

Creating VPC In AWS

Create VPC Info

A VPC is an isolated portion of the AWS Cloud populated by AWS objects, such as Amazon EC2 instances.

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 - optional

Creates a tag with a key of 'Name' and a value that you specify.

my-vpc-demo

IPv4 CIDR block Info

- IPv4 CIDR manual input
- IPAM-allocated IPv4 CIDR block

IPv4 CIDR

10.0.0.0/16

CIDR block size must be between /16 and /28.

- Now add name tag
- IPv4 CIDR: $10.0.0.0/16 = 65,536$
- Click on Create VPC

Your VPCs

VPCs

VPC encryption controls

Your VPCs (2) Info

Last updated
less than a minute ago



Actions ▾

Create VPC

Find VPCs by attribute or tag

< 1 >

<input type="checkbox"/> Name	<input type="checkbox"/> VPC ID	<input type="checkbox"/> State	<input type="checkbox"/> Enc
<input type="checkbox"/> -	vpc-0720101e98859592b	Available	-
<input type="checkbox"/> my-vpc-demo	vpc-057a32e8407105e54	Available	-

Now Create 6 Subnets

Creating **Exactly 6 subnets**, each with **different IP capacities**.

Subnet Name	Purpose	Required IPs	CIDR
Admin	Bastion / Ops	~256	/24
Edge	Ingress / LB	~512	/23
Web	Web Tier	~1,024	/22
App	App Tier	~2,048	/21
Platform	Containers / Tools	~4,096	/20
Shared	Large Internal Services	~8,192	/19

- Here Created 6 Subnets

Subnet Name	Required IPs & CIDR
Shared	10.0.0.0/19 = 8,192 IP's
Platform	10.0.32.0/20 = 4,096 IP's
App	10.0.48.0/21 = 2,048 IP's
Web	10.0.56.0/22 = 1,024 IP's
Edge	10.0.60.0/23 = 512 IP's
Admin	10.0.62.0/24 = 256 IP's

The screenshot shows the AWS Subnets list page. At the top, it says "Subnets (8) Info" and "Last updated 1 minute ago". There are "Actions" and "Create subnet" buttons. Below is a search bar with placeholder "Find subnets by attribute or tag". The main table has columns: Name, Subnet ID, State, and VPC. The subnets listed are:

Name	Subnet ID	State	VPC
Edge	subnet-023ef772506c9bab8	Available	vpc-057a32e8407105e54 my...
Web	subnet-0d87487944f613d28	Available	vpc-057a32e8407105e54 my...
Platform	subnet-042903b1d47d49e66	Available	vpc-057a32e8407105e54 my...
Shared	subnet-08baf0cc00169c0dc	Available	vpc-057a32e8407105e54 my...
APP	subnet-08763976a4f5106cf	Available	vpc-057a32e8407105e54 my...
Admin	subnet-0a20c0a94f932b85f	Available	vpc-057a32e8407105e54 my...

Now Creating Internet Gateway

- Creating one Internet Gateway.
- Attach it to the VPC.
- Internet access must be controlled and intentional

Internet gateways (2) Info			
<input type="checkbox"/>	Name	Internet gateway ID	State
	-	igw-071eb158fd08ed74b	Attached
<input checked="" type="checkbox"/>	my-demo-igw	igw-03b30f5127d39dd99	Detached

- Now Internet Gateway has Created.
- Now this is in Detached state and Attach to VPC.
- Go to Actions
- Click On Attach to VPC
- It will navigate to other page there you will find your VPC you have created
- And Then Click on VPC you have Created
- Now you can see the IGW has Attached to VPC

Internet gateways (1/2) Info			
<input type="checkbox"/>	Name	Internet gateway ID	State
	-	igw-071eb158fd08ed74b	Attached
<input checked="" type="checkbox"/>	my-demo-igw	igw-03b30f5127d39dd99	Attached

Now Creating Route Tables

- Click on Create Route Tables

- Create **2** Route Tables: **Public-RT** and **Private-RT**
- Assign a Name to the Route Table
- Then Click on VPC you have created

Route tables (4) Info					
Last updated less than a minute ago C Actions Create route table					
<input type="checkbox"/>	Name	Route table ID	Explicit subnet associ...	Edge associations	Main
<input type="checkbox"/>	Public-RT	rtb-0b757dff8882220a0	-	-	No
<input type="checkbox"/>	Private-RT	rtb-07ca28adc72b94697	-	-	No
<input type="checkbox"/>	-	rtb-04a3bbe874f7a0f18	-	-	Yes

Now Edit Routes

- Add Routes to Public-RT 0.0.0.0/0
- Target – IGW

Edit routes

Destination	Target	Status	Propagated	Route Origin
10.0.0.0/16	local	Active	No	CreateRouteTable
<input type="text" value="0.0.0.0/0"/> X	<input type="text" value="local"/> X			
<input type="text" value="0.0.0.0/0"/> X	<input type="text" value="Internet Gateway"/> X	-	No	CreateRoute
	<input type="text" value="igw-03b30f5127d39dd99"/> X			Remove
Add route				
Cancel Preview Save changes				

Now Edit Explicit-Subnet Association

Explicitly associate:

- Admin + Edge subnets → **Public Route Table**
- Remaining 4 subnets → **Private Route Table**

Route tables (4) Info					
Last updated 1 minute ago C Actions Create route table					
<input type="checkbox"/> Name	Route table ID	Explicit subnet assoc...	Edge associations	Main	
<input type="checkbox"/> Public-RT	rtb-0b757dff8882220a0	2 subnets	-	No	
<input type="checkbox"/> Private-RT	rtb-07ca28adc72b94697	4 subnets	-	No	
<input type="checkbox"/> -	rtb-04a3bbe874f7a0f18	-	-	Yes	
<input type="checkbox"/> -	rtb-0b64f5ff114690382	-	-	Yes	

Now Create EC2 Server and Make some changes in Network

▼ Network settings [Info](#)

VPC - required [Info](#)

vpc-057a32e8407105e54 (my-vpc-demo)
10.0.0.0/16

Subnet [Info](#)

subnet-0a20c0a94f932b85f Admin
VPC: vpc-057a32e8407105e54 Owner: 443618463163
Availability Zone: us-west-1a (usw1-az1) Zone type: Availability Zone
IP addresses available: 251 CIDR: 10.0.62.0/24

Create new subnet [i](#)

Auto-assign public IP [Info](#)

Enable

Firewall (security groups) [Info](#)

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

Create security group Select existing security group

Now Connect to Server

Now ping google.com

Let See the google is ping that means it is public and using Internet

```
ubuntu@ip-10-0-62-211:~$ ping google.com
PING google.com (142.250.191.46) 56(84) bytes of data.
64 bytes from nuq04s42-in-f14.1e100.net (142.250.191.46): icmp_seq=1 ttl=118 time=0.751 ms
64 bytes from nuq04s42-in-f14.1e100.net (142.250.191.46): icmp_seq=2 ttl=118 time=0.902 ms
64 bytes from nuq04s42-in-f14.1e100.net (142.250.191.46): icmp_seq=3 ttl=118 time=0.762 ms
64 bytes from nuq04s42-in-f14.1e100.net (142.250.191.46): icmp_seq=4 ttl=118 time=0.769 ms
64 bytes from nuq04s42-in-f14.1e100.net (142.250.191.46): icmp_seq=5 ttl=118 time=0.768 ms
64 bytes from nuq04s42-in-f14.1e100.net (142.250.191.46): icmp_seq=6 ttl=118 time=0.753 ms
64 bytes from nuq04s42-in-f14.1e100.net (142.250.191.46): icmp_seq=7 ttl=118 time=0.759 ms
64 bytes from nuq04s42-in-f14.1e100.net (142.250.191.46): icmp_seq=8 ttl=118 time=0.785 ms
64 bytes from nuq04s42-in-f14.1e100.net (142.250.191.46): icmp_seq=9 ttl=118 time=0.761 ms
64 bytes from nuq04s42-in-f14.1e100.net (142.250.191.46): icmp_seq=10 ttl=118 time=0.773 ms
64 bytes from nuq04s42-in-f14.1e100.net (142.250.191.46): icmp_seq=11 ttl=118 time=0.765 ms
64 bytes from nuq04s42-in-f14.1e100.net (142.250.191.46): icmp_seq=12 ttl=118 time=0.769 ms
64 bytes from nuq04s42-in-f14.1e100.net (142.250.191.46): icmp_seq=13 ttl=118 time=0.768 ms
64 bytes from nuq04s42-in-f14.1e100.net (142.250.191.46): icmp_seq=14 ttl=118 time=0.766 ms
64 bytes from nuq04s42-in-f14.1e100.net (142.250.191.46): icmp_seq=15 ttl=118 time=0.766 ms
64 bytes from nuq04s42-in-f14.1e100.net (142.250.191.46): icmp_seq=16 ttl=118 time=0.761 ms
64 bytes from nuq04s42-in-f14.1e100.net (142.250.191.46): icmp_seq=17 ttl=118 time=0.760 ms
64 bytes from nuq04s42-in-f14.1e100.net (142.250.191.46): icmp_seq=18 ttl=118 time=0.758 ms
64 bytes from nuq04s42-in-f14.1e100.net (142.250.191.46): icmp_seq=19 ttl=118 time=0.763 ms
64 bytes from nuq04s42-in-f14.1e100.net (142.250.191.46): icmp_seq=20 ttl=118 time=0.758 ms
64 bytes from nuq04s42-in-f14.1e100.net (142.250.191.46): icmp_seq=21 ttl=118 time=0.752 ms
64 bytes from nuq04s42-in-f14.1e100.net (142.250.191.46): icmp_seq=22 ttl=118 time=0.760 ms
64 bytes from nuq04s42-in-f14.1e100.net (142.250.191.46): icmp_seq=23 ttl=118 time=0.772 ms
64 bytes from nuq04s42-in-f14.1e100.net (142.250.191.46): icmp_seq=24 ttl=118 time=0.763 ms
64 bytes from nuq04s42-in-f14.1e100.net (142.250.191.46): icmp_seq=25 ttl=118 time=0.756 ms
64 bytes from nuq04s42-in-f14.1e100.net (142.250.191.46): icmp_seq=26 ttl=118 time=0.767 ms
```