

Module-3 Case Study

Problem Statement:

You work for XYZ Corporation that uses on premise solutions and some limited number of systems. With the increase in requests in their application, the load also increases. So, to handle the load the corporation had to buy more systems almost on regular basis. Realizing the need to cut down the expenses on systems, they decided to move their infrastructure on AWS.

Once migrated, you have been asked to:

1. Manage the scaling requirements of the company by:
 - Deploying multiple compute resources on the cloud as soon as the load increases and the CPU utilization exceeds 80%
 - Removing the resources when the CPU utilization goes under 60%
2. Create a Load balancer to distribute the load between compute resources
3. Route the traffic to the company's domain

Note: You can get a free domain from [Freenom](#)

Instances (1/1) [Info](#)

Connect

Instance state ▾

Actions ▾

Launch instances

< 1 >



Find instance by attribute or tag (case-sensitive)

<input checked="" type="checkbox"/> Name	▼ Instance ID	Instance state	▼ Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	▼ Publi
<input checked="" type="checkbox"/> Web-Server	i-0bc80f7c76de00eb8	Running	t2.micro	Initializing	No alarms	us-east-1d	ec2-3-91-145-119.com...	3.91...

Instance: i-0bc80f7c76de00eb8 (Web-Server)



Details Security Networking Storage Status checks Monitoring Tags

▼ Instance summary [Info](#)

Instance ID

i-0bc80f7c76de00eb8 (Web-Server)

Public IPv4 address

 3.91.145.119 | [open address](#)

Private IPv4 addresses

172.31.94.73

IPv6 address

Hostname type

IP name: ip-172-31-94-73.ec2.internal

Instance state

Running

Public IPv4 DNS

 ec2-3-91-145-119.compute-1.amazonaws.com | [open address](#)

Answer private resource DNS name

IPv4 (A)

Auto-assigned IP address

3.91.145.119 [Public IP]

Private IP DNS name (IPv4 only)

ip-172-31-94-73.ec2.internal

Elastic IP addresses

IAM Role

Instance type

t2.micro

AWS Compute Optimizer finding

Opt-in to AWS Compute Optimizer for recommendations. |

[Learn more](#)

VPC ID

vpc-0b03f01cba75ff067

Subnet ID

subnet-0106a319f599ab40d

Auto Scaling Group name

Quick connect...

User sessions

- 174.129.190.244 (ec2-user)
- 54.159.38.11 (ubuntu)
- 54.159.38.11 (ubuntu) (1)
- 54.159.38.11 (ubuntu) (2)
- 54.163.160.113 (ec2-user)
- 54.197.36.224
- 54.197.36.224 (1)
- 54.86.2.98 (ubuntu)

Session settings



SSH



Telnet



Rsh



Xdmcp



RDP



VNC



FTP



SFTP



Serial



File



Shell



Browser



Mosh



AWS S3



WSL

Basic SSH settings

Remote host Specify username Port

Advanced SSH settings

Terminal settings

Network settings

Bookmark settings

Secure Shell (SSH) session



OK

Cancel

Session settings

X



Basic SSH settings

Remote host * 3.91.145.119

Specify username

ubuntu



Port 22

Advanced SSH settings

Terminal settings

Network settings

Bookmark settings

X11-Forwarding

Compression

Remote environment: Interactive shell

Execute command:

Do not exit after command ends



SSH-browser type: SFTP protocol

Follow SSH path (experimental)

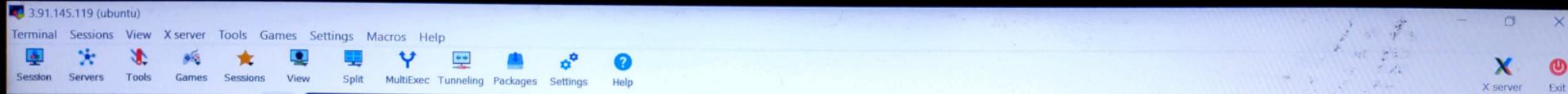
Use private key

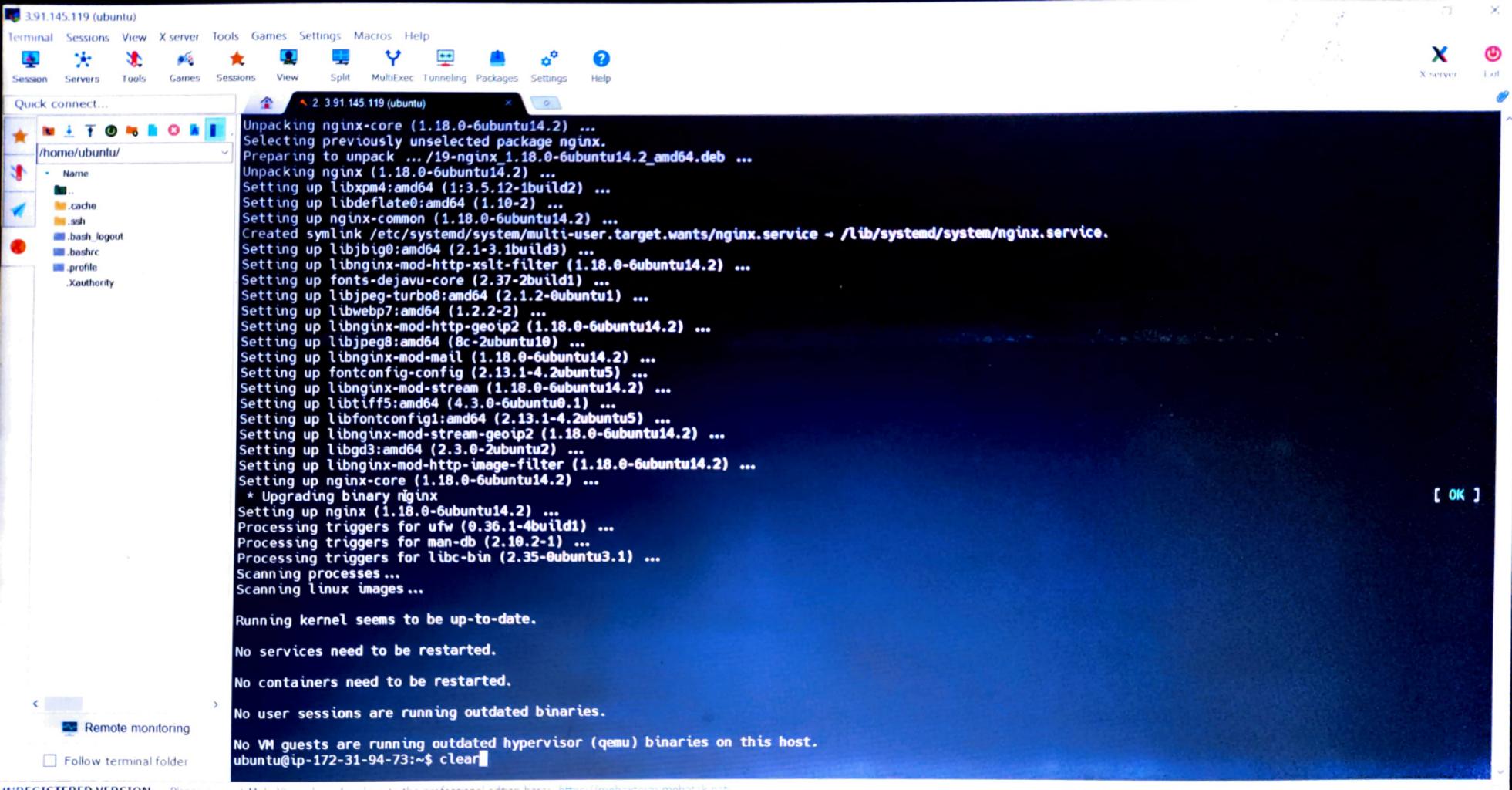
C:\Users\Lenovo\Downloads\Web

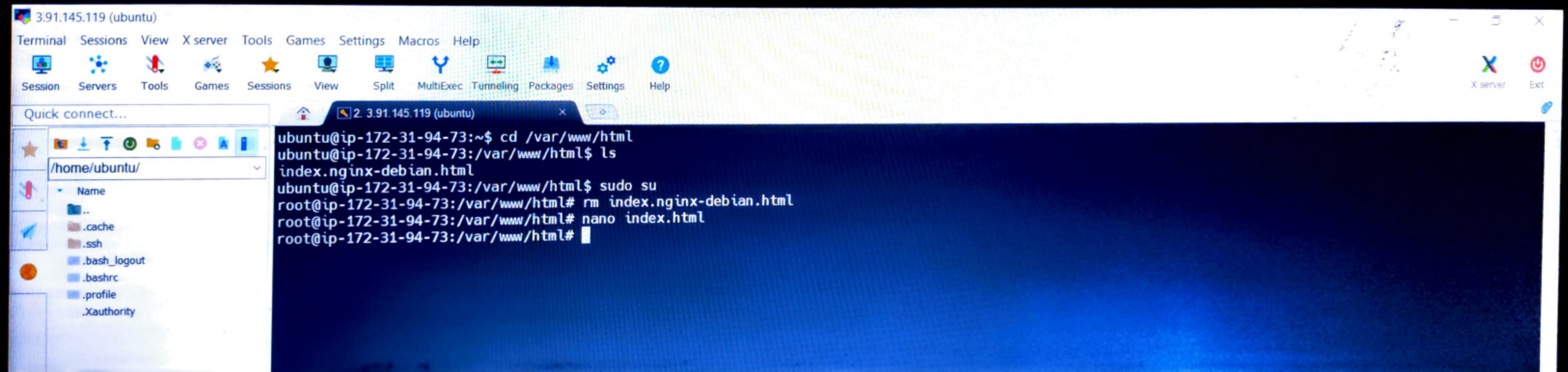
Adapt locales on remote server

Execute macro at session start: <none>









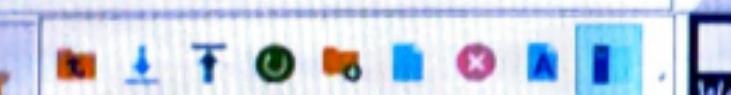
3.91.145.119 (ubuntu)

Terminal Sessions View X server Tools Games Settings Macros Help

Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help

X server Exit

Quick connect...



/home/ubuntu/

Name
..
.cache
.ssh
.bash_logout
.bashrc
.profile

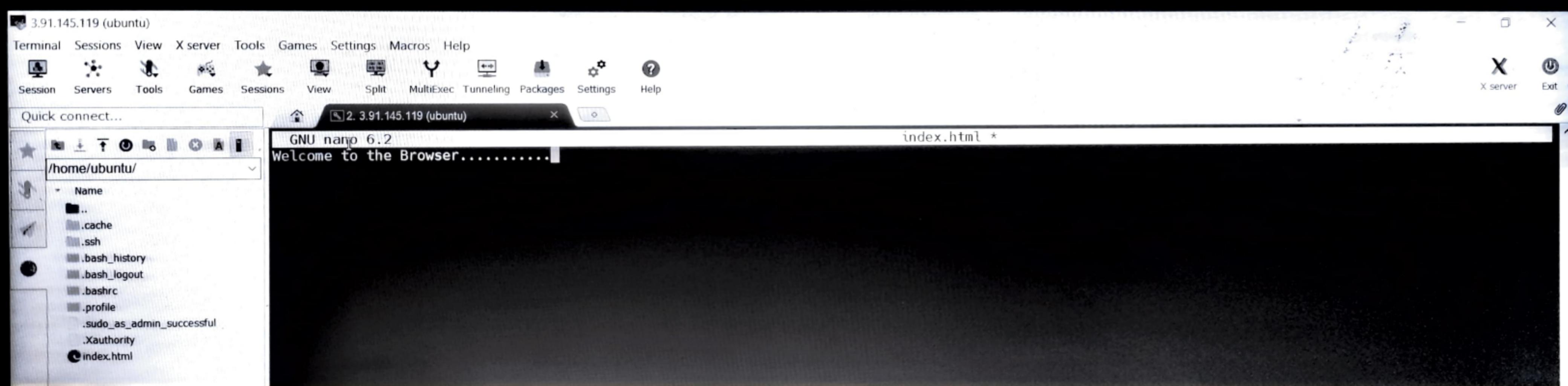
.sudo_as_admin_successful
.Xauthority

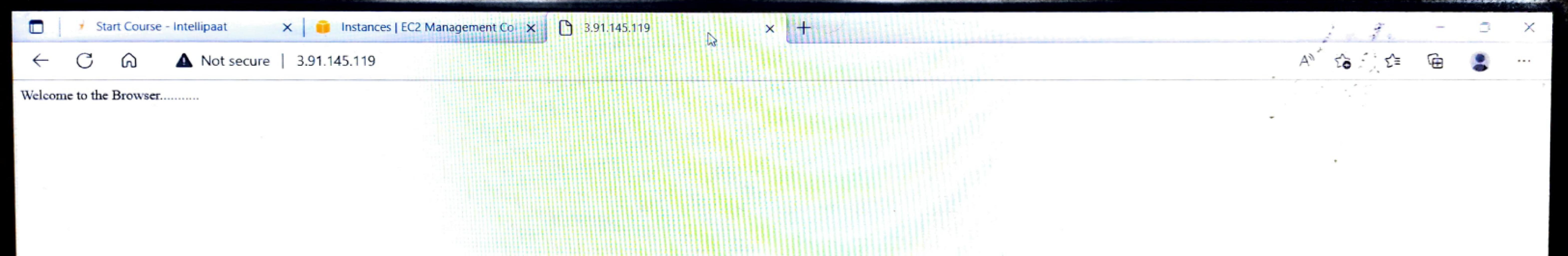
4. 3.91.145.119 (ubuntu)

GNU nano 6.2

Welcome to the Browser!

index.html *





Instances (1/1) [Info](#)

[Find instance by attribute or tag \(case-sensitive\)](#)

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability zone	Actions	Launch instances
Web-Server	i-0bc80f7c76de00eb8	Running	t2.micro	2/2 checks passed	No alarms	us-east-1	Connect	View details

Instance: i-0bc80f7c76de00eb8 (Web-Server)

[Details](#) [Security](#) [Networking](#) [Storage](#) [Status checks](#) [Monitoring](#) [Tags](#)

Instance summary [Info](#)

Instance ID	Public IPv4 address	Private IPv4 addresses
i-0bc80f7c76de00eb8 (Web-Server)	3.91.145.119 open address	172.31.94.73
IPv6 address	Instance state	Public IPv4 DNS
-	Running	ec2-3-91-145-119.compute-1.amazonaws.com open address
Hostname type	Private IP DNS name (IPv4 only)	Elastic IP addresses
IP name: ip-172-31-94-73.ec2.internal	ip-172-31-94-73.ec2.internal	-
Answer private resource DNS name	Instance type	AWS Compute Optimizer finding
IPv4 (A)	t2.micro	Opt-in to AWS Compute Optimizer for recommendations
Auto-assigned IP address	VPC ID	Learn more
3.91.145.119 [Public IP]	vpc-0b03f01cba75ff067	
IAM Role	Subnet ID	Auto Scaling Group name
-	subnet-0106a319f599ab40d	-

Actions ▾

- [Connect](#)
- [View details](#)
- [Manage instance state](#)
- [Instance settings](#)
- [Networking](#)
- [Security](#)
- [Create image](#)
- [Create template from instance](#)
- [Image and templates](#)
- [Monitor and troubleshoot](#)

Launch instances

Create image Info

An image (also referred to as an AMI) defines the programs and settings that are applied when you launch an EC2 instance. You can create an image from the configuration of an existing instance.

Instance ID

i-0bc80f7c76de00eb8 (Web-Server)

Image name

Web-Server

Maximum 127 characters. Can't be modified after creation.

Image description - optional

Image description

Maximum 255 characters

No reboot

Enable

Instance volumes

Volume type	Device	Snapshot	Size	Volume type	IOPS	Throughput	Delete on termination	Encrypted
EBS	/dev/...	Create new snapshot fr...	8	EBS General Purpose S...	100		<input checked="" type="checkbox"/> Enable	<input type="checkbox"/> Enable

[Add volume](#)

During the image creation process, Amazon EC2 creates a snapshot of each of the above volumes.

Tags - optional



aws



Services

Reserved Instances New

Dedicated Hosts

Scheduled Instances

Capacity Reservations

▼ ImagesAMIs New

AMI Catalog

▼ Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

▼ Network & Security

Security Groups

Elastic IPs

Placement Groups

Key Pairs

Network Interfaces

▼ Load Balancing

Load Balancers

Target Groups New**▼ Auto Scaling**

Launch Configurations



Auto Scaling Groups

 Currently creating AMI a**Instances (1) Info**

Find instance by attrib



Name



Web-Server

 **Select an instance**

① Recommendation to not use launch configurations

Amazon EC2 Auto Scaling no longer adds support for new EC2 features to launch configurations and will stop supporting new EC2 instance types after December 31, 2022. We recommend that customers using launch configurations migrate to launch templates. For more information, see [the documentation](#).

EC2 > Launch configurations

Launch configurations (0) [Info](#)

Actions ▾

Copy to launch template ▾

Create launch configuration

 Search launch configurations

Name



AMI ID



Instance type



Spot price



Creation time



No launch configurations found in this region.

[Create launch configuration](#)

Select a launch configuration above





Create launch configuration Info

⚠ Instead of using launch configurations to create your EC2 Auto Scaling groups, we recommend that you use launch templates and make use of the Auto Scaling guidance option. For more information on migrating launch configurations and using launch templates, [see the documentation](#)

[Create launch template](#)

Launch configuration name

Name

Web-Server

Amazon machine image (AMI) Info

AMI

Web-Server



Instance type Info

Instance type

t2.micro (1 vCPUs, 1 GiB, EBS Only)

[Choose instance type](#)

Additional configuration - optional

Purchasing option Info



Assign a security group

- Create a new security group
- Select an existing security group

Security groups

[Copy to new](#)[View rules](#)[<> 1 2 <](#)

<input type="checkbox"/>	Security group ID	Name	VPC ID	Description
<input type="checkbox"/>	sg-0f8a7099ce2855bfc	rds-ec2-mysql-SG	vpc-0b03f01cba75ff067	launch-wizard-4 created 2022-10-02T10:52:38.591Z
<input checked="" type="checkbox"/>	sg-0ecca16b46e70a9d	default	vpc-0b03f01cba75ff067	default VPC security group
<input type="checkbox"/>	sg-08733198ab61401a9	mySG	vpc-0b03f01cba75ff067	sg
<input type="checkbox"/>	sg-09f5dbdbbf64a22d1	launch-wizard-1	vpc-0b03f01cba75ff067	launch-wizard-1 created 2022-08-14T06:32:15.564Z
<input type="checkbox"/>	sg-0c3819ee74280dbc7	launch-wizard-5	vpc-0b03f01cba75ff067	launch-wizard-5 created 2022-10-26T09:18:19.408Z
<input type="checkbox"/>	sg-03f742706910d62d0	rds-sg-ec2-02-10-2022	vpc-0b03f01cba75ff067	allow access from ec2
<input type="checkbox"/>	sg-01a0bcaec80a99fdc	launch-wizard-2	vpc-0b03f01cba75ff067	launch-wizard-2 created 2022-10-01T20:59:03.406Z

 Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

 You will not be able to connect to this instance as the AMI requires port(s) 22 to be open in order to have access. Your current security group doesn't have port(s) 22 open.

<input type="checkbox"/>	sg-08733198ab61401a9	mySG	vpc-0b03f01cba75ff067	sg
<input type="checkbox"/>	sg-09f5dbdbbf64a22d1	launch-wizard-1	vpc-0b03f01cba75ff067	launch-wizard-1 created 2022-08-14T06:32:15.564Z
<input type="checkbox"/>	sg-0c3819ee74280dbc7	launch-wizard-5	vpc-0b03f01cba75ff067	launch-wizard-5 created 2022-10-26T09:18:19.408Z
<input type="checkbox"/>	sg-03f742706910d62d0	rds-sg-ec2-02-10-2022	vpc-0b03f01cba75ff067	allow access from ec2
<input type="checkbox"/>	sg-01a0bcaec80a99fdc	launch-wizard-2	vpc-0b03f01cba75ff067	launch-wizard-2 created 2022-10-01T20:59:03.406Z

⚠️ Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

⚠️ You will not be able to connect to this instance as the AMI requires port(s) 22 to be open in order to have access. Your current security group doesn't have port(s) 22 open.

Key pair (login) Info

Key pair options

Choose an existing key pair



Existing key pair

Web-prod-keypair



- I acknowledge that I have access to the selected private key file (Web-prod-keypair.pem), and that without this file, I won't be able to log into my instance.

Cancel

Create launch configuration

Recommendation to not use launch configurations

Amazon EC2 Auto Scaling no longer adds support for new EC2 features to launch configurations and will stop supporting new EC2 instance types after December 31, 2022. We recommend that customers using launch configurations migrate to launch templates. For more information, [see the documentation](#).

EC2 > Launch configurations

Launch configurations (1/1) [Info](#)

Actions ▾

Copy to launch template ▾

Create launch configuration

 Search launch configurations

< 1 >

<input checked="" type="checkbox"/>	Name	AMI ID	Instance type	Spot price	Creation time
<input checked="" type="checkbox"/>	Web-Server	ami-02c7ab51ba...	t2.micro	-	Wed Nov 02 2022 23:22:48 GMT+0530 (India Standard Time)

Launch configuration: Web-Server

Details

Copy launch configuration

aws Services Search [Alt+S] N. Virginia ▾ VAIBHAV VERMA ▾

Reserved Instances New

Dedicated Hosts

Scheduled Instances

Capacity Reservations

Images

AMIs New

AMI Catalog

Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

Network & Security

Security Groups

Elastic IPs

Placement Groups

Key Pairs

Network Interfaces

Load Balancing

Load Balancers

Target Groups New

Auto Scaling

Launch Configurations

Auto Scaling Groups

Feedback Looking for language selection? Find it in the new United Settings

Amazon EC2 Auto Scaling

helps maintain the availability of your applications

Auto Scaling groups are collections of Amazon EC2 instances that enable automatic scaling and fleet management features. These features help you maintain the health and availability of your applications.

How it works

The diagram shows an 'Auto Scaling group' represented by a blue square with a white cross inside. Below it, four squares represent EC2 instances: two solid blue squares labeled 'Minimum size' and 'Scale out as needed', and two dashed blue squares labeled 'Desired capacity'. A horizontal bracket at the bottom spans all four instances, labeled 'Maximum size'.

Create Auto Scaling group

Get started with EC2 Auto Scaling by creating an Auto Scaling group.

Create Auto Scaling group

Pricing

Amazon EC2 Auto Scaling features have no additional fees beyond the service fees for Amazon EC2, CloudWatch (for scaling policies), and the other AWS resources that you use. Visit the pricing page of each service to learn more.

Getting started

[What is Amazon EC2 Auto Scaling?](#)

[Getting started with Amazon EC2 Auto Scaling](#)

[Set up a scaled and load-balanced application](#)

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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.

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.



[Create a launch template](#)



Cancel

Next

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

Name

Auto Scaling group name

Enter a name to identify the group.

Web-Server

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

Launch configuration Info

[Switch to launch template](#)

⚠ Instead of using launch configurations to create your EC2 Auto Scaling groups, we recommend that you use launch templates and make use of the Auto Scaling guidance option. For more information on migrating launch configurations and using launch templates, [see the documentation](#) 

Launch configuration

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

Web-Server



[Create a launch configuration](#) 

Launch configuration

Web-Server

AMI ID

ami-02c7ab51ba6a346ad

Date created

Wed Nov 02 2022 23:22:48

GMT+0530 (India Standard Time)

Security groups

sg-0eccaef16b46e70a9d 

Instance type

t2.micro

Key pair name

Web-prod-keypair

Cancel

Next



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

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-0b03f01cba75ff067

172.31.0.0/16 Default



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



us-east-1a | subnet-0fa59c1c0cf77468a X

172.31.16.0/20 Default

us-east-1b | subnet-0e5d9322efef5f0177 X

172.31.32.0/20 Default

us-east-1c | subnet-0c130f14b2821e65a X

172.31.0.0/20 Default

us-east-1d | subnet-0106a319f599ab40d X

172.31.80.0/20 Default

us-east-1e | subnet-098f838aa75f6625b X

172.31.48.0/20 Default

us-east-1f | subnet-0ca07fef3bfe84bc0 X

172.31.64.0/20 Default

Create a subnet

Cancel

Previous

Skip to review

Next

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

Configure advanced options Info

Choose a load balancer to distribute incoming traffic for your application across instances to make it more reliable and easily scalable. You can also set options that give you more control over health check replacements and monitoring.

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 a new load balancer

Define a new load balancer to create for attachment to this Auto Scaling group.

Load balancer type

Choose from the load balancer types offered below. Type selection cannot be changed after the load balancer is created. If you need a different type of load balancer than those offered here, visit the [Load Balancing console](#).

Application Load Balancer

HTTP, HTTPS

Network Load Balancer

TCP, UDP, TLS

Load balancer name

Name cannot be changed after the load balancer is created.

Web-Server-1

Load balancer scheme

Scheme cannot be changed after the load balancer is created.

Internal

Internet-facing

us-east-1b

subnet-0e5d9322efe5f0177



Listeners and routing

If you require secure listeners, or multiple listeners, you can configure them from the [Load Balancing console](#) after your load balancer is created.

Protocol

Port

Default routing (forward to)

HTTP

80

Create a target group



New target group name

An instance target group with default settings will be created.

Web-Server-1

Tags - optional

Consider adding tags to your load balancer. Tags enable you to categorize your AWS resources so you can more easily manage them.

[Add tag](#)

50 remaining



Health checks - optional

Health check type [Info](#)

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.

300

seconds

Additional settings - optional

Tags - optional

Consider adding tags to your load balancer. Tags enable you to categorize your AWS resources so you can more easily manage them.

Add tag

50 remaining

Health checks - optional**Health check type** [Info](#)

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.

300 seconds

Additional settings - optional**Monitoring** [Info](#) Enable group metrics collection within CloudWatch**Default instance warmup** [Info](#)

The amount of time that CloudWatch metrics for new instances do not contribute to the group's aggregated instance metrics, as their usage data is not reliable yet.

 Enable default instance warmup[Cancel](#)[Previous](#)[Skip to review](#)[Next](#)

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

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 the group.

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**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 leave it to the scaling policy to add and remove capacity as needed to achieve that outcome.

 None

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

capacity limits. Your desired capacity must be within the limit range.

Desired capacity

3

Minimum capacity

2

Maximum capacity

8



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 leave it to the scaling policy to add and remove capacity as needed to achieve that outcome.



None

Instance scale-in protection - optional

Instance scale-in protection

If protect from scale in is enabled, newly launched instances will be protected from scale in by default.

 Enable instance scale-in protection

Cancel

Previous

Skip to review

Next

No scaling policy

Instance scale-in protection

Instance scale-in protection

- Enable instance protection from scale in

Step 5: Add notifications

[Edit](#)

Notifications

No notifications

Step 6: Add tags

[Edit](#)

Tags (0)

Key	Value	Tag new instances
-----	-------	-------------------

No tags

[Cancel](#)[Create Auto Scaling group](#)

① Predictive scaling policy now supports custom metrics, which also allows you to retain metrics across Blue/Green deployments.

Learn more X

Web-Server, 1 Load balancer, 1 Target group, 1 Listener created successfully. 1 new target group has been attached to ASG.

X

EC2 > Auto Scaling groups

Auto Scaling groups (1/1) Info



Edit

Delete

Create an Auto Scaling group

< 1 > @

Q Search your Auto Scaling groups

<input checked="" type="checkbox"/> Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max	A.
<input checked="" type="checkbox"/> Web-Server	Web-Server	3	-	3	2	8	US...

Auto Scaling group: Web-Server

⊕ X

Details

Activity

Automatic scaling

Instance management

Monitoring

Instance refresh

Group details

Edit

Desired capacity

3

Auto Scaling group name

Web-Server

Minimum capacity

2

Date created

Thu Nov 03 2022 21:44:38 GMT+0530 (India Standard Time)

Maximum capacity

8

Amazon Resource Name (ARN)

arn:aws:autoscaling:us-east-1:111952067877:autoScalingGroup:ea65ed66-8c23-4792-8491-6hd3a5a459:autoScalingGroupName/Web-Server

New EC2 Experience
Tell us what you think

EC2 Dashboard

EC2 Global View

Events

Tags

Limits

Instances

Instances New

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances New

Dedicated Hosts

Scheduled Instances

Capacity Reservations

Images

AMIs New

AMI Catalog

Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

Instances (3/3) Info

Find instance by attribute or tag (case-sensitive)

Instance state = running

Clear filters



Connect

Instance state ▾

Actions ▾

Launch Instances

< 1 >



<input checked="" type="checkbox"/> Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IP
<input checked="" type="checkbox"/> -	i-0cd7e1ba0f7403dae	<input checked="" type="radio"/> Running		t2.micro	<input checked="" type="radio"/> 2/2 checks passed	No alarms	+ us-east-1e	ec2-54-236-17-6.comp...
<input checked="" type="checkbox"/> -	i-0454eaca8665e667f	<input checked="" type="radio"/> Running		t2.micro	<input checked="" type="radio"/> 2/2 checks passed	No alarms	+ us-east-1a	ec2-54-160-247-70.co...
<input checked="" type="checkbox"/> -	i-0f579900c5ae8034f	<input checked="" type="radio"/> Running		t2.micro	<input checked="" type="radio"/> 2/2 checks passed	No alarms	+ us-east-1d	ec2-44-211-222-22.co...

Instances: i-0cd7e1ba0f7403dae, i-0454eaca8665e667f, i-0f579900c5ae8034f

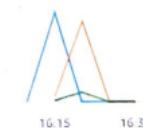
Monitoring

1h 3h 12h 1d 3d 1w Custom

Add to dashboard

CPU utilization (%)

Percent



Status check failed (any) (count)

Count

1

0.5

0

15:45

16:00

16:15

16:30

Status check failed (instance) (count)

Count

1

0.5

0

15:45

16:00

16:15

16:30

Status check failed (system) (count)

Count

1

0.5

0

15:45

16:00

16:15

16:30

Network in (bytes)

Bytes

Network out (bytes)

Bytes

Network packets in (count)

Count

Network packets out (count)

Count

AWS Services EC2 X

EC2 > Auto Scaling groups

Auto Scaling groups (1/1) [Info](#)

[Search your Auto Scaling groups](#)

[Create an Auto Scaling group](#)

<input checked="" type="checkbox"/> Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max	Avg...
<input checked="" type="checkbox"/> Web-Server	Web-Server	3	-	3	2	8	us-e...

Auto Scaling group: Web-Server

[Details](#) [Activity](#) [Automatic scaling](#) [Instance management](#) [Monitoring](#) [Instance refresh](#)

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

[Actions](#) [Create dynamic scaling policy](#)

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

[Actions](#) [Create predictive scaling policy](#)



Create dynamic scaling policy

Policy type

Step scaling

Scaling policy name

Scale Up

CloudWatch alarm

Choose an alarm that can scale capacity whenever:

▼

C

[Create a CloudWatch alarm](#)



Take the action

Add



0

capacity units



Add step

Instances need

300

seconds warm up before including in metric

Cancel



Step 1

Specify metric and conditions

Step 2

Configure actions

Step 3

Add name and description

Step 4

Preview and create

Specify metric and conditions

Metric

Graph

Preview of the metric or metric expression and the alarm threshold.

CloudWatch Alarms > Create alarm

Step
Spec
cond

Select metric

 CPUUtilization[Browse](#) | [Query](#) | **Graphed metrics (1)** | [Options](#) | [Source](#)[Add math ▾](#) | [Add query ▾](#)

Metrics (34)

All > EC2 > By Auto Scaling Group

Search for any metric, dimension or resource id

[Graph with SQL](#) | [Graph search](#)

<input type="checkbox"/>	Metric name
<input type="checkbox"/>	AutoScalingGroupName (34)
<input type="checkbox"/>	Web-Server ▾
<input checked="" type="checkbox"/>	Web-Server ▾
<input type="checkbox"/>	CPUUtilization ▾
<input type="checkbox"/>	NetworkIn ▾
<input type="checkbox"/>	NetworkOut ▾
<input type="checkbox"/>	DiskReadBytes ▾
<input type="checkbox"/>	DiskWriteBytes ▾

Cancel

Select metric



AutoScalingGroupName

Web-Server

Statistic

Average



Period

5 minutes



Conditions

Threshold type

 Static

Use a value as a threshold

 Anomaly detection

Use a band as a threshold

Whenever CPUUtilization is...

Define the alarm condition.

 Greater

> threshold

 Greater/Equal

>= threshold

 Lower/Equal

<= threshold

 Lower

< threshold

than...

Define the threshold value.

80



Must be a number

▶ Additional configuration

Cancel

Next

Step 1

Specify metric and
conditions

Step 2

Configure actions

Step 3

Add name and
description

Step 4

Preview and create

Configure actions

Notification

[Add notification](#)

Auto Scaling action

[Add Auto Scaling action](#)

EC2 action

This action is only available for EC2 Per-Instance Metrics.

[Add EC2 action](#)

Systems Manager action Info

This action will create an Incident or OpsItem in Systems Manager when the alarm is **In alarm** state.

[Add Systems Manager action](#)

[Cancel](#)

[Previous](#)

[Next](#)

Step 1

Specify metric and conditions

Step 2

Configure actions

Step 3

Add name and description

Step 4

Preview and create

Add name and description

Name and description

Alarm name

CPU>80%

Alarm description - optional

Alarm description

Up to 1024 characters (0/1024)

Cancel

Previous

Next



Whenever **CPUUtilization** is
Greater (>)

than...

80

► Additional configuration

Step 2: Configure actions

Edit

Actions

No actions

You don't have any actions for this alarm.

Step 3: Add name and description

Edit

Name and description

Name

CPU>80%

Description

Cancel

Previous

Create alarm



[Alt+S]



N. Virginia ▾

VAIBHAV VERMA ▾

View alarm



SuccessFully created alarm CPU<60%.

CloudWatch > Alarms

Alarms (2)

 Hide Auto Scaling alarms Clear selection Create composite alarm Actions ▾ Create alarm

<input type="checkbox"/> Name	State	Last state update	Conditions	Actions
<input type="checkbox"/> CPU<60%	⚠ In alarm	2022-11-03 22:38:06	CPUUtilization < 60 for 1 datapoints within 5 minutes	No actions
<input type="checkbox"/> CPU>80%	🟢 OK	2022-11-03 22:36:33	CPUUtilization > 80 for 1 datapoints within 5 minutes	No actions

Create dynamic scaling policy

Policy type

Step scaling

Scaling policy name

Scale Up

CloudWatch alarm

Choose an alarm that can scale capacity whenever:

CPU>80%

[Create a CloudWatch alarm](#)

breaches the alarm threshold: CPUUtilization > 80 for 1 consecutive periods of 300 seconds for the metric dimensions:

AutoScalingGroupName = Web-Server

Take the action

Add

1 capacity units when 80 <= CPUUtilization < +infinity

[Add step](#)

Instances need

300

seconds warm up before including in metric

[Cancel](#)[Create](#)

Auto Scaling groups (1/1) [Info](#)

Edit

Delete

Create an Auto Scaling group

< 1 >

 Search your Auto Scaling groups

<input checked="" type="checkbox"/> Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max	A.
<input checked="" type="checkbox"/> Web-Server	Web-Server	3	-	3	2	8	us...

Auto Scaling group: Web-Server



Details

Activity

Automatic scaling

Instance management

Monitoring

Instance refresh

Dynamic scaling policies (1/1) [Info](#)

Actions ▾

Create dynamic scaling policy

< 1 >

Scale Up



Step scaling

Enabled

CPU>80%

breaches the alarm threshold: CPUUtilization > 80 for 1 consecutive periods of 300 seconds
for the metric dimensions:

AutoScalingGroupName = Web-Server

Add 1 capacity units when 80 <= CPUUtilization < +infinity



Create dynamic scaling policy

Policy type

Step scaling

Scaling policy name

Scale Down

CloudWatch alarm

Choose an alarm that can scale capacity whenever:

CPU<60%



[Create a CloudWatch alarm](#)

breaches the alarm threshold: CPUUtilization < 60 for 1 consecutive periods of 300 seconds for the metric dimensions:

AutoScalingGroupName = Web-Server

Take the action

Remove

1

capacity units



when

60

>=

CPUUtilization > -infinity

[Add step](#)

Cancel

Create

aws Services EC2 X

EC2 > Auto Scaling groups

Auto Scaling groups (1/1) Info

Search your Auto Scaling groups

Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max	A.
Web-Server	Web-Server	3	-	3	2	8	us...

Auto Scaling group: Web-Server

Scale Down

Step scaling

Enabled

No alarm selected

Remove 1 capacity units when $+\infty \leq \text{Metric name} < 0$

Scale Up

Step scaling

Enabled

CPU>80%

breaches the alarm threshold: CPUUtilization > 80 for 1 consecutive periods of 300 seconds for the metric dimensions:

AutoScalingGroupName = Web-Server

Add 1 capacity units when $80 \leq \text{CPUUtilization} < +\infty$

300 seconds to warm up after each step

Predictive scaling policies (0) Info

Feedback Looking for language selection? Find it in the new Unified Settings

Actions Create predictive scaling policy

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Reserved Instances [New](#)

Dedicated Hosts

Scheduled Instances

Capacity Reservations

Images [New](#)

AMIs [New](#)

AMI Catalog

Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

Network & Security

Security Groups

Elastic IPs

Placement Groups

Key Pairs

Network Interfaces

Load Balancing

Load Balancers

Target Groups [New](#)

Auto Scaling

Launch Configurations

Auto Scaling Groups

Create Load Balancer Actions ▾

Filter by tags and attributes or search by keyword K < 1 to 1 of 1 > X

Name	DNS name	State	VPC ID	Availability Zones	Type	Created At	Monitoring
Web-Server-1	Web-Server-1-625766128.us-east-1.elb.amazonaws.com	Active	vpc-0b03f01cba75ff067	us-east-1d, us-east-1e,	application	November 3, 2022 at 9:44:33	

Load balancer: Web-Server-1

Description [Listeners](#) Monitoring Integrated services Tags

Basic Configuration

Name	Web Server-1
ARN	arn:aws:elasticloadbalancing:us-east-1:111952067877:loadbalancer/app/Web-Server-1/58e291e66c10e141
DNS name	Web-Server-1-625766128.us-east-1.elb.amazonaws.com (A Record)
State	Active
Type	application
Scheme	internet-facing
IP address type	IPv4
Edit IP address type	
VPC	vpc-0b03f01cba75ff067
Availability Zones	subnet-0106a319f599ab40d - us-east-1d (IPv4 address: Assigned by AWS)
	subnet-098f838aa75ff6625b - us-east-1e (IPv4 address: Assigned by AWS)
	subnet-0c130f14b2821e65a - us-east-1c (IPv4 address: Assigned by AWS)