

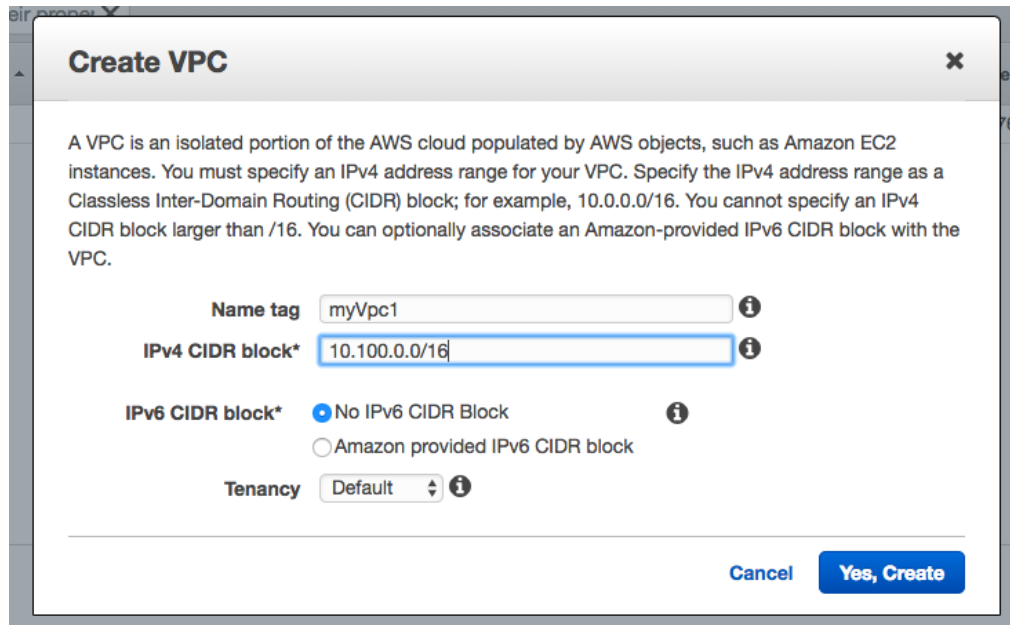
HOW TO CREATE VPC

- VPC may no longer than /16
- Considering that default EC2 resource limit for a new account in 20 instances
- AWS reserve the first 4 and last IPV4 address for their internal use
- Subnet address start with the VPC address and as small as 128

STEP:-1

- Login to your AWS account and select vpc

Create VPC which will use the 10.100.0.0/16 CIDR block



The screenshot shows the 'Create VPC' dialog box in the AWS Management Console. The dialog has a title bar with 'Create VPC' and a close button. Below the title bar is a descriptive paragraph: 'A VPC is an isolated portion of the AWS cloud populated by AWS objects, such as Amazon EC2 instances. You must specify an IPv4 address range for your VPC. Specify the IPv4 address range as a Classless Inter-Domain Routing (CIDR) block; for example, 10.0.0.0/16. You cannot specify an IPv4 CIDR block larger than /16. You can optionally associate an Amazon-provided IPv6 CIDR block with the VPC.' Below this text are four fields: 'Name tag' with the value 'myVpc1', 'IPv4 CIDR block*' with the value '10.100.0.0/16', 'IPv6 CIDR block*' with two radio button options ('No IPv6 CIDR Block' selected and 'Amazon provided IPv6 CIDR block' unselected), and 'Tenancy' with a dropdown menu set to 'Default'. At the bottom right are 'Cancel' and 'Yes, Create' buttons.

Create VPC

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Name tag myVpc1

IPv4 CIDR block* 10.100.0.0/16

IPv6 CIDR block*

- ☒ No IPv6 CIDR Block
- ☐ Amazon provided IPv6 CIDR block

Tenancy Default

Cancel Yes, Create

STEP:-2

Create Subnet will have an assigned CIDR block of 10.100.10.10/20

means it will use 4096 total address within the inclusion range of 10.100.0.0 to 10.100.15.255

Create subnet

Specify your subnet's IP address block in CIDR format; for example, 10.0.0.0/24. IPv4 block sizes must be between a /16 netmask and /28 netmask, and can be the same size as your VPC. An IPv6 CIDR block must be a /64 CIDR block.

Name tag ⓘ

VPC* ⓘ

VPC CIDRs	CIDR	Status	Status Reason
	10.100.0.0/16	associated	

Availability Zone ⓘ

IPv4 CIDR block* ⓘ

* Required

Cancel Create

@ Because of /20 block uses half of the third octet(half of the eight bits) as part of network prefix

@You can compute the subnet address range by converting the “all-ones” binary value of the unused four bits 1111-----→ 15.

@Final octet will be used for host identification, simple convert the “all-ones” binary value of this bit 11111111--→255

@Finally take the first 2 decimal octets 10.100 and append the 2 decimal numbers that we’ve converted from binary

The final address within the subnet is 10.100.15.255

SUBNET:-2

Since we will be creating another subnet , it stands to reason that the next starting address might be 10.100.16.0

In practice , you could choose any Unused block but that one would makes sence.

The second subnet will also be a /20 block but it will reside in different availability zone

[Subnets](#) > Create subnet

Create subnet

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Name tag ⓘ

VPC* ⓘ

VPC CIDRs	CIDR	Status	Status Reason
	10.100.0.0/16	associated	

Availability Zone ⓘ

IPv4 CIDR block* ⓘ

* Required

[Cancel](#) [Create](#)

At this point both VPC subnet should be visible in the AWS console

Main route table insure that both instance will be able to communicate with each other using their private address

STEP:-3

Create Internet Gateway; which allows EC2 instance within a VPC to communicate with the public internet ; without this we will not be able to use SSH

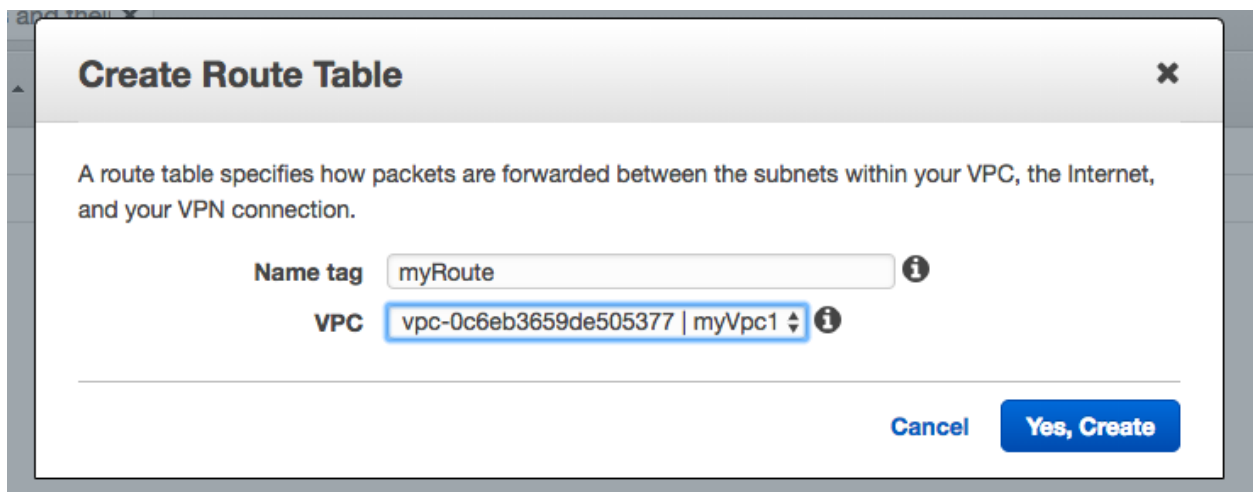
Create Internet Gateway and Attach your created VPC

STEP:-4

Create Route Table

Route----->Edit

Add another route



The screenshot shows the 'Create Route Table' dialog box. At the top, the title is 'Create Route Table' with a close button (X) on the right. Below the title, there is a descriptive text: 'A route table specifies how packets are forwarded between the subnets within your VPC, the Internet, and your VPN connection.' The form contains two fields: 'Name tag' with the value 'myRoute' and an information icon (i) to its right; and 'VPC' with a dropdown menu showing 'vpc-0c6eb3659de505377 | myVpc1' and an information icon (i) to its right. At the bottom right, there are two buttons: 'Cancel' and 'Yes, Create'.

Summary

Routes

Subnet Associations



Route Propagation

Tags

Cancel

Save

View: All rules

Destination	Target	Status	Propagated	Remove
10.100.0.0/16	local	Active	No	
<input type="text" value="0.0.0.0/0"/>	<input type="text" value="igw-08ec2a199f6b2101"/>	Active	No	
<input type="text"/>	<input type="text"/>		No	

Add another route