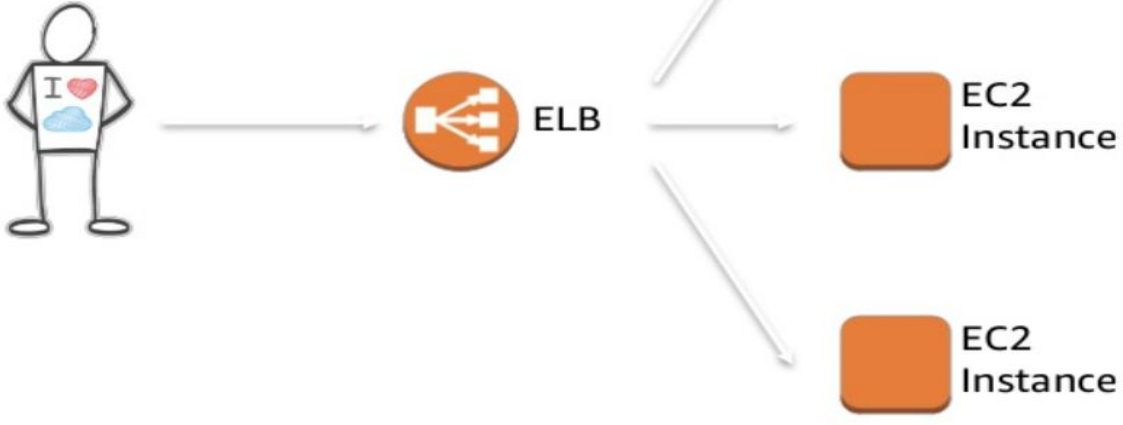
Elastic Load Balancing



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

Elastic Load Balancing provides **high-availability** by utilizing multiple Availability Zones

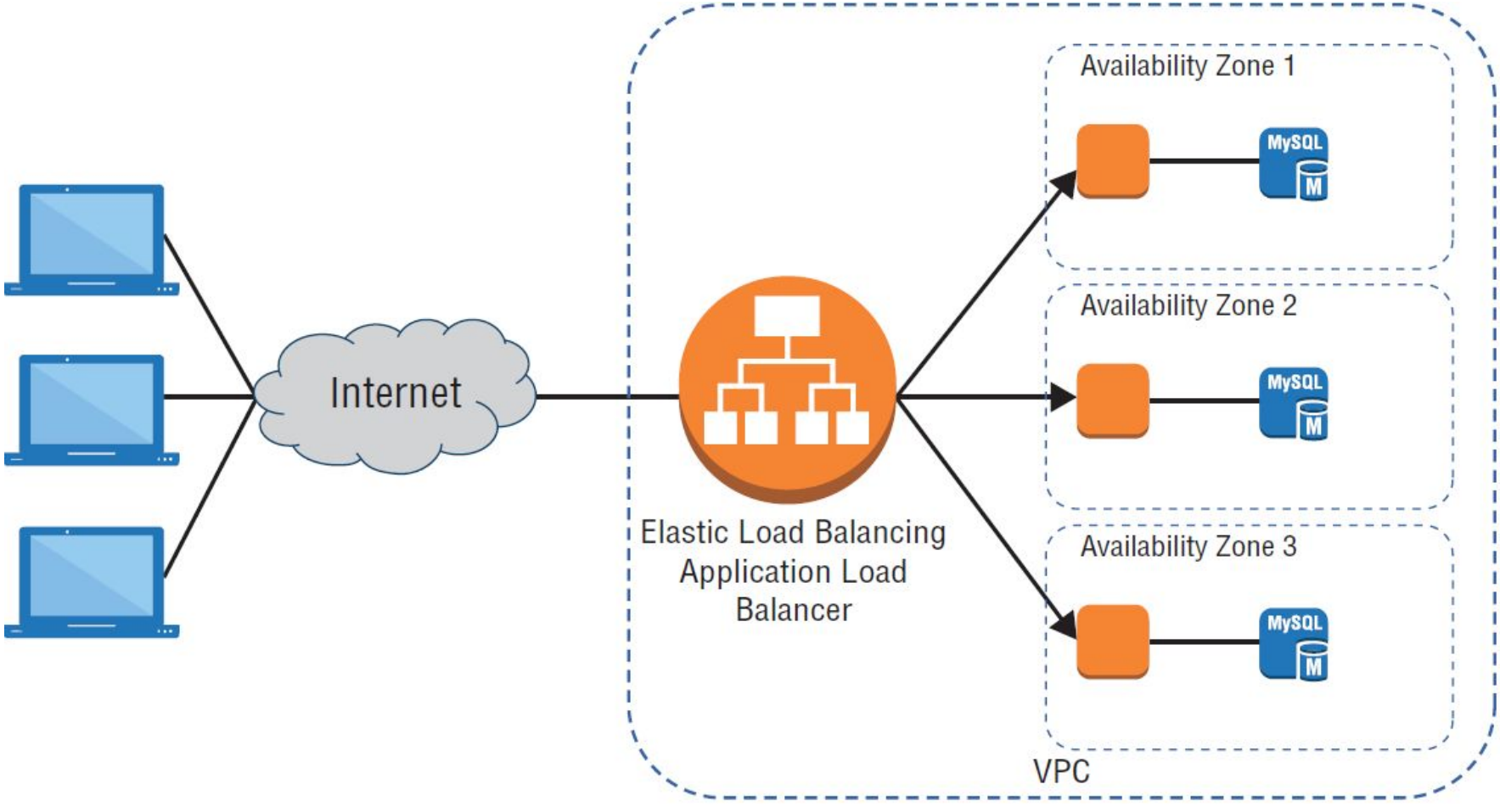
Elastic Load Balancing

- Distributes incoming application or network traffic across multiple targets, such as **EC2 instances**, **containers (ECS)**, **Lambda functions, and IP addresses**, in multiple Availability Zones.
- When you create a load balancer, you must specify one public subnet from at least two Availability Zones.

ELB - Features

- Accepts incoming traffic from clients and routes requests to its registered targets.
- Monitors the health of its registered targets and routes traffic only to healthy targets.
- Enable deletion protection to prevent your load balancer from being deleted accidentally.
- Disabled by default.
- Deleting ELB won’t delete the instances registered to it.
- Supports SSL Offloading which is a feature that allows the ELB to bypass the SSL termination by removing the SSL-based encryption from the incoming traffic.

Typical load balancing operation



Application Load Balancer - Components

Load Balancer

- A *load balancer* serves as the single point of contact for clients.

Listener

- A *listener* checks for connection requests from clients. You must define a default rule for each listener that specifies a target group, condition, and priority.

Target Group

- A *Target group* routes requests to one or more registered targets.

Application Load Balancer

Public DNS Name format for Load Balancer

- *name-1234567890.region.elb.amazonaws.com*

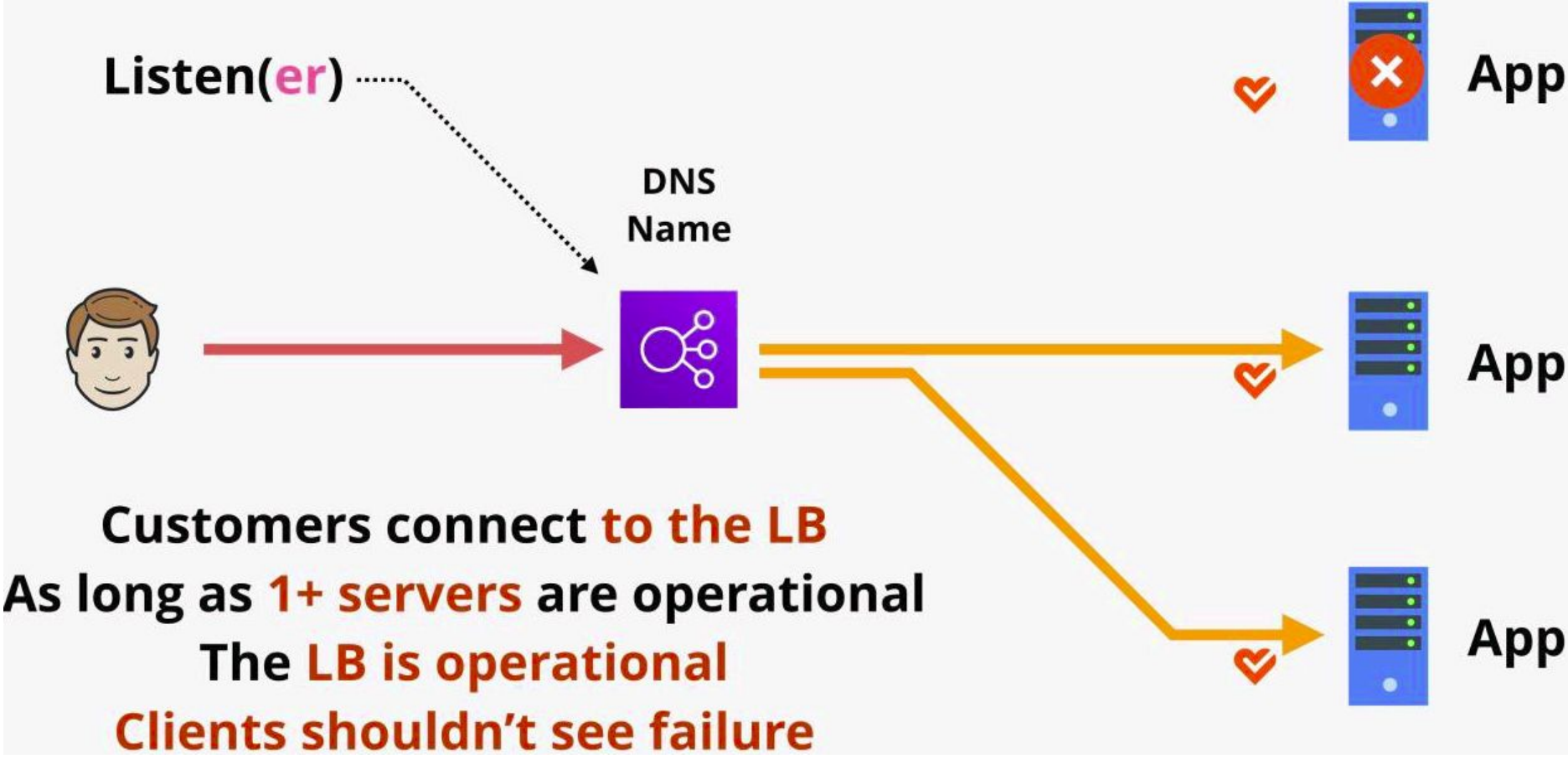
Load Balancer States

- **Provisioning** - The load balancer is being set up.
- **Active** - The load balancer is fully set up and ready to route traffic.
- **Failed** - The load balancer could not be set up.

Sticky Sessions:

- ELB can be configured to use sticky session feature (also called session affinity) which enables it to bind a user's session to an instance and ensures all requests are sent to the same instance.
- Route requests to the same target in a target group.
- You enable sticky sessions at the target group level.
- You can also set the duration for the stickiness of the load balancer-generated cookie, in seconds.

Load Balancer



ELB - Pricing

https://aws.amazon.com/elasticloadbalancing/pricing/