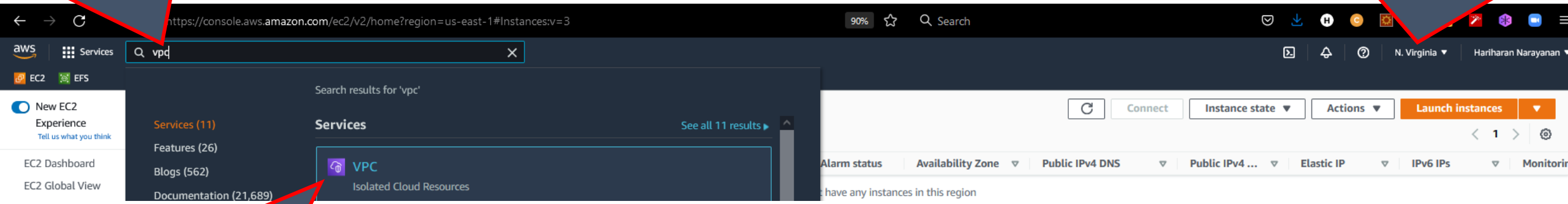
Module 4: VPC Assignment-1

You have been asked to:

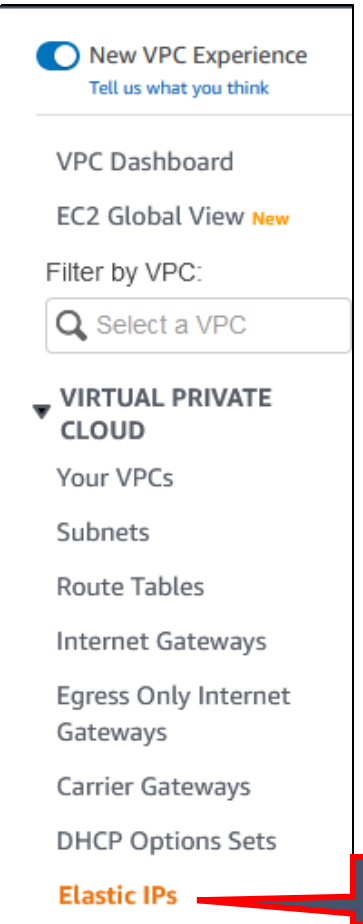
1. Create a VPC with 120.0.0.0/16 CIDR block
2. Create 1 public subnet, 2 private subnets and make sure you connect a NAT gateway for internet connectivity to private subnet

2. Type “VPC” in the search box

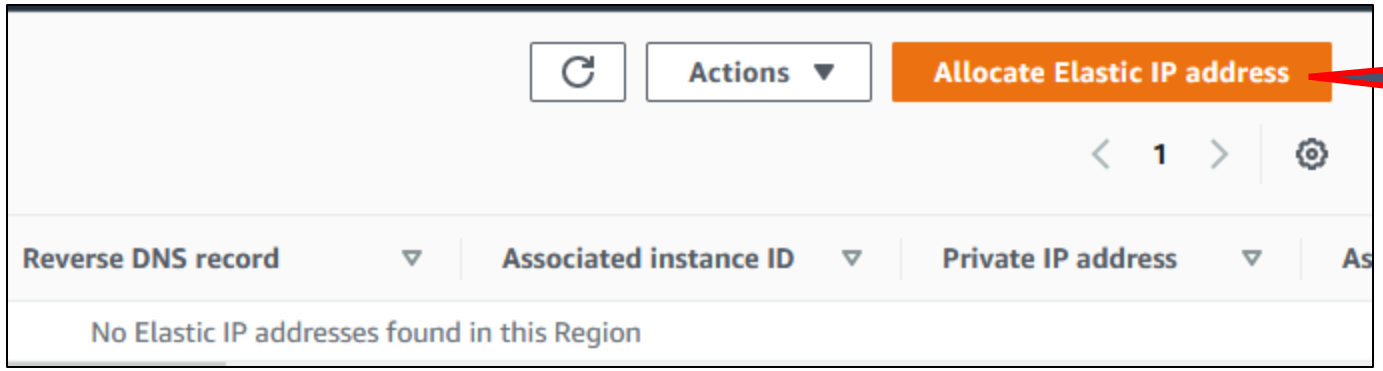
1. Login into AWS. Select N. Virginia



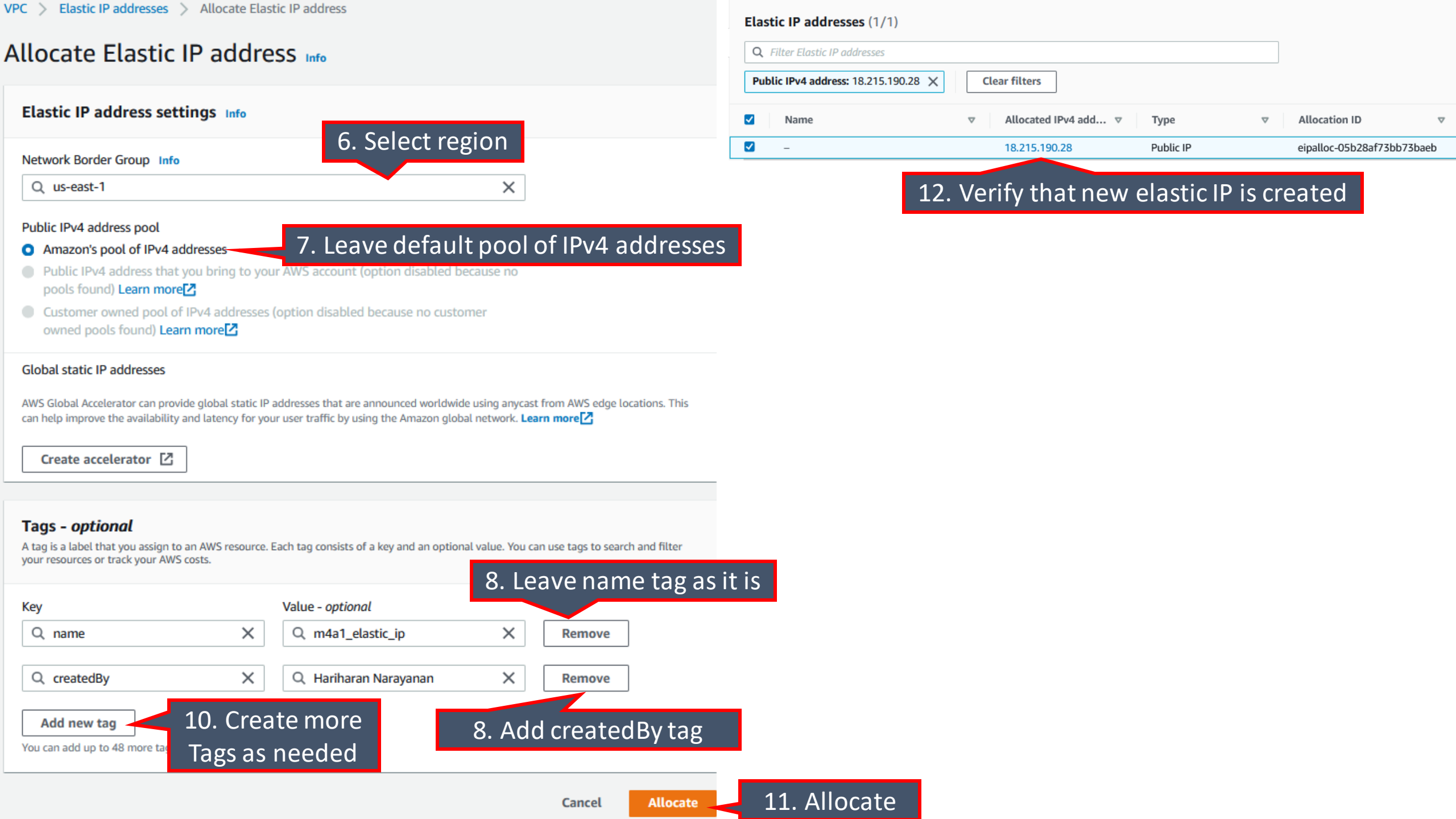
3. Select VPC



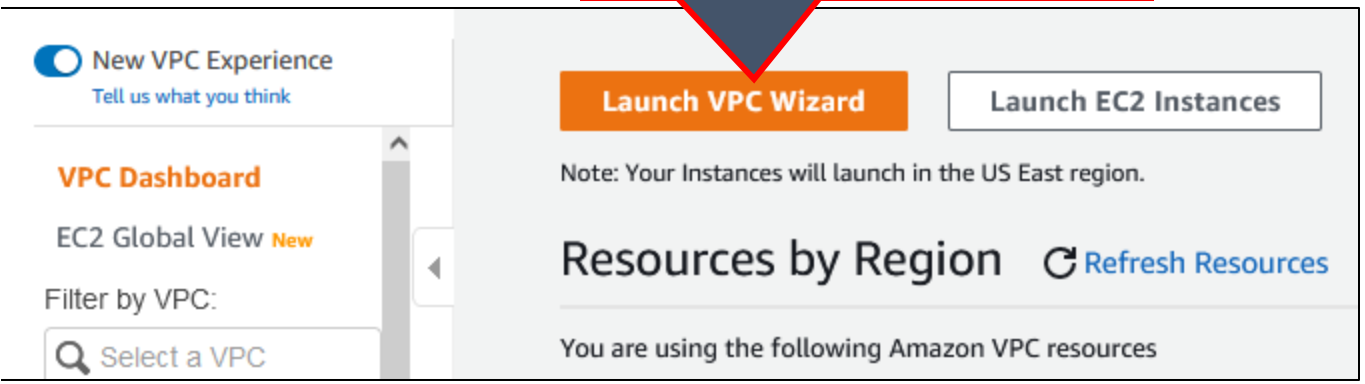
4. Select Elastic IPs



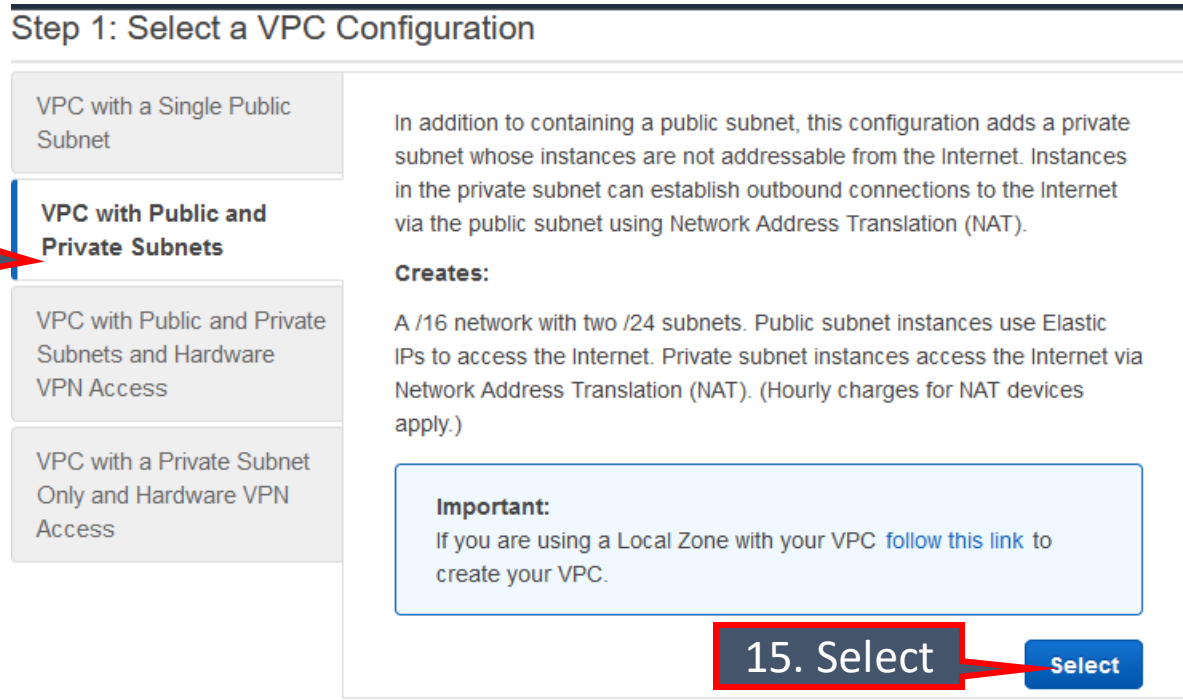
5. Create a new Elastic IP


VPC > Elastic IP addresses > Allocate Elastic IP address
Allocate Elastic IP address Info
Elastic IP address settings Info
6. Select region
Network Border Group Info
us-east-1
Public IPv4 address pool
Amazon's pool of IPv4 addresses
7. Leave default pool of IPv4 addresses
Public IPv4 address that you bring to your AWS account (option disabled because no pools found) Learn more
Customer owned pool of IPv4 addresses (option disabled because no customer owned pools found) Learn more
Global static IP addresses
AWS Global Accelerator can provide global static IP addresses that are announced worldwide using anycast from AWS edge locations. This can help improve the availability and latency for your user traffic by using the Amazon global network. Learn more
Create accelerator
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.
8. Leave name tag as it is
Key
Value - optional
name
m4a1_elastic_ip
Remove
createdBy
Hariharan Narayanan
Remove
8. Add createdBy tag
Add new tag
10. Create more Tags as needed
You can add up to 48 more tag
Cancel
Allocate
11. Allocate
Elastic IP addresses (1/1)
Filter Elastic IP addresses
Public IPv4 address: 18.215.190.28
Clear filters
Name
Allocated IPv4 add...
Type
Allocation ID
–
18.215.190.28
Public IP
eipalloc-05b28af73bb73baeb
12. Verify that new elastic IP is created

13. Launch the VPC wizard



14. Choose to create one public and one private subnet



15. Select

Step 2: VPC with Public and Private Subnets

IPv4 CIDR block:* 10.0.0.0/16 (65531 IP addresses available)

IPv6 CIDR block:
- (●) No IPv6 CIDR Block
- ( ) Amazon provided IPv6 CIDR block
- ( ) IPv6 CIDR block owned by me

VPC name: m4a1_vpc_1

16. Give a name to the VPC

Public subnet's IPv4 CIDR:* 10.0.0.0/24 (251 IP addresses available)

Availability Zone:* No Preference

Public subnet name: m4a1_vpc_1_subnet_public

17. Name the public subnet

Private subnet's IPv4 CIDR:* 10.0.1.0/24 (251 IP addresses available)

Availability Zone:* No Preference

Private subnet name: m4a1_vpc_1_subnet_private

18. Name the private subnet

You can add more subnets after Amazon Web Services creates the VPC.

Specify the details of your NAT gateway (NAT gateway rates apply).

Elastic IP Allocation ID:* eipalloc-05b28af73bb73baeb

19. Select the elastic IP created in (7)

Service endpoints

Add Endpoint

Enable DNS hostnames:* (●) Yes ( ) No

Hardware tenancy:* Default

20. Create VPC. Wait for the process to complete

Subnets (8) Info

Filter subnets

Name	Subnet ID
m4a1_vpc_1_subnet_public	subnet-0143ffb7cb5fb4127
m4a1_vpc_1_subnet_private	subnet-01c76297ae4a15cb3
–	subnet-06e773d674ee5fd8a
–	subnet-060af38694e37fae9
–	subnet-01d3cea107de0cdf4
–	subnet-099436460fb3ecea4
–	subnet-0e40cf59fbb32cddb
–	subnet-026908bd9ed58b20f

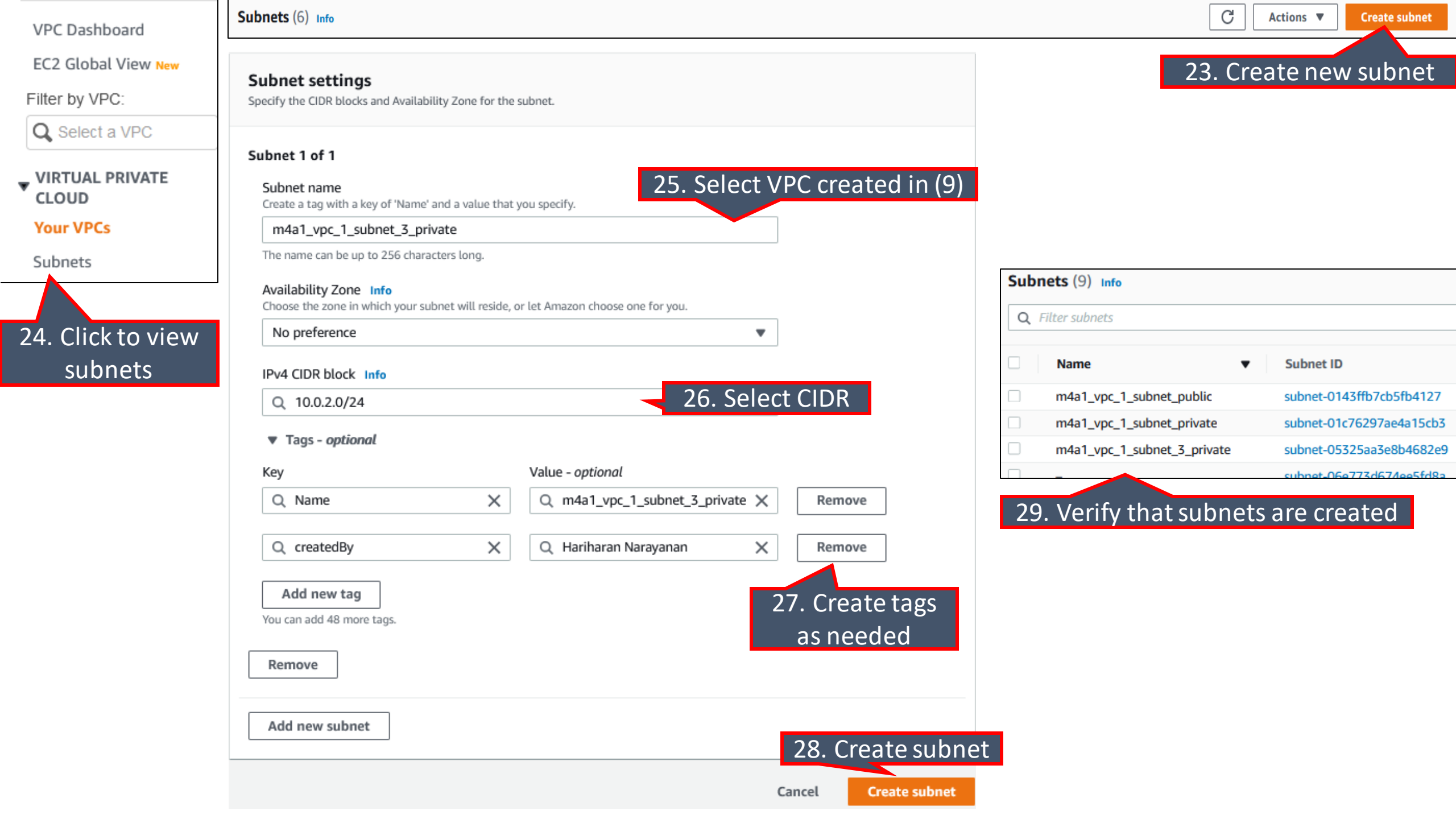
22. Verify that subnets are created as expected.

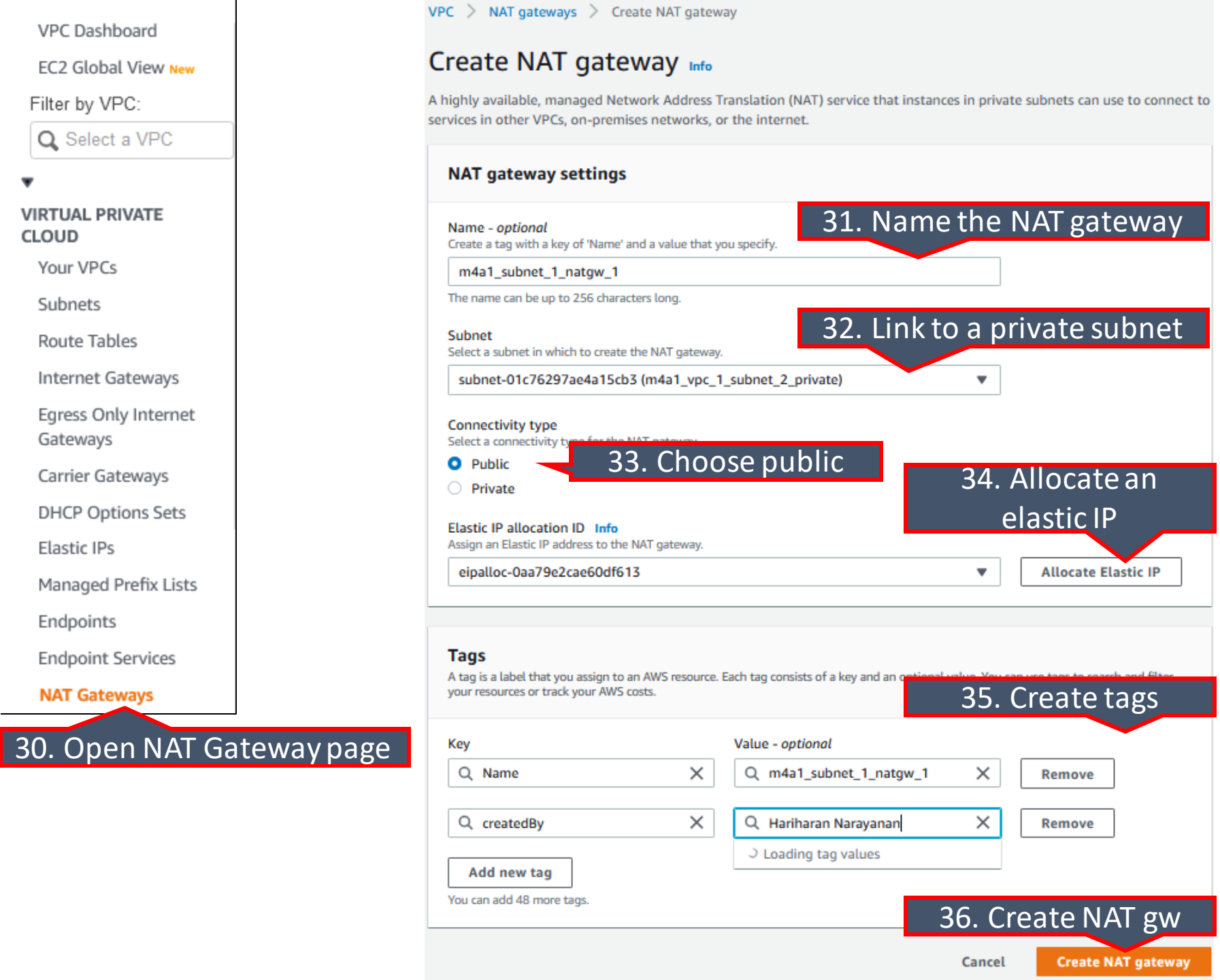
21. New VPC must be visible in the view “Your VPCs”

Your VPCs (2) Info

Filter VPCs

Name	VPC ID	State	IPv4 CIDR
m3a1_vpc_1	vpc-0ee4080ece48afd32	Available	120.0.0.0/16
–	vpc-05a4f109d9ab4c43c	Available	172.31.0.0/16


VPC Dashboard
EC2 Global View New
Filter by VPC:
Select a VPC
VIRTUAL PRIVATE CLOUD
Your VPCs
Subnets
24. Click to view subnets
Subnets (6) Info
Actions
Create subnet
23. Create new subnet
Subnet settings
Specify the CIDR blocks and Availability Zone for the subnet.
Subnet 1 of 1
Subnet name
Create a tag with a key of 'Name' and a value that you specify.
m4a1_vpc_1_subnet_3_private
25. Select VPC created in (9)
The name can be up to 256 characters long.
Availability Zone Info
Choose the zone in which your subnet will reside, or let Amazon choose one for you.
No preference
IPv4 CIDR block Info
10.0.2.0/24
26. Select CIDR
Tags - optional
Key
Value - optional
Name
m4a1_vpc_1_subnet_3_private
Remove
createdBy
Hariharan Narayanan
Remove
Add new tag
You can add 48 more tags.
27. Create tags as needed
Remove
Add new subnet
28. Create subnet
Cancel
Create subnet
Subnets (9) Info
Filter subnets
Name
Subnet ID
m4a1_vpc_1_subnet_public
subnet-0143ffb7cb5fb4127
m4a1_vpc_1_subnet_private
subnet-01c76297ae4a15cb3
m4a1_vpc_1_subnet_3_private
subnet-05325aa3e8b4682e9
29. Verify that subnets are created


VPC Dashboard
EC2 Global View New
Filter by VPC:
Select a VPC
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
30. Open NAT Gateway page
VPC > NAT gateways > Create NAT gateway
Create NAT gateway Info
A highly available, managed Network Address Translation (NAT) service that instances in private subnets can use to connect to services in other VPCs, on-premises networks, or the internet.
NAT gateway settings
Name - optional
Create a tag with a key of 'Name' and a value that you specify.
m4a1_subnet_1_natgw_1
31. Name the NAT gateway
The name can be up to 256 characters long.
Subnet
Select a subnet in which to create the NAT gateway.
subnet-01c76297ae4a15cb3 (m4a1_vpc_1_subnet_2_private)
32. Link to a private subnet
Connectivity type
Select a connectivity type for the NAT gateway.
Public
Private
33. Choose public
Elastic IP allocation ID Info
Assign an Elastic IP address to the NAT gateway.
eipalloc-0aa79e2cae60df613
Allocate Elastic IP
34. Allocate an elastic IP
Tags
A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.
35. Create tags
Key
Value - optional
Name
m4a1_subnet_1_natgw_1
Remove
createdBy
Hariharan Narayanan
Loading tag values
Remove
Add new tag
You can add 48 more tags.
36. Create NAT gw
Cancel
Create NAT gateway