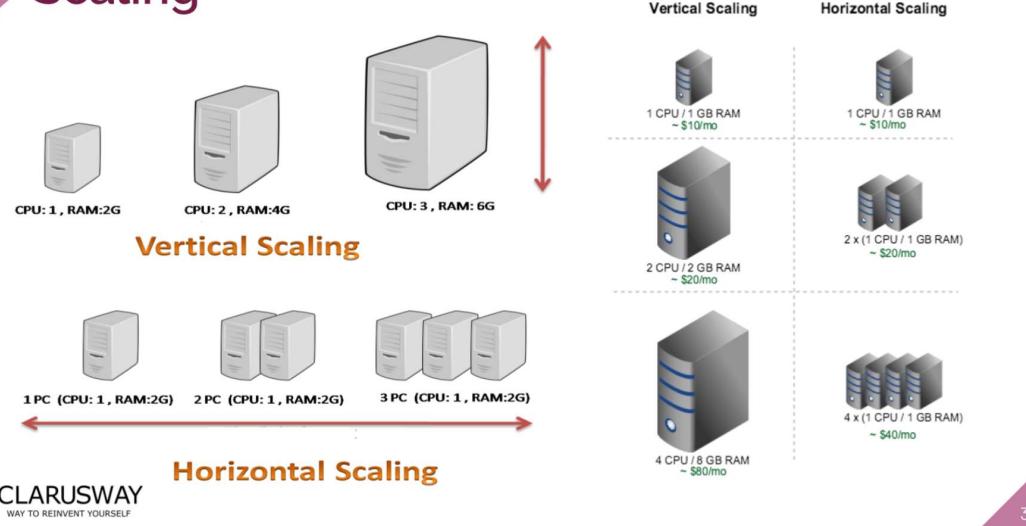


Today's Takeaways

- ▶ Part 1: Anatomy of Auto Scaling
- ▶ Part 2: Hands on

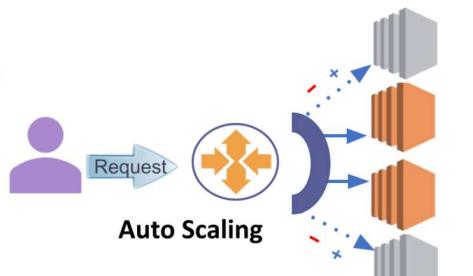
► Scaling



Vertical da belli bir miktarla kadar artırabiliyoruz.

► Auto Scaling

What is 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.
- Auto Scaling **adds** or **removes** instances to keep your system steady state.
- You can **automate** the **increasing** or **decreasing** of virtual machines when request changes over time.

Scale out ec2 sayıları artırma, **scale in** ec2 sayısı azaltma olarak anlamamız gereklidir. Bir trafik yoğunluğu veya CPU kullanımının belirli bir seviyeyi aşması gibi durumlarda EC2'lerimizin sayılarını otomatik olarak artırma veya azaltma autoscaling diyoruz.
 Belli limitleri policy belirliyoruz buna göre AWS bizim isimizi çözüyor,
 Bu sayede requestler alınıyor ve web sitemiz sağlıklı çalışıyor. (Applicationimiz)
 Cloud'un autoscaling özelliğini hem maliyet hem de zaman olarak çok fazla faydalıyor.

► Auto Scaling Features of Auto Scaling



- Auto Scaling Policy
- Launch Configurations or Launch Templates.
- Fault tolerance.
- Compatible with Elastic Load Balancer
- Better Cost Management.

CLARUSWAY
WAY TO REINVENT YOURSELF

5

ÖZELLİKLERİ

Belirli koşulların gerçekleşmesiyle scale yapabilme imkanına sahibiz.

Bu koşulları içeren otomatik scale policy belirleyebiliyoruz. (mesela CPU kullanımının %50yi aşarsa yeni makine belirle diye bilgiyi sağlıyor)

Hangi türde nasıl bir makineye ayaga kaldırıracığımı otomatik olarak belirtmem gerekecektir;

Launch template üzerinden bunu birebiliyor,

Autoscaling instance'nın sağlıklı çalışıp çalışmadığını anlıyor onu düzgün çalışmazsa termionate edip yerine yenisini açıyor

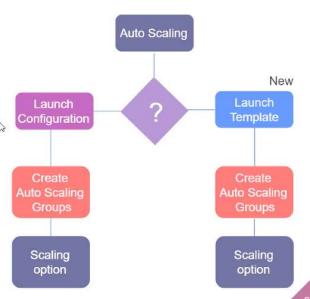
Autoscaling genellikle ELB balancer ile birlikte kullanılıyor. Bu ikisi uyumlu çalışıyor.

Cost management söyle mesela 3 makineye ödediğiniz bir para var ihtiyacınız arttıktan sonra makine kaldırılmıyor ve ihtiyaca cevap veremeyeceksiniz müşteri sitenizin başında beklediği için başka bir yere gitmesin diye bu 3 makineyi 5 makineye çıkarma işlemine devam ediyoruz, request yoğunluğunun arttığı zaman fazladan olan makineeleri otomatik olarak fazladan para ödemenmiş olacağız.

Cost tolerance dan mutlak cost management

► Auto Scaling Auto Scaling Creating Process

- First, you need to select either the **Launch Template** or the **Launch Configuration** option and create it.
- Then, create an **Auto Scaling Group**.
- Finally, Finish Creating Auto Scaling



CLARUSWAY
WAY TO REINVENT YOURSELF

Autoscaling launch template ve launch configuration eklenecek sonradan bir policy oluşturmak istenir. Bu makineye belirli bir politika uygulanır.

Bir launch templateden olusacak ec2 mimarimiz aynı oluyor. Yeni olusacak ec2 da aynı özelliklerini taşıyacağı için aynı konfigurasyona sahip olacak.

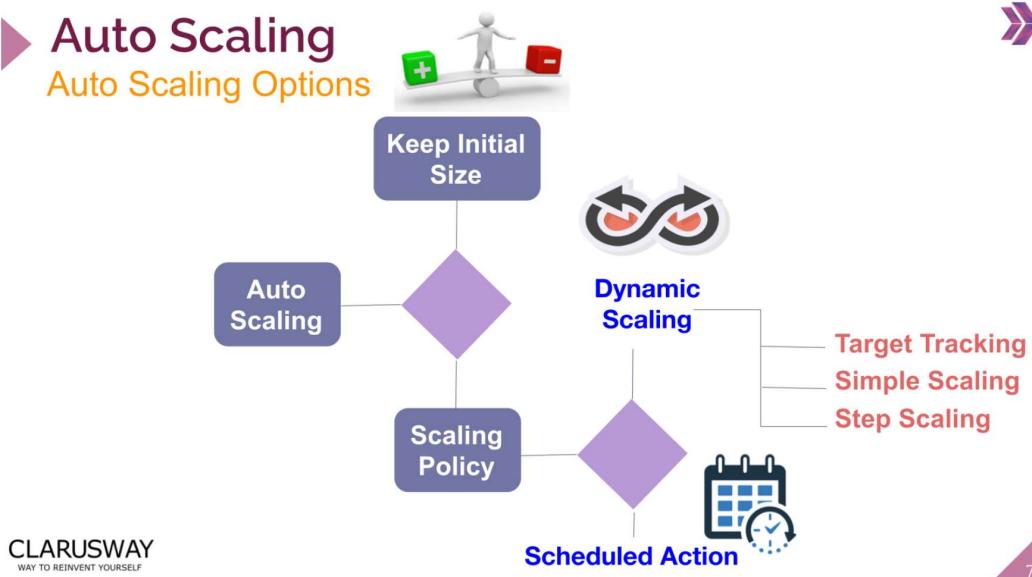
Scale in ve scale out özellikleri belirleyip set ediyoruz.

Load balancer ile autoscaling iyi arkadaşlar:) beraber kullanacağız

Autoscaling için kurduğumuz makineri logic olarak birlikte kullanabileceğiz.

► Auto Scaling

Auto Scaling Options

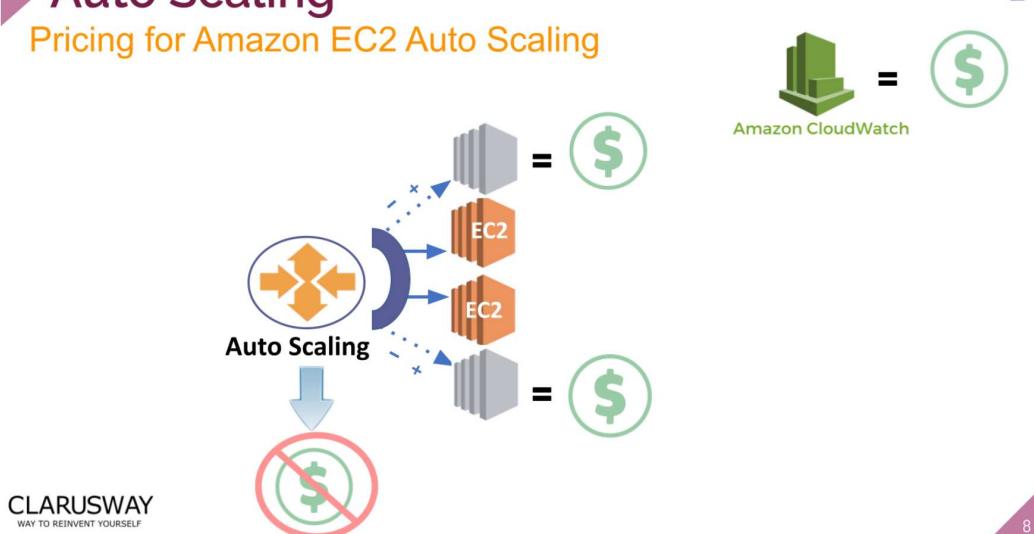


Policyleri öncelikle desire capacity belirleyebiliriz, örn. 3 tane makinem olsun o kadar ec2 da calismali surekli olarak. Health check mekanizmasi sayesinde de yeni olusup olusmayacagina karar veriyor. Desire kapasitenin altina dusurse yeni makine ayaga kalkidiracak.

Scaling policy de iki seçenek var; scheduled action: mesela haftasonu yorgunluk artiyorsa biz bu scaling policy yi özel olarak AWS ye dikte edebiliyoruz dynamic scaling de Target- Simple ve Step scaling: metric ulerinden policy belirleyebiliyoruz(cloud watch sevice) .

► Auto Scaling

Pricing for Amazon EC2 Auto Scaling

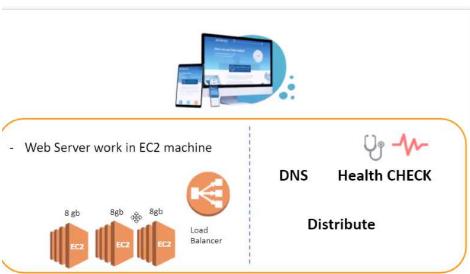


Autoscaling icin uretiremeye tabi degiliz. Ancak icindeki kullandigimiz ec2lerin parasini aliyor.
Cloud watch un da metric ozelliklerinden de uretirebilmeler var (5 dakka olmasi 3 dakka olmasi vs)

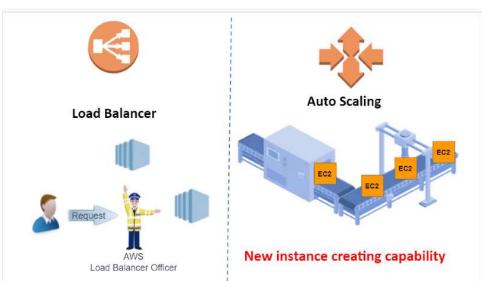
► Lifecycle Auto Scaling

Let's get our hands dirty!

- Creating an Auto Scaling



Makine sayısı artıncı gelen request hangi makineye gidecek bunun için load balancer oluşturduk

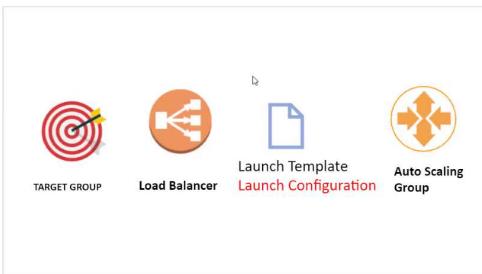


Loadbalancer trafiği yönlendiriyor ve yük dağıtıyor
Yük artıp makine bozulduğu zaman yük diğerlerine dağıtıyor makinen açmıyor
Ancak autoscaling bize yeni makine açma sansı veriyor



HANDSON

EC2 service geliyoruz



Önce target group, load balancer ve launch template oluşturacagız

Şimdi sec grup oluşturuyoruz. yeni sec grup oluşturuyoruz

EC2 > Security Groups > Create security group

Create security group Info

A security group acts as a virtual firewall for your instance to control inbound and outbound traffic. To create a new security group, complete the fields below.

Basic details
Security group name <small>Info</small> ASGSecGroup <small>Name cannot be edited after creation.</small>
Description <small>Info</small> ASGSecGroup
VPC <small>Info</small> vpc-d9b37b41
Inbound rules <small>Info</small>
Type <small>Info</small> Protocol <small>Info</small> Port range <small>Info</small> Source <small>Info</small> Description - optional <small>Info</small>
HTTP TCP 80 Anywhere-IPv4 <small>X</small> 0.0.0.0/0 Delete
SSH TCP 22 Anywhere-IPv4 <small>X</small> 0.0.0.0/0 Delete
Add rule
Outbound rules <small>Info</small>
Type <small>Info</small> Protocol <small>Info</small> Port range <small>Info</small> Destination <small>Info</small> Description - optional <small>Info</small>
All traffic All All Custom <small>X</small> 0.0.0.0/0 Delete
Add rule

Inbund rule olusturuyoruz

Outbunda dokunmuyoruz

Ancak inboundda verdigimiz yetkiler, outbound icin de gecerli

Create sec grp yapiyoruz

EC2 > Security Groups > sg-0af5ada825b57063d - ASGSecGroup

sg-0af5ada825b57063d - ASGSecGroup

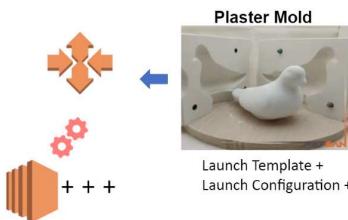
Details																														
Security group name <small>Info</small> ASGSecGroup	Security group ID <small>Info</small> sg-0af5ada825b57063d	Description <small>Info</small> ASGSecGroup	VPC ID <small>Info</small> vpc-d9b37b41																											
Owner <small>Info</small> 547187538073	Inbound rules count <small>Info</small> 2 Permission entries	Outbound rules count <small>Info</small> 1 Permission entry	Actions																											
Inbound rules	Outbound rules	Tags																												
Inbound rules (2)																														
<table border="1"> <thead> <tr> <th><input type="checkbox"/></th> <th>Name</th> <th>Security group rule... <small>Info</small></th> <th>IP version</th> <th>Type</th> <th>Protocol</th> <th>Port range</th> <th>Source</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/></td> <td>-</td> <td>sg-0b1cde0170728...</td> <td>IPv4</td> <td>SSH</td> <td>TCP</td> <td>22</td> <td>0.0.0.0/0</td> <td>-</td> </tr> <tr> <td><input type="checkbox"/></td> <td>-</td> <td>sg-0f430a9ffed61a2b</td> <td>IPv4</td> <td>HTTP</td> <td>TCP</td> <td>80</td> <td>0.0.0.0/0</td> <td>-</td> </tr> </tbody> </table>				<input type="checkbox"/>	Name	Security group rule... <small>Info</small>	IP version	Type	Protocol	Port range	Source	Description	<input type="checkbox"/>	-	sg-0b1cde0170728...	IPv4	SSH	TCP	22	0.0.0.0/0	-	<input type="checkbox"/>	-	sg-0f430a9ffed61a2b	IPv4	HTTP	TCP	80	0.0.0.0/0	-
<input type="checkbox"/>	Name	Security group rule... <small>Info</small>	IP version	Type	Protocol	Port range	Source	Description																						
<input type="checkbox"/>	-	sg-0b1cde0170728...	IPv4	SSH	TCP	22	0.0.0.0/0	-																						
<input type="checkbox"/>	-	sg-0f430a9ffed61a2b	IPv4	HTTP	TCP	80	0.0.0.0/0	-																						
Filter security group rules Manage tags Edit inbound rules																														

Load balancer olusturacagiz ancak once target grup olusturacagiz

Load Balancer-Stand-alone



Auto Scaling says "Give me INSTANCE SAMPLE"



Autoscaling de bu target grubu biz doldurmayaçagiz autoscaling kendisi doldurak.

Normalde kendimiz register ediyoruz instance lari target gruba, ama burda bos bırakacagız

Lambda function
 Facilitates routing to a single Lambda function.
 Allows to application Load Balancers only.

Target group name:
MyTargetGroup

A maximum of 12 alphanumeric characters including hyphens are allowed, but the name must not begin or end with a hyphen.

Protocol:
HTTP ▾ **80**

VPC
Select the VPC with the instances that you want to include in the target group:
vpc-d9e137fa4
vpc-d9e137fa16

Protocol version:
 HTTP1
Send requests to targets using HTTP/1.1. Supported when the request protocol is HTTP/1.1 or HTTP/2.
 HTTP2
Send requests to targets using HTTP/2. Supported when the request protocol is HTTP/2 or gRPC, but gRPC specific features are not available.
 gRPC
Send requests to targets using gRPC. Supported when the request protocol is gRPC.

Health check
The associated load balancer periodically sends requests, per the settings below, to the registered targets to test their status.

Health check protocol:
HTTP ▾

Health check path
Use the default path of "/" to ping the root, or specify a custom path if preferred:
/

Up to 1024 characters allowed.

► Advanced health check settings

► Tags - optional
Create unique tags for your target group. Tags enable you to categorize your AWS resources so you can more easily manage them.

Cancel **Next**

English (US) ▾

Healthy threshold
The number of consecutive health checks successes required before considering an unhealthy target healthy:
2 ▾
2-10

Unhealthy threshold
The number of consecutive health check failures required before considering a target unhealthy:
2 ▾
2-10

Timeout
The amount of time, in seconds, during which no response means a failed health check:
2-20 seconds

Interval
The approximate amount of time between health checks of an individual target:
10 seconds

Success codes
The range of codes to use when checking for a successful response from a target. You can specify multiple values (for example, "200,202") or a range of values (for example, "200-299").
200

Healthy threshold da 3 defa kontrol ediyoruz, unhealthy bir instance'i check ediyor 3 defa(kendimiz belirleyebiliyoruz bu sayiları) eger degerler normalse healthy kabul ediyor

Unhealthy dde 5 defa kontrol ediyor, unhealthy ise ona gönderme yapmiyoruz

Timeout da 5 saniye bekliyor her seferi icin cevap gelmezse failed olarak kabul ediyor. LB buraya yük göndermiyor artik.

Unhealthy cevap gelmemesi durumu.

Register targets

Available instances (0)
 Filter resources by property or value:

Instance ID	Name	State	Security groups	Zone	Subnet ID
No Available Instances					

Targets (0)
 Filter resources by property or value:
 Remove all pending

All	Health status	Instance ID	Name	Port	State	Security groups	Zone	Subnet ID
No Instances added yet								

Specify instances above, or leave the group empty if you prefer to add targets later.

Cancel Previous **Create target group**

Register target yapmayacagiz burda hala ec2 larimiz yok cunki. Bu ec2 lari autoscaling_group olusturacak

Dogrudan create target group diyoruz

Target Grubumuz da olustu

Target groups (1) info								
Actions								
<input type="button"/> Search or filter target groups								
Name	ARN	Port	Protocol	Target type	Load balancer	VPC ID		
<input type="checkbox"/> MyTargetGroup	arn:aws:elasticloadbalancin...	80	HTTP	Instance	-	vpc-d9e137fa4		

Simdi LOAD BALANCER OLUSTURACAGIZ

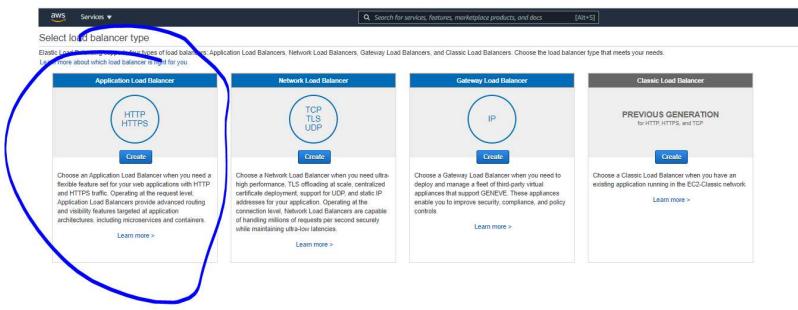
Create Load Balancer Actions ▾

Filter by tag and attributes or search by keyword

Name	DNS name	State	VPC ID	Availability Zones	Type	Created At	Monitoring
None found							

You do not have any load balancers in this region.

Select a load balancer



Step 1: Configure Load Balancer

Basic Configuration

To configure your load balancer, provide a name, select a scheme, specify one or more listeners, and select a network. The default configuration is an Internet-facing load balancer in the selected network with a listener that receives HTTP traffic on port 80.

Name: <input type="text" value="AVSProductScaling"/>	Scheme: <input checked="" type="radio"/> Internet-facing	IP address type: <input type="text" value="IPv4"/>
Listeners		
Load Balancer Protocol: <input type="text" value="HTTP"/>	Load Balancer Port: <input type="text" value="80"/>	Add Listener
Availability Zones		
Specify the Availability Zones to enable for your load balancer. The load balancer routes traffic to the targets in these Availability Zones only. You can specify only one subnet per Availability Zone. You must specify subnets from at least two Availability Zones to it.		
VPC: <input checked="" type="radio"/> vpc-de37b4 (172.31.0.0/16) (default) Availability Zones: <input checked="" type="checkbox"/> us-east-1a subnet-03bbbe IPv4 address: <input type="text" value="Assigned by AWS"/> <input checked="" type="checkbox"/> us-east-1b subnet-10286f IPv4 address: <input type="text" value="Assigned by AWS"/> <input checked="" type="checkbox"/> us-east-1c subnet-05d66f IPv4 address: <input type="text" value="Assigned by AWS"/> <input checked="" type="checkbox"/> us-east-1d subnet-475e70 IPv4 address: <input type="text" value="Assigned by AWS"/> <input checked="" type="checkbox"/> us-east-1e subnet-2db4c1 IPv4 address: <input type="text" value="Assigned by AWS"/> <input type="checkbox"/> us-east-1f subnet-374bec39 IPv4 address: <input type="text" value=""/>		

Step 3: Configure Security Groups

A security group is a set of firewall rules that control the traffic to your load balancer. On this page, you can add rules to allow specific traffic to reach your load balancer. First, decide whether to create a new security group or select an existing one.

Security Group ID	Name	Description	Actions
<input type="checkbox"/> sg-01051543d019642	AllTraffic	Allow all traffic	Copy to new
<input type="checkbox"/> sg-0200fc2395c4995	allow ssh and http	allow ssh and http	Copy to new
<input checked="" type="checkbox"/> sg-0fe4af25a2705056	ASGSecGroup	ASG Sec Group	Copy to new
<input type="checkbox"/> sg-200072cc75ca90931	cl-0zero	cl-zero	Copy to new
<input type="checkbox"/> sg-0144e115	default	default VPC security group	Copy to new
<input type="checkbox"/> sg-0609996435b1e17	ELB-NEW	ELB-NEW	Copy to new
<input type="checkbox"/> sg-0353705c57c2b26	filter_sg	this sg for filter class	Copy to new
<input type="checkbox"/> sg-0657a705a4b783bd	launch-wizard-1	launch-wizard-1 created 2021-06-15T17:25:12.465+03:00	Copy to new
<input type="checkbox"/> sg-0d5944bcb54b6d81	launch-wizard-2	launch-wizard-2 created 2021-06-17T20:38:48.910+03:00	Copy to new
<input type="checkbox"/> sg-0169563a1c0e64	launch-wizard-3	launch-wizard-3 created 2021-06-19T22:35:48.866+03:00	Copy to new
<input type="checkbox"/> sg-049d1faff61c767d	LoadBalancerSec	Allow ssh, http	Copy to new
<input type="checkbox"/> sg-07e17ae0324592b	mysec_group	mysec_group	Copy to new

Step 4: Configure Routing

Your load balancer routes requests to the targets in this target group using the protocol and port that you specify here. It also performs health checks on the targets using these settings. The target group you specify in this step will apply to all of the listeners configured on this load balancer.

Target group: <input type="text" value="Create target group"/>	
Name: <input type="text" value="MyTargetGroup"/>	
Target type: <input type="radio"/> Instances <input type="radio"/> Lambda function	
Protocol: <input type="text" value="HTTP"/>	
Port: <input type="text" value="80"/>	
Protocol version: <input type="radio"/> HTTP1.1 <input type="radio"/> HTTP2 <input type="radio"/> gRPC	
HTTP1.1: Send requests to targets using HTTP/1.1. Supported when the request protocol is HTTP/1.1 or HTTP/2. HTTP2: Send requests to targets using HTTP/2. Supported when the request protocol is HTTP/2 or gRPC, but gRPC-specific features are not available. gRPC: Send requests to targets using gRPC. Supported when the request protocol is gRPC.	
Health checks:	
Protocol: <input type="text" value="HTTP"/>	
Path: <input type="text" value="/"/>	
Advanced health check settings	

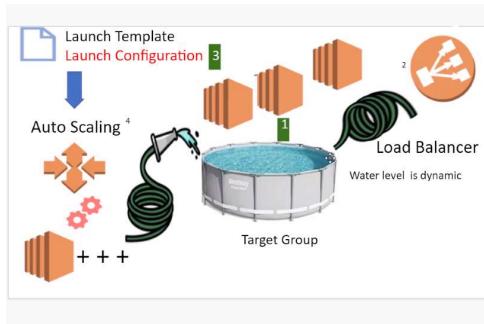
Adimlari next diyerek LoadBalancer i olusturuyoruz

Load Balancer Creation Status

Success! Successfully created load balancer.
Load balancer MyALBAutoScaling was successfully created.
Note: It might take a few minutes for your load balancer to be fully set up and ready to route traffic, and for the targets to complete the registration process and pass the initial health checks.
Suggested next steps
• Discover other services that you can integrate with your load balancer. Visit the Integrated services tab within MyALBAutoScaling.
• Consider using AWS Global Accelerator to further improve the availability and performance of your applications. AWS Global Accelerator console [?]

[Close](#)

Simdi havuza hortumlari bagladik



Simdi ec2 lari launch template ile olusturacagiz

console.aws.amazon.com/ec2/v2/home?region=us-east-1#CreateTemplate:

EC2 > Launch template > Create launch template

Create launch template

Creating a launch template allows you to create a saved instance configuration that can be reused, shared or launched at a later time. Templates can have multiple versions.

Launch template name and description

Launch template name - required

MyApp

Must be unique to this account. Max 128 chars. No spaces or special characters like %, ^, @, etc.

Template version description

Template welcome for MyApp

Auto Scaling guidance

Select this if you intend to use this template with EC2 Auto Scaling

Provide guidance to help me set up a template that I can use with EC2 Auto Scaling

Template tags

Source template

Launch template contents

Specify the details of your launch template below. Leaving a field blank will result in the field not being included in the launch template.

Amazon machine image (AMI)

AMI

Don't include in launch template

Instance type

Instance type

Don't include in launch template

Compare instance types

Key pair (login)

Yukardaki Gerekli bilgileri giriyoruz

Userdata ya da asagidaki kodu giriyoruz.

```
#!/bin/bash
#update os
yum update -y
#install apache server
yum install -y httpd
#get private ip address of ec2 instance using instance metadata
TOKEN=`curl -X PUT "http://169.254.169.254/latest/api/token" -H "X-aws-ec2-metadata-token-ttl-seconds: 21600"`` \
&& PRIVATE_IP=`curl -H "X-aws-ec2-metadata-token: $TOKEN" http://169.254.169.254/latest/meta-data/local-ipv4`\
`get public ip address of ec2 instance using instance metadata
TOKEN=`curl -X PUT "http://169.254.169.254/latest/api/token" -H "X-aws-ec2-metadata-token-ttl-seconds: 21600"`` \
&& PUBLIC_IP= curl -H "X-aws-ec2-metadata-token: $TOKEN" http://169.254.169.254/latest/meta-data/public-ipv4`\
#get date and time of server
DATE_TIME=`date`\
# set all permissions
chmod -R 777 /var/www/html
# create a custom index.html file
echo "<html>
<head>
<title> Application Load Balancer</title>
```

```

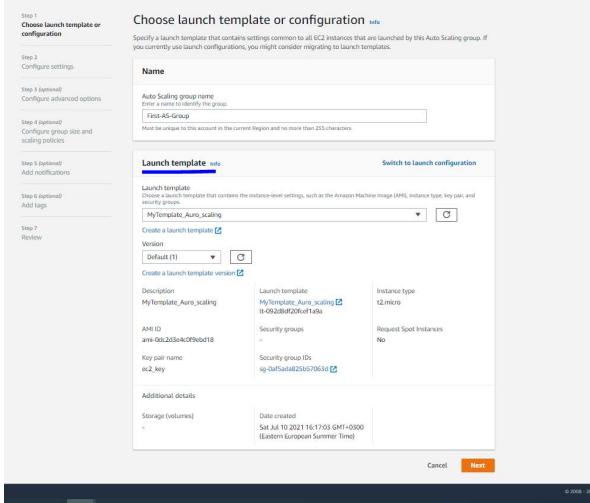
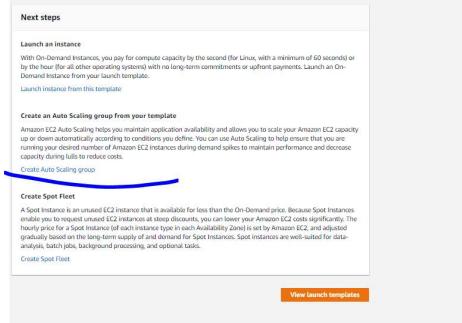
</head>
<body>
    <h1>Testing Application Load Balancer</h1>
    <h2>
        Congratulations! You have created an instance from Launch Template
    </h2>
    <h3>
        This web server is launched from the launch template by YOUR_NAME
    </h3>
    <p>This instance is created at <b>$DATE_TIME</b></p>
    <p>Private IP address of this instance is <b>$PRIVATE_IP</b></p>
</p>
    <p>Public IP address of this instance is <b>$PUBLIC_IP</b></p>
</p>
</body>
</html>" > /var/www/html/index.html
# start apache server
systemctl start httpd
systemctl enable httpd

```

Create diyoruz

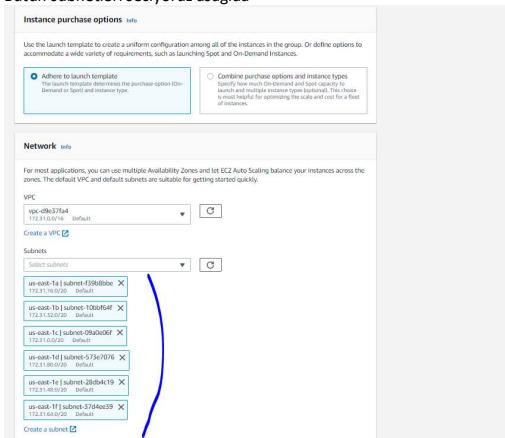
Sonra

AutoScale Grup olusturyoruz



İsim verdik, template ile devam ediyoruz

Butun subnetleri seciyoruz asagida



Olusturdugumuz LoadBalancer i attach ediyoruz

Load balancing - optional Info

Use the options below to attach your Auto Scaling group to an existing load balancer, or to a new load balancer that you define.

No load balancer
The EC2 Auto Scaling group will not be proxied by a load balancer.

Attach to an existing load balancer
Choose from your existing load balancers.

Attach to a new load balancer
Quickly create a basic load balancer and attach to your Auto Scaling group.

Attach to an existing load balancer

Select the load balancers that you want to attach to your Auto Scaling group.

Choose from your load balancer target groups
This option allows you to attach Application, Network, or Classic Load Balancers.

Choose from Classic Load Balancers

Existing load balancer target group

Only instance target groups that belong to the same VPC as your Auto Scaling group are available for selection.

Select target groups

MyTargetGroup | HTTP
Application Load Balancer: MyALBforAutoScaling

Health checks - optional

Health check type Info
EC2 health checks replace instances that fail health checks. If you enabled load balancing, you can enable ELB health checks in addition to the EC2 health checks that are always enabled.

EC2

ELB

Health check grace period
The amount of time until EC2 Auto Scaling performs the first health check on new instances after they are put into service.

300 seconds

Additional settings - optional

Monitoring Info

Enable group metrics collection within CloudWatch Metrics

Next

Health check onemli

Otomatik olarlar bize ec2 healthcheckini veriyor
Autoscaling gruba loadbalancerden gelebilecek **Health check** ieri de dikkate almasini söyleyoruz bu secenekte Yukarda ELB yi de tıklıyoruz
ELB, Autoscalingin makinanın ayakta olup da calismadigi durumdan haberi olması için lazim. (application calismadigi zamanda da ELB devreye girebilecek, bazen EC2 ayakta oluyor ama ona bagli app site vs calismayabiliyor bunu ASG nin bundan haberi olmasiicin işaretliyoruz)

Grace period yeni EC2 ayaga kalktigi zaman yeni health checke baslama zamani burada

Health checks - optional

Health check type

EC2 Auto Scaling automatically replaces instances that fail health checks. If you enabled load balancing, you can enable ELB health checks in addition to the EC2 health checks that are always enabled.

EC2

ELB

Health check grace period

The amount of time until EC2 Auto Scaling performs the first health check on new instances after they are put into service.

..... seconds

From <<https://console.aws.amazon.com/ec2autoscaling/home?region=us-east-1#/create?source=launchTemplate&launchTemplateId=lt-092d8df20fce1a9a>>
Bu time verilmeli, surekli unhealthy kabul edip devamlı instance uretmek zorunda hissedebilir kendini

Configure group size and scaling policies Info

Set the desired, minimum, and maximum capacity of your Auto Scaling group. You can optionally add a scaling policy to dynamically scale the number of instances in this group.

Group size - optional

Specify the size of the Auto Scaling group by changing the desired capacity. You can also specify minimum and maximum capacity limits. Your desired capacity must be within the limit range.

Desired capacity

Minimum capacity

Maximum capacity

Scaling policies - optional

Choose whether to use a scaling policy to dynamically resize your Auto Scaling group to meet changes in demand. Info

Target tracking scaling policy
Choose a desired outcome and have it to the scaling policy to add and remove capacity as needed to achieve the outcome.

None

Instance scale-in protection - optional

Instance scale-in protection
Instances from scale-in to scale-out, newly launched instances will be protected from scale-in by default.

Enable instance scale-in protection

Next

Surekli ayakta kalmasini istedigimiz sayı desired kapasity
Maksimum da en maksimum ayaga kaldırmasını istedigimiz,
Autoscaling grupta kaç tane ec2 olusmali onu belirliyoruz

Next diyoruz

Notification kismini geciyoruz

Tag ekliyoruz

EC2 > Auto Scaling groups > Create Auto Scaling group

Step 1 Choose launch template or configuration

Step 2 Configure settings

Step 3 (optional) Configure advanced options

Step 4 (optional) Configure group size and scaling policies

Step 5 (optional) Add notifications

Step 6 (optional) Add tags

Step 7 Review

Add tags Info

Add tags to help you search, filter, and track your Auto Scaling group across AWS. You can also choose to automatically add these tags to instances when they are launched.

You can optionally choose to add tags to instances (and their attached EBS volumes) by specifying tags in your launch template. We recommend caution, however, because the tag values for instances from your launch template will be overridden if there are any duplicate keys specified for the Auto Scaling group.

Tags (1)

Key	Value - optional	Tag new instances
Name	Auto_Scaling	<input checked="" type="checkbox"/>

Add tag 49 remaining

Cancel **Previous** **Next**

Review yapip create autoscaling Group diyoruz

First-AS-Group created successfully

EC2 > Auto Scaling groups

Auto Scaling groups (1)

Name	Launch template/configuration	Instances	Status	Desired capacity	M...	M...	Availability Zones
First-AS-Group	MyTemplate_Auto_scaling Version Default	0	Updating capacity	1	1	1	us-east-1a, us-east-1b, us-east-1c, us-east-1d, us-east-1e, us-east-1f

Kendisi otomatik eklemeyi yapmıs

EC2 > Auto Scaling groups

Auto Scaling groups (1/1)

Name	Launch template/configuration	Instances	Status	Desired capacity	M...	M...	Availability Zones
First-AS-Group	MyTemplate_Auto_scaling Version Default	0	Updating capacity	1	1	1	us-east-1a, us-east-1b, us-east-1c, us-east-1d, us-east-1e, us-east-1f

Send to On instance action

No notifications are currently specified

Create notification

Activity history (1)

Status	Description	Cause	Start time	End time
PendingService	Launching a new EC2 instance(s).	At 2021-07-10T13:29:53Z a user request created an AutoScalingGroup changing the desired capacity from 0 to 1. At 2021-07-10T13:30:02Z an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 0 to 1.	2021 July 10, 04:30:18 PM +03:00	

Autoscaling ile ec2 olustur

Instances (1) Info

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP	IPv6 IPs	Monitoring	Security Groups
Auto_Scaling	i-0bfe15dbed63381fd	Running	t2.micro	Initializing	No alarms	us-east-1e	ec2-54-237-10-68.com...	-	-	-	disabled	ASGSx

Autoscaling menusunda policies olusturabiliyoruz

Instance management bolumunden

Auto Scaling groups (1/1)

Name	Launch template/configuration	Instances	Status	Desired capacity	M...	M...	Availability Zones
First-AS-Group	MyTemplate_Auto_scaling Version Default	0	Updating capacity	1	1	1	us-east-1a, us-east-1b, us-east-1c, us-east-1d, us-east-1e, us-east-1f

Details **Activity** **Automatic scaling** **Instance management** **Monitoring** **Instance refresh**

Instances (1)

Instance ID	Lifecycle	Instance type	Weighted capacity	Launch template/configuration	Availability Zone	Health status	Protected from
i-0bfe15dbed63381fd	InService	t2.micro	-	MyTemplate_Auto_scaling Version 1	us-east-1e	Healthy	-

Lifecycle hooks (0) Info

Name	Lifecycle transition	Default result	Heartbeat timeout (seconds)	Notification target ARN	Role ARN
------	----------------------	----------------	-----------------------------	-------------------------	----------

No lifecycle hooks are currently configured.
Lifecycle hooks help you perform custom actions on instances as they launch and before they terminate.

Create lifecycle hook

Burdan da instance a mudahale edebiliyoruz yonetebiliyoruz

LOAD BALANCER a gidiyoruz onun DNS name'ini pencerede acinca:

Karsimiza asagidaki sayfa cikiyor

← → C Not secure | myalbforautoscaling-395346236.us-east-1.elb.amazonaws.com

Apps Gmail Lists Questions and... Your first Python pr... 200N_1576883390... CloudWatch-dev-750... https://console.aws... Py

Testing Application Load Balancer

Congratulations! You have created an instance from Launch Template

This web server is launched from the launch template by YOUR_NAME

This instance is created at Sat Jul 10 13:31:08 UTC 2021

Private IP address of this instance is 172.31.50.226

Public IP address of this instance is 54.237.10.68

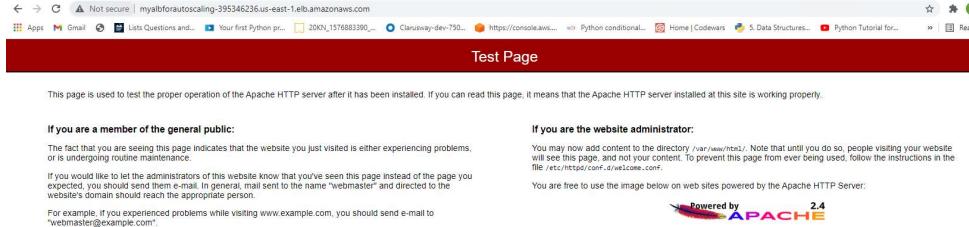
```
[ec2-user@ip-172-31-50-226 ~]$ cd /var/www/html
[ec2-user@ip-172-31-50-226 html]$ ls
index.html
[ec2-user@ip-172-31-50-226 html]$ sudo rm index.html
[ec2-user@ip-172-31-50-226 html]$ ls
[ec2-user@ip-172-31-50-226 html]$ ]
```

Ec2 ya VISUALSCODE dan baglaniyoruz

```
[ec2-user@ip-172-31-50-226 ~]$ cd /var/www/html
[ec2-user@ip-172-31-50-226 html]$ ls
index.html
[ec2-user@ip-172-31-50-226 html]$ sudo rm index.html
[ec2-user@ip-172-31-50-226 html]$ ls
[ec2-user@ip-172-31-50-226 html]$ ]
```

Indexi siliyoruz

Internetten baktigimizda ec2 dns i ne gore index gittiginden karsimiza apache server normal sayfa geliyor



Autoscaling bu durumda checklerini yapacak, makine ayakta olmasina ragmen app calismadigi icin autoscaling devreye girecek ve yeni bir makine ayaga kaldiracak

AUTOSCALING activity kisminda hemen gösteriyor

Activity notifications (0)

No notifications are currently specified

Create notification

Activity history (2)

Status	Description	Cause	Start time	End time
Terminating EC2 instance	At 2021-07-10T13:38:20Z a user request created an AutoScalingGroup changing the desired capacity from 0 to 1. At 2021-07-10T13:38:20Z an instance was taken out of service in response to an ELB system health check failure.	Waiting for ELB Connection Draining.	2021 July 10, 04:38:20 PM +03:00	
Successful	Launching a new EC2 instance	At 2021-07-10T13:38:32Z a user request created an AutoScalingGroup changing the desired capacity from 0 to 1. At 2021-07-10T13:38:32Z an instance was started in response to a difference between desired and actual capacity, increasing the capacity by 1.	2021 July 10, 04:30:18 PM +03:00	2021 July 10, 04:30:51 PM +03:00

Idiger ec2 yu da hemen ayaga kaldırıyor

Instances (2) Info											
Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP	IPv6 IP	Monitoring
Auto Scaling	i-08fe13fe063381d	Running	t2.micro	2/2 checks passed	No alarms	us-east-1e	ec2-54-237-10-68.com...	54.237.10.68	-	-	disabled
Auto Scaling	i-0c19156346547742	Running	t2.micro	0/2 initializing	No alarms	us-east-1c	ec2-3-83-21-138.com...	3.83.21.138	-	-	disabled

Tekrar loadbalancer DNSinin oldugu sayfayı tikliyoruz ve yeni ec2 ayaga kalktigi icin burda sayfamizin geldigini gorrebiliyoruz.

← → C Not secure | myalbforautoscaling-395346236.us-east-1.elb.amazonaws.com

Apps Gmail Lists Questions and... Your first Python pr... 200N_1576883390... CloudWatch-dev-750... https://console.aws... Py

Testing Application Load Balancer

Congratulations! You have created an instance from Launch Template

This web server is launched from the launch template by YOUR_NAME

This instance is created at Sat Jul 10 13:39:41 UTC 2021

Private IP address of this instance is 172.31.10.209

Public IP address of this instance is 3.83.21.138

Kapasiteyi artiriyoruz

💡 Please Add: Adding your details to the target groups. We will be reviewing the new resources based on your feedback.

💡 Lower the Probability of Load Interruption
Amazon CloudWatch Metrics monitoring for target-type instances helps prevent load interruptions by alerting you to anomalies.

Production-ready successfully

View Details Edit

Auto Scaling groups (1/1)

Group size

Specify the size of the Auto Scaling group by changing the desired capacity. You can also specify minimum and maximum capacity limits. Your desired capacity must be within the limit range.

Desired capacity: 2

Minimum capacity: 1

Maximum capacity: 4

Cancel Update

Launch template

Launch template: MyTemplate_Auto_scaling

Launch template ARN: arn:aws:autoscaling:us-east-1:547187538673:autoScalingGroup:892dc5d0-694e-4933-a721-02d0de0821:autoScalingGroupDetailsName/First-AS-Group

Desire capacity 2 oldugu icin ayni anda 2. ec2 yu da aciyor
Eski sorunluyu da dogal olarak terminate etti.

Instances (3) Info

Filter instances

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 IP	Elastic IP	IPV6 IPs	Monitoring	Se
Auto_Scaling	i-01915636b547742	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	ec2-5-81-21-138.comp...	3.85.21.138	-	-	disabled	AS
Auto_Scaling	i-08bf415f6d51381d	Terminating	t2.micro	No alarms	+ us-east-1a	-	-	-	-	-	disabled	-
Auto_Scaling	i-07a7500b84aa47a4	Running	t2.micro	0 Initializing	No alarms	us-east-1a	ec2-3-90-36-147.comp...	3.90.36.147	-	-	disabled	AS

Autoscaling detailse baktigimiz da da guncellemlerini goruyoruz details bolumunde

EC2 > Auto Scaling groups

Auto Scaling groups (1/1)

Search your Auto Scaling groups

Name	Launch template/configuration	Instances	Status	Desired capacity	M...	M...	Availability Zones
First-AS-Group	MyTemplate_Auto_scaling Version Default	2	-	2	1	4	us-east-1a, us-east-1b, us-east-1c, us-east-1d, us-east-1e, us-east-1f

Details Activity Automatic scaling Instance management Monitoring Instance refresh

Group details

Desired capacity: 2 Auto Scaling group name: First-AS-Group

Minimum capacity: 1 Date created: Sat Jul 10 2021 16:29:52 GMT+0500 (Eastern European Summer Time)

Maximum capacity: 4 Amazon Resource Name (ARN): arn:aws:autoscaling:us-east-1:547187538673:autoScalingGroup:892dc5d0-694e-4933-a721-02d0de0821:autoScalingGroupDetailsName/First-AS-Group

Launch template

Launch template: MyTemplate_Auto_scaling

AWS Lambda function: It-092d0205cf0fba18

Version: Default

Description:

Target grupta da durumu goruyoruz, healthy 2 ye cikti

Target groups (1/1) Info

Search or filter target groups

Name	ARN	Port	Protocol	Target type	Load balancer	VPC ID
MyTargetGroup	arn:aws:elasticloadbalancing:us-east-1:547187538673:targetgroup/MyTargetGroup:83eb1b5096a54ff8	80	HTTP	Instance	ALBforAutoScaling	vpc-d8c37fa4

MyTargetGroup

Details Targets Monitoring Health checks Attributes Tags

Details

Target type: Instance Protocol: Port: HTTP-80 Protocol version: HTTP1 Load balancer: ALBforAutoScaling VPC: vpc-d8c37fa4

Total targets: 2 Healthy: 2 Unhealthy: 0 Unused: 0 Initial: 0 Draining: 0

Simdi scaling policy olusturuyoruz.

Add ve remove poliycer olusturuyoruz.

Sunlar olursa ec2 azalt sunlar olursa artir diye policy belirleyecegiz.

First AS-Group created successfully

Auto Scaling groups (1/1)

Name	Launch template/configuration	Instances	Status	Desired capacity	Min...	Max...	Availability Zones
First-AS-Group	MyTemplate_Auto_scaling Version 0.0.1	2	-	2	1	4	us-east-1a, us-east-1b, us-east-1c, us-east-1d, us-east-1e, us-ea...

Automatic scaling

No dynamic scaling policies have been created.

No predictive scaling policies have been created.

Scheduled actions (0) info

Filter scheduled actions

Name	Start time	End time	Recurrence	Time zone	Desired capacity	Min	Max
------	------------	----------	------------	-----------	------------------	-----	-----

Create dynamic scaling policy

Policy type: Simple scaling

Scaling policy name: First Scaling Policy-Add

CloudWatch alarm: Choose an alarm that can scale capacity whenever: CloudWatch Metrics alarm

Take the action: Add 0 capacity units

And then wait: 300 seconds before allowing another scaling activity

Create

Step 1: Specify metric and conditions

Step 2: Configure actions

Step 3: Add name and description

Step 4: Preview and create

Metric

Select metric

Next

Select metric ec2 sectik ordan autoscaling grup sectik

Select metric

Untitled graph

Your CloudWatch graph is empty. Select some metrics to appear here.

Metrics (17)

All > EC2 > By Auto Scaling Group

Search for any metric, dimension or resource id

- AutoScalingGroupName (17)
 - First-AS-Group
 etric Name

- MetadataNotTaken
- NetworkPacketsIn
- NetworkPacketsOut
- CPUUtilization
- NetworkIn
- NetworkOut
- DiskReadBytes
- DiskWriteBytes
- DiskReadOps
- DiskWriteOps

Select a single metric to continue

Cpu utilization i seciyoruz
 CPU usage belirleyecegim ölçuye göre ASG devreye girecek

Specify metric and conditions

Metric

Graph
This alarm will trigger when the blue line goes above the red line for 1 datapoint within 1 minute.

Percent
90
40
20
12.00 13.00 14.00

Namespace: AWS/Ec2
Metric name: CPUUtilization
AutoScalingGroupName: First-AS-Group
Statistic: Q_Average
Period: 1 minute

Conditions

Threshold type:
 Static (Use a value as a threshold)
 Anomaly detection (Use a band as a threshold)

Whenever CPUUtilization is...
 Greater than threshold
 Greater/Equal than threshold
 Lower/Equal than threshold
 Lower than threshold

than...
 Decrease the threshold value
 Must be a number

▶ Additional configuration

Notification almak istemedigim icin onu remove yapiyoruz

Add name and description

Name and description

Alarm name: Auto Scaling-Add
Alarm description (optional): Auto Scaling-Add
Up to 1024 characters (16/1024)

Cancel Previous Next

ASG sayfasina geri donuyoruz ve cloudwatch alarma yeni olusturdugumuz alarimi ekliyoruz

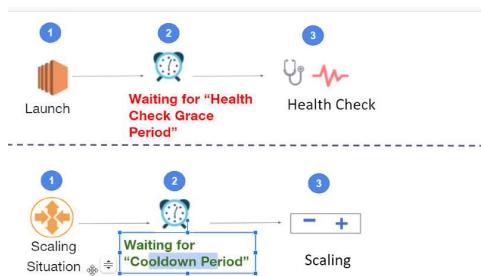
Create dynamic scaling policy

Policy type: Simple scaling
Scaling policy name: First Scaling Policy-Add

CloudWatch alarm
Choose an alarm that can scale capacity whenever:
 Create a CloudWatch alarm: CPUUtilization > 60 for 1 consecutive periods of 60 seconds for the metric dimensions:
AutoScalingGroupArn = First-AS-Group

Take the action
Add 0 capacity units
And then wait: 100 seconds before allowing another scaling activity

Create



Scaling grup herhangi bir action geclestirdikten sonra bekleme suresi. Ilave ec2 olusturulmasinin onlenmesi kapsaminda-

Create dynamic scaling policy

Policy type: Simple scaling
Scaling policy name: First Scaling Policy-Add

CloudWatch alarm
Choose an alarm that can scale capacity whenever:
 Create a CloudWatch alarm: CPUUtilization > 60 for 1 consecutive periods of 60 seconds for the metric dimensions:
AutoScalingGroupName = First-AS-Group

Take the action
Add 1 capacity units
And then wait: 120 seconds before allowing another scaling activity

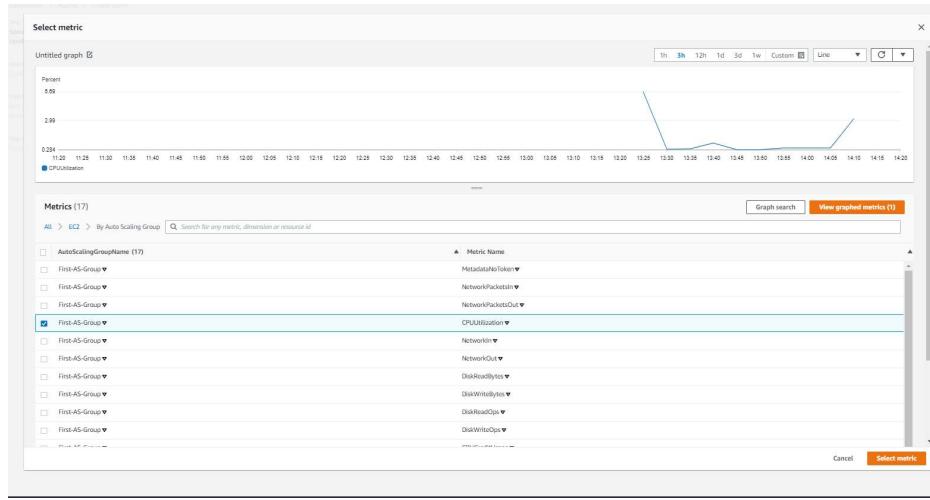
Create

Yeni bir simple scaling policy daha ekliyruz

Scaling Remove diye giriyoruz ismini Auto Scaling-Remove

Burda yeni bir alarm belirliyoruz

Yine metric seciyoruz ec2 , autoscaling ve yine cpu utilization seciyoruz



Specify metric and conditions

Metric

Graph: The alarm will trigger when the blue line goes below the red line for 1 datapoint within 1 minutes.

Percent: 30 Namespace: AWS/ECS Metric name: CPUUtilization AutoScalingGroupName: First-AS-Group Statistic: Q_Average Period: 1 minute

Conditions

Threshold type: Static (use a value as a threshold) Anomaly detection (use a band as a threshold)

Whenever CPUUtilization... Define the alarm condition: Greater > threshold (radio button selected) Lower/Equal <= threshold Lower < threshold

then... Define the threshold value: 30 Must be a number Additional configuration

Alarma Auto Scaling-Remove ismini veriyoruz

Tekrar ASG ekrana seciyoruz

Create dynamic scaling policy

Policy type: Simple scaling Scaling policy name: Auto Scaling-Remove CloudWatch alarm: Choose an alarm that can scale capacity whenever: Auto Scaling-Remove (radio button selected) breaches the alarm threshold: CPUUtilization < 30 for 1 consecutive periods of 60 seconds for the metric dimensions: AutoScalingGroupName = First-AS-Group Take the action: Remove (radio button selected) capacity units: -1 And then wait: 120 seconds before allowing another scaling activity

Cancel Create

Burda cpu 30 un altinda olursa makine sayimiz bir 1 olsun dedigimiz icin belirledigimiz sure sonunda ayaktaki makineyi 1e dusuruyor

EC2 > Auto Scaling groups > First-AS-Group

Details Activity Automatic scaling Instance management Monitoring Instance refresh

Activity notifications (0)

Send to On instance action Create notification

No notifications are currently specified.

Activity history (5)

Status Description Cause Start time End time

InProgress	Terminating EC2 instance i-0c19156363847742	At 2021-07-10T14:45:22 a monitor alarm AutoScaling-Benim in state ALARM triggered policy AutoScaling-Autoscaling changing the desired capacity from 1 to 1. At 2021-07-10T14:29:52 an instance was taken out of service in response to a difference between desired and actual capacity, shrinking the capacity from 1 to 1. At 2021-07-10T14:29:52 instance i-0c19156363847742 was selected for termination.	2021 July 10, 05:09:23 PM +03:00	2021 July 10, 04:45:38 PM +03:00
Successful	Launching a new EC2 instance i-07175000b4aa4742	At 2021-07-10T13:45:22 a user request update of AutoScalingGroup constraints to min: 1, max: 4, desired: 2 changing the desired capacity from 1 to 2. At 2021-07-10T13:45:02 an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 1 to 2.	2021 July 10, 04:43:06 PM +03:00	2021 July 10, 04:43:38 PM +03:00
Successful	Launching a new EC2 instance i-0c19156363847742	At 2021-07-10T13:38:12 an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 0 to 1.	2021 July 10, 04:38:45 PM +03:00	2021 July 10, 04:39:45 PM +03:00
Successful	Terminating EC2 instance i-0801e13b9d633810	At 2021-07-10T13:38:202 an instance was taken out of service in response to an ELB system health check failure.	2021 July 10, 04:39:20 PM +03:00	2021 July 10, 04:44:09 PM +03:00
Successful	Launching a new EC2 instance i-084fc159ed633810	At 2021-07-10T13:29:52 a user request created an AutoScalingGroup changing the desired capacity from 0 to 1. At 2021-07-10T13:30:162 an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 0 to 1.	2021 July 10, 04:08:18 PM +03:00	2021 July 10, 04:30:51 PM +03:00

Alarmımız da calisti

CloudWatch > Alarms

Alarms (3)

Search Any state Any type

Name	State	Last state update	Conditions	Actions
Auto Scaling-Add	OK	2021-07-10 17:29:53	CPUTUtilization = 60 for 1 datapoints within 1 minute	1 action(s) enabled
Auto Scaling-Remove	!alarms	2021-07-10 17:28:59	CPUTUtilization = 30 for 1 datapoints within 1 minute	1 action(s) enabled
my_aws_billingAlarm	OK	2021-06-12 17:37:20	EstimatedCharges > 10 for 1 datapoints within 6 hours	1 action(s) enabled

Instances (5) info

Filter instances

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP	IPv6 IPs	Monitoring
Auto Scaling	i-0c19156363847742	terminated	12.micro	-	No alarms	us-east-1c	-	-	-	-	disabled
Auto Scaling	i-0801e13b9d633810	terminated	12.micro	-	No alarms	us-east-1c	-	-	-	-	disabled
Auto Scaling	i-05714b06ec2b2146	running	12.micro	initializing	No alarms	us-east-1b	ec2-54-198-143-87.co...	54.198.143.87	-	-	disabled
Auto Scaling	i-07175000b4aa4742	running	12.micro	2/2 checks passed	No alarms	us-east-1a	ec2-3-90-36-147.com...	3.90.36.147	-	-	disabled

En alitta enson acik kalan Makinemize vscode ile baglaniyoruz
sudo amazon-linux-extras install epel -y
sudo yum install -y stress
stress -cpu 90 --timeout 20000

From <https://app.slack.com/client/T0227UVRJU8/C021BG84YJJ>

Kodu yaziyoruz
Cpu ya yuk bindirerek add policy mizin calismasini gorecegiz

Bundan sonra tekrar iptal olan makine devreye girdi.

Birden ikiye cikti add politikasi nedeniyle

Instances

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP	IPv6 IPs	Monitoring	Secure
Auto Scaling	i-0c19156363847742	terminated	12.micro	-	No alarms	us-east-1c	-	-	-	-	disabled	-
Auto Scaling	i-0801e13b9d633810	terminated	12.micro	-	No alarms	us-east-1c	-	-	-	-	disabled	-
Auto Scaling	i-05714b06ec2b2146	running	12.micro	initializing	No alarms	us-east-1b	ec2-54-198-143-87.co...	54.198.143.87	-	-	disabled	ASGSc
Auto Scaling	i-07175000b4aa4742	running	12.micro	2/2 checks passed	No alarms	us-east-1a	ec2-3-90-36-147.com...	3.90.36.147	-	-	disabled	ASGSc

Activity notifications (0)

Send to On instance action Create notification

No notifications are currently specified.

Activity history (6)

Status Description Cause Start time End time

Successful	Launching a new EC2 instance i-07175000b4aa4742	At 2021-07-10T14:45:22 a monitor alarm AutoScaling-Add in state ALARM triggered policy First Scaling Policy-Add changing the desired capacity from 1 to 2. At 2021-07-10T14:45:02 an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 1 to 2.	2021 July 10, 05:41:11 PM +03:00	2021 July 10, 05:41:43 PM +03:00
Successful	Launching a new EC2 instance i-0c19156363847742	At 2021-07-10T13:45:22 a user request update of AutoScalingGroup constraints to min: 1, max: 4, desired: 2 changing the desired capacity from 1 to 2. At 2021-07-10T13:45:02 an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 1 to 2.	2021 July 10, 04:30:06 PM +03:00	2021 July 10, 04:43:38 PM +03:00
Successful	Launching a new EC2 instance i-0c19156363847742	At 2021-07-10T13:38:12 an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 0 to 1.	2021 July 10, 04:38:43 PM +03:00	2021 July 10, 04:39:45 PM +03:00
Successful	Terminating EC2 instance i-0801e13b9d633810	At 2021-07-10T13:38:202 an instance was taken out of service in response to an ELB system health check failure.	2021 July 10, 04:38:20 PM +03:00	2021 July 10, 04:44:09 PM +03:00
Successful	Launching a new EC2 instance i-084fc159ed633810	At 2021-07-10T13:29:52 a user request created an AutoScalingGroup changing the desired capacity from 0 to 1. At 2021-07-10T13:30:162 an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 0 to 1.	2021 July 10, 04:30:18 PM +03:00	2021 July 10, 04:30:51 PM +03:00
Successful	Launching a new EC2 instance i-084fc159ed633810	At 2021-07-10T13:29:52 a user request created an AutoScalingGroup changing the desired capacity from 0 to 1. At 2021-07-10T13:30:162 an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 0 to 1.	2021 July 10, 04:30:18 PM +03:00	2021 July 10, 04:30:51 PM +03:00

Yeni policy bu sefer step policy

Policy type: Step scaling
Scaling policy name: First Step Policy-Add
CloudWatch alarm: Choose an alarm that can scale capacity whenever:
Create a CloudWatch alarm: Auto Scaling Add
Take the action: Add
0 capacity units when 60 <= CPUUtilization < 90
Add step
Instances need: 100 seconds warm up before including in metric
Cancel Create

Bize aralik veriyor
60-90 arası bir tane
90ı geçse 2 tane ekle diyoruz

Policy type: Step scaling
Scaling policy name: First Step Policy-Add
CloudWatch alarm: Choose an alarm that can scale capacity whenever:
Create a CloudWatch alarm: Auto Scaling Add
breaches the alarm threshold CPUUtilization > 60 for 1 consecutive periods of 60 seconds for the metric dimensions:
AutoScalingGroupName = First-AS-Group
Take the action: Add
1 capacity units when 60 <= CPUUtilization < 90
2 capacity units when 90 <= CPUUtilization < infinity
Add step
Instances need: 100 seconds warm up before including in metric
Cancel Create

EC2 > Auto Scaling groups > First-AS-Group
Details Activity Automatic scaling Instance management Monitoring Instance refresh
Dynamic scaling policy created or edited successfully.
Dynamic scaling policies (1) info Actions Create dynamic scaling policy < 1 >
First Step Policy-Add
Policy type: Step scaling
Enabled or disabled? Enabled
Execute policy when: Auto Scaling-Add
breaches the alarm threshold CPUUtilization > 60 for 1 consecutive periods of 60 seconds for the metric dimensions:
AutoScalingGroupName = First-AS-Group
Take this action:
Add 1 capacity units when 60 <= CPUUtilization < 90
Add 2 capacity units when 90 <= CPUUtilization < infinity
Instances need: 120 seconds to warm up after each step
Predictive scaling policies (0) info Actions Create predictive scaling policy < 1 >
No predictive scaling policies have been created.
Predictive scaling policies use historical data to scale out your group ahead of forecasted hourly load.
Create predictive scaling policy

Bir de remove policy olusturuyoruz

Policy type: Step scaling
Scaling policy name: First Step Policy-Remove
CloudWatch alarm: Choose an alarm that can scale capacity whenever:
Create a CloudWatch alarm: Auto Scaling Remove
breaches the alarm threshold CPUUtilization < 30 for 1 consecutive periods of 60 seconds for the metric dimensions:
AutoScalingGroupName = First-AS-Group
Take the action: Remove
-1 capacity units when 30 >= CPUUtilization < infinity
Add step
Cancel Create

30un altına düşerse bir makineyi kapatıyor

Her ne policy çalışırsa calıssın gitirdigimiz max değeri asmayacaktır.

Automatic scaling

Dynamic scaling policy created or edited successfully.

Dynamic scaling policies (2) [Info](#)

- First Step Policy-Add**
 - Policy type: Step scaling
 - Enabled or disabled? Enabled
 - Execution policy when: Auto Scaling-Add
 - Breaks the alarm threshold: CPUUtilization > 60 for 1 consecutive periods of 60 seconds for the metric dimensions: AutoScalingGroupName = First-AS-Group
 - Take the action:
 - Add 1 capacity units when 60 <= CPUUtilization < 90
 - Add 2 capacity units when 90 <= CPUUtilization < infinity - Instances need: 120 seconds to warm up after each step
- First Step Policy-Remove**
 - Policy type: Step scaling
 - Enabled or disabled? Enabled
 - Execution policy when: Auto Scaling-Remove
 - Breaks the alarm threshold: CPUUtilization < 50 for 1 consecutive periods of 60 seconds for the metric dimensions: AutoScalingGroupName = First-AS-Group
 - Take the action:
 - Remove 1 capacity units when 30 >= CPUUtilization > -infinity

Predictive scaling policies (0) [Info](#)

No predictive scaling policies have been created.

Predictive scaling policies use historical data to scale out your group ahead of forecasted hourly load.

CPU kullanımı tekrar düzeltme için terminate ediyor

Activity

Activity notifications (0)

Activity history (7)

Status	Description	Cause	Start time	End time
Waiting for ELB Connection Draining	Launching a new EC2 instance - 0191563465021446 - Waiting for ELB Connection Draining	At 2021-07-10T14:50:33Z a monitor alarm Auto Scaling-Remove in state ALARM triggered policy First Step Policy-Remove changing the desired capacity from 2 to 1. At 2021-07-10T14:50:33Z an instance was taken out of service in response to a difference between desired and actual capacity, shrinking the capacity from 2 to 1. At 2021-07-10T14:50:33Z instance i-0b71464626221446 was selected for termination.	2021 July 10, 05:50:53 PM +03:00	
Successful	Launching a new EC2 instance - 0191563465021446	At 2021-07-10T14:50:42Z a monitor alarm Auto Scaling-Add in state ALARM triggered policy First Step Policy-Add changing the desired capacity from 1 to 2. At 2021-07-10T14:50:42Z an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 1 to 2.	2021 July 10, 05:41:11 PM +03:00	2021 July 10, 05:41:43 PM +03:00
Successful	Terminating EC2 instance - 0191563465021742	At 2021-07-10T14:28:03Z a monitor alarm Auto Scaling-Remove in state ALARM triggered policy Auto Scaling-Remove changing the desired capacity from 2 to 1. At 2021-07-10T14:29:32Z an instance was taken out of service in response to a difference between desired and actual capacity, shrinking the capacity from 2 to 1. At 2021-07-10T14:29:32Z instance i-0b91563465021742 was selected for termination.	2021 July 10, 05:29:23 PM +03:00	2021 July 10, 05:32:25 PM +03:00
Successful	Launching a new EC2 instance - 0191563465021742	At 2021-07-10T13:42:52Z a user request update of AutoScalingGroup constraints to min: 1, max: 4, desired: 2 changing the desired capacity from 1 to 2. At 2021-07-10T13:43:02Z an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 1 to 2.	2021 July 10, 04:43:06 PM +03:00	2021 July 10, 04:43:38 PM +03:00
Successful	Launching a new EC2 instance - 0191563465021742	At 2021-07-10T13:38:12Z an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 0 to 1.	2021 July 10, 04:38:43 PM +03:00	2021 July 10, 04:39:45 PM +03:00
Successful	Terminating EC2 instance - i-0b1c0f9e08d1816	At 2021-07-10T13:38:20Z an instance was taken out of service in response to an ELB system health check failure.	2021 July 10, 04:38:20 PM +03:00	2021 July 10, 04:44:09 PM +03:00

Instances (3) [Info](#)

Name	Instance ID	Instance state	Type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 IP	Elastic IP	IPv6 IP	Monitoring
Auto_Scaling	i-0c1915634650217742	Terminated	t2.micro	-	No Alarms	us-east-1c	-	-	-	-	disabled
Auto_Scaling	i-0b71464626221446	Terminated	t2.micro	-	No Alarms	us-east-1b	-	-	-	-	disabled
Auto_Scaling	i-0b91563465021742	Terminated	t2.micro	2/2 checks passed	No Alarms	us-east-1a	ec2-3-90-36-147.com...	3.90.36.147	-	-	disabled

Makineyi kapattığını görebiliyoruz

Az sonra step policy kapsamında add islevi de devreye girecek.
Cpunun kullanımının artmasını bekliyoruz

```
sudo amazon-linux-extras install epel -y
sudo yum install -y stress
stress --cpu 90 --timeout 2000
Komutuyla artırdık cu yu.
```

TEMİZLİK ZAMANI

En zornu yaptığımız ilk silecek şekilde hareket ediyoruz
Autoscaling grubu geliyoruz
Autoscalingı kaldırmazsa ec2 kaldırıldıktan sonra bile devamlı ec2 oluşturmaya devam edecektir.

EC2 Dashboard

Auto Scaling groups (1/1)

Name	Launch template/configuration	Instances	Status	Desired capacity
First-AS-Group...	MyTemplate_Auto_scaling Version Details	2	-	2

Group details

Desired capacity: 2
Auto Scaling group name: First-AS-Group
Minimum capacity: 1
Date created: Sat Jul 10 2021 16:29:55 GMT+0300 (GMT+03:00)
Maximum capacity: Amazon Resource Name (ARN)

Sonra loadbalancer dan devam ediyoruz

Siliyoruz. Actions menüsünden

Sonra target grup siliyoruz

Sonra launch template siliyoruz

Boslukla delete yaziyoruz ve siliyoruz

POLICYLERI DE SİLİYORUZ

Alarmları siliyoruz sonra da

CloudWatch > Alarms						
Alarms (2/3)				Actions		
Name	State	Last state update	Conditions	Actions		
Auto Scaling-Add	Insufficient data	2021-07-10 18:06:52	EstimatedCharges > 50 for 1 datapoints within 1 minute	<input checked="" type="checkbox"/> 1 action(s) enabled		
Auto Scaling-Remove	Insufficient data	2021-07-10 18:06:58	CPUUtilization > 30 for 1 datapoints within 1 minutes	<input checked="" type="checkbox"/> 1 action(s) enabled		
My_aws_billingAlarm	OK	2021-06-12 17:37:20	EstimatedCharges > 10 for 1 datapoints within 6 hours	<input checked="" type="checkbox"/> 1 action(s) enabled		

Billing alarm disindakileri siliyoruz(bugun olusturdugumuz scale add and scale remove alarmlarini)

INSTANCELLAR KENDISI SILINIYOR

Instances (5) Info											
<input type="button" value="Filter instances"/> <input type="button" value="Connect"/> <input type="button" value="Instance state"/> <input type="button" value="Actions"/> <input type="button" value="Launch instances"/>											
Name	Instance ID	Instance state	v	Instance type	v	Status check	Alarm status	Availability Zone	v	Public IPv4 DNS	v
Auto_Scaling	i-0c915d34b54742	Terminated	@Q	t2.micro	-	No alarm	+	us-east-1c	-	-	-
Auto_Scaling	i-0b714b46c2b2144b	Terminated	@Q	t2.micro	-	No alarm	+	us-east-1b	-	-	-
Auto_Scaling	i-07a750d0e8aa47a4	Terminated	@Q	t2.micro	-	No alarm	+	us-east-1a	-	-	-