














1. create 3 instance with nginx application can expose/access via port 80 (public IP)

<input checked="" type="checkbox"/>	Nginx 	i-061da0f4991cf98a6	 Running	 	t2.micro	–	No alarms		us-east-1a
<input type="checkbox"/>	Nginx	i-061023815be397401	 Running	 	t2.micro	–	No alarms		us-east-1a
<input type="checkbox"/>	Nginx	i-08ddd1158ed3e279	 Running	 	t2.micro	–	No alarms		us-east-1a

44.201.219.240	–	–	d...	laun...	nginx	2023/07/31 19:27 GMT+7
18.233.10.7	–	–	d...	laun...	nginx	2023/07/31 19:27 GMT+7
54.237.225.223	–	–	d...	laun...	nginx	2023/07/31 19:27 GMT+7

```
o udations\AWS\nginx.pem" ec2-user@44.201.219.240
```

```
#  
~ \ #####_ Amazon Linux 2023  
n ~ \ #####\  
n ~ \ ###|  
n ~ \#/  
n ~ V n' _--> https://aws.amazon.com/linux/amazon-linux-2023  
  
n ~  
n ~ _.  
n ~ / /  
n ~ /m/' ->
```

```
Last login: Mon Jul 31 12:34:31 2023 from 116.96.47.243  
[ec2-user@ip-10-0-5-70 ~]$
```

```
[ssh] ssh [x]
```

```
[ec2-user@ip-10-0-1-107 ~]$  
logout  
Connection to 18.233.10.7 closed.  
PS D:\Devops_FPT_Foundations\AWS> ssh -i "D:\Devops_FPT_Foundations\AWS\ng  
o inx.pem" ec2-user@18.233.10.7
```

```
#  
~ \ #####_ Amazon Linux 2023  
n ~ \ #####\  
n ~ \ ###|  
n ~ \#/  
n ~ V n' _--> https://aws.amazon.com/linux/amazon-linux-2023  
  
n ~  
n ~ _.  
n ~ / /  
n ~ /m/' ->
```

```
Last login: Mon Jul 31 12:35:55 2023 from 116.96.47.243  
[ec2-user@ip-10-0-1-107 ~]$
```

```
PS D:\Devops_FTDations\AWS> ssh -i "D:\Devops_FTDations\AWS\ng
inx.pem" ec2-user@54.237.225.223
The authenticity of host '54.237.225.223 (54.237.225.223)' can't be esta
blished.
ECDSA key fingerprint is SHA256:i9kv14gMv2ybriuXx8E3VTAfTtYyMmemc0RpimWL
JB8.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '54.237.225.223' (ECDSA) to the list of known
hosts.

      #
    _#_
   ~\_#####_ Amazon Linux 2023
  nuw \#####\
     nuw \###|
     nuw  \#/ https://aws.amazon.com/linux/amazon-linux-2023
     nuw  V~' ->
          /
         /
        /
       /
      /m/'
[ec2-user@ip-10-0-9-203 ~]$
```

```
lines 1-15/15 (END)
```

```
● nginx.service - The nginx HTTP and reverse proxy server
   Loaded: loaded (/usr/lib/systemd/system/nginx.service; enabled; pr
  Active: active (running) since Mon 2023-07-31 12:46:22 UTC; 9s ago
     Process: 27348 ExecStartPre=/usr/bin/rm -f /run/nginx.pid (code=exi
     Process: 27349 ExecStartPre=/usr/sbin/nginx -t (code=exited, status=
     Process: 27350 ExecStart=/usr/sbin/nginx (code=exited, status=0/SUC
 Main PID: 27351 (nginx)
    Tasks: 2 (limit: 1114)
   Memory: 2.2M
      CPU: 57ms
   CGroup: /system.slice/nginx.service
           └─27351 "nginx: master process /usr/sbin/nginx"
             └─27352 "nginx: worker process"
```

```
Process: 27412 ExecStartPre=/usr/bin/rm -f /run/nginx.pid (code=exited, status=0/SUCCESS)
● nginx.service - The nginx HTTP and reverse proxy server
   Loaded: loaded (/usr/lib/systemd/system/nginx.service; enabled; preset=yes)
   Active: active (running) since Mon 2023-07-31 12:47:09 UTC; 7s ago
     Process: 27412 ExecStartPre=/usr/bin/rm -f /run/nginx.pid (code=exited, status=0/SUCCESS)
     Process: 27413 ExecStartPre=/usr/sbin/nginx -t (code=exited, status=0/SUCCESS)
     Process: 27414 ExecStart=/usr/sbin/nginx (code=exited, status=0/SUCCESS)
 Main PID: 27415 (nginx)
    Tasks: 2 (limit: 1114)
   Memory: 2.2M
      CPU: 56ms
   CGroup: /system.slice/nginx.service
           └─27415 "nginx: master process /usr/sbin/nginx"
             └─27416 "nginx: worker process"
```

```
Jul 31 12:47:08 ip-10-0-9-203.ec2.internal systemd[1]: Starting nginx.service: the nginx internet web server.  
Jul 31 12:47:09 ip-10-0-9-203.ec2.internal nginx[27413]: nginx: the configuration file /etc/nginx/nginx.conf was not found!  
Jul 31 12:47:09 ip-10-0-9-203.ec2.internal nginx[27413]: nginx: configuration file /etc/nginx/nginx.conf usage  
Jul 31 12:47:09 ip-10-0-9-203.ec2.internal systemd[1]: Started nginx.service: the nginx internet web server.  
  
~  
  
~  
  
~  
  
~  
  
~  
  
~  
  
~  
  
~
```

http://44.201.219.240

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.


Thank you for using nginx.

Security group rule ID	Port range	Protocol	Source
sgr-05bdb9057a229b744	80	TCP	0.0.0.0/0
sgr-04d1c8bac9c393d31	22	TCP	116.96.47.243/32
sgr-0beddec4f133ac428	80	TCP	::/0

2. create an application load balacing and a taget group with 3 exist instance

config heath check and check application via ALB dns

Create Application Load Balancer


-  Suggested next steps
- Review, customize, or configure attributes for your load balancer and listeners using the **Description** and **Listeners** tabs within [nginx-load](#).
 - Discover other services that you can integrate with your load balancer. Visit the **Integrated services** tab within [nginx-load](#).

View load balancer


Total targets

3


Healthy

 3


Unhealthy

 0


Unused

 0

Initial

 0

Draining

 0

► Distribution of targets by Availability Zone (AZ)

Select values in this table to see corresponding filters applied to the Registered targets table below.

Targets

Monitoring

Health checks

Attributes

Tags

Registered targets (3)



Deregister

Register targets

 Filter resources by property or value



<


1

>



<input type="checkbox"/>	Instance ID	Name	Port	Zone	Health status	Health status de...
<input type="checkbox"/>	i-08ddd1158ed...	Nginx	80	us-east-1a	 healthy	
<input type="checkbox"/>	i-061da0f4991cf...	Nginx	80	us-east-1a	 healthy	
<input type="checkbox"/>	i-061023815be3...	Nginx	80	us-east-1a	 healthy	

<input checked="" type="checkbox"/>	Name	DNS name	State	VPC ID	Availability Zones
<input checked="" type="checkbox"/>	nginx-load	 nginx-load-1917588052.u...	 Active	vpc-023c40e388099e671	2 Availability Zones

State	VPC ID	Availability Zones	Type	Date created
 Active	vpc-023c40e388099e671	2 Availability Zones	application	July 31, 2023, 20:01 (UTC+07:00)

Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

Thank you for using nginx.

3. add new rule in target group with path: /constant will response 503 error

Listener rules (2) [Info](#)

Traffic received by the listener is routed according to the default action and any additional rules. Rules are evaluated in priority order from the lowest value to the highest value.

Rule limits

Filter rules by property or value



Name tag	Priority	Conditions (If)	Actions (Then)	ARN
503	Pending	Path Pattern is /constant	Return fixed response <ul style="list-style-type: none">Response code: 503Response body: NoResponse content type: text/plain	Pending
Default	Last (default)	If no other rule applies	Forward to target group <ul style="list-style-type: none">123: 1 (100%)Group-level stickiness: Off	ARN

Rule details: 503

Edit ▼

Priority

1

Conditions (If)

If request matches all:
Path Pattern is /constant

Actions (Then)

Return fixed response

- Response code: 503
- Response body: No
- Response content type: text/plain

Rule ARN

Pending

Rule tags (1)

Edit

Tags can help you manage, identify, organize, search for and filter resources.

Key	Value
Name	503

Listener rules (2) Info

Traffic received by the listener is routed according to the default action and any additional rules. Rules are evaluated in priority order from the lowest value to the highest value.

Rule limits

↺

Actions ▼

Add rule

🔍 Filter rules by property or value

⚙️

■	Name tag	Priority	Conditions (If)	Actions (Then) 🔗
■	503	1	Path Pattern is /constant	<div>Return fixed response<ul style="list-style-type: none">Response code: 503Response body: NoResponse content type: text/plain</div>
■	Default	Last (default)	If no other rule applies	<div>Forward to target group<ul style="list-style-type: none">123: 1 (100%)Group-level stickiness: Off</div>

4. creat a lauch configuration / launch template and an Auto Scaling Group with min/desired/max (1/3/5).

Attach created ALB with exist ALB

Launch template version details

ActionsDelete template version

Version

1 (Default)

Description

0.0.1

Date created

2023-07-31T13:32:51.000Z

Created by

arn:aws:iam::125777342244:root

Instance details

Storage

Resource tags

Network interfaces

Advanced details

AMI ID

ami-0f34c5ae932e6f0e4

Instance type

t2.micro

Availability Zone

-

Key pair name

lauch

Security groups

-

Security group IDs

sg-02c86e109eace1e0b

EC2Launch templatesNginx

Nginx (lt-0f4fdf1f312e12ac8)

ActionsDelete template

Launch template details

Launch template ID

lt-0f4fdf1f312e12ac8

Launch template name

Nginx

Default version

1

Owner

arn:aws:iam::125777342244:root

Details

Versions

Template tags

EC2Auto Scaling groups

Auto Scaling groups (1)Info

Launch configurations

Launch templates

Actions

Create Auto Scaling group

Search your Auto Scaling groups

<1>

Name

lauling-nginx

Launch template/configuration

Nginx | Version Default

Instances

0

Status

Updating capacity...

Desired capacity

2

Min

1

Max

5

Edit liting-nginx

Info

Group size

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

3

Minimum capacity

1

Maximum capacity

5

Auto Scaling group updated successfully

×

Auto Scaling groups (1/1)

Info

↻

Launch configurations

Launch templates

Actions

Create Auto Scaling group

Q Search your Auto Scaling groups

< 1 >

⚙

<input checked="" type="checkbox"/>	Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max
<input checked="" type="checkbox"/>	liting-nginx	Nginx Version Default	2	Updating capacity...	3	1	5

Auto Scaling group: liting-nginx

⚙

×

Details

Activity

Automatic scaling

Instance management

Monitoring

Instance refresh






















Group details




Edit
















Auto Scaling group name	Desired capacity	Status	Amazon Resource Name (ARN)
liting-nginx	3	Updating capacity	arn:aws:autoscaling:us-east-1:125777743244:auto-scaling-groups:f9b21ade-0a7...

5. delete one instance in ASG and check if new instance will launched

Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone		Public IP
i-061da0f4991cf98a6	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	e...	44.201.27
i-061023815be397401	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	e...	18.233.10
i-08dddd1158ed3e279	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	e...	54.237.22
i-0856d4106a019db37	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	-	-
i-05f5cc961f8516345	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	-	-
i-04427d2f35655d447	Running	t2.micro	Initializing	No alarms	us-east-1a	-	-

	Name ▾	Instance ID	Instance state ▾	Instance type ▾
	Nginx	i-061da0f4991cf98a6	 Running  	t2.micro
	Nginx	i-061023815be397401	 Running  	t2.micro
	Nginx	i-08dddd1158ed3e279	 Shutting-down  	t2.micro
	—	i-0856d4106a019db37	 Running  	t2.micro
	—	i-05f5cc961f8516345	 Running  	t2.micro

Activity history (3) 				
<div> Filter activity history</div> <div>< 1 > </div>				
Status ▾	Description ▾	Cause ▾	Start time ▾	End
Successful	Launching a new EC2 instance: i-04427d2f35655d447	At 2023-07-31T13:38:10Z a user request update of AutoScalingGroup constraints to min: 1, max: 5, desired: 3 changing the desired capacity from 2 to 3. At 2023-07-31T13:38:16Z an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 2 to 3.	2023 July 31, 08:38:18 PM +07:00	2023 July 31, 08:38:18 PM +07:00
Successful	Launching a new EC2 instance: i-05f5cc961f8516345	At 2023-07-31T13:36:48Z a user request created an AutoScalingGroup changing the desired capacity from 0 to 2. At 2023-07-31T13:37:03Z an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 0 to 2.	2023 July 31, 08:37:05 PM +07:00	2023 July 31, 08:37:05 PM +07:00
Successful	Launching a new EC2 instance: i-0856d4106a019db37	At 2023-07-31T13:36:48Z a user request created an AutoScalingGroup changing the desired capacity from 0 to 2. At 2023-07-31T13:37:03Z an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 0 to 2.	2023 July 31, 08:37:05 PM +07:00	2023 July 31, 08:37:05 PM +07:00

Name ▾	Instance ID	Instance state ▾	Instance type ▾
Nginx	i-061da0f4991cf98a6	 Running  	t2.micro
Nginx	i-061023815be397401	 Running  	t2.micro
—	i-0856d4106a019db37	 Running  	t2.micro
—	i-05f5cc961f8516345	 Running  	t2.micro
—	i-04427d2f35655d447	 Running  	t2.micro