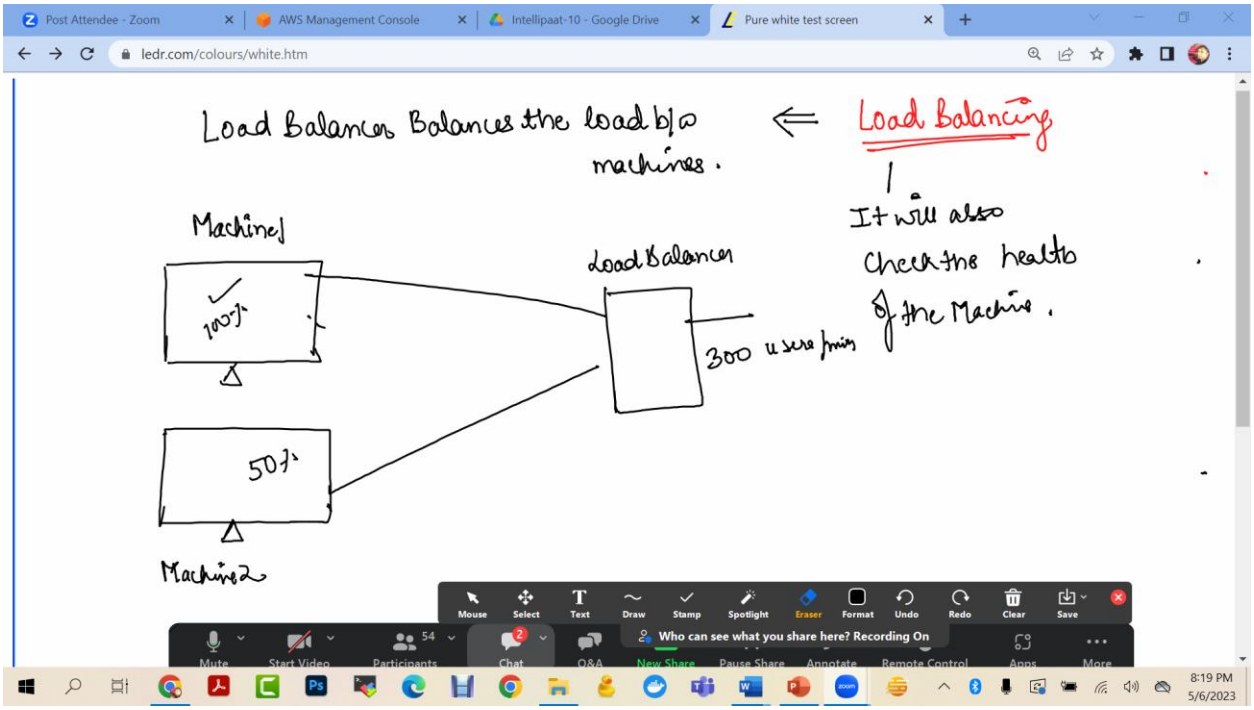
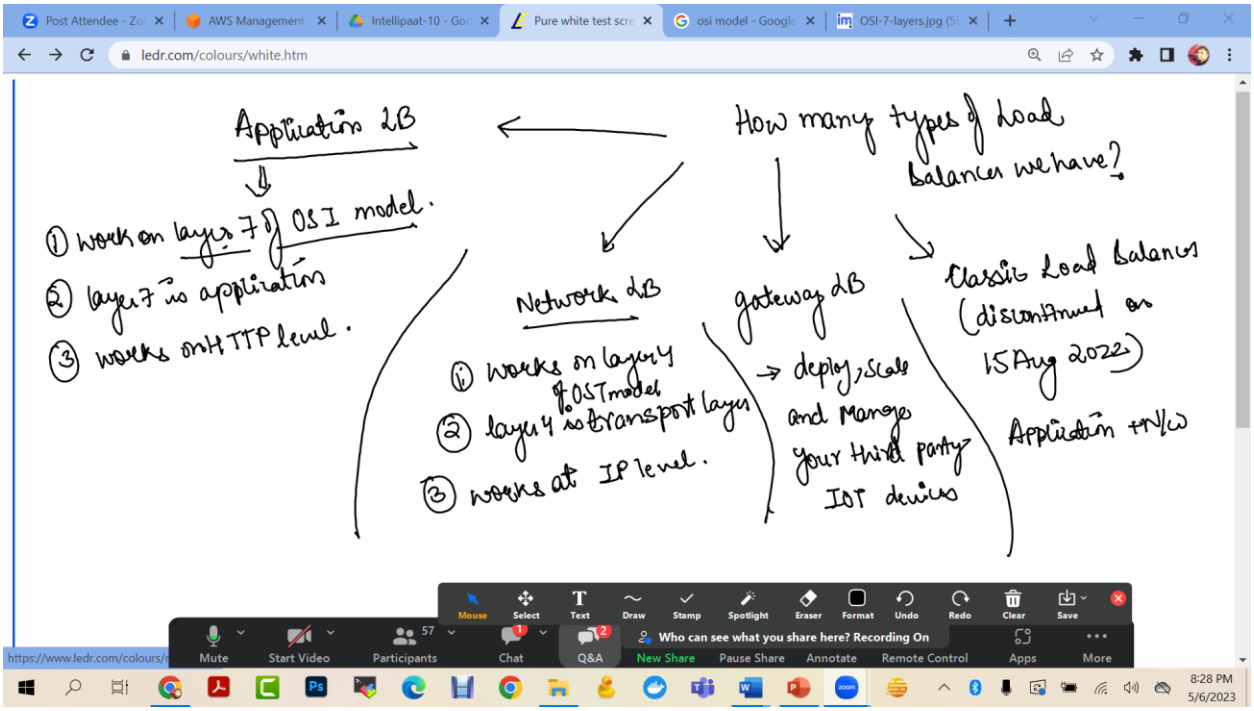
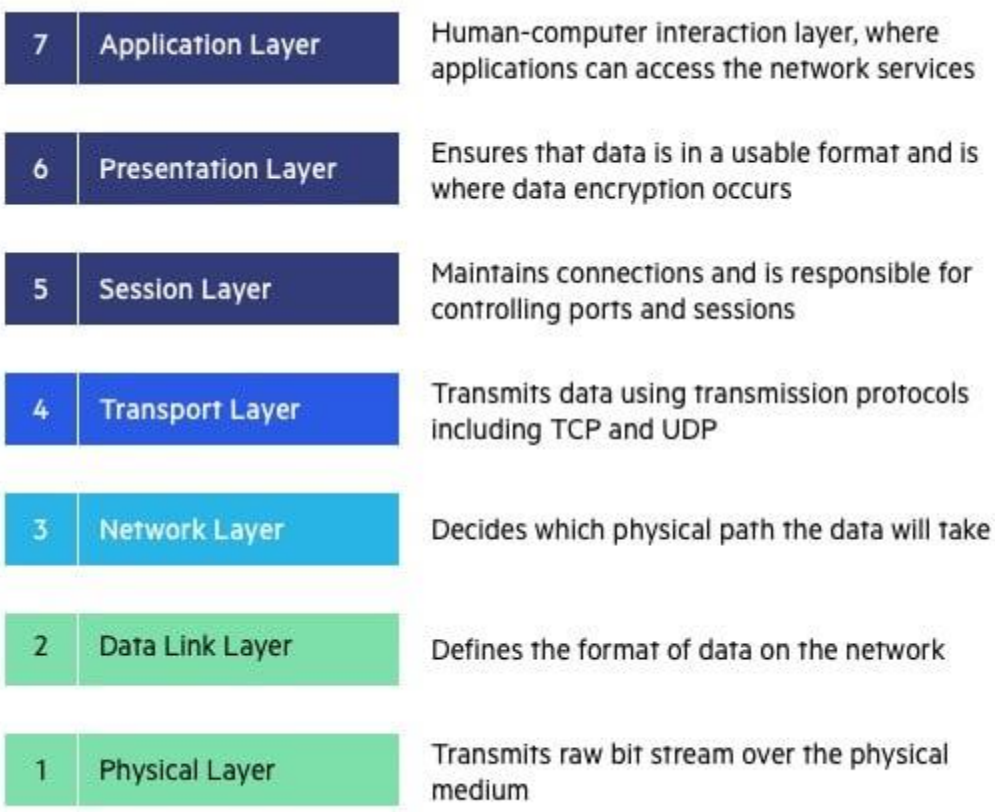
Load balancer





OSI model:



Case study:

We will two servers ..one server will have hello world website and another server will have hi dear website .
Now we will loadbalancer to balance the load between these two machines …

1) We will launch two Linux machines with two different websites

Launch two linux machines :

In machines 1 :

sudo su

yum install httpd -y

service httpd start

cd var/www/html

cat > index.html (press enter)

hello world

(ctrl d to exit)

##

In second machine

sudo su

yum install httpd -y

service httpd start

cd var/www/html

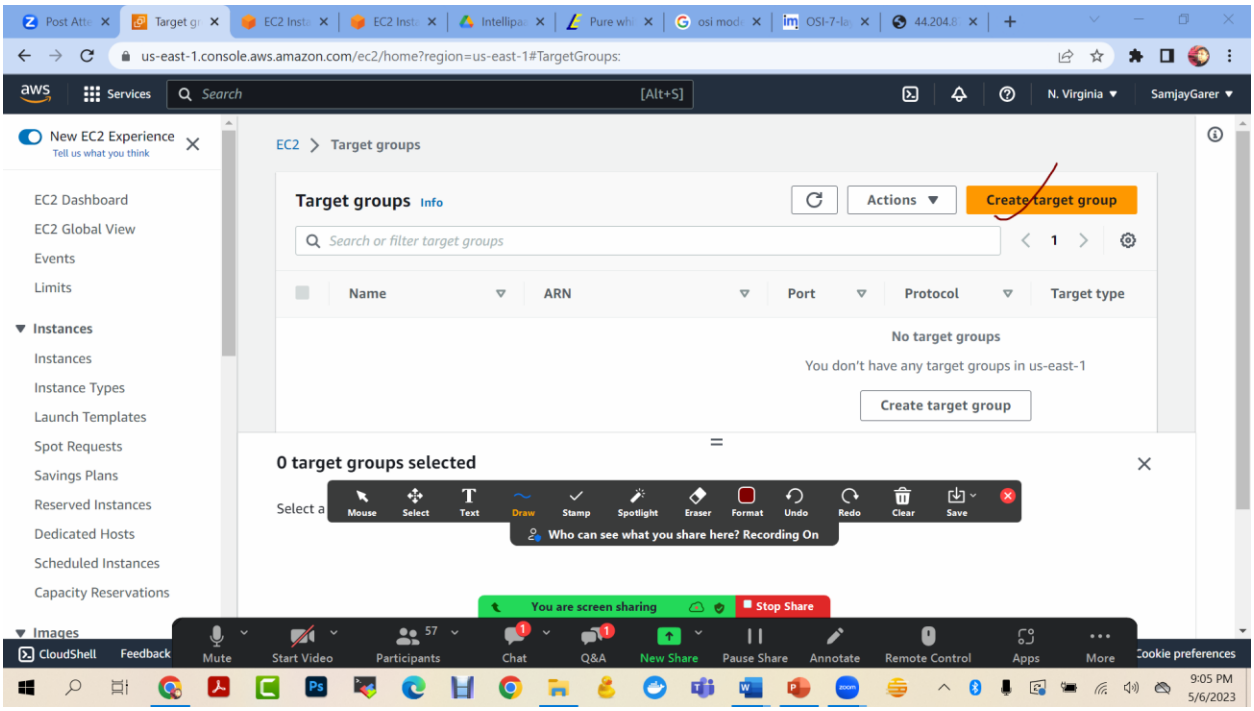
cat > index.html (press enter)

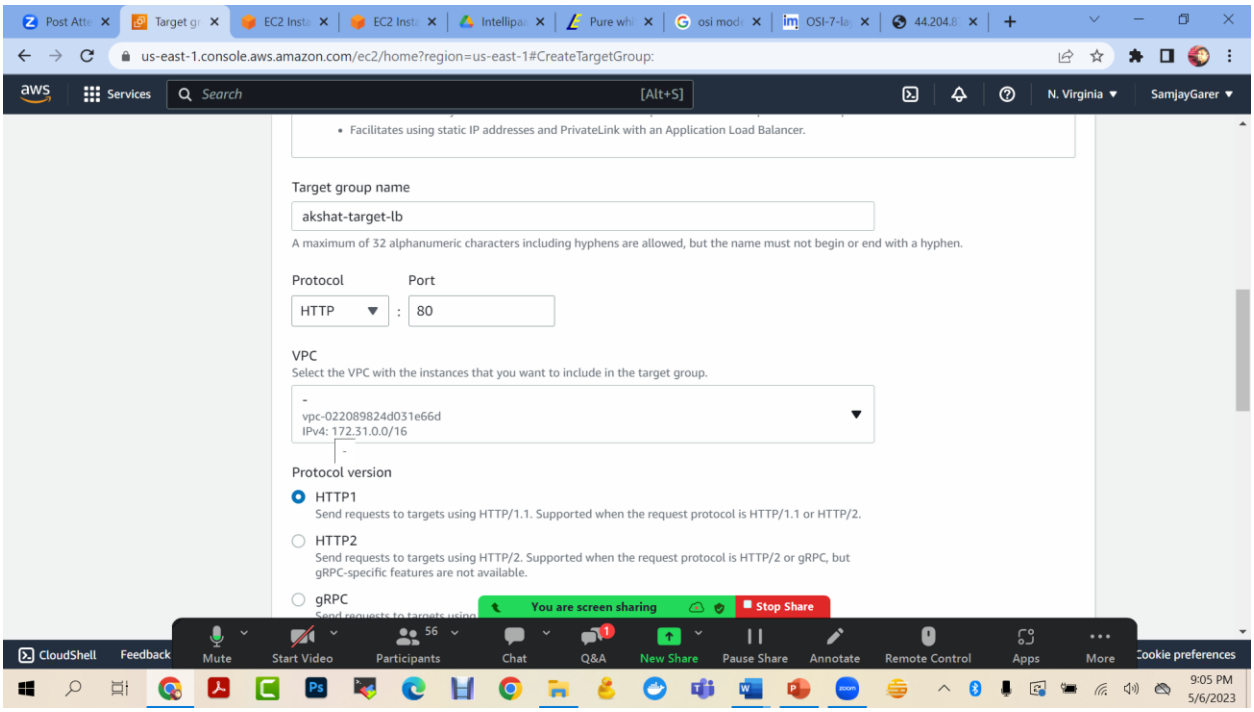
hi dear

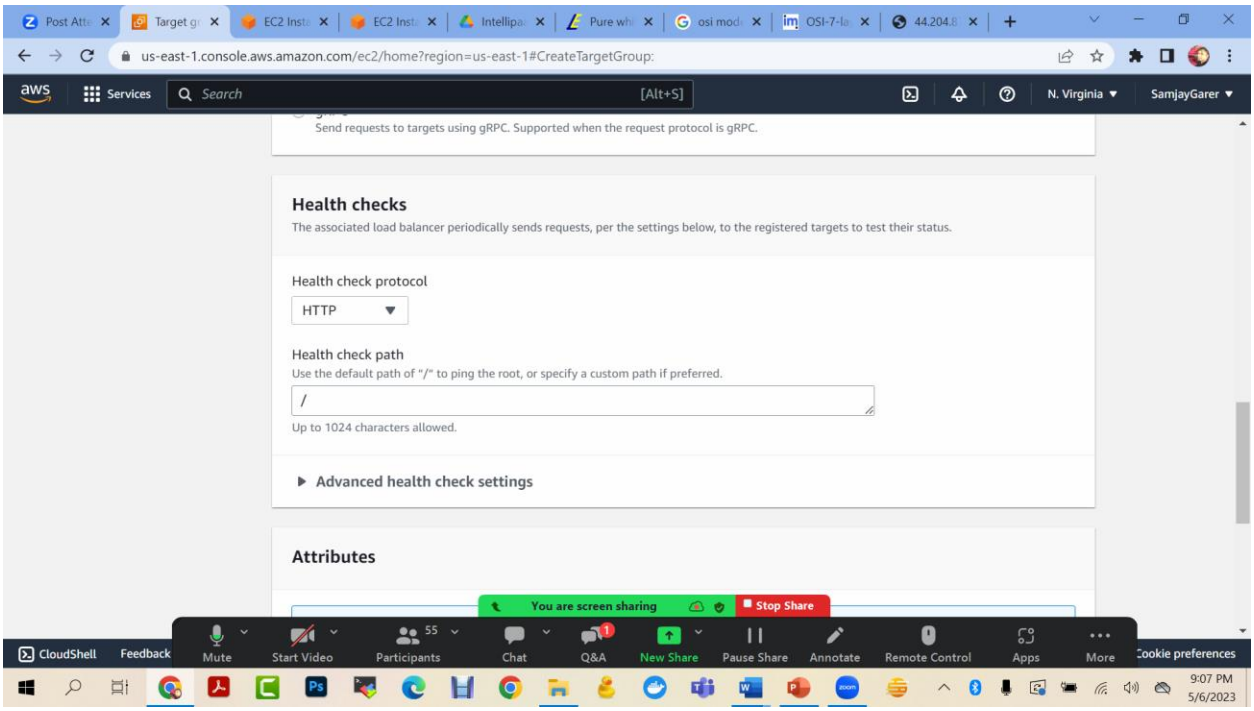
(ctrl d to exit)

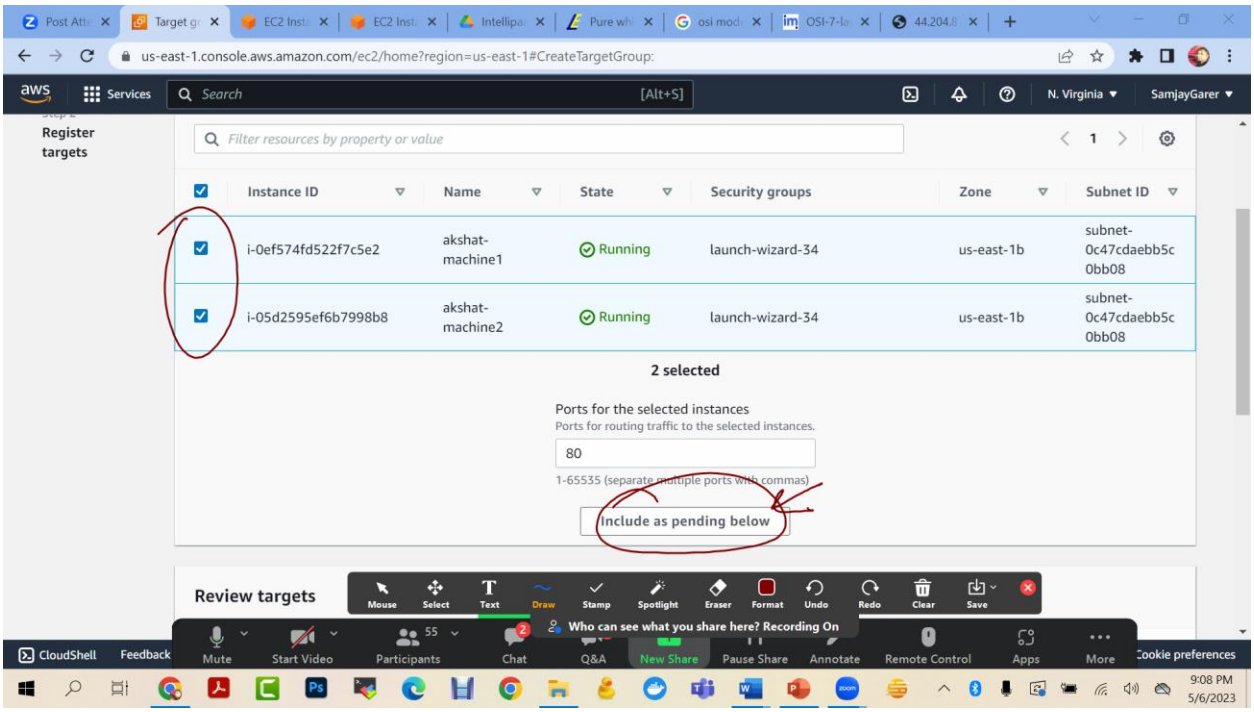
Now its turn to create a load balancer

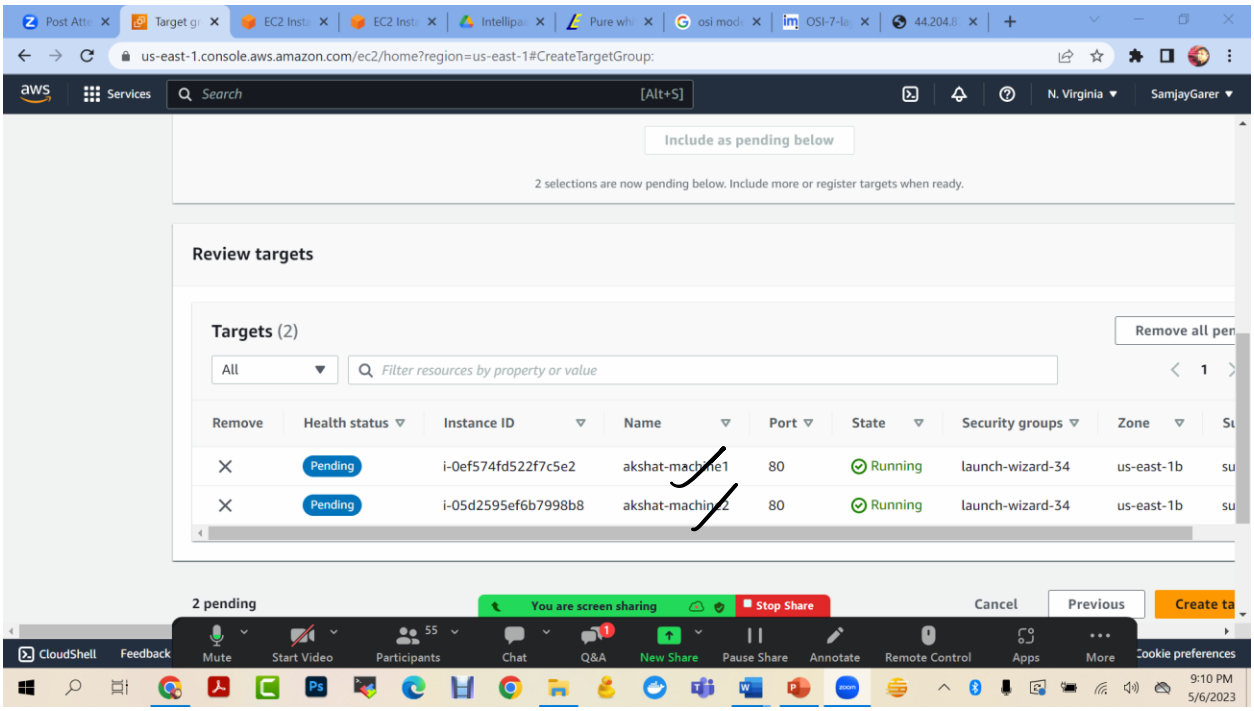
For that first we have to create the target group to tell which machines would be targeted by the load balancer


us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#TargetGroups:
Services
Search
[Alt+S]
N. Virginia
SamjayGarer
New EC2 Experience
Tell us what you think
EC2 Dashboard
EC2 Global View
Events
Limits
Instances
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts
Scheduled Instances
Capacity Reservations
Images
EC2 > Target groups
Target groups Info
Actions
Create target group
Search or filter target groups
Name
ARN
Port
Protocol
Target type
No target groups
You don't have any target groups in us-east-1
Create target group
0 target groups selected
Select a
Mouse
Select
Text
Draw
Stamp
Spotlight
Eraser
Format
Undo
Redo
Clear
Save
Who can see what you share here? Recording On
You are screen sharing
Stop Share
Mute
Start Video
Participants
Chat
Q&A
New Share
Pause Share
Annotate
Remote Control
Apps
More
CloudShell
Feedback
Cookie preferences
9:05 PM
5/6/2023

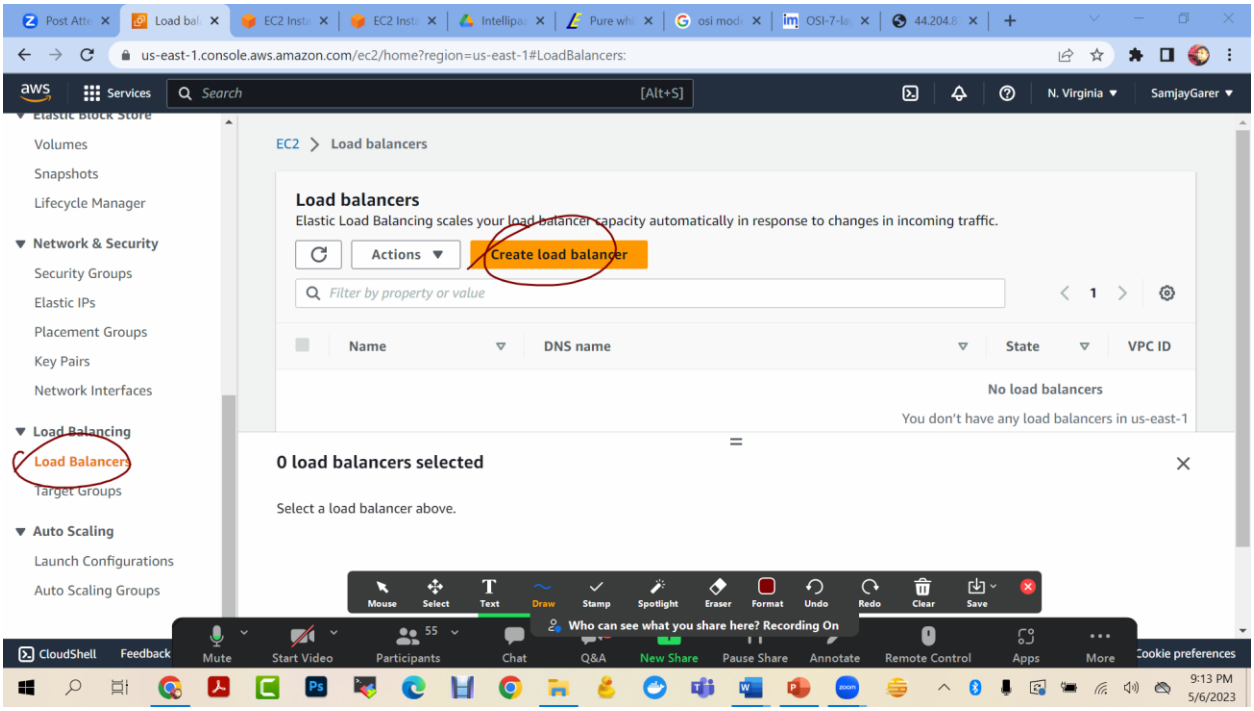

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateTargetGroup:
Services
Search
[Alt+S]
N. Virginia
SamjayGarer
• Facilitates using static IP addresses and PrivateLink with an Application Load Balancer.
Target group name
akshat-target-lb
A maximum of 32 alphanumeric characters including hyphens are allowed, but the name must not begin or end with a hyphen.
Protocol
Port
HTTP
80
VPC
Select the VPC with the instances that you want to include in the target group.
vpc-022089824d031e66d
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
You are screen sharing
Stop Share
Mute
Start Video
Participants
Chat
Q&A
New Share
Pause Share
Annotate
Remote Control
Apps
More
CloudShell
Feedback
Cookie preferences
9:05 PM
5/6/2023

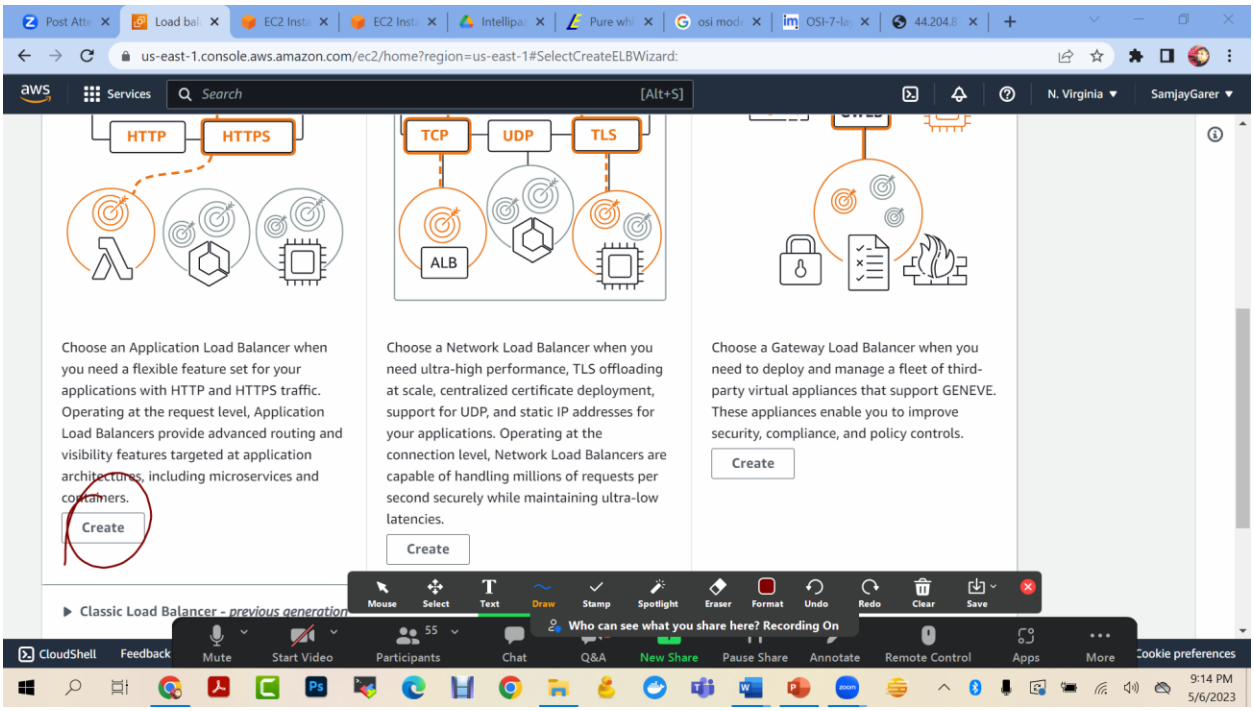

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateTargetGroup:
Send requests to targets using gRPC. Supported when the request protocol is gRPC.
Health checks
The associated load balancer periodically sends requests, per the settings below, to the registered targets to test their status.
Health check protocol
HTTP
Health check path
Use the default path of "/" to ping the root, or specify a custom path if preferred.
/
Up to 1024 characters allowed.
Advanced health check settings
Attributes
You are screen sharing
Stop Share
Mute
Start Video
Participants
Chat
Q&A
New Share
Pause Share
Annotate
Remote Control
Apps
More
CloudShell
Feedback
Cookie preferences
9:07 PM
5/6/2023

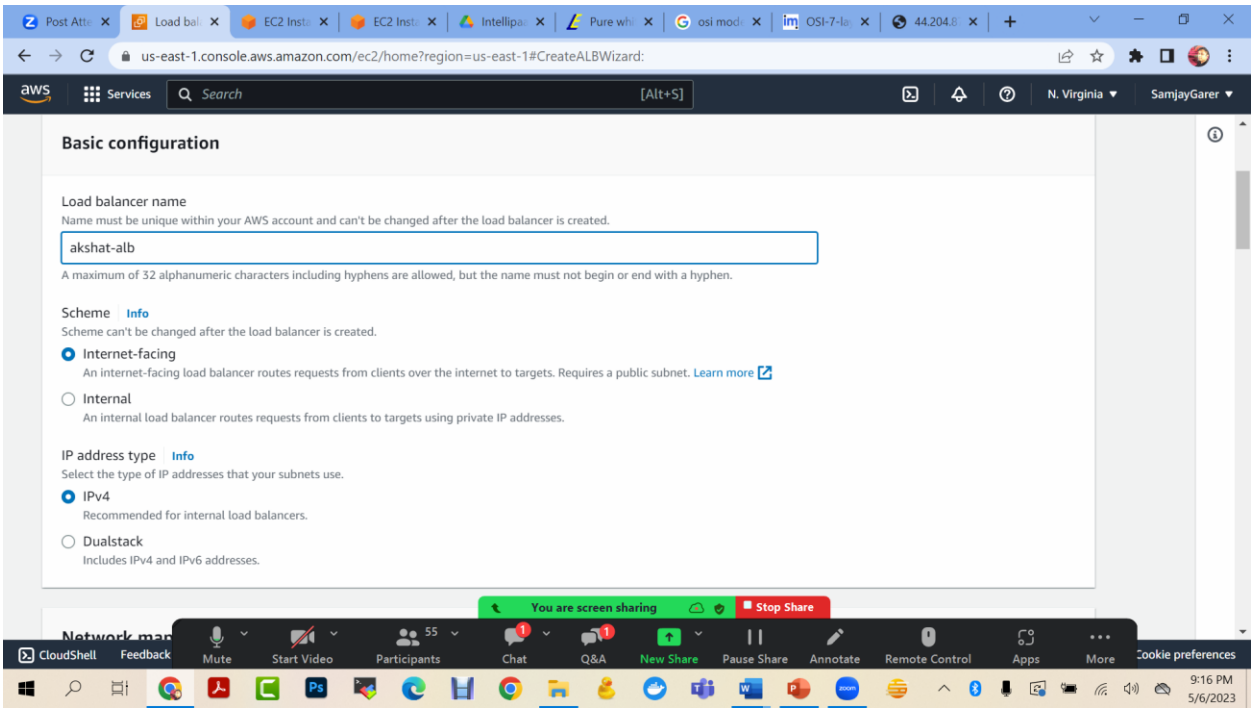

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateTargetGroup:
Register targets
Filter resources by property or value
Instance ID
Name
State
Security groups
Zone
Subnet ID
i-0ef574fd522f7c5e2
akshat-machine1
Running
launch-wizard-34
us-east-1b
subnet-0c47cdaebb5c0bb08
i-05d2595ef6b7998b8
akshat-machine2
Running
launch-wizard-34
us-east-1b
subnet-0c47cdaebb5c0bb08
2 selected
Ports for the selected instances
Ports for routing traffic to the selected instances.
80
1-65535 (separate multiple ports with commas)
Include as pending below
Review targets
Mouse
Select
Text
Draw
Stamp
Spotlight
Eraser
Format
Undo
Redo
Clear
Save
Who can see what you share here? Recording On
Mute
Start Video
Participants
Chat
Q&A
New Share
Pause Share
Annotate
Remote Control
Apps
More
CloudShell
Feedback
Cookie preferences
9:08 PM
5/6/2023

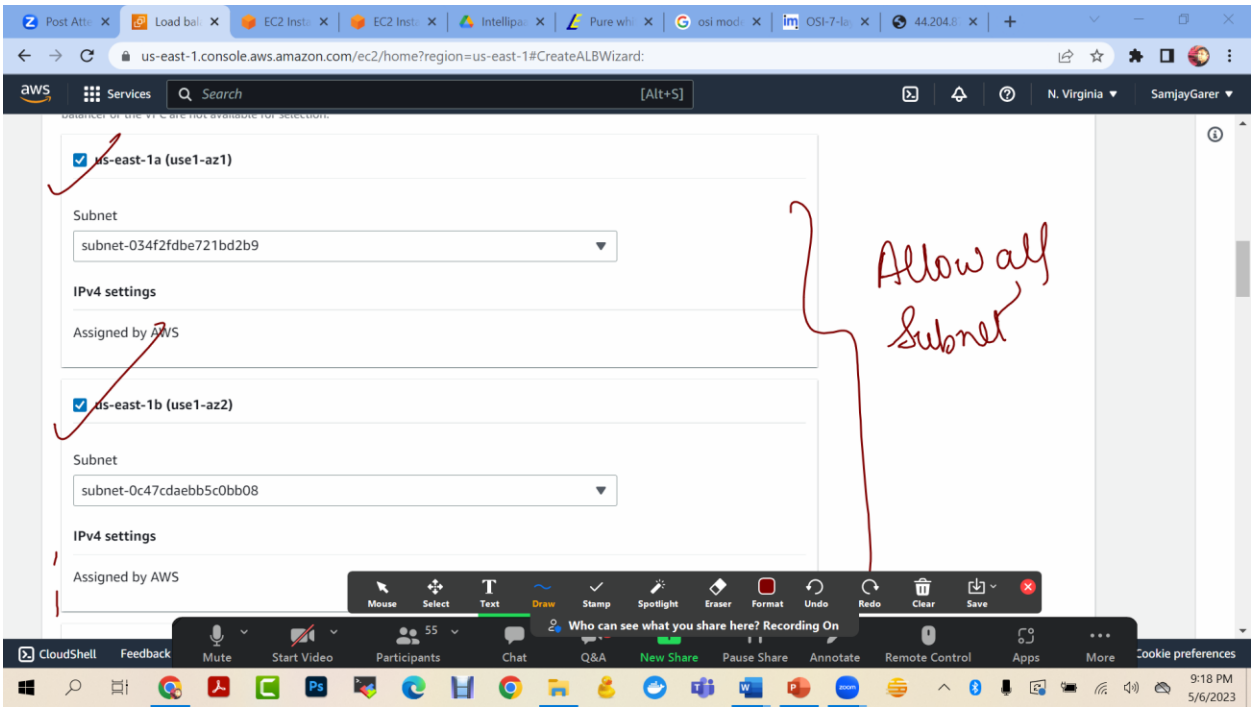


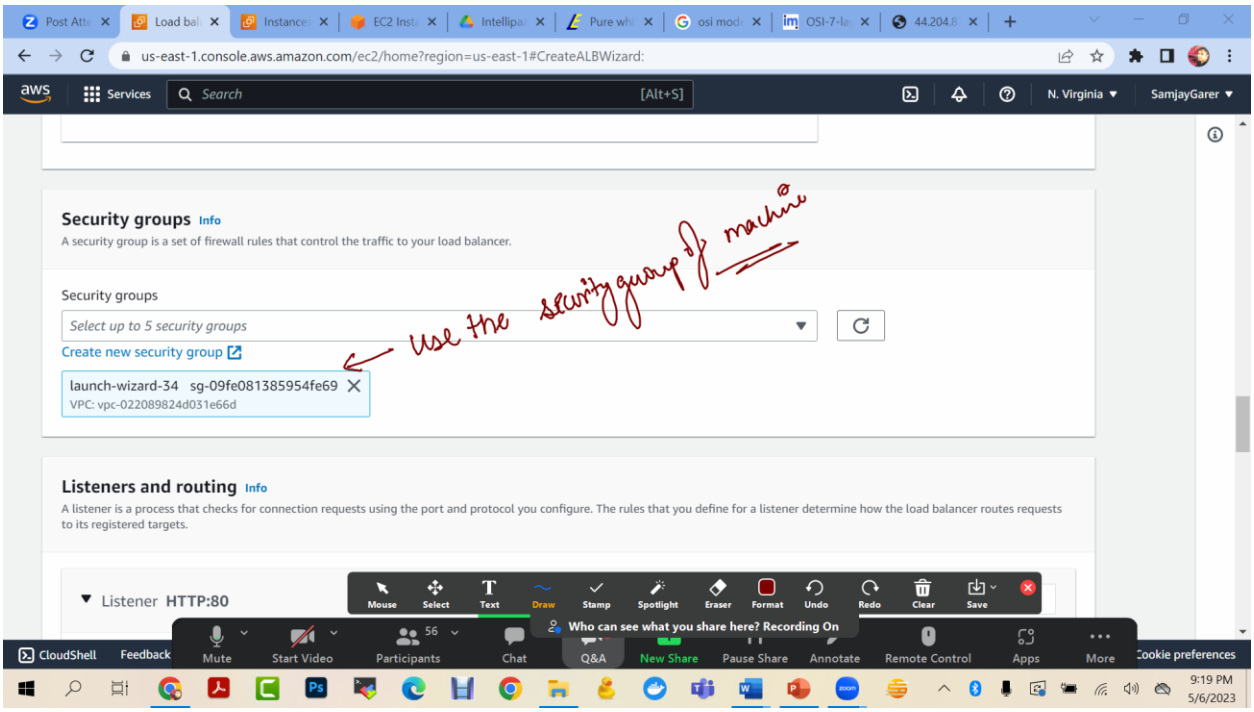
Create target



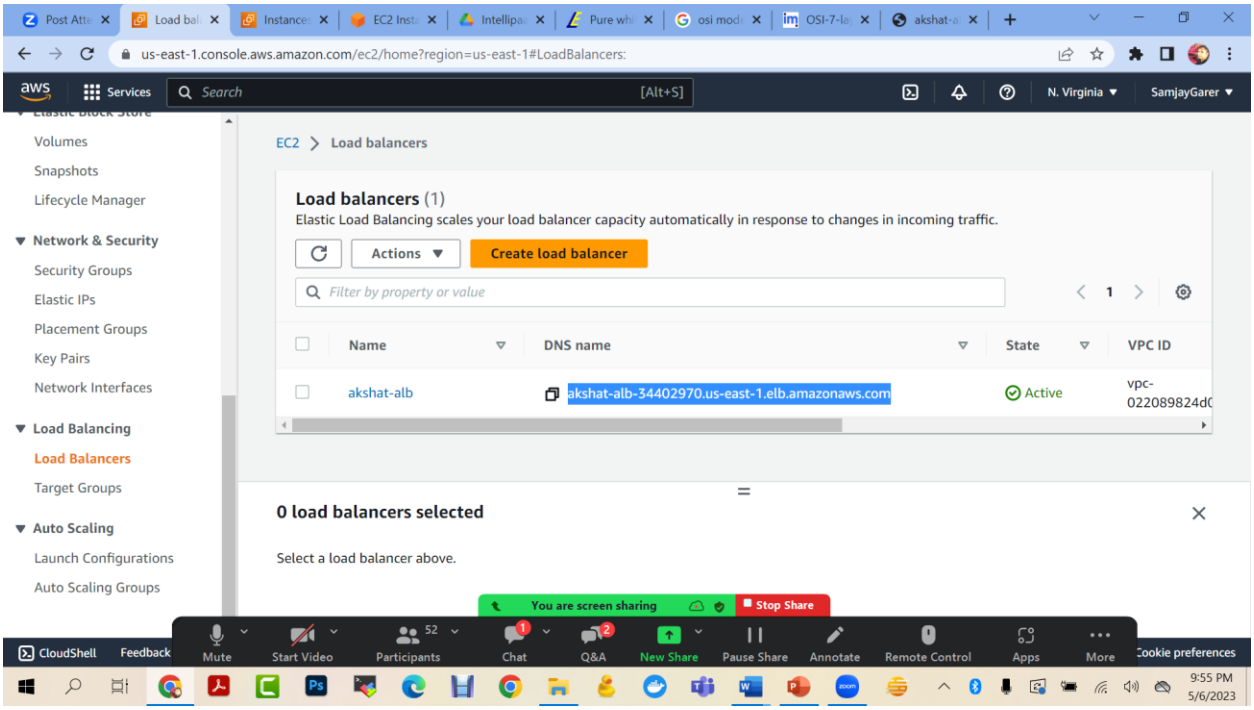

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#SelectCreateELBWizard:
Services
Search
[Alt+S]
N. Virginia
SamjayGarer
HTTP
HTTPS
TCP
UDP
TLS
ALB
Choose an Application Load Balancer when you need a flexible feature set for your applications with HTTP and HTTPS traffic. Operating at the request level, Application Load Balancers provide advanced routing and visibility features targeted at application architectures, including microservices and containers.
Create
Choose a Network Load Balancer when you need ultra-high performance, TLS offloading at scale, centralized certificate deployment, support for UDP, and static IP addresses for your applications. Operating at the connection level, Network Load Balancers are capable of handling millions of requests per second securely while maintaining ultra-low latencies.
Create
Choose a Gateway Load Balancer when you need to deploy and manage a fleet of third-party virtual appliances that support GENEVE. These appliances enable you to improve security, compliance, and policy controls.
Create
Classic Load Balancer - previous generation
Mouse
Select
Text
Draw
Stamp
Spotlight
Eraser
Format
Undo
Redo
Clear
Save
Who can see what you share here? Recording On
CloudShell
Feedback
Mute
Start Video
Participants
55
Chat
Q&A
New Share
Pause Share
Annotate
Remote Control
Apps
More
Cookie preferences
9:14 PM
5/6/2023

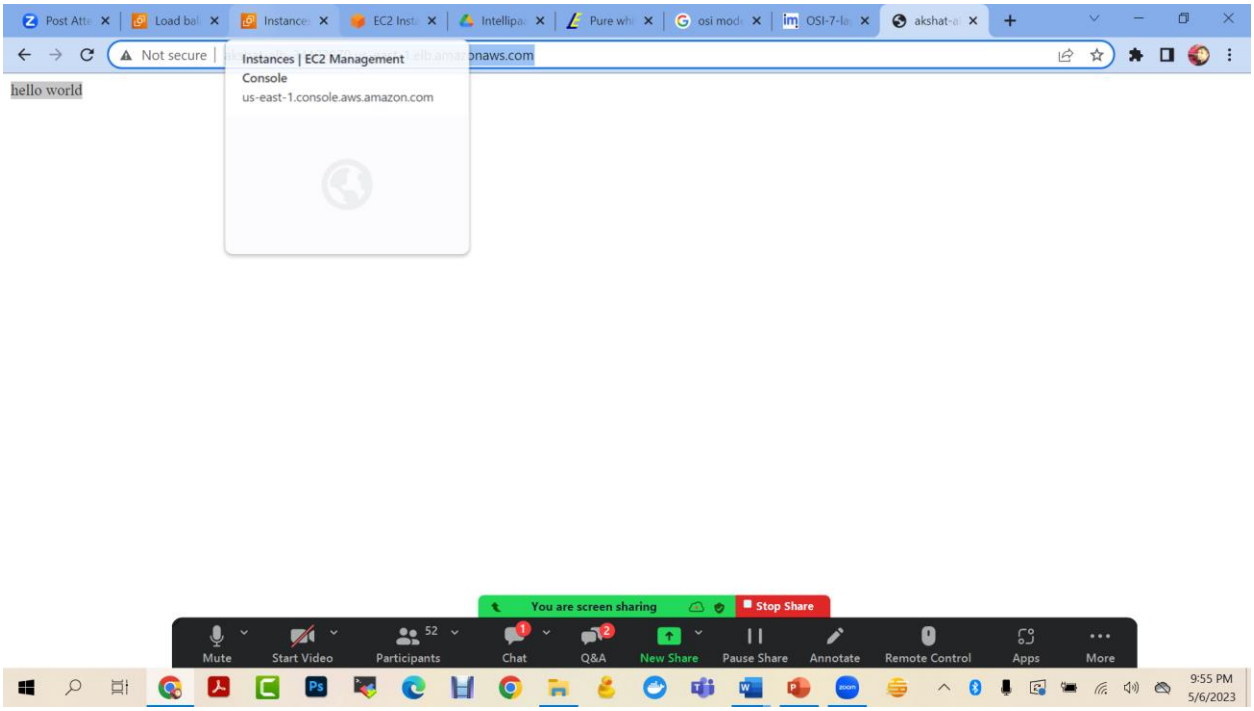

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateALBWizard:
Services
Search
[Alt+S]
N. Virginia
SamjayGarer
Basic configuration
Load balancer name
Name must be unique within your AWS account and can't be changed after the load balancer is created.
akshat-alb
A maximum of 32 alphanumeric characters including hyphens are allowed, but the name must not begin or end with a hyphen.
Scheme Info
Scheme can't be changed after the load balancer is created.
Internet-facing
An internet-facing load balancer routes requests from clients over the internet to targets. Requires a public subnet. Learn more
Internal
An internal load balancer routes requests from clients to targets using private IP addresses.
IP address type Info
Select the type of IP addresses that your subnets use.
IPv4
Recommended for internal load balancers.
Dualstack
Includes IPv4 and IPv6 addresses.
You are screen sharing
Stop Share
CloudShell
Feedback
Mute
Start Video
Participants
55
Chat
Q&A
New Share
Pause Share
Annotate
Remote Control
Apps
More
Cookie preferences
9:16 PM
5/6/2023


us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateALBWizard:
Services
Search
[Alt+S]
N. Virginia
SamjayGarer
us-east-1a (use1-az1)
Subnet
subnet-034f2fdbe721bd2b9
IPv4 settings
Assigned by AWS
us-east-1b (use1-az2)
Subnet
subnet-0c47cdaebb5c0bb08
IPv4 settings
Assigned by AWS
Allow all Subnet
Who can see what you share here? Recording On
CloudShell
Feedback
Cookie preferences
9:18 PM
5/6/2023

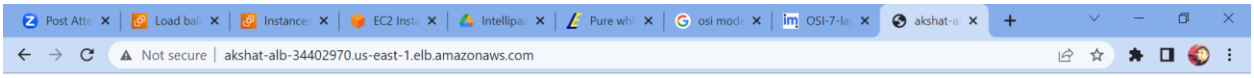

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateALBWizard:
Services
Search
[Alt+S]
N. Virginia
SamjayGarer
Security groups Info
A security group is a set of firewall rules that control the traffic to your load balancer.
Security groups
Select up to 5 security groups
Create new security group
launch-wizard-34 sg-09fe081385954fe69
VPC: vpc-022089824d031e66d
use the security group of machine
Listeners and routing Info
A listener is a process that checks for connection requests using the port and protocol you configure. The rules that you define for a listener determine how the load balancer routes requests to its registered targets.
Listener HTTP:80
Who can see what you share here? Recording On
CloudShell
Feedback
Cookie preferences
9:19 PM
5/6/2023

Create load balancer

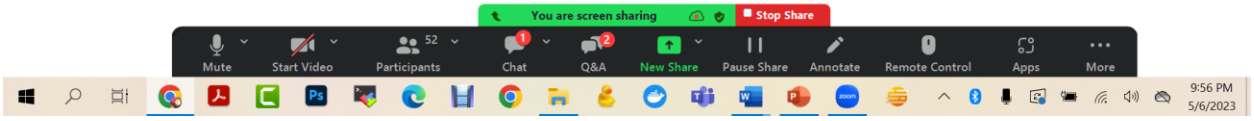


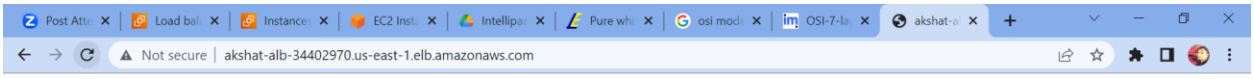
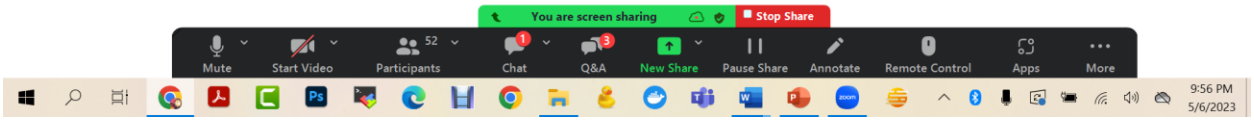


Refresh you will see both websites



hi dear





hello world