



BATCH : 149
LESSON : AWS
DATE : 15.08.2023
SUBJECT : AWS-EC2-Autoscaling

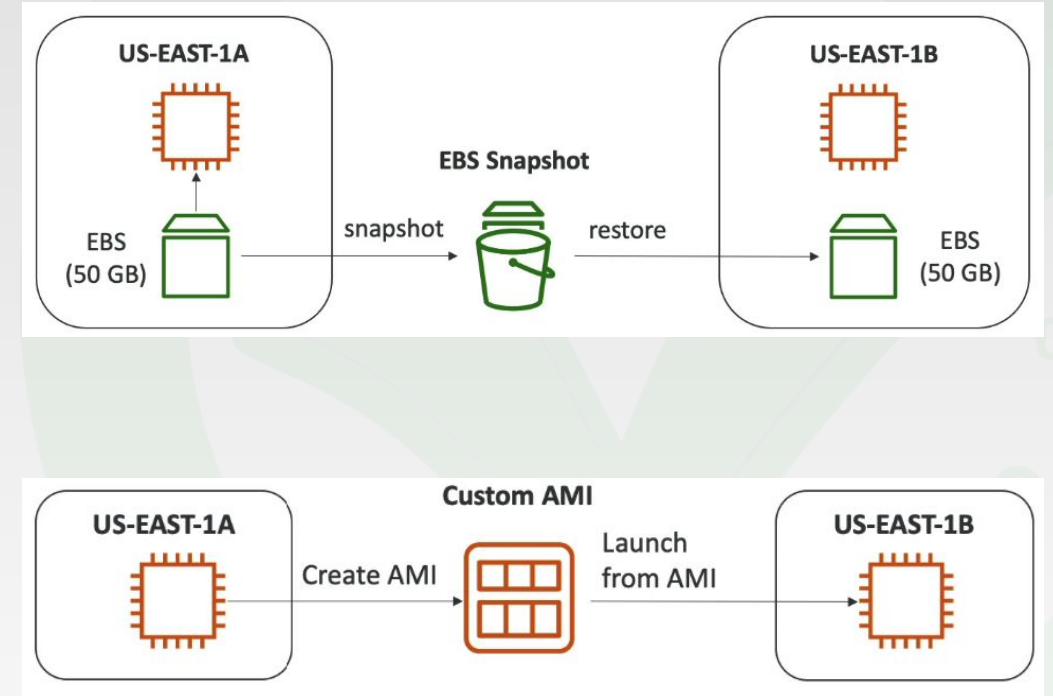
ZOOM GİRİŞLERİNİZİ LÜTFEN **LMS** SİSTEMİ ÜZERİNDEN YAPINIZ





Snapshots-AMI Summary

- You can have a backup of your EBS volume **at any point in time**
- **Snapshots can be copied across AZ or Region**
- **Snapshots are incremental storage**
- **Snapshots are stored in S3**
- **AMI is customization of an EC2 instance**
- **AMI is built for a specific region and can be copied across regions**



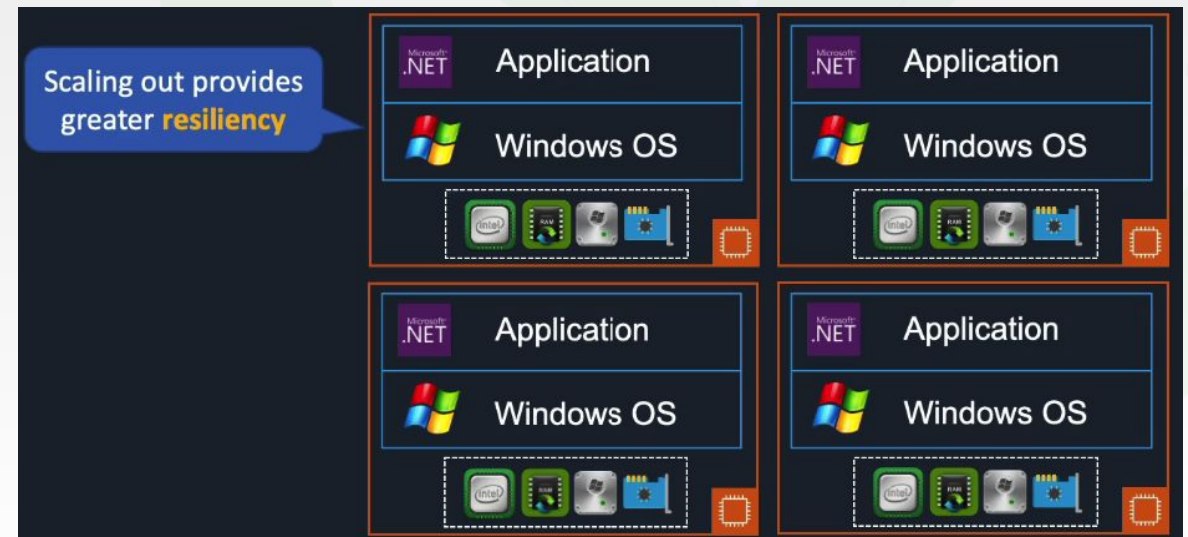
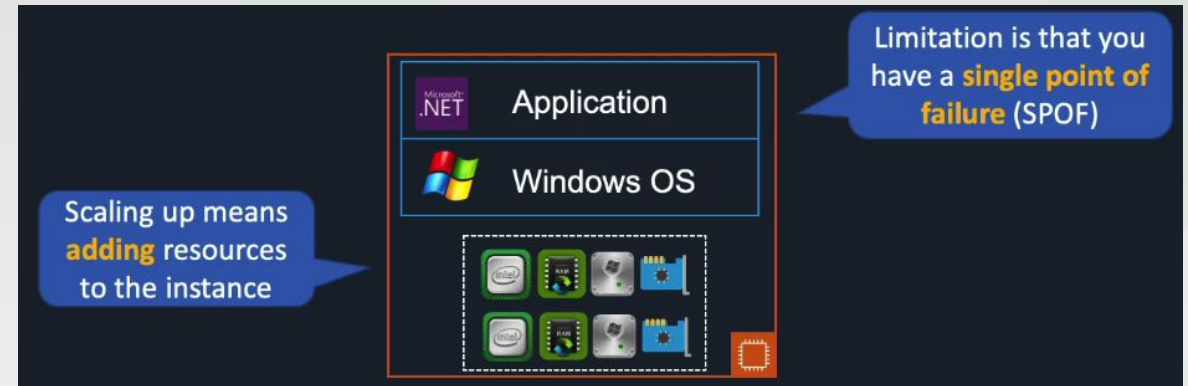


AWS EC2 Auto Scaling



Scalability

- A system adapts itself to handle loads.
- 2 types:
 - Vertical (increase size of system)
(scale up - down)
 - adding hardware (t2.micro to c5.xlarge)
 - AWS Ops Automator
 - Horizontal (elasticity) (increase number of system) (scale in - out)
 - EC2 AutoScaling
 - Load Balancer





Availability

- A system is available at all times.
- The aim is to survive any disaster or failures.
 - Auto Scaling Group multi AZ
 - Load Balancer multi AZ



Introduction to Auto Scaling

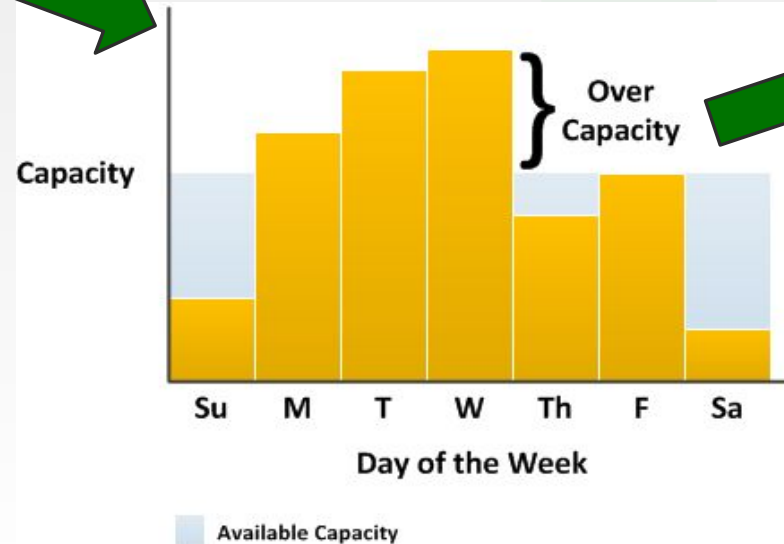
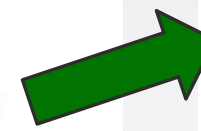
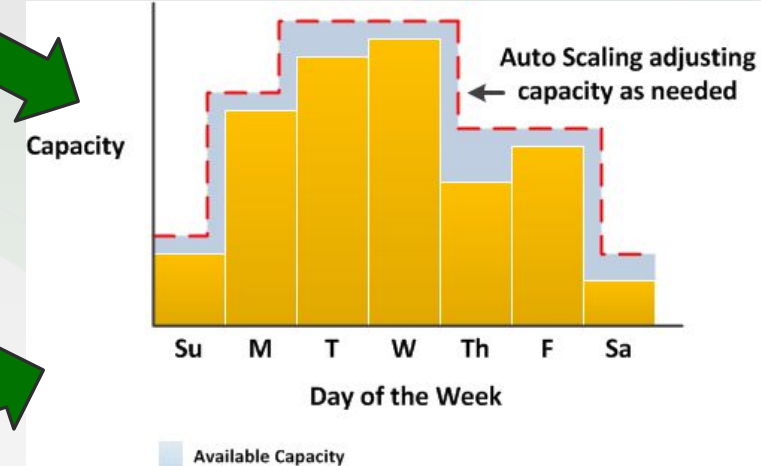
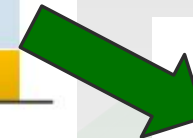
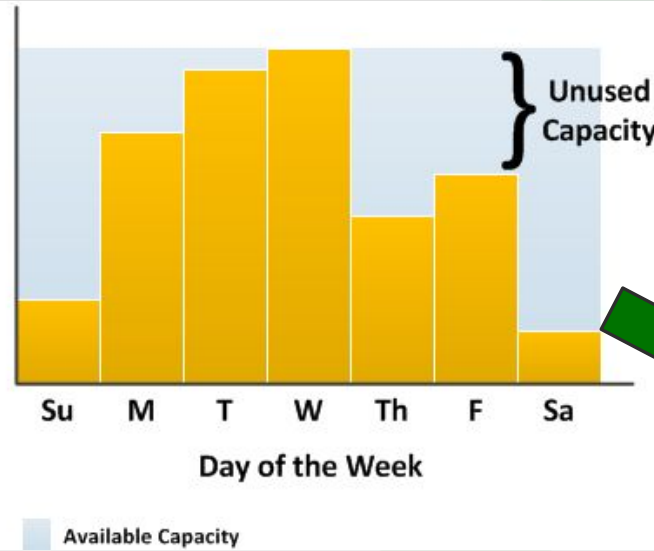
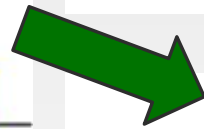
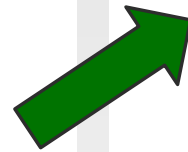
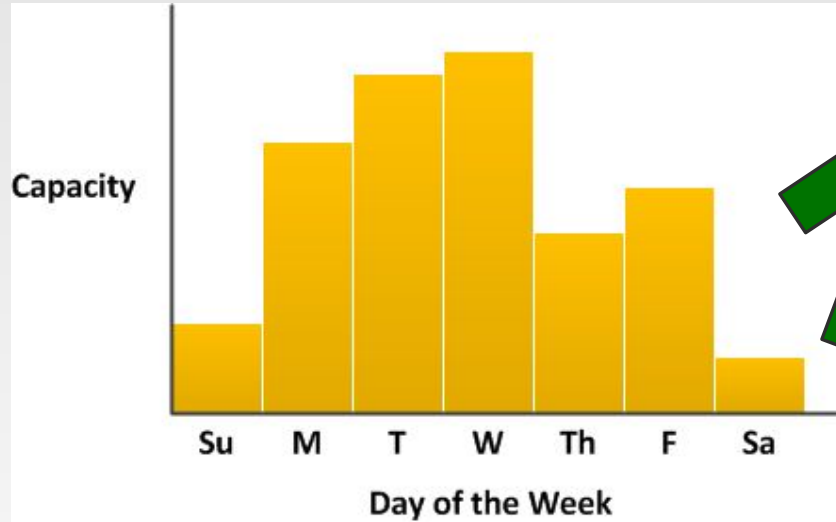


Auto Scaling

- Amazon EC2 Auto Scaling is a component that helps you ensure that you have the correct number of Amazon EC2 instances available to handle the load for your application.
- EC2 Auto Scaling can launch or terminate instances.
- Auto Scaling Group is a collection of EC2 instances that are scaled together.
- ASG (Auto Scaling Group) works with other services like Load Balancer, CloudWatch etc.
- Based on CloudWatch metrics and health checks scale-in/out policies are set.

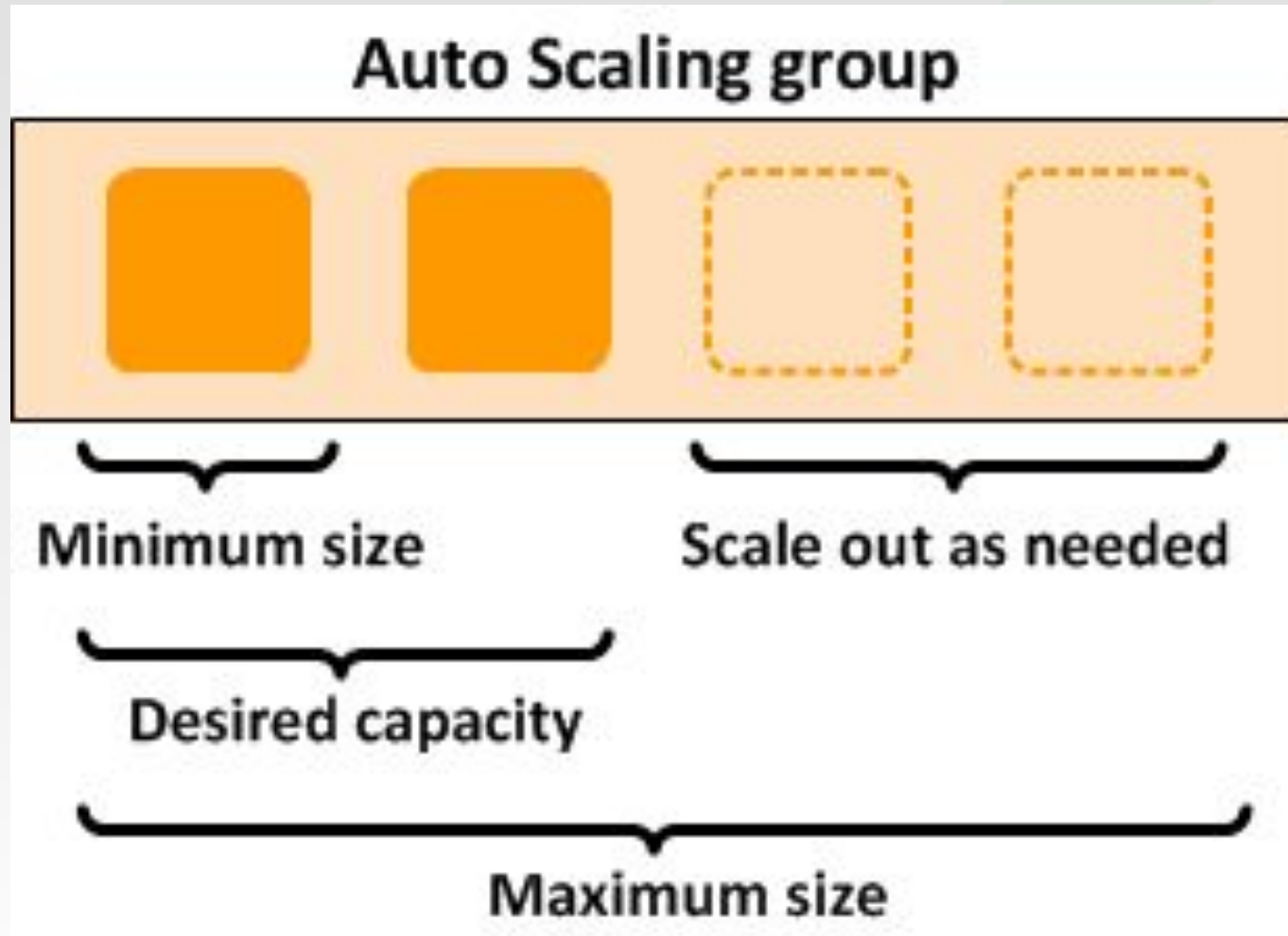


Covering variable demand



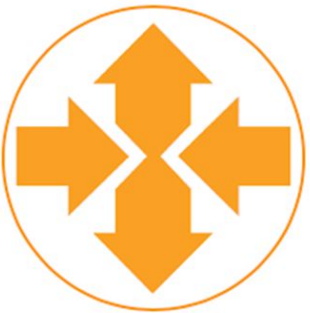


Auto Scaling





Benefits of Auto Scaling



Auto Scaling

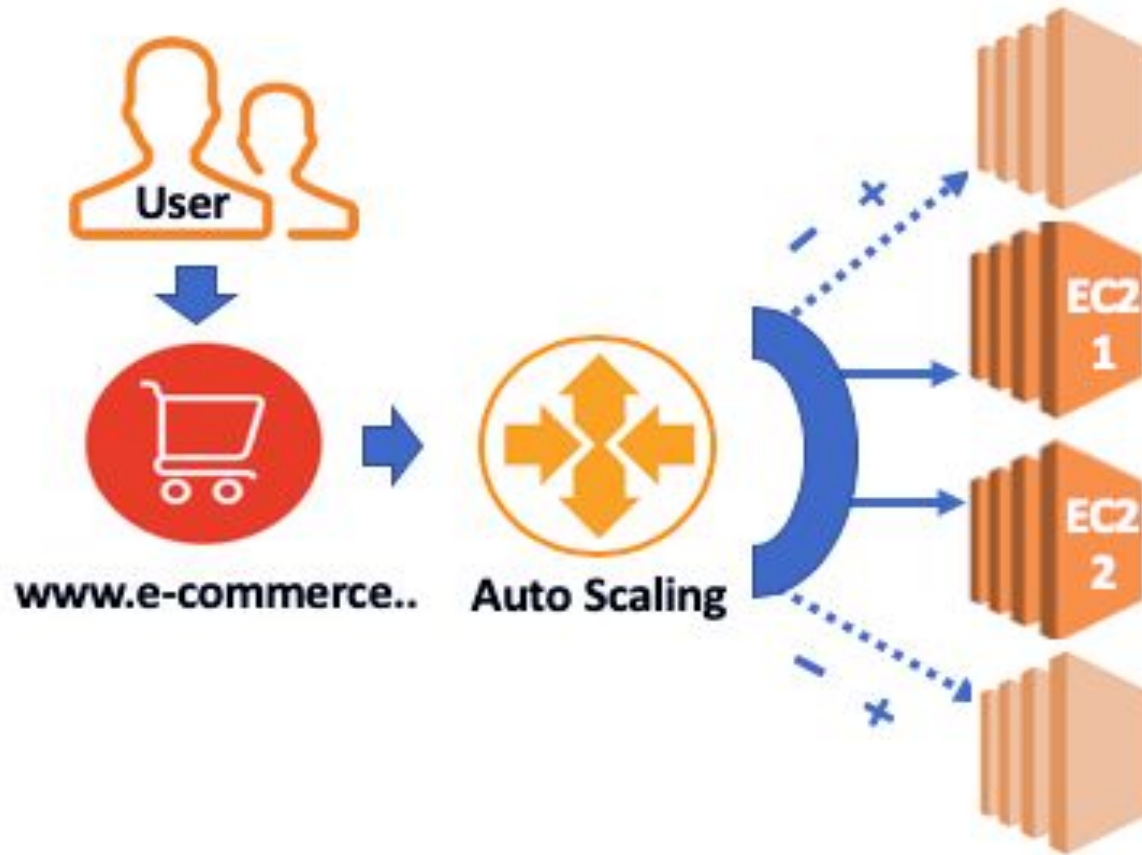
Better fault tolerance.

Better availability.

Better cost management.

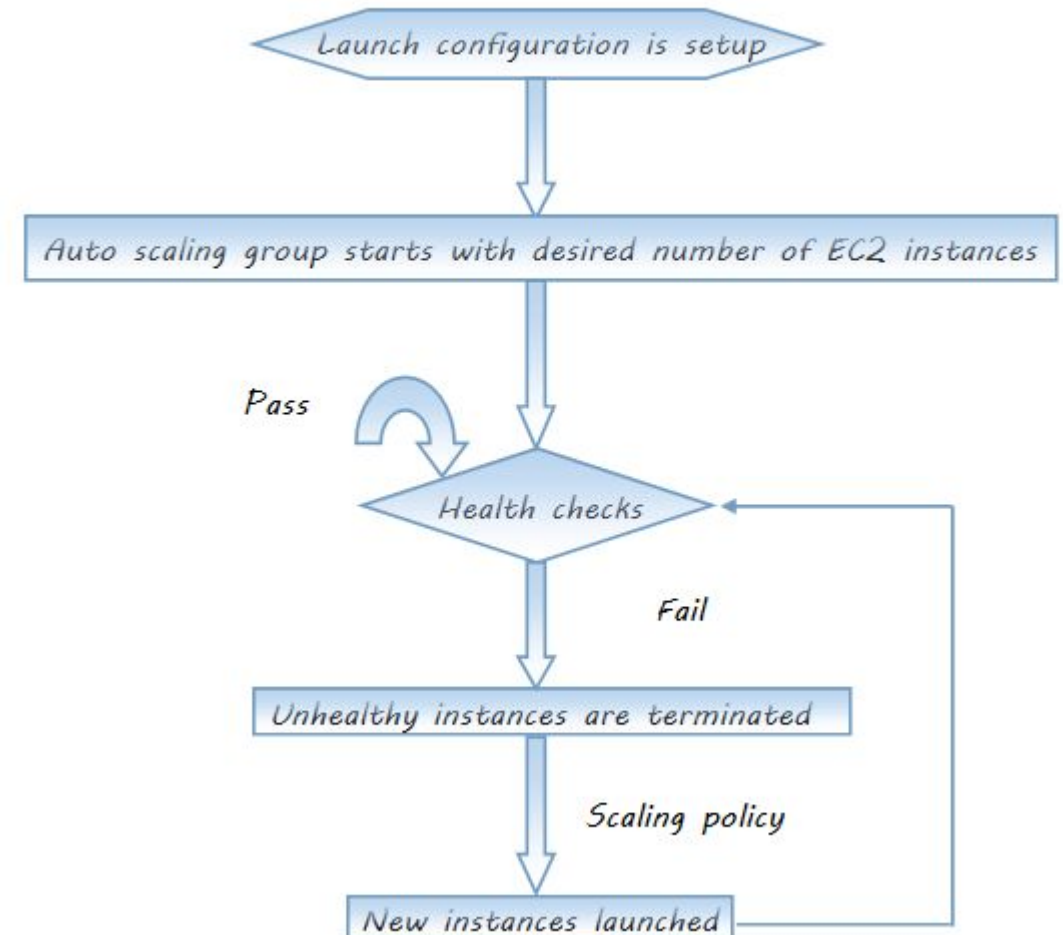


Auto Scaling Working Process



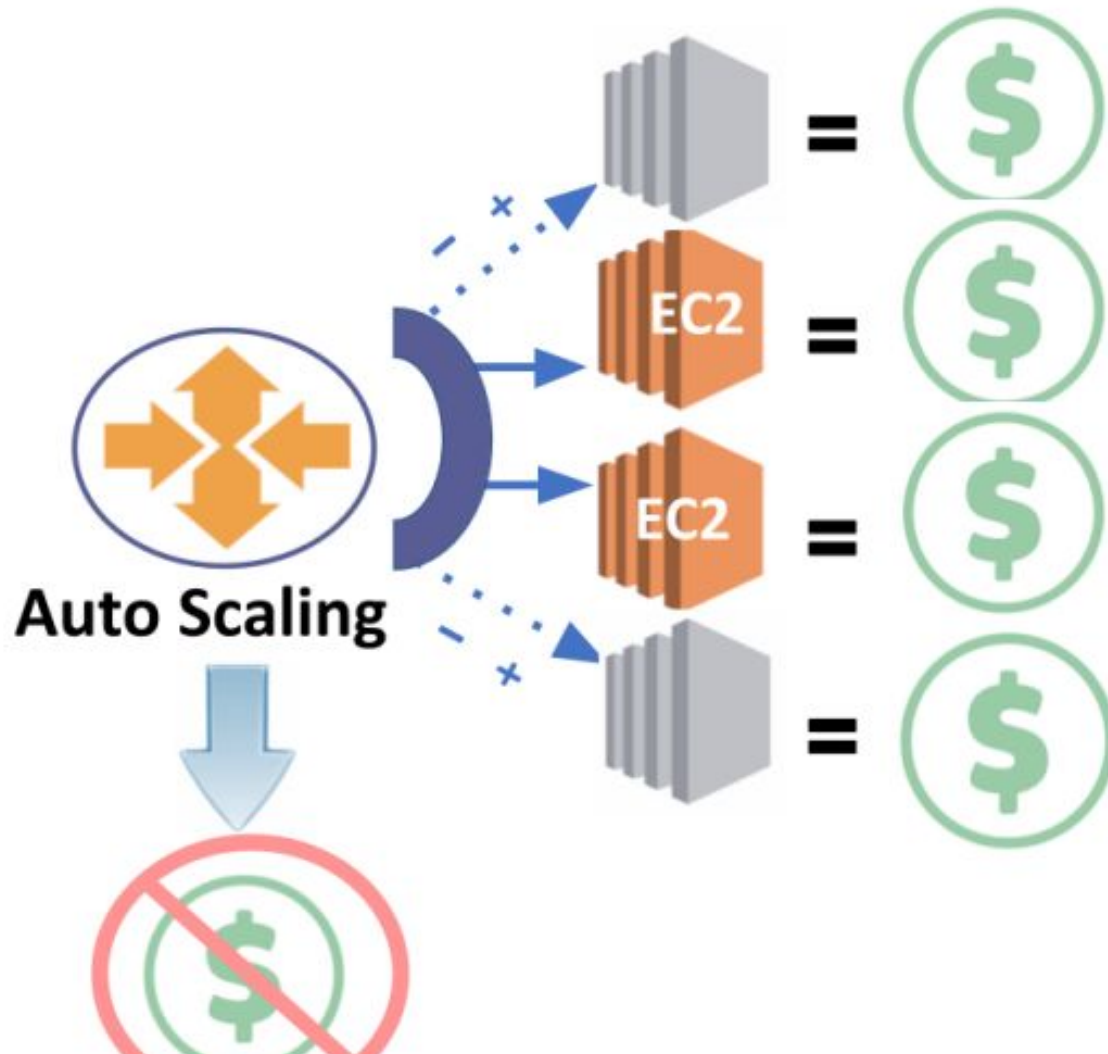
Auto Scaling Working Process

Work flow of Auto Scaling



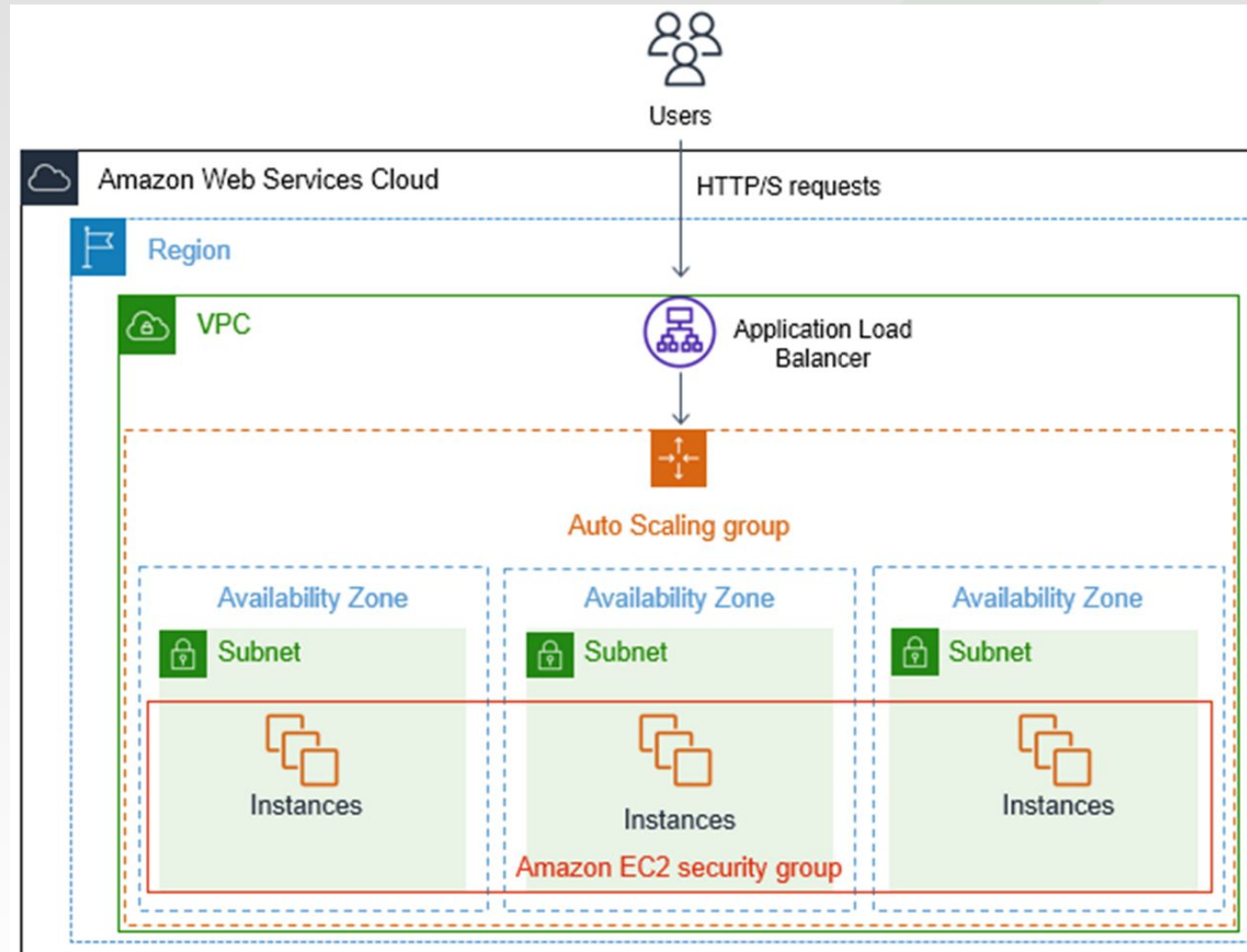


Pricing for Auto Scaling



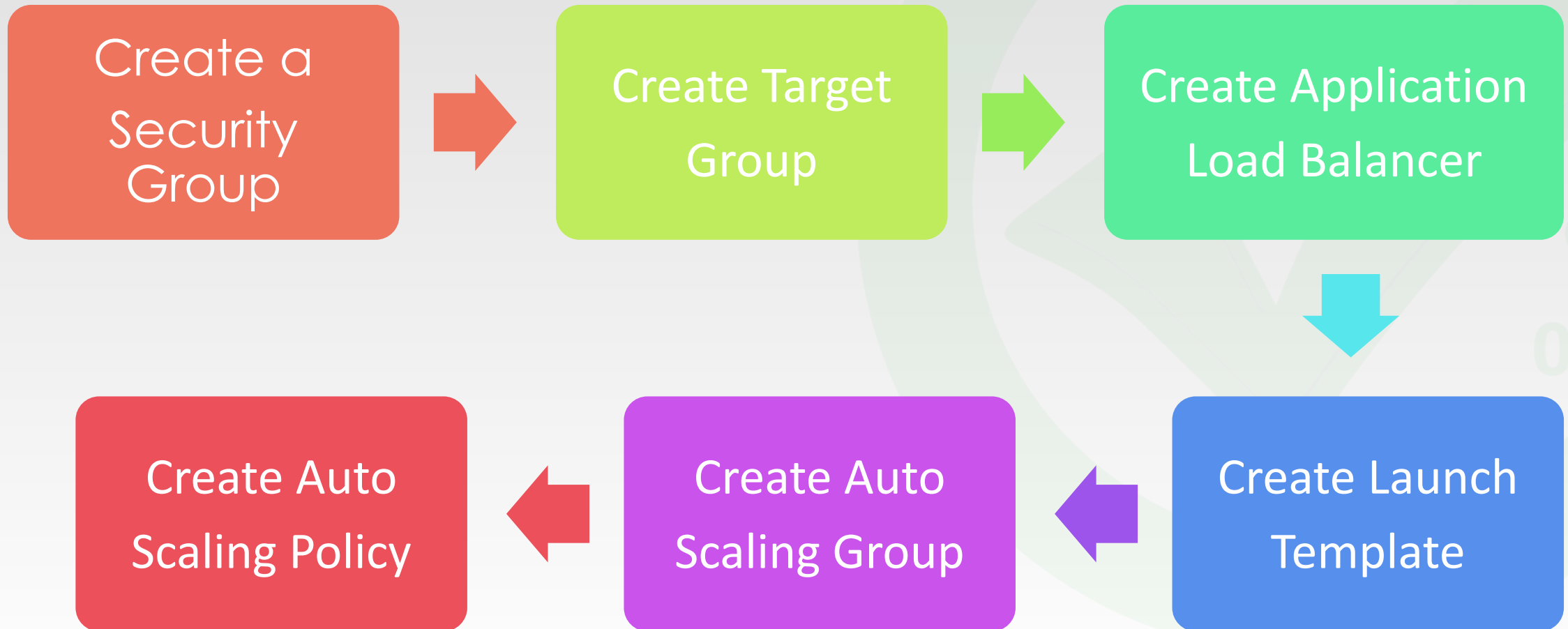


Auto Scaling Working Process





Auto Scaling Working Process





EC2 Autoscaling Summary

- EC2 Auto Scaling **launches and terminates instances dynamically.**
- **Responds to EC2 health checks and CloudWatch metrics.**
- **Scaling policies define how to respond to changes.**
- **Auto Scaling Groups are collection of instances that are scaled and managed together.**
- **Vertical Scaling (adding hardware resources to a system)**
- **Horizontal Scaling (adding copies of the same system)**



EC2 Autoscaling

Certification Test Cases

1

Scaling an EC2 instance from r4.large to r4.4xlarge is called ..

Vertical Scaling

2

Running an application on an Auto Scaling Group that scales the number of EC2 instances in and out is called ..

Horizontal Scaling

3

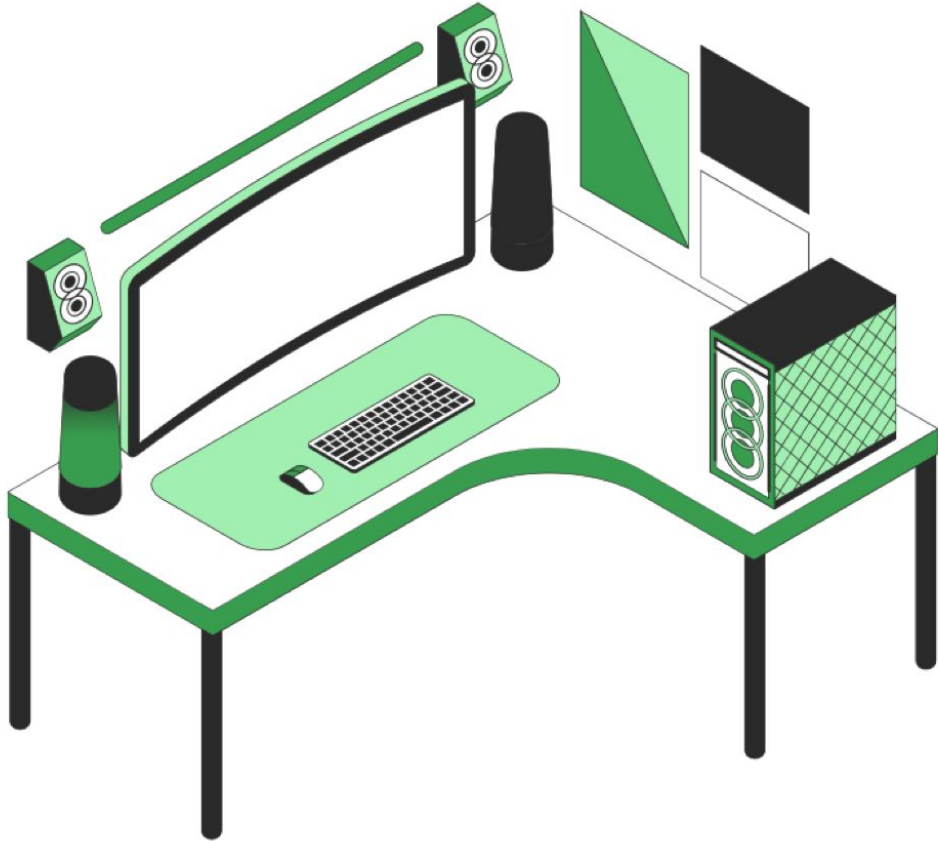
You have an Auto Scaling Group fronted by an Application Load Balancer. You have configured the ASG to use ALB Health Checks, then one EC2 instance has just been reported unhealthy. What will happen to the EC2 instance?

ASG will terminate the instance

4

A solutions architect needs to build Highly Available and Scalable web servers. What do you advise?

Use EC2 Auto Scaling and Application Load Balancer across multiple AZs



Do you
have any
questions?

Send it to us! We hope you learned
something new.