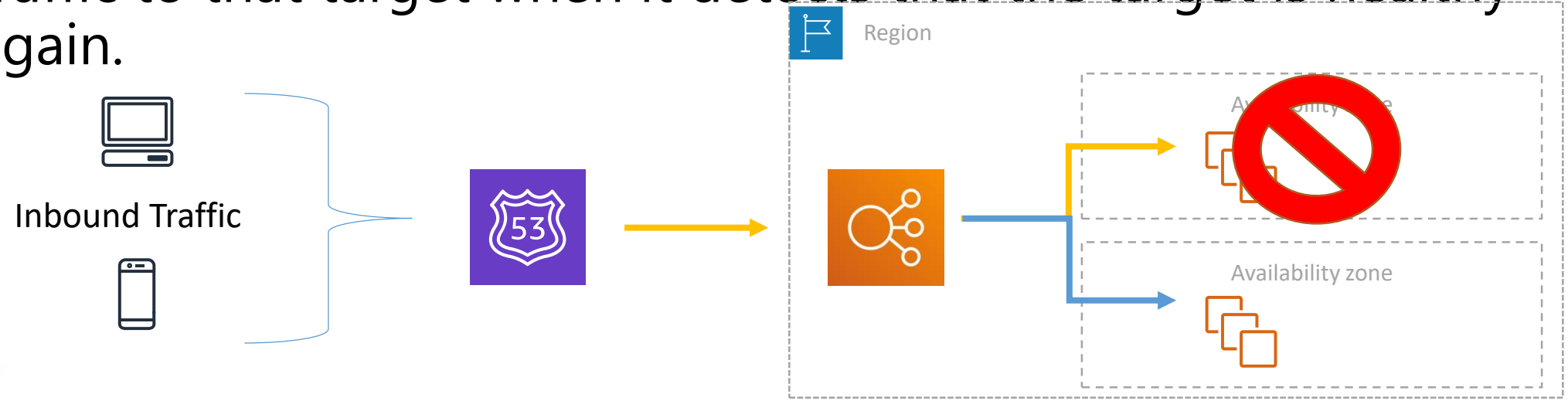
Elastic Load Balancer

Amazon Web Services

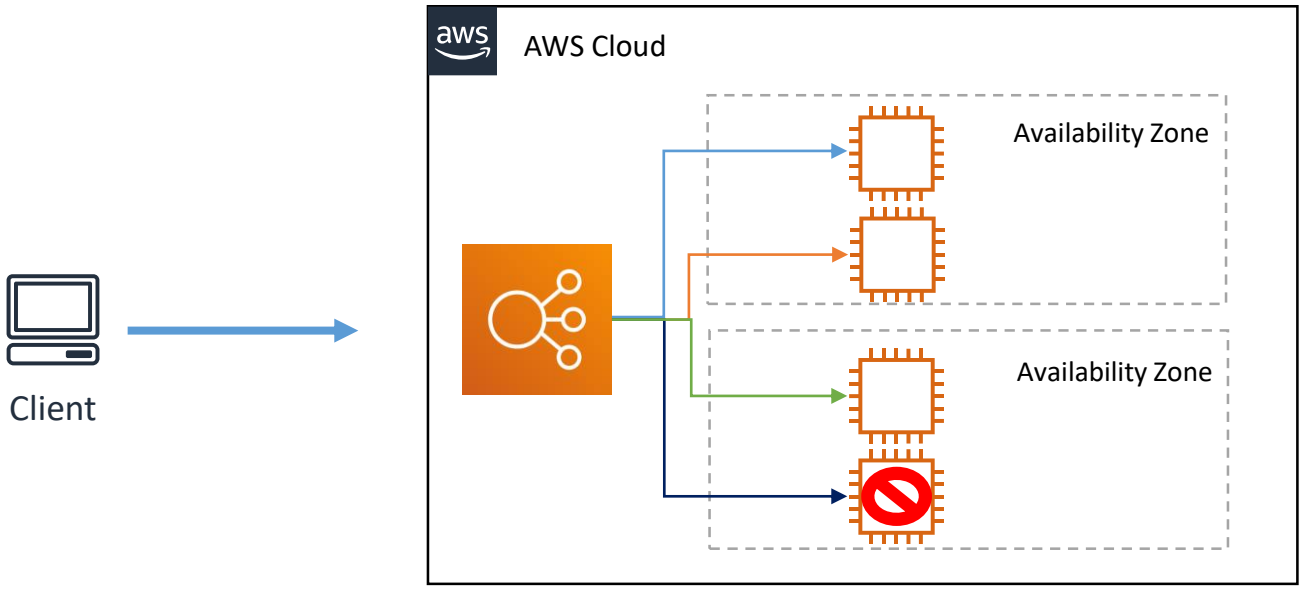
What is an Elastic Load Balancer

Load Balancers accept incoming traffic from clients and route requests to its registered targets (such as EC2 instances) in one or more Availability Zones. They also monitor the health of its registered targets ensuring that traffic only routed to healthy targets. When the load balancer detects an unhealthy target, it stops routing traffic to that target, and then resumes routing traffic to that target when it detects that the target is healthy again.



Elastic Load Balancer – Key Concepts

- Types of Load Balancers
  - Classic Load Balancer



- Classic Load Balancer distributes incoming application traffic across multiple EC2 instances in multiple Availability Zones
- Add and remove instances from your load balancer as your needs change, without disrupting the overall flow of requests to your application.
- Load balancer distributes traffic evenly across the Availability Zones
  - To distribute traffic evenly across all registered instances in all enabled Availability Zones, enable cross-zone load balancing on your load balancer

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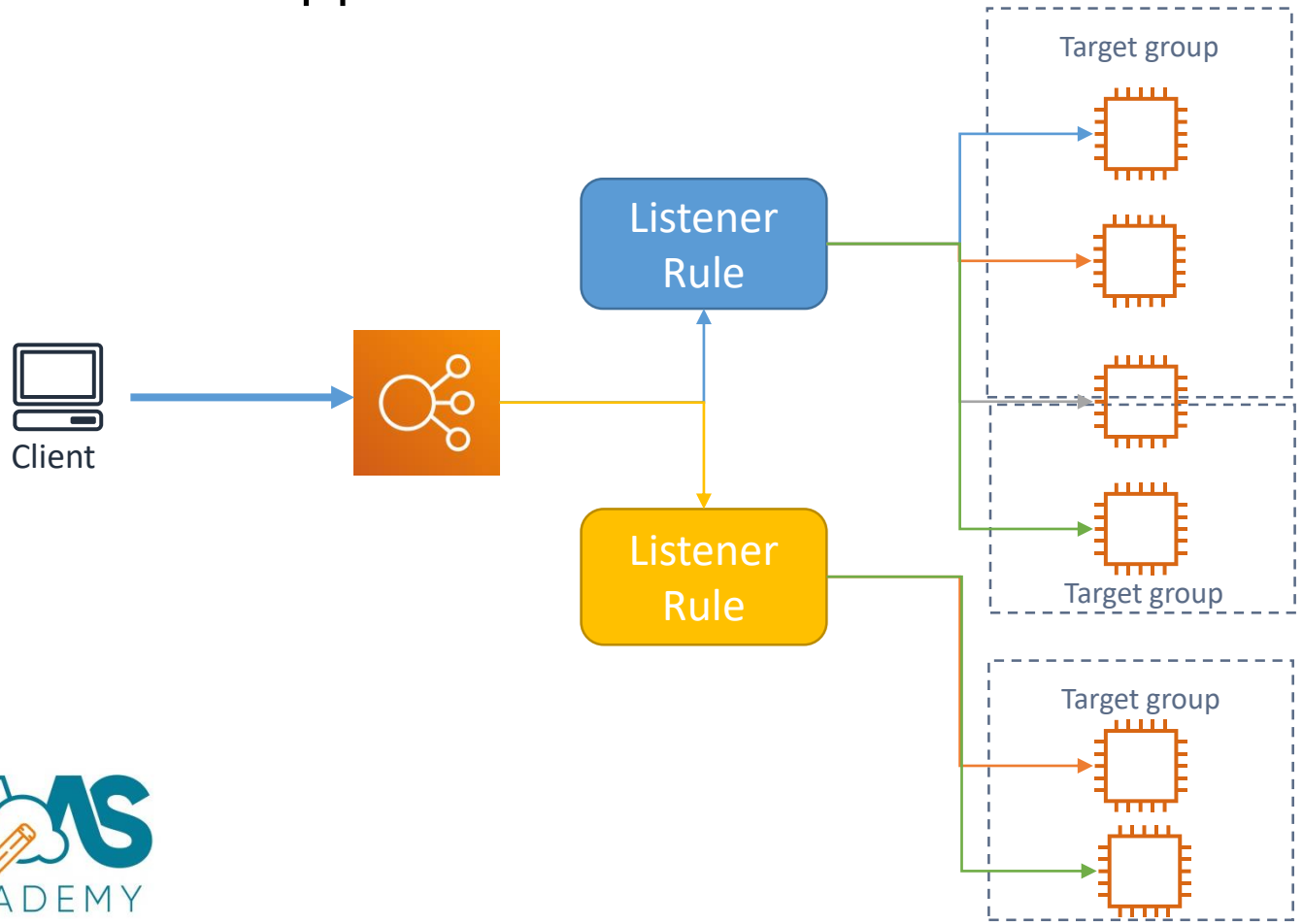
Elastic Load Balancer – Key Concepts

- Types of Load Balancers
  - Application Load Balancer



- Application Load Balancer functions at the application layer, the seventh layer of the Open Systems Interconnection (OSI) model.
- It evaluates the listener rules in priority order to determine which rule to apply, and then selects a target from the target group for the rule action
- You can configure listener rules to route requests to different target groups based on the content of the application traffic. For example:
  - Support for path-based routing
  - Support for host-based routing
  - Support for routing requests to multiple applications on a single EC2 instance
  - Support for redirecting requests from one URL to another
  - Support for registering Lambda functions as targets.
  - Support for containerized applications.

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Monitor Your Application Load Balancers

Amazon CloudWatch

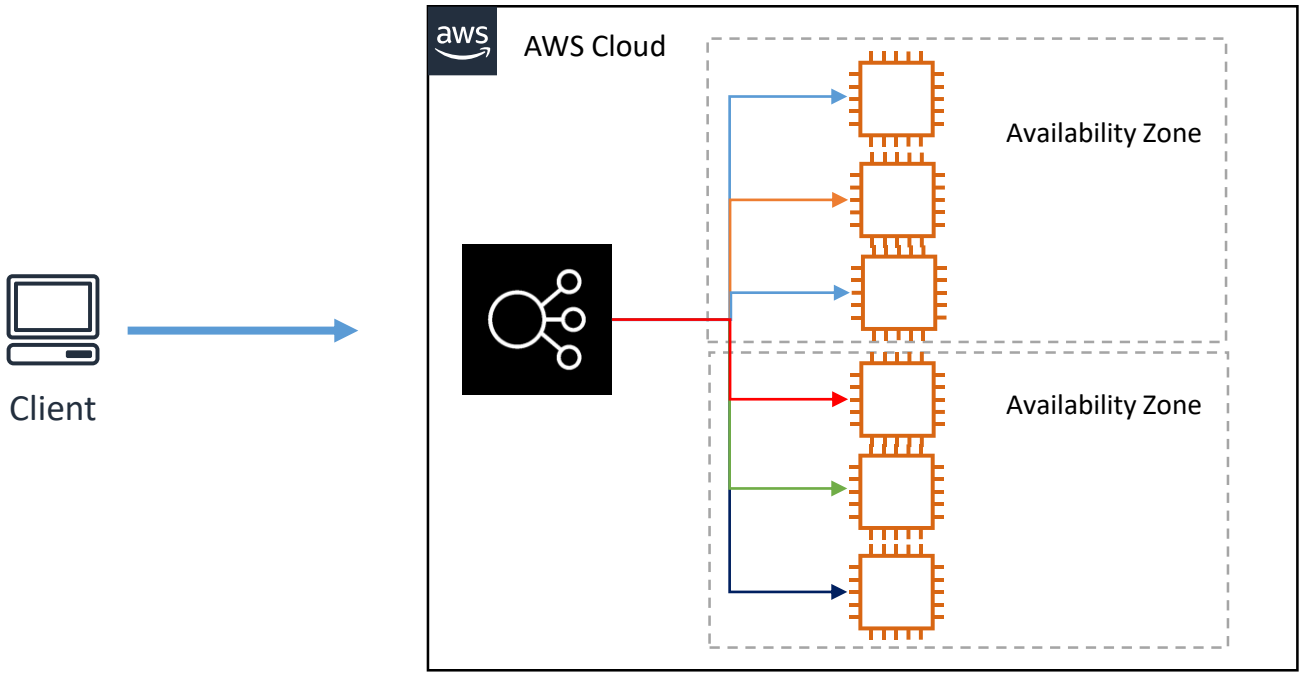
Access Logs

Request Tracing

AWS CloudTrail

Elastic Load Balancer – Key Concepts

- Types of Load Balancers
  - Network Load Balancer



- A Network Load Balancer functions at the fourth layer of the Open Systems Interconnection (OSI) model. It can handle millions of requests per second. After the load balancer receives a connection request, it selects a target from the target group for the default rule. It attempts to open a TCP connection to the selected target on the port specified in the listener configuration.
- Ability to handle volatile workloads and scale to millions of requests per second.
- Support for static IP addresses for the load balancer. You can also assign one Elastic IP address per subnet enabled for the load balancer.
- Support for registering targets by IP address, including targets outside the VPC for the load balancer.

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Next Video

Create an Application Load Balancer - Lab