AWS Assignment 2

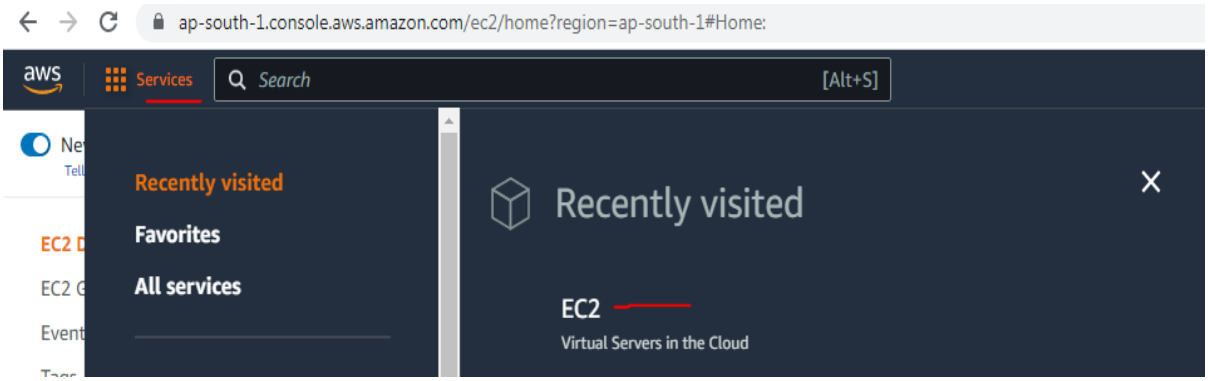
1.Creation of EC2 instance : (2 machines - 1st machine-name, 2nd machine-surname)

machine -1 : Shagani

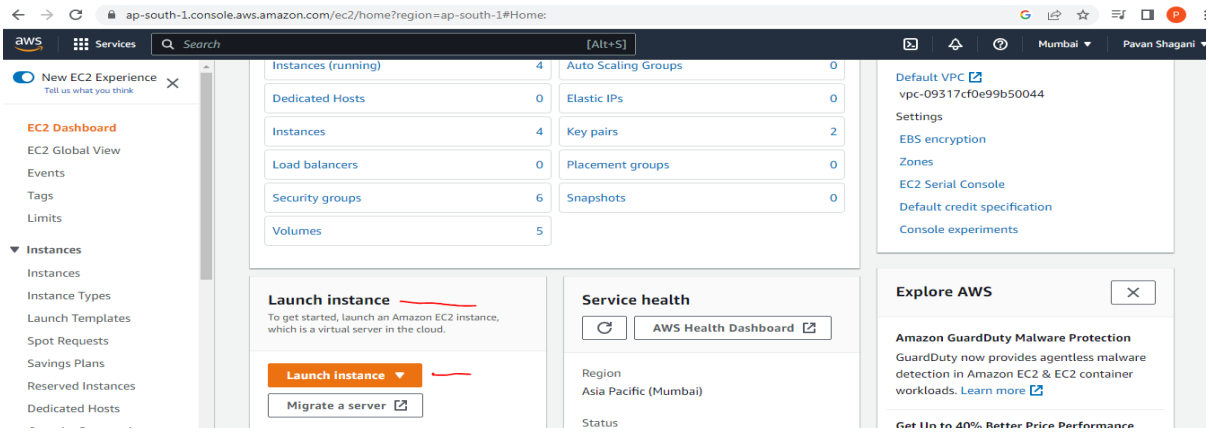
machine -2 : Pavan

Machine-1 creation [Shagani]

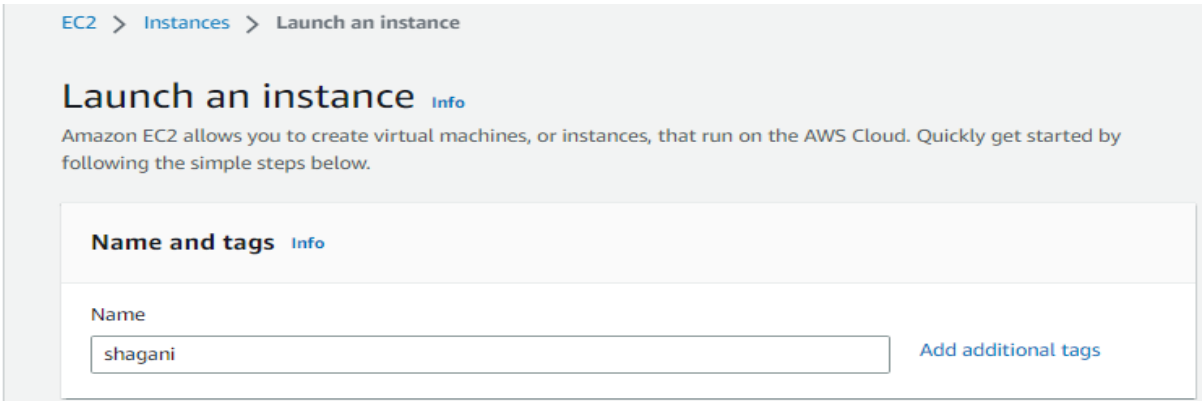
Click on EC2 service by browsing the Services



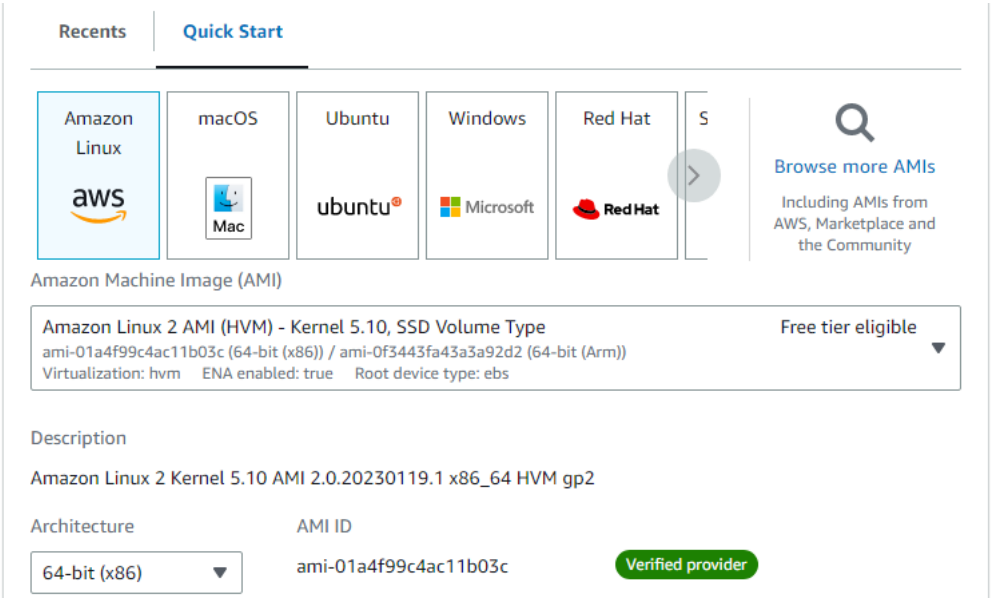
Click on **Launch Instance**



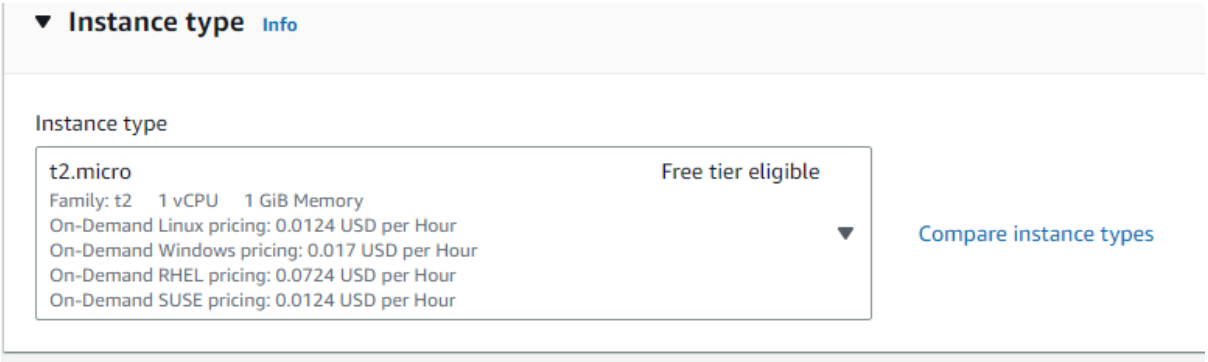
Provide the name of the instance, **name if the instance is given as 'Shagani'**



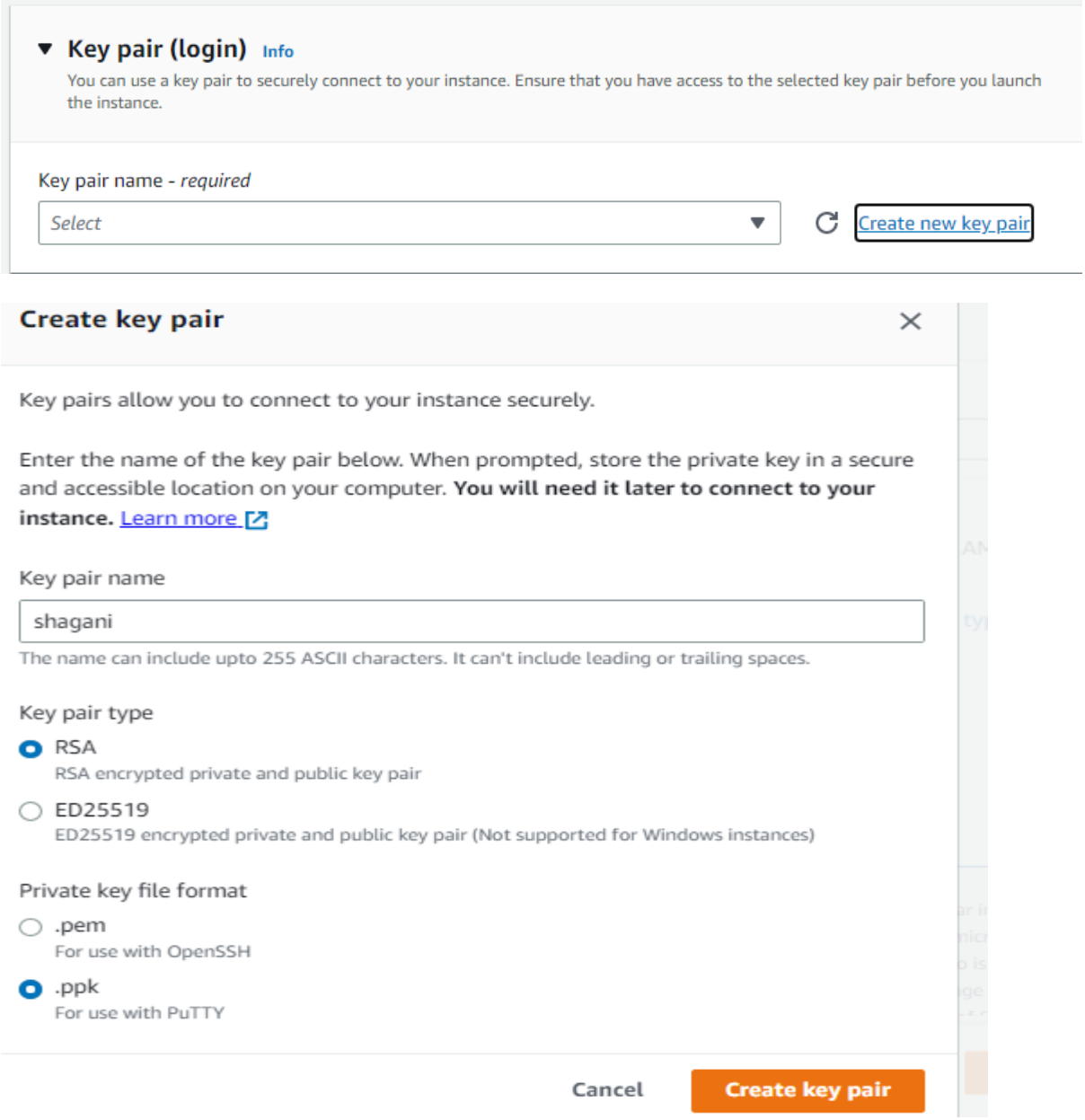
Selected Linux with Free Tier



t2.micro which is a free tier is selected as Instance Type



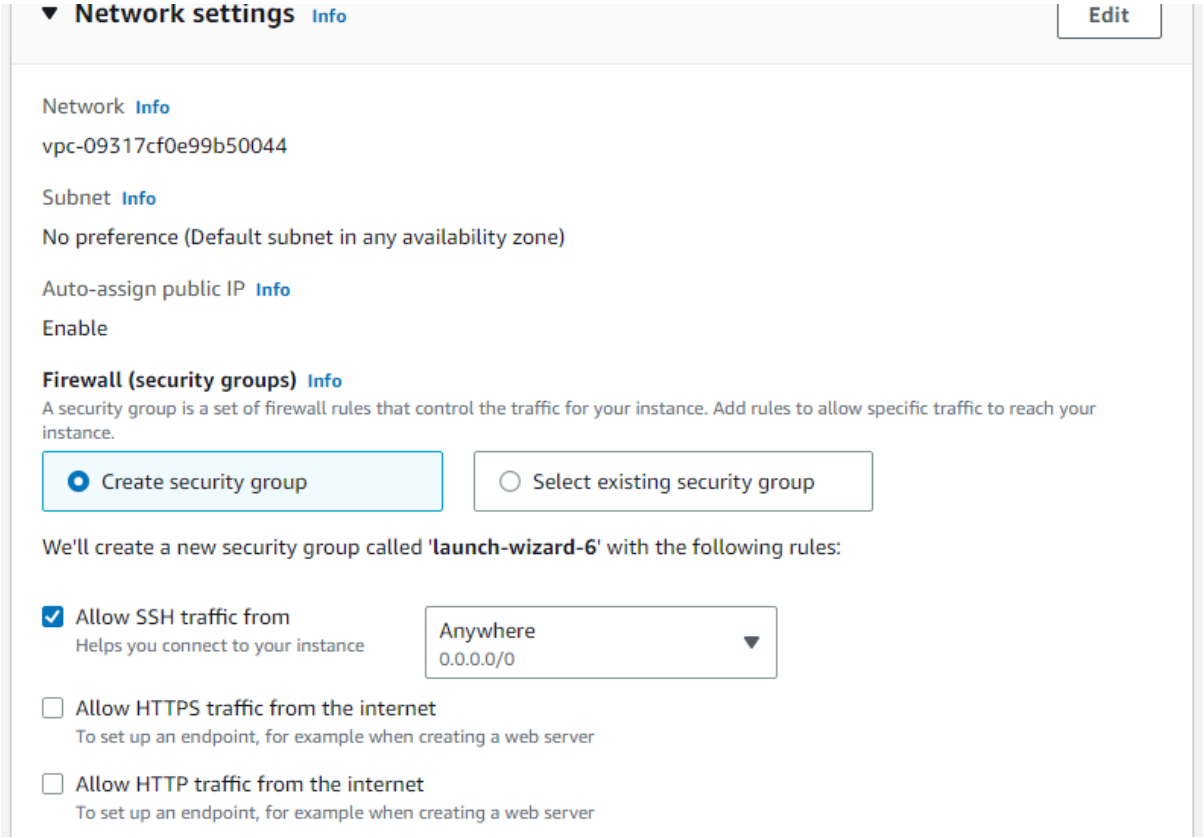
Create or reuse the existing key pair, here I have created a new key pair with name 'Shagani'



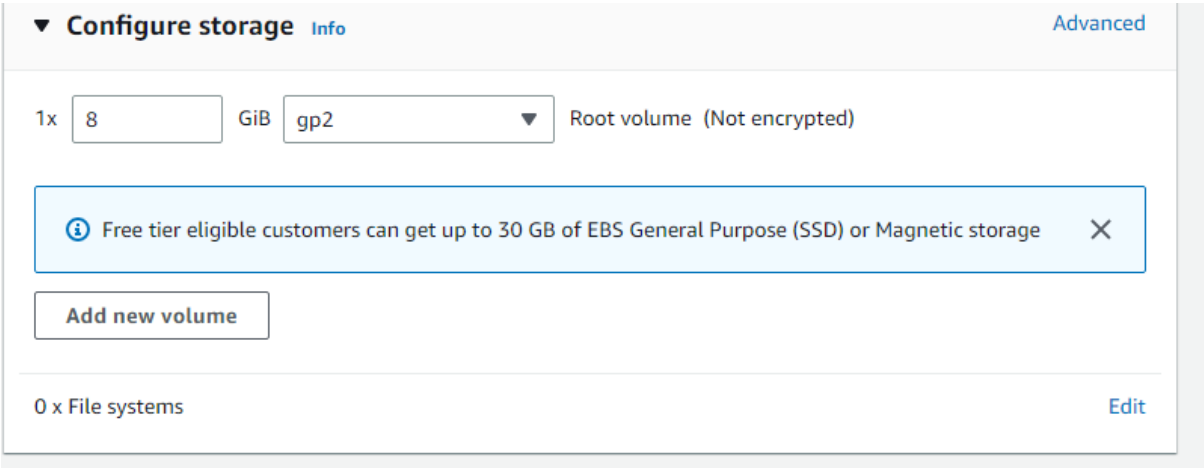
Here I created the key pair to use for the connection through Putty.

A PPK file is created in the local machine, which can be used to connect to machine from putty.

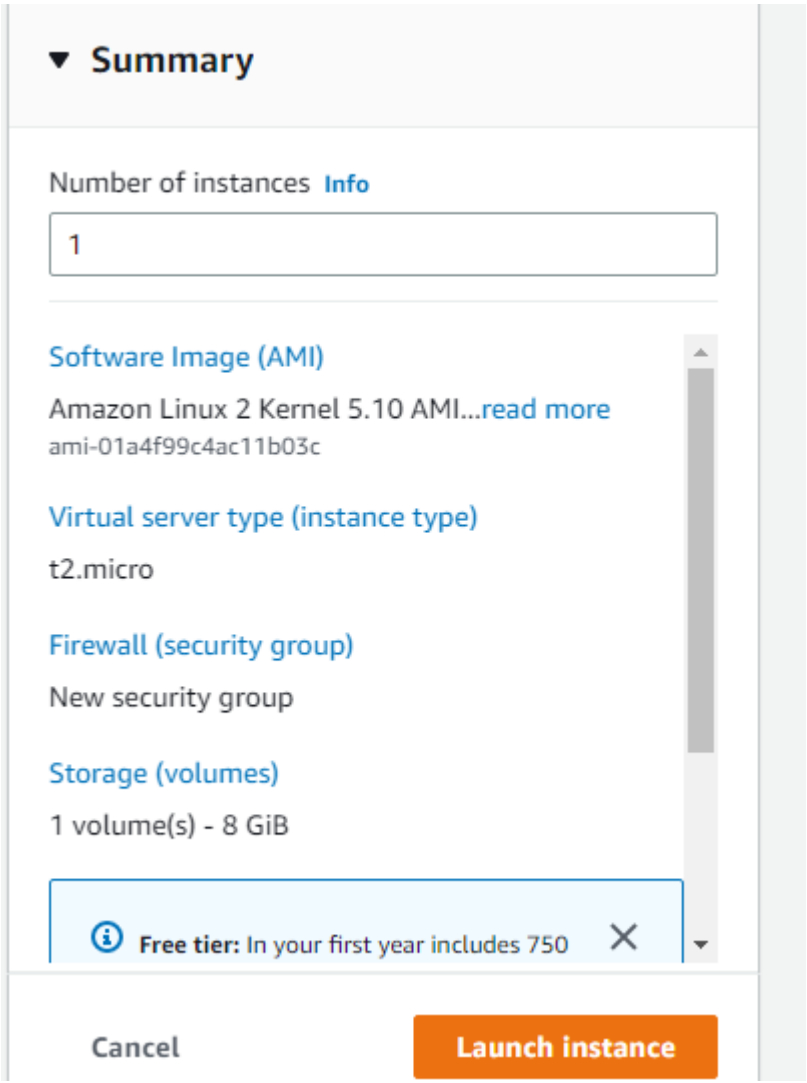
Selected default network settings

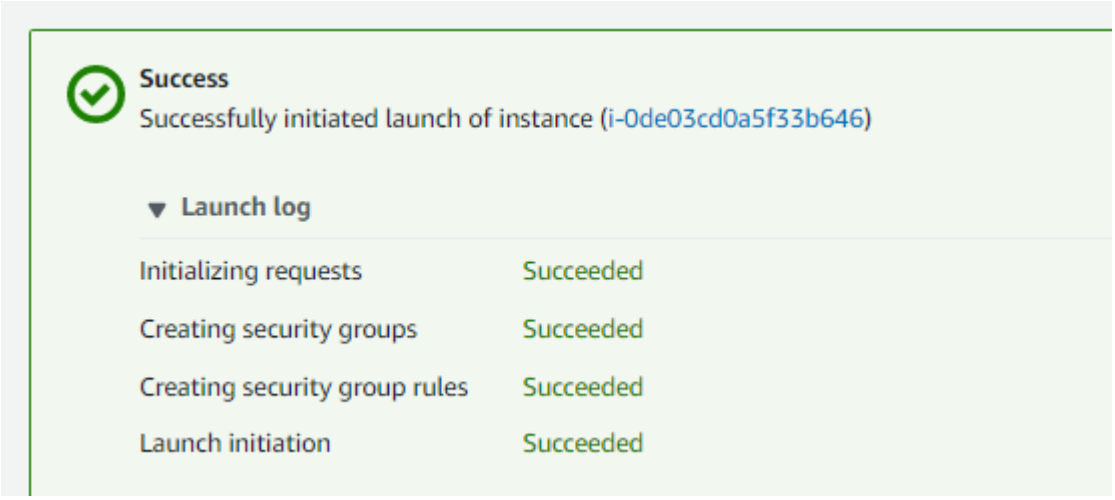


selected Default Storage settings



Click on Launch Instance

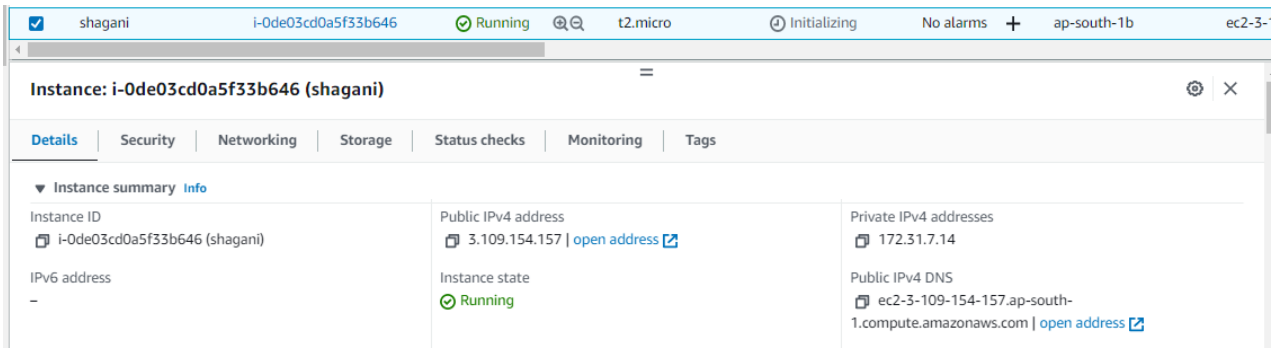

Summary
Number of instances Info
1
Software Image (AMI)
Amazon Linux 2 Kernel 5.10 AMI...read more
ami-01a4f99c4ac11b03c
Virtual server type (instance type)
t2.micro
Firewall (security group)
New security group
Storage (volumes)
1 volume(s) - 8 GiB
Free tier: In your first year includes 750
Cancel
Launch instance


Success
Successfully initiated launch of instance (i-0de03cd0a5f33b646)
Launch log
Initializing requests Succeeded
Creating security groups Succeeded
Creating security group rules Succeeded
Launch initiation Succeeded

EC2 instance created with below details

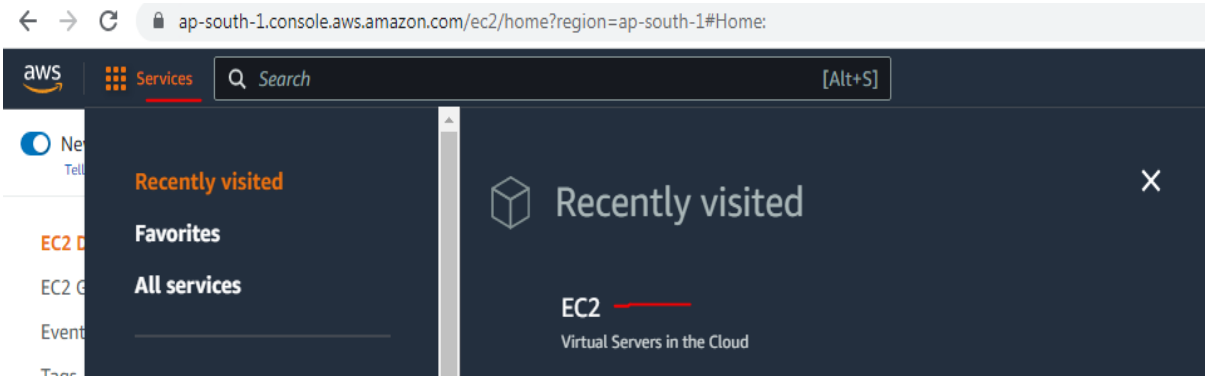
Instance ID i-0de03cd0a5f33b646

Instance Name Shagani

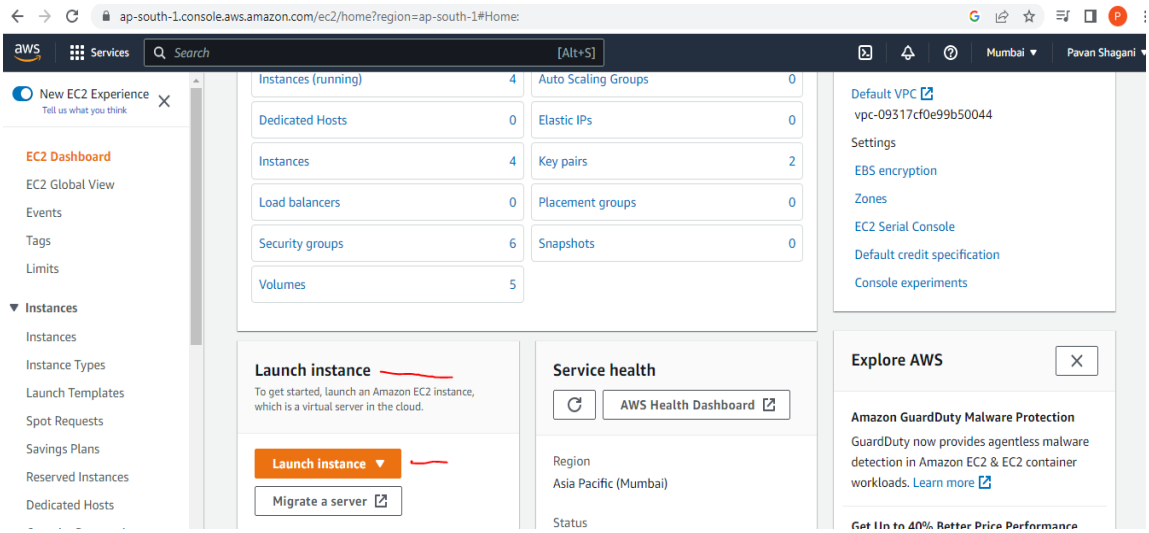


Machine-2 creation [Pavan]

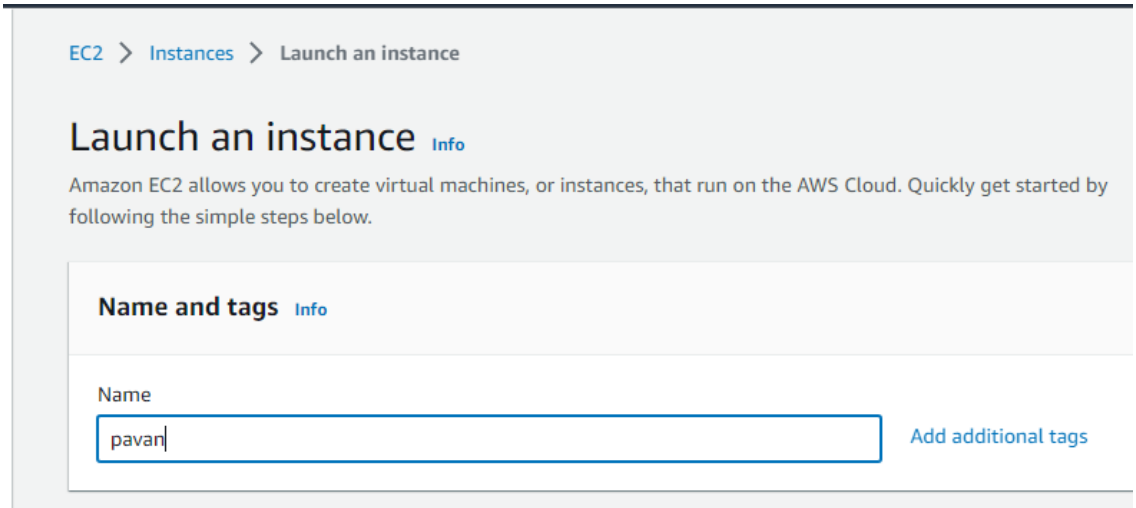
Click on EC2 service by browsing the Services



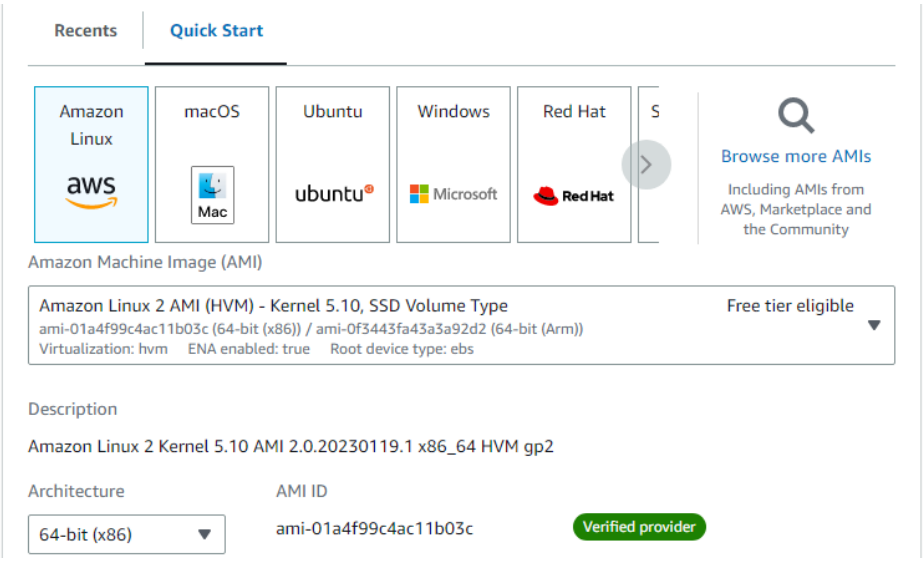
Click on **Launch Instance**



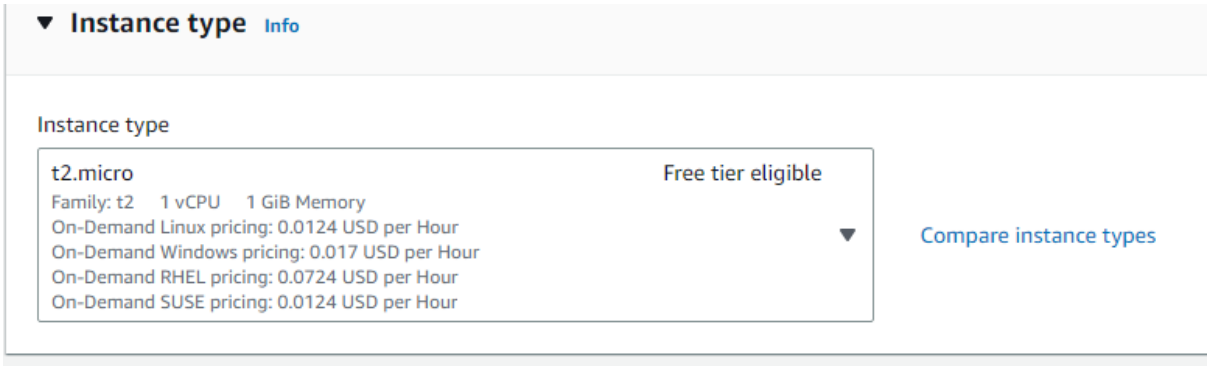
Provide the name of the instance, **name if the instance is given as 'pavan'**



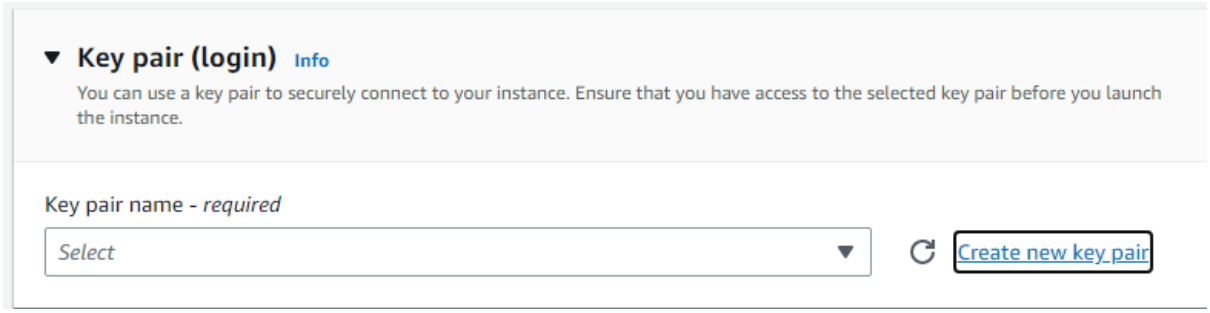
Selected Linux with Free Tier

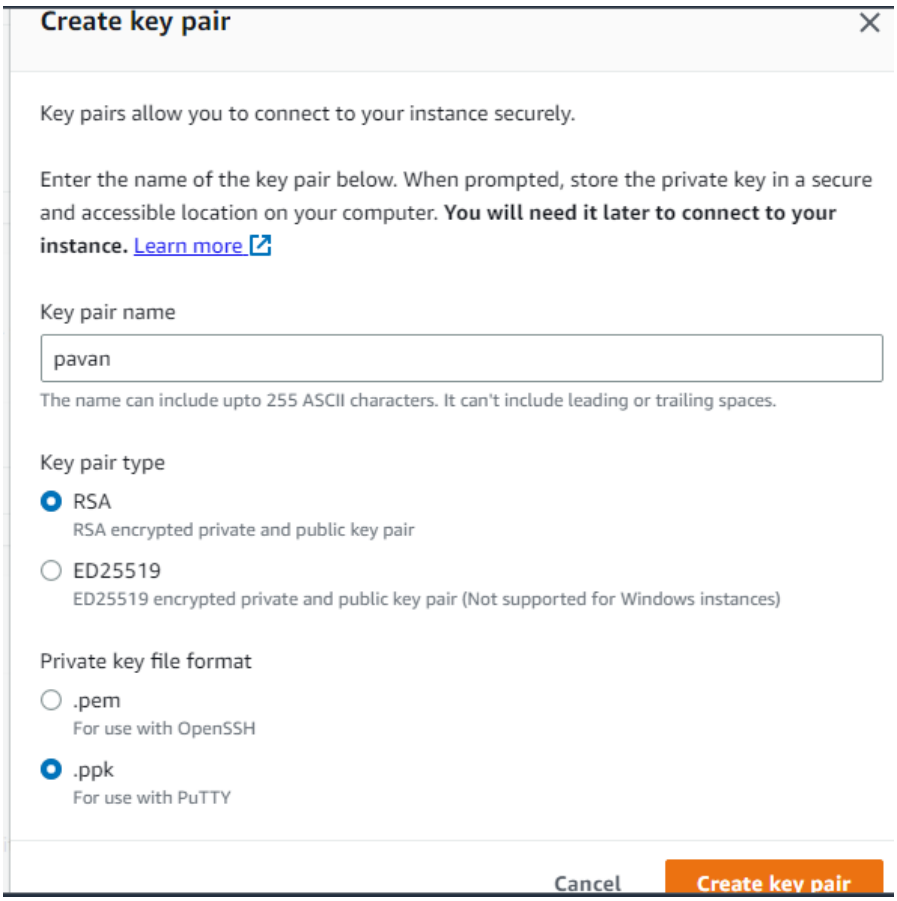


t2.micro which is a free tier is selected as Instance Type



Create or reuse the existing key pair, here I have created a new key pair with name 'pavan'

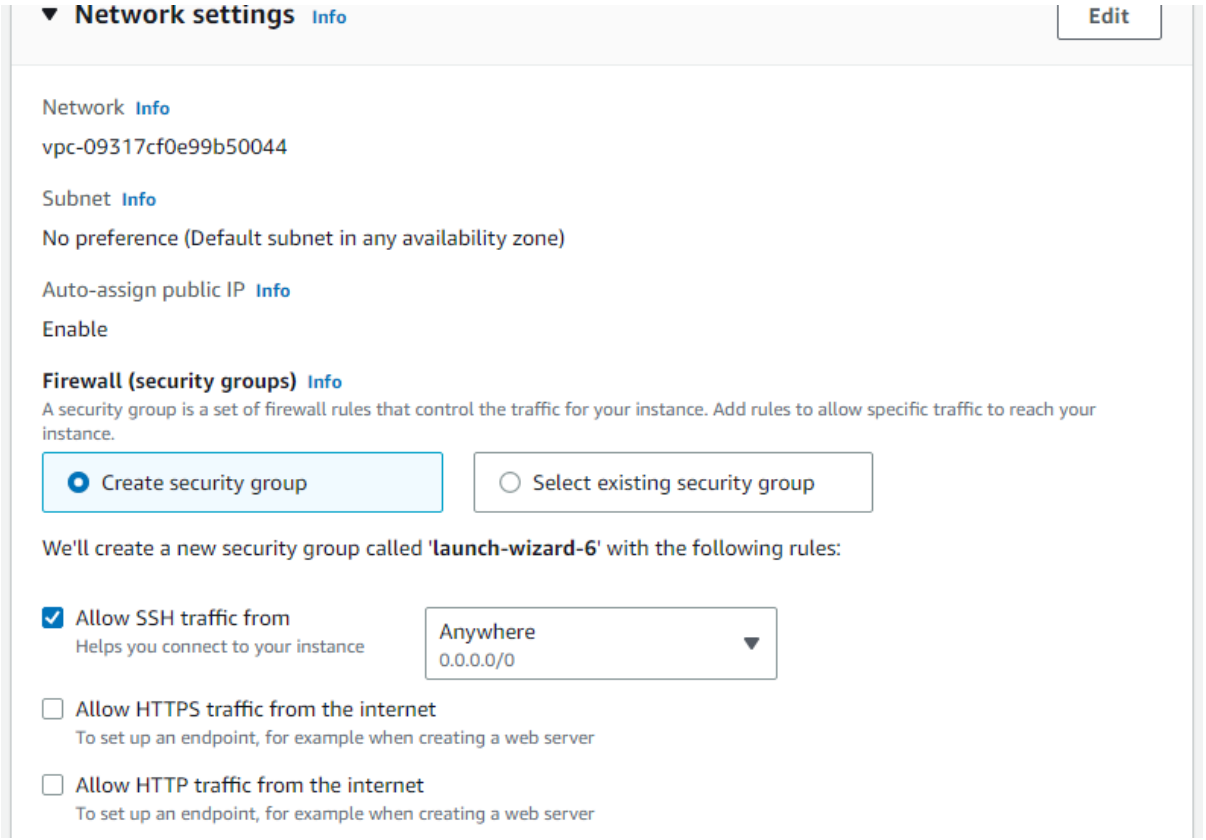




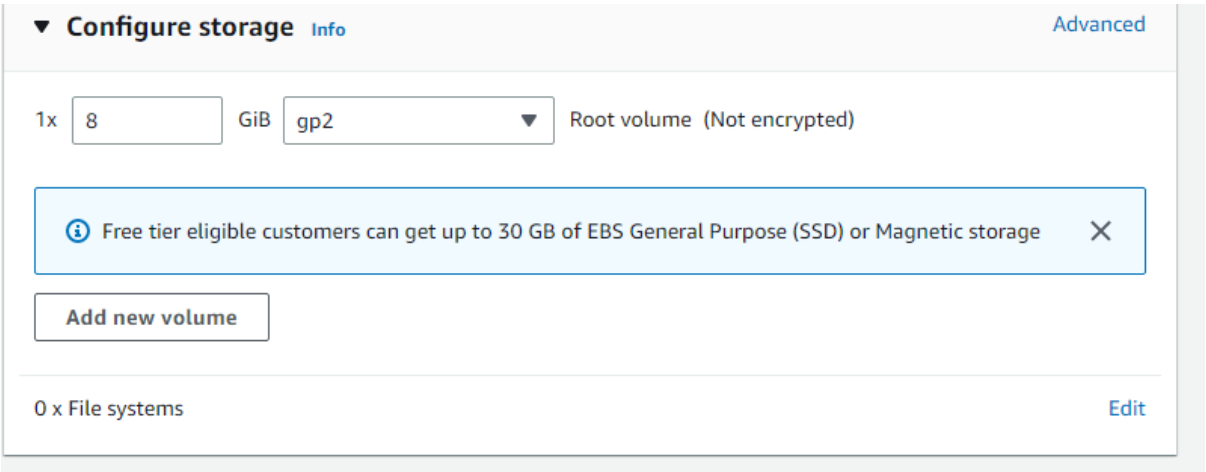
Here I created the key pair to use for the connection through Putty.

A PPK file is created in the local machine, which can be used to connect to machine from putty.

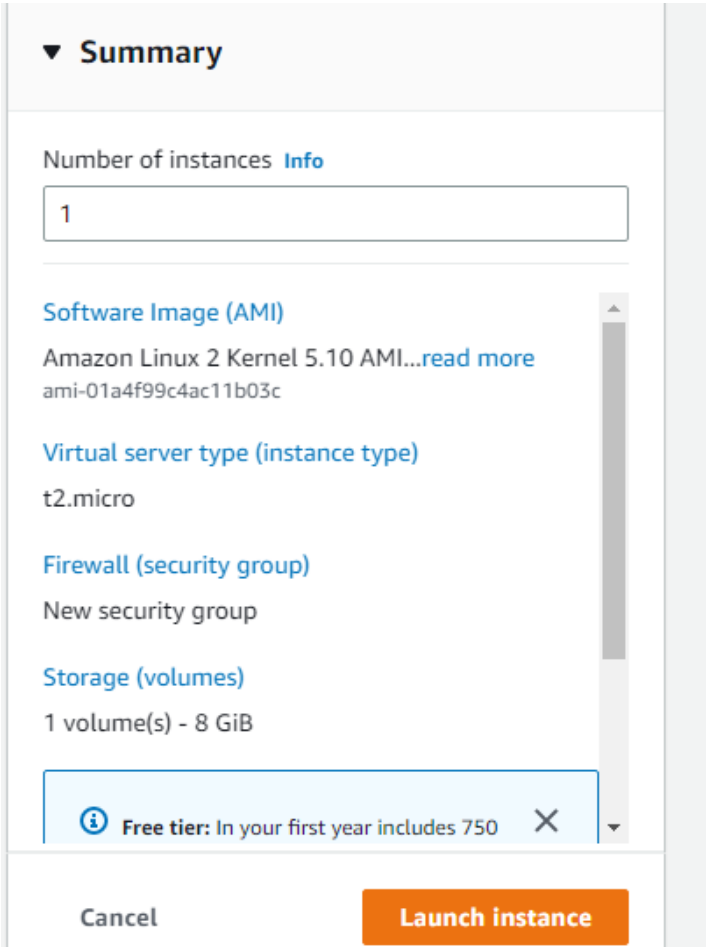
Selected default network settings

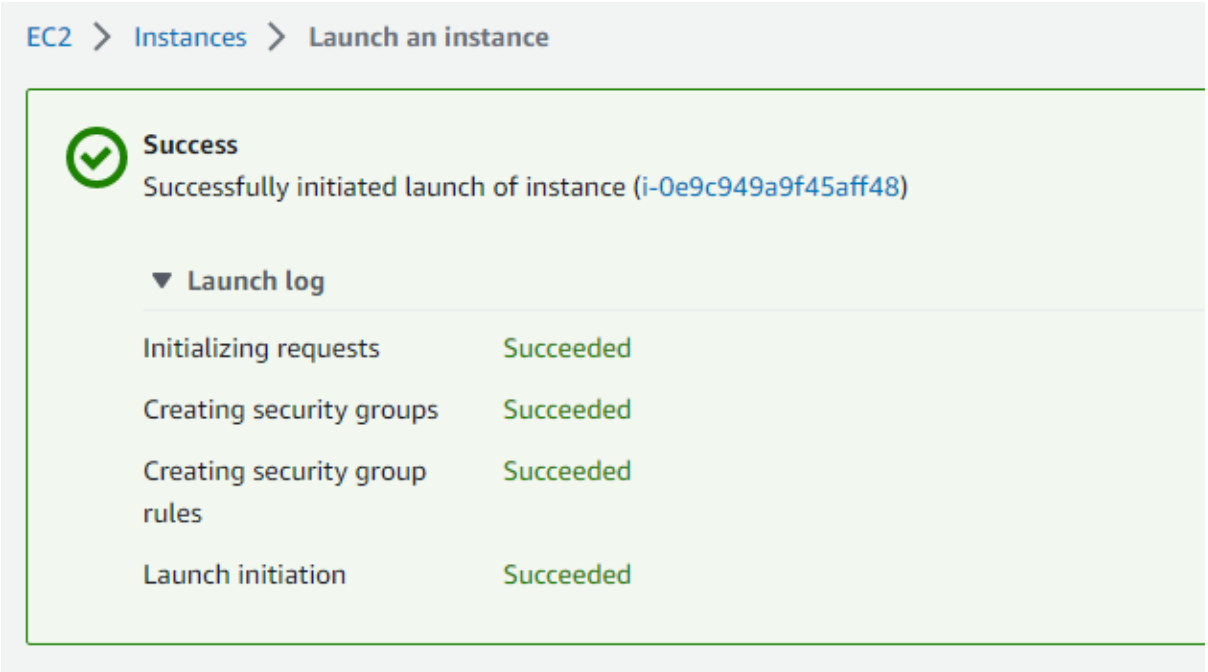


selected Default Storage settings



Click on Launch Instance

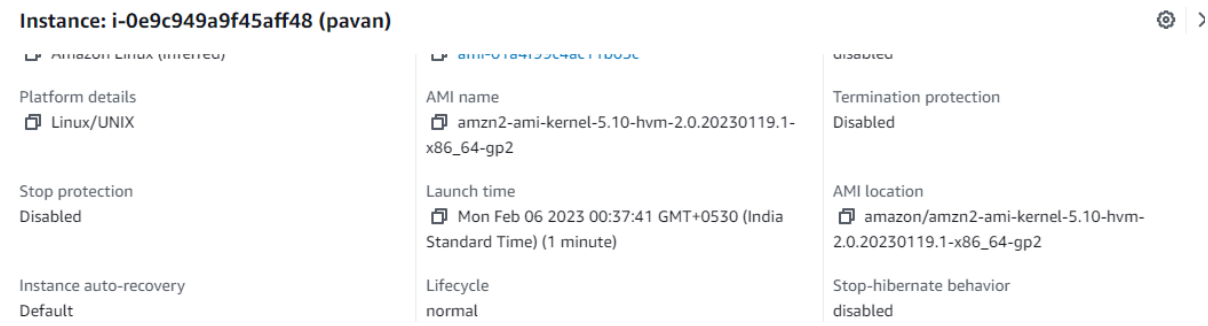


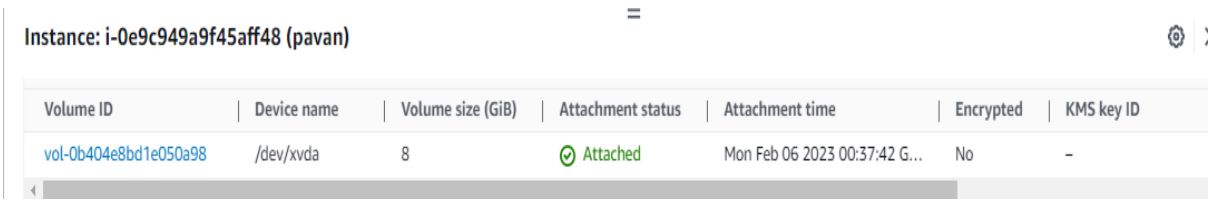


EC2 instance created with below details

Instance ID i-0e9c949a9f45aff48

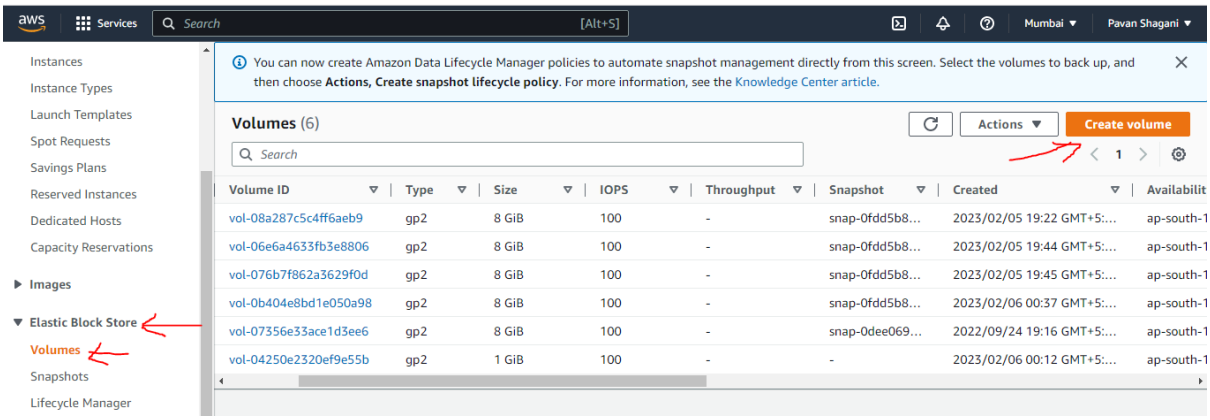
Instance Name pavan



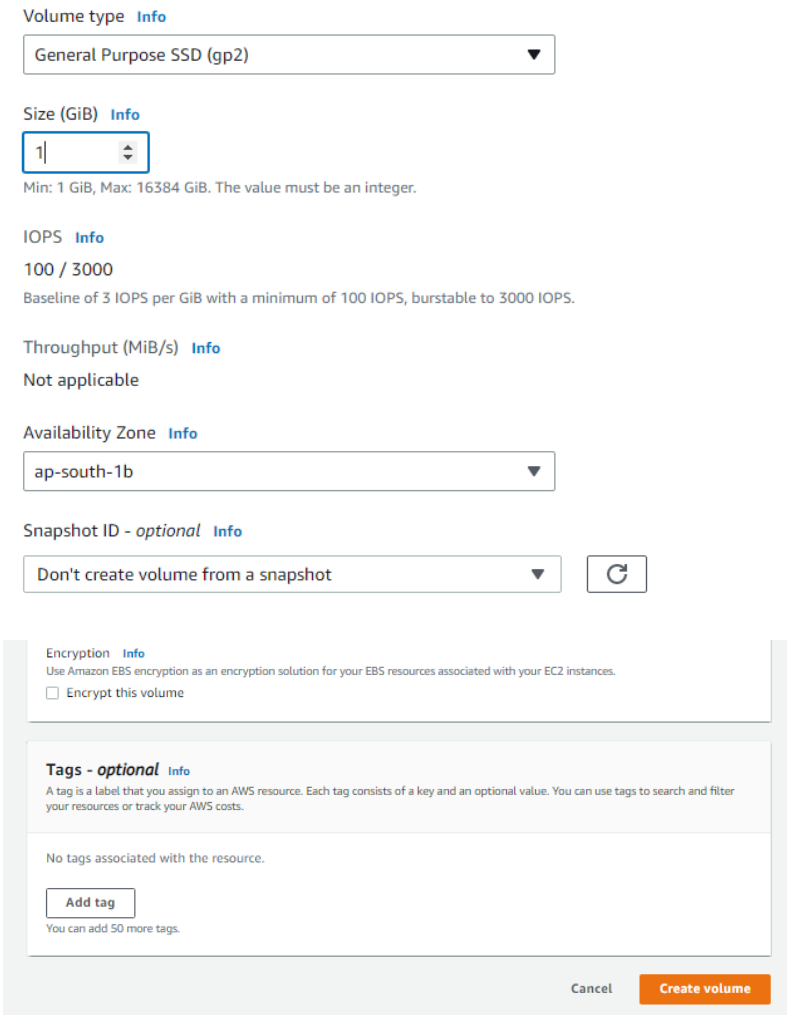


2. Elastic Block Storage :

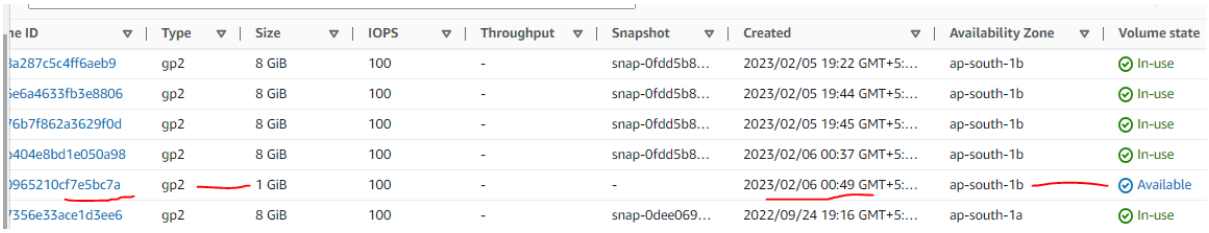
click on create volume under Elastick block store -> Volumes



Give the size and select the Availability Zone, here I selected ap-south-1b, as instance is in same zone. Click on create Volume

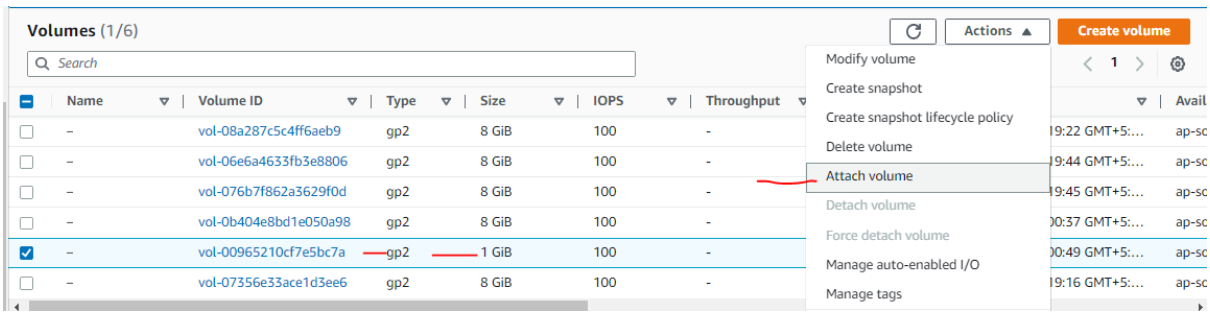


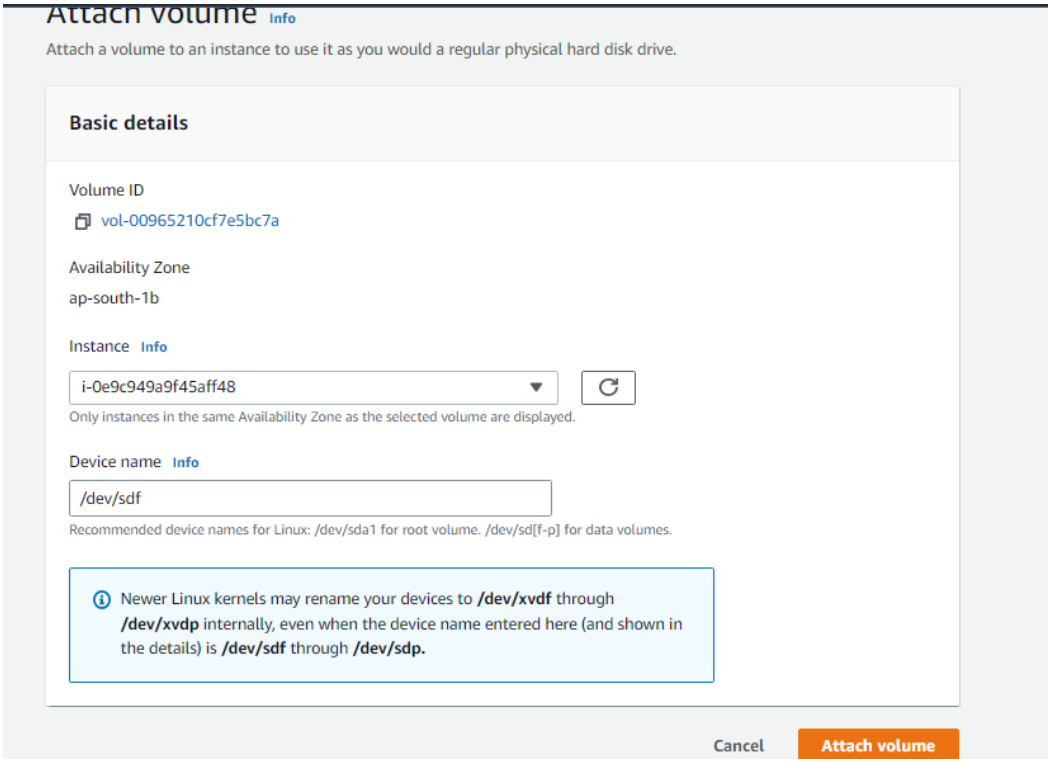
New volume is created and Available now

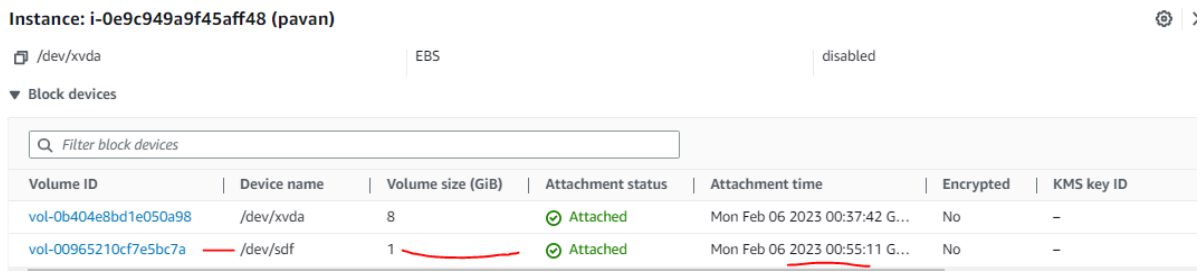


ne ID	Type	Size	IOPS	Throughput	Snapshot	Created	Availability Zone	Volume state
8a287c5c4ff6aeb9	gp2	8 GiB	100	-	snap-0fdd5b8...	2023/02/05 19:22 GMT+5:...	ap-south-1b	In-use
6e6a4633fb3e8806	gp2	8 GiB	100	-	snap-0fdd5b8...	2023/02/05 19:44 GMT+5:...	ap-south-1b	In-use
76b7f862a3629f0d	gp2	8 GiB	100	-	snap-0fdd5b8...	2023/02/05 19:45 GMT+5:...	ap-south-1b	In-use
b404e8bd1e050a98	gp2	8 GiB	100	-	snap-0fdd5b8...	2023/02/06 00:37 GMT+5:...	ap-south-1b	In-use
0965210cf7e5bc7a	gp2	1 GiB	100	-	-	2023/02/06 00:49 GMT+5:...	ap-south-1b	Available
7356e33ace1d3ee6	gp2	8 GiB	100	-	snap-0dee069...	2022/09/24 19:16 GMT+5:...	ap-south-1a	In-use

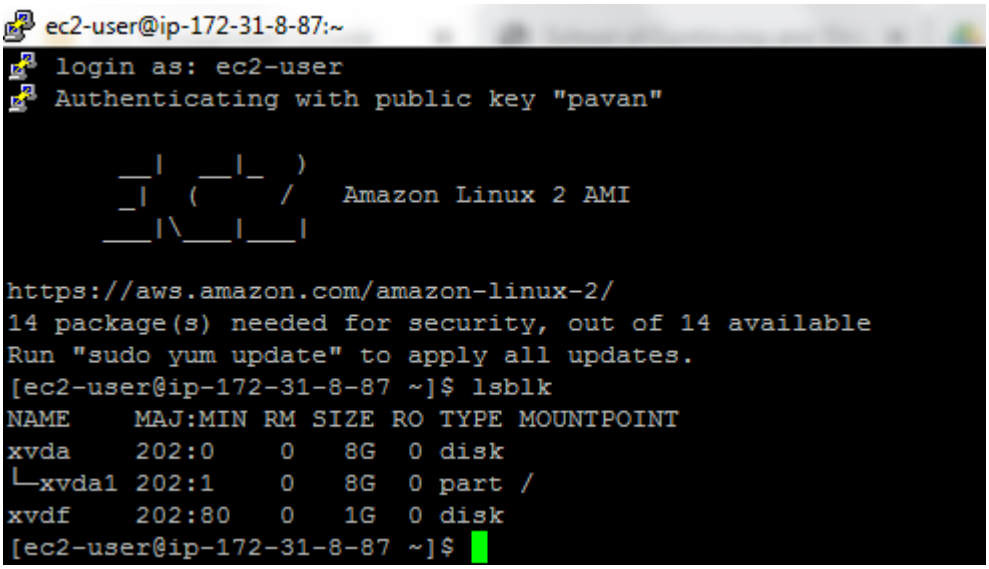
Attach the volume to Instance 'Pavan'







Verified by connecting from Putty, using lsblk command

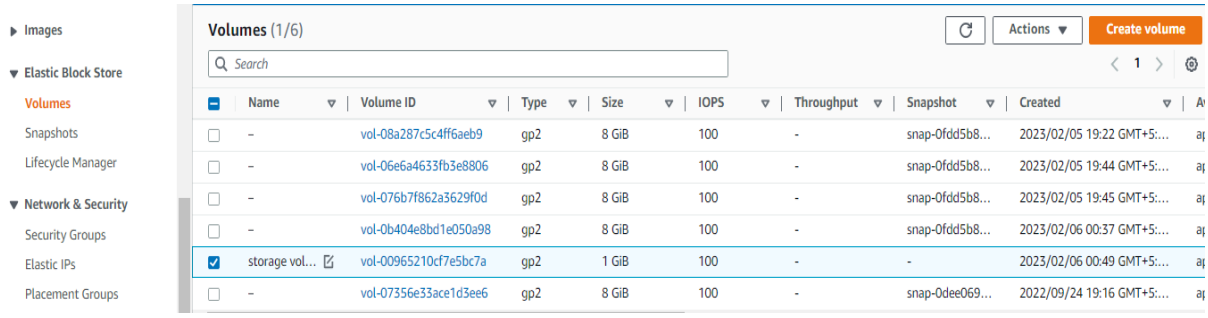


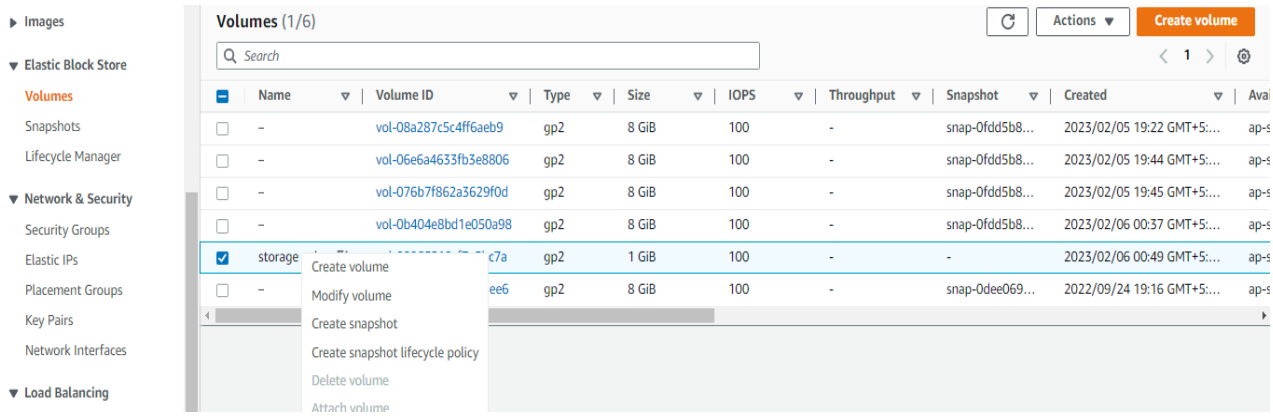
3.Snapshot Creation :

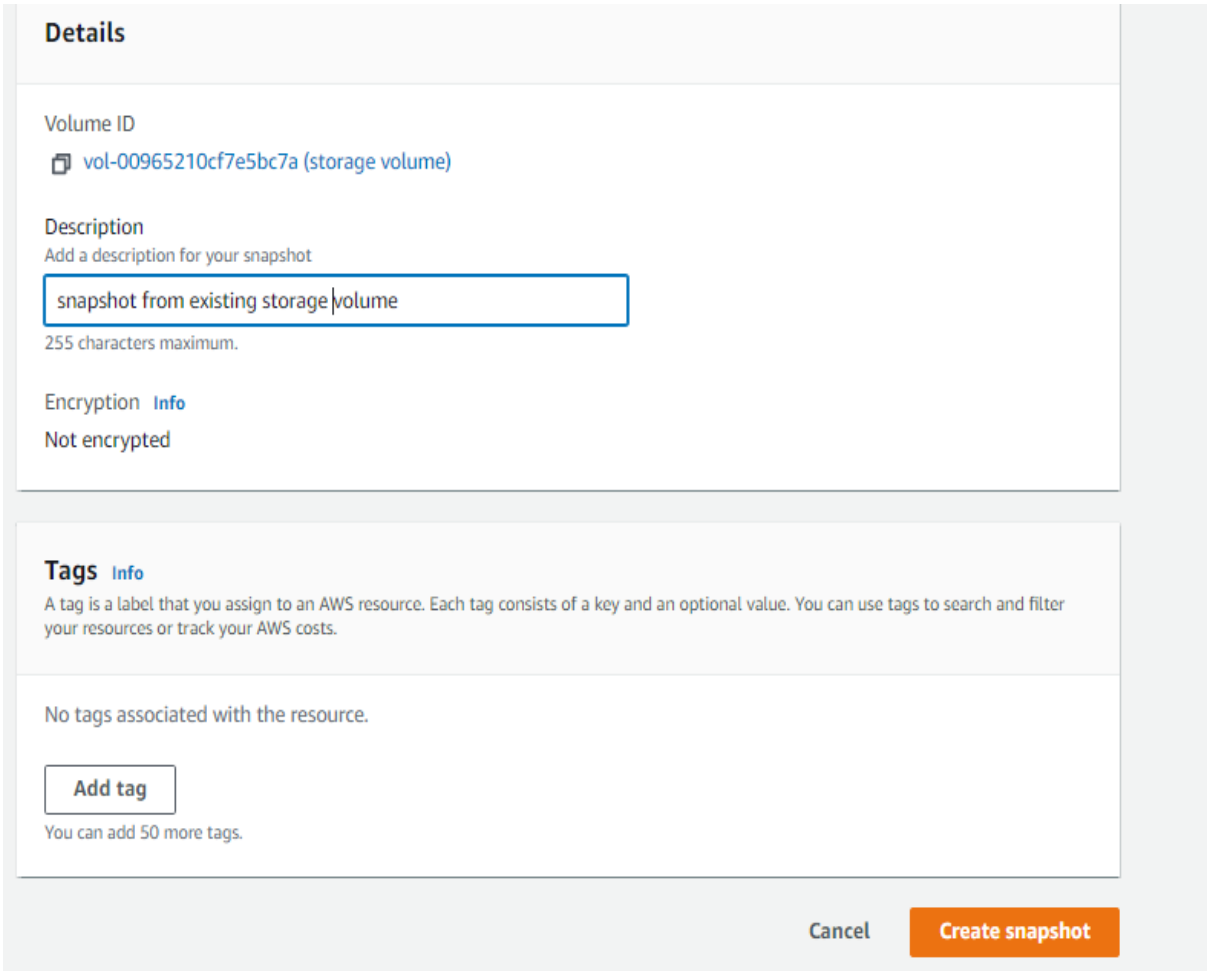
we can create in two ways

1. From Elastic Block store -> snapshot -> create snapshot

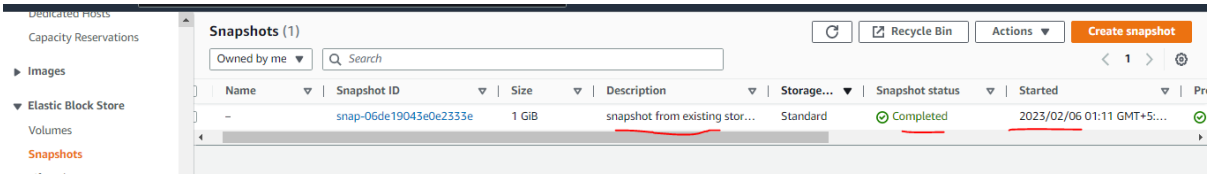
2. create from existing storage volume. **Here I create the snapshot from existing volume**





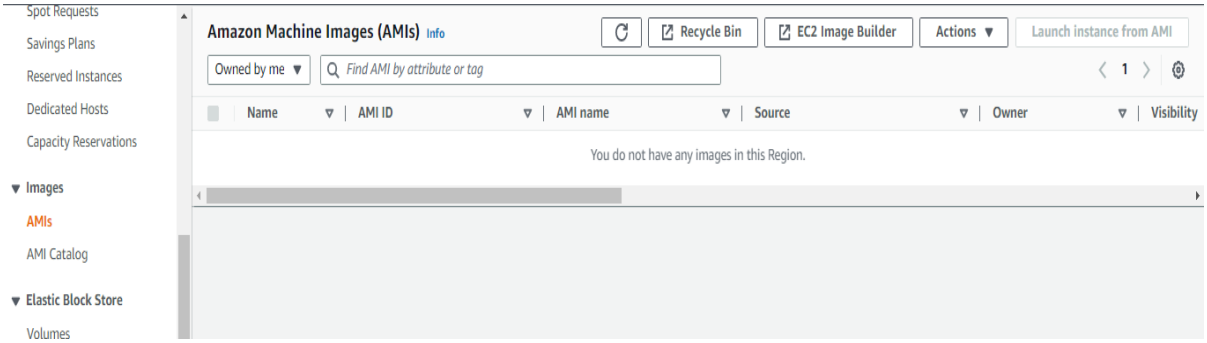


Snapshot created



AMI Creation :

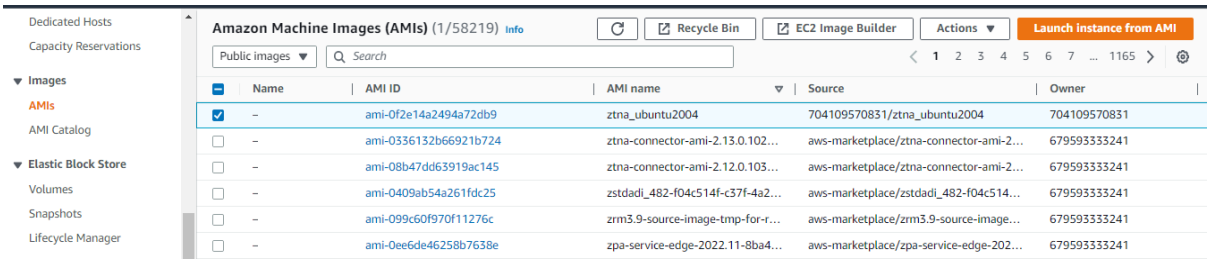
go to Images -> AMIs



select public Images from the drop down to choose the available Images for AMI creation

Check the checkbox for the required Image from market place

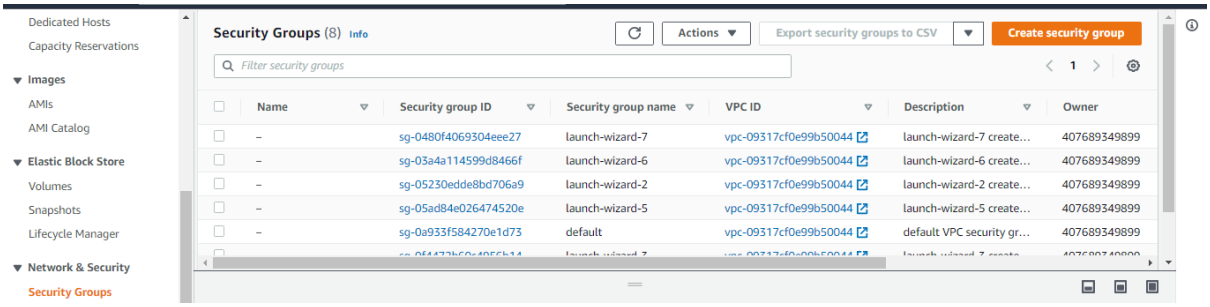
Click on Launch Instance from AMI



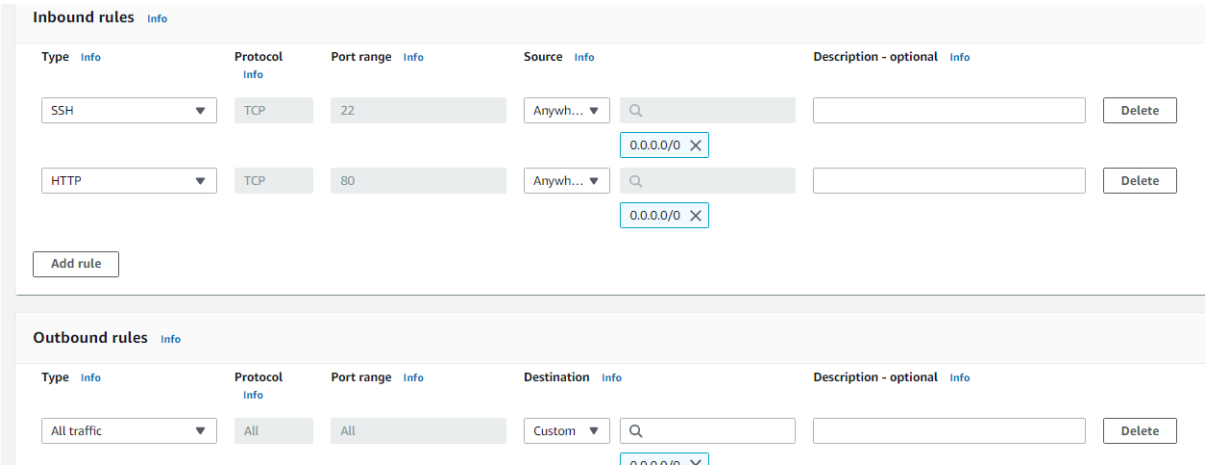
5.Load Balancer

create a security group: (name - pavansecuritygroup)

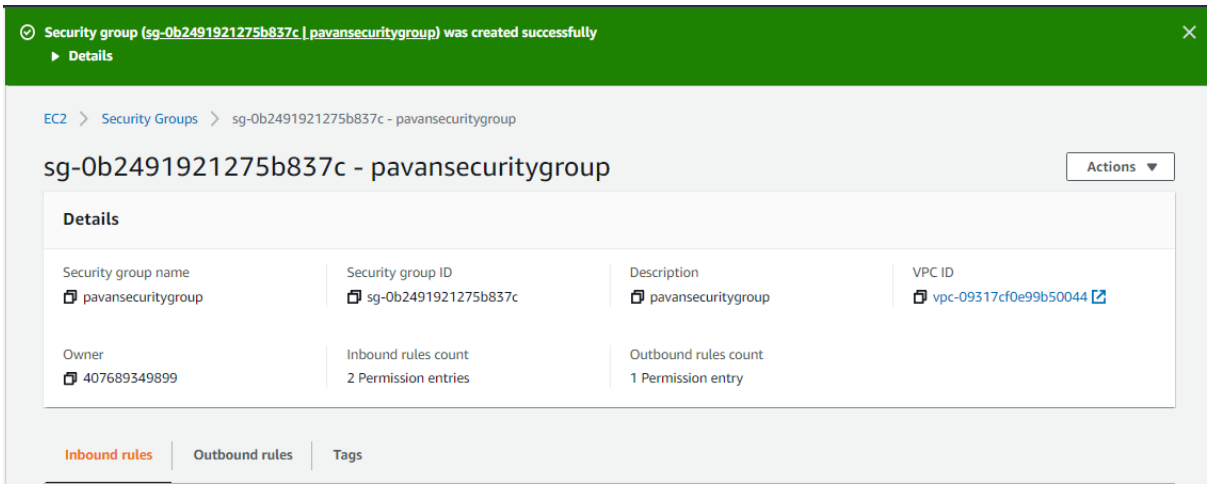
click on create security group (Network & security --> security Groups)



create inbound rules for SSH and HTTP

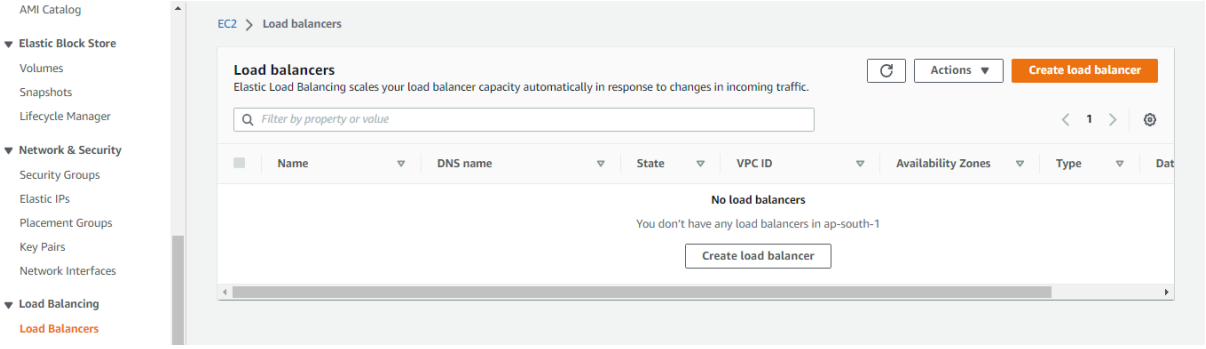


Security group created

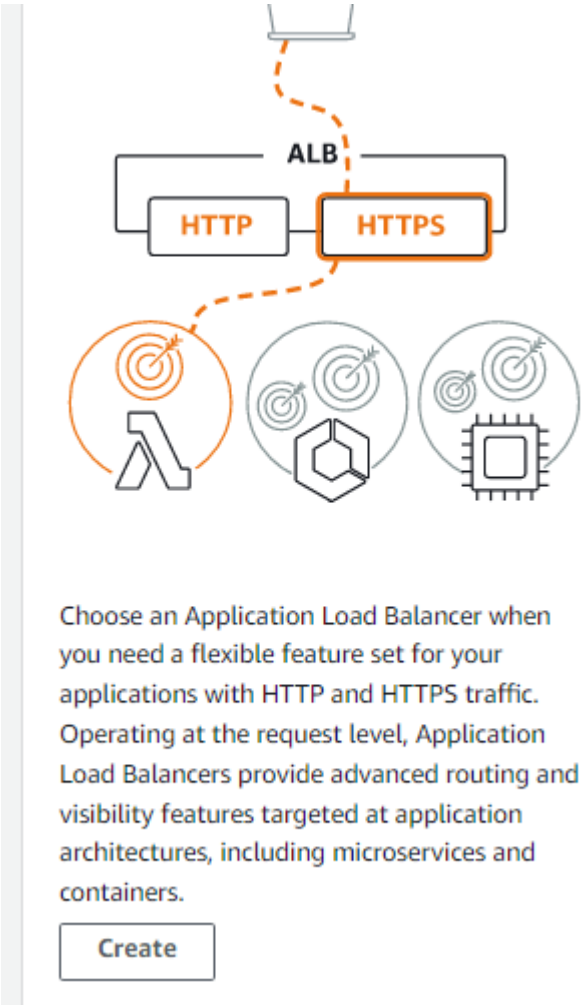


Now create an Application Load balancer by associating the security group created above

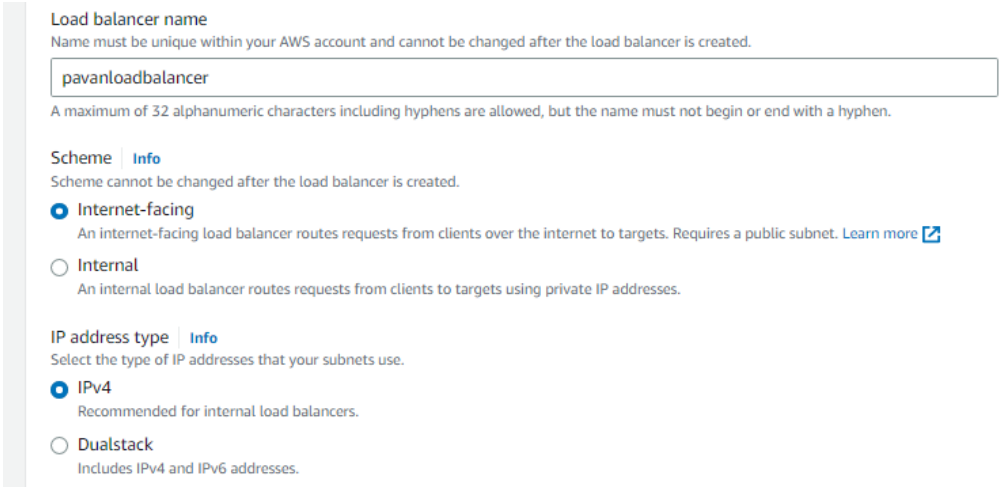
Load Balancing - Load Balancers -> create Load balancer



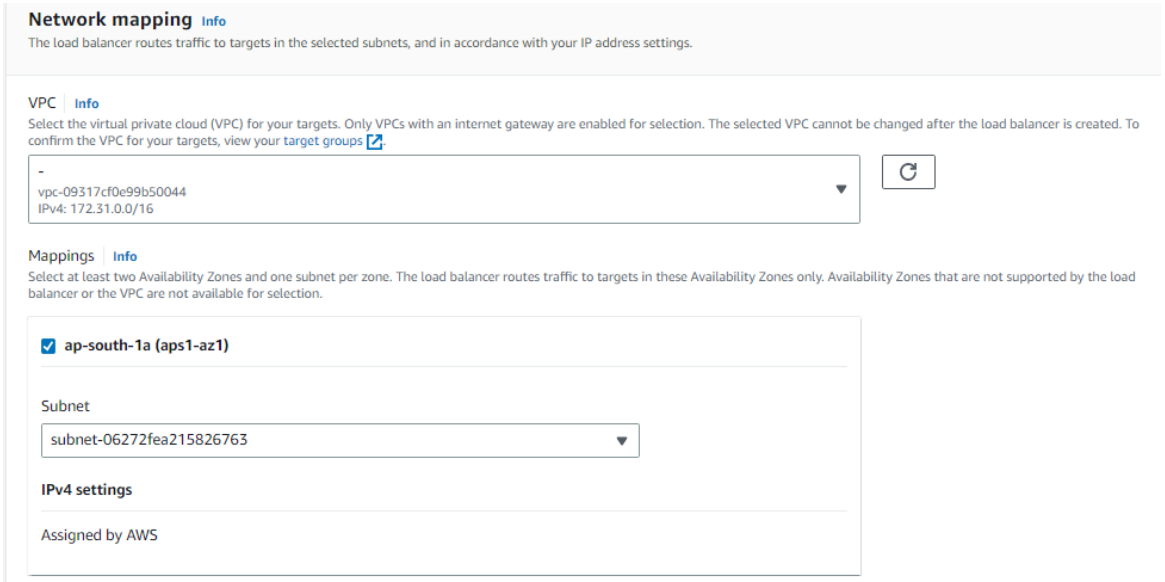
Choose Application Load balancer and click on create (name - pavanloadbalancer)

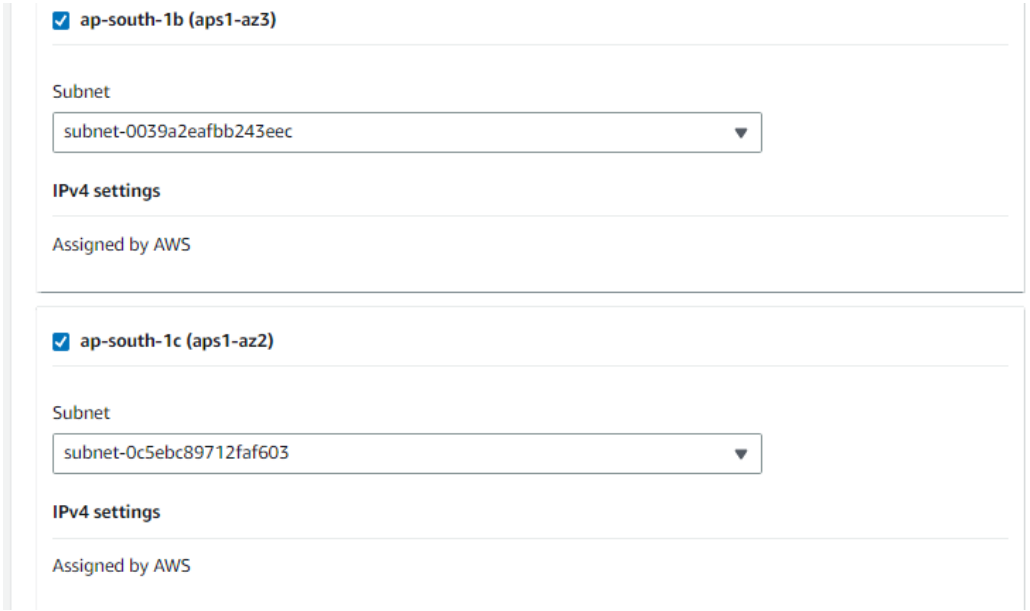


select the Scheme (Internet-facing) and IP address type as IPv4

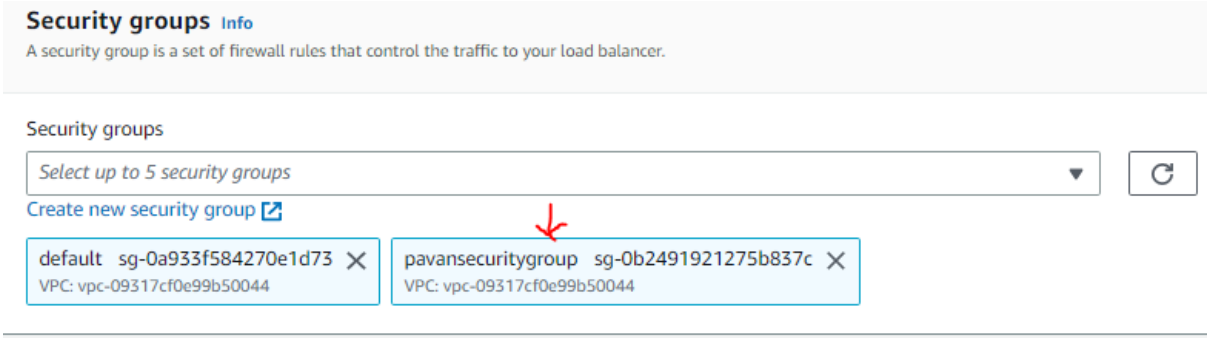


select default VPC, and select check boxes for ap-south-1a, ap-south-1b, ap-south-1c

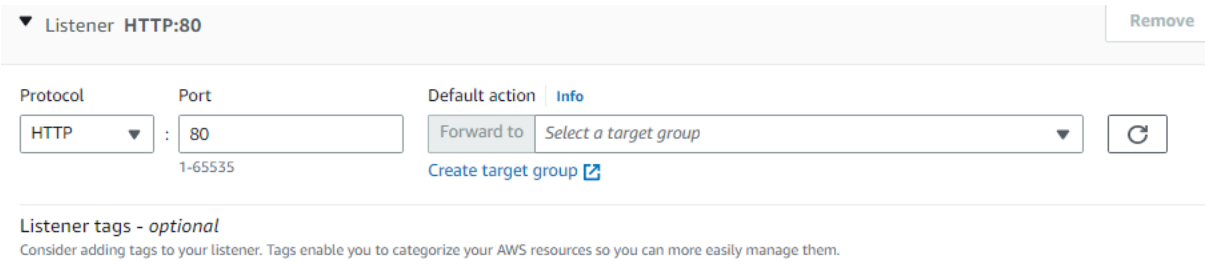




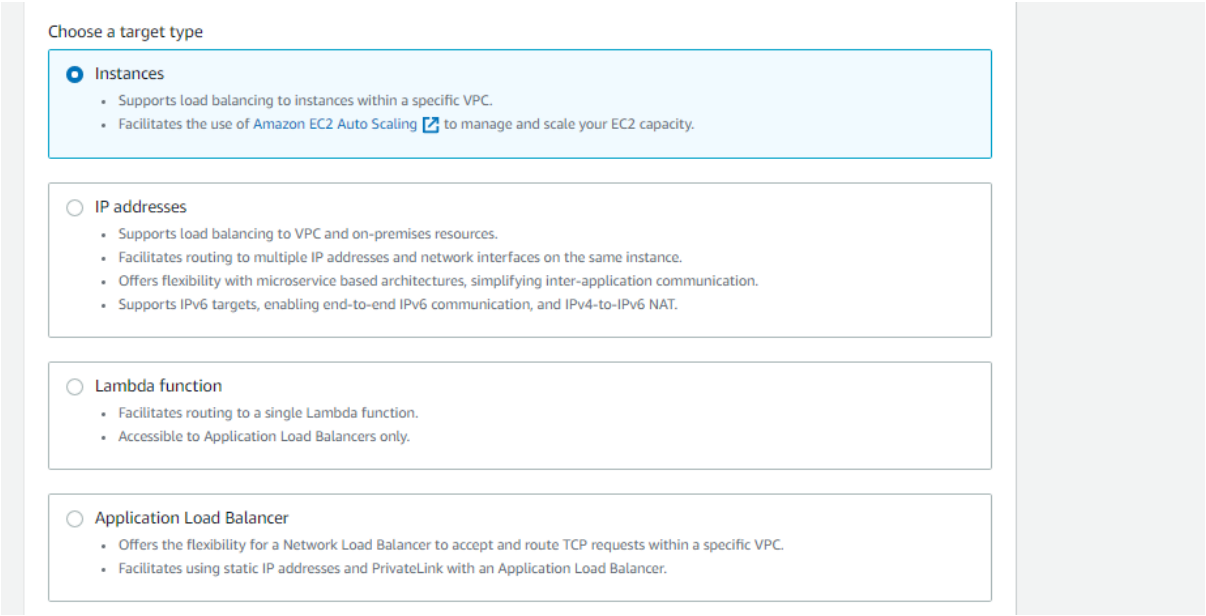
select the security group created in previous step



create a target group



Choose the target type, we have selected Instances



Give targetgroup name (pavantargetgroup) select HTTP protocol, default VPC

Target group name

pavantargetgroup

A maximum of 32 alphanumeric characters including hyphens are allowed, but the name must not begin or end with a hyphen.

Protocol: HTTP : Port: 80

VPC

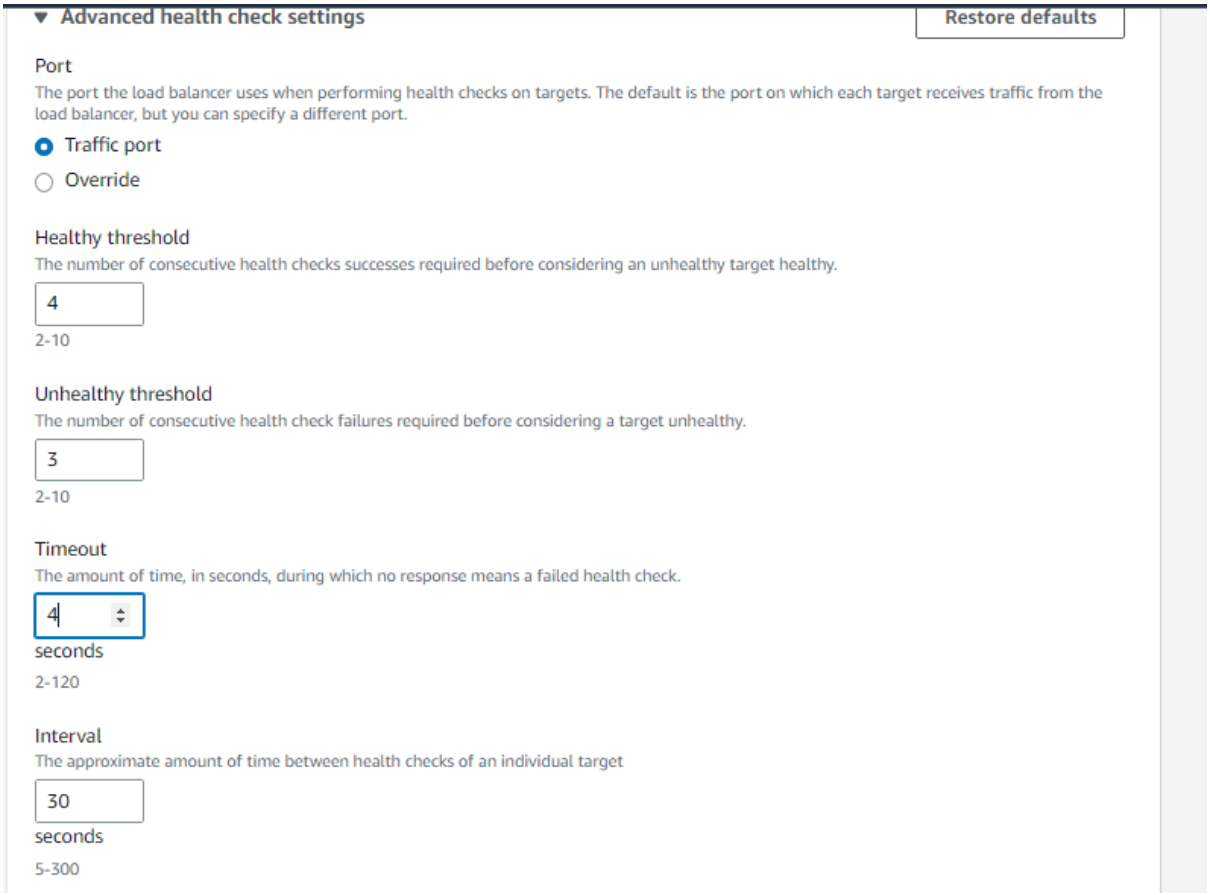
Select the VPC with the instances that you want to include in the target group.

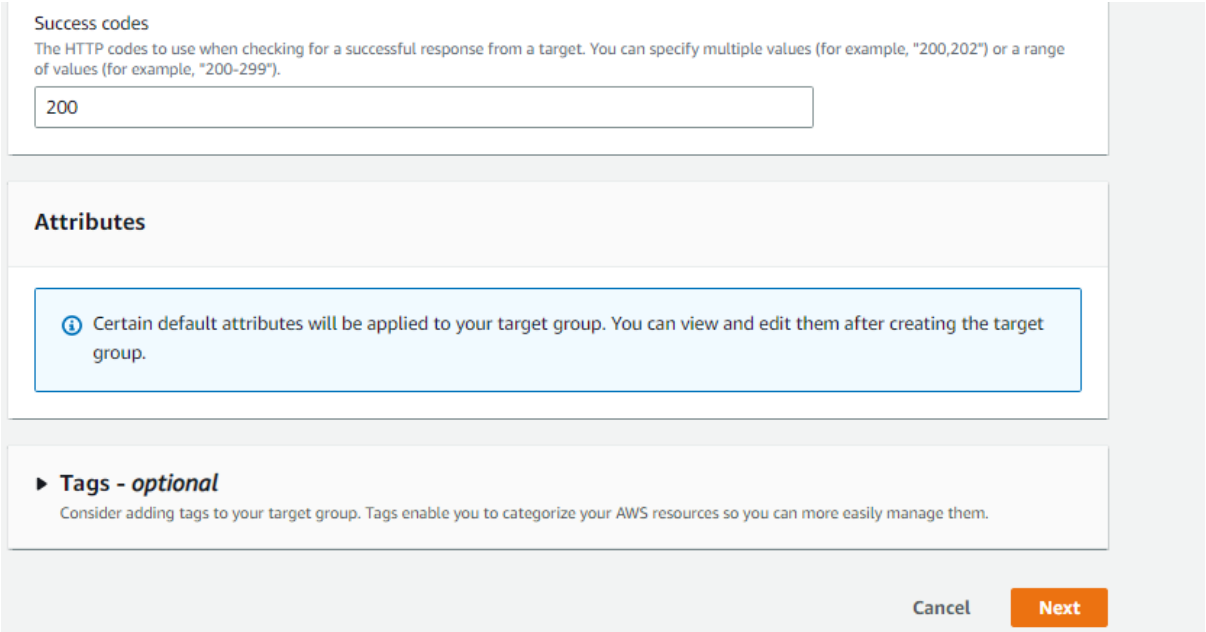
\-
vpc-09317cf0e99b50044
IPv4: 172.31.0.0/16

Protocol version

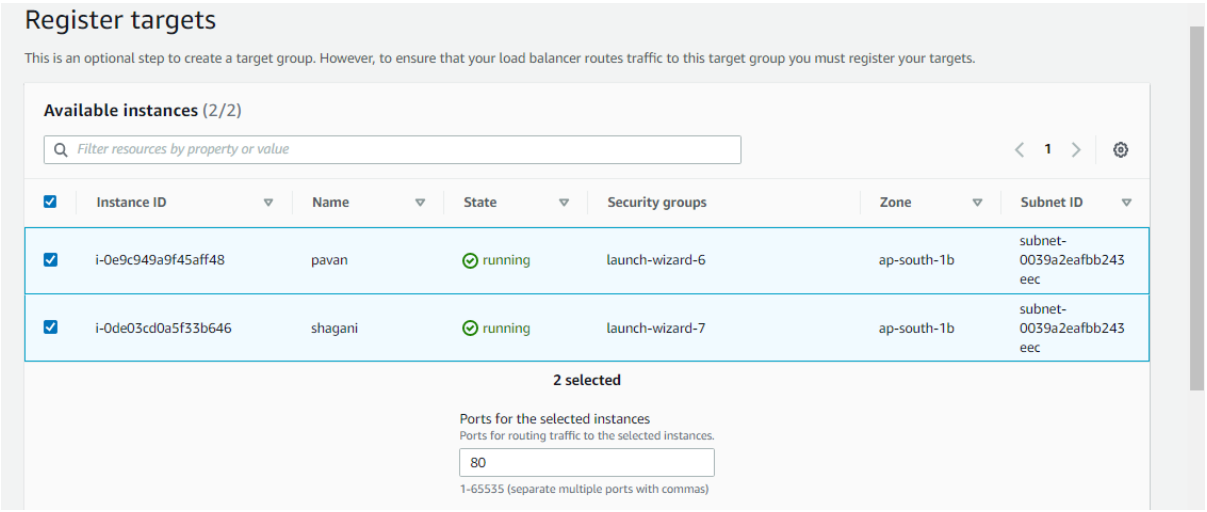
- HTTP1
  Send requests to targets using HTTP/1.1. Supported when the request protocol is HTTP/1.1 or HTTP/2.
- HTTP2
  Send requests to targets using HTTP/2. Supported when the request protocol is HTTP/2 or gRPC, but gRPC-specific features are not available.
- gRPC
  Send requests to targets using gRPC. Supported when the request protocol is gRPC.

give the numbers based on requirement under Advance healthchecks

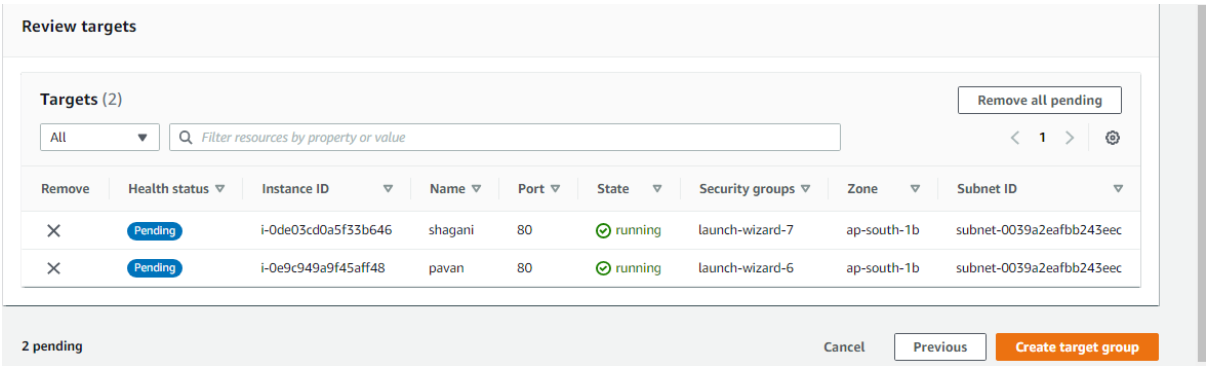




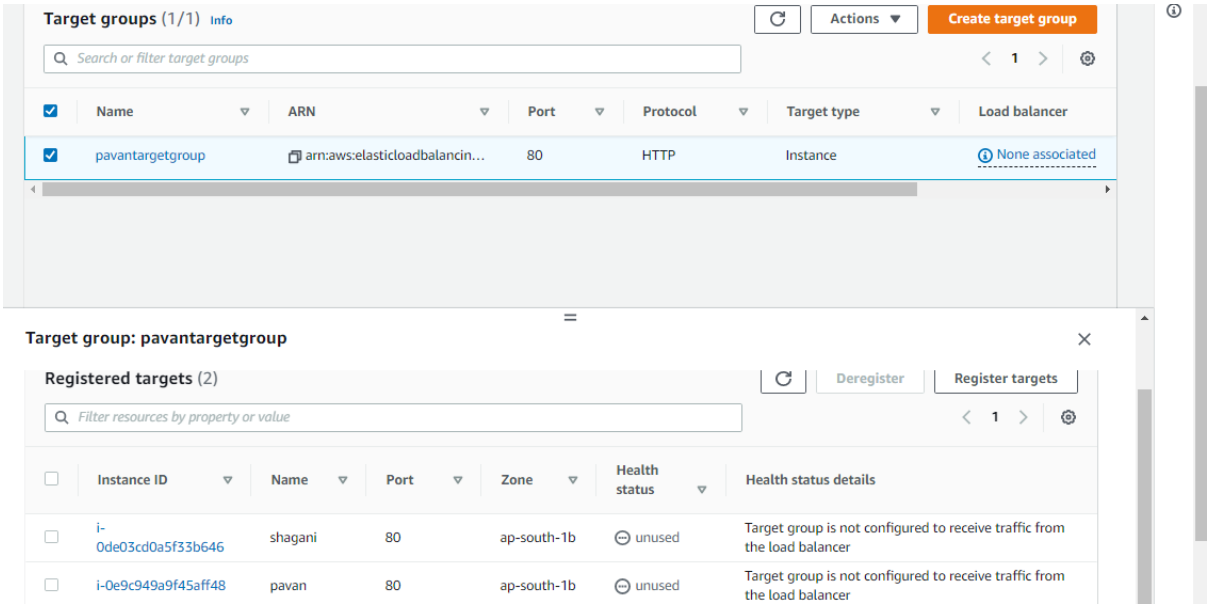
register the targets , with two new machines created (shagani, pavan)



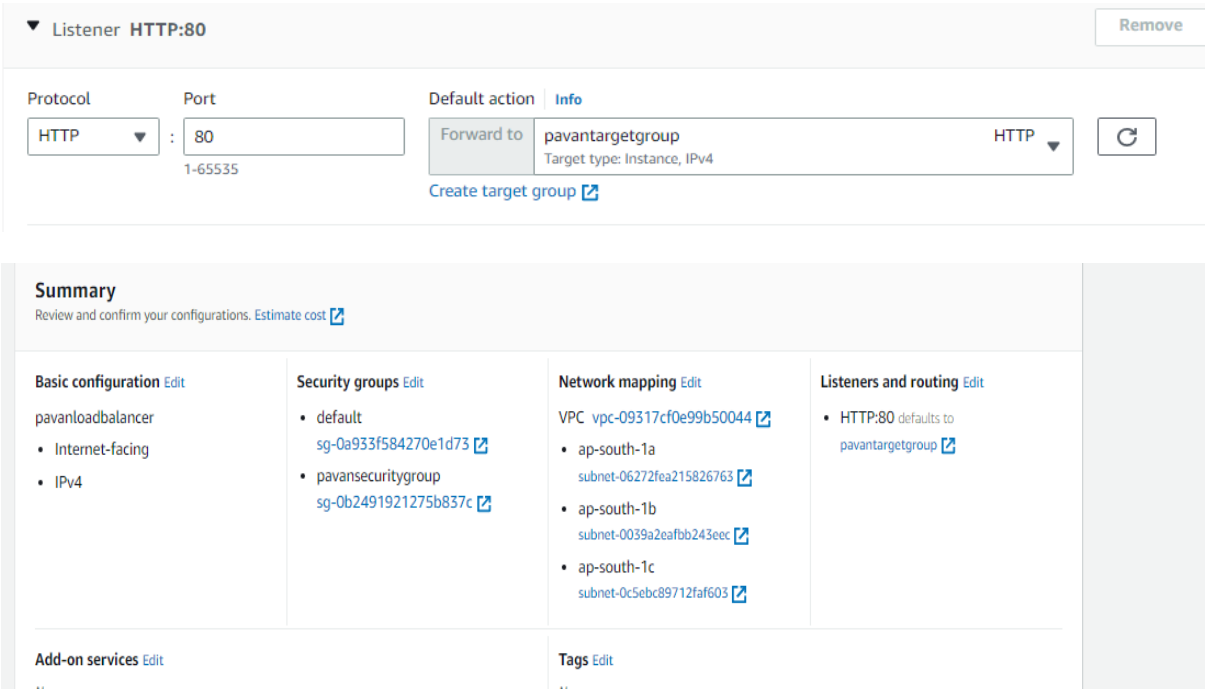
create on 'create target group'



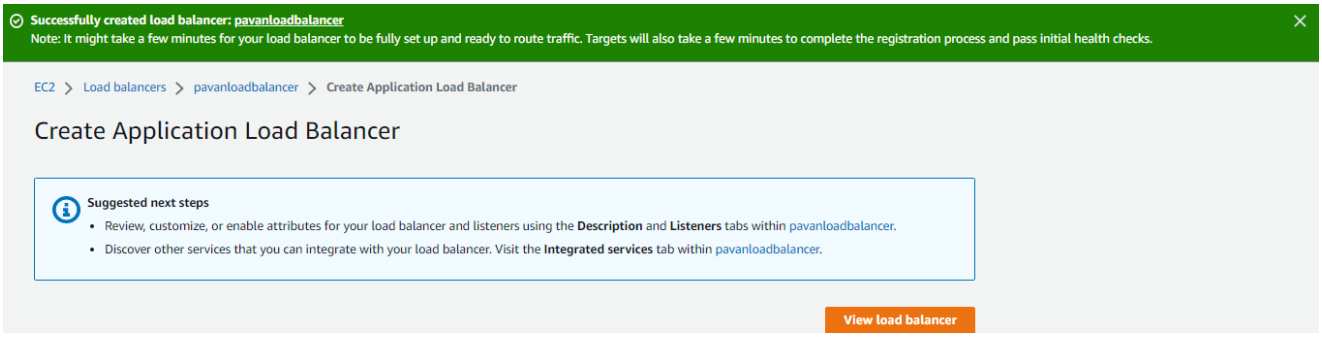
Target group created

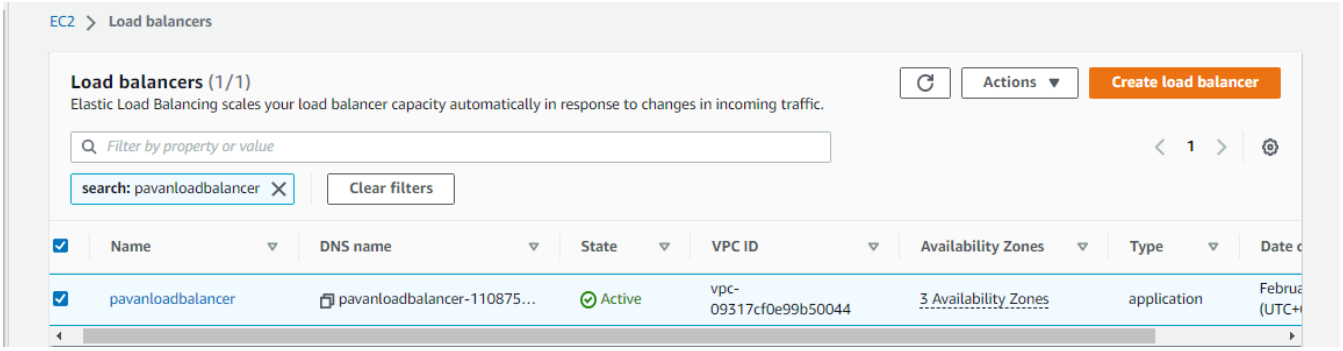


Associate the Target Group with Load balancer



Click on create Load Balancer


Successfully created load balancer: pavanloadbalancer
Note: It might take a few minutes for your load balancer to be fully set up and ready to route traffic. Targets will also take a few minutes to complete the registration process and pass initial health checks.
EC2 > Load balancers > pavanloadbalancer > Create Application Load Balancer
Create Application Load Balancer
Suggested next steps
Review, customize, or enable attributes for your load balancer and listeners using the Description and Listeners tabs within pavanloadbalancer.
Discover other services that you can integrate with your load balancer. Visit the Integrated services tab within pavanloadbalancer.
View load balancer


EC2 > Load balancers
Load balancers (1/1)
Elastic Load Balancing scales your load balancer capacity automatically in response to changes in incoming traffic.
Actions
Create load balancer
Filter by property or value
search: pavanloadbalancer
Clear filters
1
Name
DNS name
State
VPC ID
Availability Zones
Type
pavanloadbalancer
pavanloadbalancer-110875...
Active
vpc-09317cf0e99b50044
3 Availability Zones
application