CREATING VPC, INTERNET GATEWAY, SUBNETS, ROUTE TABLE
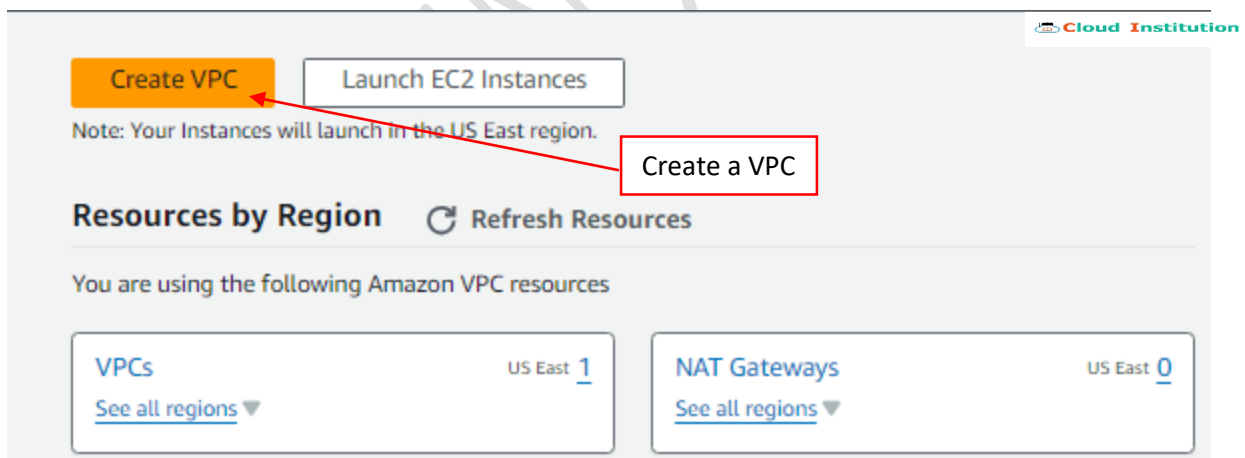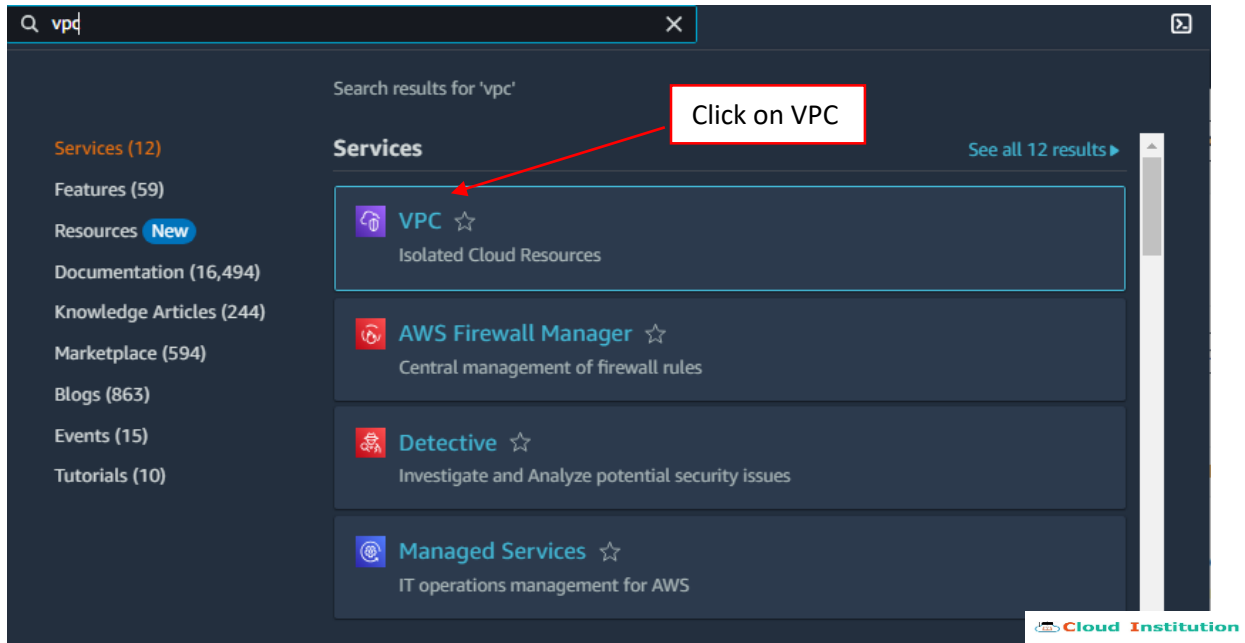
Step 1 :Create a VPC

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.

Click VPC only

- ● VPC only
- ○ VPC and more

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

N.V-VPC

Give a name to the VPC

IPv4 CIDR block Info
- ● IPv4 CIDR manual input
- ○ IPAM-allocated IPv4 CIDR block

IPv4 CIDR

10.0.0.0/24

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

Give an IP address

IPv6 CIDR block Info
- ● No IPv6 CIDR block
- ○ IPAM-allocated IPv6 CIDR block
- ○ Amazon-provided IPv6 CIDR block
- ○ IPv6 CIDR owned by me

Tenancy Info

Default ▼

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

🔍 Name ✕

Value - *optional*

🔍 N.V-VPC ✕

Remove tag

Add tag
You can add 49 more tags

Hit Create VPC

Cancel **Create VPC**

VPC dashboard ✕
EC2 Global View ↗

Filter by VPC:

Select a VPC ▼

▼ Virtual private cloud

Your VPCs
Subnets
Route tables
Internet gateways
Egress-only internet gateways
Carrier gateways
DHCP option sets
Elastic IPs

✓ You successfully created vpc-0b77c4209d8356808 / N.V-VPC

VPC > Your VPCs > vpc-0b77c4209d8356808

vpc-0b77c4209d8356808 / N.V-VPC

← **VPC is created**

Details Info

VPC ID	**State**	**DNS hostnames**
🗐 vpc-0b77c4209d8356808	✓ Available	Disabled
Tenancy	**DHCP option set**	**Main route table**
Default	dopt-00f5617776c0337b0	rtb-002ee467862ddb8b6
Default VPC	**IPv4 CIDR**	**IPv6 pool**
No	10.0.0.0/24	–
Network Address Usage metrics	**Route 53 Resolver DNS Firewall rule groups**	**Owner ID**
Disabled	–	🗐 473869189128

VPC dashboard ✕
EC2 Global View ↗

Filter by VPC:

Select a VPC ▼

▼ Virtual private cloud

Your VPCs
Subnets
Route tables
Internet gateways

Your VPCs (1/2) Info

[🔄] [Actions ▼] [**Create VPC**]

[🔍 Search]

< 1 > ⚙

☐	Name ▽	VPC ID ▽	State ▽	IPv4 CIDR ▽	IPv6 CIDR
☐	–	vpc-0ae76ae4d4a2db8aa	✓ Available	172.31.0.0/16	–
☑	N.V-VPC	vpc-0b77c4209d8356808	✓ Available	10.0.0.0/24	–

↑ **Now select the VPC**

vpc-0b77c4209d8356808 / N.V-VPC

Your VPCs (1/2) Info

[🔍 Search]

☐	**Name** ▽	**VPC ID** ▽	**State**
☐	–	vpc-0ae76ae4d4a2db8aa	✓ Available
☑	N.V-VPC	vpc-0b77c4209d8356808	✓ Available

Create VPC
Create default VPC
Create flow log
Edit VPC settings
Edit CIDRs
Manage middlebox routes
Manage tags
Delete VPC

Right click on the VPC and select edit VPC settings

vpc-0b77c4209d8356...

Details | Resource m... | ...gs | Tags | Integrations

Details

DHCP settings

DHCP option set   Info

```
dopt-00f5617776c0337b0                    ▼
```

DNS settings

☑ Enable DNS resolution   Info

☑ Enable DNS hostnames   Info

```
                    ┌─────────────────────┐
                    │  Enable DNS hostnames │
                    └─────────────────────┘
```

Network Address Usage metrics settings
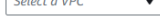
☐ Enable Network Address Usage metrics   Info

```
                    ┌────────────┐
                    │ Click Save │
                    └────────────┘
```

Cancel   **Save**

Step 2 :Create a Internet Gateway

VPC dashboard ✕	Your VPCs (1/2) Info			C	Actions ▼	Create VPC
EC2 Global View ⧉	🔍 Search					< 1 > ⚙
Filter by VPC:						
Select a VPC ▼	☐ Name ▽	VPC ID ▽	State ▽	IPv4 CIDR ▽	IPv6 CIDR
▼ Virtual private cloud	☐ –	vpc-0ae76ae4d4a2db8aa	⊘ Available	172.31.0.0/16	–
Your VPCs	☑ N.V-VPC	vpc-0b77c4209d8356808	⊘ Available	10.0.0.0/24	–
Subnets					
Route tables					
Internet gateways					

```
              ┌──────────────────────────┐
              │ Create an Internet Gateway │
              └──────────────────────────┘
```

vpc-0b77c4209d8356808 / N.V-VPC

Internet gateways (1) Info			C	Actions ▼	**Create internet gateway**
🔍 Search					< 1 > ⚙
☐ Name ▽	Internet gateway ID ▽	State ▽	VPC ID ▽	Owner	
☐ –	igw-0a5390b690492ead5	⊘ Attached	vpc-0ae76ae4d4a2db8aa	473869189128	

```
                                    ┌────────────┐
                                    │ Click here │
                                    └────────────┘
```

Create internet gateway Info

An internet gateway is a virtual router that connects a VPC to the internet. To create a new internet gateway specify the name for the gateway below.

Internet gateway settings

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

N.V-IGW

Give a name to the gateway

Tags - optional

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	
🔍 Name ✕	🔍 N.V-IGW ✕	Remove

Add new tag

You can add 49 more tags.

Click Create

Cancel   **Create internet gateway**

Step 3 : Attach the internet gateway to the VPC

⊘ The following internet gateway was created: igw-080d8816c37a5dc63 - N.V-IGW. You can now attach to a VPC to enable the VPC to communicate with the internet.   **Attach to a VPC**   ✕

VPC > Internet gateways > igw-080d8816c37a5dc63

igw-080d8816c37a5dc63 / N.V-IGW   Actions ▼

Details Info

Now attach it to the VPC

Internet gateway ID	State	VPC ID	Owner
📋 igw-080d8816c37a5dc63	⊖ Detached	–	📋 473869189128

Tags   Manage tags

🔍 Search tags   ‹ 1 › ⚙

Key	Value
Name	N.V-IGW

VPC > Internet gateways > Attach to VPC (igw-080d8816c37a5dc63)

Attach to VPC (igw-080d8816c37a5dc63) Info

VPC

Attach an internet gateway to a VPC to enable the VPC to communicate with the internet. Specify the VPC to attach below.

Select the created VPC

Available VPCs
Attach the internet gateway to this VPC.

Select a VPC

vpc-0b77c4209d8356808 - N.V-VPC

▶ AWS Command Line Interface command

Now attach

Cancel | **Attach internet gateway**

⊘ Internet gateway igw-080d8816c37a5dc63 successfully attached to vpc-0b77c4209d8356808

VPC dashboard ✕
EC2 Global View ⧉
Filter by VPC:
Select a VPC ▼

▼ Virtual private cloud
   Your VPCs
   Subnets
   Route tables
   Internet gateways
   Egress-only internet gateways
   Carrier gateways
   DHCP option sets

VPC > Internet gateways > igw-080d8816c37a5dc63

igw-080d8816c37a5dc63 / N.V-IGW

Details Info

Internet gateway ID	State	VPC ID	Owner
🗗 igw-080d8816c37a5dc63	⊘ Attached	vpc-0b77c4209d8356808 | N.V-VPC	🗗 473869189128

Now internet gateway is attached to VPC

Tags

🔍 Search tags

Key	Value
Name	N.V-IGW

Step 4 : Create Subnets

⊘ Internet gateway igw-080d8816c37a5dc63 successfully attached to vpc-0b77c4209d8356808

VPC dashboard ✕
EC2 Global View ⧉
Filter by VPC:
Select a VPC ▼

▼ Virtual private cloud
   Your VPCs
   Subnets
   Route tables
   Internet gateways
   Egress-only internet gateways
   Carrier gateways
   DHCP option sets

Now create subnets

VPC > Internet gateways > igw-080d8816c37a5dc63

...5dc63 / N.V-IGW

Details Info

Internet gateway ID	State	VPC ID	Owner
🗗 igw-080d8816c37a5dc63	⊘ Attached	vpc-0b77c4209d8356808 | N.V-VPC	🗗 473869189128

Tags

🔍 Search tags

Key	Value
Name	N.V-IGW

Subnets (6) Info					

Find resources by attribute or tag

	Name	Subnet ID	State	VPC	IPv4 CIDR
☐	–	subnet-0906e5f0a18fcbc77	⊘ Available	vpc-0ae76ae4d4a2db8aa	172.31.16.0/20
☐	–	subnet-022e895a333fbe3c9	⊘ Available	vpc-0ae76ae4d4a2db8aa	172.31.48.0/20
☐	–	subnet-0f57a4c555dc45042	⊘ Available	vpc-0ae76ae4d4a2db8aa	172.31.0.0/20
☐	–	subnet-0c04ddc17f76eb498	⊘ Available	vp	172.31.64.0/20
☐	–	subnet-0f26a6bf0f494fe82	⊘ Available	vp	172.31.32.0/20

Click create

Cloud Institution

Cloud Institution

Create subnet Info

VPC

VPC ID
Create subnets in this VPC.

Select the created VPC

Select a VPC ▲

🔍 |

vpc-0ae76ae4d4a2db8aa   (default)
172.31.0.0/16

vpc-0b77c4209d8356808 (N.V-VPC)
10.0.0.0/24

Select a VPC first to create new subnets.

Add new subnet

Click created

Cancel   Create subnet

Create to subnets in different availability zones

Subnet settings
Specify the CIDR blocks and Availability Zone for the subnet.

Cloud Institution

Subnet 1 of 1

Give a name to the subnet

Subnet name
Create a tag with a key of 'Name' and a value that you specify.

SN-1

The name can be up to 256 characters long.

Select the availability zone

Availability Zone   Info
Choose the zone in which your subnet will reside, or let Amazon choose one for you.

US East (N. Virginia) / us-east-1a   ▼

IPv4 VPC CIDR block   Info
Choose the VPC's IPv4 CIDR block for the subnet. The subnet's IPv4 CIDR must lie within this block.

10.0.0.0/24

Give a IP address

IPv4 subnet CIDR block

10.0.0.0/28   16 IPs

| < | > | ^ | v |

▼ **Tags - optional**

IPv4 subnet CIDR block

10.0.0.0/28   16 IPs

| < | > | ^ | v |

Cloud Institution

▼ **Tags - optional**

Key	Value - optional	
🔍 Name ✕	🔍 SN-1 ✕	Remove

Add new tag
You can add 49 more tags.

Remove

If you want to add more subnets then click on add new subnets

Add new subnet

Subnet 2 of 2

Subnet name
Create a tag with a key of 'Name' and a value that you specify.

Give a name to the 2nd subnet

SN-2

The name can be up to 256 characters long.

Availability Zone **Info**
Choose the zone in which your subnet will reside, or let Amazon choose one for you.

No preference

🔍

Select different availability zones

No preference	✓
US East (N. Virginia) / us-east-1a ID: use1-az2 Network border group: us-east-1	us-east-1
US East (N. Virginia) / us-east-1b ID: use1-az4 Network border group: us-east-1	us-east-1
US East (N. Virginia) / us-east-1c ID: use1-az6 Network border group: us-east-1	us-east-1
US East (N. Virginia) / us-east-1d ID: use1-az1 Network border group: us-east-1	us-east-1

US East (N. Virginia) / us-east-1b ▼

IPv4 VPC CIDR block **Info**
Choose the VPC's IPv4 CIDR block for the subnet. The subnet's IPv4 CIDR must lie within this block.

10.0.0.0/24

Give a IP address

IPv4 subnet CIDR block

10.0.0.16/28   16 IPs

‹   ›   ∧   ∨

▼ Tags - *optional*

Cloud Institution

Key   Value - *optional*

🔍 Name   ✕   🔍 SN-2   ✕   Remove

Add new tag

You can add 49 more tags.

Remove

Add new subnet

Click on create

Cancel   **Create subnet**

Subnets created

Step 5 : Create a Route table

Now create Route table

Click Create

Route table settings

Give a name to the route table

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

N.V-PUBLIC-RT

VPC
The VPC to use for this route table.

vpc-0b77c4209d8356808 (N.V-VPC) ▲

🔍 |

vpc-0ae76ae4d4a2db8aa (default)

vpc-0b77c4209d8356808 (N.V-VPC) ✓ can use tags to search and filter

your resources or track your AWS costs.

Select the created VPC

Key

🔍 Name ✕

Value - optional

🔍 N.V-PUBLIC-RT ✕

Remove

Add new tag
You can add 49 more tags.

Click create

Cancel | **Create route table**

rtb-033ebd49c5277a859 / N.V-PUBLIC-RT

Actions ▼

Details Info

Route table ID
📋 rtb-033ebd49c5277a859

Main
📋 No

Explicit subnet associations
–

Edge associations
–

VPC
vpc-0b77c4209d8356808 | N.V-VPC

Owner ID
📋 473869189128

Route table

Edit subnet associates

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

Explicit subnet associations (0)

Edit subnet associations

🔍 Find subnet association

< 1 > ⚙

Name ▽	Subnet ID ▽	IPv4 CIDR ▽	IPv6 CIDR ▽

No subnet associations
You do not have any subnet associations.

Edit subnet associations

Change which subnets are associated with this route

Select the created subnets

Available subnets (2/2)

Filter subnet associations

< 1 >

	Name ▽	Subnet ID ▽	IPv4 CIDR ▽	IPv6 CIDR ▽	Route table ID
☑	SN-1	subnet-08dd8bc772962e04f	10.0.0.0/28	–	rtb-033ebd49c5277a859 / N.V-PUB
☑	SN-2	subnet-090d723104c4e1241	10.0.0.16/28	–	rtb-033ebd49c5277a859 / N.V-PUB

Selected subnets

subnet-08dd8bc772962e04f / SN-1 ✕   subnet-090d723104c4e1241 / SN-2 ✕

Click on Save

Cancel   **Save associations**

Now go to routes

rtb-033ebd49c5277a859 / N.V-PUBLIC-RT

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

Click on edit routes

Routes (1)

Filter routes

Both ▼   **Edit routes**

< 1 >

Destination ▽	Target ▽	Status ▽	Propagated ▽
10.0.0.0/24	local	⊘ Active	No

VPC > Route tables > rtb-033ebd49c5277a859 > Edit routes

Edit routes

Click add routes

Destination	Target	Status	Propagated
10.0.0.0/24	local ▼	⊘ Active	No
	🔍 local ✕		

Add route

VPC > Route tables > rtb-033ebd49c5277a859 > Edit routes

Edit routes

2.Enter Internet gateway

1.Select 0.0.0.0/0

Destination	Target	Status	Propagated
10.0.0.0/24	local ▼	⊘ Active	No
	🔍 local ✕		

| 🔍 0.0.0.0/0 ✕ | Internet Gateway ▼ | | No | Remove |

🔍 igw- ✕

Use: "igw-"

3.Select Internet gateway

igw-080d8816c37a5dc63 (N.V-IGW)

Add route

Cancel   Preview   **Save changes**

VPC > Route tables > rtb-033ebd49c5277a859 > Edit routes

Edit routes

Destination	Target	Status	Propagated	
10.0.0.0/24	local ▼	✓ Active	No	
	🔍 local ✕			
🔍 0.0.0.0/0 ✕	Internet Gateway ▼	–	No	Remove
	🔍 igw- ✕			
	Use: "igw-"			
	igw-080d8816c37a5dc63 (N.V-IGW)			
Add route				

Click on Save

Cancel   Preview   **Save changes**