# ASSIGNMENT-2

## EC2- Classic Load Balancer

- Create 2 Ec2 windows free tier instances.
- Configure IIS server on both. Be sure you are configuring them on two different availability zones for achieving high availability.
- Configuring a classic load balancer between those two instances with HTTP service port.
  Note: You can use one node same from Assignment 1 of IIS server.

### Load Balancing-

Load Balancing distributes incoming application or network traffic across multiple targets, such as Amazon EC2 instances, containers, and IP addresses, in multiple Availability Zones. Elastic Load Balancing scales your load balancer as traffic to your application changes over time. It can automatically scale to the vast majority of workloads.

### Load Balancer Benefits-

A load balancer distributes workloads across multiple compute resources, such as virtual servers. Using a load balancer increases the availability and fault tolerance of your applications.

You can add and remove compute resources from your load balancer as your needs change, without disrupting the overall flow of requests to your applications.

You can configure health checks, which monitor the health of the compute resources, so that the load balancer sends requests only to the healthy ones. You can also offload the work of encryption and decryption to your load balancer so that your compute resources can focus on their main work.

Elastic Load Balancing supports three types of load balancers: Application Load Balancers, Network Load Balancers, and Classic Load Balancers. Here we'll discuss Classic Load Balancers.

### Classic Load Balancer-

A load balancer distributes incoming application traffic across multiple EC2 instances in multiple Availability Zones. This increases the fault tolerance of your applications. Elastic Load Balancing detects unhealthy instances and routes traffic only to healthy instances.

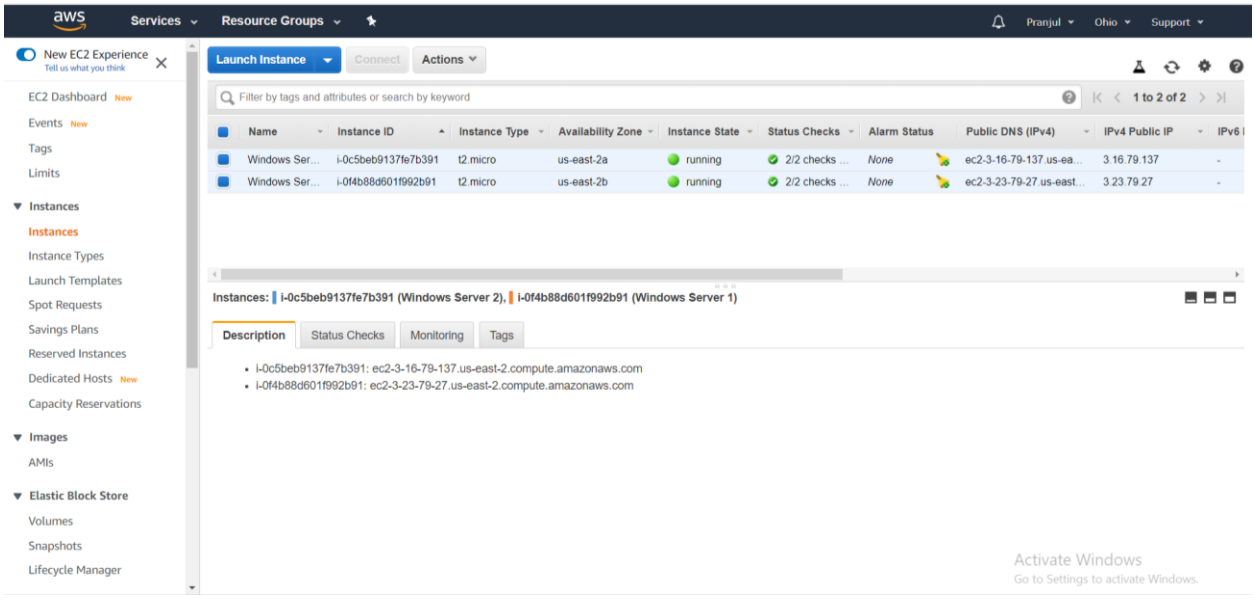
Your load balancer serves as a single point of contact for clients. This increases the availability of your application. You can add and remove instances from your load balancer as your needs change, without disrupting the overall flow of requests to your application. Elastic Load Balancing scales your load balancer as traffic to your application changes over time. Elastic Load Balancing can scale to the vast majority of workloads automatically.

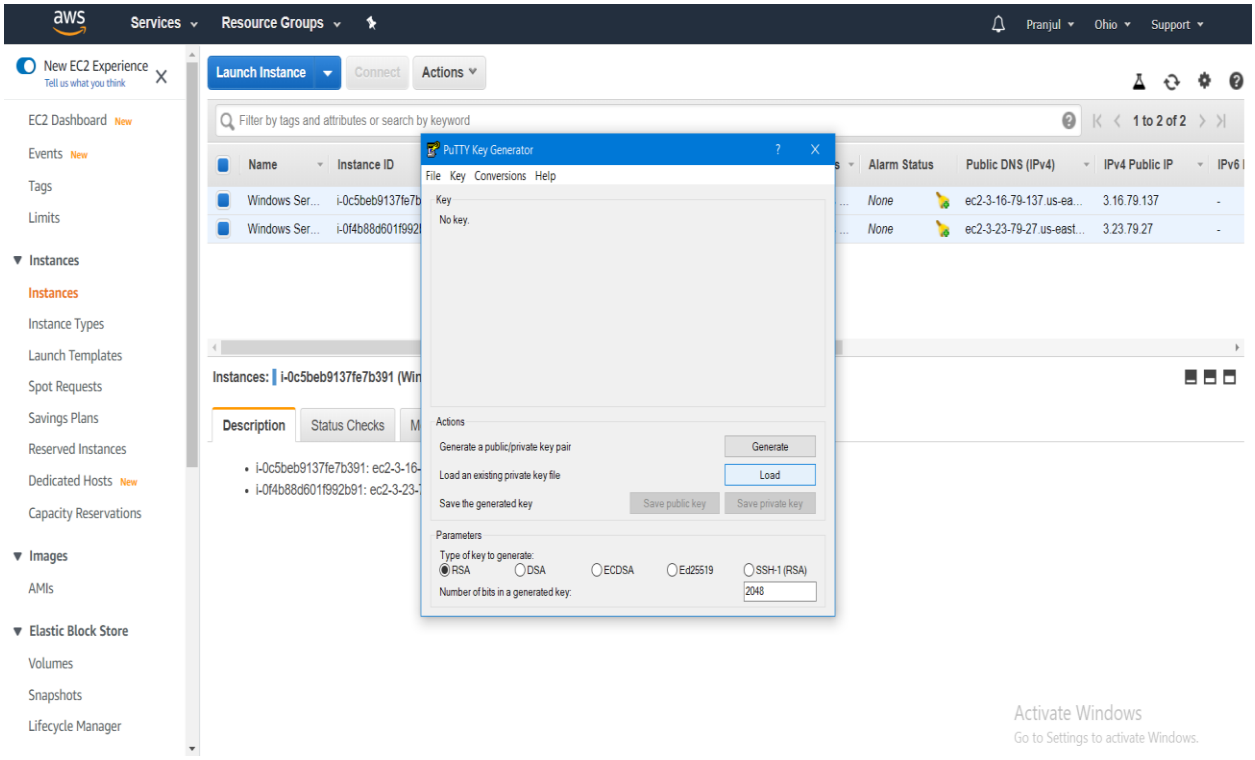
You can configure *health checks*, which are used to monitor the health of the registered instances so that the load balancer only sends requests to the healthy instances.

## Steps:

1- Create two EC2 windows free tier instances. i.e. Windows Server 1 and Windows Server 2

2- Configure on two different availability zones. i.e. us-east-2a and us-east-2b




aws
Services
Resource Groups
Pranjul
Ohio
Support
New EC2 Experience
Tell us what you think
Launch Instance
Connect
Actions
Filter by tags and attributes or search by keyword
1 to 2 of 2
EC2 Dashboard New
Events New
Tags
Limits
Instances
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts New
Capacity Reservations
Images
AMIs
Elastic Block Store
Volumes
Snapshots
Lifecycle Manager
Name
Instance ID
Alarm Status
Public DNS (IPv4)
IPv4 Public IP
Windows Ser...
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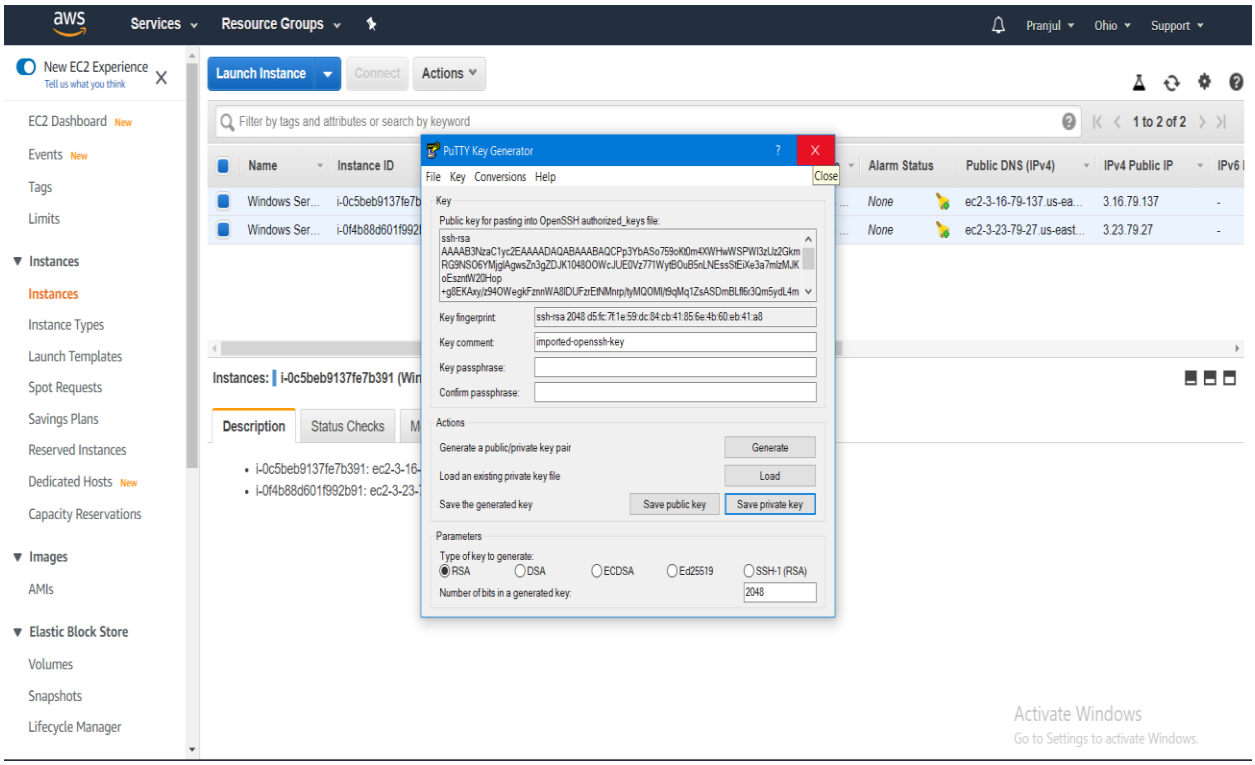
None
ec2-3-16-79-137.us-ea...
3.16.79.137
Windows Ser...
i-0f4b88d601f992
None
ec2-3-23-79-27.us-east...
3.23.79.27
Instances: i-0c5beb9137fe7b391 (Win
Description
Status Checks
i-0c5beb9137fe7b391: ec2-3-16-
i-0f4b88d601f992b91: ec2-3-23-
PuTTY Key Generator
File Key Conversions Help
Key
No key.
Actions
Generate a public/private key pair
Generate
Load an existing private key file
Load
Save the generated key
Save public key
Save private key
Parameters
Type of key to generate:
RSA
DSA
ECDSA
Ed25519
SSH-1 (RSA)
Number of bits in a generated key:
2048
Activate Windows
Go to Settings to activate Windows.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Public DNS (IPv4)
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Windows Ser...
i-0c5beb9137fe7b
None
ec2-3-16-79-137.us-ea...
3.16.79.137
Windows Ser...
i-0f4b88d601f992
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i-0f4b88d601f992b91: ec2-3-23-
PuTTY Key Generator
File Key Conversions Help
Close
Key
Public key for pasting into OpenSSH authorized_keys file:
ssh-rsa
AAAAB3NzaC1yc2EAAAADAQABAAABAQCPp3YbASo759oKl0m4XWHwWSPWI3zUz2Gkm
RG9NSO6YMjglAgwsZn3gZDJK1048OOWcJUE0Vz771WytBOuB5nLNEssStEiXe3a7mlzMJK
oEsztW20lHop
+g8EKAxy/z940WegkFznnWA8IDUFzrEtNMnp/tyMQOMl/t9qMq1ZsASDmBLf6i3Qm5ydL4m
Key fingerprint:
ssh-rsa 2048 d5:fc:7f:1e:59:dc:84:cb:41:85:6e:4b:60:eb:41:a8
Key comment:
imported-openssh-key
Key passphrase:
Confirm passphrase:
Actions
Generate a public/private key pair
Generate
Load an existing private key file
Load
Save the generated key
Save public key
Save private key
Parameters
Type of key to generate:
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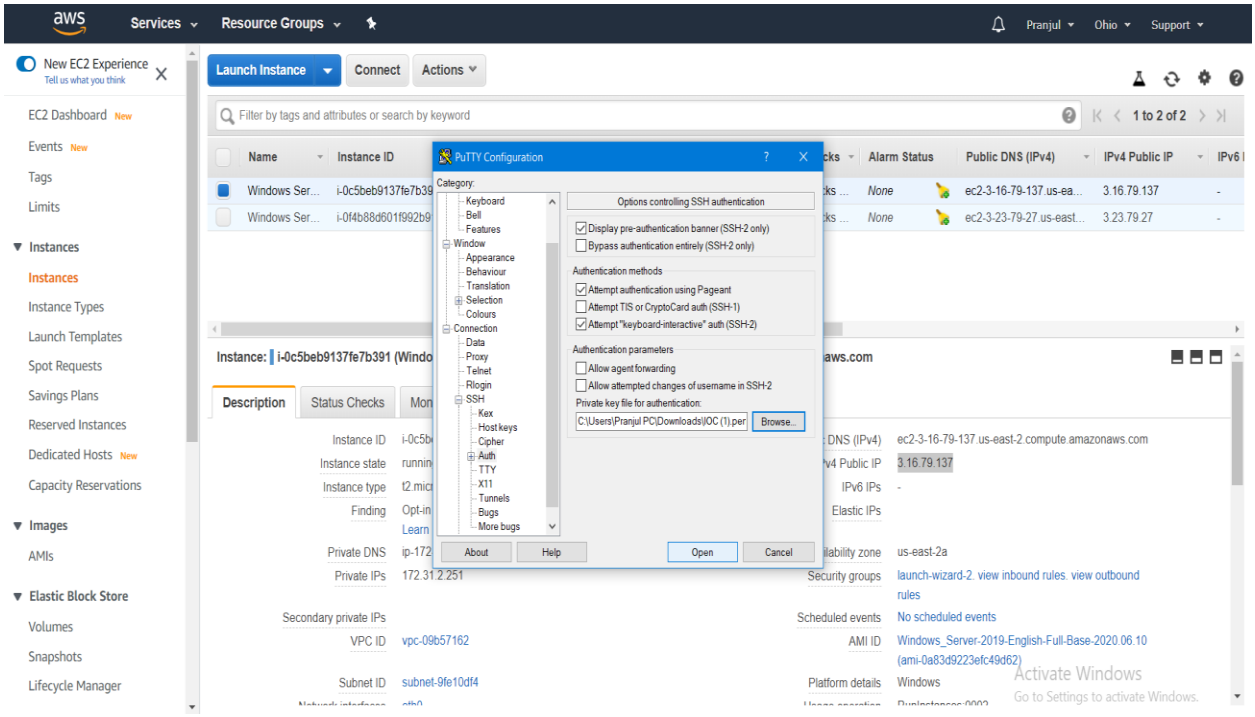
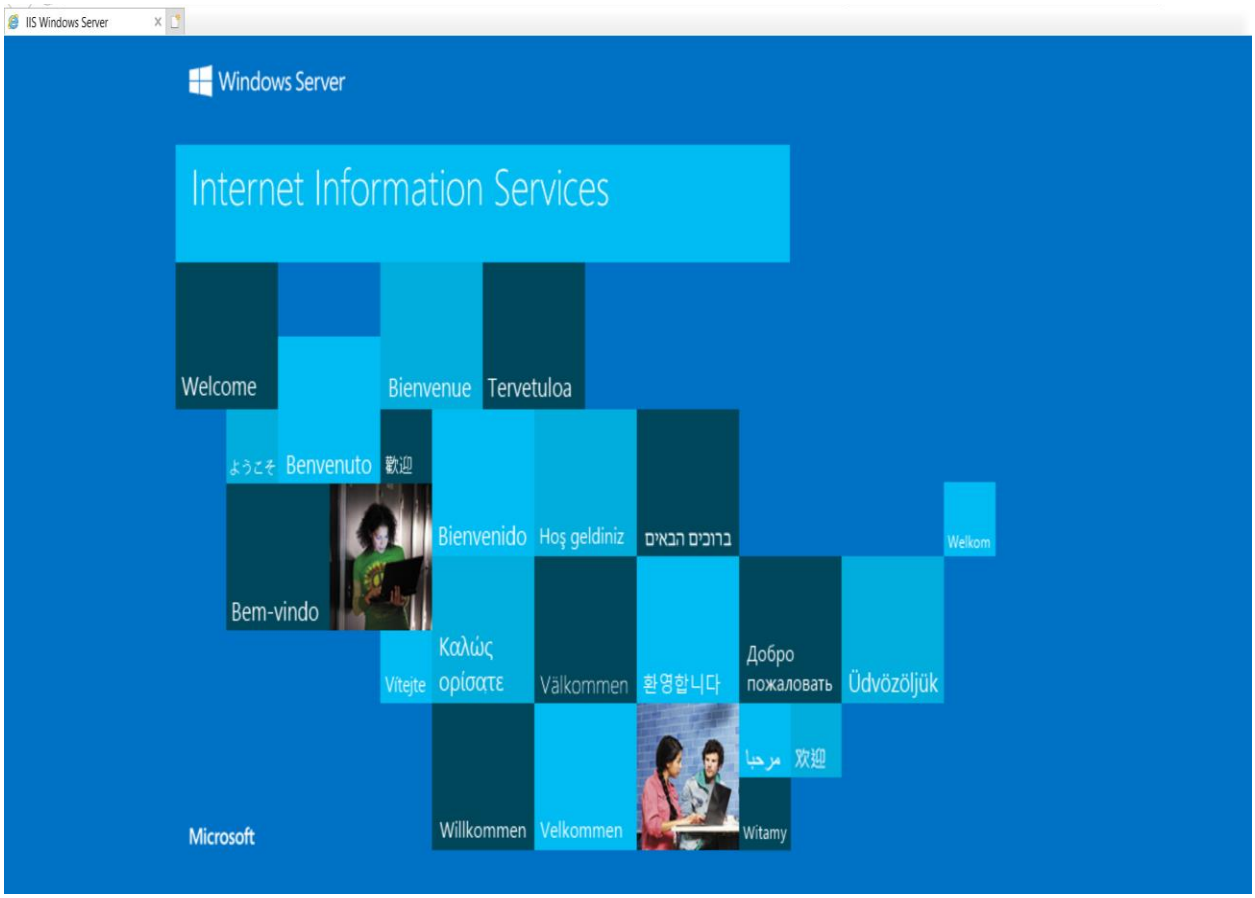
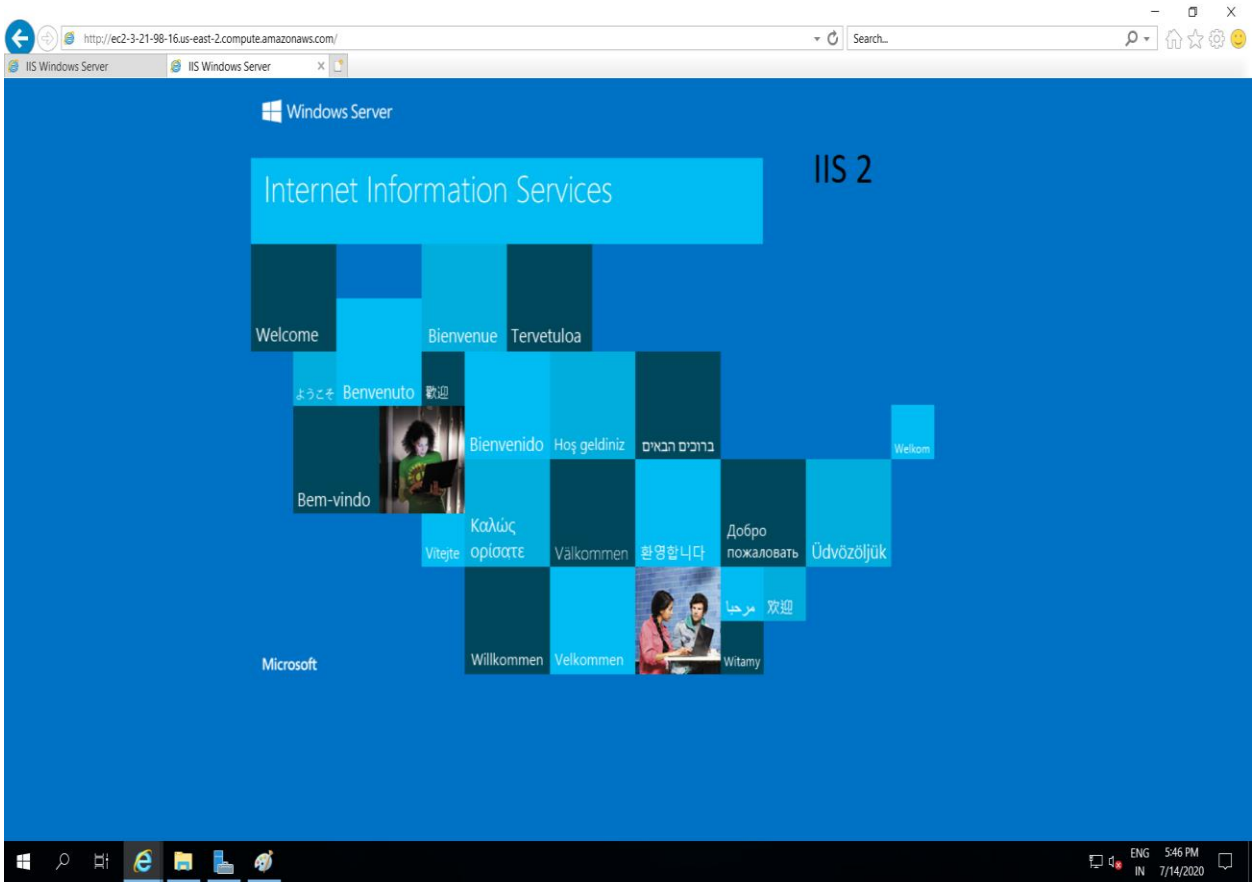
DSA
ECDSA
Ed25519
SSH-1 (RSA)
Number of bits in a generated key:
2048
Activate Windows
Go to Settings to activate Windows.

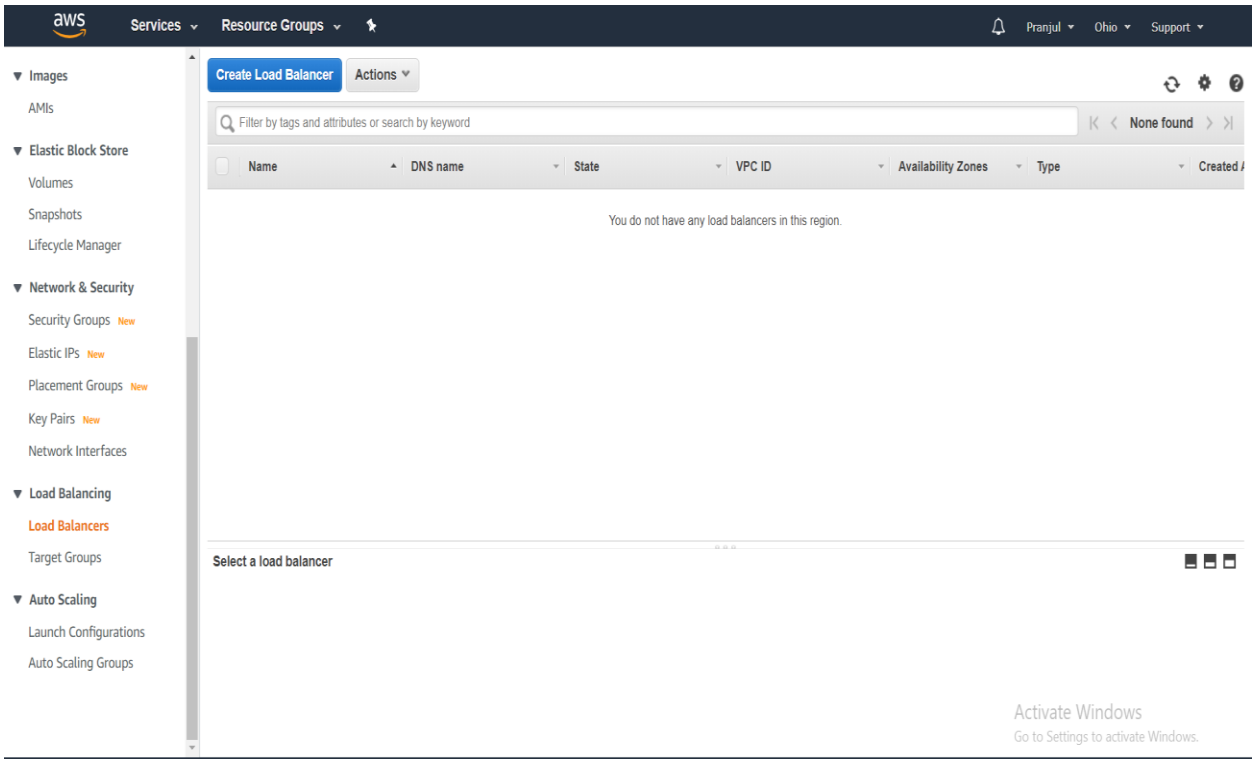



Two Windows Server (IIS) are launched.

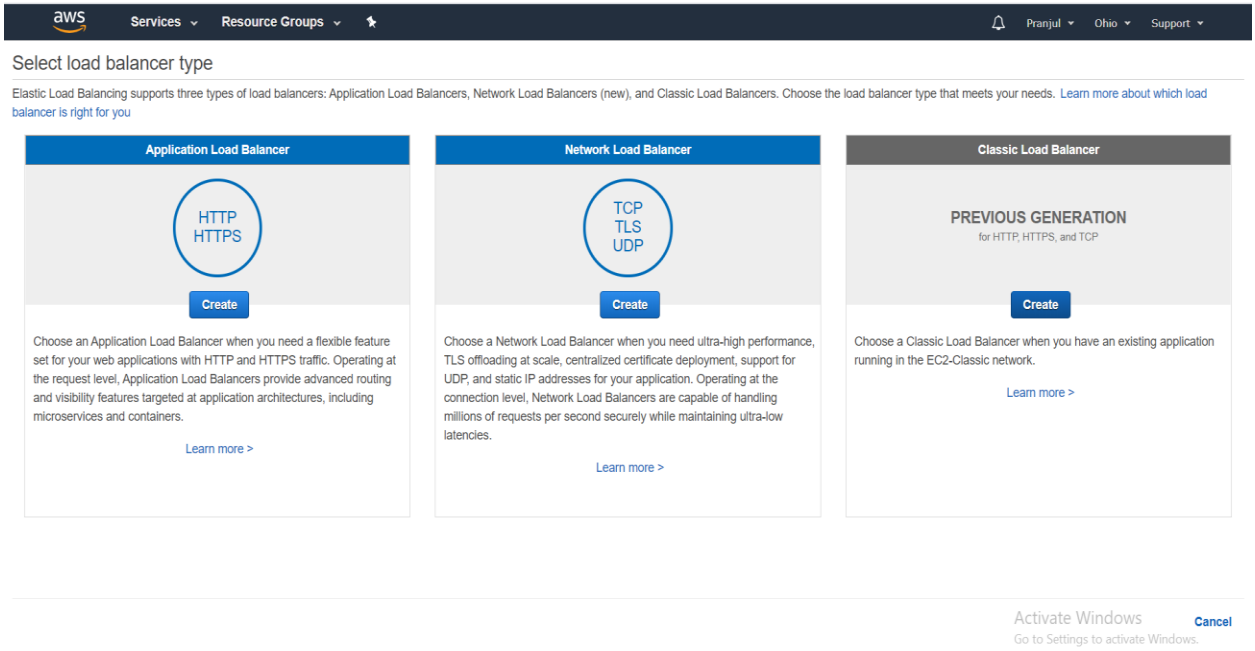




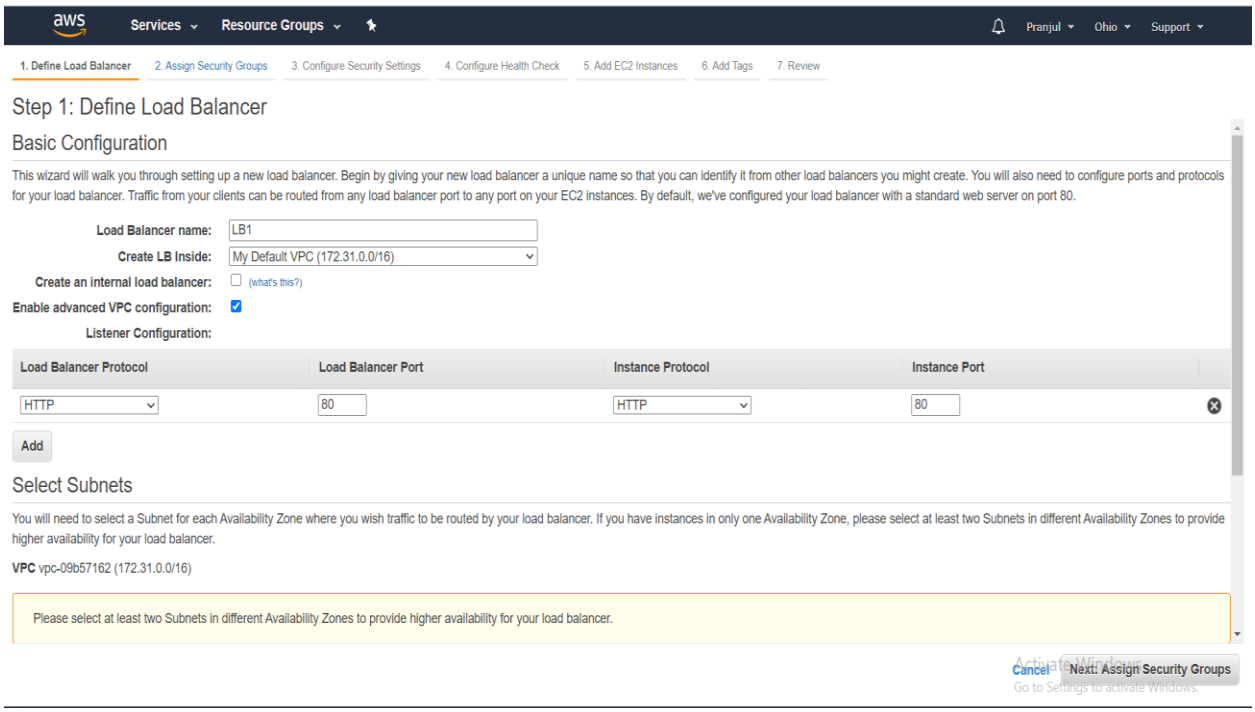

3- Create Load Balancer



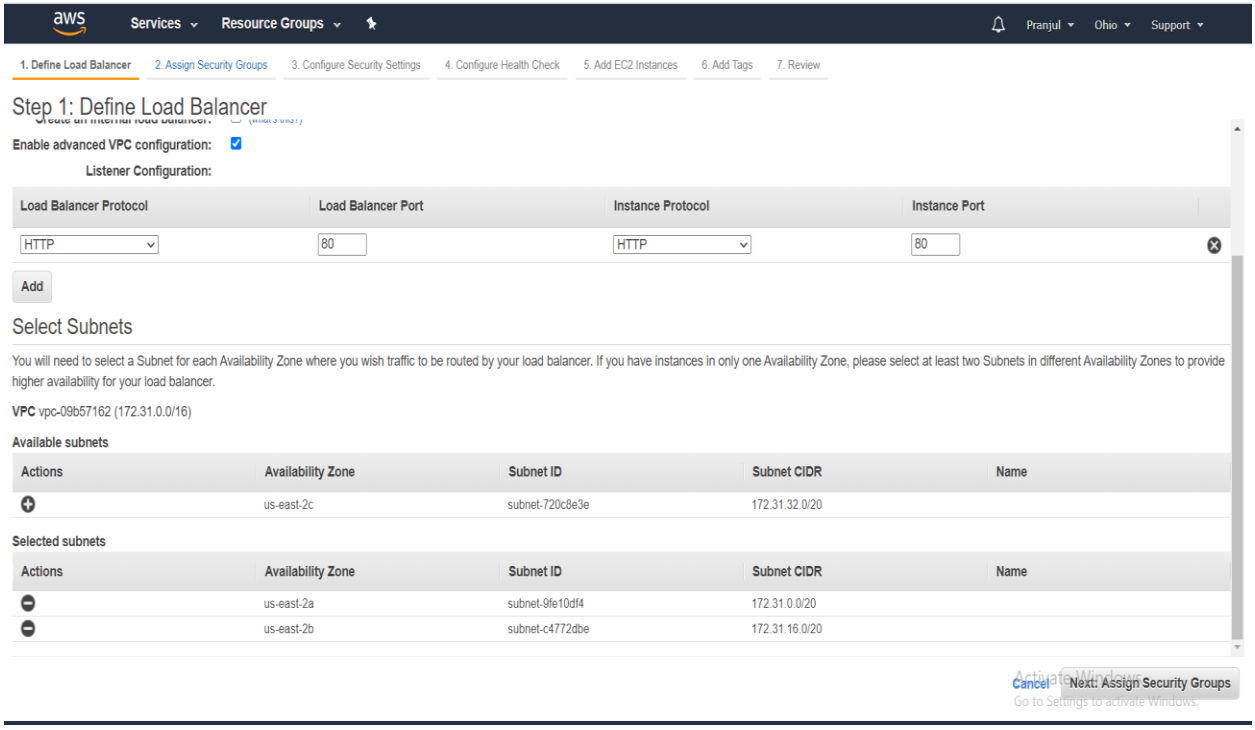
4- Select load balancer type. Configure HTTP service port.



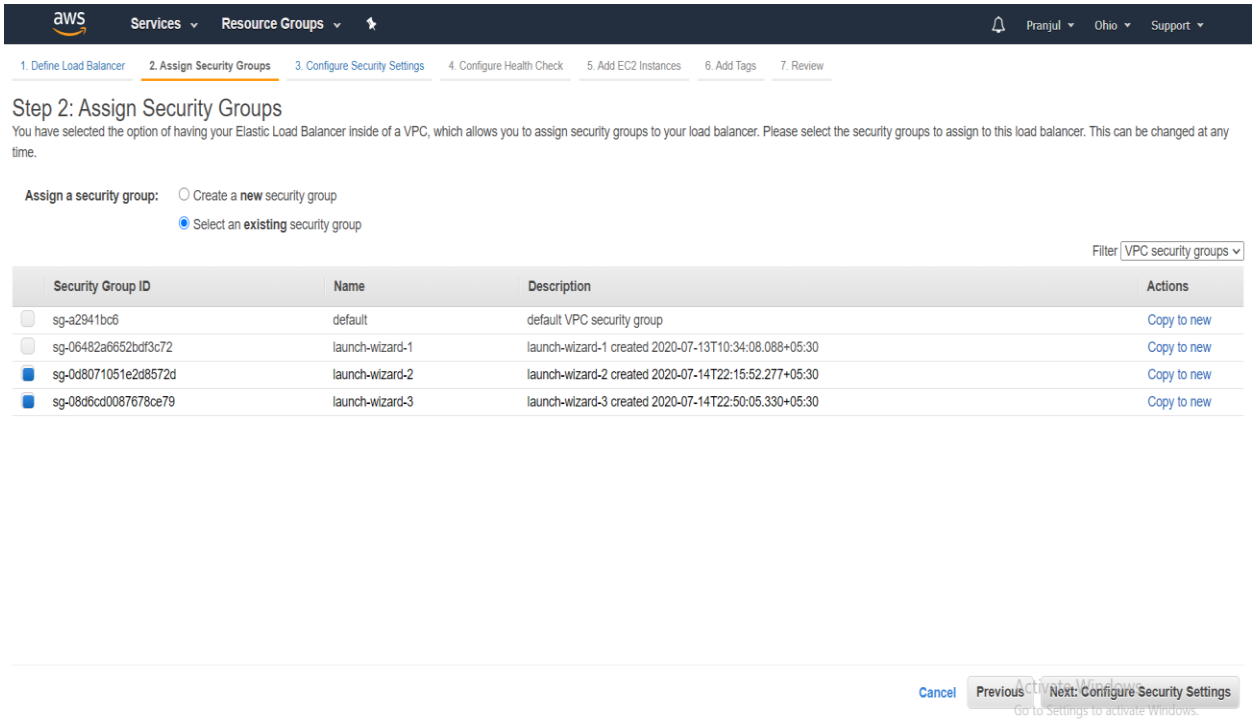

5- Define Load Balancer.
Load Balancer Name: LB1
Enable advanced VPC configuration



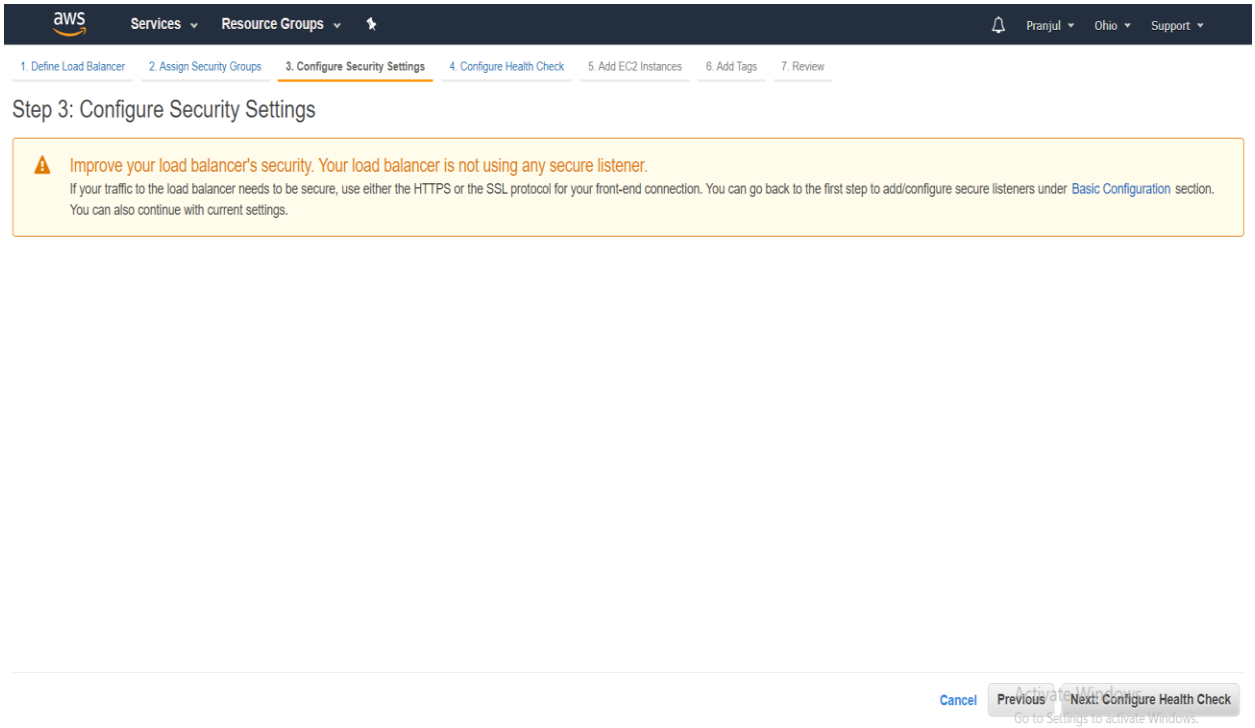
6- Choose sebnets.



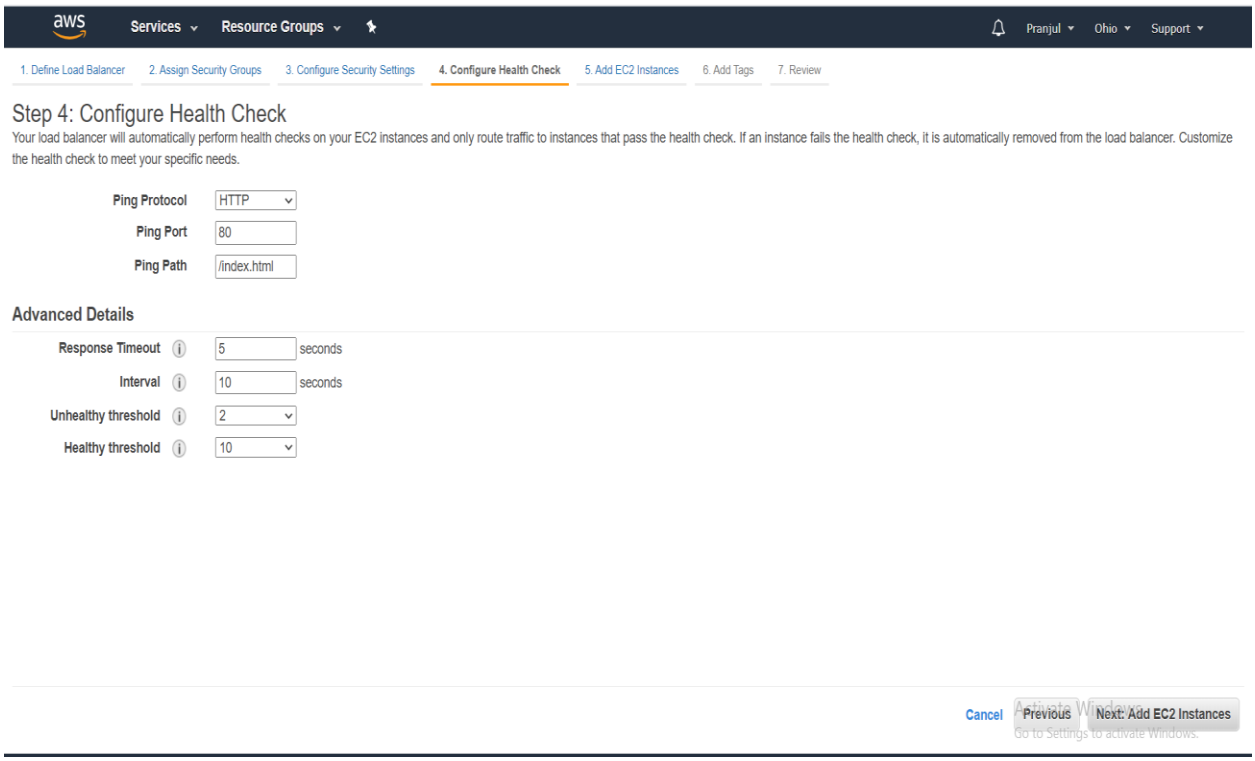

7- Assign Security Groups.



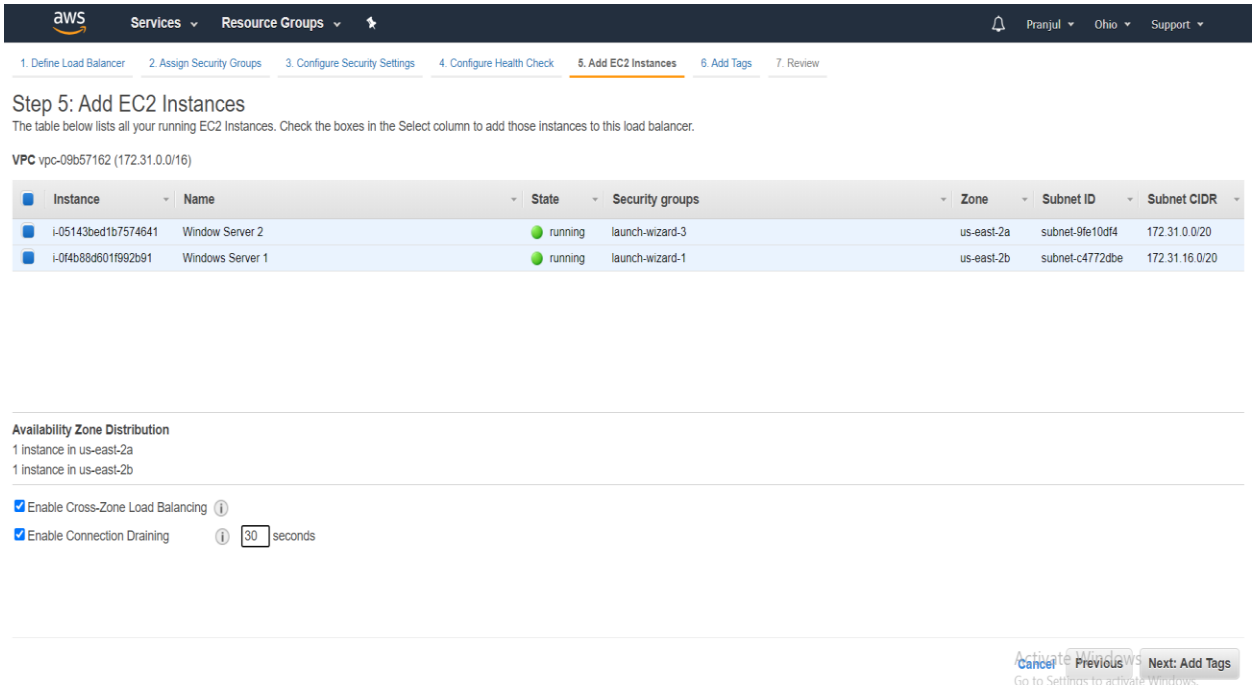
8- Configure Security Settings.



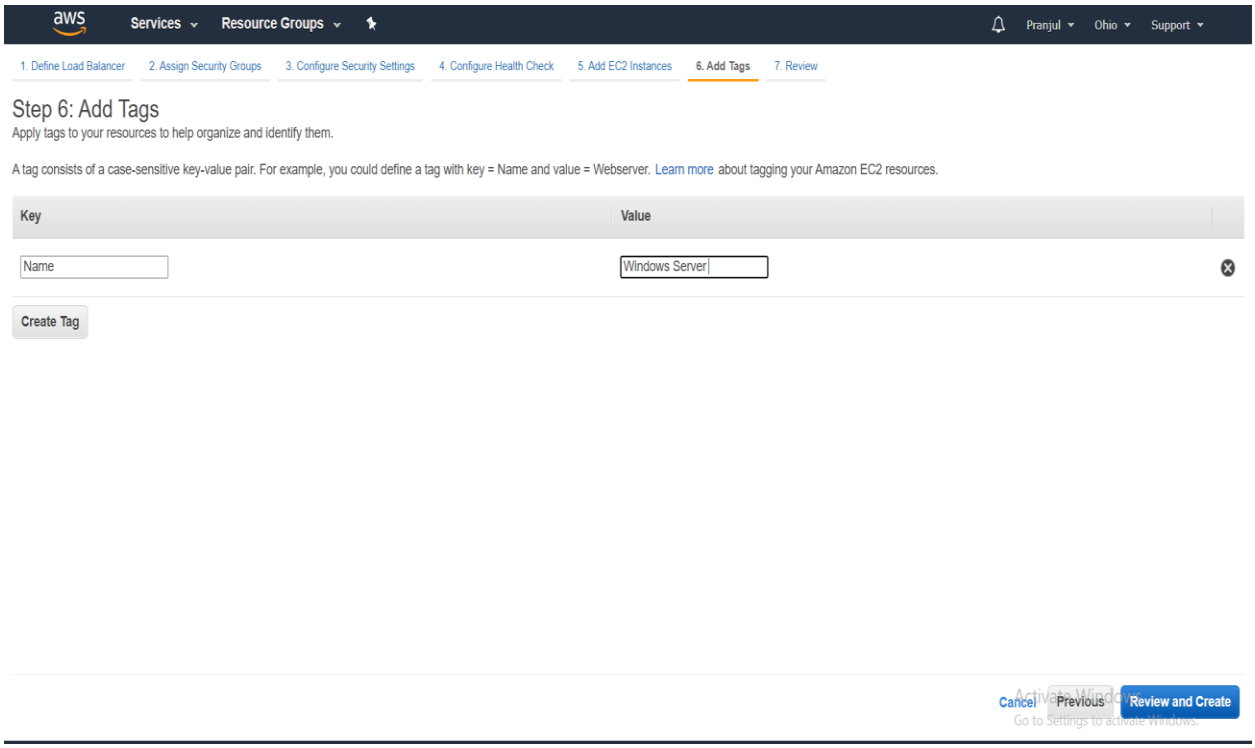

9- Configure Health check.



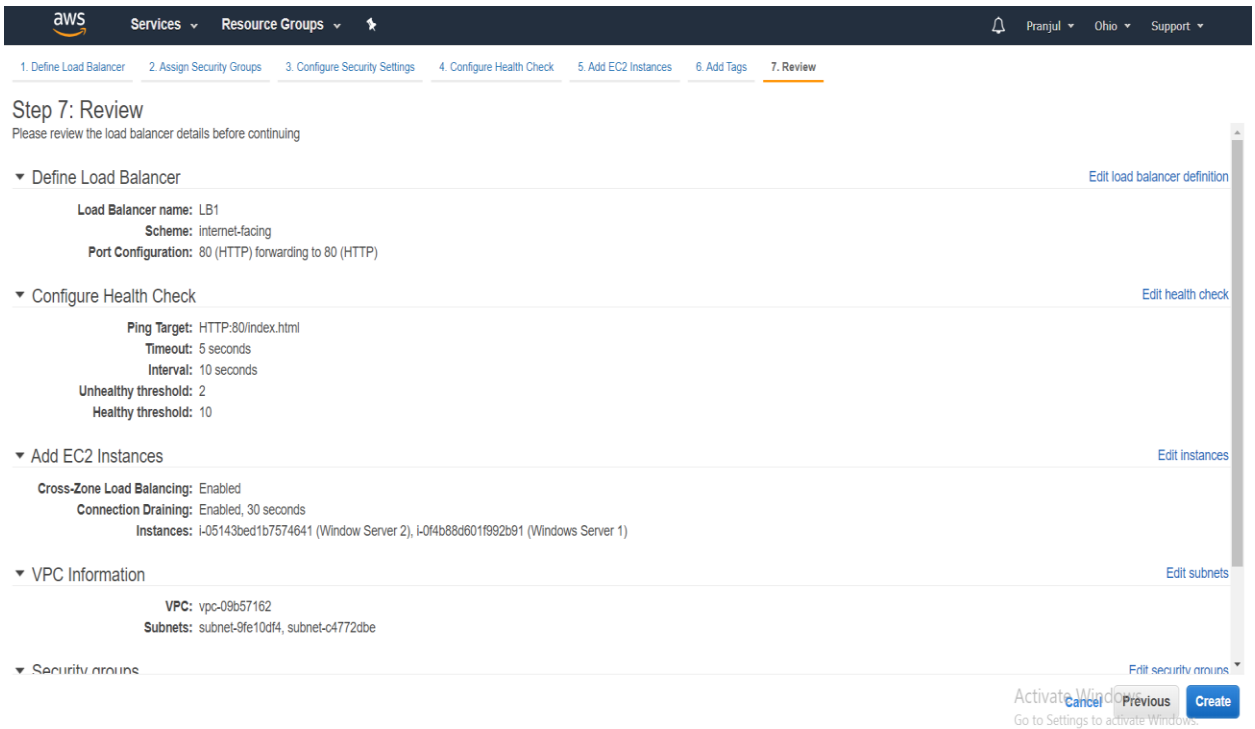
10- Add EC2 Instance.



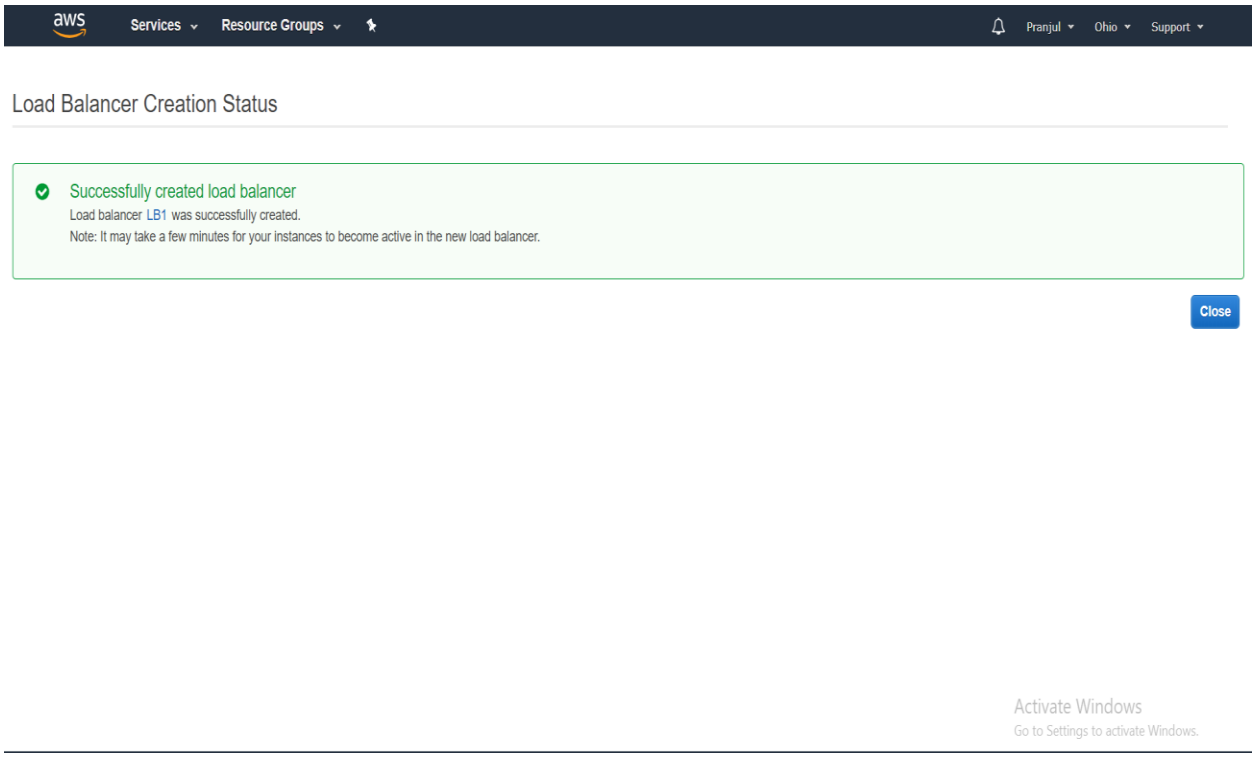

11- Add Tags.



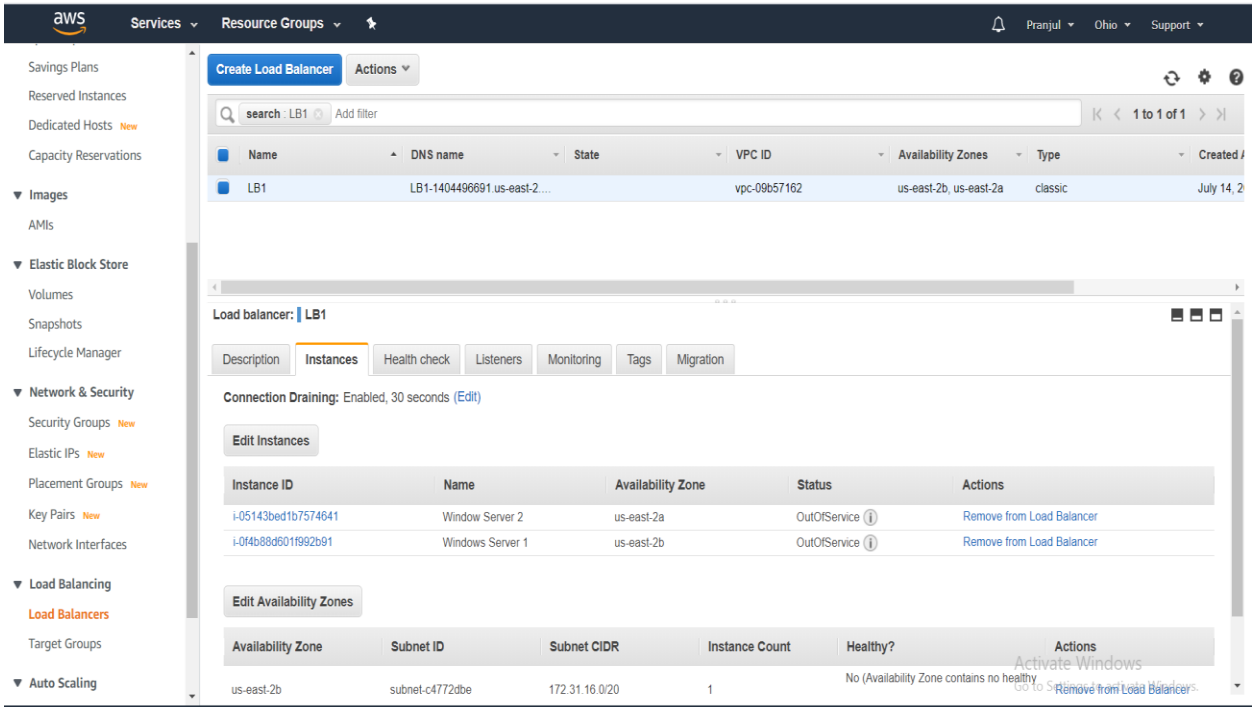
12- Review and create.

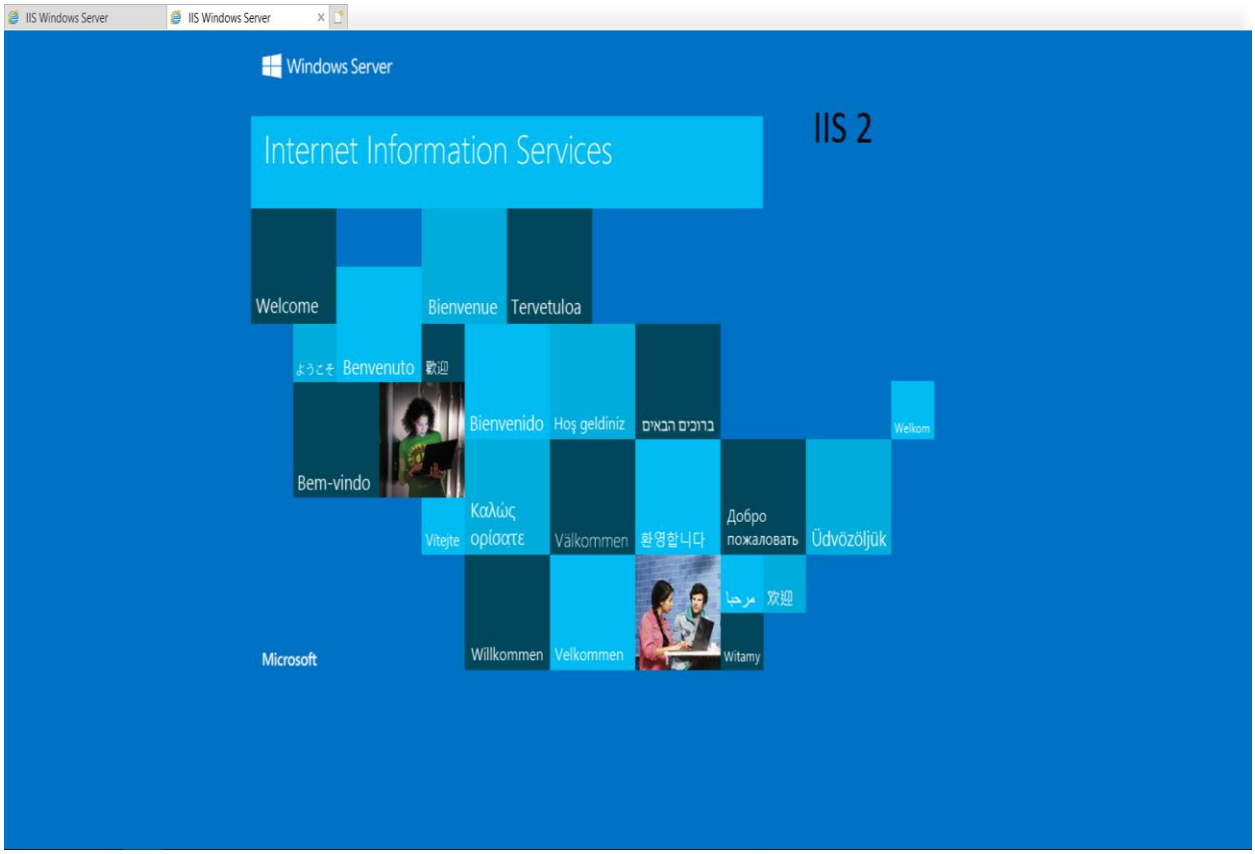


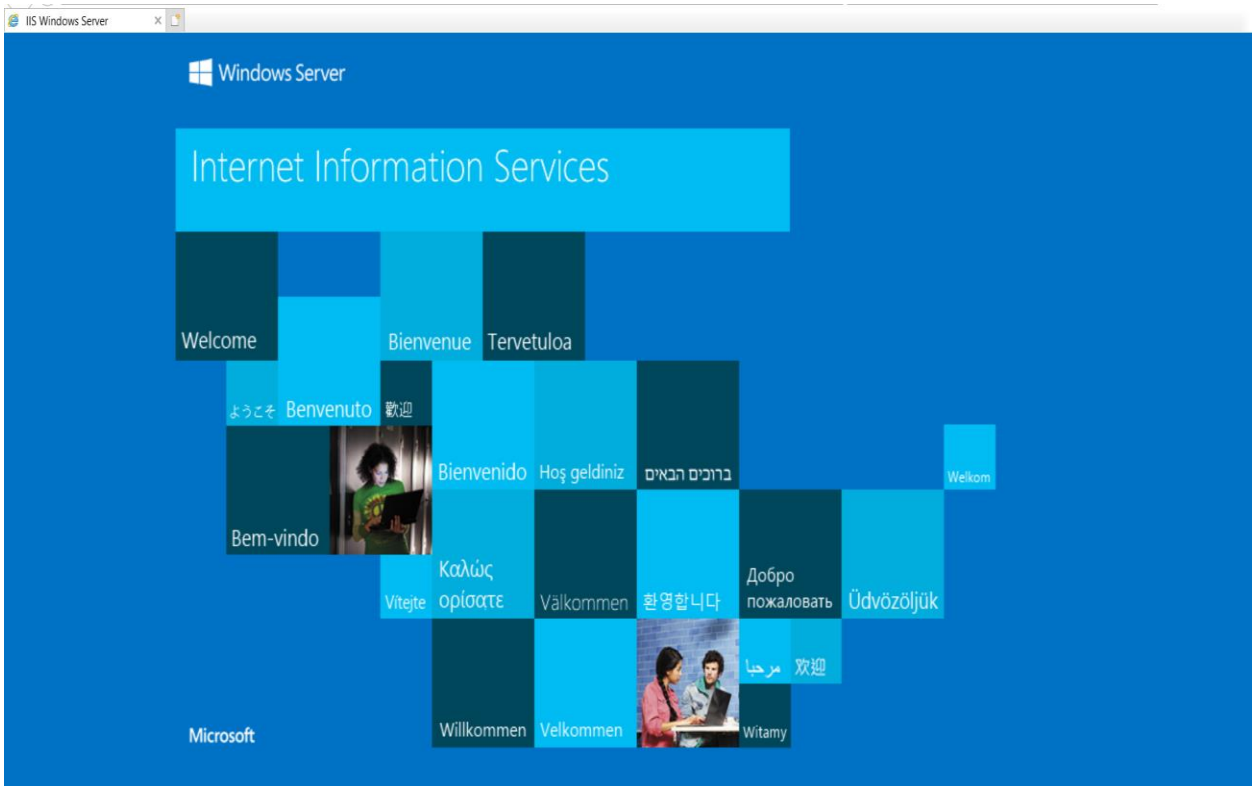

13- Successfully created load balancer.



14- Check the status after 30 seconds.




IIS Windows Server
Windows Server
Internet Information Services
Welcome
Bienvenue
Tervetuloa
ようこそ
Benvenuto
歡迎
Bienvenido
Hoş geldiniz
ברוכים הבאים
Welkom
Bem-vindo
Vítejte
Καλώς ορίσατε
Välkommen
환영합니다
Добро пожаловать
Üdvözöljük
مرحبا
欢迎
Willkommen
Velkommen
Witamy
Microsoft