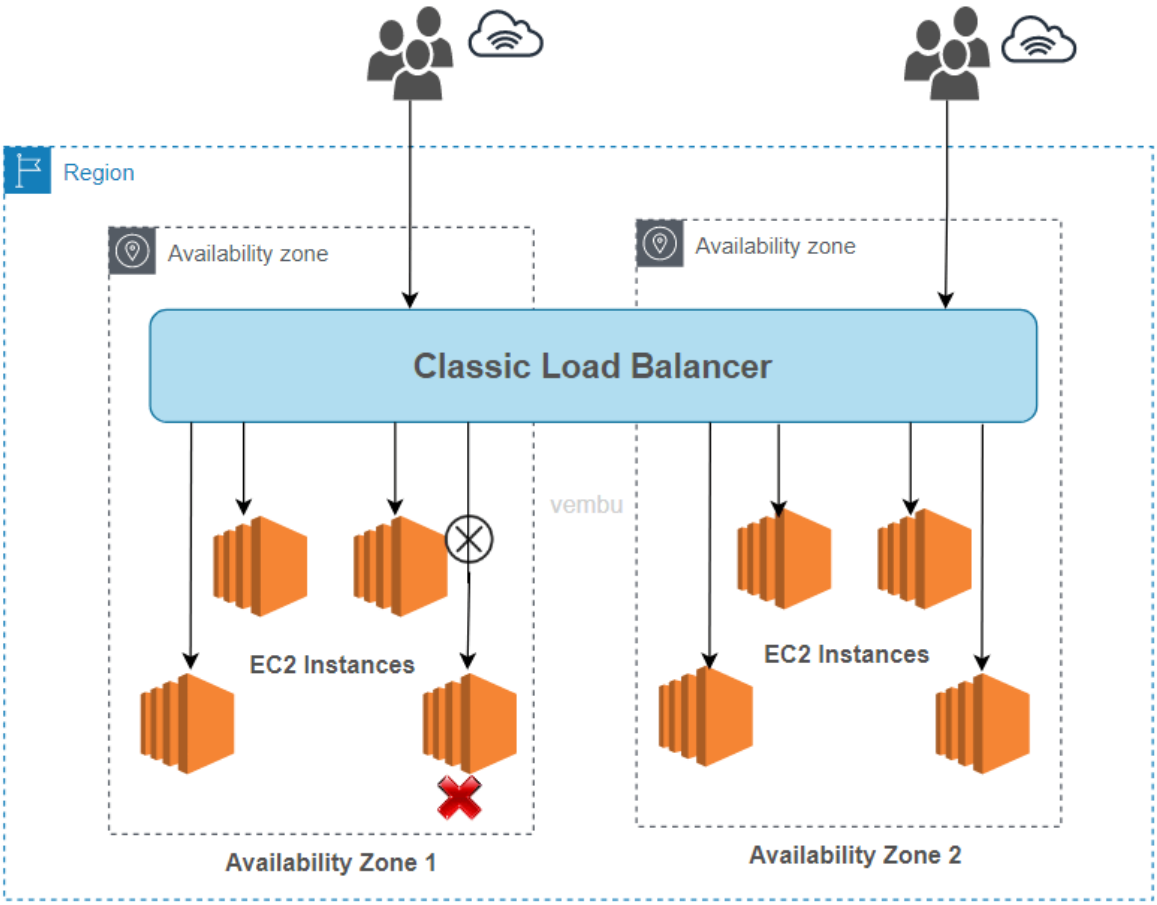
Type of Load Balancers in AWS:

Amazon Web Services (AWS) offers several types of load balancers that you can use to distribute incoming traffic across your application's resources: Here is the type of Elastic Load Balancers(ELB) offered in AWS:

1. Classic Load Balancer (CLB): Classic Load Balancer (CLB) is a basic load balancer that operates at either the application or network layer and supports HTTP, HTTPS, and TCP traffic. Classic Load Balancer is the oldest type of load balancer in AWS, designed to handle traffic at both the request and connection levels. It routes traffic between clients and backend services, such as Amazon EC2 instances and containers. Classic Load Balancer enables multiple cloud resources to be accessed through a single domain endpoint, simplifying access and improving scalability. Classic Load Balancer is limited to handling traffic at the request and connection levels only. It is not as feature-rich as ALB and is generally not recommended for new applications.



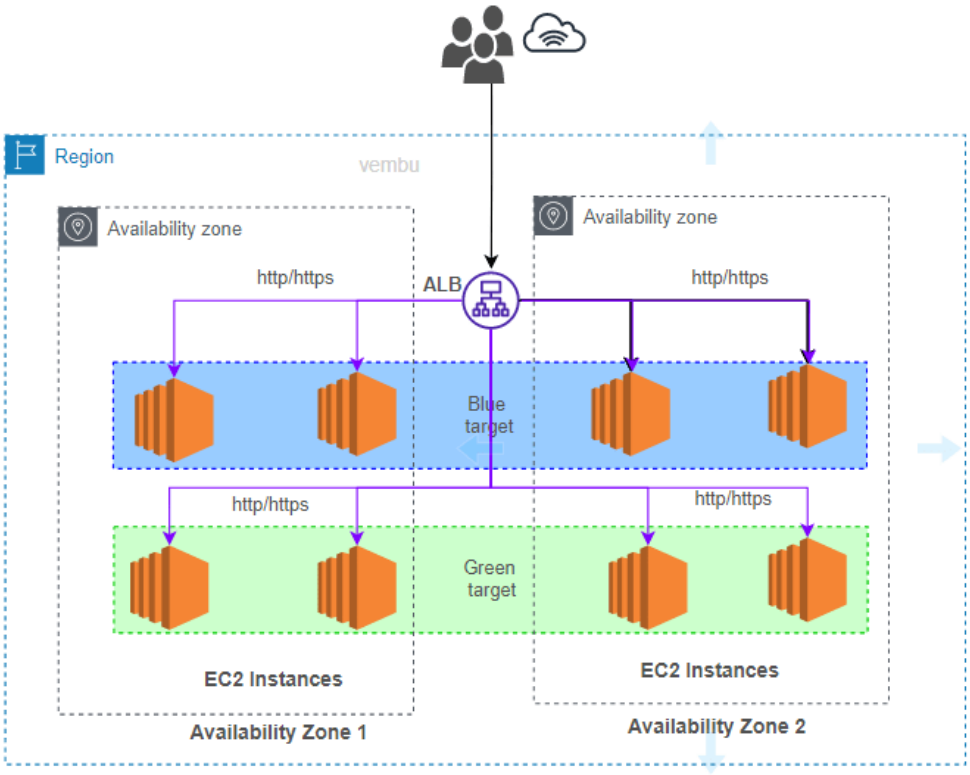
Limitation:

- Classic LB per region – 20

Load Balancer Components Limits:

- Listeners – 50
- Security Group – 5
- Registered Instances – 1000
- Subnet per Availability zone – 1

2. Application Load Balancer (ALB): This is a load balancer that routes traffic to target groups based on the content of the request. It operates at the application layer (layer 7 in the OSI model) and supports HTTP, HTTPS, and WebSocket traffic. ALB is designed to handle high levels of traffic and provides advanced request routing features, such as support for multiple protocols, path-based routing, and ability to bind to multiple SSL certificates.



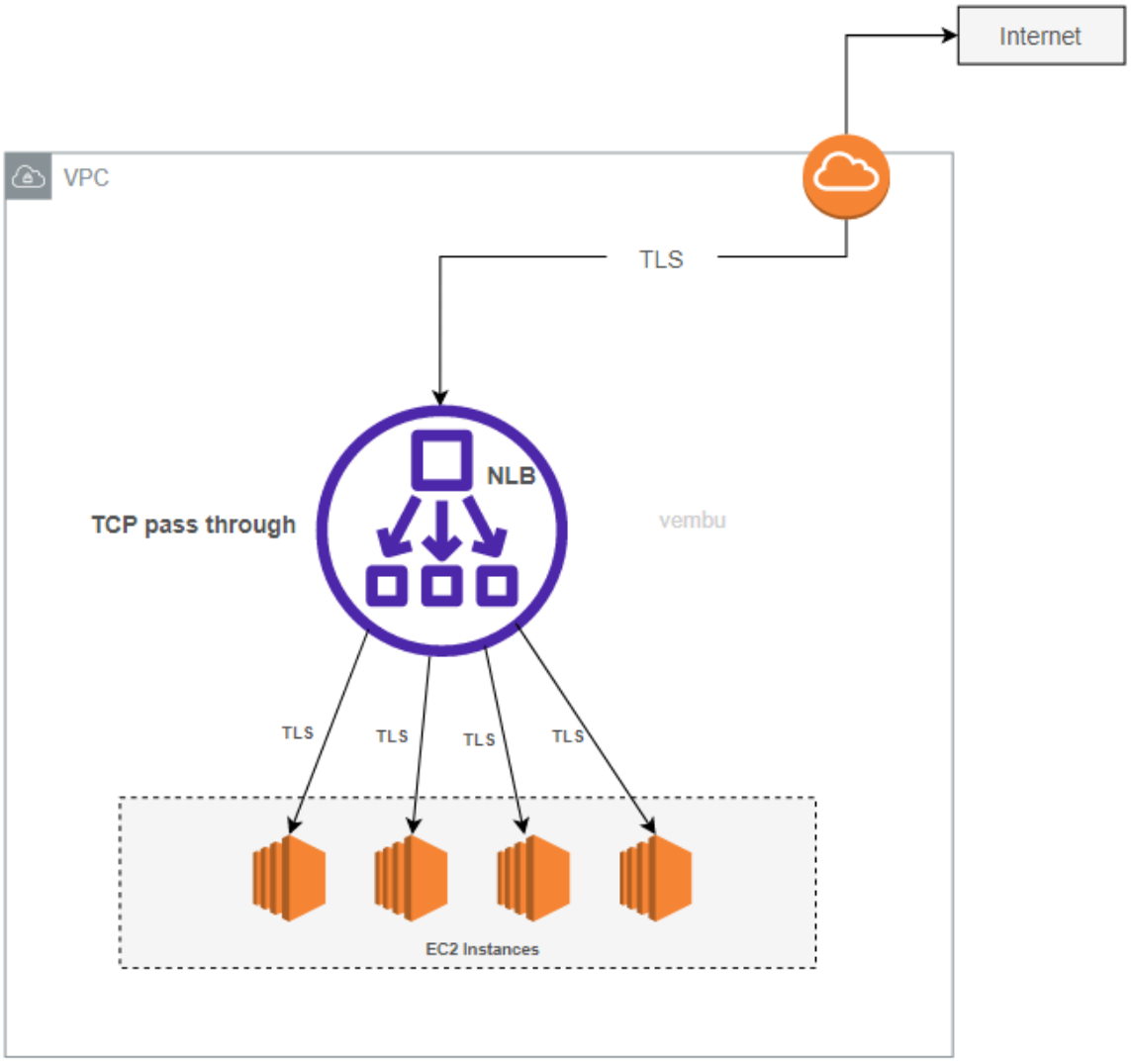
Limitation:

- Application LB per region – 20
- Target groups – 3000

Load Balancer Components Limits:

- Listeners – 50
- Targets load balancer – 1000
- Subnet per Availability zone – 1
- Rules – 100
- Security groups – 5

3. Network Load Balancer (NLB): This is a load balancer that routes traffic to target groups based on IP address and TCP port. It operates at the network layer (layer 4 in the OSI model) and supports any TCP-based protocol. NLB is designed to handle high levels of traffic and provides ultra-low latencies.



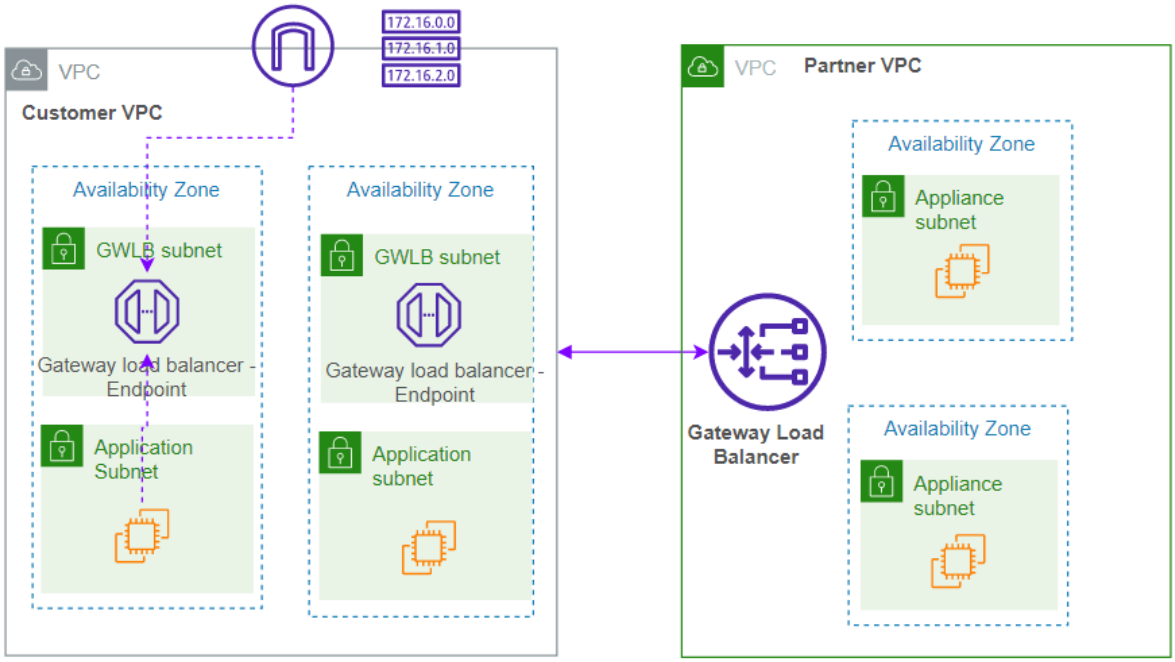
Limitation:

- Network LB per region – 20
- Target groups – 3000

Load Balancer Components Limits:

- Listeners – 50
- Targets per availability zone with cross-zone load balancing disabled – 200
- Targets per availability zone with cross-zone load balancing enabled – 200
- Subnet per Availability zone – 1

4. Gateway Load Balancer (GLB): Deploy scale and manage a fleet of 3rd party network virtual appliances in AWS. For an example, Firewalls, Intrusion detection and prevention, deep packet inspection, payload manipulation etc.. It operates at layer 3 (IP Packets). Its act as transparent network gateway. It distributes traffic to your virtual appliances. GLB uses “GENEVE” and its registered virtual appliance instances to share application traffic on port 6081.



Limitation:

- Gateway LB per region – 20
- Target groups – 3000

Load Balancer Components Limits:

- Gateway load balancer per VPC – 10
- Targets groups with GENEVE protocol – 10

Conclusion:

You should choose ALB if you want a load balancer that can route traffic based on the content of the request and supports multiple protocols, path-based routing, and SSL certificates. NLB is a good choice if you want a load balancer that can handle high levels of traffic with ultra-low latencies and can route traffic based on IP address and TCP port. CLB is a legacy load balancer that is not recommended for new applications.