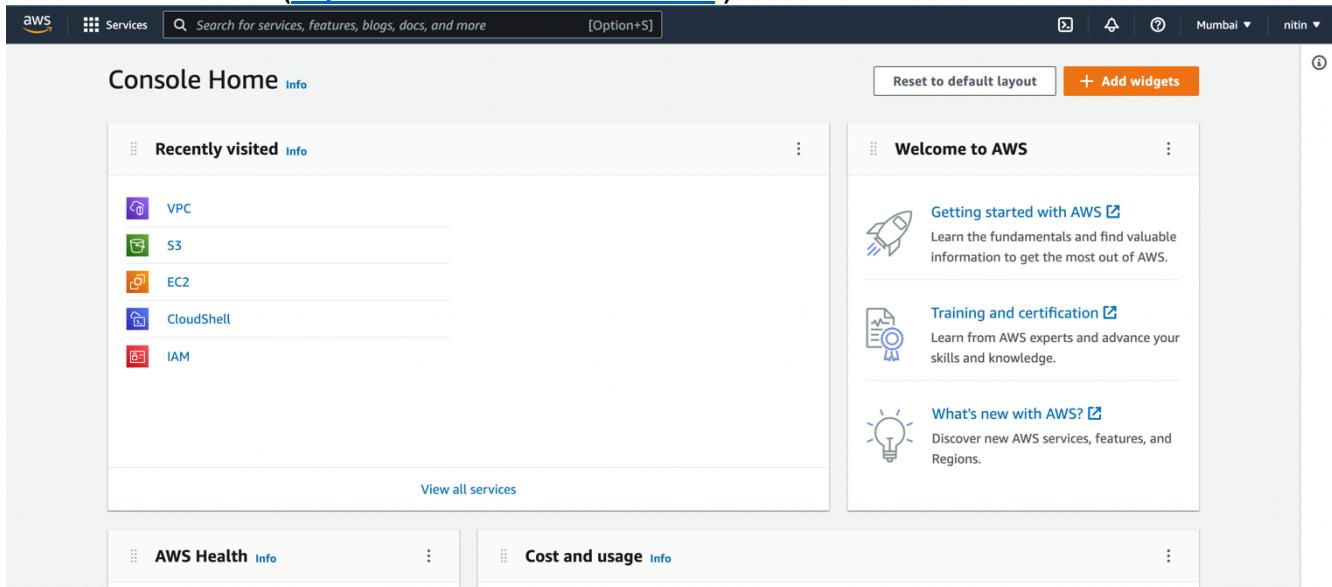


## Experiént 3 - Configuring Virtual Private Cloud VPC & Troubleshoot a VPC

**AIM:** To configure a Virtual Private Cloud VPC & Troubleshoot a VPC

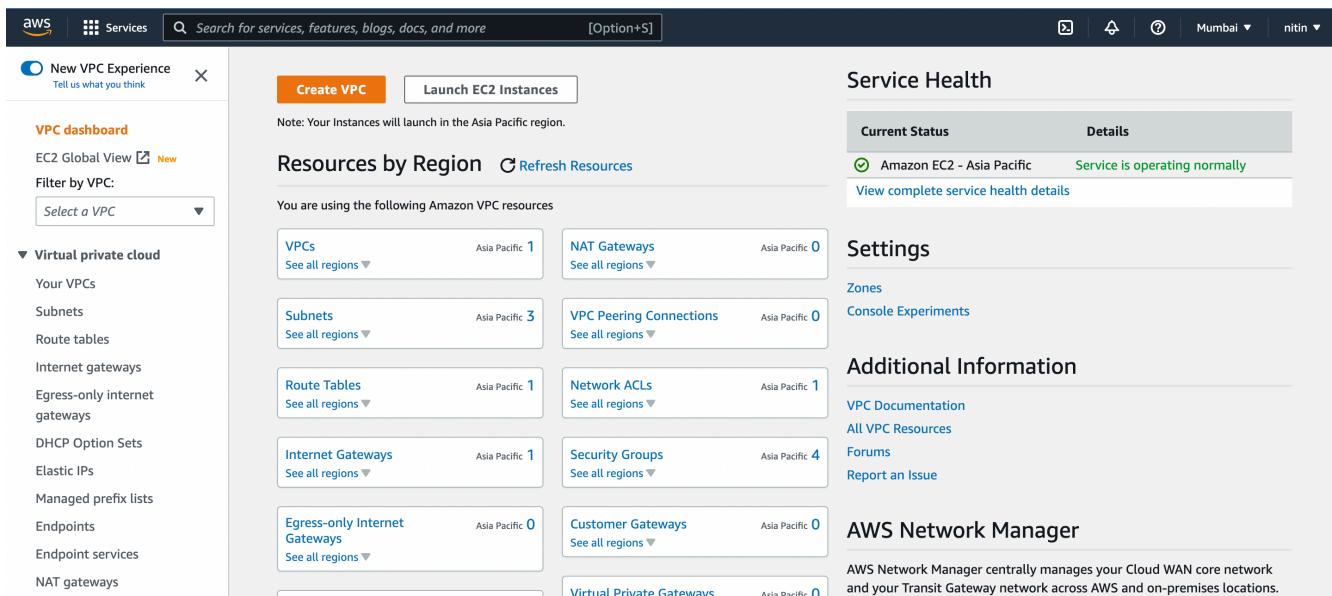
### **PROCEDURE:**

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



The screenshot shows the AWS Console Home page. At the top, there is a navigation bar with the AWS logo, a 'Services' dropdown, a search bar containing 'Search for services, features, blogs, docs, and more', and user information for 'Mumbai' and 'nitin'. Below the navigation bar, the main content area is titled 'Console Home'. It features a 'Recently visited' section with links to VPC, S3, EC2, CloudShell, and IAM. There are also sections for 'AWS Health' and 'Cost and usage'. On the right side, there is a 'Welcome to AWS' sidebar with three cards: 'Getting started with AWS' (Learn the fundamentals and find valuable information to get the most out of AWS), 'Training and certification' (Learn from AWS experts and advance your skills and knowledge), and 'What's new with AWS?' (Discover new AWS services, features, and Regions).

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



The screenshot shows the VPC dashboard page. At the top, there is a navigation bar with the AWS logo, a 'Services' dropdown, a search bar containing 'Search for services, features, blogs, docs, and more', and user information for 'Mumbai' and 'nitin'. Below the navigation bar, the main content area has a 'New VPC Experience' section with a 'Create VPC' button and a note that instances will launch in the Asia Pacific region. To the left, there is a sidebar with sections for 'VPC dashboard', 'Virtual private cloud', 'Your VPCs', 'Subnets', 'Route tables', 'Internet gateways', 'Egress-only internet gateways', 'DHCP Option Sets', 'Elastic IPs', 'Managed prefix lists', 'Endpoints', 'Endpoint services', and 'NAT gateways'. The main content area includes sections for 'Resources by Region' (listing VPCs, Subnets, Route Tables, Internet Gateways, Egress-only Internet Gateways, NAT Gateways, NAT Gateways, VPC Peering Connections, Network ACLs, Security Groups, Customer Gateways, and Virtual Private Gateways), 'Service Health' (showing current status for Amazon EC2 - Asia Pacific as 'Service is operating normally'), 'Settings' (with links for Zones and Console Experiments), 'Additional Information' (with links for VPC Documentation, All VPC Resources, Forums, and Report an Issue), and 'AWS Network Manager' (described as centrally managing Cloud WAN core network and Transit Gateway network across AWS and on-premises locations).

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

The screenshot shows the AWS VPC "Create VPC" page. On the left, under "VPC settings", there are two options: "VPC only" (unchecked) and "VPC and more" (checked). Below this is a "Name tag auto-generation" section with a "Auto-generate" checkbox (checked) and a "project" value. A blue box highlights the "VPC and more" option and the "Auto-generate" checkbox. On the right, the "Preview" section displays a network diagram. It starts with a "VPC" node labeled "project-vpc". This node connects to four "Subnets (4)" nodes: "ap-south-1a" (which contains "project-subnet-public1-ap-south-1a" and "project-subnet-private1-ap-south-1a") and "ap-south-1b" (which contains "project-subnet-public2-ap-south-1b"). These subnets connect to three "Route tables (3)" nodes: "project-rtb-public", "project-rtb-private1-ap-south-1a", and "project-rtb-private2-ap-south-1b". Finally, these route tables connect to two "Network connections (2)" nodes: "project-igw" and "project-vpce-s3".

**4. Select the following configurations with appropriate VPC name.**

The screenshot shows the "Preview" section of the AWS VPC "Create VPC" page. It displays the same network diagram as the previous screenshot, but with different components highlighted in blue. The "VPC" node "project-vpc" is highlighted. The "Subnets (4)" nodes "ap-south-1a" and "ap-south-1b" are also highlighted. The "Route tables (3)" nodes "project-rtb-public", "project-rtb-private1-ap-south-1a", and "project-rtb-private2-ap-south-1b" are highlighted. The "Network connections (2)" nodes "project-igw" and "project-vpce-s3" are highlighted. A blue box highlights the "VPC" node "project-vpc".

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

**Create VPC** Info

A VPC is an isolated portion of the AWS Cloud populated by AWS objects, such as Amazon EC2 instances. Mouse over a resource to highlight the related resources.

**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.](#)

**VPC settings**

Resources to create Info  
Create only the VPC resource or the VPC and other networking resources.

VPC only

VPC and more

Name tag auto-generation Info  
Enter a value for the Name tag. This value will be used to auto-generate Name tags for all resources in the VPC.

Auto-generate  
project

IPv4 CIDR block Info  
Determine the starting IP and the size of your VPC using CIDR notation.

10.0.0.0/16 65,536 IPs

IPv6 CIDR block Info  
 No IPv6 CIDR block  
 Amazon-provided IPv6 CIDR block

**Preview**

**VPC** [Show details](#)  
Your AWS virtual network  
project-vpc

**Subnets (4)**  
Subnets within this VPC

- ap-south-1a**
  - project-subnet-public1-ap-south-1a
  - project-subnet-private1-ap-south-1a
- ap-south-1b**
  - project-subnet-public2-ap-south-1b
  - project-subnet-private2-ap-south-1b

**Route table**  
Route network traffic between subnets

- project-rtb-project-rtb-project-rtb

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

**New VPC Experience** Tell us what you think

**Your VPCs (2) Info**

<input type="checkbox"/>	Name	VPC ID	State	IPv4 CIDR	IPv6 CIDR
<input type="checkbox"/>	project-vpc	vpc-07ee6088648737167	<span>Available</span>	10.0.0.0/16	-
<input type="checkbox"/>	-	vpc-0875d8ad88f74a3cf	<span>Available</span>	172.31.0.0/16	-

Select a VPC above

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

**Subnets (7) Info**

Name	Subnet ID	State	VPC	IPv4 CIDR	IPv6 CIDR
-	subnet-03b5bec2812c86779	Available	vpc-0875d8ad88f74a3cf	172.31.0.0/20	-
project-subnet-priv...	subnet-0398e60be62fa7df7	Available	vpc-07ee6088648737167   pr...	10.0.144.0/20	-
-	subnet-0d8d5ca71b0050c94	Available	vpc-0875d8ad88f74a3cf	172.31.16.0/20	-
project-subnet-priv...	subnet-05320267072fdbc80	Available	vpc-07ee6088648737167   pr...	10.0.128.0/20	-
project-subnet-pub...	subnet-08c1b754f2b4a08e8	Available	vpc-07ee6088648737167   pr...	10.0.0.0/20	-
project-subnet-pub...	subnet-070c256477bb7c2e4	Available	vpc-07ee6088648737167   pr...	10.0.16.0/20	-
-	subnet-0609c10f8abe868ff	Available	vpc-0875d8ad88f74a3cf	172.31.32.0/20	-

**Select a subnet**

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

**Route tables (5) Info**

Name	Route table ID	Explicit subnet associat...	Edge associations	Main	VPC
-	rtb-0f31097e4a2622135	-	-	Yes	vpc-0875d8ad88f74a3cf
project-rtb-private...	rtb-02a0571b424800e91	subnet-0398e60be62fa...	-	No	vpc-07ee6088648737167   pr...
-	rtb-0cb665a9b27d2cf5c	-	-	Yes	vpc-07ee6088648737167   pr...
project-rtb-public	rtb-0f4b511dab5a4a1f1	2 subnets	-	No	vpc-07ee6088648737167   pr...
project-rtb-private...	rtb-05a35135921bb7650	subnet-05320267072fd...	-	No	vpc-07ee6088648737167   pr...

**Select a route table**

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

The screenshot shows the AWS VPC Network ACLs page. On the left, there's a sidebar with navigation links for VPC dashboard, EC2 Global View, Filter by VPC, Virtual private cloud (Your VPCs, Subnets, 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 (Network ACLs). The main content area is titled "Network ACLs (2)" and contains a table with two rows. The columns are Name, Network ACL ID, Associated with, Default, and VPC ID. The first row has a Name of "-" and a Network ACL ID of "acl-018509715a717ba...". It is associated with "4 Subnets" and is marked as "Yes" for Default. Its VPC ID is "vpc-07ee6088648737167 / project-". The second row also has a Name of "-" and a Network ACL ID of "acl-0bc2518f624040ad3". It is associated with "3 Subnets" and is marked as "Yes" for Default. Its VPC ID is "vpc-0875d8ad88f74a3cf". There are "Actions" and "Create network ACL" buttons at the top right of the table.

Name	Network ACL ID	Associated with	Default	VPC ID
-	acl-018509715a717ba...	4 Subnets	Yes	vpc-07ee6088648737167 / project-
-	acl-0bc2518f624040ad3	3 Subnets	Yes	vpc-0875d8ad88f74a3cf

## RESULT:

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