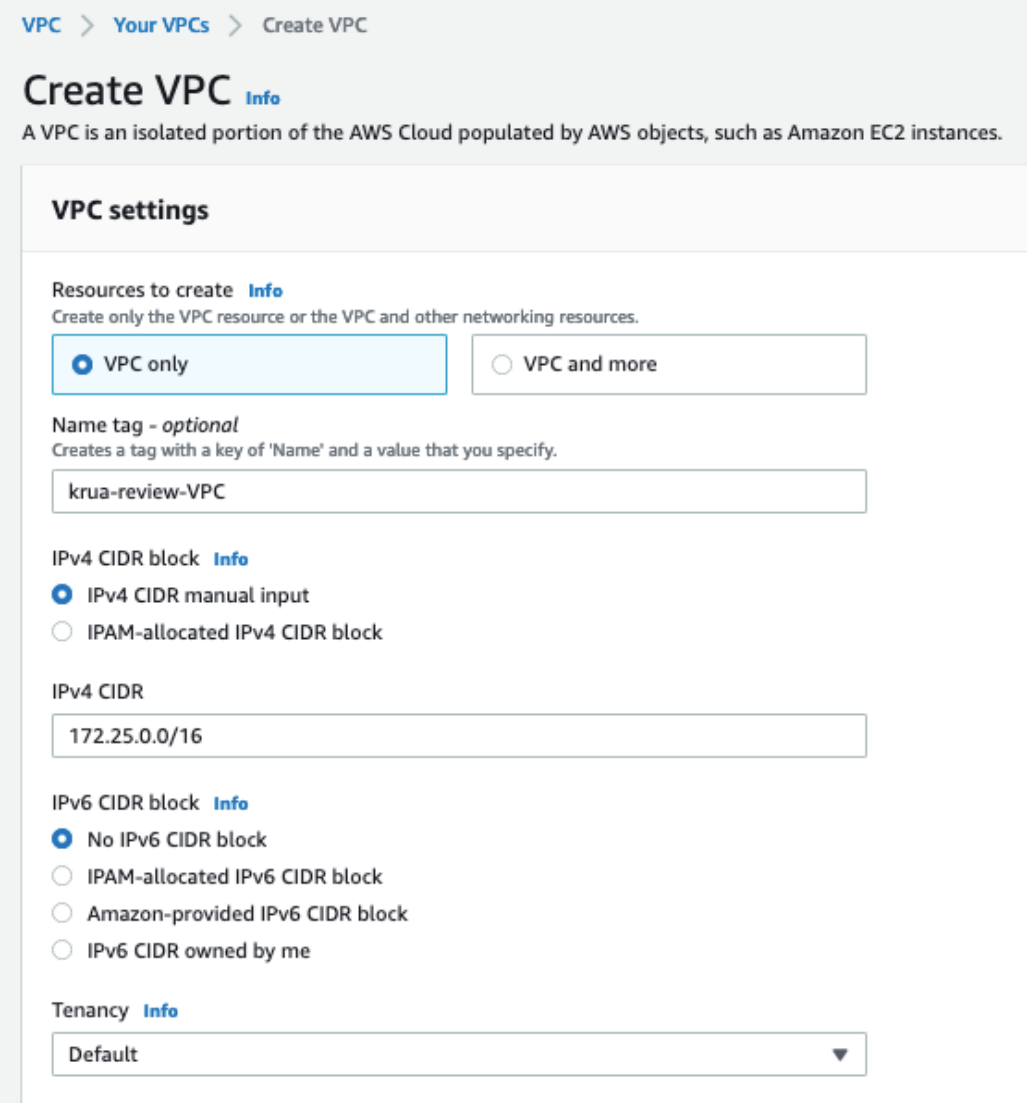
Deployment 3 Documentation
Caden Hong

VPC Setup

Creating a VPC



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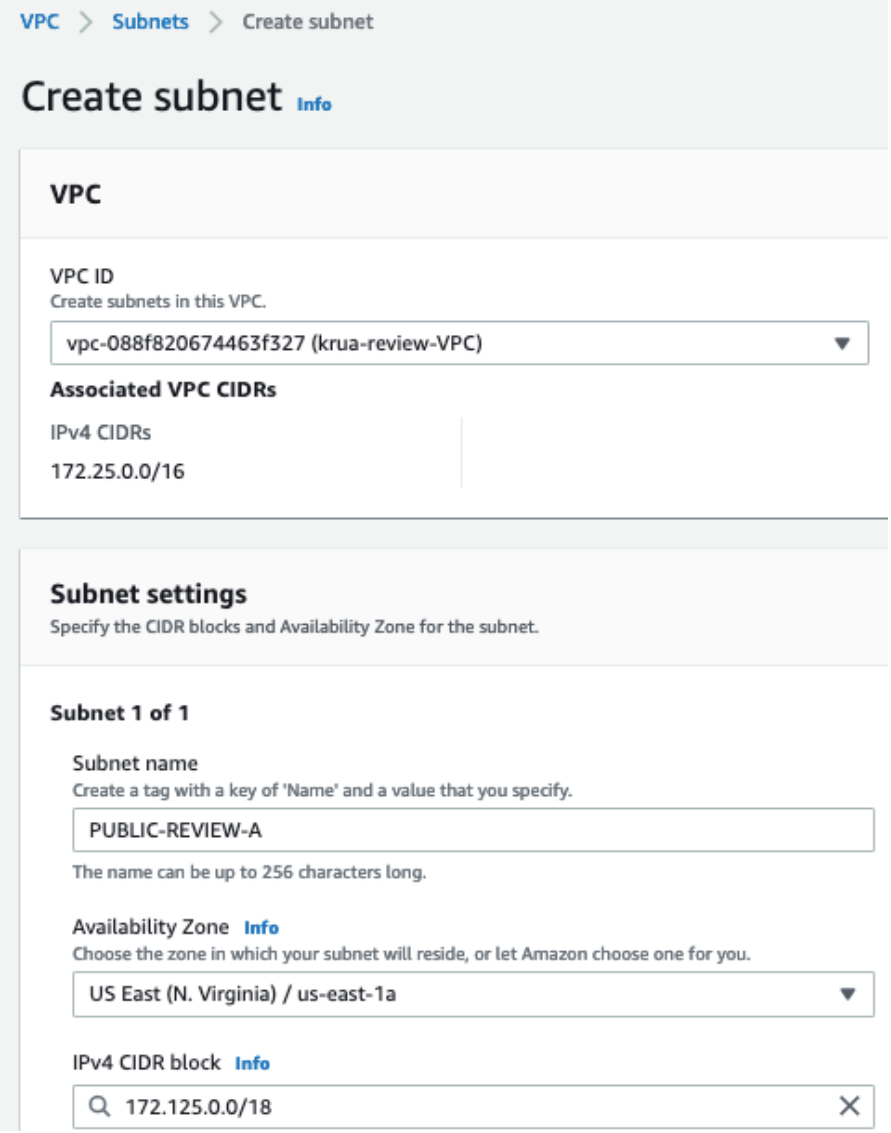
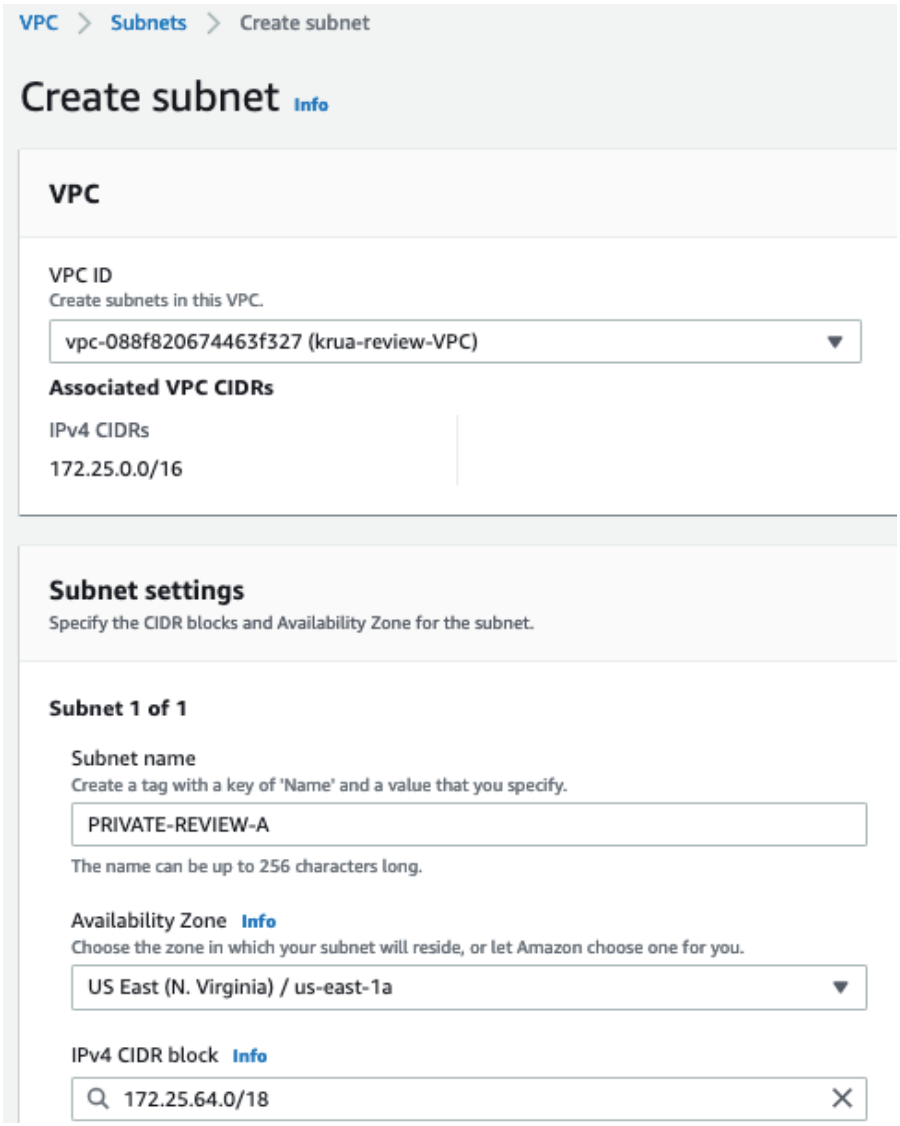
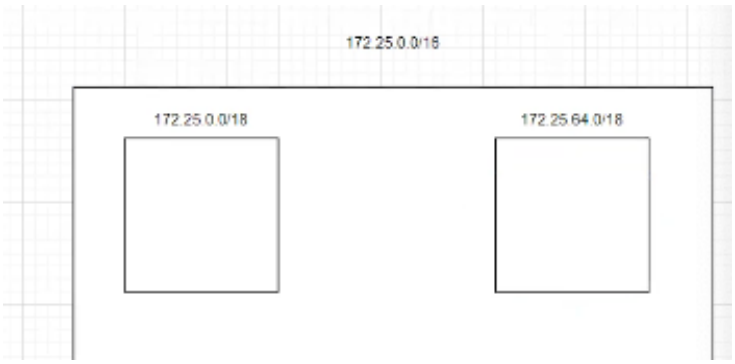
Creating Subnets

Public Subnet



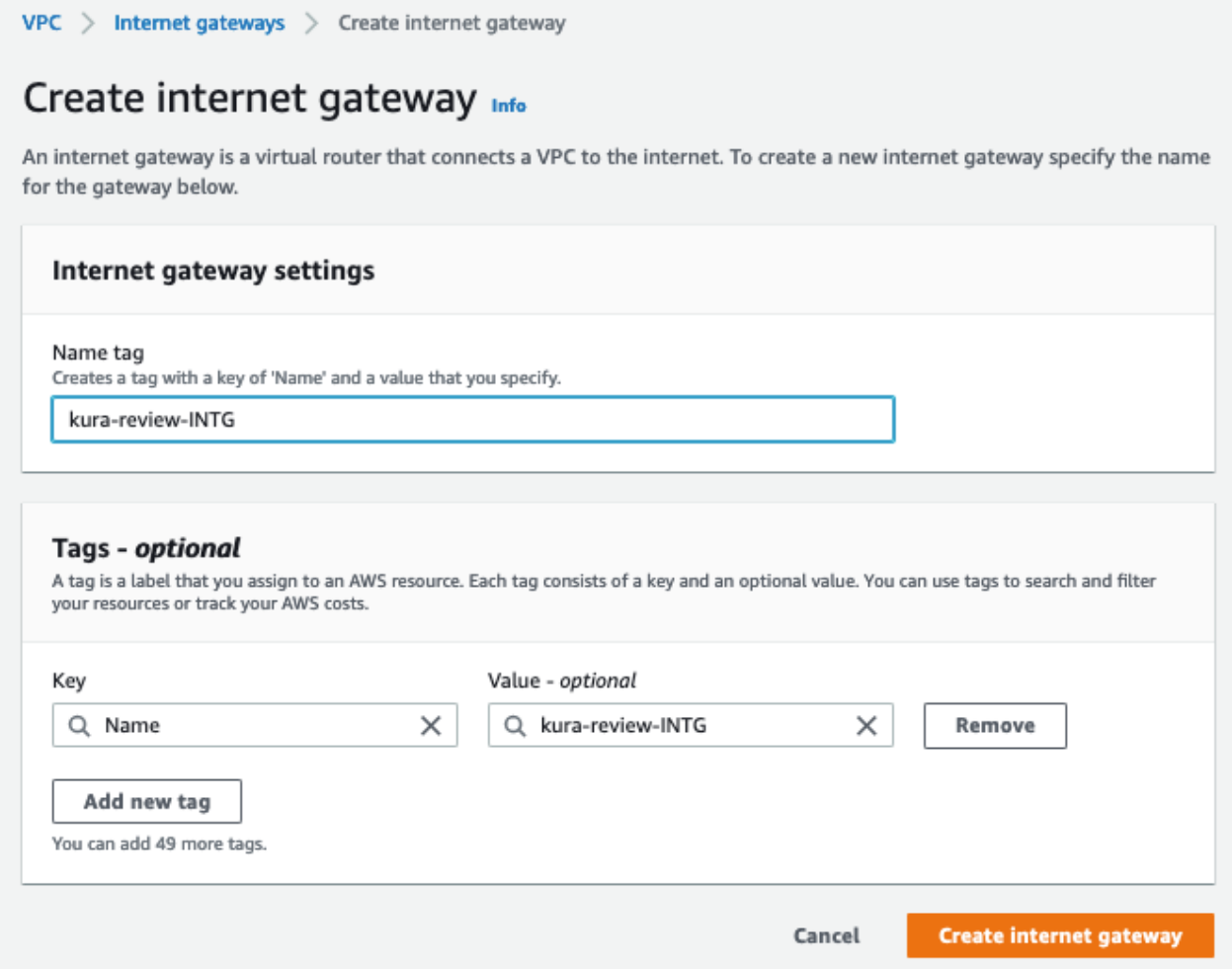
Private Subnet

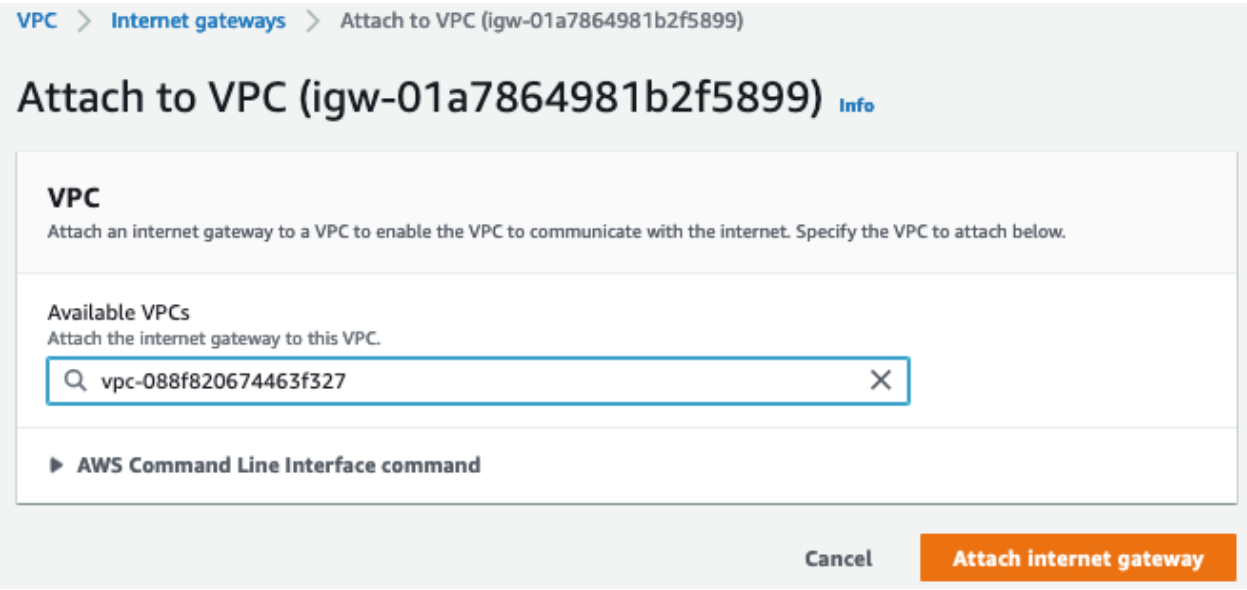




The entire diagram has 4 squares inside the CIDR block - since we are splitting /16 into 4, we are assigning /18 to each subnet block (if in half, we'd do /17)

Attaching Internet Gateway

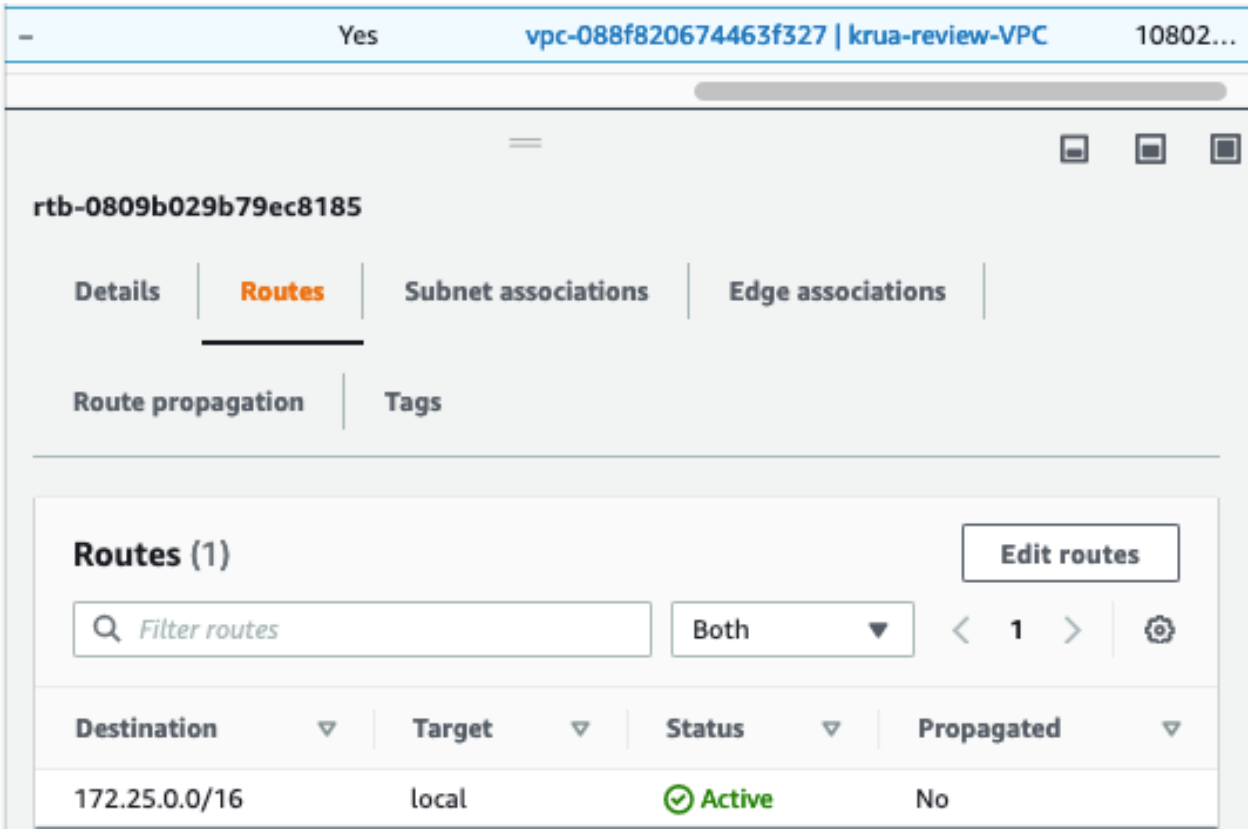




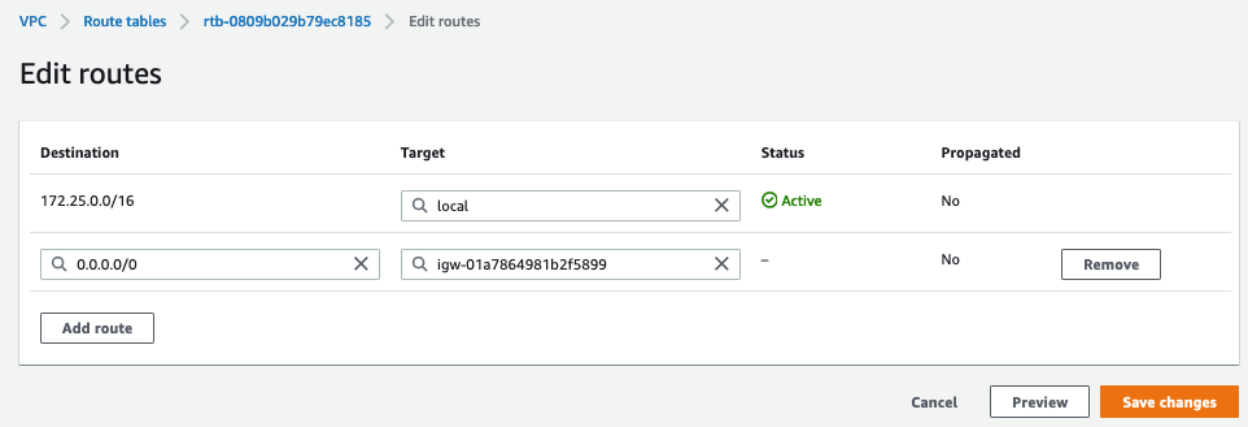
Create Internet Gateway and then attach to the VPC created

Creating Route Tables

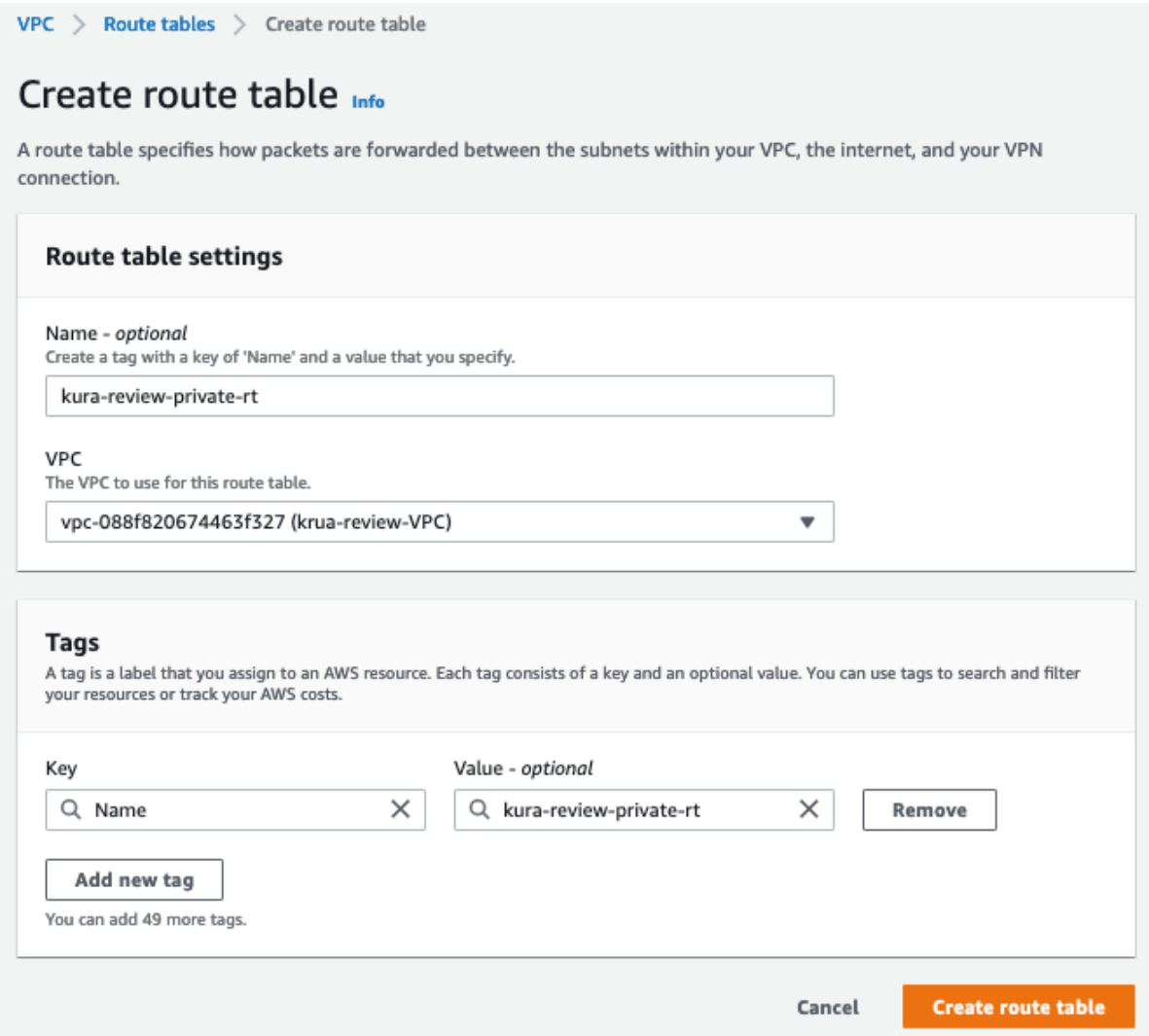
Editing Default to Include Internet Gateway

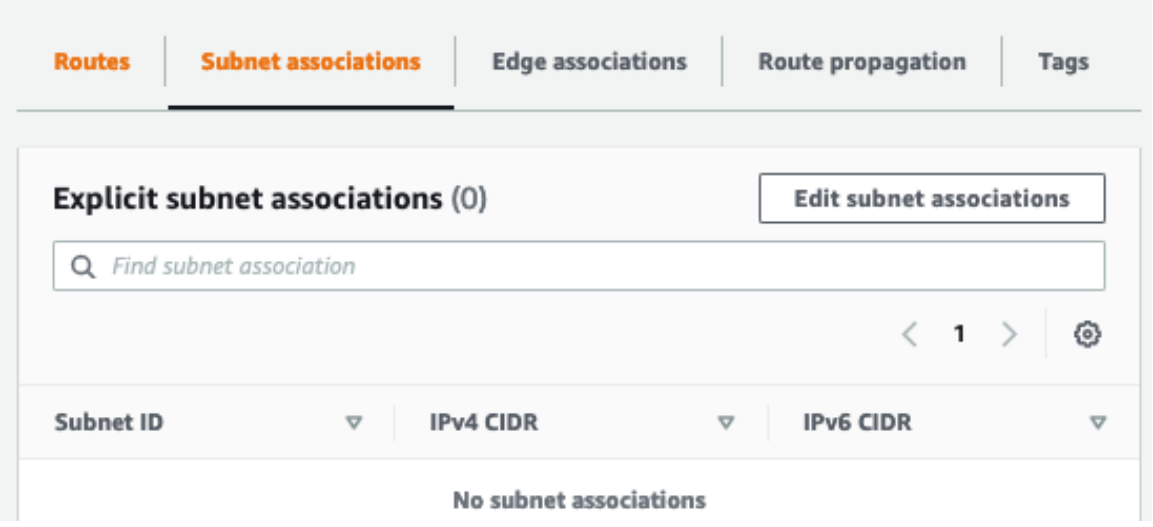


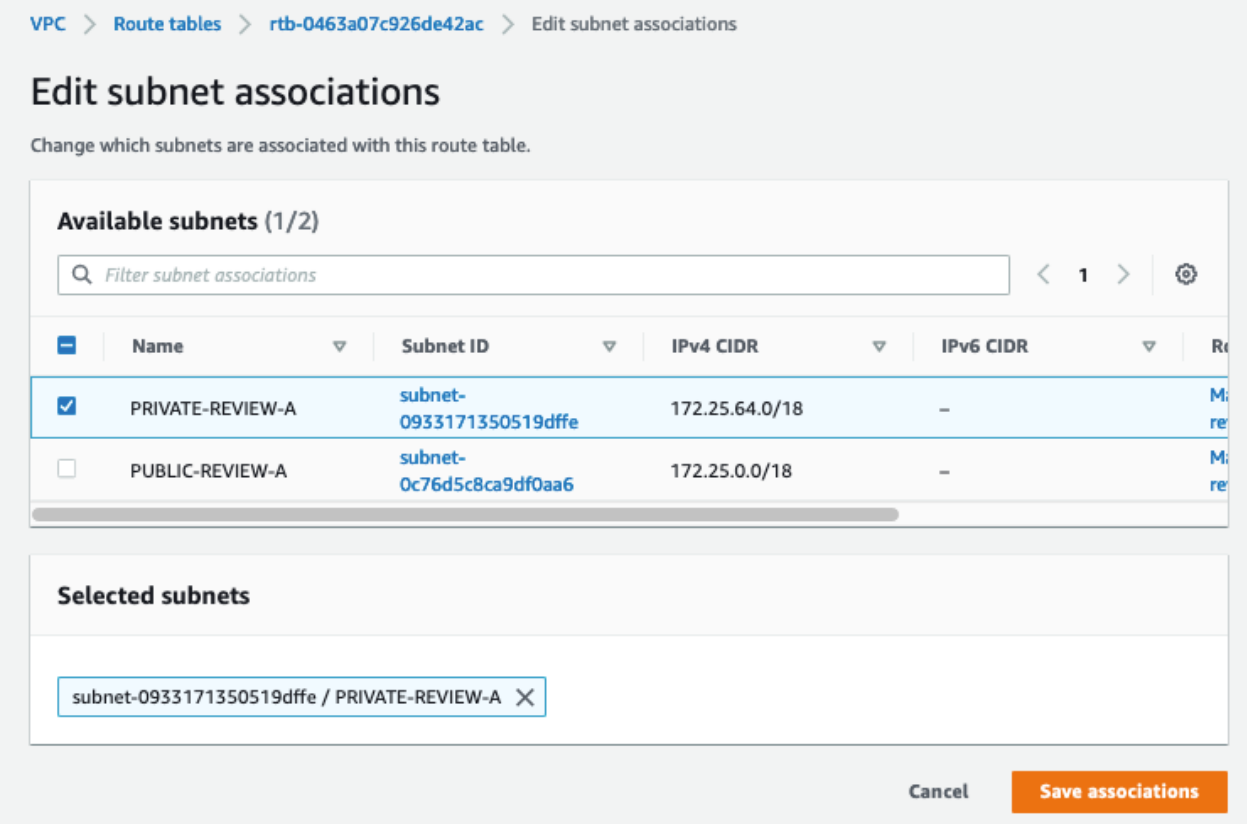
A default routing table is created for all subnets within the address range of 172.25.0.0 – 172.25.255.255 to communicate with each other, but there aren't any routes created to connect to the internet – so we have to click on **Edit Routes** and add 0.0.0.0/0 as destination and the created Internet Gateway as the target

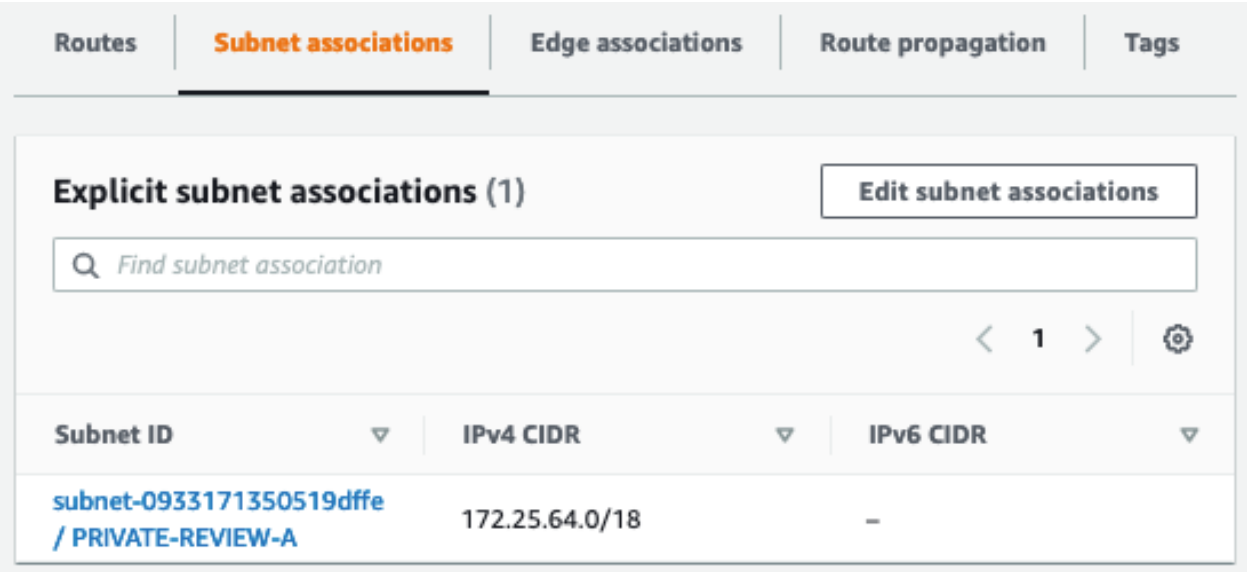


Private Route Table






VPC > Route tables > rtb-0463a07c926de42ac > Edit subnet associations
Edit subnet associations
Change which subnets are associated with this route table.
Available subnets (1/2)
Filter subnet associations
1
Name
Subnet ID
IPv4 CIDR
IPv6 CIDR
PRIVATE-REVIEW-A
subnet-0933171350519dffe
172.25.64.0/18
–
PUBLIC-REVIEW-A
subnet-0c76d5c8ca9df0aa6
172.25.0.0/18
–
Selected subnets
subnet-0933171350519dffe / PRIVATE-REVIEW-A
Cancel
Save associations


Routes
Subnet associations
Edge associations
Route propagation
Tags
Explicit subnet associations (1)
Edit subnet associations
Find subnet association
1
Subnet ID
IPv4 CIDR
IPv6 CIDR
subnet-0933171350519dffe / PRIVATE-REVIEW-A
172.25.64.0/18
–

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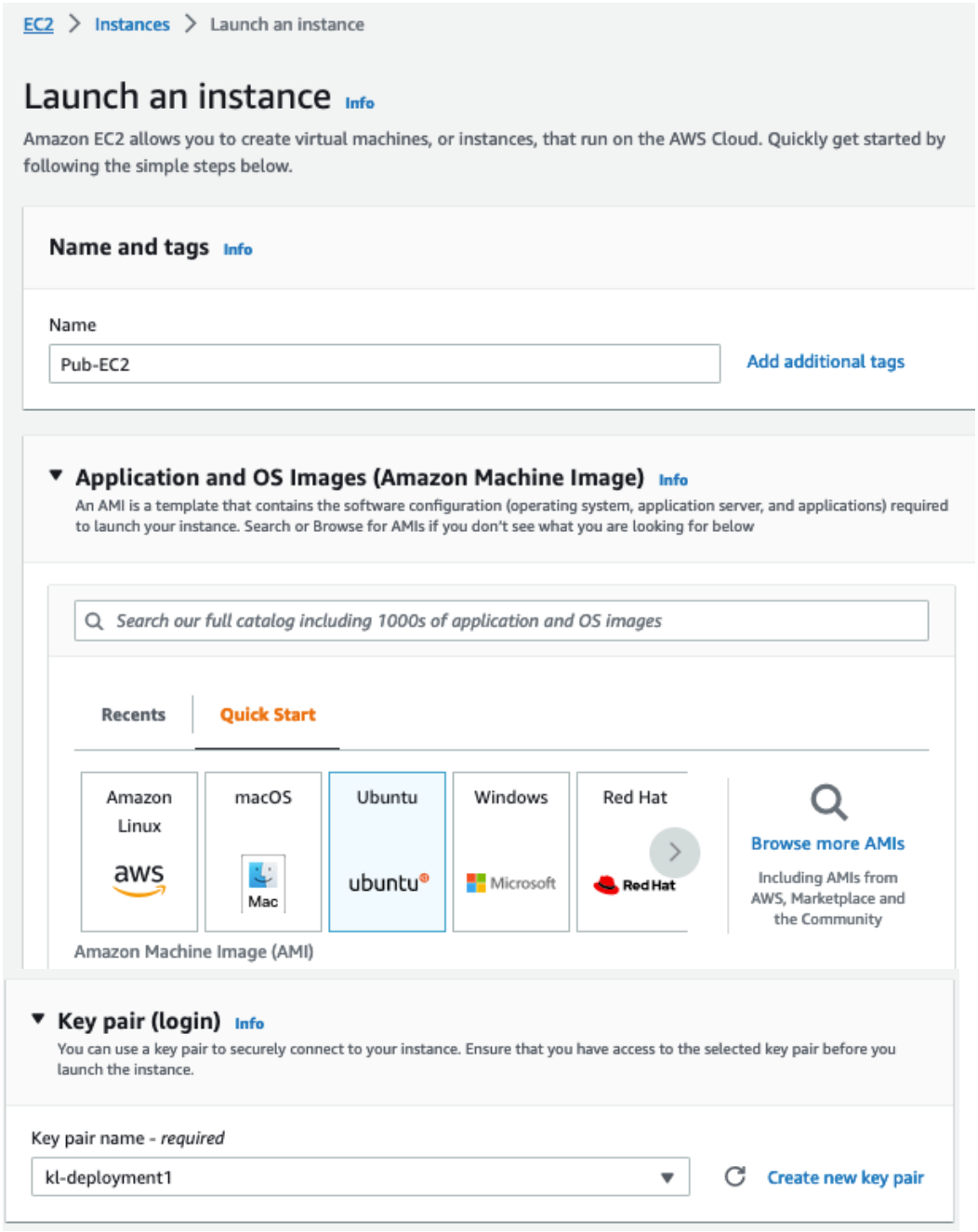
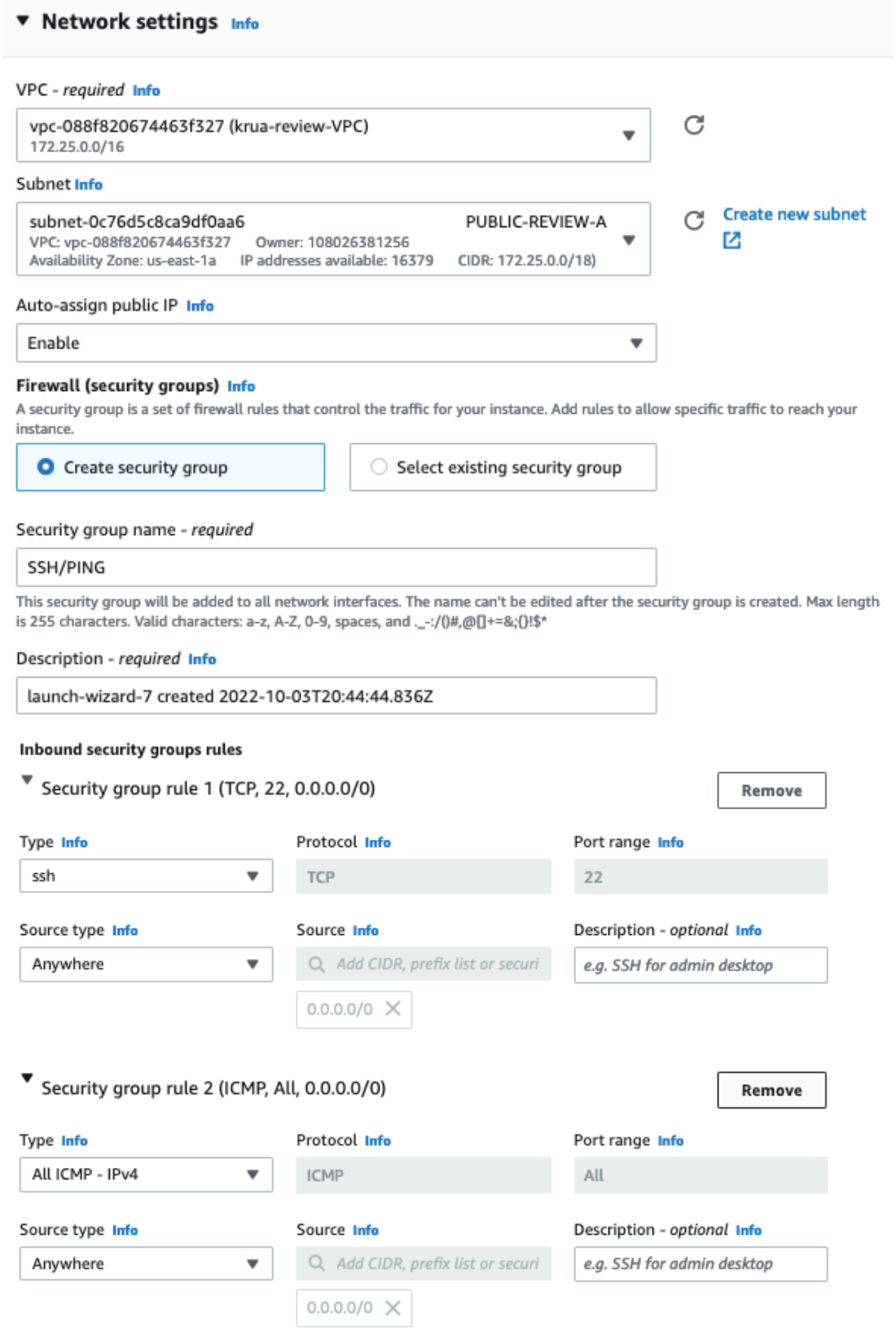
Creating EC2

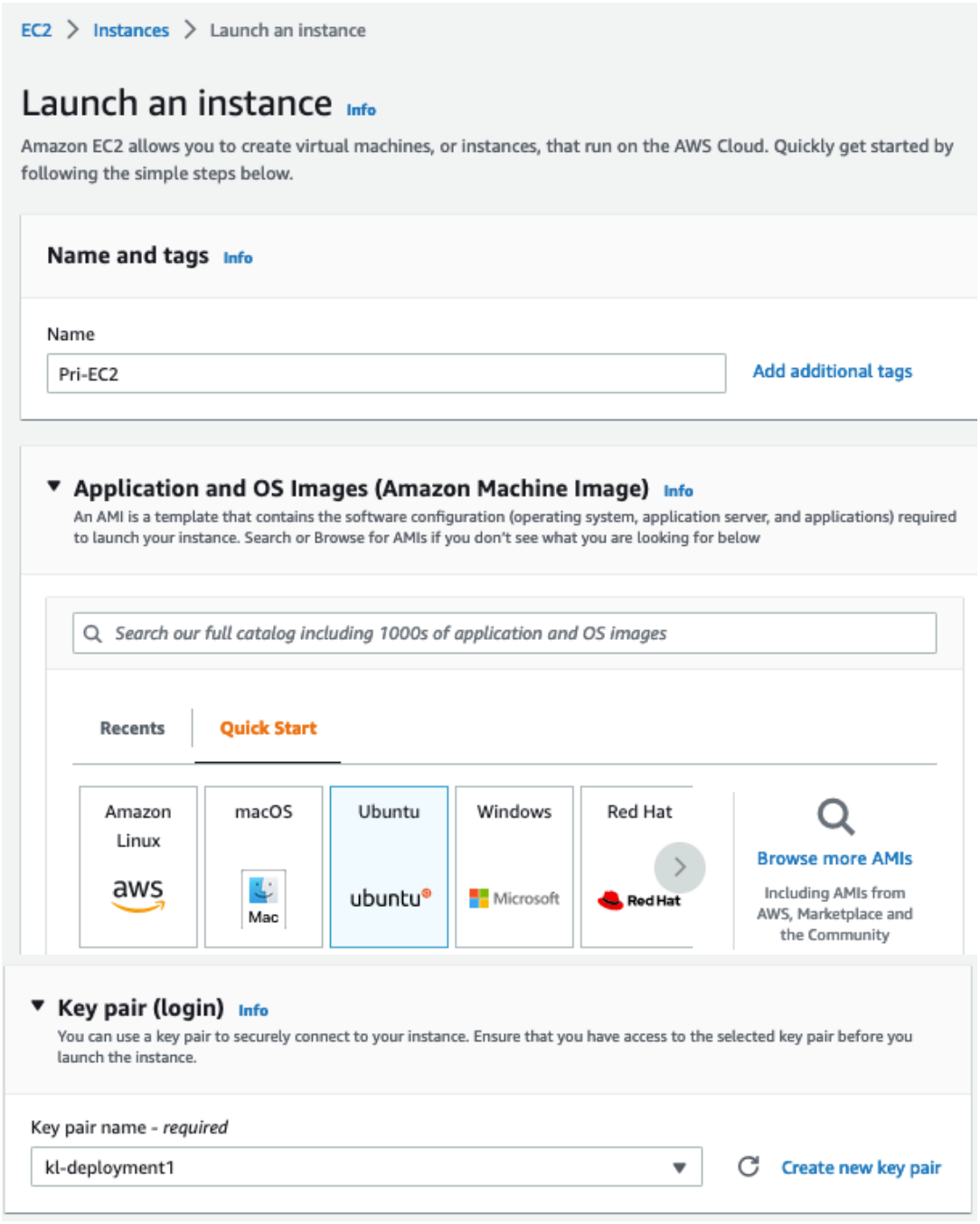
Public EC2

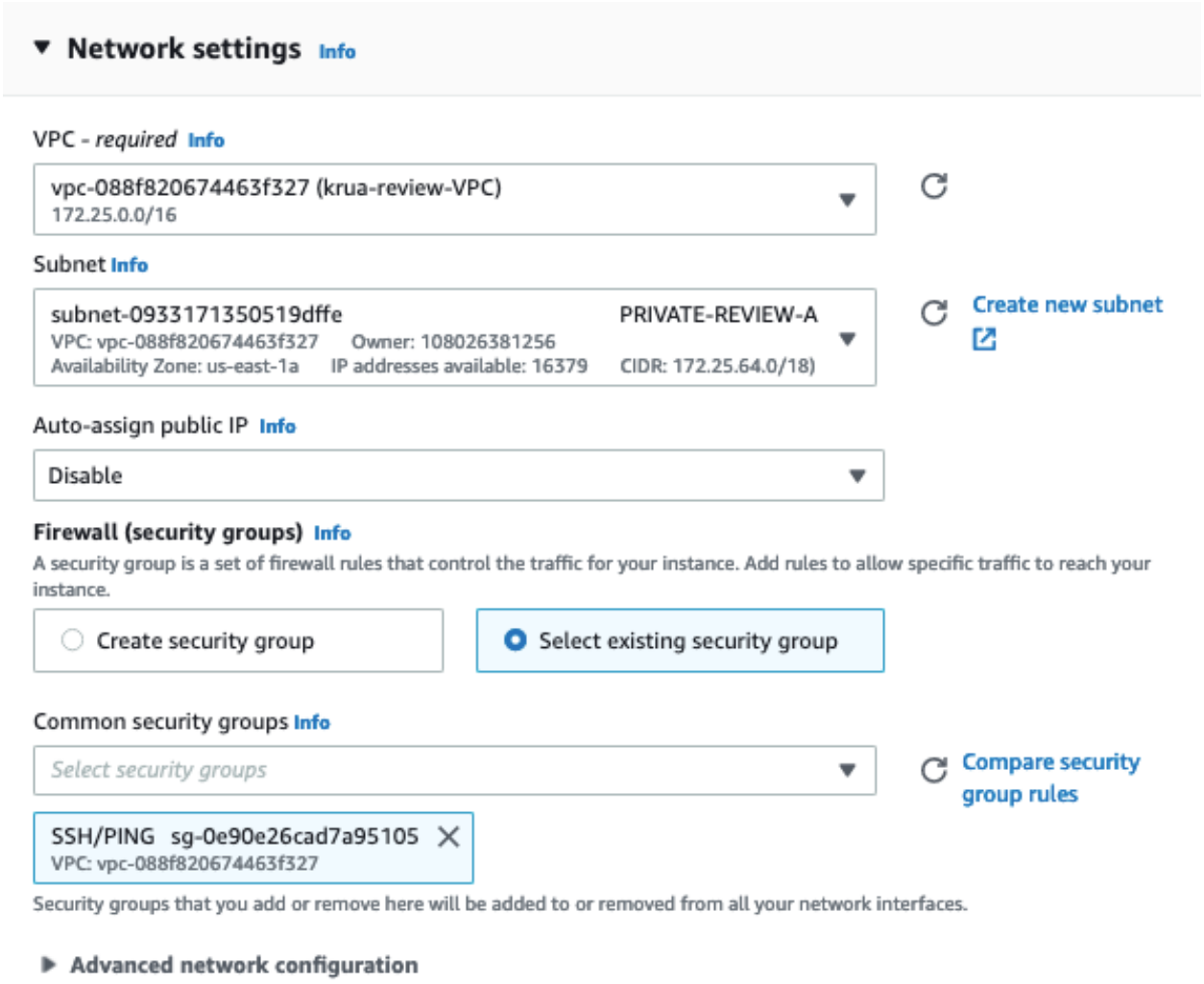


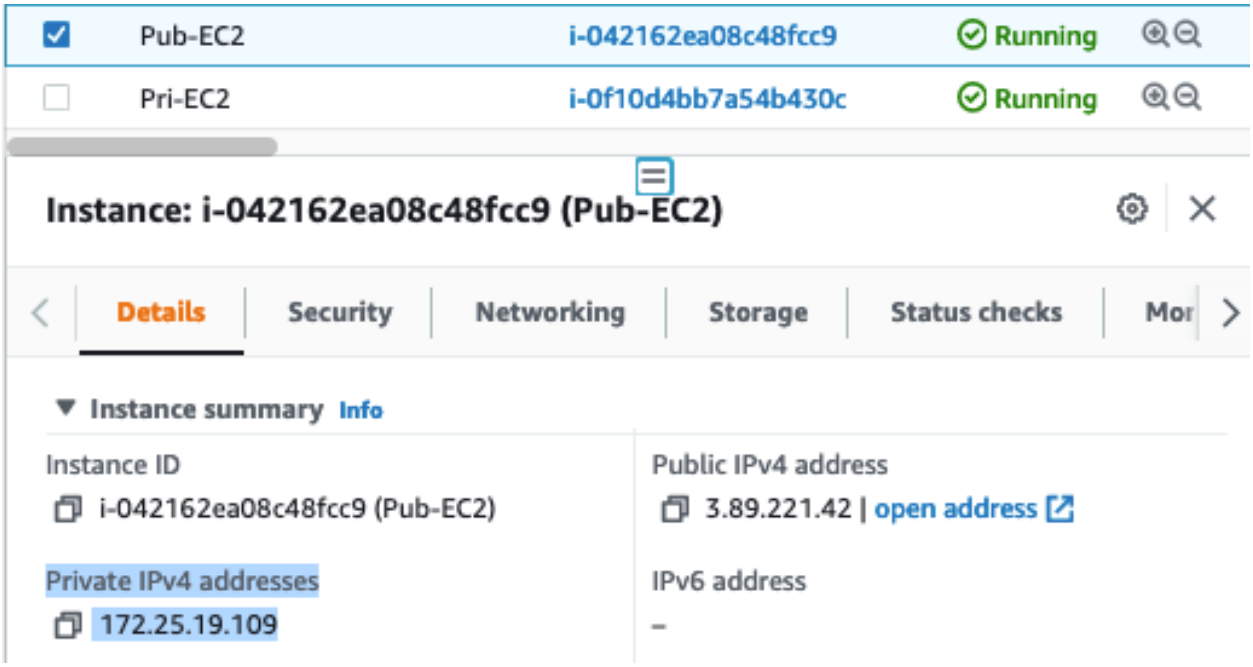


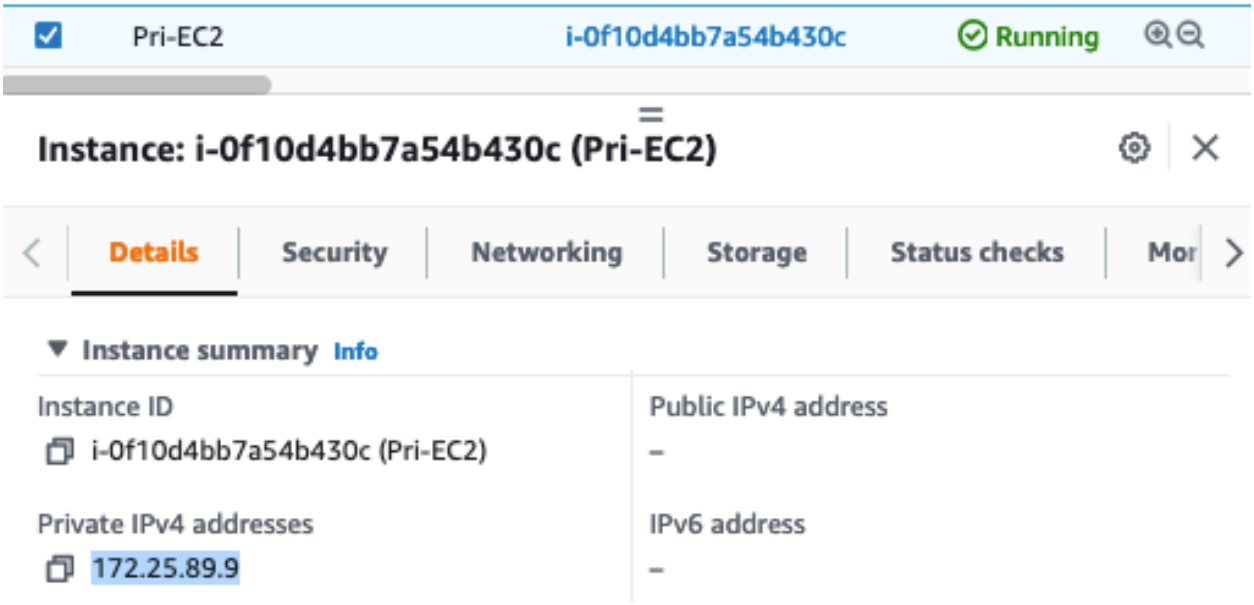
ICMP for pinging

Private EC2


EC2 > Instances > Launch an instance
Launch an instance Info
Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.
Name and tags Info
Name
Pri-EC2
Add additional tags
Application and OS Images (Amazon Machine Image) Info
An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below
Search our full catalog including 1000s of application and OS images
Recents
Quick Start
Amazon Linux
macOS
Mac
Ubuntu
ubuntu
Windows
Microsoft
Red Hat
Red Hat
Browse more AMIs
Including AMIs from AWS, Marketplace and the Community
Key pair (login) Info
You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.
Key pair name - required
kl-deployment1
Create new key pair


Network settings Info
VPC - required Info
vpc-088f820674463f327 (krua-review-VPC)
172.25.0.0/16
Subnet Info
subnet-0933171350519dffe PRIVATE-REVIEW-A
VPC: vpc-088f820674463f327 Owner: 108026381256
Availability Zone: us-east-1a IP addresses available: 16379 CIDR: 172.25.64.0/18)
Create new subnet
Auto-assign public IP Info
Disable
Firewall (security groups) Info
A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.
Create security group
Select existing security group
Common security groups Info
Select security groups
Compare security group rules
SSH/PING sg-0e90e26cad7a95105
VPC: vpc-088f820674463f327
Security groups that you add or remove here will be added to or removed from all your network interfaces.
Advanced network configuration





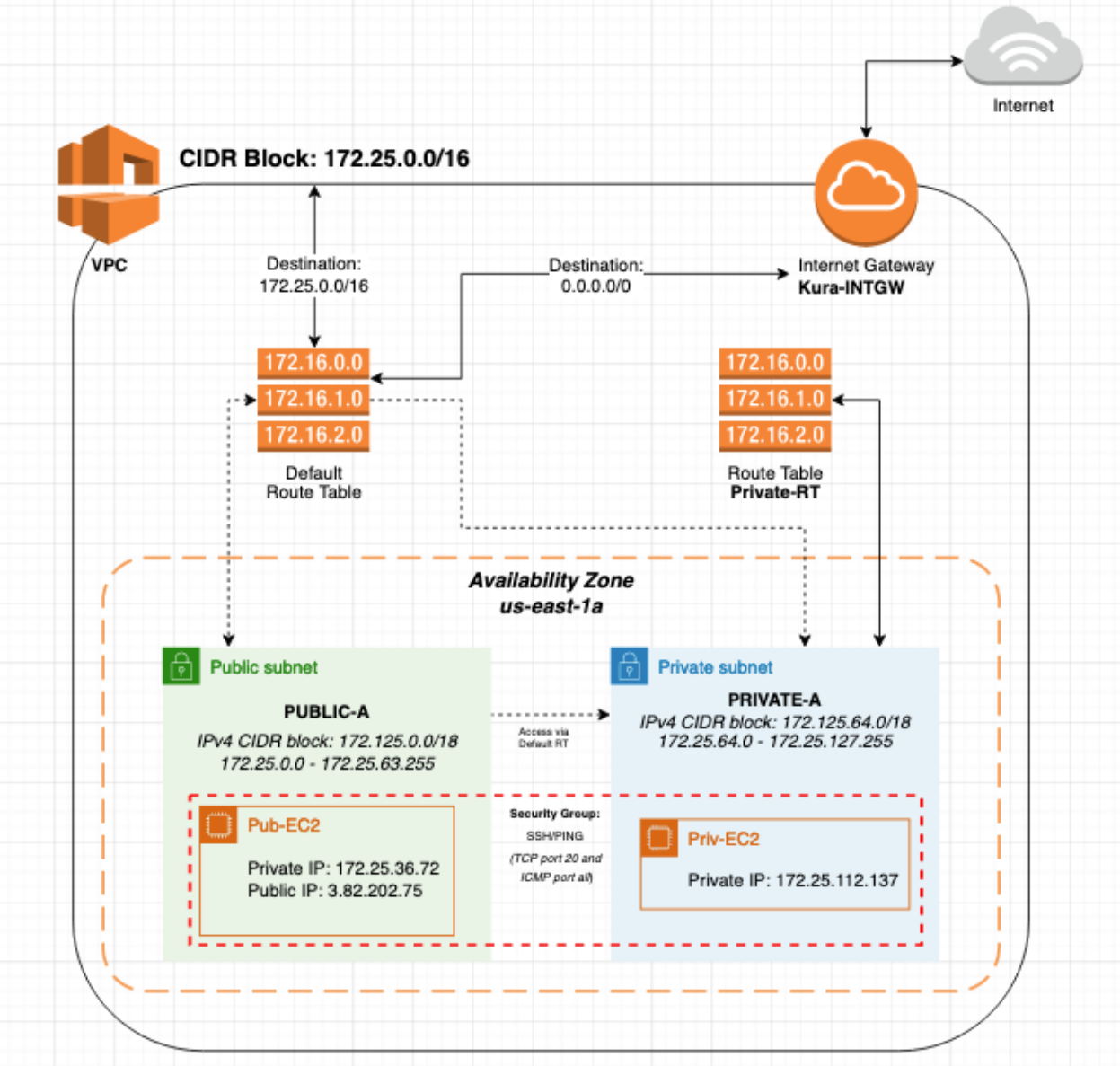
You can check both public and private EC2s are within the given subnet range

To Access the Private EC2

1. Transfer key-pair file into the public EC2: **scp -i keypair.pem keypair.pem ubuntu@publicip:/home/ubuntu**
2. SSH into the public EC2: **ssh -i keypair.pem ubuntu@publicip**
3. From public EC2, SSH into the private EC2 using the private IP: **ssh -i keypair.pem ubuntu@privateip**

NOTE: Both EC2 must use the same keypair.pem file

Diagram


Internet
CIDR Block: 172.25.0.0/16
VPC
Destination:
172.25.0.0/16
Destination:
0.0.0.0/0
Internet Gateway
Kura-INTGW
172.16.0.0
172.16.1.0
172.16.2.0
Default
Route Table
172.16.0.0
172.16.1.0
172.16.2.0
Route Table
Private-RT
Availability Zone
us-east-1a
Public subnet
PUBLIC-A
IPv4 CIDR block: 172.125.0.0/18
172.25.0.0 - 172.25.63.255
Access via
Default RT
Private subnet
PRIVATE-A
IPv4 CIDR block: 172.125.64.0/18
172.25.64.0 - 172.25.127.255
Pub-EC2
Private IP: 172.25.36.72
Public IP: 3.82.202.75
Security Group:
SSH/PING
(TCP port 20 and
ICMP port all)
Priv-EC2
Private IP: 172.25.112.137