

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	VPC ID	State	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

Subnets (8) [Info](#) Last updated 1 minute ago [Actions](#) [Create subnet](#)

Find subnets by attribute or tag

<input type="checkbox"/>	Name	Subnet ID	State	VPC
<input type="checkbox"/>	Edge	subnet-023ef772506c9bab8	Available	vpc-057a32e8407105e54 my-...
<input type="checkbox"/>	Web	subnet-0d87487944f613d28	Available	vpc-057a32e8407105e54 my-...
<input type="checkbox"/>	Platform	subnet-042903b1d47d49e66	Available	vpc-057a32e8407105e54 my-...
<input type="checkbox"/>	Shared	subnet-08baf0cc00169c0dc	Available	vpc-057a32e8407105e54 my-...
<input type="checkbox"/>	APP	subnet-08763976a4f5106cf	Available	vpc-057a32e8407105e54 my-...
<input type="checkbox"/>	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](#)

Find internet gateways by attribute or tag

< 1 > ⚙

<input type="checkbox"/>	Name	Internet gateway ID	State	VPC ID
<input type="checkbox"/>	-	igw-071eb158fd08ed74b	✓ Attached	vpc-0720101e98859592b
<input 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](#)

Find internet gateways by attribute or tag

< 1 > ⚙

<input type="checkbox"/>	Name	Internet gateway ID	State	VPC ID
<input type="checkbox"/>	-	igw-071eb158fd08ed74b	✓ Attached	vpc-0720101e98859592b
<input checked="" type="checkbox"/>	my-demo-igw	igw-03b30f5127d39dd99	✓ Attached	vpc-057a32e8407105e54 my-

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 [Actions](#) [Create route table](#)

Find route tables by attribute or tag

<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"/>	<input type="text" value="local"/>	–	No	CreateRoute
	Internet Gateway			
	<input type="text" value="igw-03b30f5127d39dd99"/>			

[Add route](#) [Remove](#)

[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 [Actions](#) [Create route table](#)

Find route tables by attribute or tag

<input type="checkbox"/>	Name	Route table ID	Explicit subnet associ...	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 [Refresh](#)

Subnet [Info](#)

subnet-0a20c0a94f932b85f Admin [Refresh](#) [Create new subnet](#)

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

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
```