

Description:

Set up a VPC with an Internet gateway, create a public subnet with 256 IP addresses, a private subnet with 256 IP addresses, make a route table connecting the Internet gateway and the subnets, and launch a Linux EC2 instance by using the above VPC and public subnet.

Techstacks needs to be used :

- AWS VPC
- AWS EC2

To Create a VPC

The screenshot shows the AWS search interface with the query 'vpd' entered in the search bar. The results page displays the 'VPC' service under the 'Services' section. The 'VPC' card includes the description 'Isolated Cloud Resources'. To the right of the main search area, there's a sidebar titled 'EC2 cost' showing a credit balance of \$119.15 USD and 102 days remaining. Below the sidebar, there are sections for 'Dashboard' and 'Account attributes' which lists the Default VPC as 'vpc-01eeb13ae824cbde3'.

Services

- VPC Isolated Cloud Resources
- AWS Global View AWS Global View provides a global dashboard and search functionality that lets you ...
- AWS Firewall Manager Central management of firewall rules

Features

- Dashboard VPC feature
- Route 53 VPCs Route 53 feature
- VPC links

Were these results helpful?

Yes No

EC2 cost

- Date range: Past 6 months
- Costs in your free plan account
- Credits remaining \$119.15 USD
- Days remaining 102 (February 19, 2026)

Account attributes

- Default VPC vpc-01eeb13ae824cbde3
- Settings

Click on create VPC

The screenshot shows the AWS VPC Dashboard. At the top, there are buttons for 'Create VPC' and 'Launch EC2 Instances'. A note says 'Note: Your Instances will launch in the Asia Pacific region.' On the left, a sidebar lists 'Virtual private cloud' and 'Security' sections. The main area displays 'Resources by Region' for the Mumbai region, showing counts for VPCs (1), Subnets (3), Route Tables (1), Internet Gateways (1), Egress-only Internet Gateways (0), NAT Gateways (0), VPC Peering Connections (0), Network ACLs (1), Security Groups (3), and Customer Gateways (0). There are also links to 'See all regions' for each category. On the right, there are sections for 'Service Health', 'Settings', and 'Additional Information'.

The screenshot shows the 'Create VPC' wizard. The current step is 'VPC settings'. It has two tabs: 'VPC only' (selected) and 'VPC and more'. Under 'Name tag - optional', there is a text input field containing 'VPC_test'. Under 'IPv4 CIDR block', there is a dropdown menu with '13.0.0.0/16' selected. Under 'IPv6 CIDR block', there is a list of options: 'No IPv6 CIDR block' (selected), 'IPAM-allocated IPv6 CIDR block', 'Amazon-provided IPv6 CIDR block', and 'IPv6 CIDR owned by me'. A note at the bottom says 'CIDR block size must be between /16 and /28.'

To create an Internet gateway

The screenshot shows the AWS VPC dashboard with the 'Internet gateways' section selected. A table lists one internet gateway:

Name	Internet gateway ID	State	VPC ID	Owner
-	igw-0dc4acb9d48ab3475	Attached	vpc-01eeb13ae824cbde3	675845727425

A message below the table says "Select an internet gateway above". On the left sidebar, under "Virtual private cloud", "Internet gateways" is also listed.

The screenshot shows the "Create internet gateway" wizard. The first step, "Internet gateway settings", is completed with the name tag "test_igw". The second step, "Tags - optional", shows a single tag "Name: test_igw". The "Create internet gateway" button is at the bottom right.

Click on **create internet gateway**

Attach Internet Gateway to VPC

Go to Internet Gateway ➔ Click on **Attach to VPC**

The screenshot shows the AWS VPC Internet Gateways page. The top navigation bar includes the AWS logo, search bar, and account information (Account ID: 6758-4572-7425, SethuEng). The left sidebar has sections for VPC dashboard, AWS Global View, Virtual private cloud (Your VPCs, Subnets, Route tables), Internet gateways (Egress-only internet gateways, DHCP option sets, Elastic IPs, Managed prefix lists, NAT gateways, Peering connections, Route servers), and Security (Network ACLs). The main content area displays an Internet gateway named 'igw-0b524431d708a6f20 / test_igw'. The 'Details' section shows the Internet gateway ID, state (Detached), VPC ID (-), and owner (675845727425). Below it is a 'Tags (1)' section with a single tag 'Name: test_igw'. On the right, there's an 'Actions' menu with options: Attach to VPC (highlighted in blue), Detach from VPC, Manage tags, and Delete.

The screenshot shows the 'Attach to VPC' dialog box. The title is 'Attach to VPC (igw-0b524431d708a6f20)'. The 'VPC' section contains instructions to attach an internet gateway to a VPC to enable communication with the internet. The 'Available VPCs' section shows a search bar with the input 'vpc-099edcd9ed8e6822e' and a dropdown list with the same entry. At the bottom are 'Cancel' and 'Attach internet gateway' buttons, with 'Attach internet gateway' being highlighted in orange.

Click on **Attach Internet Gateway**

To Create Subnet

Go to subnets

while creating subnets you can select a VPC

The screenshot shows the AWS VPC Subnets page. On the left, there's a sidebar with 'VPC dashboard' and several other VPC-related options like Route tables, Internet gateways, Egress-only internet gateways, DHCP option sets, Elastic IPs, Managed prefix lists, NAT gateways, Peering connections, and Route servers. The main area is titled 'Subnets (3) info'. It has a search bar and a table with columns: Name, Subnet ID, State, VPC, Block Public..., and IPv4 CIDR. The table lists three subnets: 'subnet-05cbc113b732b1d4a' (Available, vpc-01eeb13ae824cbde3, Off, 172.31.0.0/20), 'subnet-0479efdd4c005274e' (Available, vpc-01eeb13ae824cbde3, Off, 172.31.16.0/20), and 'subnet-0c4ed08e4cf056fb' (Available, vpc-01eeb13ae824cbde3, Off, 172.31.32.0/20). At the top right, there's a 'Create subnet' button.

To create a public subnet

The screenshot shows the 'Create subnet' wizard. Step 1: Subnet details. It has fields for 'Subnet name' (containing 'public_test_subnet'), 'Availability Zone' (set to 'Asia Pacific (Mumbai) / aps1-az1 (ap-south-1a)'), 'IPv4 VPC CIDR block' (set to '13.0.0.0/16'), and 'IPv4 subnet CIDR block' (set to '13.0.1.0/24'). Below these are optional tags: a key 'Name' with value 'public_test_subnet', an 'Add new tag' button, and a 'Remove' button. At the bottom are 'Cancel' and 'Create subnet' buttons.

To create a Privat subnet

The screenshot shows the 'Create subnet' page in the AWS VPC console. The 'Subnet 1 of 1' section is active. The 'Subnet name' field contains 'Private_test_subnet'. The 'Availability Zone' dropdown is set to 'Asia Pacific (Mumbai) / aps1-az1 (ap-south-1a)'. The 'IPv4 CIDR block' dropdown is set to '13.0.0.0/16'. The 'IPv4 subnet CIDR block' dropdown is set to '13.0.2.0/24'. Under 'Tags - optional', there is one tag named 'Name' with value 'Private_test_subnet'. At the bottom right are 'Cancel' and 'Create subnet' buttons.

To create Route Tables

The screenshot shows the 'Route tables (2)' page in the AWS VPC console. The table lists two route tables:

Name	Route table ID	Explicit subnet associ...	Edge associations	Main	VPC	Owner ID
-	rtb-06e20f5b1db248558	-	-	Yes	vpc-01eeb13ae824cbde3	675845727425
-	rtb-068cb64f5a140e4f2	-	-	Yes	vpc-099edcd9ed8e6822e VPC...	675845727425

Click on create route tables

AWS Search [Alt+S] Asia Pacific (Mumbai) ▾

VPC > Route tables > Create route table

Create route table Info

A route table specifies how packets are forwarded between the subnets within your VPC, the internet, and your VPN connection.

Route table settings

Name - optional
Create a tag with a key of 'Name' and a value that you specify.

Route_table_test

VPC
The VPC to use for this route table.

vpc-099edcd9ed8e6822e (VPC_test)

Tags
A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Key	Value - optional
<input type="text" value="Name"/>	<input type="text" value="Route_table_test"/> X Remove

Add new tag

You can add 49 more tags.

Cancel Create route table

Route tables need to access internet access. Let give internet access

Click on edit routes

AWS Search [Alt+S] Asia Pacific (Mumbai) ▾ SethuEng

VPC dashboard < AWS Global View Filter by VPC Actions ▾

Virtual private cloud Your VPCs Subnets **Route tables** Internet gateways Egress-only internet gateways DHCP option sets Elastic IPs Managed prefix lists NAT gateways Peering connections Route servers New Security

rtb-0ca62b071f709fd1e | Route_table_test was created successfully.

rtb-0ca62b071f709fd1e / Route_table_test

Details Info

Route table ID	Main	Explicit subnet associations	Edge associations
rtb-0ca62b071f709fd1e	<input type="checkbox"/> No	-	-
VPC	Owner ID	Actions	
vpc-099edcd9ed8e6822e VPC_test	675845727425	Actions	

Routes (1) Both Edit routes

Destination	Target	Status	Propagated	Route Origin
13.0.0.0/16	local	Active	No	CreateRouteTable

Choose internet gateway

Select the gateway in that list

AWS Search [Alt+S] Asia Pacific (Mumbai) ▾ SethuEng

VPC > Route tables > rtb-0ca62b071f709fd1e > Edit routes

Edit routes

Destination	Target	Status	Propagated	Route Origin
13.0.0.0/16	local	Active	No	CreateRouteTable
0.0.0.0/0	Internet Gateway	-	No	CreateRoute
	lgw-0b524431d708af20			Remove

Add route Cancel Preview Save changes

Click on Save changes

Lets Create Route Tables for Private subnets

VPC > Route tables > Create route table

Create route table Info

A route table specifies how packets are forwarded between the subnets within your VPC, the internet, and your VPN connection.

Route table settings

Name - optional
Create a tag with a key of 'Name' and a value that you specify.

Route_table_private

VPC
The VPC to use for this route table.
vpc-099edcd9ed8e6822e (VPC_test)

Tags

A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Key	Value - <small>optional</small>
Q Name	Q Route_table_private X Remove

Add new tag

You can add 49 more tags.

Cancel **Create route table**

This is a private subnet, it doesn't need any internet access

VPC > Route tables > rtb-0bc06eed73ab7bbea

rtb-0bc06eed73ab7bbea / Route_table_private

VPC dashboard Actions ▾

Details Info

Route table ID	Main	Explicit subnet associations	Edge associations
rtb-0bc06eed73ab7bbea	No	-	-
VPC	Owner ID		
vpc-099edcd9ed8e6822e VPC_test	675845727425		

Routes Subnet associations Edge associations Route propagation Tags

Routes (1)

Destination	Target	Status	Propagated	Route Origin
13.0.0.0/16	local	Active	No	Create Route Table

Click on Subnet associations

VPC > Route tables > rtb-0bc06eed73ab7bbea

rtb-0bc06eed73ab7bbea / Route_table_private

Details **Info**

Route table ID rtb-0bc06eed73ab7bbea	Main <input checked="" type="checkbox"/>	Explicit subnet associations -	Edge associations -
VPC vpc-099edcd9ed8e6822e VPC_test	Owner ID 675845727425		

Routes **Subnet associations** **Edge associations** **Route propagation** **Tags**

Explicit subnet associations (0)

Edit subnet associations

No subnet associations
You do not have any subnet associations.

Select Private subnet and click on Save association

aws > Search [Alt+S] Account ID: 6758-4572-7425 SethuEng

VPC > Route tables > rtb-0bc06eed73ab7bbea > Edit subnet associations

Edit subnet associations

Change which subnets are associated with this route table.

Available subnets (1/2)

Name	Subnet ID	IPv4 CIDR	IPv6 CIDR	Route table ID
Private_test_subnet	subnet-06b8b0ec90604624c	13.0.2.0/24	-	Main (rtb-068cb64f5a140e4f2)
public_test_subnet	subnet-0ccb81c20fc9c4591	13.0.1.0/24	-	Main (rtb-068cb64f5a140e4f2)

Selected subnets

subnet-06b8b0ec90604624c / Private_test_subnet

Save associations

VPC > Route tables > rtb-0bc06eed73ab7bbea

You have successfully updated subnet associations for rtb-0bc06eed73ab7bbea / Route_table_private.

rtb-0bc06eed73ab7bbea / Route_table_private

Details **Info**

Route table ID rtb-0bc06eed73ab7bbea	Main <input checked="" type="checkbox"/>	Explicit subnet associations subnet-06b8b0ec90604624c / Private_test_subnet	Edge associations -
VPC vpc-099edcd9ed8e6822e VPC_test	Owner ID 675845727425		

Routes **Subnet associations** **Edge associations** **Route propagation** **Tags**

Explicit subnet associations (1)

Edit subnet associations

Private_test_subnet subnet-06b8b0ec90604624c 13.0.2.0/24

Subnets without explicit associations (1)

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

Edit subnet associations

Create Ec2 instance on public subnet

The screenshot shows the 'Name and tags' step of the 'Launch an instance' wizard. It includes fields for 'Name' (set to 'Public_ec2') and 'Add additional tags'. Below this is the 'Application and OS Images (Amazon Machine Image)' section, which displays a search bar and a grid of OS icons. A specific AMI, 'Ubuntu Server 24.04 LTS (HVM), SSD Volume Type', is selected. The summary panel on the right shows 'Number of instances' set to 1, 'Software Image (AMI)' as Canonical, Ubuntu, 24.04, 'Virtual server type (instance type)' as t3.micro, and 'Storage (volumes)' as 1 volume(s) - 8 GiB. Buttons for 'Launch instance' and 'Preview code' are visible.

Click on edit network settings

The screenshot shows the 'Network settings' step of the 'Launch an instance' wizard. It includes sections for 'Network' (set to 'vpc-01eeb13ae824cbde5'), 'Subnet' (set to 'No preference (Default subnet in any availability zone)'), and 'Auto-assign public IP' (set to 'Enable'). The 'Firewall (security group)' section contains a 'Create security group' button and a note about creating a new security group named 'launch-wizard-3'. A warning message at the bottom states: 'Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.' The summary panel on the right is identical to the previous screenshot, showing 1 instance, Canonical AMI, t3.micro instance type, and 8 GiB storage.

Choose our custom settings

Select VPC, Subnet then enable Auto-assign public IP

Select the security groups

Screenshot of the AWS EC2 Launch Instance wizard. The left panel shows Network settings, including VPC (vpc-09edcd9ed8e6822e), Subnet (public_test_subnet), and Auto-assign public IP (Enable). It also includes Firewall (security groups) settings, showing a new security group named 'launch-wizard-3' with a single inbound rule for SSH (TCP port 22). The right panel shows the Summary section with 1 instance, Software Image (AMI) set to Canonical, Ubuntu, 24.04, amd64, and Virtual server type (instance type) set to t3.micro. The 'Launch instance' button is highlighted.

Click on launch instance