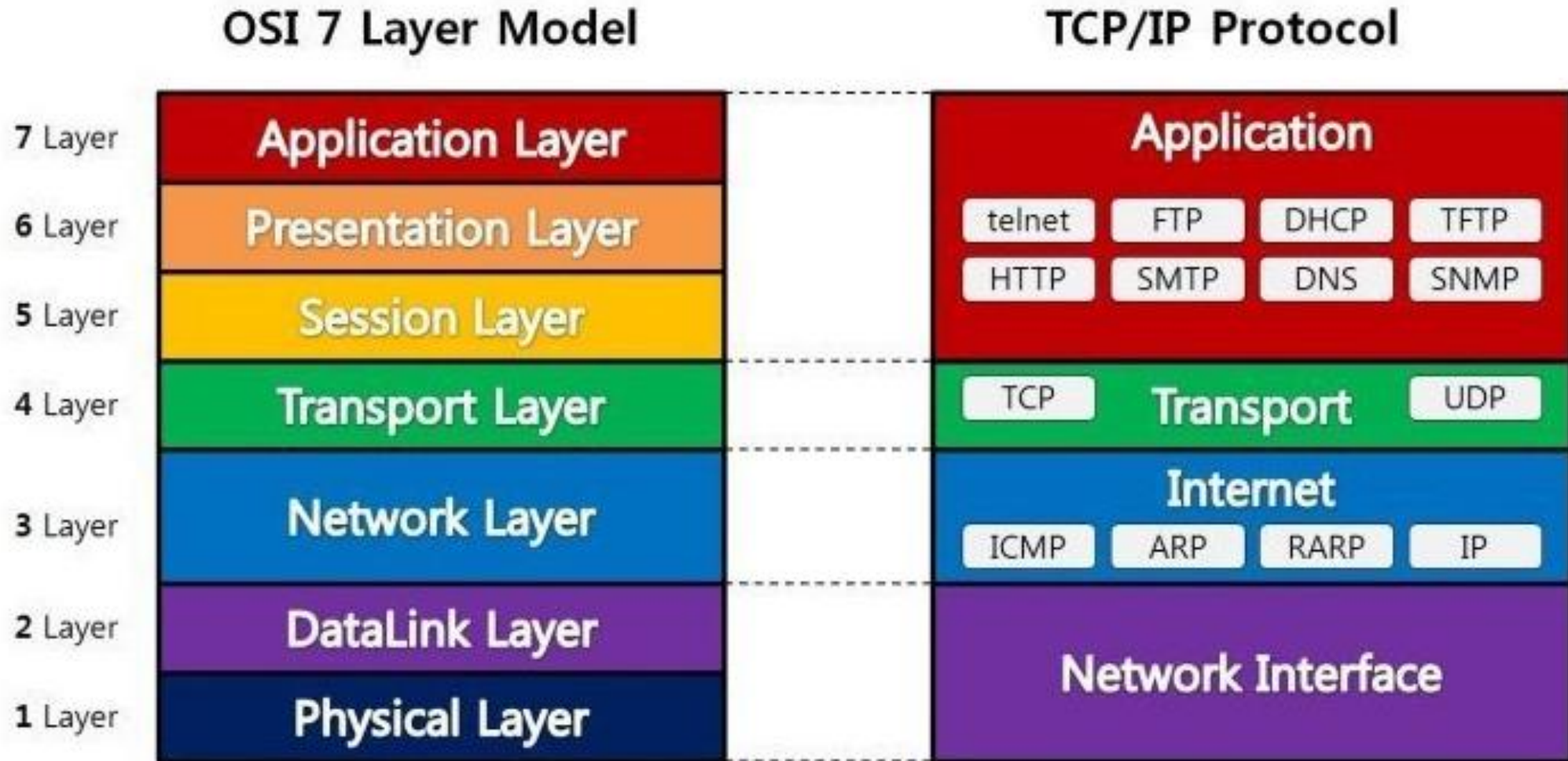




Amazon EC2 AutoScaling

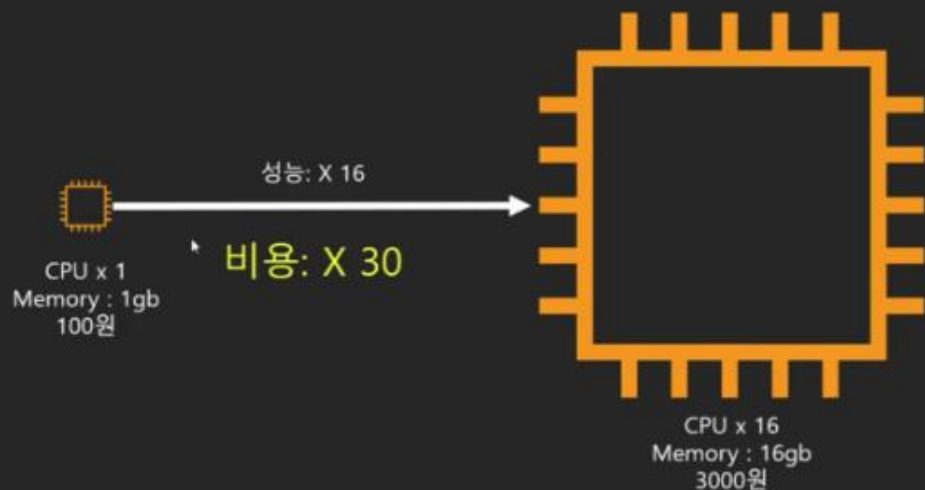
OSI 7 Layer



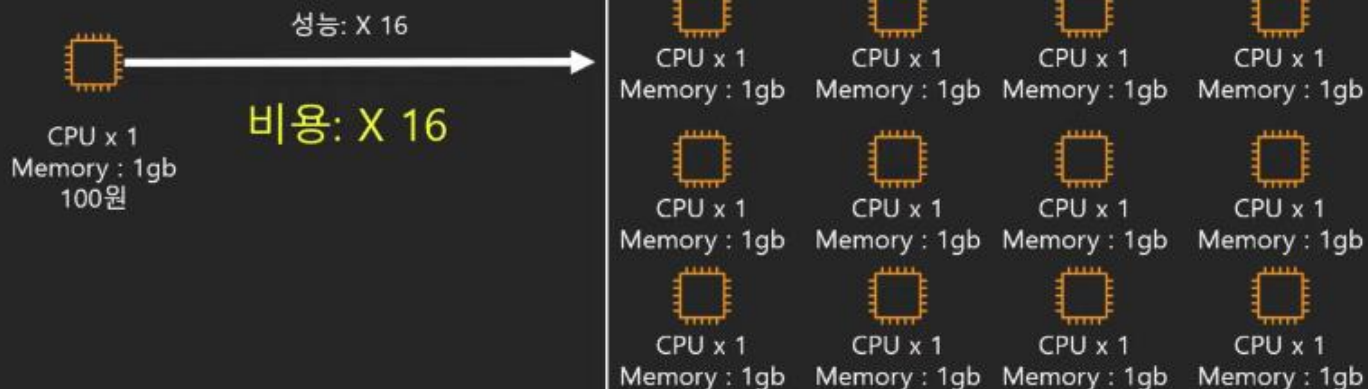
확장성 (Scalability)

클라우드 환경에서는 Scale Out을 항상 염두하며 설계를 해야 합니다.
수요에 따라 인스턴스를 덜 쓸 수도, 더 쓸 수도 있음으로써 유연성을 가질 수 있습니다.

■ Vertical Scalability(스케일 업 : Scale Up)

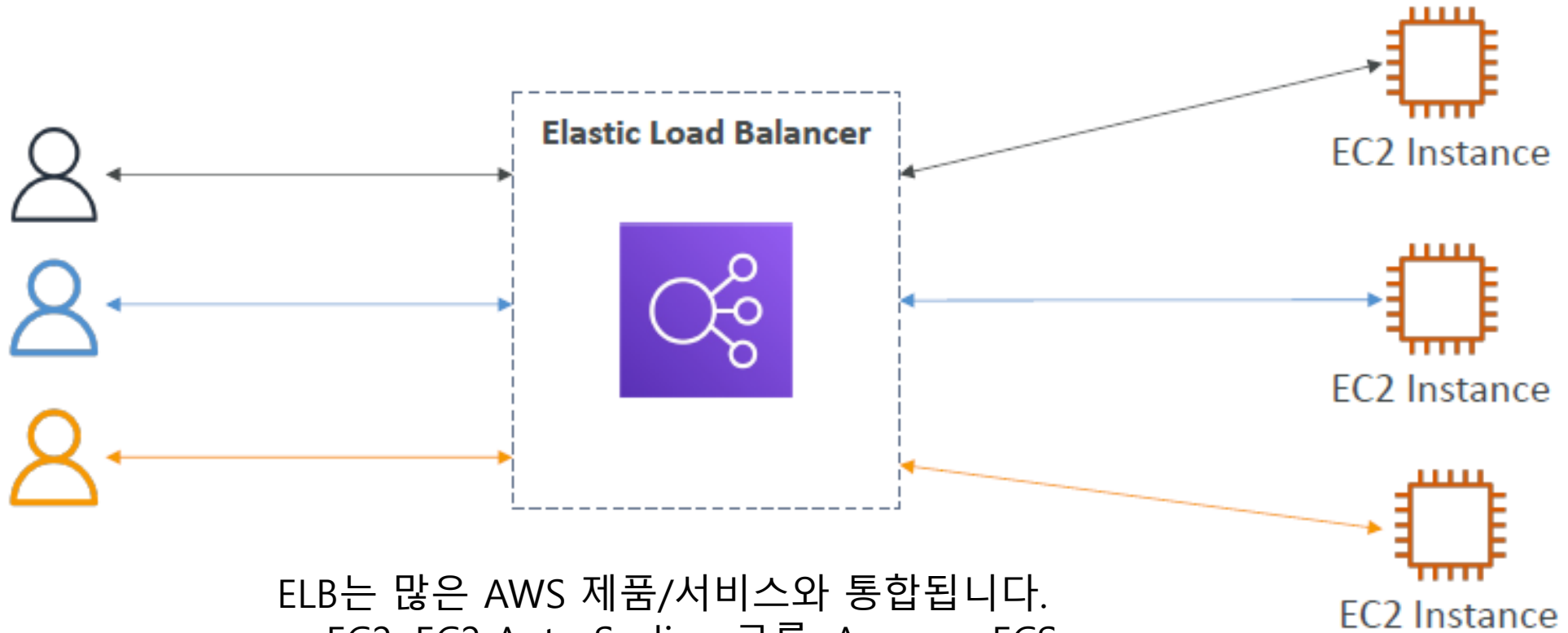


■ Horizontal Scalability(= elasticity, 스케일 아웃 : Scale Out)



로드밸런서 (ELB : Elastic Load Balancer)

Load Balancer는 트래픽을 여러 서버(예: EC2 인스턴스) 다운스트림으로 전달하는 서버입니다.
Elastic Load Balancer는 관리형 Load Balancer 입니다.

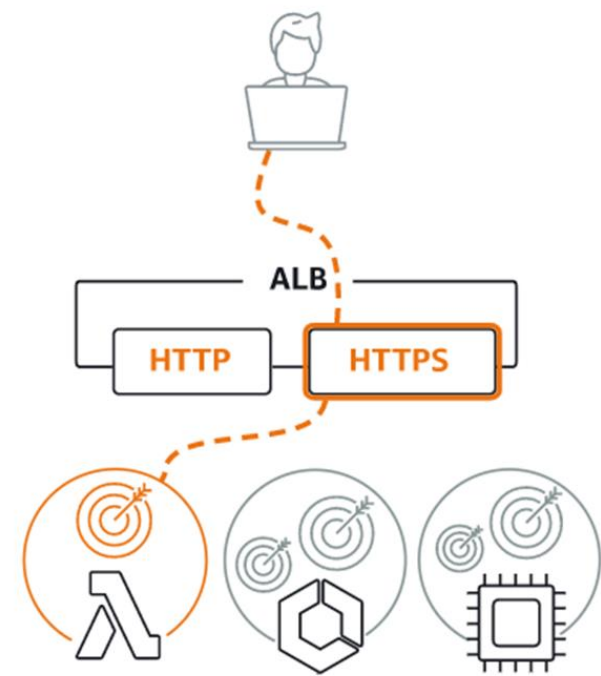


ELB는 많은 AWS 제품/서비스와 통합됩니다.

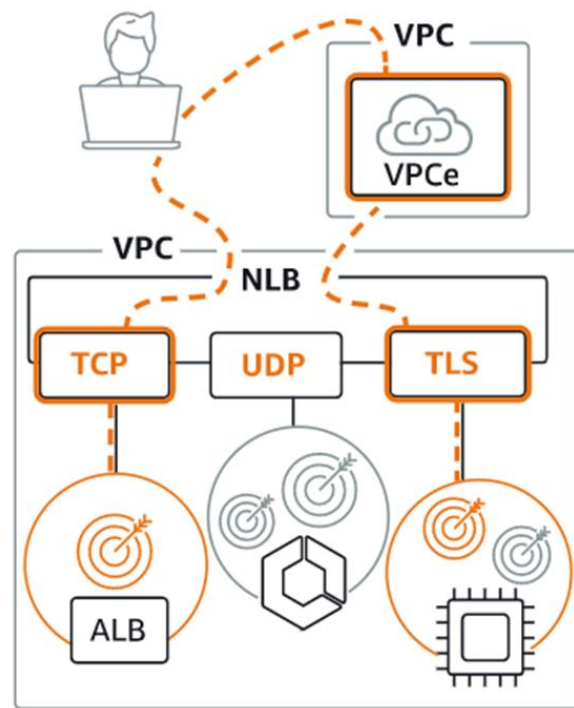
- EC2, EC2 Auto Scaling 그룹, Amazon ECS
- AWS 인증서 관리자(ACM), CloudWatch
- Route 53, AWS WAF, AWS 글로벌 액셀러레이터

로드밸런서(ELB) 종류

Application Load Balancer [Info](#)



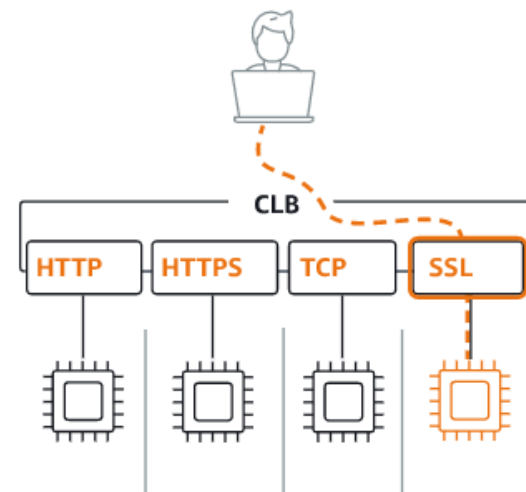
Network Load Balancer [Info](#)



Gateway Load Balancer [Info](#)

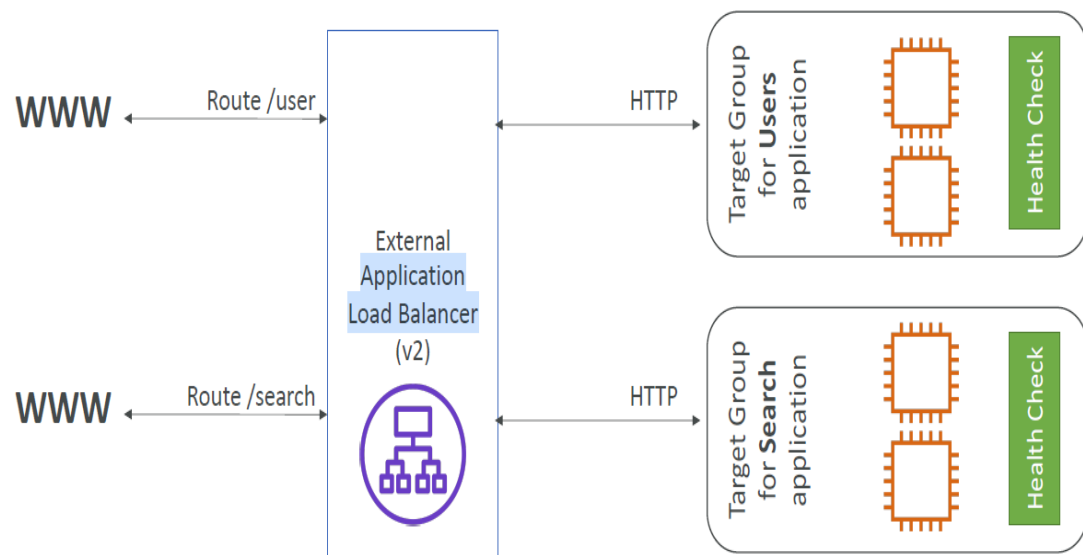


Classic Load Balancer [Info](#)

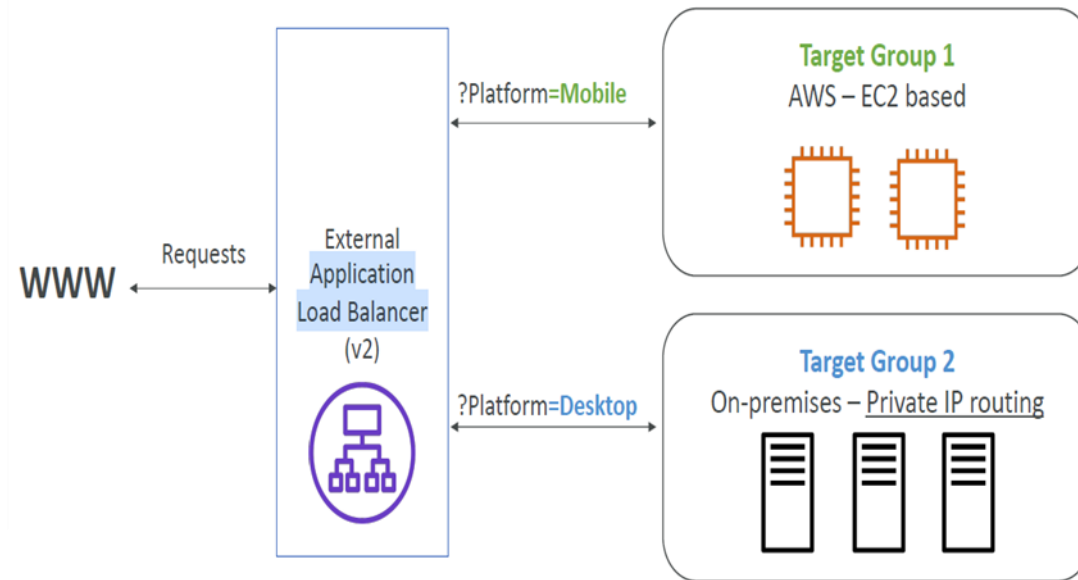


로드밸런서 – ALB(Application Load Balancer)

■ HTTP Based Traffic



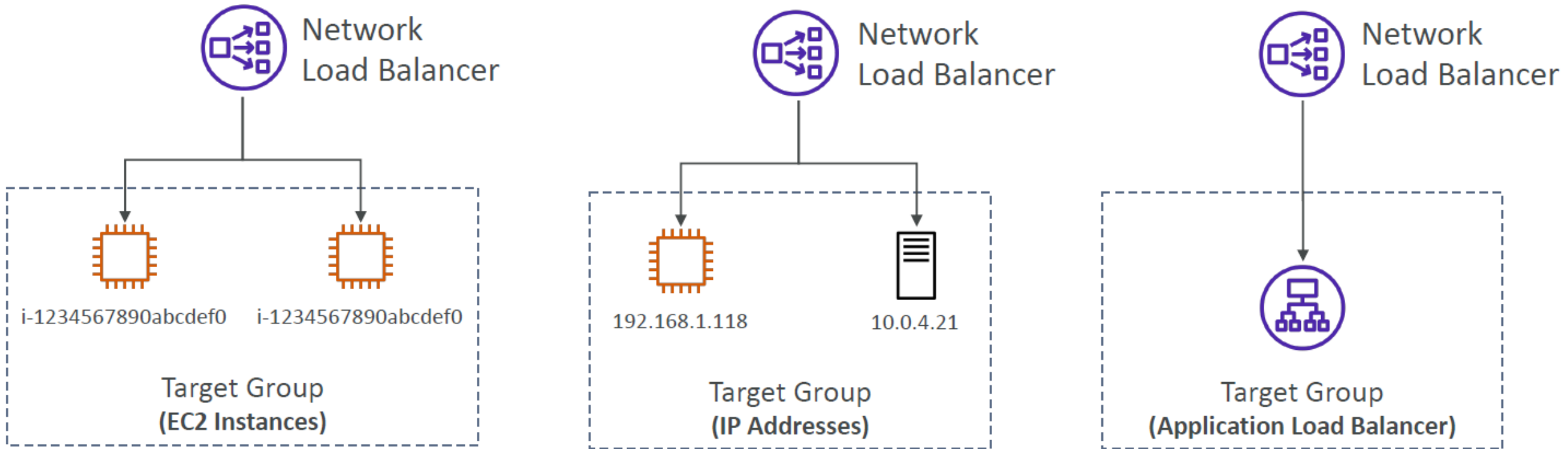
■ Query Strings/Parameters Routing



- ALB는 Layer 7(HTTP)에서 동작
- 여러 대상 그룹에서 여러 HTTP 애플리케이션에 대한 로드 밸런싱
- 동일한 시스템(예: 컨테이너)의 여러 애플리케이션에 대한 로드 밸런싱
- HTTP/2 및 WebSocket 지원
- ALB는 마이크로 서비스 및 컨테이너 기반 애플리케이션(예: Docker 및 Amazon ECS)에 매우 적합
- ECS의 동적 포트로 리디렉션하는 포트 매핑 기능이 있음

로드밸런서 - NLB(Network Load Balancer)

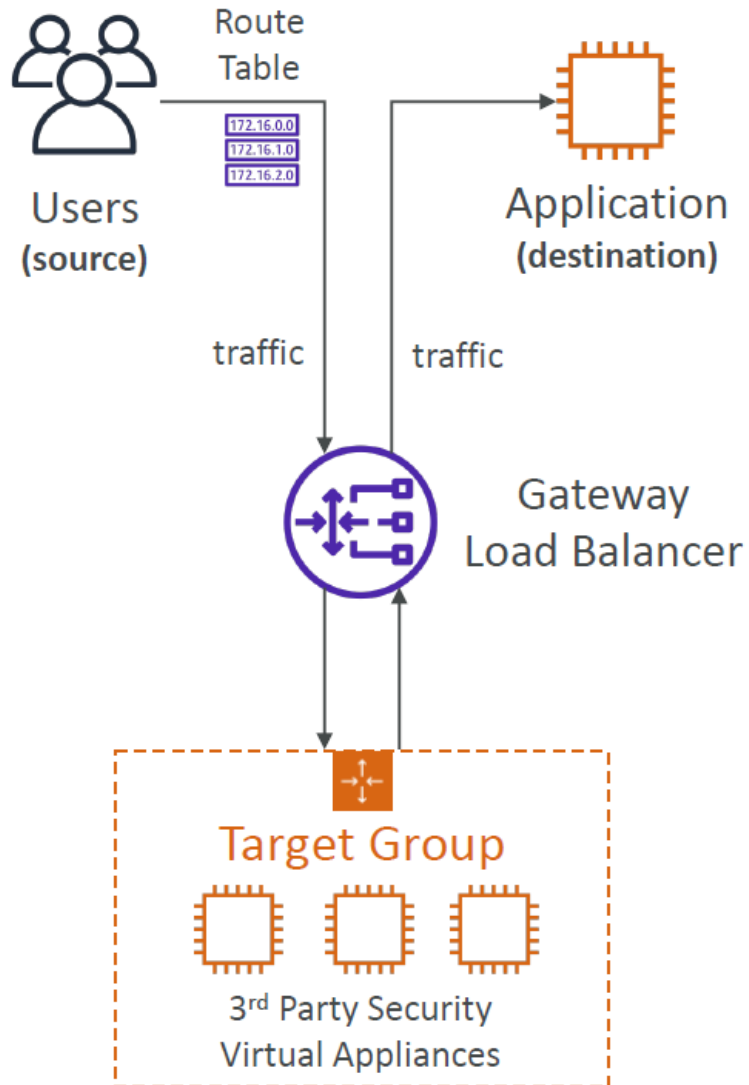
■ 타깃 그룹 : EC2, IP Address, ALB



- NLB는 Layer 4(TCP & UDP)에서 동작
- TCP 및 UDP 트래픽을 인스턴스로 전달
- 초당 수백만 건의 요청 처리
- ~100ms 미만의 지연 시간(ALB의 경우 400ms)
- NLB는 AZ당 하나의 고정 IP를 가지며 탄력적 IP 할당을 지원하지 않음
- NLB는 고성능, TCP 또는 UDP 트래픽에 사용

로드밸런서 - GWLB (Gateway Load Balancer)

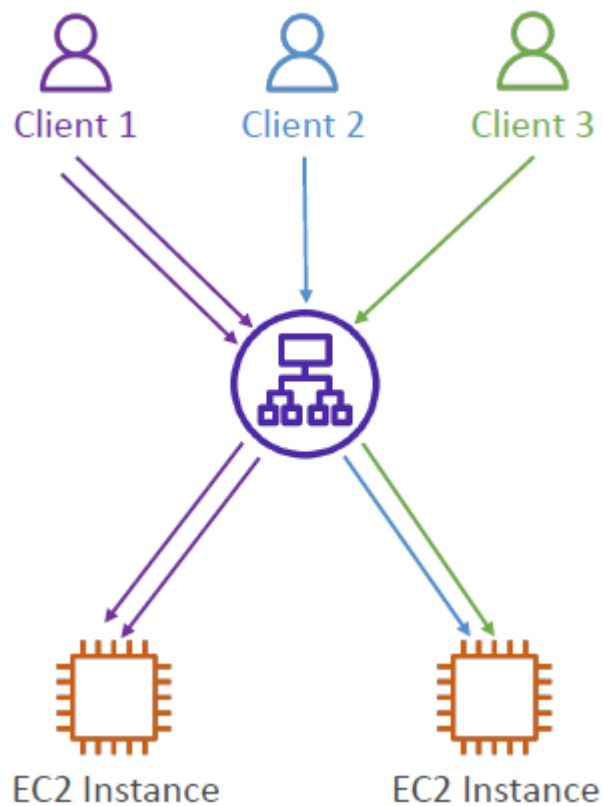
GWLB는 모든 트래픽에 대한 단일 entry/exit이며, traffic을 가상 어플라이언스로 distribute 합니다.



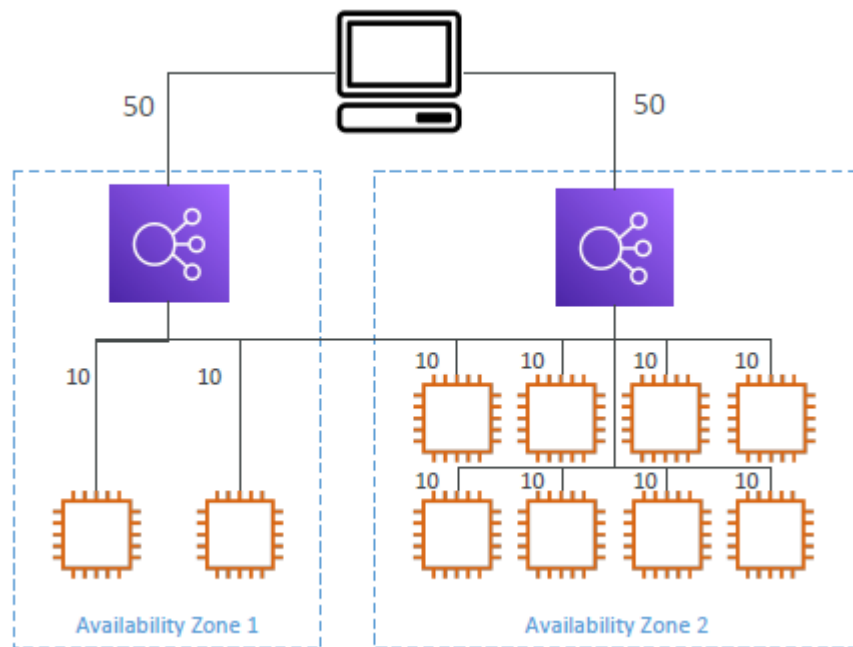
- GWLB는 Layer 3(IP 패킷)에서 동작
- Examples
 - Firewalls
 - Intrusion Detection and Prevention Systems
 - Deep Packet Inspection Systems
 - payload manipulation 등
- Transparent Network Gateway – single entry/exit for all traffic
- Load Balancer – distributes traffic to your virtual appliances

로드밸런서 - Sticky Session, Cross-Zone LB, SSL/TLS

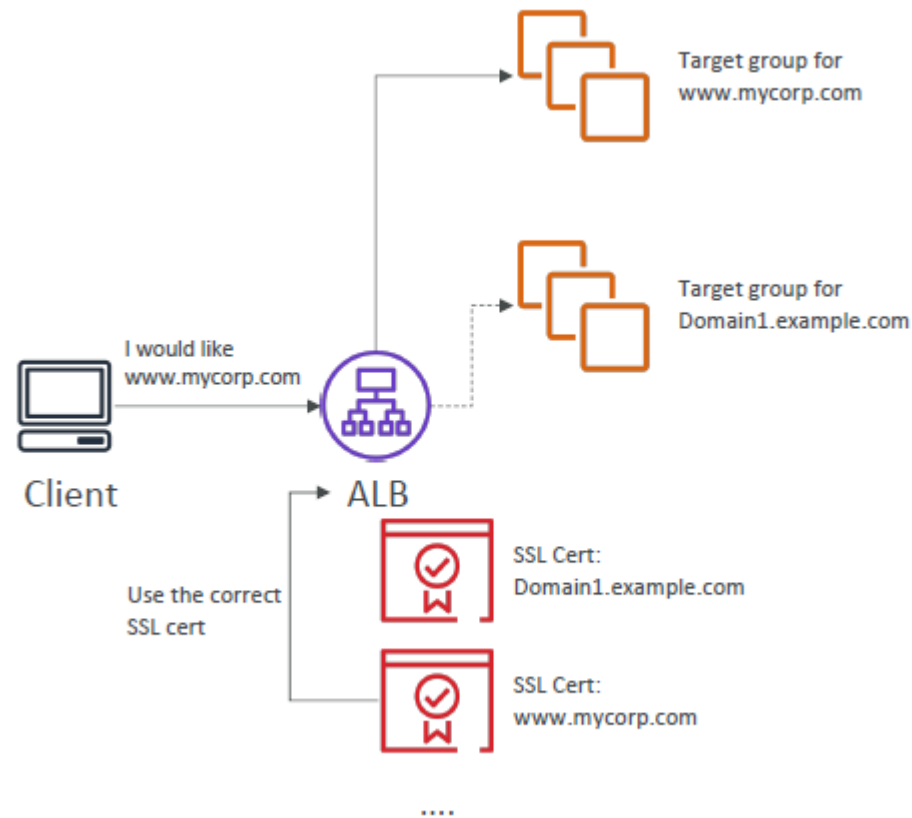
■ Sticky Sessions(Cookie Names)



■ Cross-Zone Load Balancing

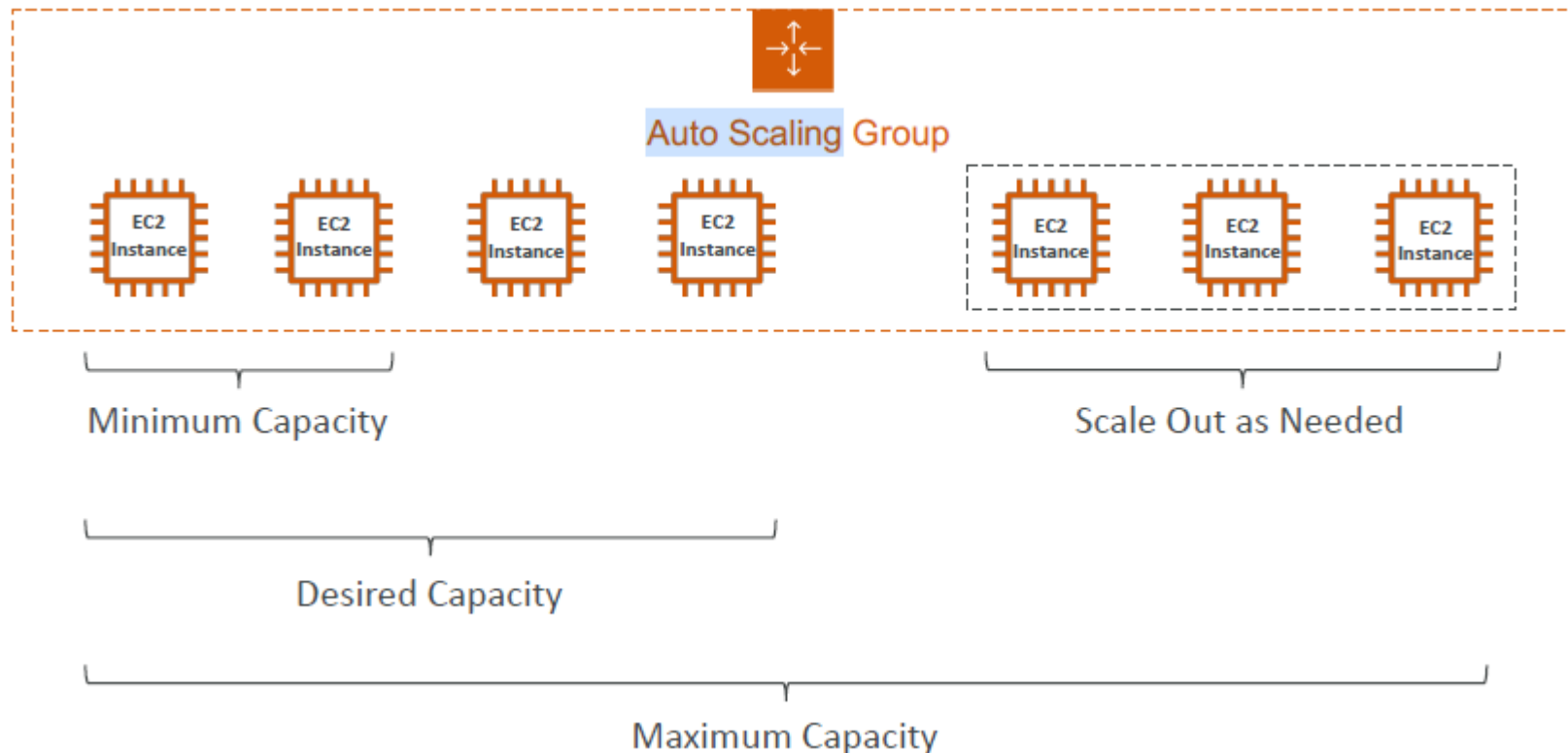


■ Server Name Indication (SNI)



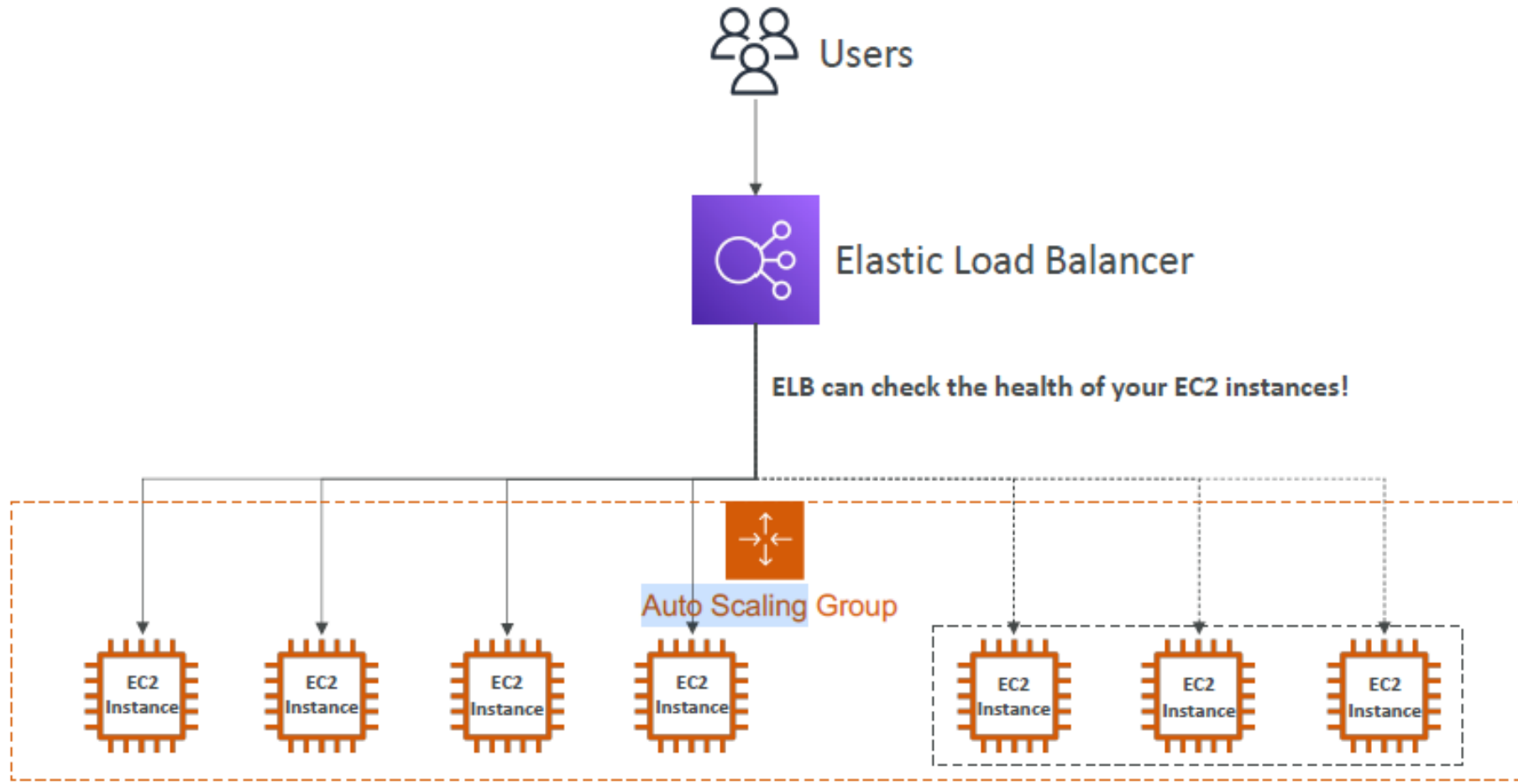
오토 스케일링 그룹 (ASG : Auto Scaling Group)

ASG 를 생성할 때 EC2 인스턴스의 최소 및 최대 인스턴스 수와 원하는 인스턴스 수를 지정하고 이 범위안에서 Scale in/out 이 일어납니다.



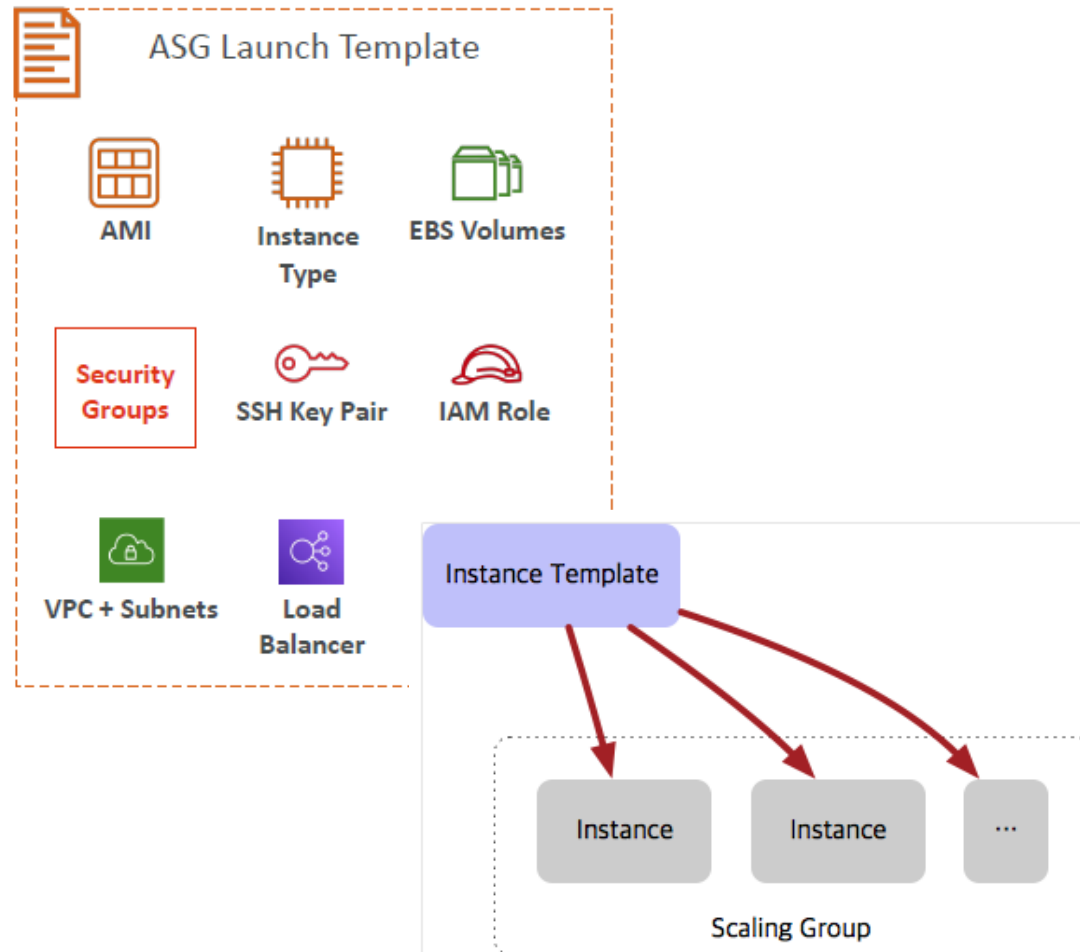
- 실행 중인 EC2 인스턴스의 최소 및 최대 수가 있는지 확인
- 인스턴스를 로드밸런서에 자동으로 등록
- 이전 인스턴스가 종료된 경우(예: 비정상인 경우) EC2 인스턴스를 다시 생성

ASG with ELB



ASG - 시작 템플릿(Launch Template)

시작 템플릿(Launch Template)은 똑같은 환경의 인스턴스를 간편하게 복제하기 위해서 구성하는 것입니다. 인스턴스의 AMI, 인스턴스 유형, 키 페어, 보안 그룹, 블록 디바이스 매핑 등의 정보를 셋팅해서 템플릿을 구성합니다.

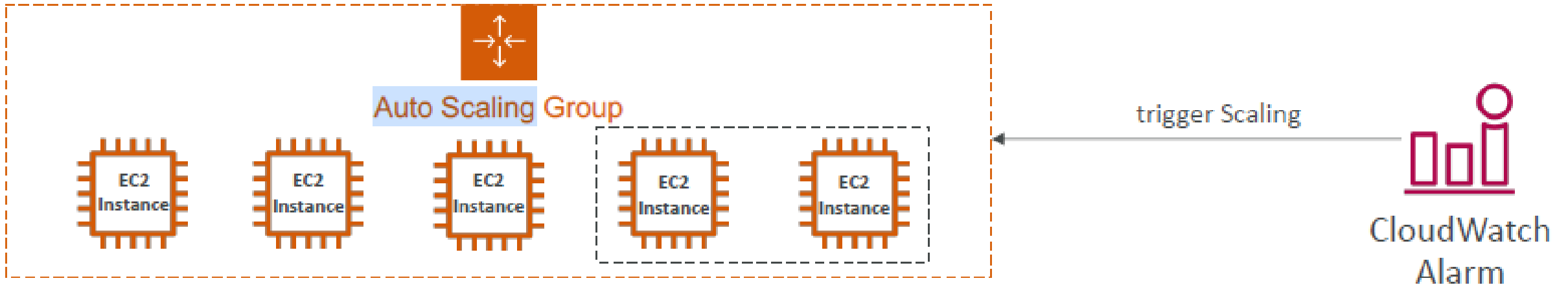


■ 시작 템플릿(Launch Template)

- AMI + Instance Type
- EC2 User Data
- EBS Volumes
- Security Groups
- SSH Key Pair
- IAM Roles for your EC2 Instances
- Network + Subnets Information
- Load Balancer Information

ASG – CloudWatch Alarms & Scaling

CloudWatch 경보를 기반으로 ASG를 확장할 수 있습니다. 경보는 지표(평균 CPU 또는 사용자 지정 지표)를 모니터링 합니다.



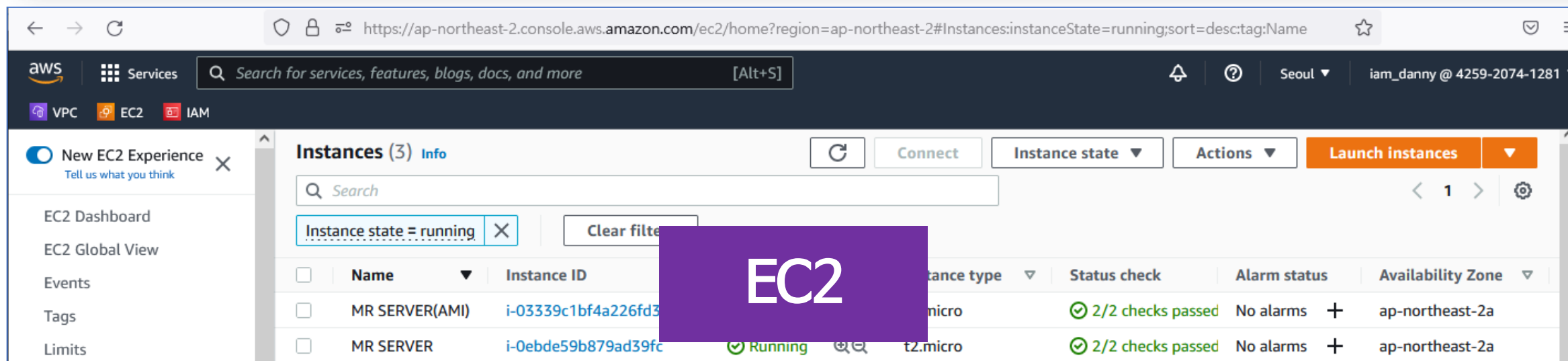
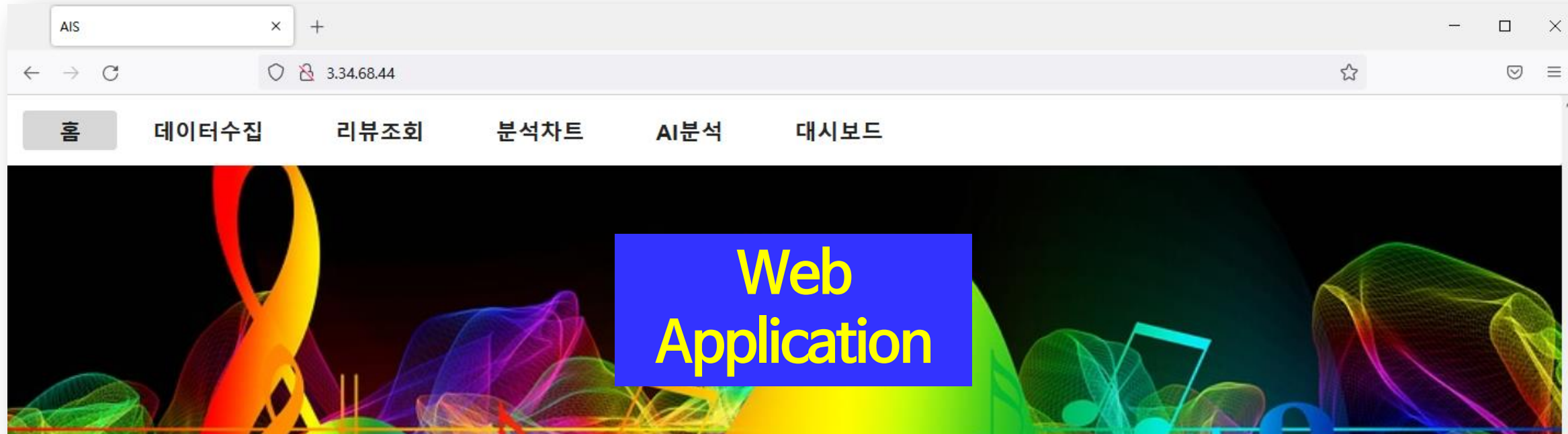
■ 스케일링 정책(Scaling Policies)

- Target Tracking Scaling : ex) I want the average ASG CPU to stay at around 40%.
- Simple / Step Scaling : ex) When a CloudWatch alarm is triggered (CPU > 70%), then add 2 units
- Scheduled Actions : ex) Increase the min capacity to 10 at 5 pm on Fridays
- Predictive Scaling: Continuously forecast load and schedule scaling ahead

애플리케이션에 대한 고가용성 구성 실습

- 0. 애플리케이션 개발, AMI 생성
- 1. ELB 생성
- 2. ASG 생성
- 3. Automatic Scaling
- 4. 4. Stress Test

0. 애플리케이션 개발, AMI 생성



1. ELB 생성

애플리케이션이 트래픽이 증가할 때 수평으로 크기 조정할 수 있도록 Application Load Balancer를 생성합니다.

[EC2](#) > [Load balancers](#) > Create Application Load Balancer

Create Application Load Balancer [Info](#)

The Application Load Balancer distributes incoming HTTP and HTTPS traffic across multiple targets such as Amazon EC2 instances, microservices, and containers, based on request attributes. When the load balancer receives a connection request, it evaluates the listener rules in priority order to determine which rule to apply, and if applicable, it selects a target from the target group for the rule action.

► How Application Load Balancers work

Basic configuration

Load balancer name

Name must be unique within your AWS account and cannot be changed after the load balancer is created.

MRA-ELB

A maximum of 32 alphanumeric characters including hyphens are allowed, but the name must not begin or end with a hyphen.

Scheme [Info](#)

Scheme cannot be changed after the load balancer is created.

☒ Internet-facing

An internet-facing load balancer routes requests from clients over the internet to targets. Requires a public subnet. [Learn more](#)

☐ Internal

An internal load balancer routes requests from clients to targets using private IP addresses.

1. ELB 생성

Network mapping [Info](#)

The load balancer routes traffic to targets in the selected subnets, and in accordance with your IP address settings.

VPC [Info](#)

Select the virtual private cloud (VPC) for your targets. Only VPCs with an internet gateway are enabled for selection. The selected VPC cannot be changed after the load balancer is created. To confirm the VPC for your targets, view your [target groups](#).

DemoVPC

vpc-0520e52ad5590b36a

IPv4: 10.0.0.0/16



Mappings [Info](#)

Select at least two Availability Zones and one subnet per zone. The load balancer routes traffic to targets in these Availability Zones only. Availability Zones that are not supported by the load balancer or the VPC are not available for selection.

☒ ap-northeast-2a

Subnet

subnet-007d5cd91191a5021

PublicSubnetA ▼

IPv4 settings

Assigned by AWS

☒ ap-northeast-2b

Subnet

subnet-0b7623e49806276bb

PublicSubnetB ▼

IPv4 settings

Assigned by AWS

1. ELB 생성

Security groups [Info](#)

A security group is a set of firewall rules that control the traffic to your load balancer.

Security groups

Select up to 5 security groups



[Create new security group](#)

load-balancer-sg sg-0b6e87ca208c403f1 ✕

VPC: vpc-0520e52ad5590b36a

1. ELB 생성

Listeners and routing [Info](#)

A listener is a process that checks for connection requests using the port and protocol you configure to its registered targets.

▼ Listener HTTP:80

Protocol	Port	Default action	Info
HTTP ▼	: 80 1-65535	Forward to Select a target	

[Create target group](#) 

Add listener

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

Port

The port the load balancer uses when performing health checks on targets. The default is the port on which each target load balancer, but you can specify a different port.

☒ Traffic port

☐ Override

Healthy threshold

The number of consecutive health checks successes required before considering an unhealthy target healthy.

3

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.

4

seconds

2-120

Interval

The approximate amount of time between health checks of an individual target

5

seconds

5-300

1. ELB 생성

Register targets

This is an optional step to create a target group. However, to ensure that your load balancer routes traffic to this target group you must register your targets.

Available instances (2/3)

Filter resources by property or value

< 1 > ⚙

	Instance ID	Name	State	Security groups	Zone	Subnet ID
<input type="checkbox"/>	i-05c4696f46de0e7be	FC SERVER	running	launch-wizard-2	ap-northeast-2b	subnet-0b7623e49806276bb
<input checked="" type="checkbox"/>	i-0ebde59b879ad39fc	MR SERVER	running	my-first-load-balancer-sg	ap-northeast-2a	subnet-007d5cd91191a5021
<input checked="" type="checkbox"/>	i-03339c1bf4a226fd3	MR SERVER(AMI)	running	my-first-load-balancer-sg	ap-northeast-2a	subnet-007d5cd91191a5021

2 selected

Ports for the selected instances

Ports for routing traffic to the selected instances.

80

1-65535 (separate multiple ports with commas)

Include as pending below

Targets (2)

All

Filter resources by property or value

Remove all pending

< 1 > ⚙

Remove	Health status	Instance ID	Name	Port	State	Security groups	Zone	Subnet ID
×	Pending	i-03339c1bf4a226fd3	MR SERVER(AMI)	80	running	my-first-load-balancer-sg	ap-northeast-2a	subnet-007d5cd91191a5021
×	Pending	i-0ebde59b879ad39fc	MR SERVER	80	running	my-first-load-balancer-sg	ap-northeast-2a	subnet-007d5cd91191a5021

2 pending

Cancel

Previous

Create target group

1. ELB 생성

Listeners and routing [Info](#)

A listener is a process that checks for connection requests using the port and protocol you configure. The rules that you define for a listener determine how the load balancer routes requests to its registered targets.

▼ Listener HTTP:80

[Remove](#)

Protocol

Port

HTTP ▼

: 80

1-65535

Default action [Info](#)

Forward to

MRA-Target-Group

Target type: Instance, IPv4

HTTP ▼



[Create target group](#)

Add listener

1. ELB 생성

Summary

Review and confirm your configurations. [Estimate cost](#)

Basic configuration Edit MRA-ELB <ul style="list-style-type: none">Internet-facingIPv4	Security groups Edit <ul style="list-style-type: none">load-balancer-sg sg-0b6e87ca208c403f1	Network mapping Edit VPC vpc-0520e52ad5590b36a DemoVPC <ul style="list-style-type: none">ap-northeast-2a subnet-007d5cd91191a5021 PublicSubnetAap-northeast-2b subnet-0b7623e49806276bb PublicSubnetB	Listeners and routing Edit <ul style="list-style-type: none">HTTP:80 defaults to MRA-Target-Group
Add-on services Edit None		Tags Edit None	

Attributes

Certain default attributes will be applied to your load balancer. You can view and edit them after creating the load balancer.

[Cancel](#)[Create load balancer](#)

1. ELB 생성

The screenshot shows the AWS Management Console for the ap-northeast-2 region. The left sidebar contains navigation links for EC2 Dashboard, Global View, Events, Tags, Limits, Elastic Block Store, and Network & Security. The main content area displays the 'Create Load Balancer' button and a table of existing load balancers. The table has columns for Name, DNS name, State, VPC ID, Availability Zones, Type, and Created. One load balancer, MRA-ELB, is listed with a state of 'Provisioning'. Below the table, the 'Load balancer: MRA-ELB' configuration page is shown, with tabs for Description, Listeners, Monitoring, Integrated services, and Tags. The 'Description' tab is active, showing the 'Basic Configuration' section. The 'DNS name' field is highlighted with a red box and contains the value 'MRA-ELB-260319186.ap-northeast-2.elb.amazonaws.com (A Record)'. A blue arrow points from this field to the right.

Name	DNS name	State	VPC ID	Availability Zones	Type	Created
MRA-ELB	MRA-ELB-260319186.ap-northeast-2.elb.amazonaws.com	Provisioning	vpc-0520e52ad5590b36a	ap-northeast-2a, ap-northeast-2b	application	September 1, 2023

Load balancer: MRA-ELB

Description Listeners Monitoring Integrated services Tags

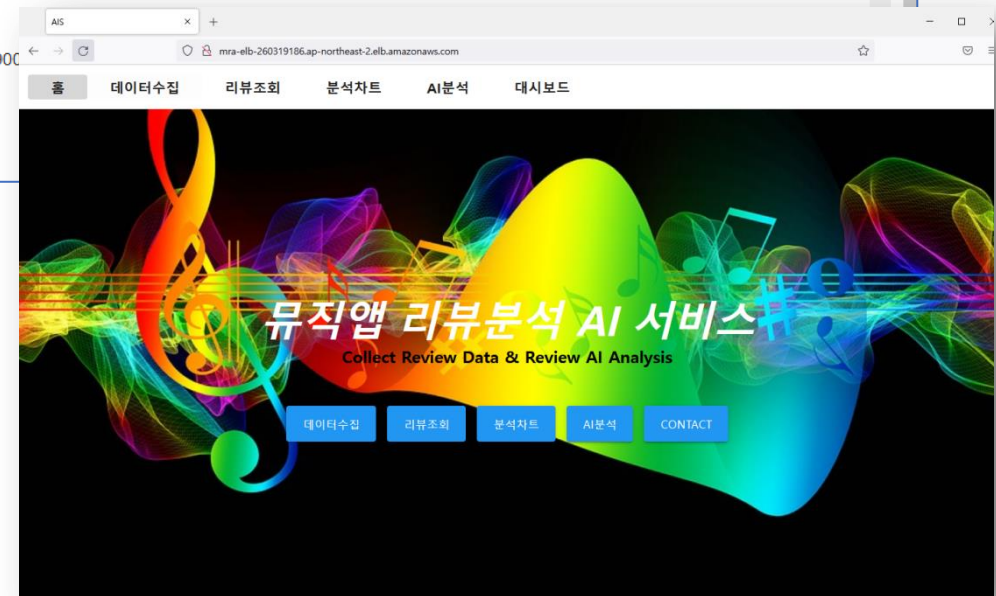
Basic Configuration

Name MRA-ELB

ARN arn:aws:elasticloadbalancing:ap-northeast-2:425920741281:loadbalancer/app/MRA-ELB/8d30f68a0490d90c

DNS name MRA-ELB-260319186.ap-northeast-2.elb.amazonaws.com (A Record)

State Provisioning



2. ASG 생성

EC2 > Auto Scaling groups > Create Auto Scaling group

Step 1

Choose launch template or configuration

Step 2

Choose instance launch options

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

Choose launch template or configuration [Info](#)

Specify a launch template that contains settings common to all EC2 instances that are launched by this Auto Scaling group. If you currently use launch configurations, you might consider migrating to launch templates.

Name

Auto Scaling group name

Enter a name to identify the group.

MRA-ASG

Must be unique to this account in the current Region

Launch template [Info](#)

Launch template

Choose a launch template that contains the instance profile, security groups.

Select a launch template

Create a launch template [↗](#)

Launch template name and description

Launch template name - *required*

MRATemplate

Must be unique to this account. Max 128 chars. No spaces or special characters like '&', '*', '@'.

Template version description

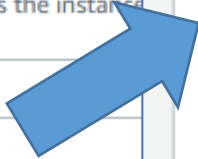
A prod web server for MRA

Max 255 chars

Auto Scaling guidance [Info](#)

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



23

2. ASG 생성 - 시작템플릿(Launch Template)

Recents

My AMIs

Quick Start

☒ Owned by me

☐ Shared with me

Amazon Machine Image (AMI)

MR SERVER AMI

ami-027fc358881bb78c6

2022-09-04T03:42:08.000Z

Virtualization: hvm

ENA enabled

Description

-

Architecture

x86_64

AMI ID

ami-027fc358881bb78c6

▼ Instance type

Info

Simple

☒ Manually select instance type

Select an instance type that meets your computing, memory, networking, or storage needs

☐ Specify instance type attributes

Specify instance attributes that match your compute requirements

Instance type

t3.micro

Family: t3 2 vCPU 1 GiB Memory

On-Demand Linux pricing: 0.013 USD per Hour

On-Demand Windows pricing: 0.0222 USD per Hour

Compare instance types

▼ Key pair (login)

Info

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name

abckp

▼

↻

Create new key pair

2. ASG 생성 - 시작템플릿(Launch Template)

▼ Network settings Info

Subnet Info

Don't include in launch template ▼

When you specify a subnet, a network interface is automatically added to your template.

Create new subnet ↗

Firewall (security groups) Info

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

☒ Select existing security group

☐ Create security group

Security groups Info

Select security groups ▼

load-balancer-sg sg-0b6e87ca208c403f1 X
VPC: vpc-0520e52ad5590b36a

Compare security group rules ↻

▶ Advanced network configuration

Cancel

Create launch template

2. ASG 생성

EC2 > Auto Scaling groups > Create Auto Scaling group

Step 1

Choose launch template or configuration

Step 2

Choose instance launch options

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

Choose launch template or configuration [Info](#)

Specify a launch template that contains settings common to all EC2 instances that are launched by this Auto Scaling group. If you currently use launch configurations, you might consider migrating to launch templates.

Name

Auto Scaling group name

Enter a name to identify the group.

MRA-ASG

Must be unique to this account in the current Region and no more than 255 characters.

Launch template [Info](#)

[Switch to launch configuration](#)

Launch template

Choose a launch template that contains the instance-level settings, such as the Amazon Machine Image (AMI), instance type, key pair, and security groups.

MRATemplate



[Create a launch template](#)

Version

2. ASG 생성

Step 1

Choose launch template or configuration

Step 2

Choose instance launch options

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

Choose instance launch options [Info](#)

Choose the VPC network environment that your instances are launched into, and customize the instance types and purchase options.

Network [Info](#)

For most applications, you can use multiple Availability Zones and let EC2 Auto Scaling balance your instances across the zones. The default VPC and default subnets are suitable for getting started quickly.

VPC

Choose the VPC that defines the virtual network for your Auto Scaling group.

vpc-0520e52ad5590b36a (DemoVPC)
10.0.0.0/16



[Create a VPC](#)

Availability Zones and subnets

Define which Availability Zones and subnets your Auto Scaling group can use in the chosen VPC.

Select Availability Zones and subnets



ap-northeast-2a | subnet-007d5cd91191a5021
(PublicSubnetA)
10.0.0.0/24



ap-northeast-2b | subnet-0b7623e49806276bb
(PublicSubnetB)
10.0.1.0/24



2. ASG 생성

Step 2

Choose instance launch options

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

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
Traffic to your Auto Scaling group will not be fronted 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 to 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 Gateway Load Balancers.

☐ Choose from Classic Load Balancers

Existing load balancer target groups

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

Select target groups

MRA-Target-Group | HTTP X
Application Load Balancer: MRA-ELB

Health checks - optional

Health check type [Info](#)
EC2 Auto Scaling automatically replaces instances that fail the health check. In addition to the EC2 health checks that are always performed, you can configure additional health checks for your Auto Scaling group.

☒ EC2 ☒ ELB

Health check grace period
The amount of time until EC2 Auto Scaling performs the health check after an instance enters the Pending state.

300 seconds

28

2. ASG 생성

Group size - optional [Info](#)

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

Review [Info](#)

Step 1: Choose launch template or configuration [Edit](#)

Group details

Auto Scaling group name
MRA-ASG

Launch template

Launch template	Version	Description
MRATemplate lt-03e52f2cb6476d958	Default	A prod web server for MRA

Step 2: Choose instance launch options [Edit](#)

Network

Network

VPC
[vpc-0520e52ad5590b36a](#)

Availability Zone	Subnet	
ap-northeast-2a	subnet-007d5cd91191a5021	10.0.0.0/24
ap-northeast-2b	subnet-0b7623e49806276bb	10.0.1.0/24

Step 3: Configure advanced options [Edit](#)

Load balancing

Load balancer 1

Name	Type	Target group
MRA-ELB	Application/HTTP	MRA-Target-Group

[Create Auto Scaling group](#)

2. ASG 생성

EC2 > Auto Scaling groups > MRA-ASG

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

Activity notifications (0)

Filter notifications

Send to On instance action

No notifications are currently specified

Create notification

Activity history (2)


Filter activity history

Status	Description	Cause	Start time	End time
Successful	Launching a new EC2 instance: i-0ecb9ebd95c8df8d6	At 2022-09-04T14:00:36Z a user request created an AutoScalingGroup changing the desired capacity from 0 to 2. At 2022-09-04T14:00:37Z an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 0 to 2.	2022 September 04, 11:00:39 PM +09:00	2022 September 04, 11:00:45 PM +09:00
Successful	Launching a new EC2 instance: i-0a509c648b4938945	At 2022-09-04T14:00:36Z a user request created an AutoScalingGroup changing the desired capacity from 0 to 2. At 2022-09-04T14:00:37Z an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 0 to 2.	2022 September 04, 11:00:39 PM +09:00	2022 September 04, 11:00:46 PM +09:00


3. Automatic Scaling

EC2 > Auto Scaling groups > MRA-ASG


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


Dynamic scaling policies (0) [Info](#)  Actions ▾ Create dynamic scaling policy < 1 >

No dynamic scaling policies have been created

Predictive scaling policies (0) [Info](#)  Actions ▾ Create predictive scaling policy < 1 >

No predictive scaling policies have been created

Scheduled actions (0) [Info](#)  Actions ▾ Create scheduled action

< 1 > 

<input type="checkbox"/>	Name ▲	Start time ▾	End time ▾	Recurrence ▾	Time zone ▾	Desired capac... ▾	Min ▾	Max ▾
No scheduled actions are currently specified								
<div>Create scheduled action</div>								

3. Automatic Scaling

EC2 > Auto Scaling groups > MRA-ASG

Create dynamic scaling policy

Policy type
Target tracking scaling ▼

Scaling policy name
Target Tracking Policy

Metric type
Average CPU utilization ▼

Target value
50

Instances need
300 seconds warm up before including in metric

Target tracking scaling
Step scaling
Simple scaling

Average CPU utilization
Average network in (bytes)
Average network out (bytes)
Application Load Balancer request count per target

3. Automatic Scaling

Create dynamic scaling policy

Policy type

Target tracking scaling ▼

Scaling policy name

Target Tracking Policy

Metric type

Average CPU utilization ▼

Target value

40

Instances need

300 seconds warm up before including in metric

☐ Disable scale in to create only a scale-out policy

Cancel

Create

3. Automatic Scaling

EC2 > Auto Scaling groups > MRA-ASG

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

Group details

Desired capacity
2

Minimum capacity
1

Maximum capacity
4

Group size [X]

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
1 [v]

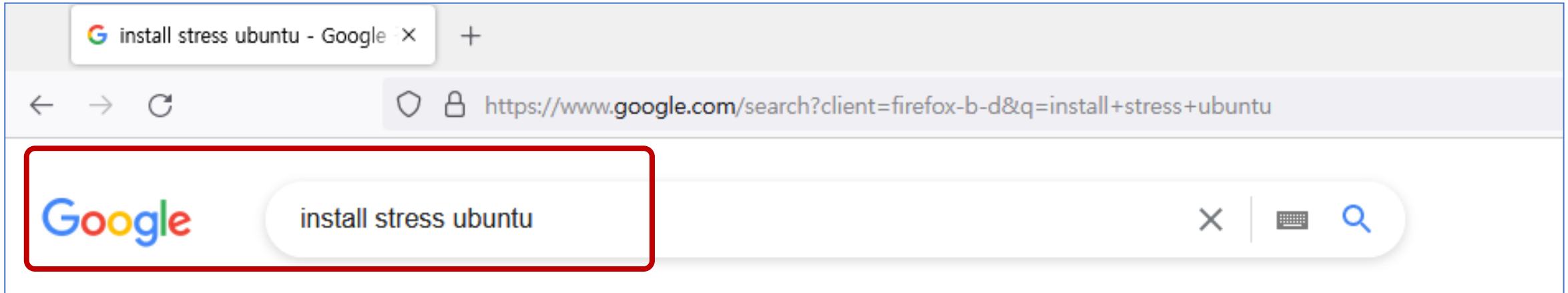
Minimum capacity
1 [v]

Maximum capacity
3 [v]

Cancel [Update]

Edit

4. Stress Test

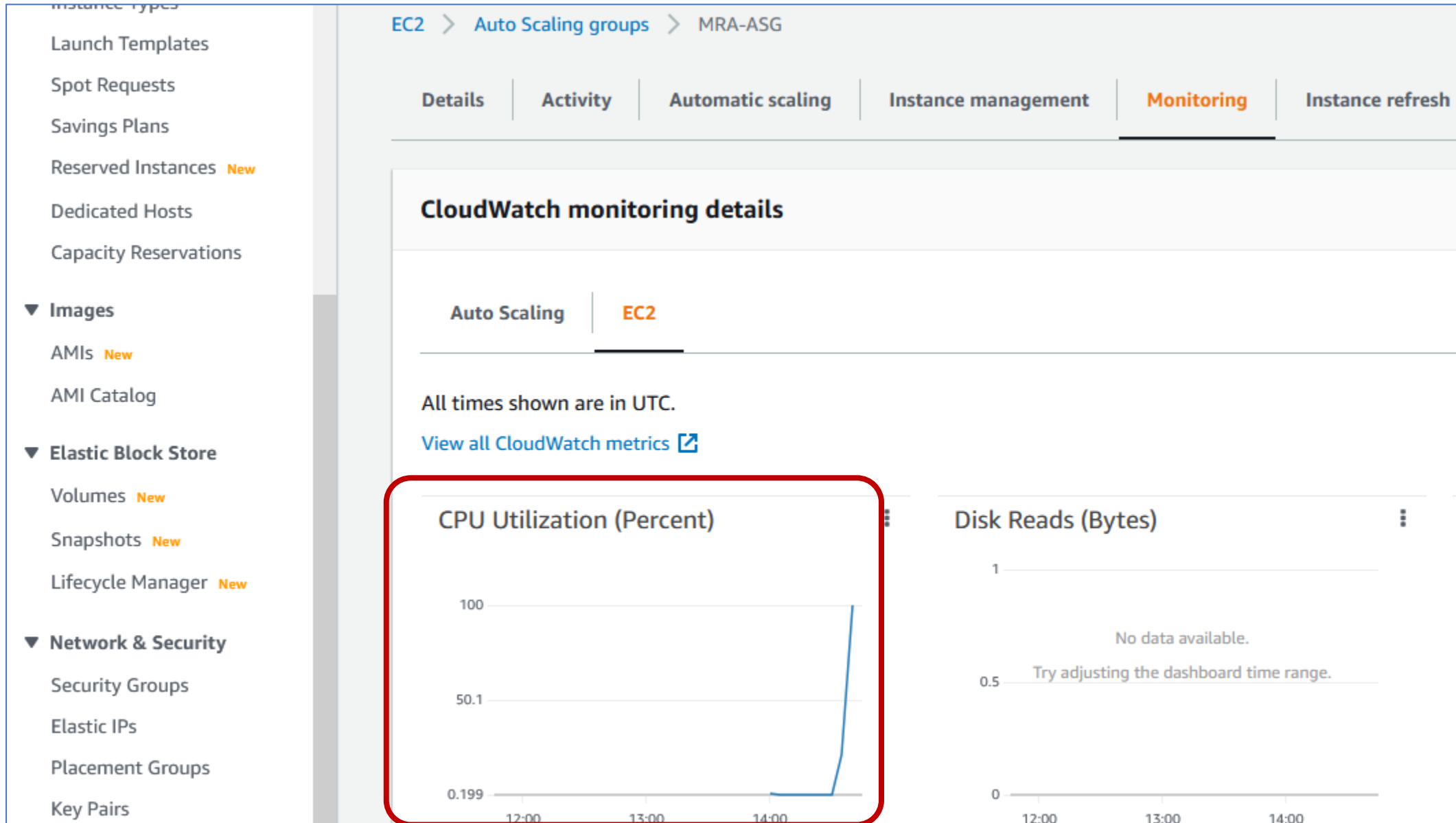


```
sudo apt -y install stress
```

```
stress -c 4
```

```
root@ip-10-0-1-52:~# stress -c 4
stress: info: [1546] dispatching hogs: 4 cpu, 0 io, 0 vm, 0 hdd
```


4. Stress Test



4. Stress Test

The screenshot shows the AWS CloudWatch Alarms console in the ap-northeast-2 region. The left sidebar contains navigation links for CloudWatch, Favorites and recents, Dashboards, Alarms (with 0 warnings, 2 OK, and 0 errors), In alarm, All alarms, Logs, and Metrics. The main content area is titled 'CloudWatch > Alarms' and shows 'Alarms (2)'. A search bar and a filter dropdown set to 'In alarm' are present. A table lists the alarms, with one alarm highlighted by a red box:

<input type="checkbox"/>	Name	State	Last state update	Conditions
<input type="checkbox"/>	TargetTracking-MRA-ASG-AlarmHigh-18a94f64-7188-42d6-8759-7877220b32ef	In alarm	2022-09-04 23:44:15	CPUUtilization > 40 for 3 datapoints within 3 minutes

4. Stress Test

Instances | EC2 Management

← → ↻

https://ap-northeast-2.console.aws.amazon.com/ec2/v2/home?region=ap-northeast-2#Instances:instanceState=running;sort=tag:Name

aws

Services

Search for services, features, blogs, docs, and more

[Alt+S]

VPC

EC2

IAM

CloudWatch

New EC2 Experience

Tell us what you think

EC2 Dashboard

EC2 Global View

Events

Tags

Limits

▼ Instances

Instances (5) Info

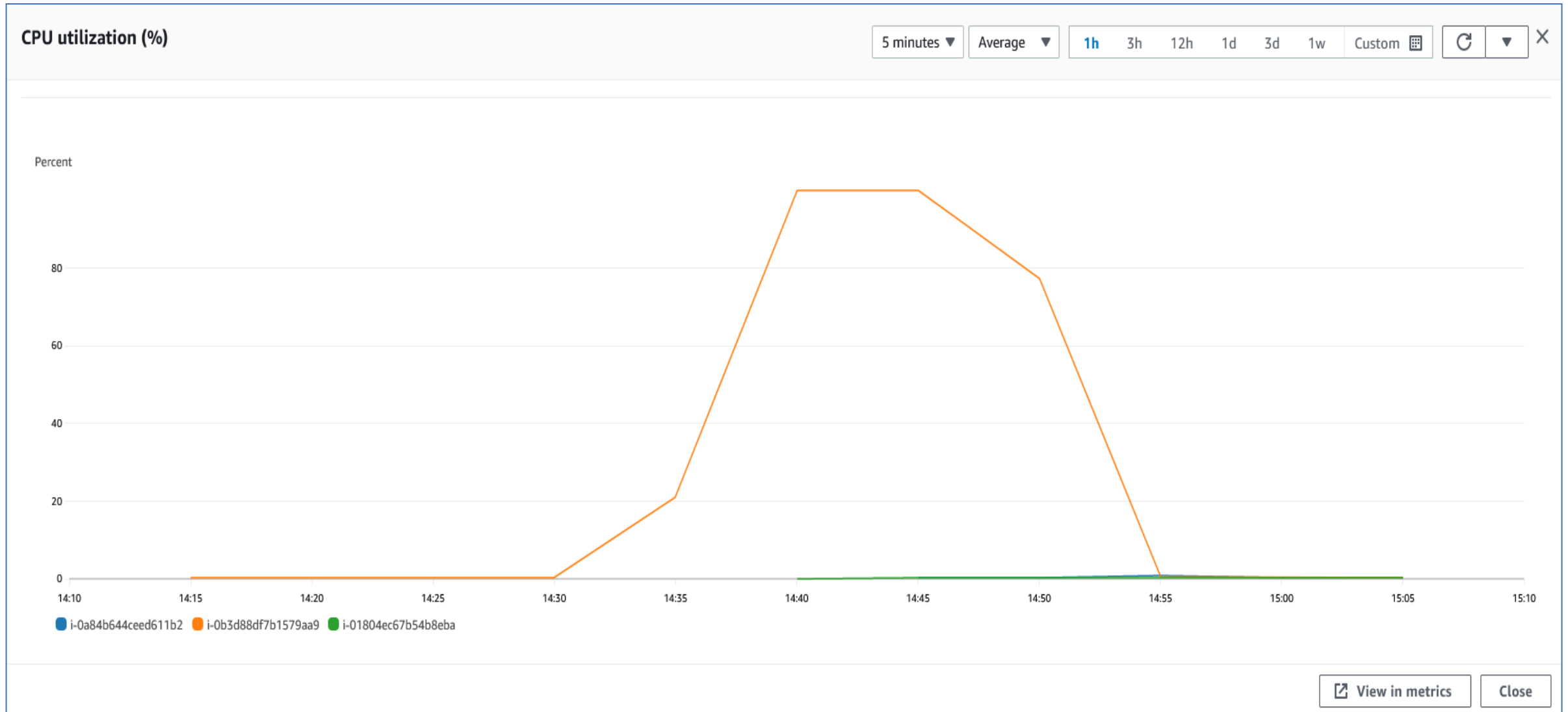
Search

Instance state = running

Clear filters

<input type="checkbox"/>	Name ▲	Instance ID	Instance state ▼	Instance type ▼	Status check	Alarm status
<input type="checkbox"/>	-	i-0a84b644ceed611b2	✓ Running 🔍	t3.small	✓ 2/2 checks passed	No alarms +
<input type="checkbox"/>	-	i-0b3d88df7b1579aa9	✓ Running 🔍	t3.small	✓ 2/2 checks passed	No alarms +
<input type="checkbox"/>	-	i-01804ec67b54b8eba	✓ Running 🔍	t3.small	✓ 2/2 checks passed	No alarms +

4. Stress Test



Thank you