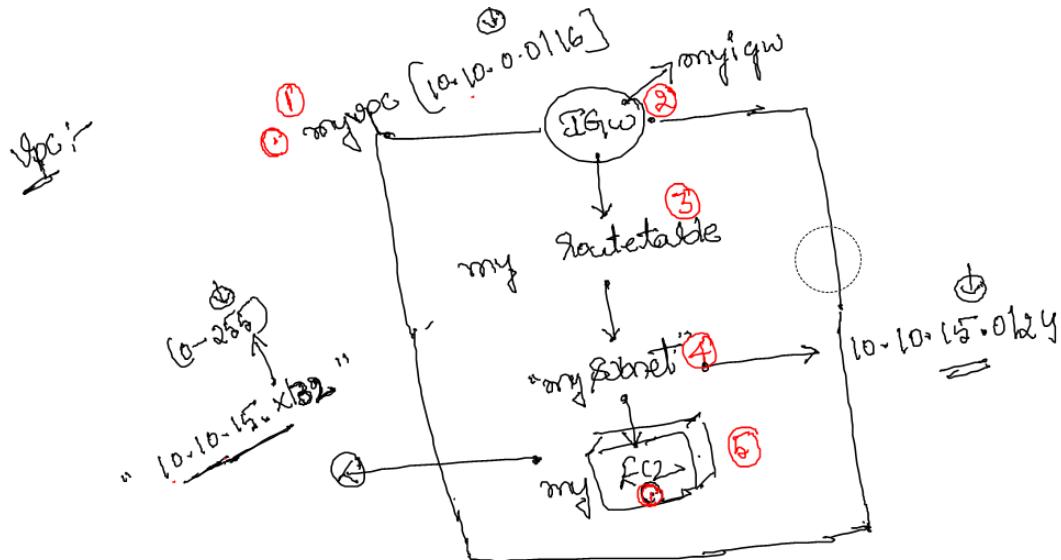


DVS Technologies Aws & Devops

1. Working with VPC

Creating a normal VPC and bringing one Ec2 from the customized VPC



1/1

History

VPC (selected)

Console Home

EC2

IAM

S3

CloudFormation

VPC

Isolated Cloud Resources

AWS Firewall Manager

Central management of firewall rules

Detective

Investigate and analyze potential security issues

Route 53 Resolver

Route 53 Resolver provides recursive DNS for your Amazon VPC and on-premises networks over VPN or Direct Connect.

AWS Outputs	Quantum Technologies	Data Pipeline
EC2 Image Builder	Amazon Braket	AWS Data Exchange
Storage	Management & Governance	AWS Glue
S3	AWS Organizations	AWS Lake Formation
EFS		MSK

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The screenshot shows the AWS VPC console interface. On the left, there's a sidebar with options like 'Subnets', 'Route Tables', 'Internet Gateways', 'Egress Only Internet Gateways', 'Carrier Gateways', 'DHCP Options Sets', 'Elastic IPs', 'Managed Prefix Lists', and 'Endpoints'. A red arrow points from the 'Create VPC' button at the top of the main content area to the 'Create VPC' button on the 'Create VPC' form.

The main content area shows a table of existing VPCs. One VPC, named 'DONT_DELETE', is highlighted. A red arrow points from the 'Actions' dropdown menu next to this VPC to the 'Actions' dropdown on the 'Create VPC' form.

The 'Create VPC' form has several fields:

- Name tag: myvpc (highlighted by a red arrow)
- IPv4 CIDR block*: 10.10.0.0/16 (highlighted by a red arrow)
- IPv6 CIDR block: No IPv6 CIDR Block
- Tenancy: Default

At the bottom right of the form, there are 'Cancel' and 'Create' buttons. A red arrow points from the 'Create' button to the 'Create' button on the 'VPCs > Create VPC' page above.

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Name	VPC ID	State	IPv4 CIDR	IPv6 CIDR
myvpc	vpc-0cc0ee3d6d946832d	available	10.10.0.0/16	-
DONT_DELETE	vpc-fae81987	available	172.31.0.0/16	-

New VPC Experience
Tell us what you think.

- Subnets
- Route Tables
- Internet Gateways New**
- Egress Only Internet Gateways New
- Carrier Gateways New
- DHCP Options Sets New
- Elastic IPs New
- Managed Prefix Lists New
- Endpoints
- Endpoint Services
- NAT Gateways New
- Peering Connections
- SECURITY
- Network ACLs

VPC > Internet gateways

Internet gateways (1/1) Info

Name	Internet gateway ID	State	VPC ID
-	igw-14694d6f	Attached	vpc-fae81987 DONT_DELETE

igw-14694d6f

Details Tabs

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Internet gateway settings

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

myigw

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

Q Name X Q myigw X Remove

Add new tag

You can add 49 more tags.

Cancel Create internet gateway

The following internet gateway was created: igw-079f4a35bd3cee902 . You can now attach to a VPC to enable the VPC to communicate with the internet.

Attach to a VPC

VPC > Internet gateways > igw-079f4a35bd3cee902

igw-079f4a35bd3cee902 / myigw

Actions ▲

Attach to VPC

Detach from VPC

Manage tags

Delete

Details Info

Internet gateway ID: igw-079f4a35bd3cee902 State: Detached VPC ID: - Owner: 907814406801

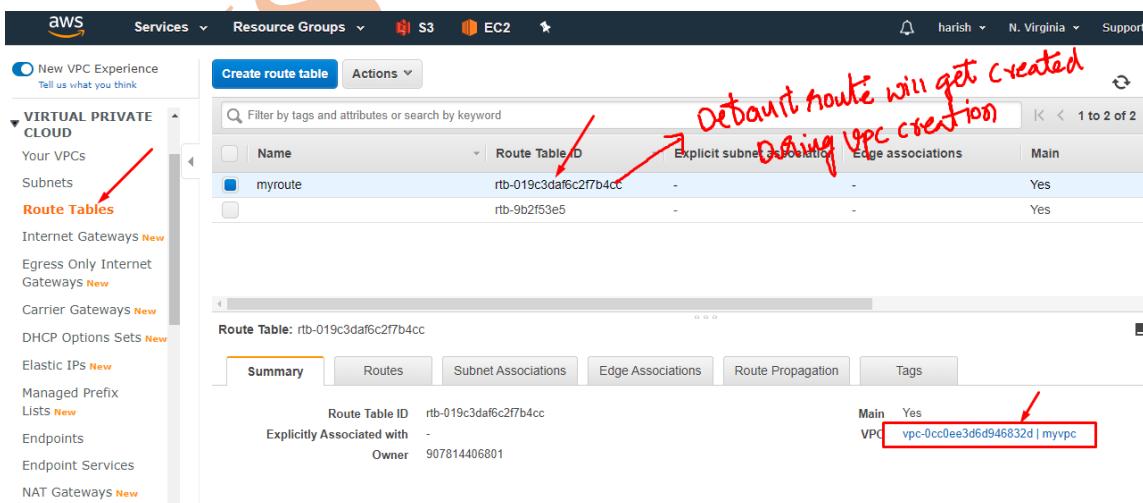
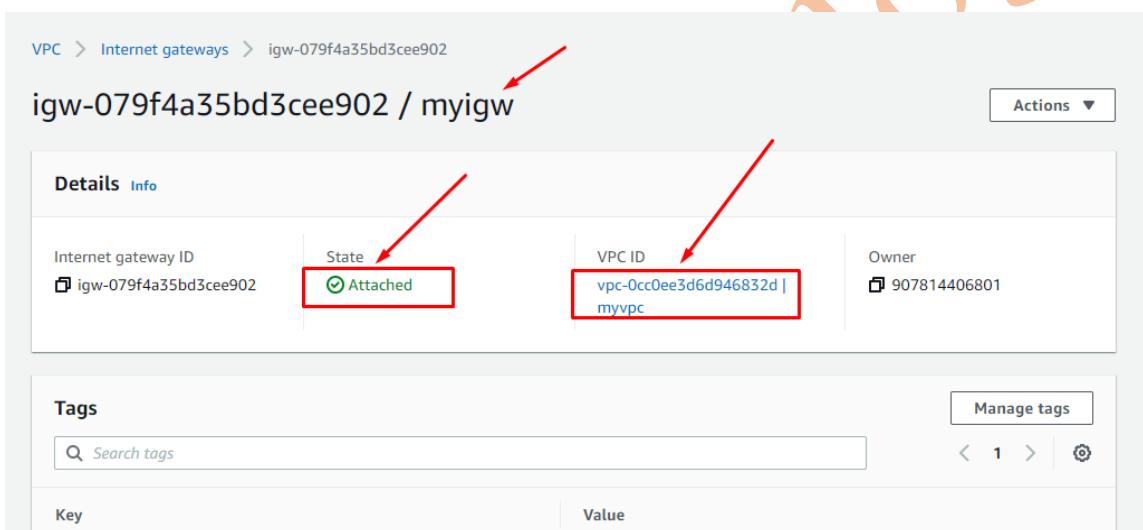
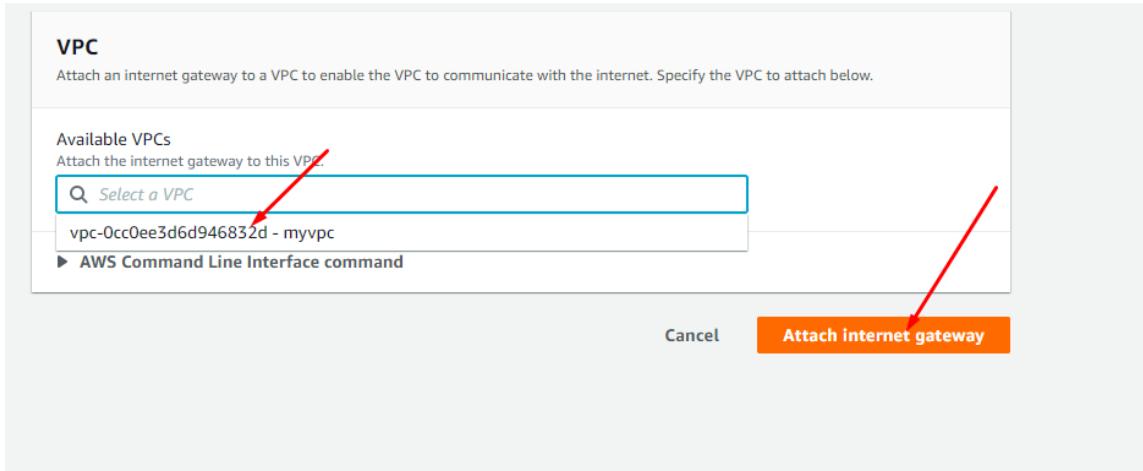
Tags

Search tags

Key Value

Name myigw

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The screenshot shows the AWS VPC Subnets page. On the left, a sidebar lists various VPC-related services: New VPC Experience, Subnets (highlighted with a red arrow), Route Tables, Internet Gateways, Egress Only Internet Gateways, Carrier Gateways, DHCP Options Sets, Elastic IPs, Managed Prefix Lists, Endpoints, Endpoint Services, NAT Gateways, and Peering Connections. The main area displays a table of existing subnets:

Name	Subnet ID	State	VPC	IPv4 CIDR	Available IPv4
DONT DELETE	subnet-133ea11d	available	vpc-fae81987 DONT_DE...	172.31.64.0/20	4091
DONT DELETE	subnet-2698ed6b	available	vpc-fae81987 DONT_DE...	172.31.16.0/20	4091
DONT DELETE	subnet-4320861c	available	vpc-fae81987 DONT_DE...	172.31.32.0/20	4091
DONT DELETE	subnet-4d2e8e6c	available	vpc-fae81987 DONT_DE...	172.31.80.0/20	4091
DONT DELETE	subnet-e6cd6880	available	vpc-fae81987 DONT_DE...	172.31.0.0/20	4091
DONT DELETE	subnet-e99d75d8	available	vpc-fae81987 DONT_DE...	172.31.48.0/20	4091

A large orange arrow points from the 'Create subnet' button at the top left of the main area to the 'Create subnet' button on the 'Create subnet' form below.

Create subnet

Specify your subnet's IP address block in CIDR format; for example, 19.0.0.0/24. 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: mysubnet

VPC*: vpc-0cc0ee3d6d946832d

Availability Zone: us-east-1a

VPC CIDRs	CIDR	Status	Status Reason
	10.10.0.0/16	associated	

IPv4 CIDR block*: 10.10.15.0/24

Cancel Create

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The screenshot shows the AWS VPC Route Tables page. On the left sidebar, under 'Route Tables', there is a red box around the 'Route Tables' link. In the main content area, a red box highlights the 'myroute' entry in the 'Name' column of the table. Another red box highlights the 'Routes' tab in the navigation bar below the table. A third red box highlights the 'Edit routes' button in the 'Edit routes' section.

Name	Route Table ID	Explicit subnet association	Edge associations	Main	VPC
myroute	rtb-019c3daf6c2f7b4cc	-	-	Yes	vpc
	rtb-9b2f53e5	-	-	Yes	vpc

Route Tables > Edit routes

Edit routes

The screenshot shows the 'Edit routes' page. It displays a table with one row: Destination 10.10.0.0/16, Target local, Status active, and Propagated No. A red arrow points from the 'Add route' button at the bottom-left to the 'Destination' input field. Below the table, a note says '* Required'.

Destination	Target	Status	Propaga
10.10.0.0/16	local	active	No

DVS Technologies Aws & Devops

Route Tables > Edit routes

Edit routes

Destination	Target	Status	Propagated
10.10.0.0/16	local	Active	No
0.0.0.0/0	igw	Active	No
	igw-079f4a35bd3cee902 my gw		

* Required

Cancel Save routes

Amazon AWS Services Resource Groups S3 EC2 harish N. Virginia Support

New VPC Experience Tell us what you think

VIRTUAL PRIVATE CLOUD Your VPCs Subnets **Route Tables**

Internet Gateways Egress Only Internet Gateways Carrier Gateways DHCP Options Sets Elastic IPs Managed Prefix Lists Endpoints Endpoint Services NAT Gateways Peering Connections

Create route table Actions

Filter by tags and attributes or search by keyword 1 to 2 of 2

Name	Route Table ID	Explicit subnet association	Edge associations	Main
myroute	rtb-019c3daf6c2f7b4cc	-	-	Yes
	rtb-9b2f53e5	-	-	Yes

Route Table: rtb-019c3daf6c2f7b4cc

Summary Routes **Subnet Associations** Edge Associations Route Propagation Tags

Edit subnet associations

None found

You do not have any subnet associations.

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

DVS Technologies Aws & Devops

Route Tables > Edit subnet associations

Edit subnet associations

Route table rtb-019c3daf6c2f7b4cc (myroute)

Associated subnets subnet-043b038229a855b09

Subnet ID	IPv4 CIDR	IPv6 CIDR	Current Route Table
subnet-043b038229a855b09 mysubnet	10.10.15.0/24	-	Main

* Required

Cancel Save

New VPC Experience
Tell us what you think

Create route table

Actions

- VIRTUAL PRIVATE CLOUD
- Your VPCs
- Subnets
- Route Tables**
- Internet Gateways New
- Egress Only Internet Gateways New
- Carrier Gateways New
- DHCP Options Sets New
- Elastic IPs New
- Managed Prefix Lists New
- Endpoints
- Endpoint Services
- NAT Gateways New

Filter by tags and attributes or search by keyword

Name	Route Table ID	Explicit subnet association	Edge associations	Main
myroute	rtb-019c3daf6c2f7b4cc	subnet-043b038229a855b09	-	Yes
	rtb-9b2f53e5	-	-	Yes

Route Table: rtb-019c3daf6c2f7b4cc

Summary Routes Subnet Associations Edge Associations Route Propagation Tags

Edit subnet associations

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

Subnet ID	IPv4 CIDR	IPv6 CIDR
subnet-043b038229a855b...	10.10.15.0/24	-

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The screenshot shows the AWS EC2 console with the 'Launch Instance' wizard open. The left sidebar is collapsed, showing 'Instances' (selected), 'Instance Types', 'Launch Templates', 'Spot Requests', 'Savings Plans', 'Reserved Instances', 'Dedicated Hosts', 'Scheduled Instances', and 'Capacity Reservations'. The main area displays a message: 'You do not have any running instances in this region.' with links to 'Getting Started Guide' and 'Launch Instance'. A red arrow points from the 'Instances' link in the sidebar to the 'Launch Instance' button.

Step 1: Choose an Amazon Machine Image (AMI)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace, or you can select one of your own AMIs.

Search for an AMI by entering a search term e.g. "Windows"

Quick Start

- My AMIs
- AWS Marketplace
- Community AMIs
- Free tier only

Image	Name	Type	Root device type	Virtualization type	ENI Enabled	Architecture
	Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-02354e95b39ca8dec (64-bit x86) / ami-0c5bf07e510b75b11 (64-bit Arm)	Amazon Linux	EBS	HVM	Yes	64-bit (x86) 64-bit (Arm)
	Amazon Linux AMI 2018.03.0 (HVM), SSD Volume Type - ami-09d8b522f2b93bf0	Amazon Linux	EBS	HVM	Yes	64-bit (x86)

Select

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

The screenshot shows the 'Configure Instance' step of the wizard. The 'Instance Type' dropdown is set to 't2.micro (Variable ECUs, 1 vCPUs, 2.5 GHz, Intel Xeon Family, 1 GiB memory, EBS only)'. A red arrow points from the 'General purpose' row in the table to the 'Select' button.

Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

Filter by: All instance types Current generation Show/Hide Columns

Currently selected: t2.micro (Variable ECUs, 1 vCPUs, 2.5 GHz, Intel Xeon Family, 1 GiB memory, EBS only)

Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
General purpose	t2.micro <small>Free tier eligible</small>	1	1	EBS only	-	Low to Moderate	Yes
General purpose	t2.small	1	2	EBS only	-	Low to Moderate	Yes
General purpose	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
General purpose	t2.large	2	8	EBS only	-	Low to Moderate	Yes

Review and Launch

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Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances: 1

Purchasing option: Request Spot instances

Network:

Subnet:
251 IP Addresses available

Auto-assign Public IP:

Placement group: Add instance to placement group

Capacity Reservation:

IAM role:

Shutdown behavior:

Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group: Create a new security group
 Select an existing security group

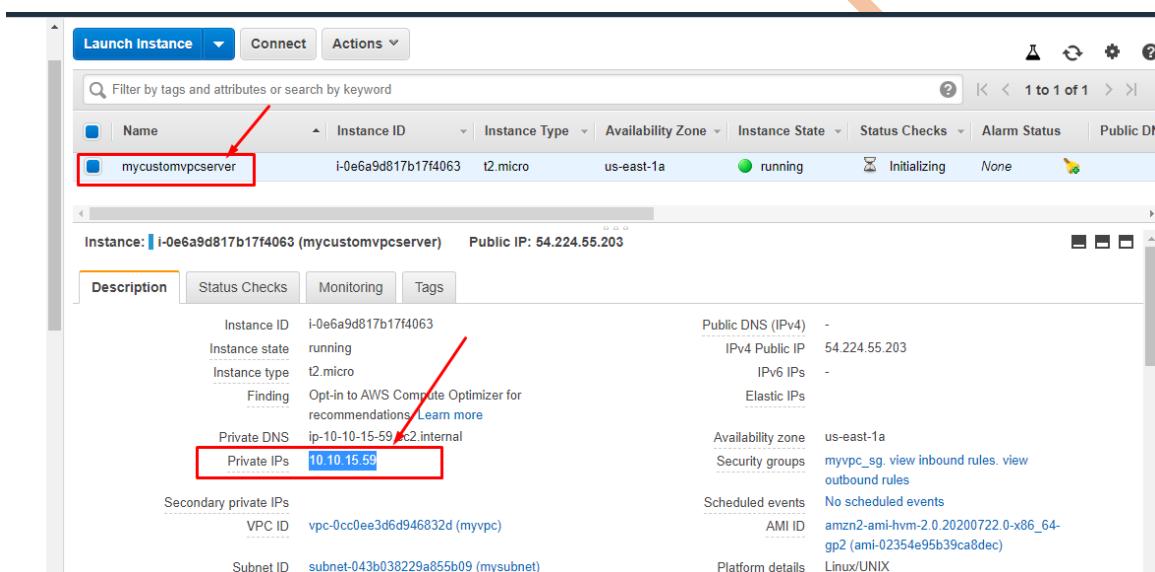
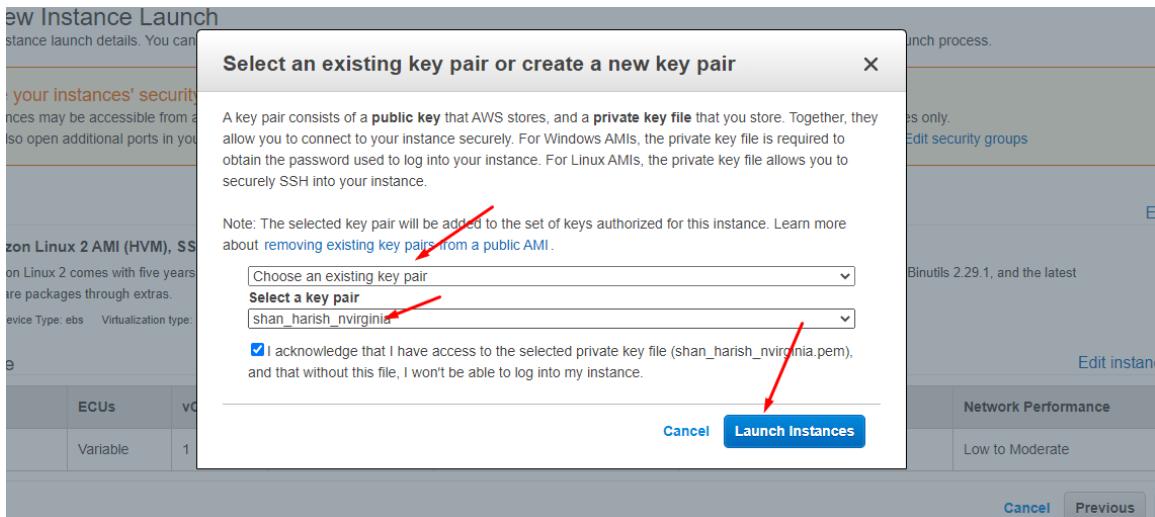
Security group name:

Description: launch-wizard-1 created 2020-08-12T19:12:17.132+04:00

Type	Protocol	Port Range	Source	Description
All traffic	All	0 - 65535	Custom 0.0.0.0	e.g. SSH for Admin Desktop

Warning
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.

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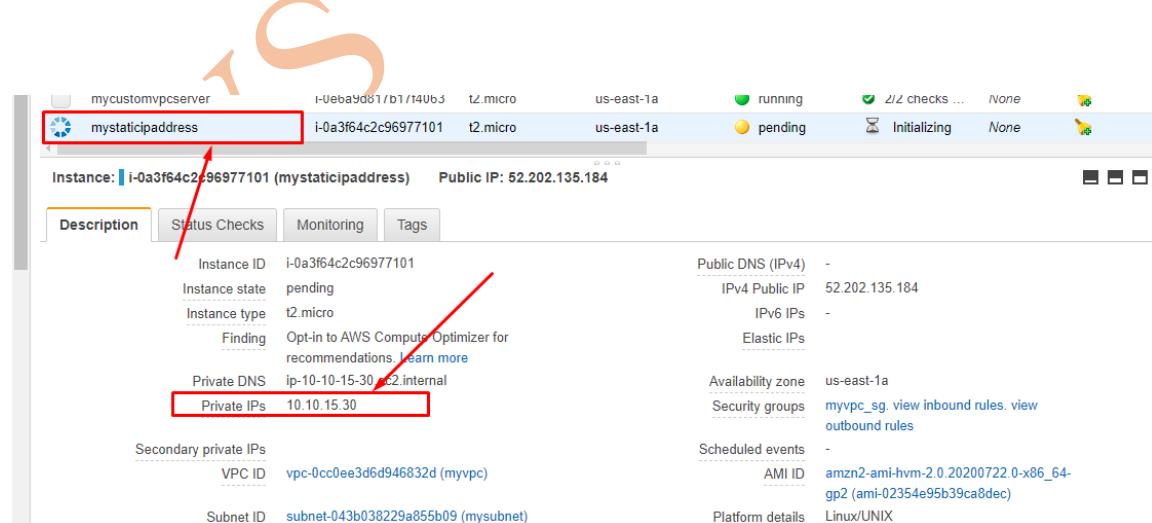
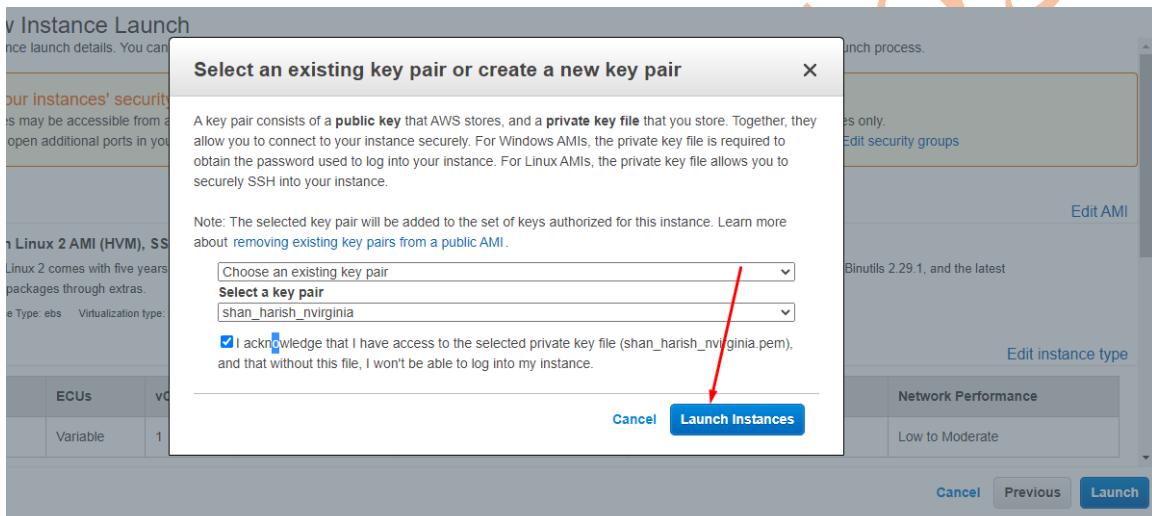
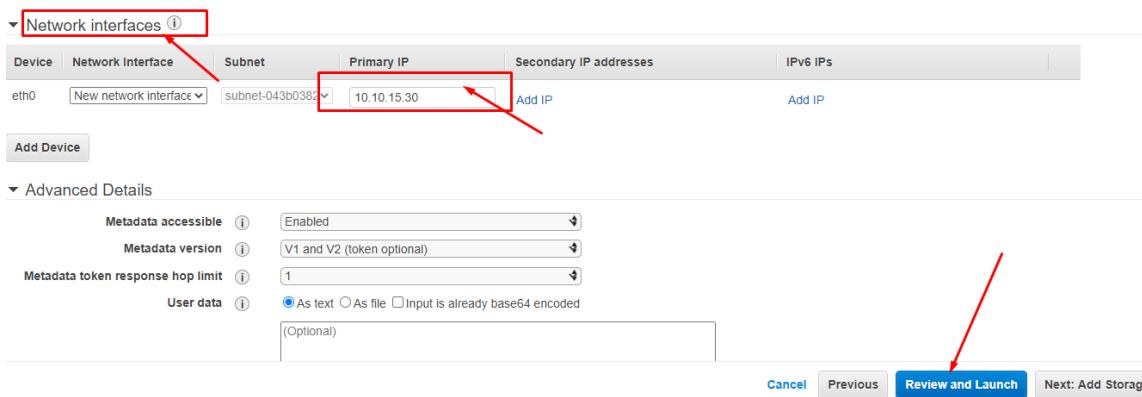


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2. Ec2 with Selected IPAddress

The screenshot shows the AWS EC2 Launch Instance wizard. At the top, there's a navigation bar with 'Launch Instance' (highlighted with a red arrow), 'Connect', and 'Actions'. Below it is a search bar and a table showing existing instances. One instance, 'mycustomvpcserver', is highlighted. The main area is titled 'Step 3: Configure Instance Details'. It includes fields for 'Number of instances' (set to 1), 'Purchasing option' (checkbox for Request Spot instances), 'Network' (VPC selected), 'Subnet' (subnet selected), 'Auto-assign Public IP' (set to Enable), and other options like 'Placement group', 'Capacity Reservation', 'IAM role', and 'Shutdown behavior'. At the bottom are 'Cancel', 'Previous', 'Review and Launch' (highlighted with a red arrow), and 'Next: Add Storage'.

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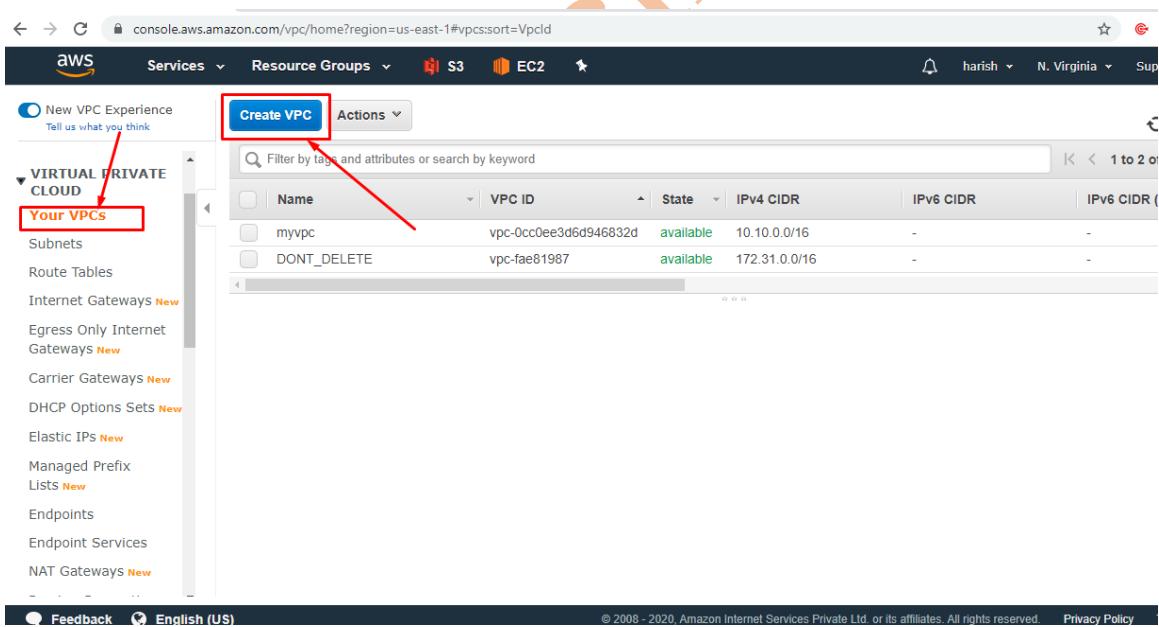
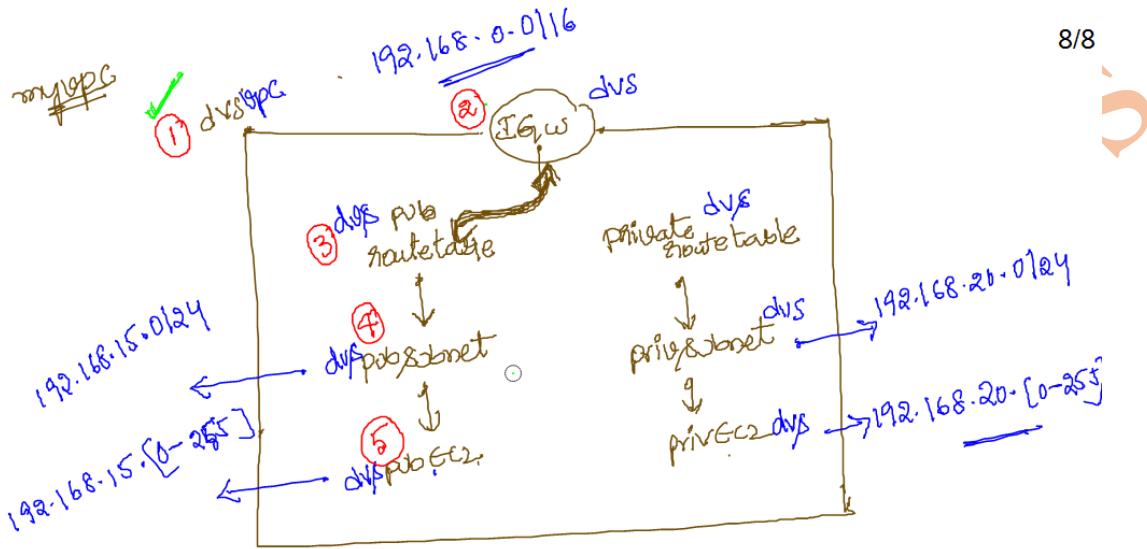
Remaining 5 IP Details:

```
10.0.0.0: Network address.  
10.0.0.1: Reserved by AWS for the VPC router.  
10.0.0.2: Reserved by AWS for mapping to the Amazon-provided DNS.  
10.0.0.3: Reserved by AWS for future use.  
10.0.0.255: Network broadcast address. We do not support broadcast in a VPC, therefore we reserve this address."  
Explain about the usecase of bastion server
```

```
[root@ip-10-10-15-59 ~]# route -n  
Kernel IP routing table  
Destination     Gateway         Genmask        Flags Metric Ref    Use Iface  
0.0.0.0         10.10.15.1   0.0.0.0        UG    0      0        0 eth0  
10.10.15.0      0.0.0.0       255.255.255.0  U     0      0        0 eth0  
169.254.169.254 0.0.0.0       255.255.255.255 UH    0      0        0 eth0  
[root@ip-10-10-15-59 ~]# ping www.google.com^C  
[root@ip-10-10-15-59 ~]# ping www.google.com  
PING www.google.com (172.217.15.68) 56(84) bytes of data.  
64 bytes from iad23s63-in-f4.1e100.net (172.217.15.68): icmp_seq=1 ttl=112 time=1.31 ms  
^C  
--- www.google.com ping statistics ---  
1 packets transmitted, 1 received, 0% packet loss, time 0ms  
rtt min/avg/max/mdev = 1.316/1.316/1.316/0.000 ms  
[root@ip-10-10-15-59 ~]# cat /etc/resolv.conf  
; generated by /usr/sbin/dhclient-script  
search ec2.internal  
options timeout:2 attempts:5  
nameserver 10.10.0.2  
[root@ip-10-10-15-59 ~]# ifconfig eth0  
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 9001  
      inet 10.10.15.59  netmask 255.255.255.0  broadcast 10.10.15.255  
      inet6 fe80::c8c:f4ff:fe55:9449  prefixlen 64  scopeid 0x20<link>  
      ether 0e:8c:f4:55:94:49  txqueuelen 1000  (Ethernet)  
      RX packets 33636  bytes 47310639 (45.1 MiB)  
      RX errors 0  dropped 0  overruns 0  frame 0
```

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3. VPC with public & private subnets



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VPCs > Create VPC

Create VPC

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 IPv6 CIDR block with the VPC.

Name tag	dsvpc
IPv4 CIDR block*	192.168.0.0/16
IPv6 CIDR block	<input checked="" type="radio"/> No IPv6 CIDR Block <input type="radio"/> Amazon provided IPv6 CIDR block <input type="radio"/> IPv6 CIDR owned by me
Tenancy	Default

* Required

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

Experience what you think

Create VPC Actions

Filter by tags and attributes or search by keyword

Name	VPC ID	State	IPv4 CIDR	IPv6 CIDR	IPv6 CIDR (Network)
myvpc	vpc-0cc0ee3d6d946832d	available	10.10.0.0/16	-	-
dsvpc	vpc-0ede0337bfe36725a	available	192.168.0.0/16	-	-
DONT_DELETE	vpc-fae81987	available	172.31.0.0/16	-	-

New VPC Experience Tell us what you think

Services Services Resource Groups S3 EC2

Internet gateways New

Internet Gateways New

Internet gateways (2) Info

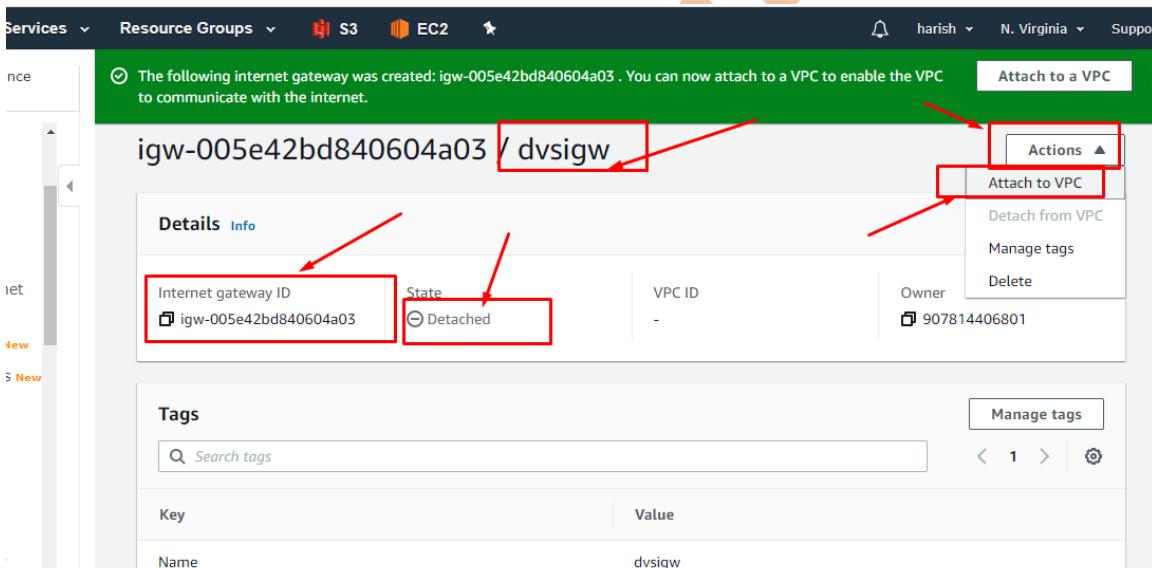
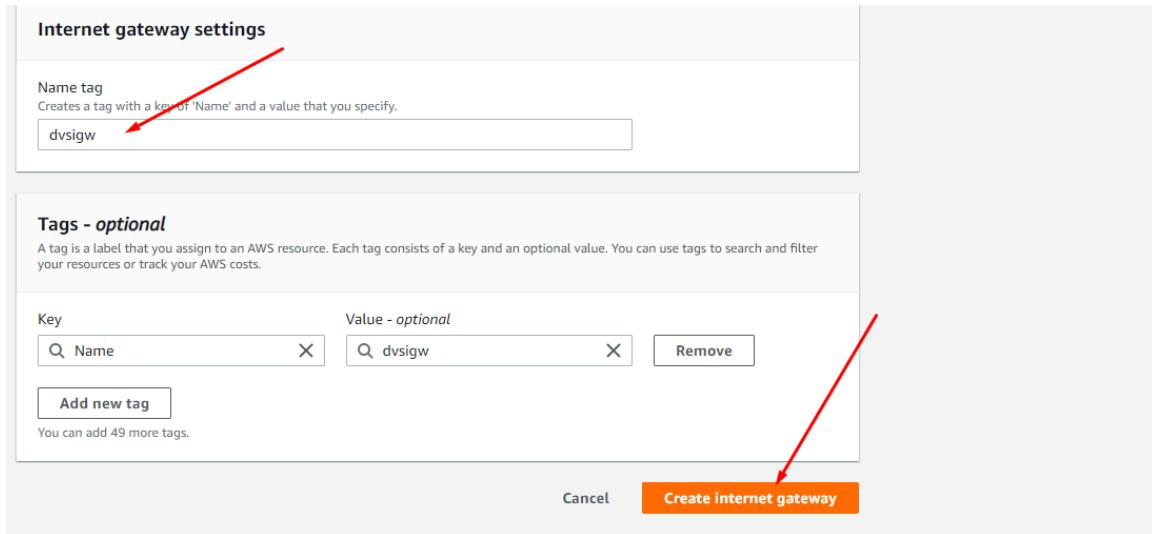
Create internet gateway

Name	Internet gateway ID	State	VPC ID
myigw	igw-079f4a35bd3cee902	Attached	vpc-0cc0ee3d6d946832d myvpc
-	igw-14694d6f	Attached	vpc-fae81987 DONT_DELETE

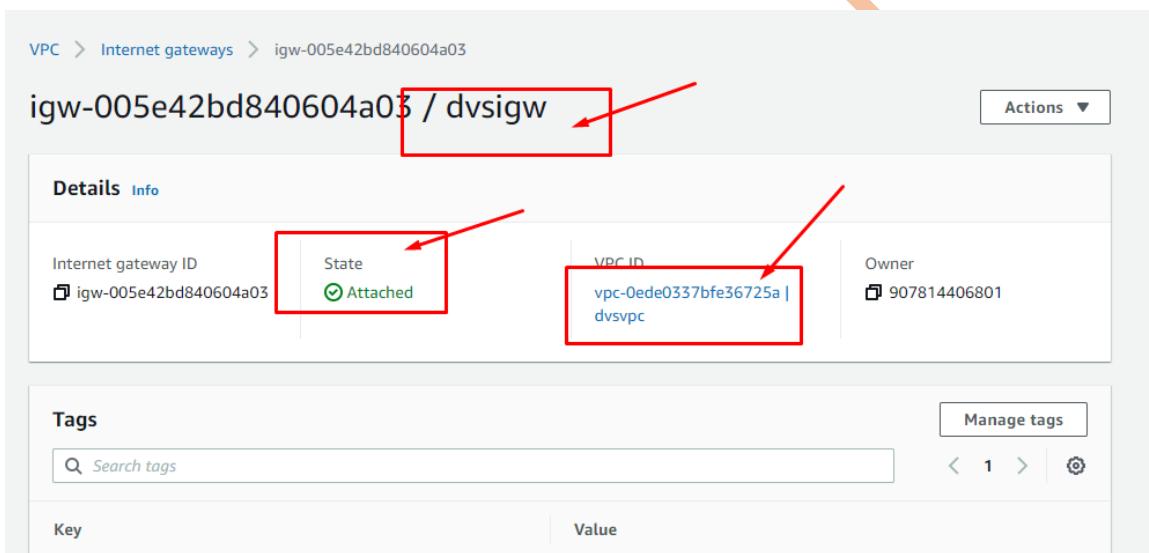
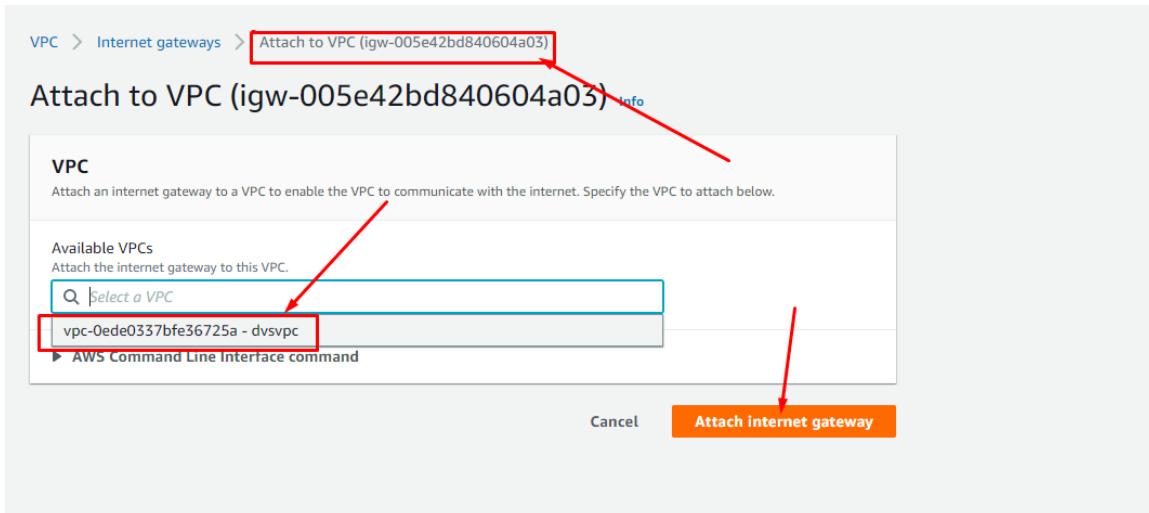
Select an internet gateway above

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Create route table

Name	Route Table ID	Explicit subnet association	Edge associations	Main
myroute	rtb-019c3da16c2f7dacc	subnet-043b038229a855b09	-	Yes
dvspubroute	rtb-09e42ed10443e5c3e	-	-	Yes
	rtb-9b2f53e5	-	-	Yes

Create subnet

Name	Subnet ID	State	VPC	IPv4 CIDR	Available IPv4
mysubnet	subnet-043b038229a855b09	available	vpc-0cc0ee3d6d946832d...	10.10.15.0/24	249
DONT DELETE	subnet-133ea11d	available	vpc-fae81987 DONT_DE...	172.31.64.0/20	4091
DONT DELETE	subnet-2698ed6b	available	vpc-fae81987 DONT_DE...	172.31.16.0/20	4091
DONT DELETE	subnet-4320861c	available	vpc-fae81987 DONT_DE...	172.31.32.0/20	4091
DONT DELETE	subnet-4d2e8e6c	available	vpc-fae81987 DONT_DE...	172.31.80.0/20	4091
DONT DELETE	subnet-e5cd6880	available	vpc-fae81987 DONT_DE...	172.31.0.0/20	4091
DONT DELETE	subnet-e99d75d8	available	vpc-fae81987 DONT_DE...	172.31.48.0/20	4091

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	dvspubsub1
VPC*	vpc-0ede0337bfe36725a
Availability Zone	us-east-1a
VPC CIDRs	CIDR: 192.168.0.0/16 Status: associated
IPv4 CIDR block*	192.168.15.0/24

* Required

Create

DVS Technologies Aws & Devops

The screenshot shows the AWS VPC Route Tables page. On the left sidebar, 'Route Tables' is highlighted. In the main area, a table lists three route tables: 'myroute', 'dvspubroute', and 'rtb-9bf2f53e5'. The 'dvspubroute' row is selected and highlighted with a red box. A red arrow points from the sidebar's 'Route Tables' link to this row. Below the table, a sub-section titled 'Route Table: rtb-09e42ed10443e5c3e' is shown with tabs for 'Summary', 'Routes' (which is selected), 'Subnet Associations', 'Edge Associations', 'Route Propagation', and 'Tags'. An 'Edit routes' button is also present. A red box highlights the 'Edit routes' button, and a red arrow points to it from the bottom-left.

Route Tables > Edit routes

Edit routes

The screenshot shows the 'Edit routes' dialog box. It has a table with columns: Destination, Target, Status, and Propagated. A new route is being added: 'Destination' is '0.0.0.0/0', 'Target' is 'igw-005e42bd840604a03', 'Status' is 'active', and 'Propagated' is 'No'. A red box highlights the '0.0.0.0/0' entry in the 'Destination' column, and another red box highlights the 'igw-005e42bd840604a03' entry in the 'Target' column. At the bottom right, there are 'Cancel' and 'Save routes' buttons, with a red arrow pointing to the 'Save routes' button.

The screenshot shows the AWS VPC Route Tables page, similar to the one above but with different route entries. The 'dvspubroute' row is selected and highlighted with a red box. A red arrow points from the sidebar's 'Route Tables' link to this row. Below the table, a sub-section titled 'Route Table: rtb-09e42ed10443e5c3e' is shown with tabs for 'Summary', 'Routes' (selected), 'Subnet Associations', 'Edge Associations', 'Route Propagation', and 'Tags'. A red arrow points from the 'Edit routes' button on the previous screen to the 'Edit routes' button here. Below the table, a table shows existing routes: one for '192.168.0.0/16' with target 'local' and status 'active', and another for '0.0.0.0/0' with target 'igw-005e42bd840604a03' and status 'active'. A red arrow points from the '0.0.0.0/0' entry in the first row to the '0.0.0.0/0' entry in the second row.

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The screenshot shows the AWS VPC Route Tables page. On the left sidebar, under 'Route Tables', the 'dvspubroute' table is selected and highlighted with a red box. A red arrow points from the sidebar to the selected table. The main pane displays a table of route tables, with the 'dvspubroute' table being edited. The 'Subnet Associations' tab is selected, indicated by a red box and arrow. The table shows one subnet association:

Name	Route Table ID	Explicit subnet association	Edge associations	Main
dvspubroute	rtb-09e42ed10443e5c3e	-	-	Yes

Route Tables > Edit subnet associations

Edit subnet associations

The screenshot shows the 'Edit subnet associations' dialog for the 'dvspubroute' route table. At the top, it says 'Route table rtb-09e42ed10443e5c3e (dvspubroute)'. Below that, 'Associated subnets' is listed as 'subnet-003449071a13e97d5'. The main area shows a table of subnets:

Subnet ID	IPv4 CIDR	IPv6 CIDR	Current Route Table
subnet-003449071a13e97d5	192.168.15.0/...	-	Main

A red arrow points from the 'Required' label to the subnet ID column header. Another red arrow points from the 'Save' button at the bottom right to the 'Save' button.

Lets work on Private subnet creation:

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Your VPCs

Subnets

Route Tables Route Tables

Internet Gateways New

Egress Only Internet Gateways New

Carrier Gateways New

DHCP Options Sets New

Elastic IPs New

Managed Prefix Lists New

Route Tables > Create route table

Create route table

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

Name tag i

VPC* C i

Key (128 characters maximum) | Value (256 characters maximum)
This resource currently has no tags

Add Tag 50 remaining (Up to 50 tags maximum)

* Required Cancel **Create**

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The screenshot shows the AWS VPC Subnets creation interface. The 'Create subnet' button is highlighted with a red box. The 'Name tag' field contains 'dvspribsub'. The 'VPC' dropdown shows 'vpc-0ede0337bfe36725a'. The 'Availability Zone' dropdown shows 'us-east-1b'. Under 'VPC CIDs', there is one entry with CIDR '192.168.0.0/16' and status 'associated'. Under 'IPv4 CIDR block', there is one entry with '192.168.20.0/24'. The 'Create' button is highlighted with a red box.

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The screenshot shows the AWS VPC Route Tables page. On the left sidebar, under 'VIRTUAL PRIVATE CLOUD', 'Route Tables' is selected and highlighted with a red box. In the main content area, a table lists existing route tables: 'myroute', 'dsvpubroute', and 'dvspriprivroute'. The 'dvspriprivroute' row is also highlighted with a red box. Below the table, a modal window titled 'Route Table: rtb-06b36a7373a4ac6a6' is open, showing tabs for 'Summary', 'Routes', 'Subnet Associations' (which is highlighted with a red box), 'Edge Associations', 'Route Propagation', and 'Tags'. The 'Subnet Associations' tab shows a message: 'You do not have any subnet associations.'

Route Tables > Edit subnet associations

Edit subnet associations

The screenshot shows the 'Edit subnet associations' dialog. At the top, it says 'Route table rtb-06b36a7373a4ac6a6 (dvspriprivroute)'. Below that, 'Associated subnets' is listed as 'subnet-0f6eb8ad48e3cac03'. A modal window displays a table of subnets:

Subnet ID	IPv4 CIDR	IPv6 CIDR	Current Route Table
subnet-0f6eb8ad48e3cac03 dvsprivsub	192.168.20.0/...	-	Main
subnet-003449071a13e97d5 dsvpubsub1	192.168.15.0/...	-	rtb-09e42ed10443e5c3e

At the bottom right of the modal are 'Cancel' and 'Save' buttons, with 'Save' highlighted by a red arrow.

Lets create pub & priv servers:

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Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of Instances: 1 Launch into Auto Scaling Group

Purchasing option: Request Spot instances

Network: vpc-0ede0337bfe36725a | dvsvpc

Subnet: subnet-003449071a13e97d5 | dvspubsub1 | us-east-1 251 IP Addresses available

Auto-assign Public IP: Enable

Placement group: Add instance to placement group

Capacity Reservation: Open

IAM role: None

Cancel Previous Review and Launch Next: Add Storage

Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group: Create a new security group Select an existing security group

Security group name: dvsvpc_sg

Description: launch-wizard-1 created 2020-08-13T18:51:29.272+04:00

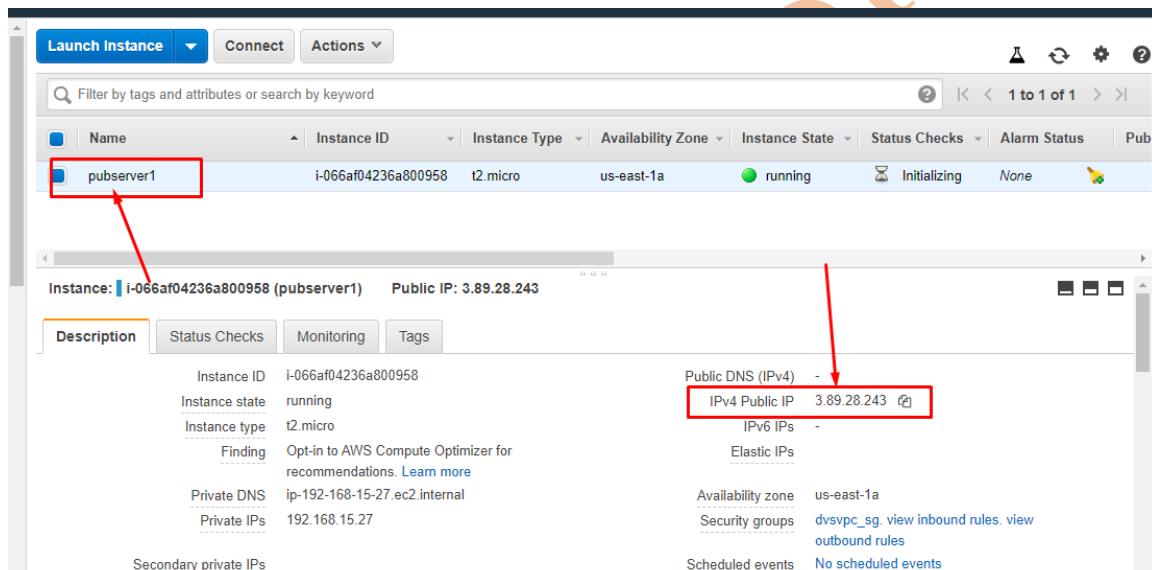
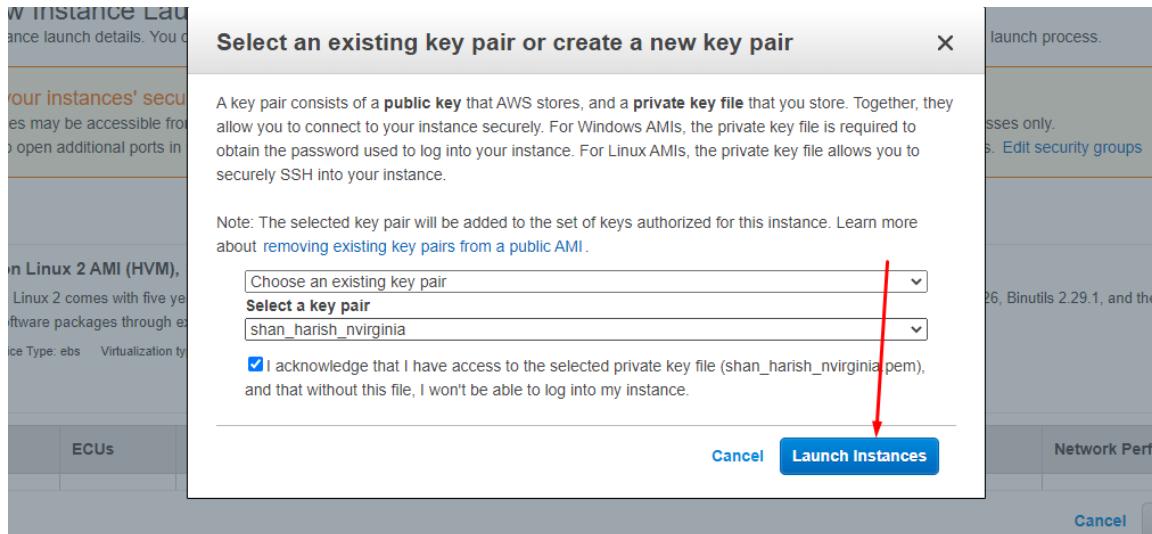
Type	Protocol	Port Range	Source	Description
All traffic	All	0 - 65535	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop

Add Rule

Warning
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.

Cancel Previous Review and Launch

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NOTE: Similarly launch your private server with private subnet



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Launch Instance Connect Actions

Filter by tags and attributes or search by keyword

Name	Instance ID	Instance Type	Availability Zone	Status
privserver1	i-07fbdb111a57f0db6	t2.micro	us-east-1b	rur
pubserver1	i-066af04236a800958	t2.micro	us-east-1a	rur

Instance: i-07fbdb111a57f0db6 (privserver1) Public IP: 34.201.30.106

Description Status Checks Monitoring Tags

Instance ID: i-07fbdb111a57f0db6	Instance state: running	Instance type: t2.micro	Finding Opt-in to AWS Compute Optimizer for	Public DNS (IPv4): ec2-user@3.89.28.243	IPv4 Public IP: 34.201.30.106	IPv6 IP: -	Elastic IP: -
----------------------------------	-------------------------	-------------------------	---	---	-------------------------------	------------	---------------

Testing Connectivity:

Public Server:

Specify the destination you want to connect to

Host Name (or IP address): ec2-user@3.89.28.243 Port: 22

Connection type: Raw Telnet Rlogin SSH Serial

Load, save or delete a stored session

Saved Sessions:

- Default Settings
- Hadoop
- mahendra_nvirginia
- shan_nvirginia
- shan_senthil_california
- shan_senthil_mumbai
- shan_senthil_nvirginia

Close window on exit: Always Never Only on clean exit

Open Cancel

Instance State: running	Status Checks: 2/2 checks ...	Alarm Status: None
running	2/2 checks ...	None
Public DNS (IPv4): 3.89.28.243		
IPv6 IPs: -		
Elastic IPs: -		
Availability zone: us-east-1a		
Security groups: dvsvpc_sg, view inbound rules, view outbound rules		
Scheduled events: No scheduled events		

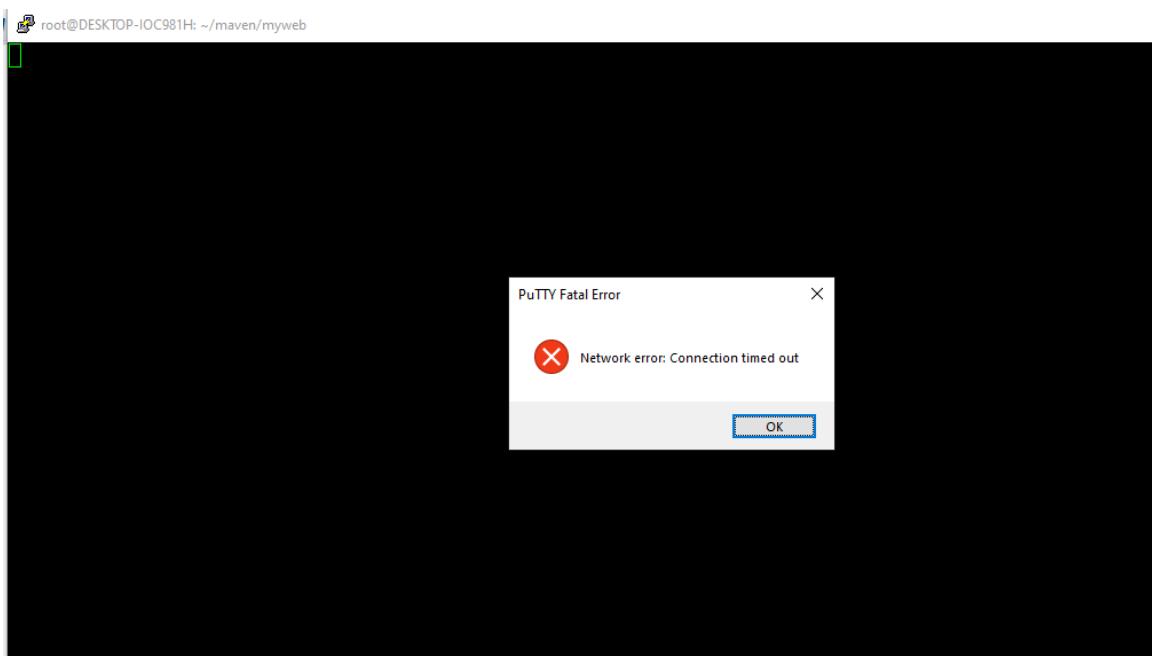
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```
ec2-user@ip-192-168-15-27:~$ Using username "ec2-user".
Authenticating with public key "imported-openssh-key" from agent
              _\ _ / Amazon Linux 2 AMI
             _\ \_ |_
https://aws.amazon.com/amazon-linux-2/
4 package(s) needed for security, out of 8 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-192-168-15-27 ~]$ uptime
14:58:06 up 5 min, 1 user, load average: 0.00, 0.02, 0.00
[ec2-user@ip-192-168-15-27 ~]$ hostname -i
fe80::cbb:f4ff:fe25:820b%eth0 192.168.15.27
[ec2-user@ip-192-168-15-27 ~]$
```

PrivateServer Access:

The screenshot shows the AWS Lambda console interface. On the left, a list of Lambda functions is shown, with 'privserver1' selected and highlighted with a red box. In the center, a 'Putty Configuration' dialog box is open over the Lambda function details page. The 'Session' tab is selected in the Putty dialog. The 'Host Name (or IP address)' field contains 'ec2-user@34.201.30.106', which is also highlighted with a red box. The 'IPv4 Public IP' field on the Lambda details page is also highlighted with a red box and has an arrow pointing to it from the Putty dialog. The Lambda function details page shows the instance ID 'i-07fbdb111a57' and its status as 'running'.

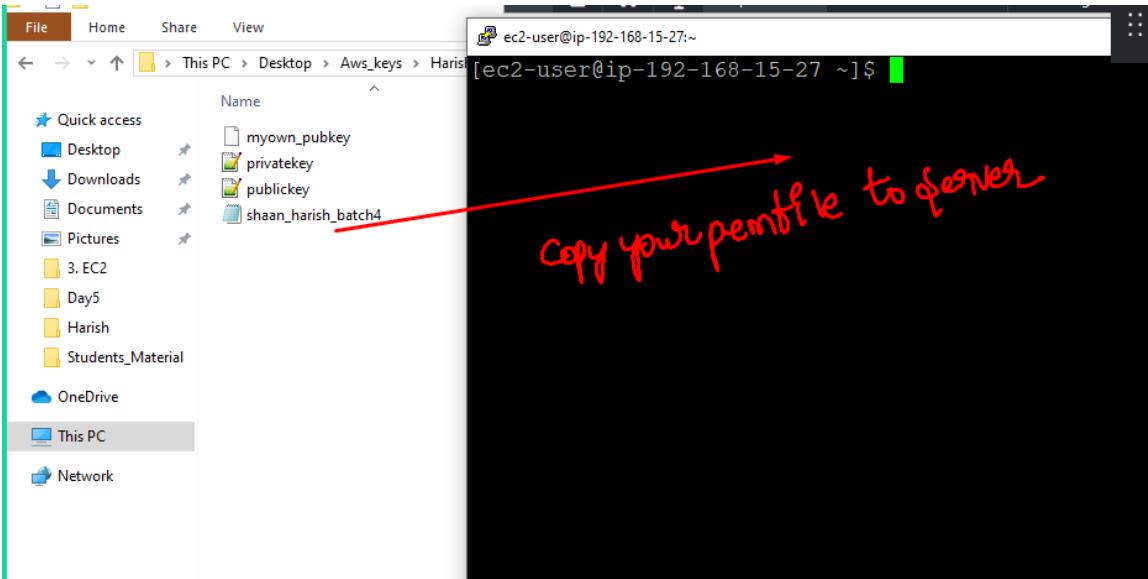
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Now Lets connect private server from our public server:

```
fe80::cbb:f4ff:fe25:820b%eth0 192.168.15.27
[ec2-user@ip-192-168-15-27 ~]$ ssh 192.168.20.157 → Private server ip
The authenticity of host '192.168.20.157 (192.168.20.157)' can't be established.
ECDSA key fingerprint is SHA256:aoRDwgQ65I3gleiMpM5hhaTk7Dit5tLde5RTq/WloEM.
ECDSA key fingerprint is MD5:9a:70:d6:dd:64:35:9e:1d:99:9d:86:b6:a7:f0:36:2b.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '192.168.20.157' (ECDSA) to the list of known hosts.
Permission denied (publickey,gssapi-keyex,gssapi-with-mic).
[ec2-user@ip-192-168-15-27 ~]$
```

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```
-----BEGIN RSA PRIVATE KEY-----  
MIIEp0IBAAKCAQEkSv+10OkxsRm22F9l+k7etX0tI  
RDqjQWtLhL6s3ea0WHLxk/itxJsoar=z3HAnG4gsAx  
7HQ5AH1ymjTdmYsHhhAGOoC3dXcHCKj-i59e780K3  
GH8yNzBDTtC88HnA/1Pn7igylAudXTuNsL27gZHM  
Uzu1eYzrnjaCjE2V8QCX-G7I2T2zuATXskoOxFzMe  
vTz75/EXPrqulicCI2NLFGg3OBX2d1yLGul+tmtTK  
uvqISV1d0tK0@63k-BKy/iitnjz2z1Q1428RpnnxK  
v5y1E/K/vjejtSeXW5t-TGd018L5m/vt6X9McoLx  
m41x/SOZ8QcH12p6nWk9EmmJ0KwCCbqU93eVSC  
20xISbDB8wmksQlyjLD4ayz2y6xAoGBAfaFSb867  
znTHL1HmpPSX49W-311119vhkqtoTQJTdvk12sq  
1kUJPPwlyFDILuMsUwPawT0d8Q1aB5FLofKVVu  
mE2luvT9NMG1fN1e-Ly0n2yAoD1HE9hpLG1q+zb  
07kTdr+0Mc77W29oFULpoGpRDHrDD0/w6tz+cN1  
AoGBALy2WaswzoXPrpNxga/eRVmsT0SgTKnZGBEq  
L2eC7LN6B01NTz/93Xkh21n9oqjd5qoDqF107V3J  
jw07WV1lvk3EsqULBiynJaGBAK4+ykieTQmRC1  
8Vq21C7HGrpTrkoBekV+PTLG5TpLzX1UIEko1Dd  
mHxGgBF006jgj1vVTZGRudACTHL4wENfkaU1  
3nke47h1sC7H6nTkoBe5d3YydzpDV12sAyICmk  
InnrurhUk77pGt4VI1jE+64dFKNNKG1xofRxNG2t  
----END RSA PRIVATE KEY-----  
-----BEGIN RSA PRIVATE KEY-----  
MIIEp0IBAAKCAQEkSv+10OkxsRm22F9l+k7etX0tI  
RDqjQWtLhL6s3ea0WHLxk/itxJsoar=z3HAnG4gsAx  
7HQ5AH1ymjTdmYsHhhAGOoC3dXcHCKj-i59e780K3  
GH8yNzBDTtC88HnA/1Pn7igylAudXTuNsL27gZHM  
Uzu1eYzrnjaCjE2V8QCX-G7I2T2zuATXskoOxFzMe  
vTz75/EXPrqulicCI2NLFGg3OBX2d1yLGul+tmtTK  
uvqISV1d0tK0@63k-BKy/iitnjz2z1Q1428RpnnxK  
v5y1E/K/vjejtSeXW5t-TGd018L5m/vt6X9McoLx  
m41x/SOZ8QcH12p6nWk9EmmJ0KwCCbqU93eVSC  
20xISbDB8wmksQlyjLD4ayz2y6xAoGBAfaFSb867  
znThL1HmpPSX49W-311119vhkqtoTQJTdvk12sq  
1kUJPPwlyFDILuMsUwPawT0d8Q1aB5FLofKVVu  
mE2luvT9NMG1fN1e-Ly0n2yAoD1HE9hpLG1q+zb  
07kTdr+0Mc77W29oFULpoGpRDHrDD0/w6tz+cN1  
AoGBALy2WaswzoXPrpNxga/eRVmsT0SgTKnZGBEq  
L2eC7LN6B01NTz/93Xkh21n9oqjd5qoDqF107V3J  
jw07WV1lvk3EsqULBiynJaGBAK4+ykieTQmRC1A  
8Vq21C7HGrpTrkoBekV+PTLG5TpLzX1UIEko1Dd  
mHxGgBF006jgj1vVTZGRudACTHL4wENfkaU1  
3nke47h1sC7H6nTkoBe5d3YydzpDV12sAyICmk  
InnrurhUk77pGt4VI1jE+64dFKNNKG1xofRxNG2t  
----END RSA PRIVATE KEY-----  
" > mykey.pem  
[ec2-user@ip-192-168-15-27 ~]$
```

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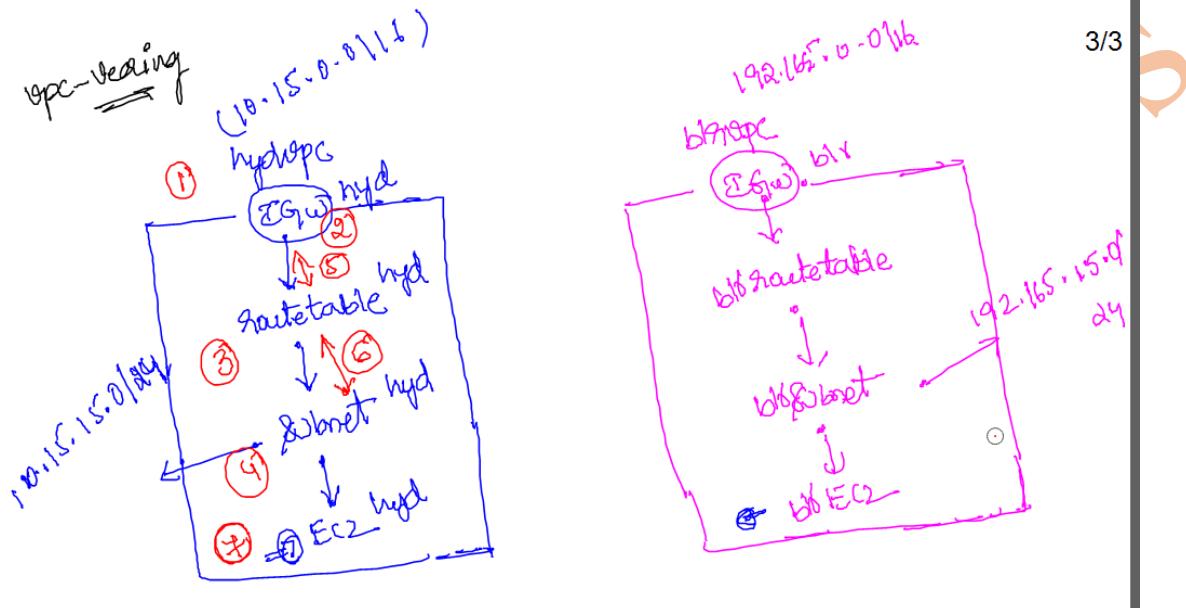
```
[ec2-user@ip-192-168-15-27 ~]$ cat mykey.pem
-----BEGIN RSA PRIVATE KEY-----
MIIEpqIBAAKCAQEAkSrdl0OkRsM22F9L+k7mtX0MIGChiXJgSQ/WMMHU9x6xomKo61peWvUE+Hy6
RDq1QNWhL6s3ea0MHLxk/itXJaoarz3HAnG4gqSaoYWhSg4qsUH1ffPsb0RvH9C0qivy5URLk10
7M05AH1ymjTdmYsRhhAGooC3dX3cHCkj159e780K3rM9HKPr4tsvRA7Lz8Ur0YYhqaA3N8w2ASGM
GH8yn1BD7tTc8BhnA/1Pn7igyLAwdtTWU5uL2fgIHRckYfG7HJ68J58+oMIREFKnJUiOWSAZ45pw
J2uJleYzrnjaCjE2V8QCX+G712TJzWAJXsKoOXfzMocevfg8He93FwIDAQABoIBAQCINte6Wkz1
vTiz75/EXPrgru1ciCI2NwLFGq3OBX2dly1GuL+tWTKX62D1AfRDu6s0e9aGfGKfug/u3kn0aLFLH
jVq15Y1d0tK60b63k+Bxy/iwtnj2z1Q142BrpnxWXRCvJ82SSD0d2bW+/vd1OUviQnGp2yltBdcf
v5y1E/kVjejAt5eXWR5rTGD018L5mVVT6X9McoWlxG41IBooQiK/2I2i15ybsaB9ils19R4qou1q
nx4ixYSOZ8qcHM2p6eNX80EmmUokNoCCbq9JeY5C/bKwiuD6jImVMUfaZc090VLFOUrueYDn+7mw
20xNSbBD8Uwmkg9WygJLD4ya2y6xAoGBAMaFSb8G7D/hi0+PX69qj1yZunaAI5y2TyDMtb26HVW
znThLiH9mPSX43W3l119vhmkqt0QJTdkI2srq7//26QPx9Sbs6o/plpfBeJenTbCR7rdIPeu
ikUJPPWHyFDWLUMXSUwbPawTod8Q1qB5FLOFKVVduW9jkESeDYZAoGBALsy8Lr3+YUZYZeYkdWX
nE2WuYnT9NWGiFnie+Ly0n2yAoDiIHE9hpLG1q+zbM+br1KFaNnE9srzM3AXy9rsDP+3ounelQI+
07kTdrtoMc7TW29oFULpoGPSeRDHurDD0/w6tzc+N13PPGHs/LX0vbWMg/r1aHHEpmUDhhlbM79hv
AoGBALy2WaswoXPRpnDxga/eRVmsT0SgTKnZGBEq6BX1sVsVm�+4tbC9o6UkF1BZuvX0LI+S1xV
L2ec7LN6BD1NTz/93Xh2ln9oqjd5qoDqFl07Y3vUzaMHFM2XpRPutwuHbrST9HqAfBJ+o9Je3rT
jwxo7WHV1Lvvk3ESqULBiyNJAoGBAK4+ykieTQmRCIAdKZGRG9kMtqMP4dnM+b0sLHig4UC6X4or
9Vq2LC7HGkpNTRkoBekV+PTLG5TpLzX1UEkOy1d0cNeasGlnx9G4VbLiGAJpnaXf/8iqi34PpB
jNHxGgBF006gj1qjVTZGRUdACTHL4wEnfk3aUk1IuBkvDPNaogAreJynAHRzwVn5q9uIZCEtWBL
InnrhUk77pGTM4VIIJcE+64dFKNNKGiXoFRxNG2twlook9NKF3LcxC3RxzbUMcQ81Md1qo=
-----END RSA PRIVATE KEY-----
[ec2-user@ip-192-168-15-27 ~]$ chmod 600 mykey.pem
[ec2-user@ip-192-168-15-27 ~]$ ssh -i mykey.pem ec2-user@192.168.20.157
[ec2-user@ip-192-168-20-157 ~]$
```

private server ip address

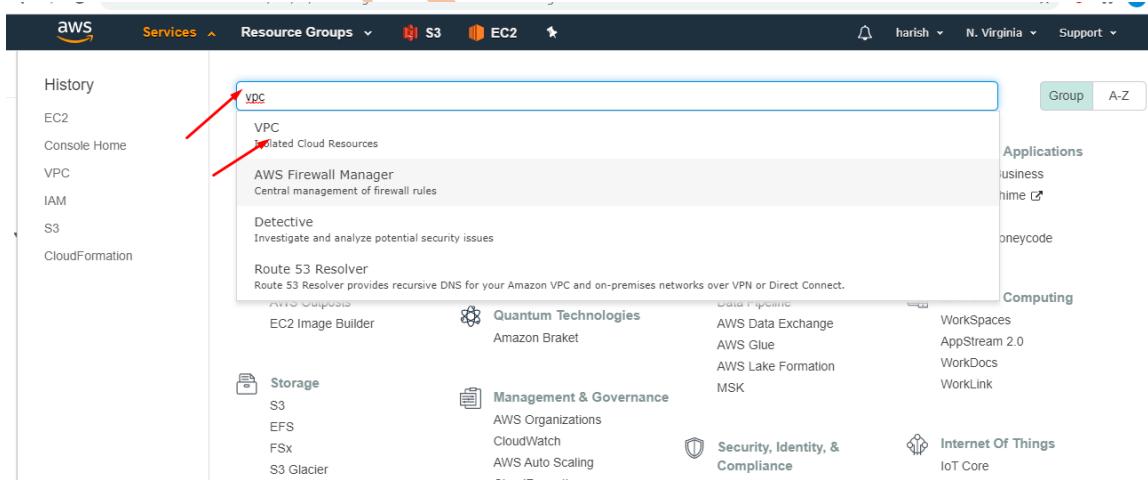
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4. VPC Peering in the same region



Creating HydVpc:



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Select a VPC

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Egress Only Internet Gateways [New](#)

Carrier Gateways [New](#)

DHCP Options Sets [New](#)

Elastic IPs [New](#)

Create VPC Actions ▾

Filter by tags and attributes or search by keyword

Name	VPC ID	State	IPv4 CIDR	IPv6 CIDR
vpc_harish	vpc-073344e7a80c54e03	available	10.10.0.0/16	-
dvsvpvc	vpc-0ede0337bfe36725a	available	192.168.0.0/16	-
DONT_DELETE	vpc-fae81987	available	172.31.0.0/16	-

VPCs > Create VPC

Create VPC

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 IPv6 CIDR block with the VPC.

Name tag i

IPv4 CIDR block* i

IPv6 CIDR block No IPv6 CIDR Block i
 Amazon provided IPv6 CIDR block i
 IPv6 CIDR owned by me i

Tenancy i

* Required

Create

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The screenshot shows the AWS VPC Internet Gateways page. On the left, there's a sidebar with 'Virtual Private Cloud' navigation, including 'Internet Gateways New' which is highlighted with a red box and has a red arrow pointing to it from the bottom of the previous screen. The main table lists three Internet Gateways:

Name	Internet gateway ID	State	VPC ID
igw_harish	igw-003938717e03ef6f6	Attached	vpc-073344e7a80c54e03 vpc_harish
dvsigw	igw-005e42bd840604a03	Attached	vpc-0ede0337bfe36725a dvsvpc
-	igw-14694d6f	Attached	vpc-fae81987 DONT_DELETE

A red box highlights the 'Create internet gateway' button at the top right of the table.

This screenshot shows the 'Create internet gateway' wizard. It starts with a 'Tags - optional' section where a tag named 'hydigw' is being created. A red box highlights the 'hydigw' tag name, and a red arrow points from the bottom of the previous screen's sidebar to this tag input field. Below the tags, there's a 'Key' and 'Value - optional' section with a 'Name' key and a 'hydigw' value. A red box highlights the 'hydigw' value, and another red arrow points from the bottom of the previous screen's sidebar to this value input field. At the bottom right is a large red box highlighting the 'Create internet gateway' button.

This screenshot shows the details page for the newly created Internet Gateway with ID 'igw-06c368db5b4c96ec4'. A red box highlights the gateway ID, and a red arrow points from the previous screen's tag input field to this ID. To the right, a context menu is open over the gateway, with a red box highlighting the 'Actions' button. The menu options are: Attach to VPC, Detach from VPC, Manage tags, and Delete.

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The screenshot shows the AWS VPC Internet Gateways interface. At the top, it says "Attach to VPC (igw-06c368db5b4c96ec4) [Info](#)". Below this, under the "VPC" section, it says "Attach an internet gateway to a VPC to enable the VPC to communicate with the internet. Specify the VPC to attach below." It lists "Available VPCs" with one item: "vpc-0b43c617d54df3d00 - hydvgc". A red box highlights this entry. Red arrows point from the highlighted entry to the "Attach internet gateway" button at the bottom right of the modal. The "Attach internet gateway" button is also highlighted with a red box. At the bottom left of the modal is a "Cancel" button.

Below the modal, the "igw-06c368db5b4c96ec4 / hydigw" page is shown. It has a "Details" tab selected. The "Status" field shows "Attached" with a green checkmark, which is highlighted with a red box. Another red box highlights the "VPC ID" field, which contains "vpc-0b43c617d54df3d00 | hydvgc". Red arrows point from both the highlighted status and VPC ID boxes to the corresponding fields on the page. The "Owner" field shows "907814406801". At the bottom, there is a "Tags" section with a search bar and a "Manage tags" button.

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Select a VPC

VIRTUAL PRIVATE CLOUD

- Your VPCs
- Subnets
- Route Tables**
- Internet Gateways New
- Egress Only Internet Gateways New
- Carrier Gateways New
- DHCP Options Sets New
- Elastic IPs New
- Managed Prefix Lists New
- Endpoints
- Endpoint Services

Create route table Actions ▾

Name	Route Table ID	Explicit subnet association	Edge associations	Main
route_harish	rtb-06cbbdec6e0319ce8	subnet-0dec320101e1ed04d	-	Yes
dvspublicroute	rtb-09e42ed10443e5c39	subnet-003449071a13e97d5	-	Yes
dvsprivroute	rtb-06b36a7373a4c6a6	subnet-0f6eb8ad48e3cac03	-	No
rtb-9b2f53e5	-	-	-	Yes
hydroute	rtb-0dbf125e4e924ffd1	-	-	Yes

Route Table: rtb-0dbf125e4e924ffd1

Summary Routes Subnet Associations Edge Associations Route Propagation Tags

Route Table ID: rtb-0dbf125e4e924ffd1
Explicitly Associated with: -
Owner: 907814406801

Main: Yes
VPC: vpc-0b43c617d54df3d00 | hydvc

New VPC Experience
Tell us what you think

Select a VPC

VIRTUAL PRIVATE CLOUD

- Your VPCs
- Subnets**
- Route Tables
- Internet Gateways New
- Egress Only Internet Gateways New
- Carrier Gateways New
- DHCP Options Sets New
- Elastic IPs New
- Managed Prefix Lists New
- Endpoints
- Endpoint Services

Create subnet Actions ▾

Name	Subnet ID	State	VPC	IPv4 CIDR
DONT DELETE	subnet-4d2e8e6c	available	vpc-fae81987 DONT_DE...	172.31.80.0/20
DONT DELETE	subnet-2698ed6b	available	vpc-fae81987 DONT_DE...	172.31.16.0/20
DONT DELETE	subnet-133ea11d	available	vpc-fae81987 DONT_DE...	172.31.64.0/20
DONT DELETE	subnet-e6cd6880	available	vpc-fae81987 DONT_DE...	172.31.0.0/20
DONT DELETE	subnet-e99d75d8	available	vpc-fae81987 DONT_DE...	172.31.48.0/20
DONT DELETE	subnet-4320861c	available	vpc-fae81987 DONT_DE...	172.31.32.0/20
subnet_harish	subnet-0dec320101e1ed04d	available	vpc-073344e7a80c54e03 ...	10.10.15.0/24
dvsprivsub	subnet-0f6eb8ad48e3cac03	available	vpc-0ede0337bfe36725a ...	192.168.20.0/24
dvspubsub1	subnet-003449071a13e97d5	available	vpc-0ede0337bfe36725a ...	192.168.15.0/24

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: **hydpubsub1**

VPC*: **vpc-0b43c617d54df3d00**

Availability Zone: **us-east-1a**

VPC CIDRs:

CIDR	Status	Status Reason
10.15.0.0/16	associated	

IPv4 CIDR block*: **10.15.15.0/24**

Cancel Create

* Required

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The screenshot shows the AWS VPC Route Tables page. On the left sidebar, under 'Route Tables', there is a red arrow pointing to the 'Route Tables' link. In the main content area, a route table named 'hydroute' is selected. A red arrow points to the 'Edit routes' button. The 'Routes' tab is selected. A table displays a single route entry:

Destination	Target	Status	Propagated
10.15.0.0/16	local	active	No
0.0.0.0/0	igw-06c368db5b4c96ec4	active	No

At the bottom right of the 'Edit routes' dialog, there are 'Cancel' and 'Save routes' buttons, with 'Save routes' being highlighted by a red arrow.

The screenshot shows the AWS VPC Route Tables page. On the left sidebar, under 'Route Tables', there is a red arrow pointing to the 'Route Tables' link. In the main content area, a route table named 'hydroute' is selected. A red arrow points to the 'Subnet Associations' tab. An orange arrow points to the 'Edit subnet associations' button. Below the tabs, a message states: 'You do not have any subnet associations.'

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Route table rtb-0dbf125e4e924ffd1 (hydroute)

Associated subnets subnet-08a6071aefab89fd0

Filter by attributes or search by keyword

Subnet ID	IPv4 CIDR	IPv6 CIDR	Current Route Table
subnet-08a6071aefab89fd0 hydpubsub1	10.15.15.0/24	-	Main

Cancel Save

Lets launch one EC2 from our hyd vpc:

Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances 1 Launch into Auto Scaling Group

Purchasing option Request Spot instances

Network vpc-0b43c617d54df3d00 | hydvc Create new VPC

Subnet subnet-08a6071aefab89fd0 | hydpubsub1 | us-east-1 Create new subnet
251 IP Addresses available

Auto-assign Public IP Enable

Placement group Add instance to placement group

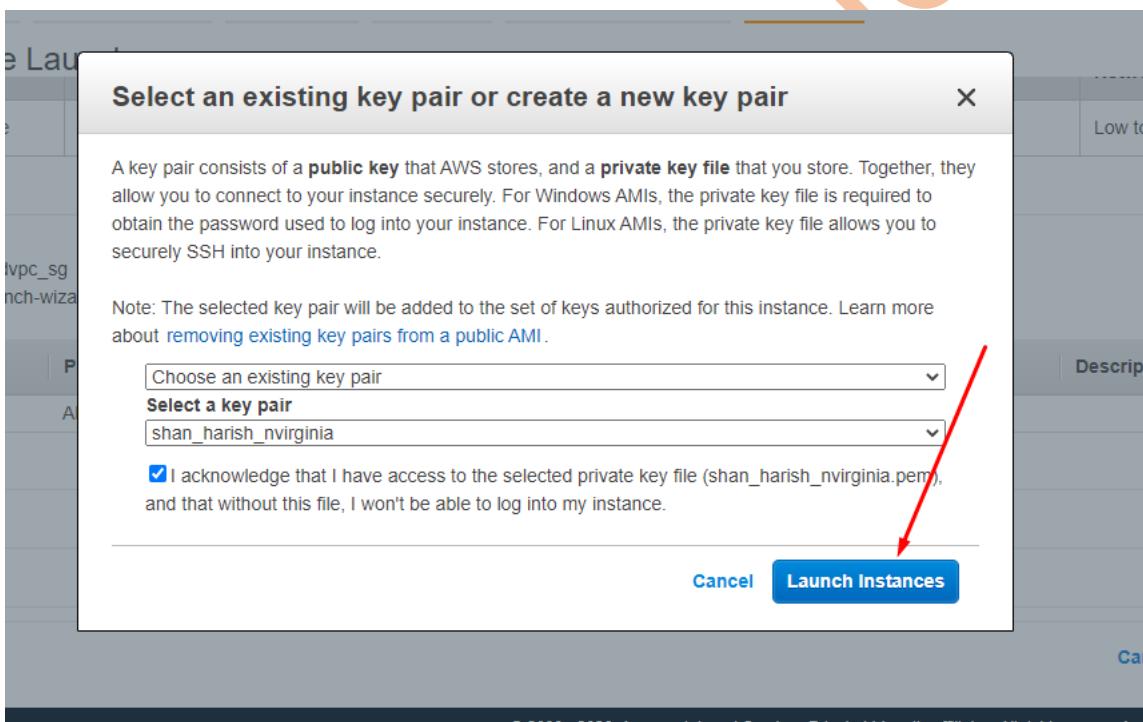
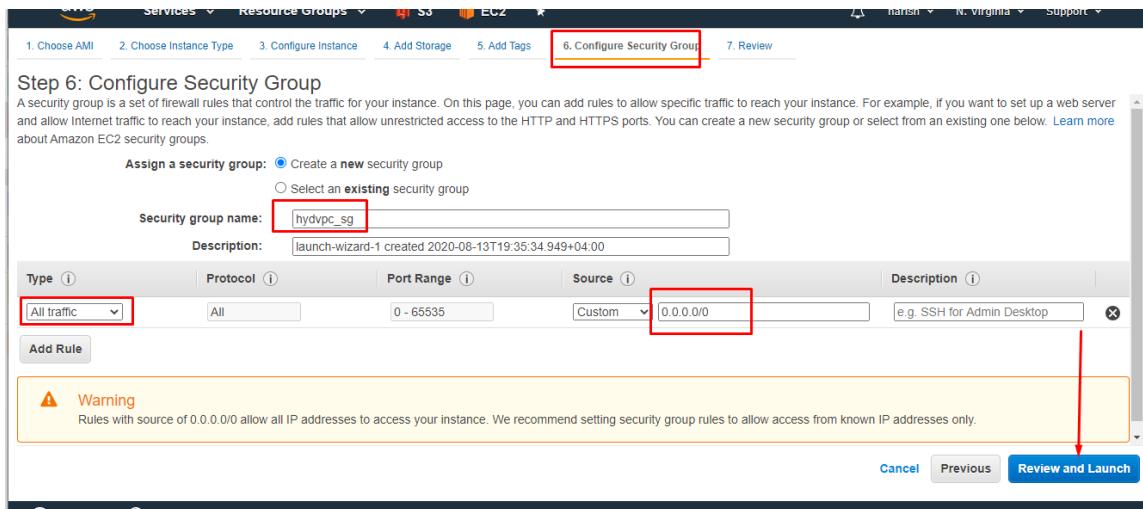
Capacity Reservation Open

IAM role None Create new IAM role

Cancel Previous Review and Launch Next: Add Storage

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Instance: i-017932103dba1423d (hydpubec2) Public IP: 3.84.133.46

Description	Status Checks	Monitoring	Tags
Instance ID: i-017932103dba1423d			
Instance state: running			
Instance type: t2.micro			
Finding: Opt-in to AWS Compute Optimizer for recommendations. Learn more			
Private DNS: ip-10-15-15-160.ec2.internal			
Private IPs: 10.15.15.160			
Public DNS (IPv4): -			
IPv4 Public IP: 3.84.133.46			
IPv6 IPs: -			
Elastic IPs: -			
Availability zone: us-east-1a			
Security groups: hydvp_sg, view inbound rules , view			

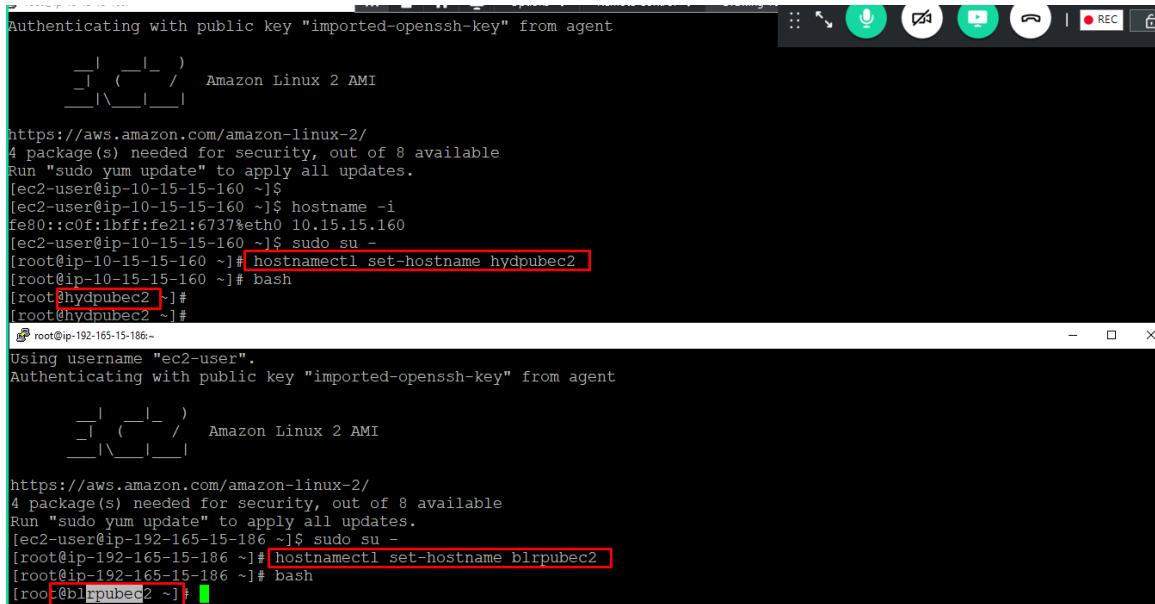

```
ec2-user@ip-10-15-15-160:~ [ec2-user@ip-10-15-15-160 ~]$ hostname -i fe80::c0f:1bff:fe21:6737%eth0 10.15.15.160 [ec2-user@ip-10-15-15-160 ~]$
```

hydope server

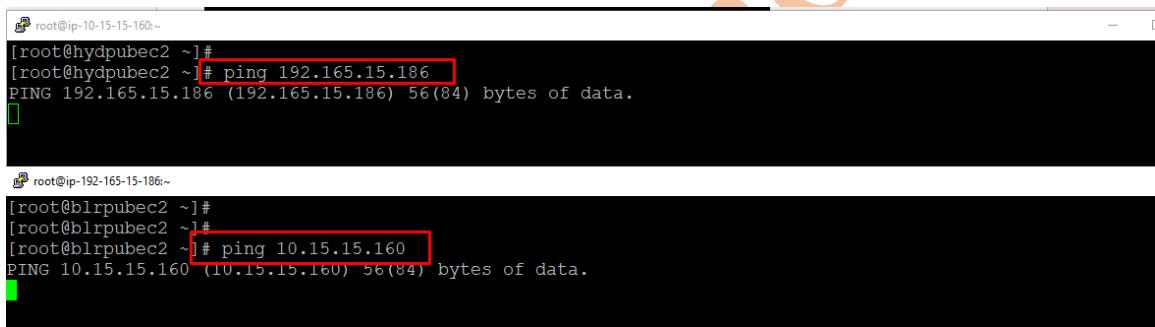
NOTE: PLEASE FOLLOW THE ABOVE STEPS FOR YOUR BLR VPC & EC2 CREATION

Now lets work on connecting these two diff ip range servers:

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```
Authenticating with public key "imported-openssh-key" from agent
[ec2-user@ip-10-15-15-160 ~]$ hostname -i
fe80::c0ff:fe21:6737%eth0 10.15.15.160
[ec2-user@ip-10-15-15-160 ~]$ sudo su -
[root@ip-10-15-15-160 ~]# hostnamectl set-hostname hydpubec2
[root@ip-10-15-15-160 ~]# bash
[root@hydpubec2 ~]#
[root@hydpubec2 ~]# Using username "ec2-user".
Authenticating with public key "imported-openssh-key" from agent
[ec2-user@ip-192-165-15-186 ~]$ hostname -i
fe80::c0ff:fe21%eth0 10.15.15.186
[ec2-user@ip-192-165-15-186 ~]$ sudo su -
[root@ip-192-165-15-186 ~]# hostnamectl set-hostname blrpubec2
[root@ip-192-165-15-186 ~]# bash
[root@blrpubec2 ~]#
```

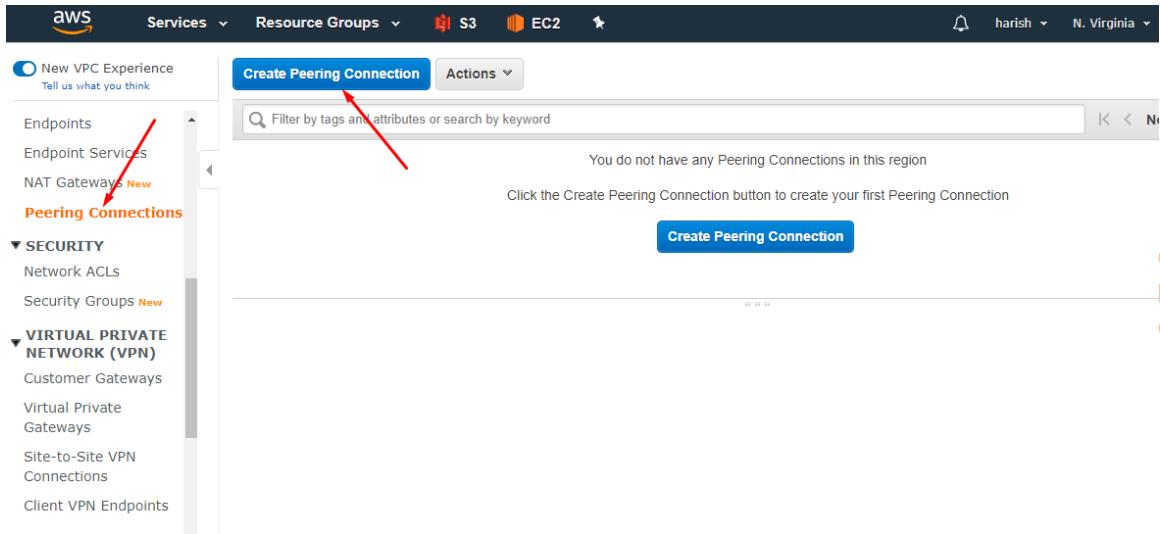


```
[root@ip-10-15-15-160 ~]#
[root@hydpubec2 ~]# ping 192.165.15.186
PING 192.165.15.186 (192.165.15.186) 56(84) bytes of data.

[root@ip-192-165-15-186 ~]#
[root@blrpubec2 ~]# ping 10.15.15.160
PING 10.15.15.160 (10.15.15.160) 56(84) bytes of data.
```

Enable VPC Peering:

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Peering Connections > Create Peering Connection

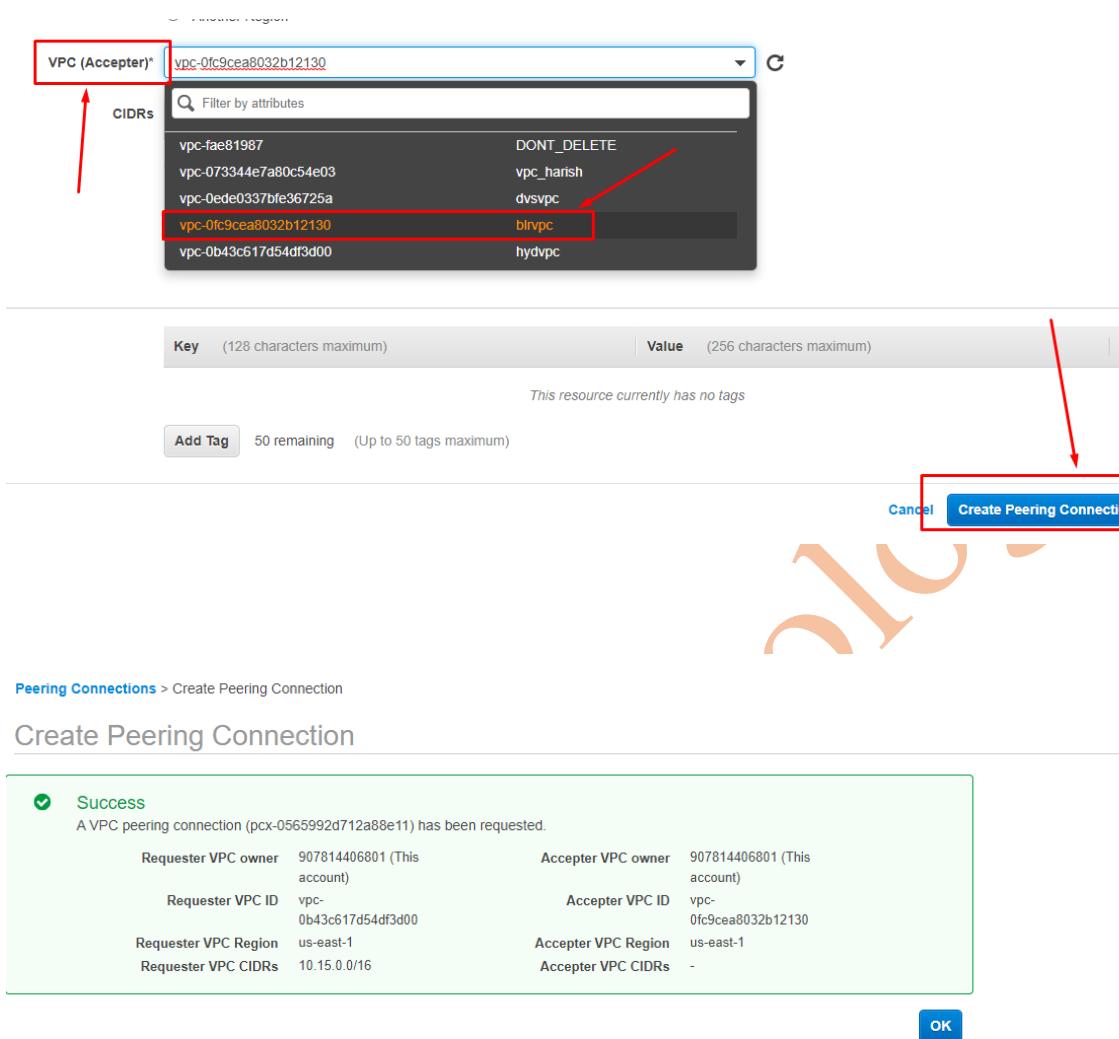
Create Peering Connection

This screenshot shows the first step of the "Create Peering Connection" wizard. It asks to "Select a local VPC to peer with". A dropdown menu is open, showing a list of VPCs under the account. One specific VPC, "vpc-0b43c617d54df3d00", is highlighted with a red box and a red arrow pointing to it. The dropdown also includes a filter bar and a "VPC (Requester)*" label.

Account	VPC ID	Status
	vpc-fae81987	DONT_DELETE
	vpc-073344e7a80c54e03	vpc_harish
	vpc-0ede0337bfe36725a	dsvpc
	vpc-0fc9cea8032b12130	blrvc
	vpc-0b43c617d54df3d00	hydvc

Region: This region (us-east-1) Another Region

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The screenshot shows the AWS VPC Peering Connection creation interface. A red box highlights the 'VPC (Acceptor)*' dropdown, which contains a list of VPCs. One VPC, 'vpc-0fc9cea8032b12130', is selected and highlighted with a red box. Another red box highlights the 'blrvpc' tag value in the tag editor. A large orange watermark 'DVS' is diagonally across the page.

VPC (Acceptor)* vpc-0fc9cea8032b12130

CIDRs

Filter by attributes

vpc-fae81987 DONT_DELETE
vpc-073344e7a80c54e03 vpc_harish
vpc-0ede0337bfe36725a dvsvpc
vpc-0fc9cea8032b12130 blrvpc
vpc-0b43c617d54df3d00 hydvpvc

Key (128 characters maximum) Value (256 characters maximum)

This resource currently has no tags

Add Tag 50 remaining (Up to 50 tags maximum)

Cancel Create Peering Connection

Peering Connections > Create Peering Connection

Create Peering Connection

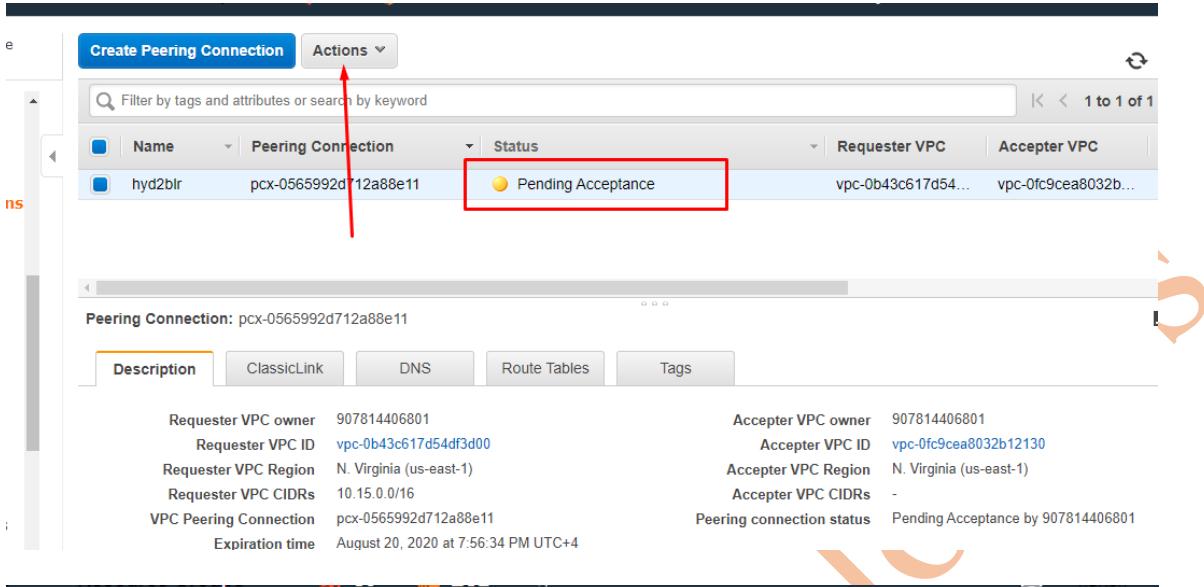
Success

A VPC peering connection (pcx-0565992d712a88e11) has been requested.

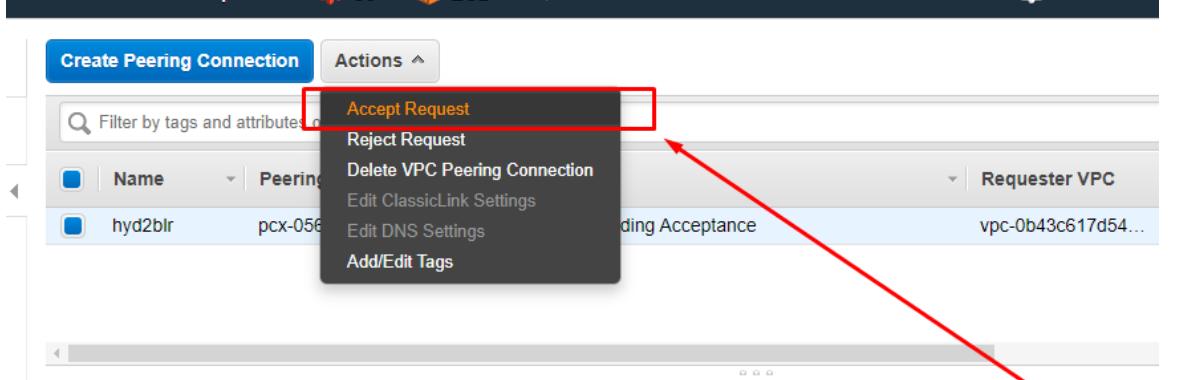
Requester VPC owner	907814406801 (This account)	Acceptor VPC owner	907814406801 (This account)
Requester VPC ID	vpc-0b43c617d54df3d00	Acceptor VPC ID	vpc-0fc9cea8032b12130
Requester VPC Region	us-east-1	Acceptor VPC Region	us-east-1
Requester VPC CIDRs	10.15.0.0/16	Acceptor VPC CIDRs	-

OK

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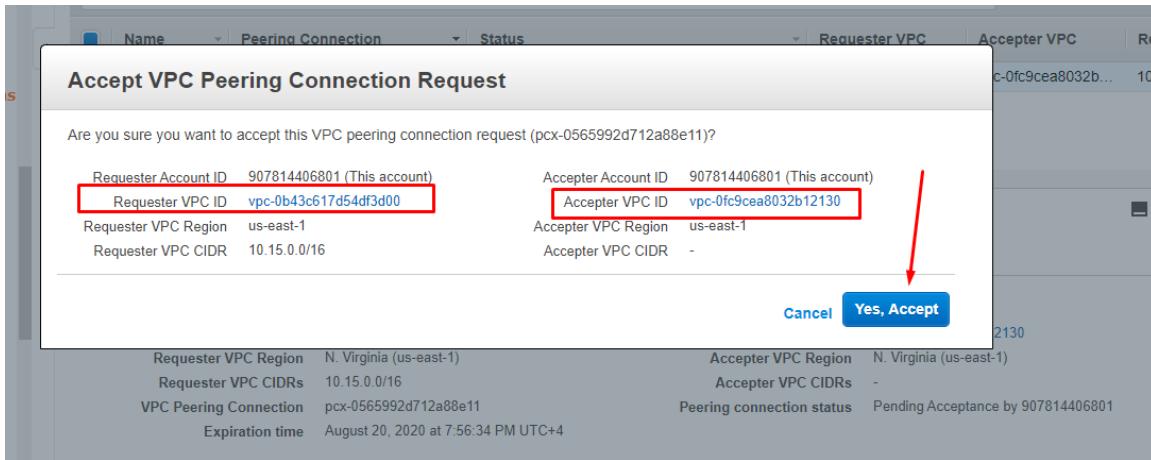
The screenshot shows the AWS VPC Peering Connections page. A peering connection named 'hyd2blr' is listed with the status 'Pending Acceptance'. A red box highlights this status. Below the table, a detailed view of the peering connection 'pcx-0565992d712a88e11' is shown. The requester's information includes owner ID 907814406801, VPC ID vpc-0b43c617d54df3d00, Region N. Virginia (us-east-1), and CIDR 10.15.0.0/16. The accepter's information includes owner ID 907814406801, VPC ID vpc-0fc9cea8032b12130, Region N. Virginia (us-east-1), and CIDR -. The peering connection status is 'Pending Acceptance by 907814406801'.



A red box highlights the 'Accept Request' option in the Actions dropdown menu. The menu also includes 'Reject Request', 'Delete VPC Peering Connection', 'Edit ClassicLink Settings', 'Edit DNS Settings', and 'Add/Edit Tags'.

The detailed view of the peering connection 'pcx-0565992d712a88e11' is identical to the first screenshot, showing requester and accepter details and a pending acceptance status.

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The screenshot shows the 'Create Peering Connection' section of the AWS VPC console. It includes a search bar and a table with columns: Name, Peering Connection, Status, Requester VPC, and Acceptor VPC. One row is highlighted with a red box around the 'Status' column, which shows 'Active'. A red arrow points from this 'Active' status to the 'Active' status indicator in the detailed view below.

Peering Connection: pcx-0565992d712a88e11

Description	ClassicLink	DNS	Route Tables	Tags
Requester VPC owner	907814406801	Acceptor VPC owner	907814406801	
Requester VPC ID	vpc-0b43c617d54df3d00	Acceptor VPC ID	vpc-0fc9cea8032b12130	
Requester VPC Region	N. Virginia (us-east-1)	Acceptor VPC Region	N. Virginia (us-east-1)	
Requester VPC CIDRs	10.15.0.0/16	Acceptor VPC CIDRs	192.168.0.0/16	
VPC Peering Connection	pcx-0565992d712a88e11	Peering connection status	Active	
Expiration time	-			

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```
[root@hydpubec2 ~]# ping 192.165.15.186
PING 192.165.15.186 (192.165.15.186) 56(84) bytes of data.

[root@blrpubec2 ~]# ping 10.15.15.160
PING 10.15.15.160 (10.15.15.160) 56(84) bytes of data.
```

New VPC Experience
Tell us what you think

VPC Dashboard New

Filter by VPC:
Select a VPC

VIRTUAL PRIVATE CLOUD

Your VPCs

Subnets

Route Tables

Internet Gateways New

Egress Only Internet Gateways New

Carrier Gateways New

DHCP Options Sets New

Elastic IPs New

Managed Prefix Lists New

Endpoints

Create route table Actions

Filter by tags and attributes or search by keyword

Name	Route Table ID	Explicit subnet association	Edge associations
route_harish	rtb-06ccb8ec6e0319ce8	subnet-0dec320101e1ed04d	-
hydroute	rtb-0dbf125e4e924ffd1	subnet-08a6071aefab89fd0	-
dvspubroute	rtb-09e42ed10443e5c3e	subnet-003449071a13e97d5	-
dvsprivroute	rtb-06b36a7373a4ac6a6	subnet-0f6eb8ad48e3ca03	No
blrroute	rtb-05e00f913dea9f01e	subnet-0d82fd13c1ed9eed9	Yes
	rtb-0b2f53e5	-	Yes

Summary Routes Subnet Associations Edge Associations Route Propagation Tags

Edit routes

View All routes

Destination	Target	Status	Propagated
192.165.0.0/16	local	active	No

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Route Tables > Edit routes

Edit routes

The screenshot shows the AWS Route Tables interface. At the top, there's a table with columns: Destination, Target, Status, and Propagated. A red box highlights the 'Destination' column for the first row (192.168.0.0/16). Another red box highlights the 'Target' column for the second row (0.0.0.0/0), which is set to 'igw-0792bb41b615b8d26'. A third red box highlights the 'Target' column for the third row (10.15.0.0/16), which is set to 'peering[pcx-0565992d712a88e11]'. A fourth red box highlights the 'Status' column for the third row, which is 'active'. A fifth red box highlights the 'Propagated' column for the third row, which is 'No'. A red arrow points from the 'peering' dropdown to a 'Peering Connection' button. A red arrow points from the 'Save routes' button to a circular orange icon. Below this table, there's a section labeled 'Add route' with a red box around it. A red arrow points from the 'Add route' button to the 'Destination' field for the new route (10.15.0.0/16). This new route has a target of 'pcx-0565992d712a88e11' and a status of 'No'. A red box highlights the 'Status' column for this new route. A red arrow points from the 'Save routes' button to another circular orange icon.

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Route Tables > Edit routes

Edit routes

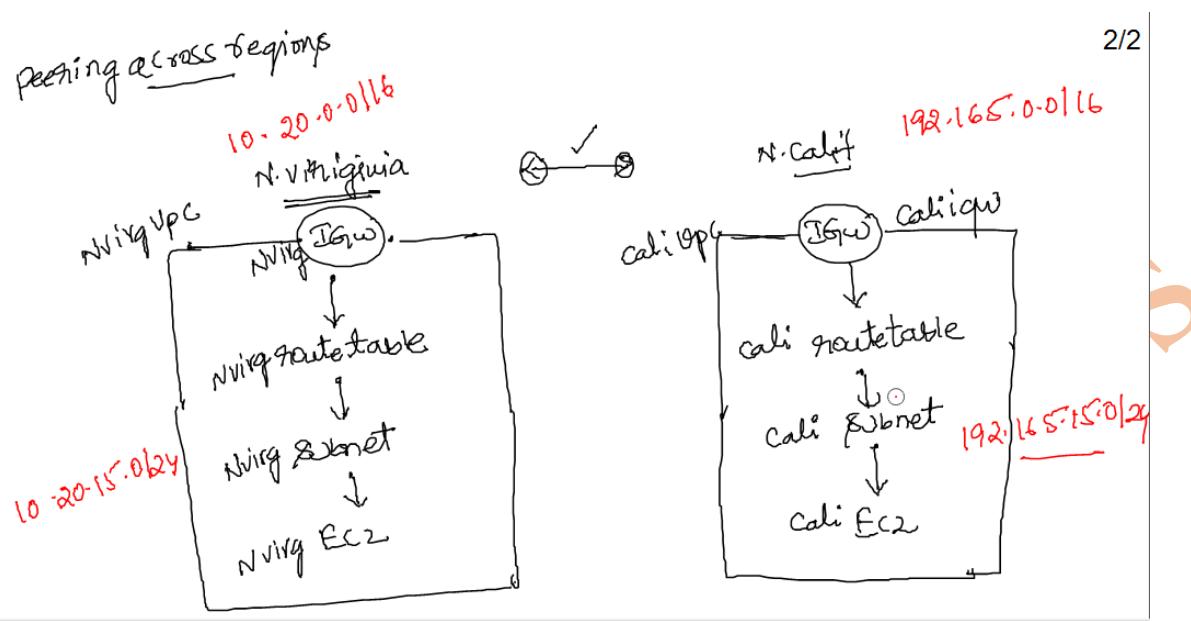
The screenshot shows the 'Edit routes' page in the AWS Route Tables section. A new route entry is being added for destination 192.165.0.0/16. The 'Target' dropdown is set to 'pcx'. The 'Status' column shows 'active' for both the local route and the one via 'pcx'. The 'Propagated' column shows 'No' for both. The 'Save routes' button is highlighted with a red box.

The screenshot displays two terminal sessions. The left session is on a host with IP 10.15.15.186, pinging 192.165.15.186. The right session is on a host with IP 192.165.15.186, pinging 10.15.15.160. Both sessions show successful ping results with low latency.

```
[root@hydpubec2 ~]# ping 192.165.15.186
PING 192.165.15.186 (192.165.15.186) 56(84) bytes of data.
64 bytes from 192.165.15.186: icmp_seq=359 ttl=64 time=0.760 ms
64 bytes from 192.165.15.186: icmp_seq=360 ttl=64 time=0.760 ms
64 bytes from 192.165.15.186: icmp_seq=361 ttl=64 time=0.760 ms
64 bytes from 192.165.15.186: icmp_seq=362 ttl=64 time=0.760 ms
64 bytes from 192.165.15.186: icmp_seq=363 ttl=64 time=0.760 ms
64 bytes from 192.165.15.186: icmp_seq=364 ttl=64 time=0.760 ms
64 bytes from 192.165.15.186: icmp_seq=365 ttl=64 time=0.760 ms
64 bytes from 192.165.15.186: icmp_seq=366 ttl=64 time=0.760 ms
64 bytes from 192.165.15.186: icmp_seq=367 ttl=64 time=0.760 ms
64 bytes from 192.165.15.186: icmp_seq=368 ttl=64 time=0.760 ms
64 bytes from 192.165.15.186: icmp_seq=369 ttl=64 time=0.760 ms
64 bytes from 192.165.15.186: icmp_seq=370 ttl=64 time=0.760 ms
64 bytes from 192.165.15.186: icmp_seq=371 ttl=64 time=0.760 ms
64 bytes from 192.165.15.186: icmp_seq=372 ttl=64 time=0.760 ms
64 bytes from 192.165.15.186: icmp_seq=373 ttl=64 time=0.760 ms
64 bytes from 192.165.15.186: icmp_seq=374 ttl=64 time=0.760 ms
64 bytes from 192.165.15.186: icmp_seq=375 ttl=64 time=0.760 ms
64 bytes from 192.165.15.186: icmp_seq=376 ttl=64 time=0.760 ms
64 bytes from 192.165.15.186: icmp_seq=377 ttl=64 time=0.760 ms
64 bytes from 192.165.15.186: icmp_seq=378 ttl=64 time=0.760 ms
--- 10.15.15.160 ping statistics ---
36 packets transmitted, 0 received, 100% packet loss, time 35829ms
[root@blrpubec2 ~]# ping 10.15.15.160
PING 10.15.15.160 (10.15.15.160) 56(84) bytes of data.
```

5. VPC Peering across regions

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Perform below in N.Virginia Region:

New VPC Experience
Tell us what you think

VPC Dashboard New

Filter by VPC:
Select a VPC

VIRTUAL PRIVATE CLOUD

Your VPCs

- Subnets
- Route Tables
- Internet Gateways New
- Egress Only Internet Gateways New
- Carrier Gateways New
- DHCP Options Sets New
- Elastic IPs New
- Managed Prefix Lists New
- Endpoints
- Endpoint Services

Create VPC Actions

Name	VPC ID	State	IPv4 CIDR	IPv6 CIDR
vpc_harish	vpc-073344e7a80c54e03	available	10.10.0.0/16	-
dvsdpvc	vpc-0ede0337bfe36725a	available	192.168.0.0/16	-
blrpvc	vpc-0fc9cea8032b12130	available	192.165.0.0/16	-
DONT_DELETE	vpc-fae81987	available	172.31.0.0/16	-

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VPCs > Create VPC

Create VPC

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 IPv6 CIDR block with the VPC.

Name tag: nvirgvc

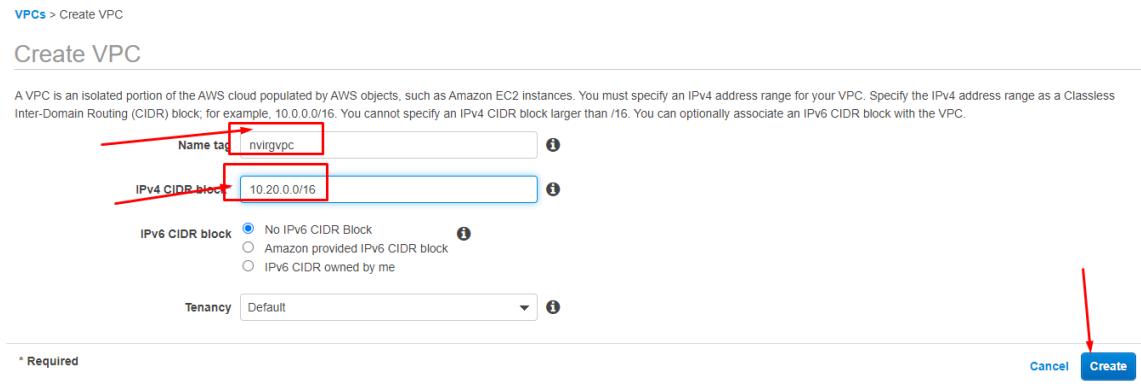
IPv4 CIDR block: 10.20.0.0/16

IPv6 CIDR block: No IPv6 CIDR Block Amazon provided IPv6 CIDR block IPv6 CIDR owned by me

Tenancy: Default

* Required

Cancel **Create**



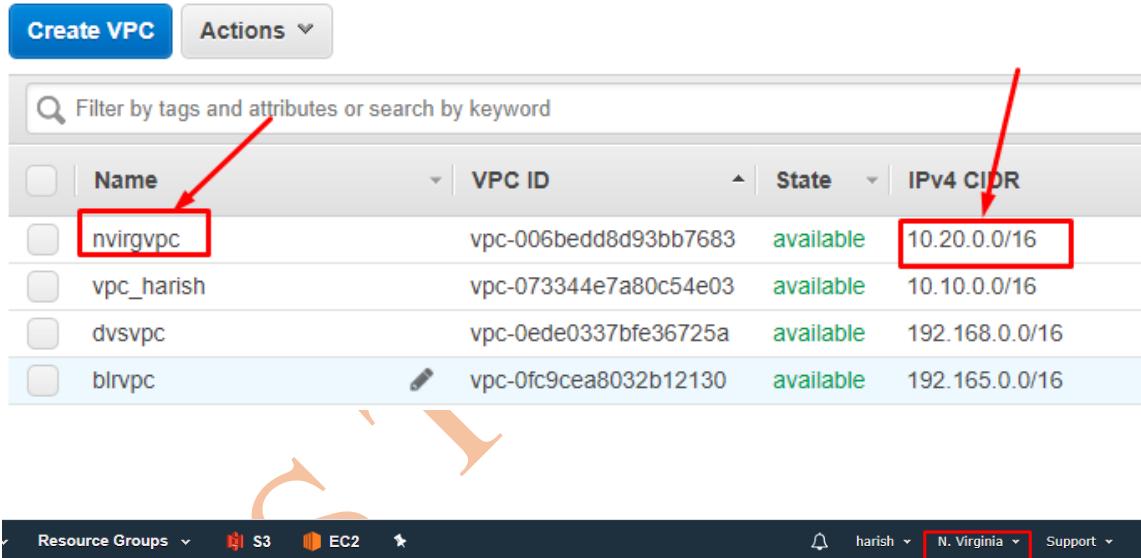
Create VPC

Actions ▾

Filter by tags and attributes or search by keyword

	Name	VPC ID	State	IPv4 CIDR
<input type="checkbox"/>	nvirgvc	vpc-006bedd8d93bb7683	available	10.20.0.0/16
<input type="checkbox"/>	vpc_harish	vpc-073344e7a80c54e03	available	10.10.0.0/16
<input type="checkbox"/>	dsvpc	vpc-0ede0337bfe36725a	available	192.168.0.0/16
<input type="checkbox"/>	blrvc	vpc-0fc9cea8032b12130	available	192.165.0.0/16

Resource Groups S3 EC2 N. Virginia Support



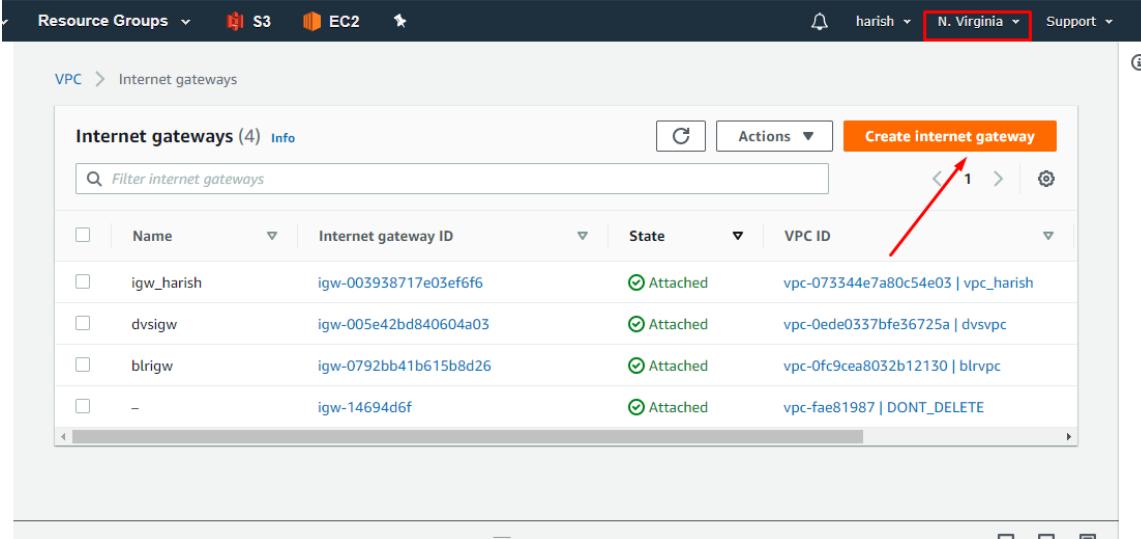
VPC > Internet gateways

Internet gateways (4) Info

Actions ▾ **Create internet gateway**

Filter internet gateways

	Name	Internet gateway ID	State	VPC ID
<input type="checkbox"/>	igw_harish	igw-003938717e03ef6f6	Attached	vpc-073344e7a80c54e03 vpc_harish
<input type="checkbox"/>	dvsigw	igw-005e42bd840604a03	Attached	vpc-0ede0337bfe36725a dsvpc
<input type="checkbox"/>	blrigw	igw-0792bb41b615b8d26	Attached	vpc-0fc9cea8032b12130 blrvpc
<input type="checkbox"/>	-	igw-14694d6f	Attached	vpc-fae81987 DONT_DELETE



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Internet gateway settings

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

nvirgigw

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 nvirgigw Remove

Add new tag You can add 49 more tags.

Cancel Create internet gateway

Resource Groups S3 EC2 harish N. Virginia Support

The following internet gateway was created: igw-0232a2519a3f553af . You can now attach to a VPC to enable the VPC to communicate with the internet.

VPC > Internet gateways > igw-0232a2519a3f553af / nvirgigw

Actions Attach to VPC Detach from VPC Manage tags Delete

Details Info

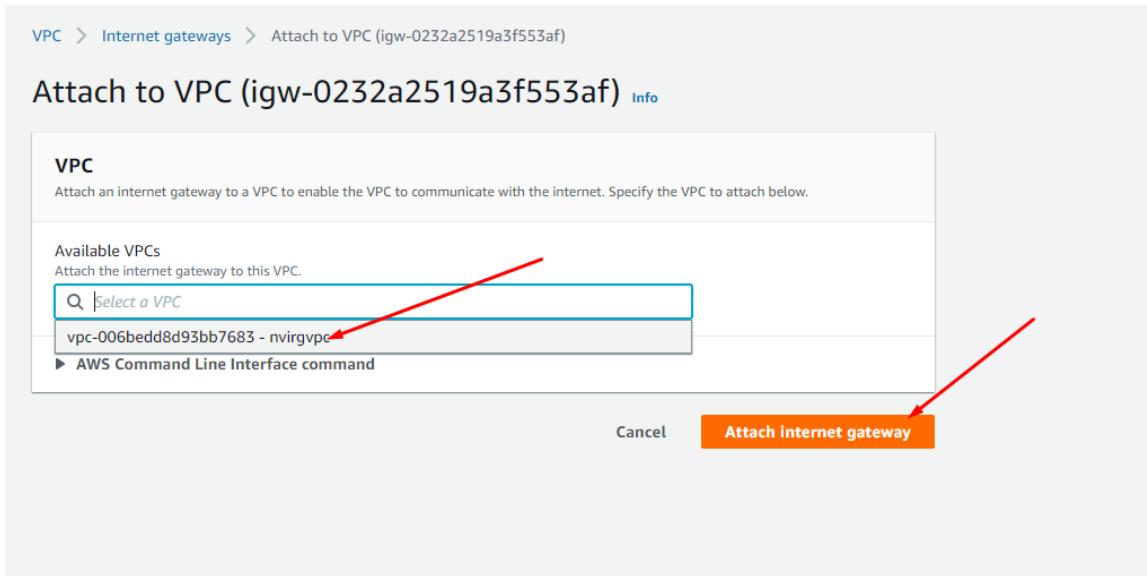
Internet gateway ID	igw-0232a2519a3f553af	State	Detached	VPC ID	-	Owner	907814406801
---------------------	-----------------------	-------	----------	--------	---	-------	--------------

Tags

Search tags

Key	Value
-----	-------

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A screenshot of the AWS Internet Gateway details page for 'igw-0232a2519a3f553af'. The top navigation bar shows 'Resource Groups > S3 > EC2 > N. Virginia'. The main title is 'Internet gateway igw-0232a2519a3f553af successfully attached to vpc-006bedd8d93bb7683'. The 'Actions' dropdown menu is open. The 'Details' tab is selected, showing the following information:

Internet gateway ID igw-0232a2519a3f553af	State <input checked="" type="checkbox"/> Attached	VPC ID vpc-006bedd8d93bb7683 nvirgvp	Owner 907814406801
--	---	---	-----------------------

The 'Attached' state is highlighted with a red box and a red arrow points to it. The 'N. Virginia' region is also highlighted with a red box and a red arrow points to it. The 'igw-0232a2519a3f553af / nvirgigw' part of the URL is also highlighted with a red box and a red arrow points to it.

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The screenshot shows the AWS VPC Route Tables page. On the left sidebar, under the Subnets section, there is a link to 'Route Tables'. A red box highlights this link. In the main content area, a table lists existing route tables. A red box highlights the row for 'nvirgroute' (Route Table ID: rtb-0948efd8010529379). A red arrow points from the highlighted 'nvirgroute' row to the 'nvirgroute' entry in the 'Name' column of the table.

Subnets > Create subnet

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.

The screenshot shows the 'Create subnet' wizard. The first step is 'Configure basic settings'. It includes fields for 'Name tag' (nvirgpubsub), 'VPC' (vpc-006bedd8d93bb76c5), 'Availability Zone' (us-east-1a), 'VPC CIDRs' (CIDR: 10.20.0.0/16, Status: associated), and 'IPv4 CIDR block' (10.20.15.0/24). A red box highlights the 'Name tag' field. Another red box highlights the 'VPC' dropdown. A third red box highlights the 'Availability Zone' dropdown. A fourth red box highlights the 'VPC CIDRs' table. A fifth red box highlights the 'IPv4 CIDR block' input field. A red arrow points from the 'Create' button at the bottom right towards the 'IPv4 CIDR block' field.

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The screenshot shows the AWS VPC Route Tables page. On the left sidebar, under the 'Route Tables' section, there is a red box highlighting the 'Route Tables' link. In the main content area, a route table named 'inviroute' is selected, indicated by a red box around its name in the list. Below the list, a navigation bar has tabs: 'Summary' (disabled), 'Routes' (selected and highlighted with a red box), 'Subnet Associations', 'Edge Associations', 'Route Propagation', and 'Tags'. A large orange arrow points from the 'Edit routes' button in the 'Routes' tab to the 'Edit routes' sub-page below. The 'Edit routes' sub-page has a table with columns: Destination, Target, Status, and Propagated. It shows two entries: one for '10.20.0.0/16' with 'local' as the target and 'active' status, and another for '0.0.0.0/0' with 'igw-0232a2519a3f553af' as the target and 'No' status. A red box highlights the '0.0.0.0/0' entry. A red arrow points from the 'Save routes' button at the bottom right of the sub-page to the 'Save routes' button on the main 'Edit routes' page. The main page also has an 'Add route' button and a note: '* Required'.

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The screenshot shows the AWS VPC Route Tables page. On the left sidebar, 'Route Tables' is selected. In the main area, a table lists three route tables: 'route_harish', 'nvirgroute' (which is highlighted with a red box), and 'dvspublicroute'. The 'nvirgroute' table has a 'Route Table ID' of 'rtb-0948efd8010529379'. Below the table, tabs for 'Summary', 'Routes', 'Subnet Associations' (which is also highlighted with a red box), 'Edge Associations', 'Route Propagation', and 'Tags' are visible. A message indicates 'You do not have any subnet associations.' and 'The following subnets have not been explicitly associated with any route tables and are therefore associated with the main route table:'.

Route Tables > Edit subnet associations

Edit subnet associations

Route table rtb-0948efd8010529379 (nvirgroute)

Associated subnets

A modal dialog titled 'Edit subnet associations' is shown. It contains a table with one row, where the 'Subnet ID' is 'subnet-0fe7e0b760ffe8f38' and its 'Current Route Table' is 'Main'. The 'Save' button at the bottom right is highlighted with a red arrow.

Subnet ID	IPv4 CIDR	IPv6 CIDR	Current Route Table
subnet-0fe7e0b760ffe8f38 nvirgroute	10.20.15.0/24	-	Main

* Required

Cancel Save

Create EC2 in N.virginia region:

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The screenshot shows the AWS EC2 Launch Instance interface. On the left, a sidebar menu is open under the 'Instances' section, with 'Instances' highlighted. At the top right, the region is set to 'N. Virginia'. A red box highlights the 'N. Virginia' dropdown, and a red arrow points from it to the 'Region' label. The main area displays a message: 'You do not have any running instances in this region.' Below this, there are links for 'Getting Started Guide' and 'Launch Instance'. A large orange 'DVS' watermark is overlaid on the left side of the page.

Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances: 1

Purchasing option: Request Spot instances

Network: vpc-006bedd8d93bb7683 | nvirgypc

Subnet: subnet-0fe7e0b760ffe8f38 | nvirgpublish | us-east-1a

Auto-assign Public IP: Enable

Placement group: Add instance to placement group

Capacity Reservation: Open

IAM role: None

Shutdown behavior: Stop

Buttons at the bottom: Cancel, Previous, Review and Launch, Next: Add S

A large orange '10' watermark is overlaid on the right side of the page.

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1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group: Create a new security group Select an existing security group

Security group name: nvirg_sg

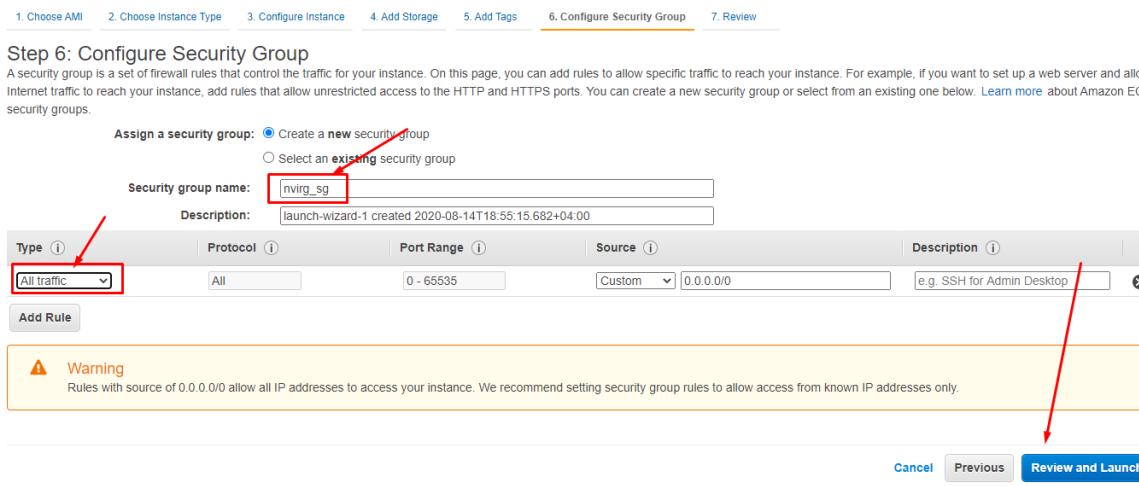
Description: launch-wizard-1 created 2020-08-14T18:55:15.682+04:00

Type	Protocol	Port Range	Source	Description
All traffic	All	0 - 65535	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop

Add Rule

Warning
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.

Cancel Previous Review and Launch



Launch

You can choose to launch multiple instances at once. This will start the launch process.

security

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five years

extras.

zation type:

vC

1

Select an existing key pair or create a new key pair

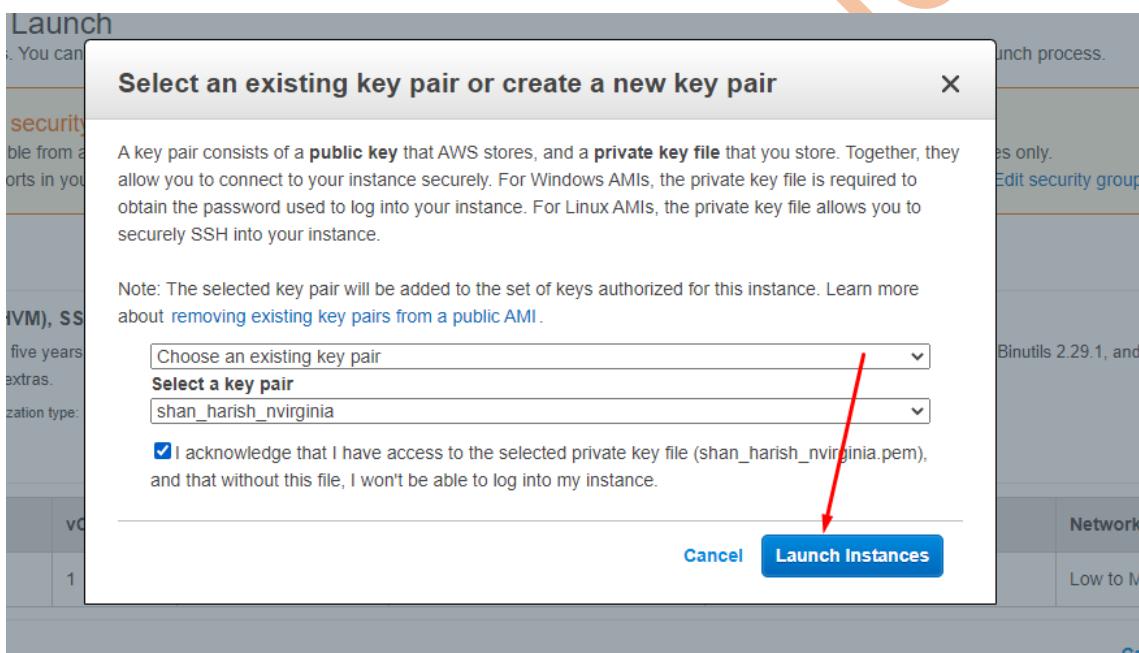
A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about [removing existing key pairs from a public AMI](#).

Choose an existing key pair
Select a key pair
shan_harish_nvirginia

I acknowledge that I have access to the selected private key file (shan_harish_nvirginia.pem), and that without this file, I won't be able to log into my instance.

Cancel Launch Instances



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The screenshot shows the AWS EC2 console with the following details:

- Name:** nvirgserver
- Instance ID:** i-052815134dfd9cad3
- Instance Type:** t2.micro
- Availability Zone:** us-east-1a
- Instance State:** running
- Public DNS (IPv4):** 54.209.179.238
- Private IPs:** 10.20.15.206

```
root@ip-10-20-15-206:~#
Using username "ec2-user".
Authenticating with public key "imported-openssh-key" from agent
              _\ _ / )   Amazon Linux 2 AMI
             __| \__|_|

https://aws.amazon.com/amazon-linux-2/
4 package(s) needed for security, out of 8 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-10-20-15-206 ~]$ sudo su -
[root@ip-10-20-15-206 ~]# hostnamectl set-hostname nvirgserver
[root@ip-10-20-15-206 ~]# bash
[root@nvirgserver ~]#
```

NOTE: PLEASE PERFORM THE ABOVE STEPS IN N.CALIFORNIA REGION

Once you are done you will get like below

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The screenshot shows the AWS EC2 Instances page. At the top, there are filters for Resource Groups, S3, EC2, and a dropdown for 'N. California'. Below the header is a search bar and a table of instances. The first instance, 'caliserver', is selected and highlighted with a red box. Its status is 'running' (also highlighted with a red box). The table includes columns for Name, Instance ID, Instance Type, Availability Zone, Instance State, Status Checks, Alarm Status, and Public DNS. The Public DNS for 'caliserver' is listed as '54.151.46.115'. The instance details pane below shows the instance ID (i-0046dde8bfb976e7), state (running), type (t2.micro), finding status (Opt-in to AWS Compute Optimizer for recommendations), private DNS (ip-192-165-15-225.us-west-1.compute.internal), private IP (192.165.15.225), availability zone (us-west-1b), security groups (calivpc_sg), and scheduled events (None). A large orange watermark 'DVS' is overlaid across the entire screenshot.

```
root@ip-192-165-15-225:~# Using username "ec2-user".
Authenticating with public key "imported-ssh-key" from agent
[  _   |  _  ] [  _  /  ]
[ _ | (   )_ /  Amazon Linux 2 AMI
[ _ \ \_ |__| ] [  _  /  ]

https://aws.amazon.com/amazon-linux-2/
1 package(s) needed for security, out of 8 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-192-165-15-225 ~]$ sudo su -
[root@ip-192-165-15-225 ~]# hostnamectl set-hostname caliserver
[root@ip-192-165-15-225 ~]# bash
root@caliserver ~]#
```

Testing the connectivity:

DVS Technologies Aws & Devops

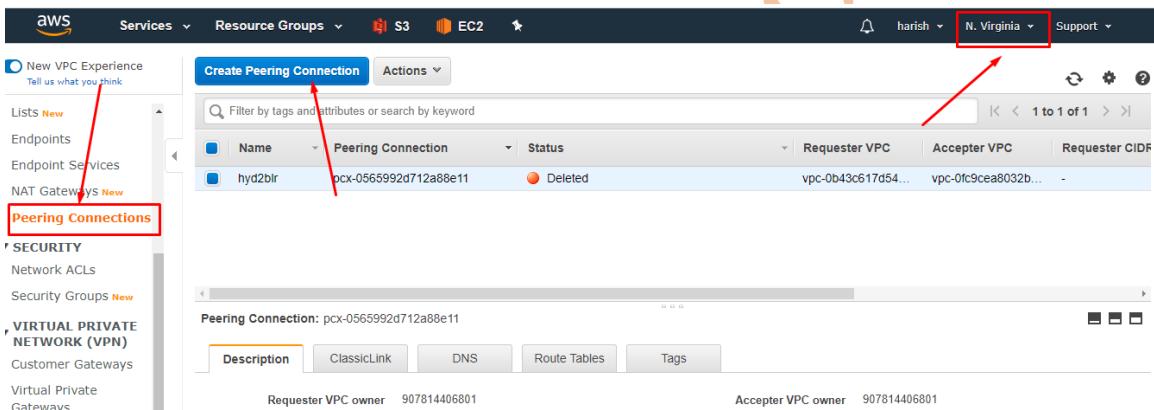
The screenshot shows two terminal sessions. The left session is on a host with IP 192.165.15.225, and the right session is on an EC2 instance with IP 10.20.15.206. Both sessions show successful ping tests between them. The EC2 instance's session also shows it has updated its hostname to 'nvrsgserver'.

```
[root@caliserver ~]# ping 10.20.15.206
PING 10.20.15.206 (10.20.15.206) 56(84) bytes of data.
[ec2-user@ip-10-20-15-206 ~]$ ping 192.165.15.225
PING 192.165.15.225 (192.165.15.225) 56(84) bytes of data.
```

```
[root@ip-10-20-15-206 ~] Using username "ec2-user".
Authenticating with public key "imported-openssh-key" from agent
[ec2-user@ip-10-20-15-206 ~]$ hostnamectl set-hostname nvrsgserver
[ec2-user@ip-10-20-15-206 ~]$ bash
[ec2-user@ip-10-20-15-206 ~]$
```

Now Configure Peering across the regions:

Perform below from N.Virginia region



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The screenshot shows the AWS VPC Management Console interface for creating a peering connection. A red box highlights the 'Peering connection name tag' input field containing 'nvrg2call'. Another red box highlights the 'VPC (Requester)*' dropdown menu, which is open and shows a list of CIDRs. A red arrow points from the 'nvrg2call' tag to the dropdown menu. Below the dropdown, a red box highlights the 'nvrgvpc' entry in the list. The 'Select another VPC to peer with' section is also visible, showing account and region selection options.

Peering connection name tag: nvrg2call

VPC (Requester)*: nvrgvpc

Select another VPC to peer with:

Account: My account

Region: This region (us-east-1)

Services: VPC Management Console

Region: N. California

VPC (Accepter): calivpc

Tags: Key: (128 characters maximum)

VPC ID: vpc-0b2593b2be7151677

Description: calivpc

State: available

IPv4 CIDR: 192.165.0...

IPv6 CIDR: -

Feedback: English (US)

Create Peering Connection

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Account My account
 Another account

Region This region (us-east-1)
 Another Region

US West (N. California) (us-west-1)

VPC (Acceptor)* vpc-0b2593b2be7151677

Tags

Key (128 characters maximum) Value (256 characters maximum)

This resource currently has no tags

Add Tag 50 remaining (Up to 50 tags maximum)

Cancel Create Peering Connection

AWS Services Resource Groups S3 EC2 harish N. Virginia Support

New VPC Experience Tell us what you think

Lists New Endpoints Endpoint Services NAT Gateways New Peering Connections SECURITY Network ACLs Security Groups New VIRTUAL PRIVATE NETWORK (VPN) Customer Gateways Virtual Private Gateways Site-to-Site VPN Connections Client VPN Endpoints TRANSIT

Create Peering Connection Actions

Filter by tags and attributes or search by keyword 1 to 2 of 2

Name	Peering Connection	Status	Requester VPC	Acceptor VPC	Requester CIDR
hyd2blr	pcx-0565992d712a88e11	Deleted	vpc-0b43c617d54...	vpc-0fc9cea8032b...	-
nvirg2call	pcx-0209e9b56356a261e	Pending Acceptance	vpc-006bedd8d93...	vpc-0b2593b2be7...	10.20.0.0/16

Peering Connection: pcx-0209e9b56356a261e

Description DNS Route Tables Tags

Requester VPC owner 907814406801 Acceptor VPC owner 907814406801
Requester VPC ID vpc-006bedd8d93b7683 Acceptor VPC ID vpc-0b2593b2be7151677
Requester VPC Region N. Virginia (us-east-1) Acceptor VPC Region N. California (us-west-1)
Requester VPC CIDRs 10.20.0.0/16 Acceptor VPC CIDRs -
VPC Peering Connection pcx-0209e9b56356a261e Peering connection status Pending Acceptance by 907814406801
Expiration time August 21, 2020 at 7:15:08 PM UTC+4

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The screenshot shows the AWS VPC Peering Connections console. A red box highlights the 'Pending Accept...' status of the peering connection. Another red box highlights the 'N. California' region. A large orange arrow points from the 'Pending Accept...' status to the 'Accept Request' option in the context menu.

Peering Connection: pcx-0209e9b56356a261e

Name	Peerings	Status	Requester VPC	Acceptor VPC	Requester CIDRs	Acceptor CIDRs	Requester DNS	Acceptor DNS
pcx-0209e9b56356a261e	1	Pending Accept...	vpc-006bedd8d93bb7683	vpc-0b2593b2be7151677	10.20.0.0/16	-	907814406801	907814406801

Peering Connection: pcx-0209e9b56356a261e

Requester VPC owner: 907814406801
Requester VPC ID: vpc-006bedd8d93bb7683
Requester VPC Region: N. Virginia (us-east-1)
Requester VPC CIDRs: 10.20.0.0/16
VPC Peering Connection: pcx-0209e9b56356a261e

Acceptor VPC owner: 907814406801
Acceptor VPC ID: vpc-0b2593b2be7151677
Acceptor VPC Region: N. California (us-west-1)
Acceptor VPC CIDRs: -
Peering connection status: Pending Acceptance by 907814406801

A red box highlights the 'Accept Request' option in the context menu for the peering connection. Another red box highlights the 'N. California' region. A large orange arrow points from the 'Accept Request' option to the 'Accept Request' button in the main interface.

Peering Connection: pcx-0209e9b56356a261e

Requester VPC owner: 907814406801
Requester VPC ID: vpc-006bedd8d93bb7683
Requester VPC Region: N. Virginia (us-east-1)
Requester VPC CIDRs: 10.20.0.0/16
VPC Peering Connection: pcx-0209e9b56356a261e

Acceptor VPC owner: 907814406801
Acceptor VPC ID: vpc-0b2593b2be7151677
Acceptor VPC Region: N. California (us-west-1)
Acceptor VPC CIDRs: -
Peering connection status: Pending Acceptance by 907814406801

Let again check the connectivity:

```
root@ip-192-165-15-225:~# ping 10.20.15.206
PING 10.20.15.206 (10.20.15.206) 56(84) bytes
[...]
Using username "ec2-user".
Authenticating with public key "imported-openssh-key" from agent
[...]
Amazon Linux 2 AMI
[...]
https://aws.amazon.com/amazon-linux-2/
4 package(s) needed for security, out of 8 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-10-20-15-206 ~]$ sudo su -
[root@ip-10-20-15-206 ~]# hostnamectl set-hostname nvirgserver
[root@ip-10-20-15-206 ~]# bash
[root@nvirgserver ~]# ping 192.165.15.225
PING 192.165.15.225 (192.165.15.225) 56(84) bytes of data.
```

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AWS Services: Services, Resource Groups, S3, EC2

User: harish, Region: N. Virginia

Route Tables

- Internet Gateways New
- Egress Only Internet Gateways New
- Carrier Gateways New
- DHCP Options Sets New
- Elastic IPs New
- Managed Prefix Lists New
- Endpoints
- Endpoint Services
- NAT Gateways New
- Peering Connections

SECURITY

- Network ACLs

Route Tables > Edit routes

Edit routes

Destination	Target	Status	Propagated
10.20.0.0/16	local	active	No
0.0.0.0/0	igw-0232a2519a3f50af	active	No
192.165.0.0/16	pcx-0209e9b56356a261e	active	No

* Required

Cancel **Save routes**

Now perform below in California:

AWS Services: Services, Resource Groups, S3, EC2

User: harish, Region: N. California

Route Tables

- Select a VPC
- VIRTUAL PRIVATE CLOUD**
- Your VPCs
- Subnets
- Route Tables**
- Internet Gateways New
- Egress Only Internet Gateways New
- DHCP Options Sets New
- Elastic IPs New
- Managed Prefix Lists

Create route table

Route Table: rtb-0d84374862b3c62d

Destination	Target	Status	Propagated
192.165.0.0/16	local	active	No

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Route Tables > Edit routes

Edit routes

Destination	Target	Status	Propagated
192.168.0.0/16	local	active	No
0.0.0.0/0	igw-0255788e430772c18	active	No
10.20.0.0/16	pcl-0209e9b56356a261e	active	No

Add route

* Required

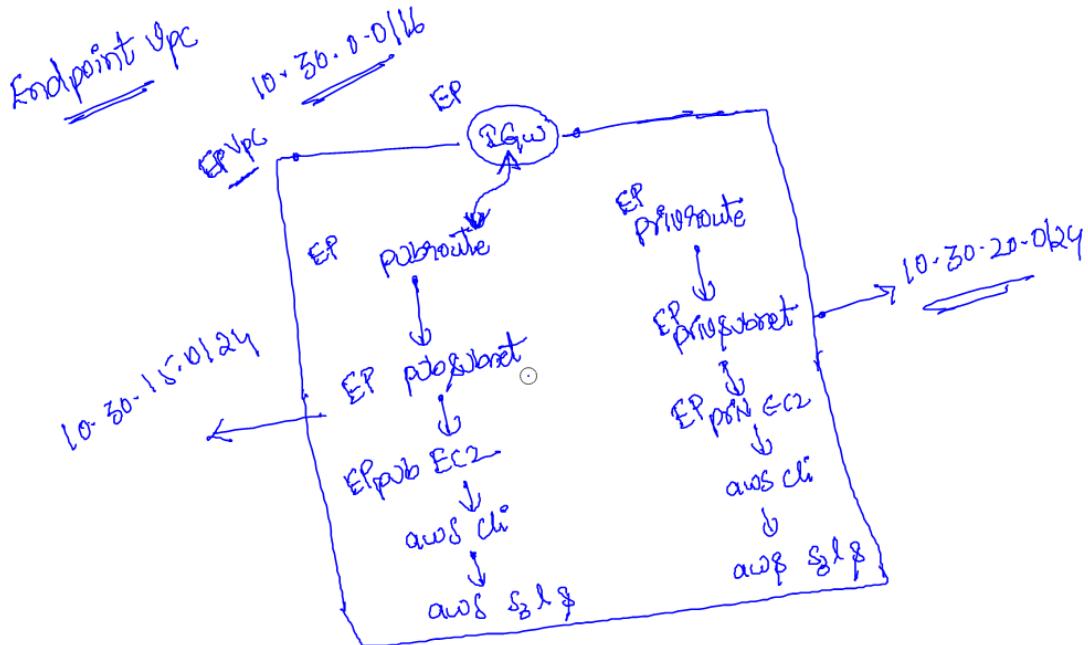
Cancel

Save routes

```
[root@caliserver ~]# ping 10.20.15.206
PING 10.20.15.206 (10.20.15.206) 56(84) bytes of data.
64 bytes from 10.20.15.206: icmp_seq=1063 ttl=64 time=0.397 ms
64 bytes from 10.20.15.206: icmp_seq=1064 ttl=64 time=0.397 ms
64 bytes from 10.20.15.206: icmp_seq=1065 ttl=64 time=0.397 ms
64 bytes from 10.20.15.206: icmp_seq=1066 ttl=64 time=0.397 ms
64 bytes from 10.20.15.206: icmp_seq=1067 ttl=64 time=0.397 ms
64 bytes from 10.20.15.206: icmp_seq=1068 ttl=64 time=0.397 ms
64 bytes from 10.20.15.206: icmp_seq=1069 ttl=64 time=0.397 ms
64 bytes from 10.20.15.206: icmp_seq=1070 ttl=64 time=0.397 ms
64 bytes from 10.20.15.206: icmp_seq=1071 ttl=64 time=0.397 ms
PING 192.165.15.225 (192.165.15.225) 56(84) bytes of data.
64 bytes from 192.165.15.225: icmp_seq=1075 ttl=255 time=62.7 ms
64 bytes from 192.165.15.225: icmp_seq=1076 ttl=255 time=62.7 ms
64 bytes from 192.165.15.225: icmp_seq=1077 ttl=255 time=62.7 ms
64 bytes from 192.165.15.225: icmp_seq=1078 ttl=255 time=62.7 ms
64 bytes from 192.165.15.225: icmp_seq=1079 ttl=255 time=62.8 ms
64 bytes from 192.165.15.225: icmp_seq=1080 ttl=255 time=62.7 ms
64 bytes from 192.165.15.225: icmp_seq=1081 ttl=255 time=62.7 ms
64 bytes from 192.165.15.225: icmp_seq=1082 ttl=255 time=62.6 ms
```

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6. Endpoint Configuration



Screenshot of the AWS VPC Dashboard. The left sidebar shows 'Your VPCs' (with a red box around it) and other options like Subnets, Route Tables, Internet Gateways, Egress Only Internet Gateways, Carrier Gateways, DHCP Options Sets, Elastic IPs, and Managed Prefixes. The main pane displays a table of existing VPCs:

Name	VPC ID	State	IPv4 CIDR	IPv6 CIDR	IPv6 CIDR (Network E)
virvgpc	vpc-006bedd8d93bb7683	available	10.20.0.0/16	-	-
vpc_harish	vpc-073344e7a80c54e03	available	10.10.0.0/16	-	-
blrvgc	vpc-0fc9cea8032b12130	available	192.165.0.0/16	-	-
DONT_DELETE	vpc-fae81987	available	172.31.0.0/16	-	-

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VPCs > Create VPC

Create VPC

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 IPv6 CIDR block with the VPC.

Name tag: EPvpc

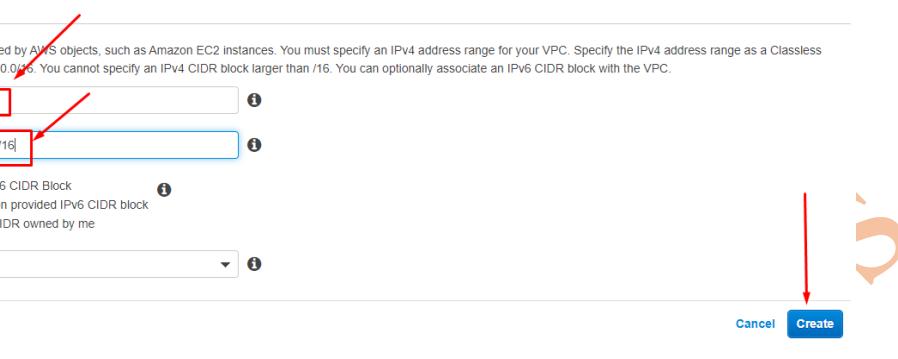
IPv4 CIDR block: 10.30.0.0/16

IPv6 CIDR block: No IPv6 CIDR Block
 Amazon provided IPv6 CIDR block
 IPv6 CIDR owned by me

Tenancy: Default

* Required

Cancel **Create**



AWS Services Resource Groups S3 EC2 harish N. Virginia Support

New VPC Experience Tell us what you think

VPC Dashboard New Filter by VPC: Select a VPC

Internet Gateways New

Your VPCs Subnets Route Tables

Egress Only Internet Gateways New

Carrier Gateways New

DHCP Options Sets New

Elastic IPs New

Managed Prefix Lists New

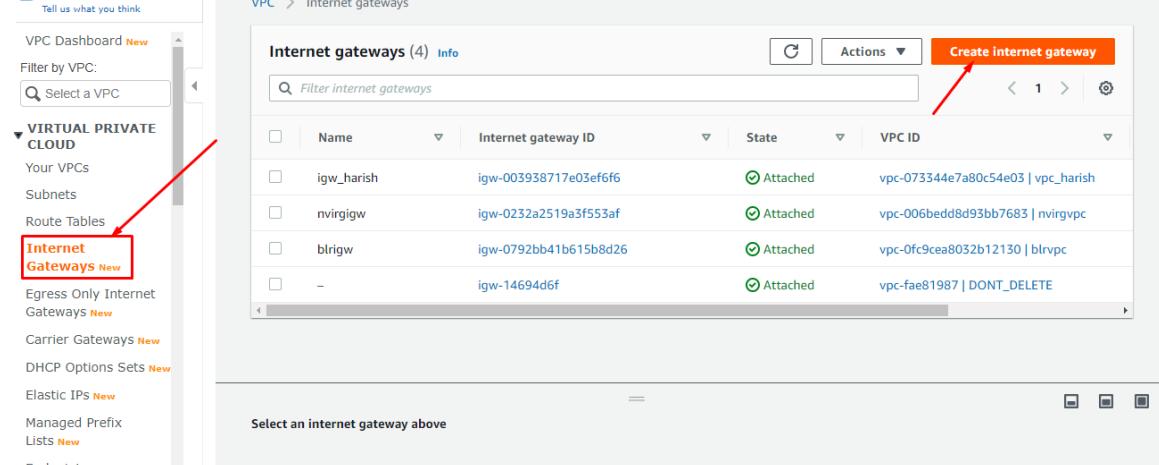
Frontpoints

Internet gateways (4) Info

Filter Internet gateways

Name	Internet gateway ID	State	VPC ID
igw_harish	igw-003938717e03ef6f6	Attached	vpc-073344e7a80c54e03 vpc_harish
nvirgigw	igw-0232a2519a3f553af	Attached	vpc-006bedd8d93bb7683 nvirgvc
blrigw	igw-0792bb41b615b8d26	Attached	vpc-0fc9cea8032b12130 blrvpc
-	igw-14694d6f	Attached	vpc-fae81987 DONT_DELETE

Select an internet gateway above



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Internet gateway settings

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

EPigw

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.

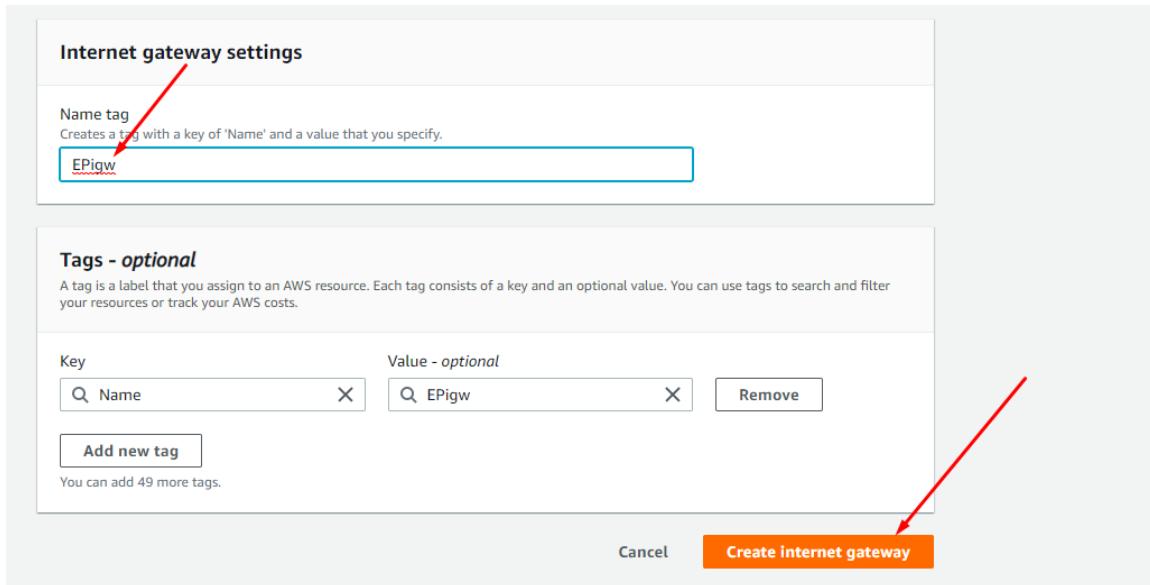
Key Value - optional

Name EPigw Remove

Add new tag

You can add 49 more tags.

Cancel Create internet gateway



New VPC Experience
Tell us what you think

VPC Dashboard New

Filter by VPC:
Select a VPC

VIRTUAL PRIVATE CLOUD

- Your VPCs
- Subnets
- Route Tables
- Internet Gateways New**
- Egress Only Internet Gateways New
- Carrier Gateways New
- DHCP Options Sets New
- Elastic IPs New
- Managed Prefix Lists New

The following internet gateway was created: igw-03d7c4fe862a259ab . You can now attach to a VPC to enable the VPC to communicate with the internet.

Attach to a VPC

igw-03d7c4fe862a259ab / EPigw

Details Info

Internet gateway ID: igw-03d7c4fe862a259ab State: Detached VPC ID: Owner: 907814406801

Actions ▾

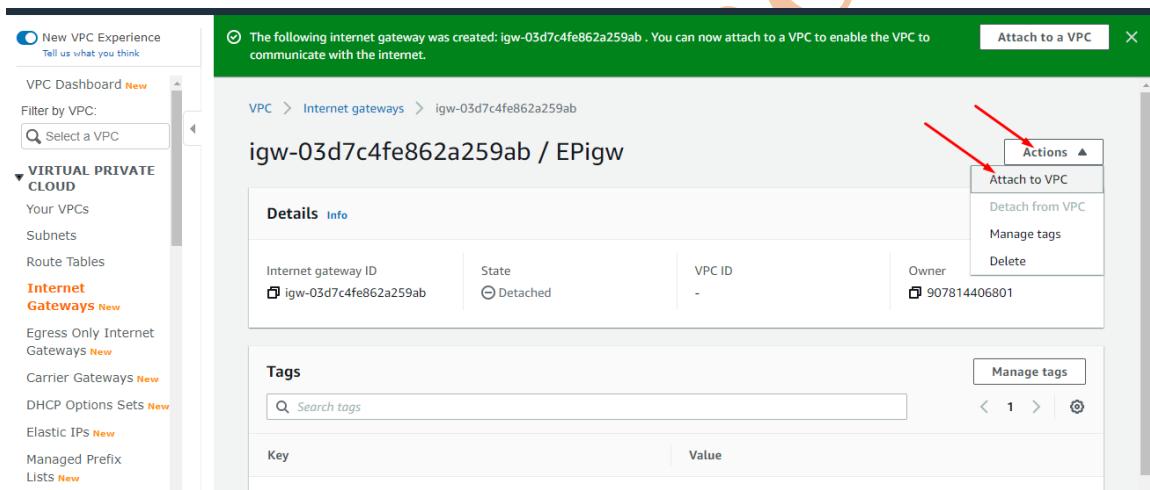
- Attach to VPC
- Detach from VPC
- Manage tags
- Delete

Tags

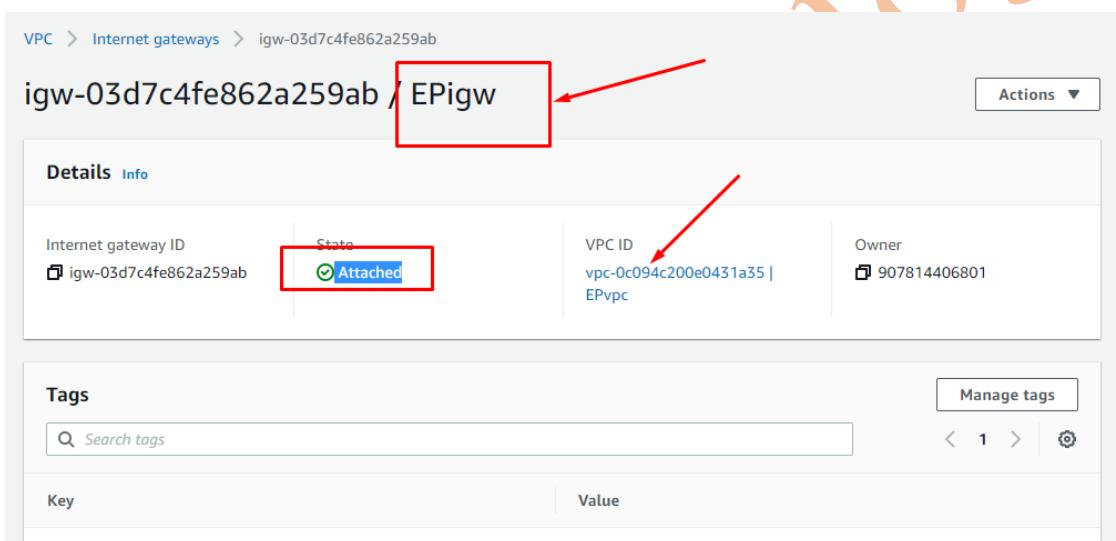
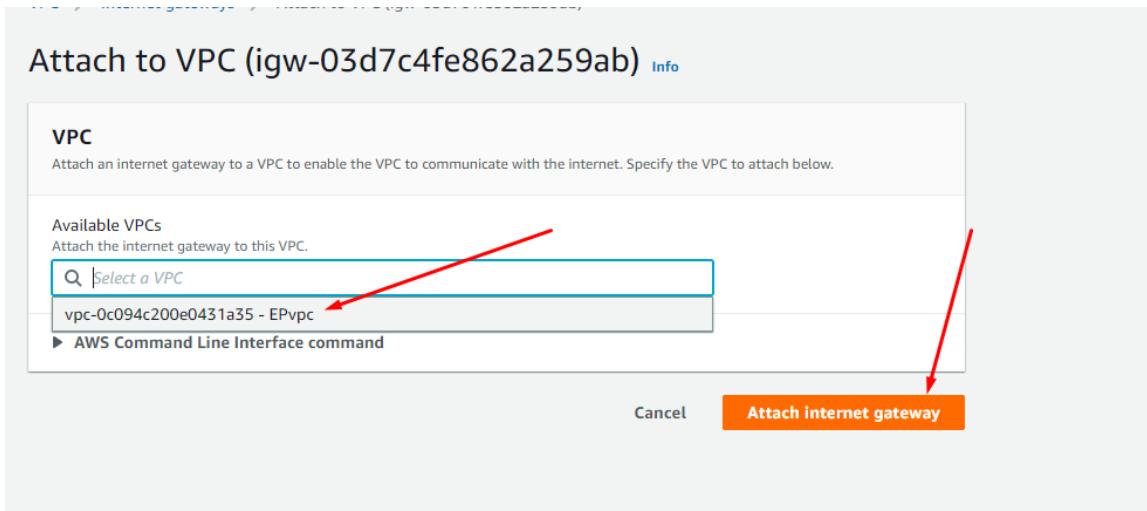
Search tags

Key	Value
Name	EPigw

Manage tags



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Let's Concentrate on Pub section:

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The screenshot shows the AWS VPC Route Tables page. On the left sidebar, under 'VIRTUAL PRIVATE CLOUD', 'Route Tables' is selected and highlighted with a red box. In the main content area, there is a 'Create route table' button and a table listing existing route tables. A new route table, 'EPpubroute', is being created and is highlighted with a red box. Below the table, a summary section provides details about the newly created route table.

Name	Route Table ID	Explicit subnet association	Edge associations
route_harish	rtb-06ccb8ec6e0319ce8	subnet-0dec320101e1ed04d	-
nvirgroute	rtb-0948ef8d010529379	subnet-0fe7e0b760ffe8f38	-
blrroute	rtb-05e00913deaf01e	subnet-0d82fd13c1ed9eed9	-
	rtb-9b2f53e5	-	-
EPpubroute	rtb-0467555f9e74d21fd	-	-

Route Table: rtb-0467555f9e74d21fd

Route Table ID: rtb-0467555f9e74d21fd
Explicitly Associated with: -
Owner: 907814406801

Main: Yes
VPC: vpc-0c094c200e0431e

The screenshot shows the AWS VPC Subnets page. On the left sidebar, 'Subnets' is selected and highlighted with a red box. In the main content area, there is a 'Create subnet' button and a table listing existing subnets. A new subnet, 'nvirgpubsub', is being created and is highlighted with a red box. Below the table, a summary section provides details about the newly created subnet.

Name	Subnet ID	State	VPC	IPv4 C...
DONT DELETE	subnet-4d2e8e6c	available	vpc-fae81987 DONT_DE...	172.3...
DONT DELETE	subnet-2698ed6b	available	vpc-fae81987 DONT_DE...	172.3...
DONT DELETE	subnet-133ea11d	available	vpc-fae81987 DONT_DE...	172.3...
DONT DELETE	subnet-e6cd6880	available	vpc-fae81987 DONT_DE...	172.3...
DONT DELETE	subnet-e99d75d8	available	vpc-fae81987 DONT_DE...	172.3...
DONT DELETE	subnet-4320861c	available	vpc-fae81987 DONT_DE...	172.3...
subnet_harish	subnet-0dec320101e1ed04d	available	vpc-073344e7a80c54e03 ...	10.10...
blrpubsub1	subnet-0d82fd13c1ed9eed9	available	vpc-0fc9cea8032b12130 ...	192.16...
nvirgpubsub	subnet-0fe7e0b760ffe8f38	available	vpc-006bedd8d93bb7683 ...	10.20...

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Subnets > Create subnet

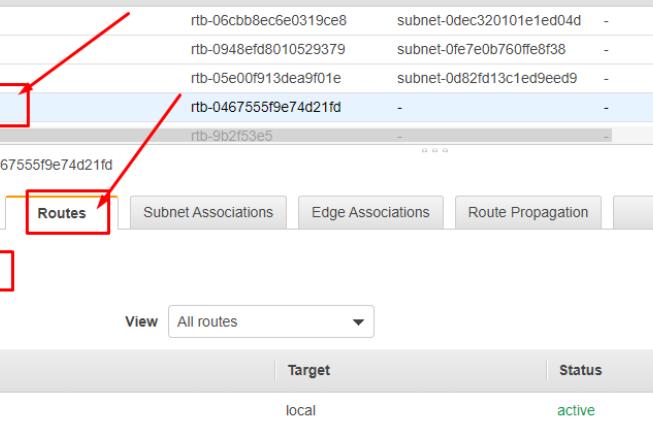
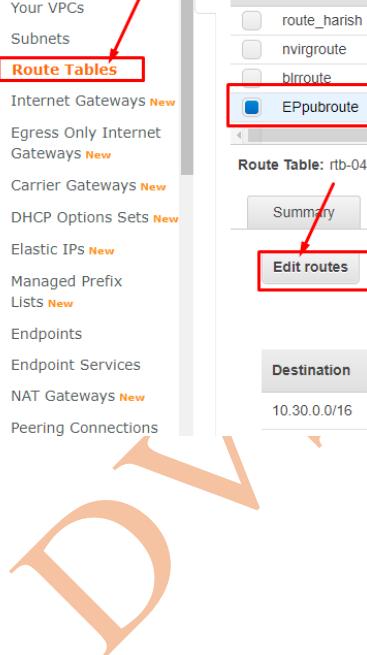
Create subnet

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	EPPubsubnet
VPC*	vpc-0c094c200e0431a35
Availability Zone	us-east-1a
VPC CIDRs	CIDR Status Status Reason
	10.30.0.0/16 associated
IPv4 CIDR block*	10.30.15.0/24

* Required

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



New VPC Experience
Tell us what you think

VIRTUAL PRIVATE CLOUD

- Your VPCs
- Subnets
- Route Tables**
- Internet Gateways New
- Egress Only Internet Gateways New
- Carrier Gateways New
- DHCP Options Sets New
- Elastic IPs New
- Managed Prefix Lists New
- Endpoints
- Endpoint Services
- NAT Gateways New
- Peering Connections

Create route table Actions ▾

Filter by tags and attributes or search by keyword

Name	Route Table ID	Explicit subnet association	Edge associations
route_harish	rtb-06ccb8ec6e0319ce8	subnet-0dec320101e1ed04d	-
nvirgroute	rtb-0948efd8010529379	subnet-0fe7e0b760ffe8f38	-
blrroute	rtb-05e00f913dea9f01e	subnet-0d82fd13c1ed9eed9	-
EPpubroute	rtb-0467555f9e74d21fd	-	-
	rtb-9b2f53e5	-	-

Route Table: rtb-0467555f9e74d21fd

Summary **Routes** Subnet Associations Edge Associations Route Propagation Tags

Edit routes

View All routes

Destination	Target	Status
10.30.0.0/16	local	active

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Route Tables > Edit routes

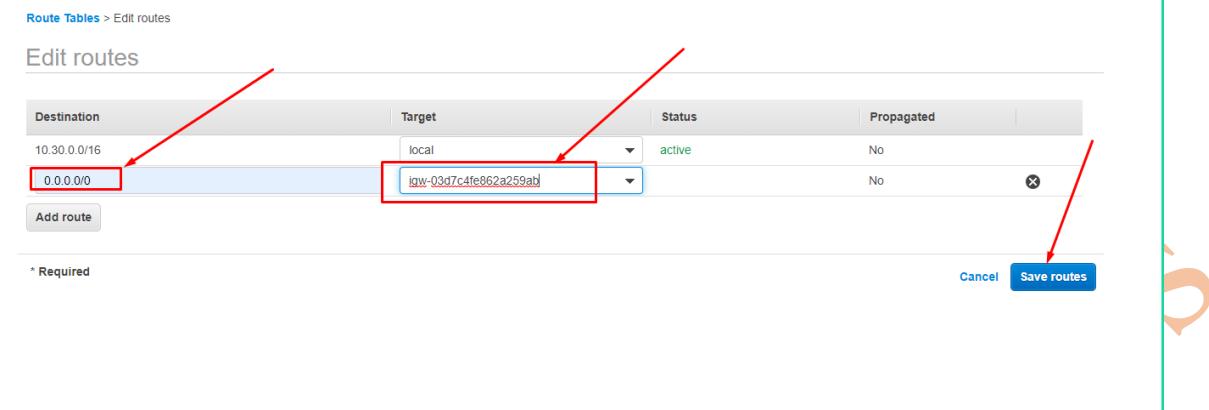
Edit routes

Destination	Target	Status	Propagated
10.30.0.0/16	local	active	No
0.0.0.0/0	igw-03d7c4fe862a259ab	active	No

Add route

* Required

Cancel Save routes



New VPC Experience
Tell us what you think

Create route table Actions ▾

Filter by tags and attributes or search by keyword

Name	Route Table ID	Explicit subnet association	Edge associations
route_harish	rtb-06ccb8ec6e0319ce8	subnet-0dec320101e1ed04d	-
nvirgroute	rtb-0948efd8010529379	subnet-0fe7e0b760ffe8f38	-
blrroute	rtb-05e00f913dea9f01e	subnet-0d82fd13c1ed9eed9	-
EPpubroute	rtb-0467555f9e74d21fd	-	-
	rtb-9b2f53e5	-	-

Route Table: rtb-0467555f9e74d21fd

Summary Routes Subnet Associations Edge Associations Route Propagation Tags

Edit subnet associations

You do not have any subnet associations.

Route Tables > Edit subnet associations

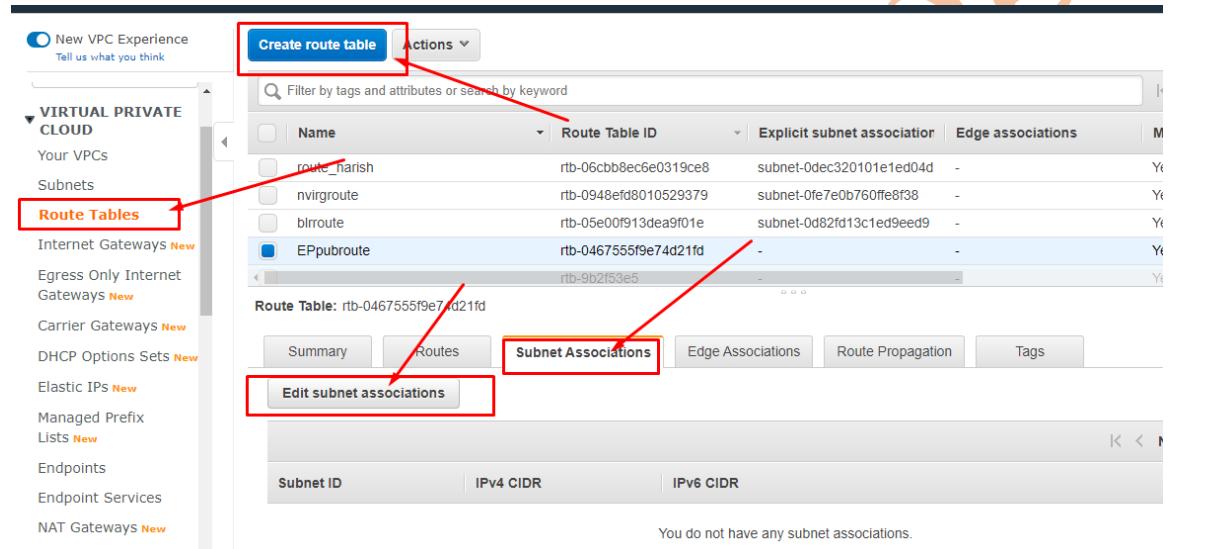
Edit subnet associations

Route table rtb-0467555f9e74d21fd (EPpubroute)

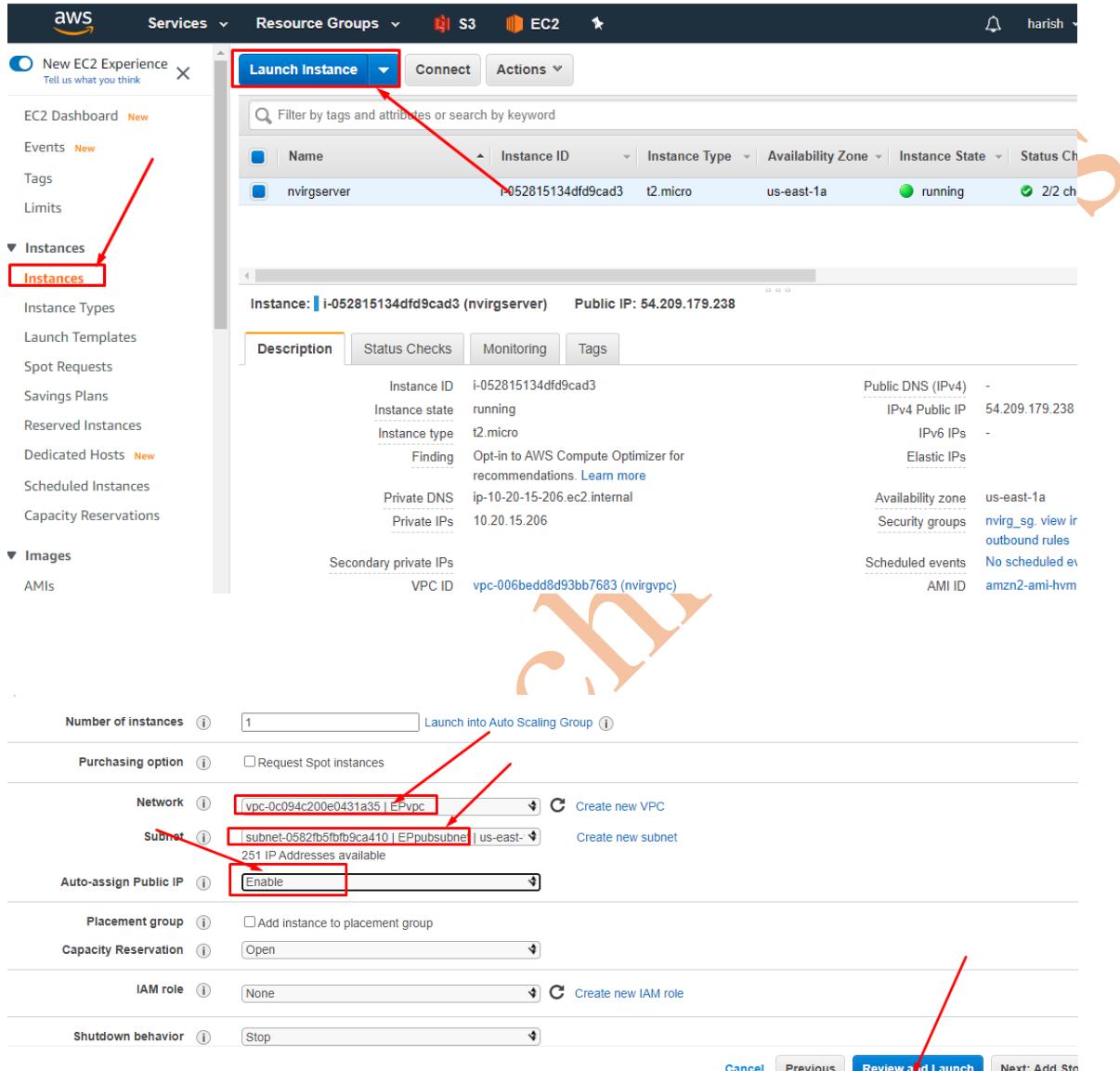
Associated subnets subnet-0582fb5fbfb9ca410

Subnet ID	IPv4 CIDR	IPv6 CIDR	Current Route Table
subnet-0582fb5fbfb9ca410 EPpubsubnet	10.30.15.0/24	-	Main

* Required Cancel Save



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The screenshot shows the AWS EC2 Instances page. On the left sidebar, 'Instances' is selected. In the main pane, an instance named 'EPPubServer' is listed as 'running'. The instance details panel shows the following information:

Instance ID	Public IP	Private IP
i-0e744541408d21189	184.73.36.44	10.30.15.63

Below the instance details, a terminal window displays the following command being run:

```
[ec2-user@ip-10-30-15-63 ~]$ sudo hostnamectl set-hostname EPPubServer  
[ec2-user@ip-10-30-15-63 ~]$ bash  
[ec2-user@EPPubServer ~]$
```

Let's Configure Private Section:

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The screenshot shows the AWS VPC Route Tables page. On the left, there's a sidebar for VPC management with options like 'Route Tables' highlighted. The main area displays a table of existing route tables, with one row selected ('EPpubroute'). A red arrow points from the 'Create route table' button at the top left of the main content area to the 'Create route table' form below. Another red arrow points from the 'Name tag' field in the form to the 'EPprivroute' value. A third red arrow points from the 'VPC*' dropdown to the 'vpc-0c094c200e0431a35' value. A large orange 'DVS' watermark is overlaid on the bottom left.

Name	Route Table ID	Explicit subnet association	Edge associations	Main
route_harish	rtb-06cbb8ec6e0319ce8	subnet-0dec320101e1ed04d	-	Yes
nviroute	rtb-0948efd8010529379	subnet-0fe7e0b760ffe8f38	-	Yes
blrroute	rtb-05e00f913dea9f01e	subnet-0d82fd13c1ed9eed9	-	Yes
EPpubroute	rtb-0467555f9e74d21fd	subnet-0582fb5fb9ca410	-	Yes
	rtb-9b2f53e5	-	-	Yes

Create route table

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

Name tag: EPprivroute

VPC*: vpc-0c094c200e0431a35

Key (128 characters maximum) | Value (256 characters maximum)

This resource currently has no tags

Add Tag 50 remaining (Up to 50 tags maximum)

Cancel Create

DVS Technologies Aws & Devops

New VPC Experience
Tell us what you think

Services ▾ Resource Groups ▾ S3 EC2 ▾

Create subnet Actions ▾

Filter by VPC: Select a VPC

VIRTUAL PRIVATE CLOUD

Your VPCs

Subnets

Route Tables

Internet Gateways New

Egress Only Internet Gateways New

Carrier Gateways New

DHCP Options Sets New

Elastic IPs New

Managed Prefix Lists New

Endpoints

Endpoint Services

Subnets > Create subnet

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	VPC	Availability Zone	VPC CIDRs	IPv4 CIDR block
EPprivsubnet	vpc-0c094c200e0431a35	us-east-1b	CIDR 10.30.0.0/16	10.30.20.0/24

* Required

Cancel Create

Name	Subnet ID	State	VPC	IPv4 CIDR
DONT DELETE	subnet-4d2e8e6c	available	vpc-fae81987 DONT_DE...	172.31.80.0/20
DONT DELETE	subnet-2698ed6b	available	vpc-fae81987 DONT_DE...	172.31.16.0/20
DONT DELETE	subnet-133ea11d	available	vpc-fae81987 DONT_DE...	172.31.64.0/20
DONT DELETE	subnet-e6cd6880	available	vpc-fae81987 DONT_DE...	172.31.0.0/20
DONT DELETE	subnet-e99d75d8	available	vpc-fae81987 DONT_DE...	172.31.48.0/20
DONT DELETE	subnet-4320861c	available	vpc-fae81987 DONT_DE...	172.31.32.0/20
subnet_harish	subnet-0dec320101e1ed04d	available	vpc-073344e7a80c54e03 ...	10.10.15.0/24
blrpubsub1	subnet-0d82fd13c1ed9eed9	available	vpc-0fc9cea8032b12130 ...	192.165.15.0/24
EPpubsubnet	subnet-0582fb5fbfb9ca410	available	vpc-0c094c200e0431a35 ...	10.30.15.0/24
nvirgpubsub	subnet-0fe7e0b760ffe8f38	available	vpc-006bedd8d93bb7683 ...	10.20.15.0/24

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The screenshot shows the AWS VPC Route Tables page. On the left sidebar, under 'Route Tables', a red box highlights the 'EPprivroute' entry. In the main content area, the 'Subnet Associations' tab is selected, and a red box highlights the 'Edit subnet associations' button. A large orange arrow points from the highlighted 'EPprivroute' to the 'Edit subnet associations' button.

Route Tables > Edit subnet associations

Edit subnet associations

Route table rtb-030d9b07cd8ab10a1 (EPprivroute)

Associated subnets subnet-0131177856ba797b8

Subnet ID	IPv4 CIDR	IPv6 CIDR	Current Route Table
subnet-0582fb5fb9ca410 EPpubsubnet	10.30.15.0/24	-	rtb-0467555f9e74d21fd
subnet-0131177856ba797b8 EPprivsubnet	10.30.20.0/24	-	Main

* Required

Cancel Save

Now let's create our Private Ec2 server:

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The screenshot shows the AWS EC2 Instances page. On the left, there's a sidebar with options like EC2 Dashboard, Events, Tags, Limits, Instances (with Instances selected), Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts (New), Scheduled Instances, Capacity Reservations, and Images. The main area displays a table of instances. A red arrow points from the 'Launch Instance' button at the top left of the main content area towards the Instances table.

Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

This screenshot shows the 'Launch Instance' configuration step. It includes fields for the number of instances (set to 1), purchasing option (checkbox for Request Spot instances), VPC selection (vpc-0c094c200e0431a35 | EPvpc), subnet selection (subnet-0131177856ba797b8 | EPprivsubnet | us-eas), and auto-assigning a public IP (checkbox set to 'Enable'). Other fields include Placement group (checkbox for adding to a placement group), Capacity Reservation (set to Open), IAM role (None), and Shutdown behavior (Stop). At the bottom are buttons for Cancel, Previous, Review and Launch (highlighted in blue), and Next: Add Storage.

A large orange 'DV' watermark is overlaid on the left side of the form. Red annotations are present: 'It's not required' is written above the 'Request Spot instances' checkbox, and 'for priv. subnet' is written above the 'EPprivsubnet' dropdown.

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New EC2 Experience Tell us what you think X

EC2 Dashboard New

Events New

Tags

Limits

Instances Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts New

Scheduled Instances

Capacity Reservations

Images

Launch Instance Connect Actions

Filter by tags and attributes or search by keyword

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS
EPPrivServer	i-03a1d23c4b49d687a	t2.micro	us-east-1b	running	Initializing	None	-
EPPubServer	i-0e744541408d21189	t2.micro	us-east-1a	running	2/2 checks ...	None	-
nvrserver	i-052815134dfd9cad3	t2.micro	us-east-1a	running	2/2 checks ...	None	-

Instance: i-03a1d23c4b49d687a (EPPrivServer) Public IP: 3.237.61.79

Description Status Checks Monitoring Tags

Instance ID	i-03a1d23c4b49d687a	Public DNS (IPv4)	-
Instance state	running	IPv4 Public IP	3.237.61.79
Instance type	t2.micro	IPv6 IPs	-
Finding	Opt-in to AWS Compute Optimizer for recommendations. Learn more	Elastic IPs	-
Private DNS	ip-10-30-20-251.ec2.internal	Availability zone	us-east-1b
Private IPs	10.30.20.251	Security groups	EPvpc_sg, view inbound rules, view outbound rules

Logging in to Private Server:

New EC2 Experience Tell us what you think X

2 Dashboard New

Events New

Instances Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts New

Scheduled Instances

Capacity Reservations

Images

Launch Instance Connect Actions

Filter by tags and attributes or search by keyword

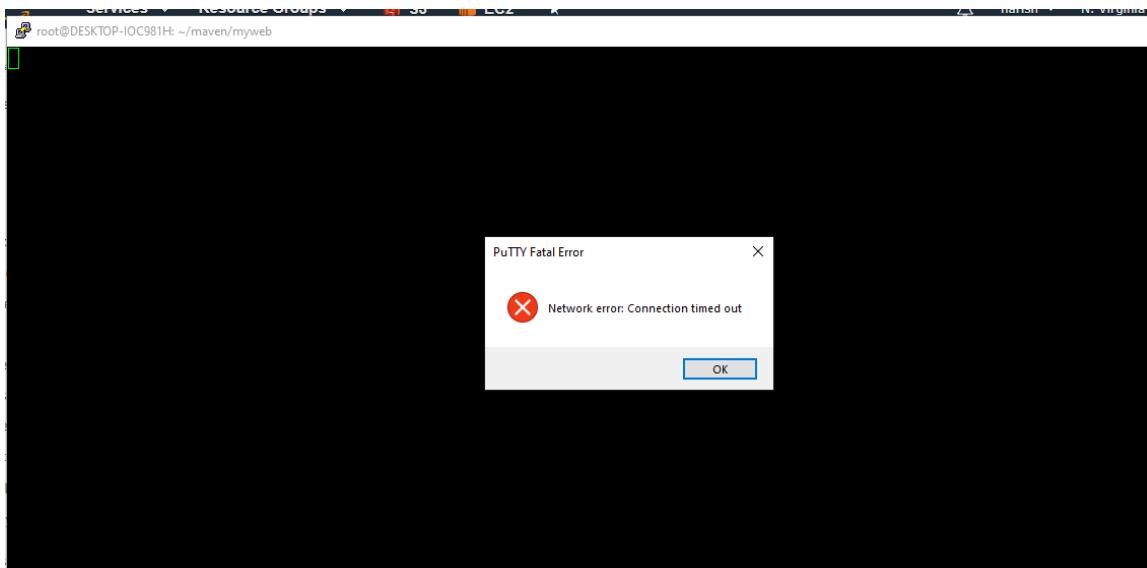
Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS
EPPrivServer	i-03a1d23c4b49d687a	t2.micro	us-east-1b	running	Initializing	None	-
EPPubServer	i-0e744541408d21189	t2.micro	us-east-1a	running	2/2 checks ...	None	-
nvrserver	i-052815134dfd9cad3	t2.micro	us-east-1a	running	2/2 checks ...	None	-

Instance: i-03a1d23c4b49d687a (EPPrivServer) Public IP: 3.237.61.79

Description Status Checks Monitoring Tags

Instance ID	i-03a1d23c4b49d687a	Public DNS (IPv4)	-
Instance state	running	IPv4 Public IP	3.237.61.79
Instance type	t2.micro	IPv6 IPs	-
Finding	Opt-in to AWS Compute Optimizer for recommendations. Learn more	Elastic IPs	-
Private DNS	ip-10-30-20-251.ec2.internal	Availability zone	us-east-1b
Private IPs	10.30.20.251	Security groups	EPvpc_sg, view inbound rules, view outbound rules
Secondary private IPs	vpc-0c094c200e0431a35 (EPvpc)	Scheduled events	No scheduled events
VPC ID	vpc-0c094c200e0431a35 (EPvpc)	AMI ID	amzn2-ami-hvm-2 0.20200722.0-x86_64

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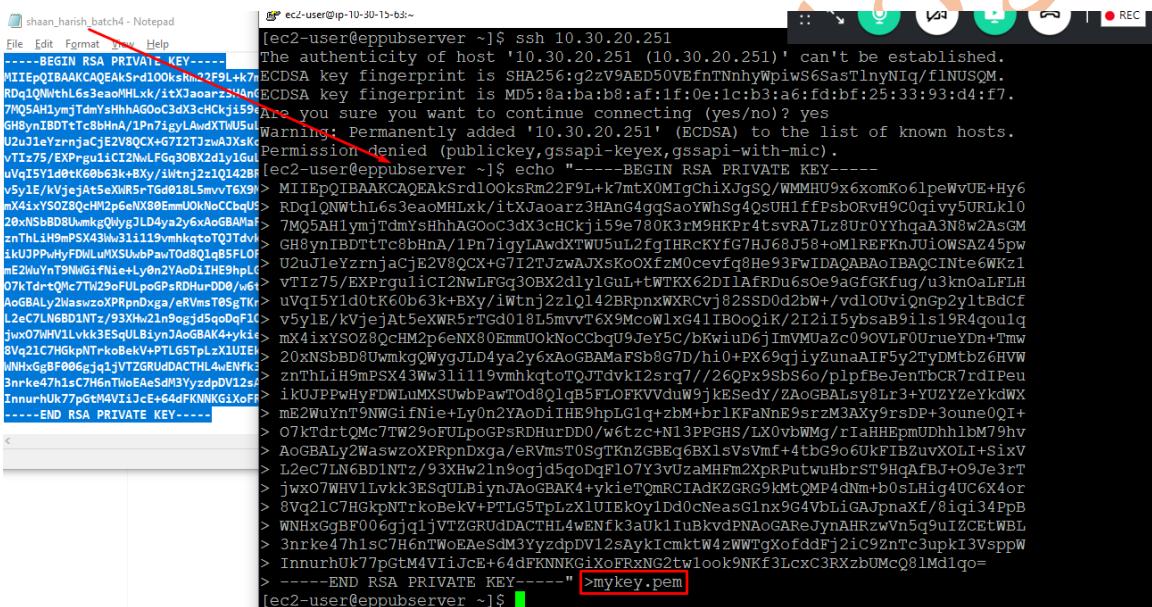
Perform the below to login to private server:

The screenshot shows the AWS EC2 Instances page. On the left, there's a sidebar with 'Instances' selected. In the main area, a table lists three instances. The second instance, 'EPPubServer', has a blue selection box around it and is highlighted with a red box. Below the table, the details for 'Instance: i-0e744541408d21189 (EPPubServer)' are shown. The 'Description' tab is selected. Under 'Public DNS (IPv4)', the 'IPv4 Public IP' field is highlighted with a red box and contains the value '184.73.36.44'.

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```
[ec2-user@eppubserver ~]$ ssh 10.30.20.251 → priv server ip
The authenticity of host '10.30.20.251 (10.30.20.251)' can't be established.
ECDSA key fingerprint is SHA256:g2zv9AED50VEfnTNhyWpiws6SasTlnyNIq/f1nUSQM.
ECDSA key fingerprint is MD5:8a:ba:b8:af:1f:0e:1c:b3:a6:fd:bf:25:33:93:d4:f7.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '10.30.20.251' (ECDSA) to the list of known hosts.
Permission denied (publickey,gssapi-keyex,gssapi-with-mic).
[ec2-user@eppubserver ~]$
```

```
[ec2-user@eppubserver ~]$ ssh 10.30.20.251
The authenticity of host '10.30.20.251 (10.30.20.251)' can't be established.
ECDSA key fingerprint is SHA256:g2zv9AED50VEfnTNhyWpiws6SasTlnyNIq/f1nUSQM.
ECDSA key fingerprint is MD5:8a:ba:b8:af:1f:0e:1c:b3:a6:fd:bf:25:33:93:d4:f7.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '10.30.20.251' (ECDSA) to the list of known hosts.
Permission denied (publickey,gssapi-keyex,gssapi-with-mic).
[ec2-user@eppubserver ~]$ echo "-----BEGIN RSA PRIVATE KEY-----"
-----BEGIN RSA PRIVATE KEY-----
```



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```
[ec2-user@eppubserver ~]$ ssh -i mykey.pem ec2-user@10.30.20.251
[ec2-user@ip-10-30-20-251 ~]$ ls -ld ~/.ssh/
drwx----- 2 ec2-user ec2-user 29 Aug 14 15:56 /home/ec2-user/.ssh/
[ec2-user@epprivserver ~]$ ls -ld ~/.ssh/authorized_keys
-rw----- 1 ec2-user ec2-user 403 Aug 14 15:56 /home/ec2-user/.ssh/authorized_keys
[ec2-user@epprivserver ~]$
```

The screenshot shows two terminal windows side-by-side. The left window has a red border and displays the command: [user@ip-10-30-15-63:~]\$. The right window also has a red border and displays the command: [ec2-user@ip-10-30-20-251:~]\$. Both windows show a black background with white text. Red arrows point from the top of each window's title bar towards the center of the screen, indicating they are separate windows.

Now let's configure AWS CLI on both the servers:

Generate AWS CLI Tokens:

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The screenshot shows the AWS IAM 'Add user' wizard. On the left, a sidebar menu for 'Identity and Access Management (IAM)' is visible, with 'Access management' expanded and 'Users' selected. A red box highlights the 'Users' link. At the top right of the main window, there are 'Add user' and 'Delete user' buttons. Below them is a search bar and a table listing existing users. The table columns include 'User name', 'Groups', 'Access key age', 'Password age', and 'Last act'. Several users are listed with their status and last activity dates.

Set user details

You can add multiple users at once with the same access type and permissions. [Learn more](#)

User name* [Add another user](#)

Select AWS access type

Select how these users will access AWS. Access keys and autogenerated passwords are provided in the last step. [Learn more](#)

Access type* **Programmatic access**
Enables an **access key ID** and **secret access key** for the AWS API, CLI, SDK, and other development tools.

AWS Management Console access
Enables a **password** that allows users to sign-in to the AWS Management Console.

* Required Cancel Next: Permissions

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Add user

1 2 3 4 5

Set permissions

Add user to group

Copy permissions from existing user

Attach existing policies directly

Create policy

Filter policies

Search

Showing 576 results

Policy name

AdministratorAccess

AlexaForBusinessDeviceSetup

AlexaForBusinessFullAccess

AlexaForBusinessGatewayExecution

AlexaForBusinessLifesizeDelegatedAccessPolicy

AlexaForBusinessPolicyDelegatedAccessPolicy

Type

Job function Permissions policy (1)

AWS managed

None

Cancel

Previous

Next: Tags

Permissions boundary

Permissions boundary is not set

Permissions summary

The following policies will be attached to the user shown above.

Type

Name

Managed policy

AdministratorAccess

Tags

No tags were added.

Cancel

Previous

Create user

Success

You successfully created the users shown below. You can view and download user security credentials. You can also email users instructions for signing in to the AWS Management Console. This is the last time these credentials will be available to download. However, you can create new credentials at any time.

Users with AWS Management Console access can sign-in at: <https://90781406141.signin.aws.amazon.com/console>

Download .csv

User

Access key ID

Secret access key

EPUSEN

AKIA5GXPURKIRRWSKTP

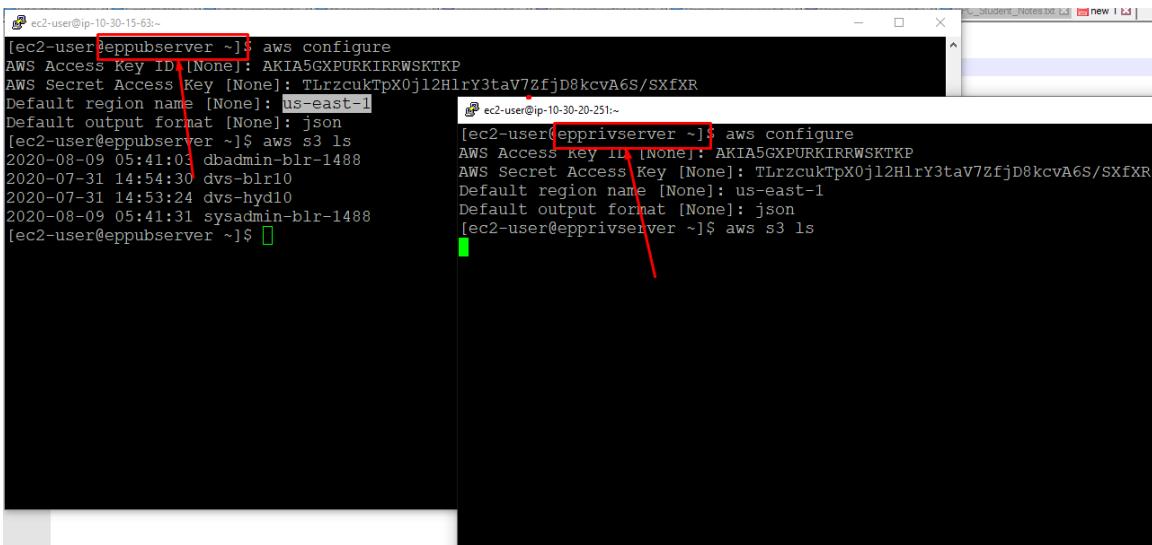
TlrcukTpX0j2HrY3taV7zfj

D8kcvA6S/SXfXR Hide

Keep it safely

Close

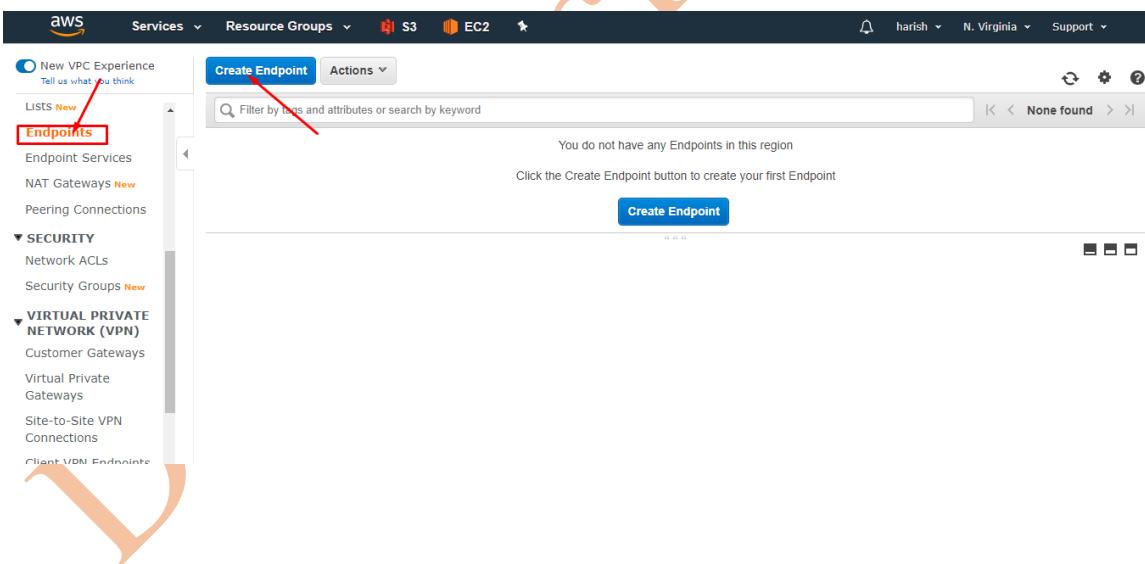
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```
[ec2-user@ip-10-30-15-63:~] aws configure
AWS Access Key ID [None]: AKIA5GXPURKIRRWSTKTP
AWS Secret Access Key [None]: TLrzckTpX0j12HlrY3taV7ZfjD8kcvA6S/SXfxR
Default region name [None]: us-east-1
Default output format [None]: json
[ec2-user@eppubserver ~]$ aws s3 ls
2020-08-09 05:41:03 dbadmin-blr-1488
2020-07-31 14:54:30 dvs-blr10
2020-07-31 14:53:24 dvs-hyd10
2020-08-09 05:41:31 sysadmin-blr-1488
[ec2-user@eppubserver ~]$ 

[ec2-user@ip-10-30-20-251:~] aws configure
AWS Access Key ID [None]: AKIA5GXPURKIRRWSTKTP
AWS Secret Access Key [None]: TLrzckTpX0j12HlrY3taV7ZfjD8kcvA6S/SXfxR
Default region name [None]: us-east-1
Default output format [None]: json
[ec2-user@epprivserver ~]$ aws s3 ls
```

If you observe above we are not getting response from my AWS S3. This is because of Internet connectivity. In order to resolve this we are going to configure our ENDPOINT for private subnet.



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A VPC endpoint allows you to securely connect your VPC to another service.
An interface endpoint is powered by [PrivateLink](#), and uses an elastic network interface (ENI) as an entry point for traffic destined to the service.
A gateway endpoint serves as a target for a route in your route table for traffic destined for the service.

Service category AWS services Find service by name Your AWS Marketplace services

Service Name com.amazonaws.us-east-1.s3 [i](#)

Service Name	Owner	Type
com.amazonaws.us-east-1.s3	amazon	Gateway

VPC vpc-0c094c200e0431a35 [C](#) [i](#)

Configure route tables

Filter by attributes
vpc-lae81987 172.31.0.0/16 available DONT_DELETE
vpc-073344e7a80cb54e03 10.10.0.0/16 available vpc_harish
vpc-0fc9cea8032b12130 192.165.0.0/16 available blrvpc
vpc-0c094c200e0431a35 10.30.0.0/16 available EPvpc
vpc-006beddd93bb7683 10.20.0.0/16 available nvirgvpc

Route Table ID Main Associated With

rtb-030d9b07cd8ab10a1 No subnet-0131177856ba797b8 | EPprivsubnet

rtb-0467555f9e74d21fd Yes subnet-0582fb5fbfb9ca410 | EPpubsubnet

Subnets associated with Selected route tables will be able to access this endpoint

Route Table ID	Main	Associated With
<input checked="" type="checkbox"/> rtb-030d9b07cd8ab10a1	No	subnet-0131177856ba797b8 EPprivsubnet
<input type="checkbox"/> rtb-0467555f9e74d21fd	Yes	subnet-0582fb5fbfb9ca410 EPpubsubnet

⚠ Warning

When you use an endpoint, the source IP addresses from your instances in your affected subnets for accessing the AWS service in the same region will be private IP addresses, not public IP addresses. Existing connections from your affected subnets to the AWS service that use public IP addresses may be dropped. Ensure that you don't have critical tasks running when you create or modify an endpoint.

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The screenshot shows the AWS VPC Endpoints console. On the left, a sidebar lists various VPC services: New VPC Experience, Endpoints, NAT Gateways, Peering Connections, SECURITY, VIRTUAL PRIVATE NETWORK (VPN), and TRANSIT. The 'Endpoints' section is selected, showing a table of existing endpoints. A red box highlights the 'Create Endpoint' button at the top of the table. Below the table, a specific endpoint row is selected, with its details shown in a modal window. A red box highlights the 'Endpoint ID' field, which contains 'vpce-0f76f446f98acf721'. Another red box highlights the 'VPC ID' field, which contains 'vpc-0c094c200e0...'. The modal also displays the 'Service name' (com.amazonaws.us-east-1.s3), 'Endpoint type' (Gateway), and 'Status' (available). The creation time is listed as August 14, 2020.

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```
[ec2-user@epprivserver ~]$ aws configure
AWS Access Key ID [None]: AKIA5GXPUKIRRWSTKTP
AWS Secret Access Key [None]: TLrzcukTpX0j12HlrY3taV7ZfjD8kcvA6S/SXfxR
Default region name [None]: us-east-1
Default output format [None]: json
[ec2-user@epprivserver ~]$ aws s3 ls
^C
[ec2-user@epprivserver ~]$ aws s3 ls

Connect timeout on endpoint URL: "https://s3.amazonaws.com/"
[ec2-user@epprivserver ~]$ aws s3 ls
2020-08-09 05:41:03 dbadmin-blr-1488
2020-07-31 14:54:30 dvs-blr10
2020-07-31 14:53:24 dvs-hyd10
2020-08-09 05:41:31 sysadmin-blr-1488
[ec2-user@epprivserver ~]$
```

post Endpoint configuration

```
[ec2-user@ip-10-30-15-63:~]
[ec2-user@eppubserver ~]$ aws s3 ls
2020-08-09 05:41:03 dbadmin-blr-1488
2020-07-31 14:54:30 dvs-blr10
2020-07-31 14:53:24 dvs-hyd10
2020-08-09 05:41:31 sysadmin-blr-1488
[ec2-user@eppubserver ~]$
```

```
[ec2-user@ip-10-30-20-251:~]
[ec2-user@epprivserver ~]$ aws s3 ls
2020-08-09 05:41:03 dbadmin-blr-1488
2020-07-31 14:54:30 dvs-blr10
2020-07-31 14:53:24 dvs-hyd10
2020-08-09 05:41:31 sysadmin-blr-1488
[ec2-user@epprivserver ~]$
```