

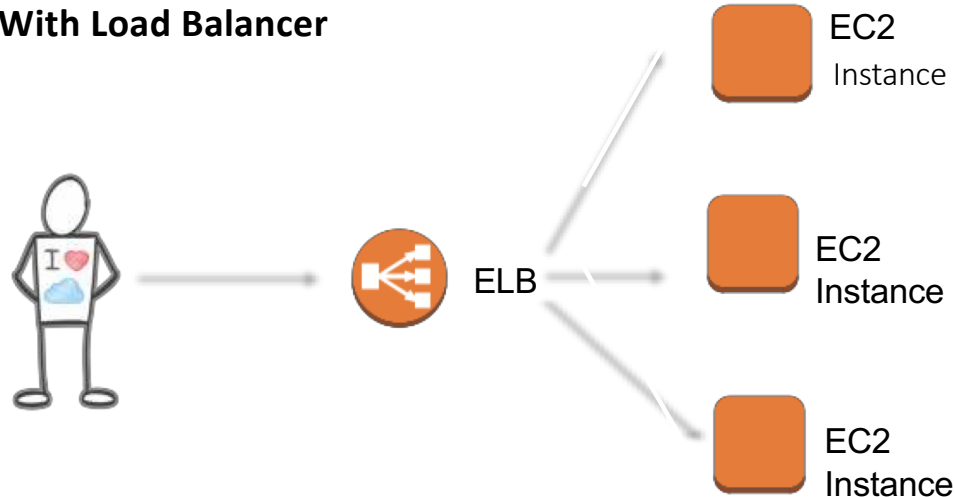
ELB (Elastic Load Balancer)

Elastic Load Balancing automatically distributes incoming application traffic across multiple targets, such as Amazon EC2 instances, Containers, or IP addresses in your VPC.

With Out Load Balancer



With Load Balancer



Load balancer used to route incoming requests to multiple EC2 instances, Containers, or IP addresses in your VPC.

Elastic Load Balancer will **distribute application traffic across multiple targets in different Availability Zones within the same Region.**

The Elastic Load Balancing Family

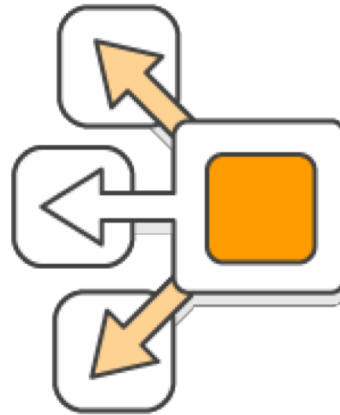
Application Load Balancer

HTTP & HTTPS (VPC)



Network Load Balancer

TCP Workloads (VPC)



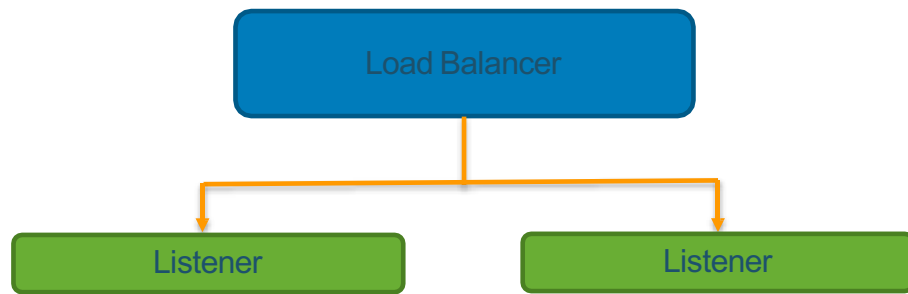
Classic Load Balancer

Previous Generation
for HTTP, HTTPS, TCP
(Classic Network)



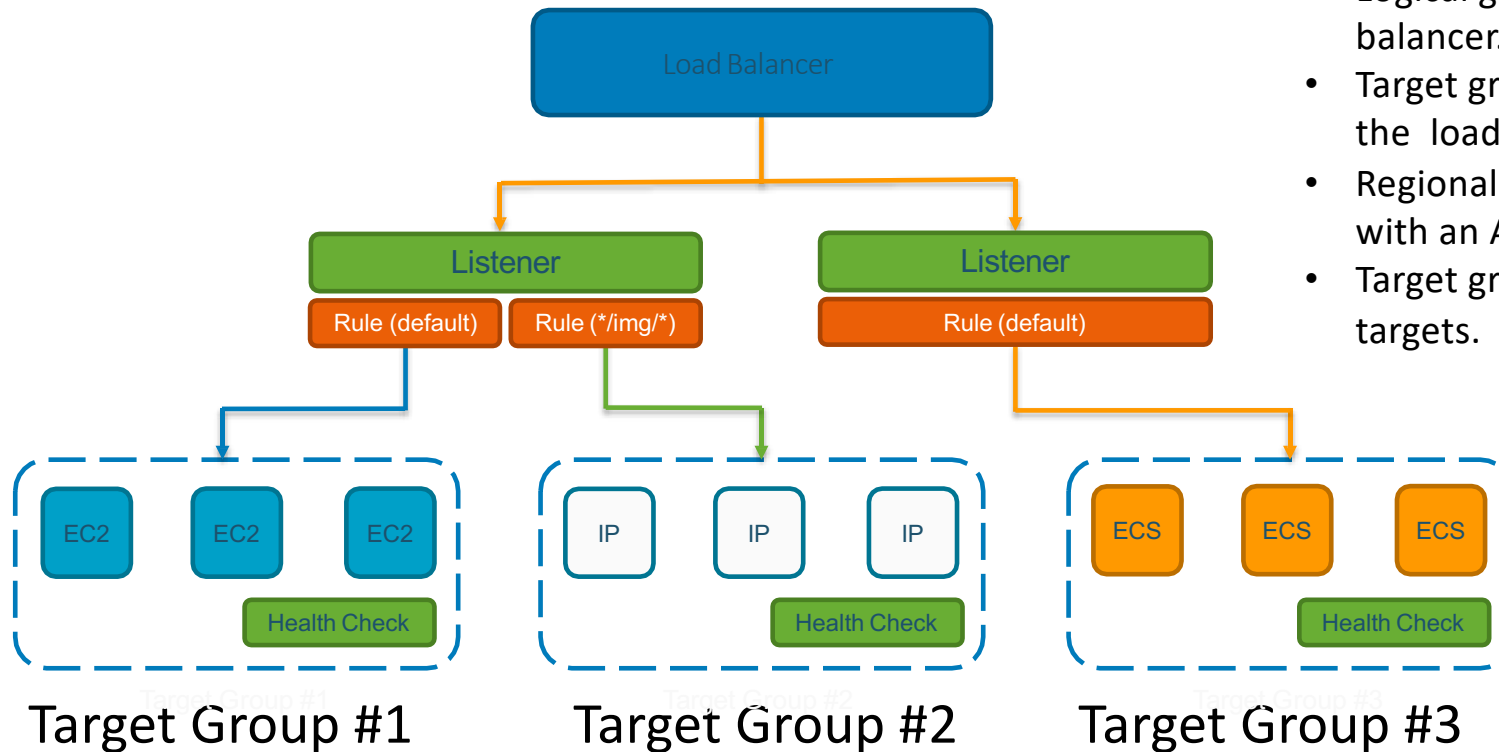
Application Load Balancer

- Support for HTTP/HTTPS.
- Path and Host Based Routing Improved health checks and additional CloudWatch metrics.
- Content-based routing allows requests to be routed to different applications behind a single load balancer.
- Support for micro services and container based applications.



Listener

- Define the port and protocol which the load balancer must listen on.
- Each Application Load Balancer needs at least one listener to accept traffic.
- Each Application Load Balancer can have up to 50 listeners.
- Routing rules are defined on listeners.



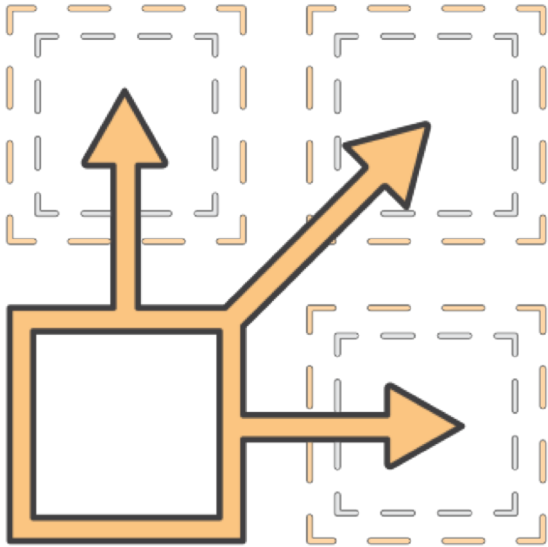
Target Group

- Logical grouping of targets behind the load balancer.
- Target groups can exist independently from the load balancer.
- Regional construct that can be associated with an Auto Scaling group.
- Target groups can contain up to 1,000 targets.

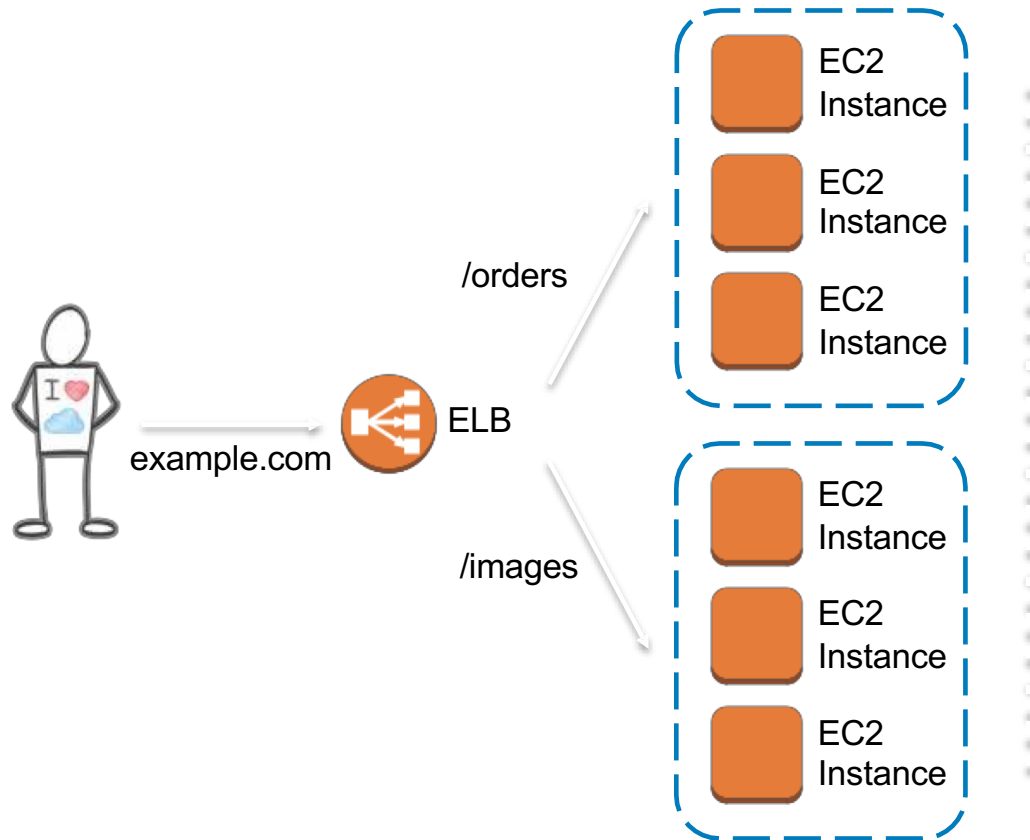
Target

- Support for EC2 instances and ECS containers,
- and IP Addresses.
- EC2 instances can be registered with the same target group using multiple ports.
- A single target can be registered with multiple target groups

Rules



- Each listener **can have one or more rules** for routing requests to target groups.
- Rules consist of **conditions and actions**.
- When a request meets the condition of the rule, the action is taken.
- Rules can forward requests to a specified target group.
- Conditions can be specified in path pattern format.
- A path pattern is case sensitive, can be up to 255 characters in length.



Application Load Balancer allows for multiple services to be hosted behind a single load balancer.

Health Checks

- Health checks allow for traffic to be shifted away from failed instances.
- Support for HTTP and HTTPS health checks.
- Customize the frequency and failure thresholds.
- Consider the depth and accuracy of your health checks.
- Details of health check failures are now returned via the API and Management Console.

