ALB & NLB(Load Balancer) Savita Nalawade

❖ Application Load Balancer

1) Create two instance in different AZ with Bootstrapping and check if both applications are running fine.
2) Create ALB(application load balancer)
   a. Select network mapping for those created instance AZ
   b. Add Security group with (SSH:22,HTTP:80,HTTPS:443)
   c. Add Listener with port no (HTTPS:443)
   d. Create Target group, Select protocol version HTTP1 -> HTTP-> /index.html ->Next. Register target will open then select running instance those you want to add in ALB, Give port no as (HTTP:80) -> select include as pending below → Done
   e. Select Target group which is created in d step and upload ACM(Amazon certificate Manager) Certificate then click on create Load Balancer.
   f. ALB will create successfully .
3) Go to Route53 service
   a. Need to add domain in (Hosted zone)
   b. Select your available domain
   c. Click on create record
   d. Enter record name(www).domain name
   e. Select Alias to application & Classic Load balancer
   f. Choose region(ap-south-1)
   g. Select your load balancer which is created in 2nd step.
   h. Create record.
4) You will get one url with record & domain name
5) Hit/enter (https://www.domain-name)

❖ Network Load Balancer

Network load balancer also following same steps of ALB , We need to change only network groups (TCP,UDP,TLS)

NLS practical is optional we can go with ALB

Difference between ALS and NLS

Feature/Aspect	NLB (Network Load Balancer)	ALB (Application Load Balancer)
Layer of Operation	Layer 4 (Transport Layer)	Layer 7 (Application Layer)
Target Type	VPC and IP addresses	VPC (e.g., EC2, containers)
Path and Host-Based Routing	Not Supported	Supported
Connection Handling	Preserves client-side source IP	Uses X-Forwarded-For header
Health Checks	Per-target basis	Target group and per-target
Stickiness	Not Supported	Supported (using cookies)
WebSockets and HTTP/2	Supports WebSockets	Supports WebSockets and HTTP/2
Performance	High throughput, low latency	Optimized for volatile traffic
Use Cases	TCP/UDP traffic, preserve IP	Microservices, advanced routing
Integration with AWS Services	Limited integration	AWS WAF, ECS, Lambda, etc.