

Autoscaling group

Step-1: create a VPC environment or use default. If your using own VPC. Create VPC, subnets, internet gateway, route table, NAT gateway. Create security groups, load balancer, target group.

Step-2: Create launch instance

☰

EC2 > Launch templates > Create launch template

Create launch template

Creating a launch template allows you to create a saved instance configuration that can be reused, shared and launched at a later time. Temp versions.

Launch template name and description

Launch template name - *required*

launch-instance-public

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

Template version description

launch-instance-public

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

▶ **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.

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.

▼ Application and OS Images (Amazon Machine Image) Info

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

Q Search our full catalog including 1000s of application and OS images

Recents

Quick Start

Don't include in launch template

Amazon Linux

aws

macOS

Mac

Ubuntu

ubuntu

Windows

Microsoft

Red Hat

Red Hat

SUSE Linux

Debian

debian

>

Q

Browse more AMIs

Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Amazon Linux 2023 AMI
ami-0d2614eafc1b0e4d2 (64-bit (x86), uefi-preferred) / ami-0f6168e963366cd18 (64-bit (Arm), uefi)
Virtualization: hvm ENA enabled: true Root device type: ebs

Free tier eligible ▼

Description

Amazon Linux 2023 is a modern, general purpose Linux-based OS that comes with 5 years of long term support. It is optimized for AWS and designed to provide a secure, stable and high-performance execution environment to develop and run your cloud applications.

▼ Instance type Info | Get advice

Instance type

t2.micro

Family: t2 1 vCPU 1 GiB Memory Current generation: true On-Demand Linux base pricing: 0.0124 USD per Hour On-Demand Windows base pricing: 0.017 USD per Hour On-Demand RHEL base pricing: 0.0268 USD per Hour On-Demand Ubuntu Pro base pricing: 0.0142 USD per Hour On-Demand SUSE base pricing: 0.0124 USD per Hour

Free tier eligible ▼

☐ All generations

Compare instance types

Additional costs apply for AMIs with pre-installed software

▼ 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

Key_2.1.25 ▼

Create new key pair

▼ Network settings Info

▼ Network settings

Info

Subnet

Info

Don't include in launch template

▼

↻ Create new subnet

↗

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

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

▼

public-sg-1 sg-0171dff314bf5f460

×

VPC: vpc-05ec5e2208de8edac

↻ Compare security group rules

► Advanced network configuration

▼ Storage (volumes)

Info

EBS Volumes

Hide details

► Volume 1 (AMI Root) (8 GiB, EBS, General purpose SSD (gp3), 3000 IOPS)

AMI Volumes are not included in the template unless modified

EC2 IAM VPC RDS EFS

EC2 > Launch templates > Create launch template

2

Allow tags in metadata

Info

Don't include in launch template

▼

User data - optional

Info

Upload a file with your user data or enter it in the field.

Choose file

```
#!/bin/bash
yum -y install httpd
echo "public on $(hostname -n) " > /var/www/html/index.html
systemctl enable --now httpd
```

☐ User data has already been base64 encoded

▼ Summary

Software Image (AMI)

Amazon Linux 2023 AMI 2023.6.2...read more

ami-0d2614eafc1b0e4d2

Virtual server type (instance type)

t2.micro

Firewall (security group)

public-sg-1

Storage (volumes)

1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

×

Cancel

Create launch template

Launch Templates (1)

Info

↻ Actions

Create launch template

Search

< 1 >

⚙

<input type="checkbox"/>	Launch Template ID	Launch Template Name	Default Version	Latest Version	Create Time	Created By	
<input type="checkbox"/>	lt-0f9cff795b59c7a46	launch-instance-public	1	1	2025-01-21T06:58:15.000Z	arn:aws:iam::277707135838:root	

Step-3: Create autoscaling group

EC2

>

Auto Scaling groups

>

Create Auto Scaling group

Step 1

Choose launch template

Step 2

Choose instance launch options

Step 3 - optional

Integrate with other services

Step 4 - optional

Configure group size and scaling

Step 5 - optional

Add notifications

Step 6 - optional

Add tags

Step 7

Review

Choose launch template

Info

Specify a launch template that contains settings common to all EC2 instances that are launched by this Auto Scaling group.

Name

Auto Scaling group name

Enter a name to identify the group.

asg-public

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

Launch template

Info

For accounts created after May 31, 2023, the EC2 console only supports creating Auto Scaling groups with launch templates. Creating Auto Scaling groups with launch configurations is not recommended but still available via the CLI and API until December 31, 2023.

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.

launch-instance-public

Create a launch template

Version

Default (1)

Create a launch template version

Description

Launch template

Instance type

EC2

>

Auto Scaling groups

>

Create Auto Scaling group

Step 6 - optional

Add tags

Step 7

Review

t2.micro

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-05ec5e2208de8edac (vpc-01)

192.168.0.0/16

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-south-1a | subnet-0daeb62decdbbf0d5 (public-sub-a)

192.168.1.0/28

ap-south-1b | subnet-0b6867cd296089eff (public-sub-b)

192.168.3.0/28

Create a subnet

Availability Zone distribution - new

Auto Scaling automatically balances instances across Availability Zones. If launch failures occur in a zone, select a strategy.

Balanced best effort

If launches fail in one Availability Zone, Auto Scaling will attempt to launch in another healthy Availability Zone.

Balanced only

If launches fail in one Availability Zone, Auto Scaling will continue to attempt to launch in the unhealthy Availability Zone to preserve balanced distribution.

EC2

>

Auto Scaling groups

>

Create Auto Scaling group

Step 2

Choose instance launch options

Step 3 - optional

Integrate with other services

Step 4 - optional

Configure group size and scaling

Step 5 - optional

Add notifications

Step 6 - optional

Add tags

Step 7

Review

Use a load balancer to distribute network traffic across multiple servers. Enable service-to-service communications with VPC Lattice. Shift resources away from impaired Availability Zones with zonal shift. You can also customize health check replacements and monitoring.

Load balancing

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

tg-public-1 | HTTP

Application Load Balancer: public-alb

VPC Lattice integration options

Info

To improve networking capabilities and scalability, integrate your Auto Scaling group with VPC Lattice. VPC Lattice facilitates communications between AWS services and helps you connect and manage your applications across compute services in AWS.

CloudShell Feedback

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EC2 > Auto Scaling groups > Create Auto Scaling group

Application Recovery Controller (ARC) zonal shift - *new* [Info](#)

During an Availability Zone impairment, target instance launches towards other healthy Availability Zones.

☐ Enable zonal shift

New instance launches will be retargeted towards healthy Availability Zones until the zonal shift is canceled.

Health checks

Health checks increase availability by replacing unhealthy instances. When you use multiple health checks, all are evaluated, and if at least one fails, instance replacement occurs.

EC2 health checks

[Always enabled](#)

Additional health check types - *optional* [Info](#)

☒ Turn on Elastic Load Balancing health checks [Recommended](#)

Elastic Load Balancing monitors whether instances are available to handle requests. When it reports an unhealthy instance, EC2 Auto Scaling can replace it on its next periodic check.

EC2 Auto Scaling will start to detect and act on health checks performed by Elastic Load Balancing. To avoid unexpected terminations, first verify the settings of these health checks in the [Load Balancer console](#)

X

☐ Turn on VPC Lattice health checks

VPC Lattice can monitor whether instances are available to handle requests. If it considers a target as failed a health check, EC2 Auto Scaling replaces it after its next periodic check.

☐ Turn on Amazon EBS health checks

EBS monitors whether an instance's root volume or attached volume stalls. When it reports an unhealthy volume, EC2 Auto Scaling can replace the instance on its next periodic health check.

Health check grace period [Info](#)

This time period delays the first health check until your instances finish initializing. It doesn't prevent an instance from terminating when placed into a non-running state.

30 seconds

Step 1

Choose launch template

Step 2

Choose instance launch options

Step 3 - optional

Integrate with other services

Step 4 - optional

Configure group size and scaling

Step 5 - optional

Add notifications

Step 6 - optional

Add tags

Step 7

Review

Configure group size and scaling - *optional* [Info](#)

Define your group's desired capacity and scaling limits. You can optionally add automatic scaling to adjust the size of your group.

Group size [Info](#)

Set the initial size of the Auto Scaling group. After creating the group, you can change its size to meet demand, either manually or by using automatic scaling.

Desired capacity type

Choose the unit of measurement for the desired capacity value. vCPUs and Memory(GiB) are only supported for mixed instances groups configured with a set of instance attributes.

Units (number of instances)

Desired capacity

Specify your group size.

2

Scaling [Info](#)

You can resize your Auto Scaling group manually or automatically to meet changes in demand.

Scaling limits

Set limits on how much your desired capacity can be increased or decreased.

Min desired capacity

2

Equal or less than desired capacity

Max desired capacity

5

Equal or greater than desired capacity

Automatic scaling - *optional*

Scaling limits

Set limits on how much your desired capacity can be increased or decreased.

Min desired capacity

2

Equal or less than desired capacity

Max desired capacity

5

Equal or greater than desired capacity

Automatic scaling - *optional*

Choose whether to use a target tracking policy [Info](#)

You can set up other metric-based scaling policies and scheduled scaling after creating your Auto Scaling group.

☐ No scaling policies

Your Auto Scaling group will remain at its initial size and will not dynamically resize to meet demand.

☒ Target tracking scaling policy

Choose a CloudWatch metric and target value and let the scaling policy adjust the desired capacity in proportion to the metric's value.

Scaling policy name

Target Tracking Policy

Metric type [Info](#)

Monitored metric that determines if resource utilization is too low or high. If using EC2 metrics, consider enabling detailed monitoring for better scaling performance.

Average CPU utilization

Target value

40

Instance warmup [Info](#)

30 seconds

☐ Attachments to create during instance launch

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Step 1: Choose launch template

Step 2: Choose instance launch options

Step 3 - optional: Integrate with other services

Step 4 - optional: Configure group size and scaling

Step 5 - optional: Add notifications

Step 6 - optional: Add tags

Step 7: Review

Review

Step 1: Choose launch template

Group details

Auto Scaling group name: asg-public

Launch template

Launch template	Version	Description
launch-instance-public lt-0f9c7f795b59c7a46	Default	launch-instance-public

Step 2: Choose instance launch options

Network

VPC: vpc-05ec5e2208de8edac

Availability Zones and subnets

Availability Zone	Subnet	Subnet CIDR range
ap-south-1a	subnet-0dae62decdbbf0d5	192.168.1.0/28

EC2 > Auto Scaling groups

Auto Scaling groups (1)

Search your Auto Scaling groups

Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max	Availability Zones
asg-public	launch-instance-public Version Default	2	-	2	2	5	ap-south-1b, ap-south-1a

Step-4: Check whether instances is add or not

Instances (2)

Find Instance by attribute or tag (case-sensitive)

Running

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
	i-0d251636ac1740b2f	Running	t2.micro	Initializing	View alarms +	ap-south-1b	-
	i-07b7d034ae100d613	Running	t2.micro	Initializing	View alarms +	ap-south-1a	-

Step-5: Increase the load and check whether it is creating new instance or not

```
[root@ip-192-168-1-14 ~]# dd if=/dev/zero of=/dev/null &
[1] 26417
[root@ip-192-168-1-14 ~]# dd if=/dev/zero of=/dev/null &
[2] 26418
[root@ip-192-168-1-14 ~]# dd if=/dev/zero of=/dev/null &
[3] 26419
[root@ip-192-168-1-14 ~]# dd if=/dev/zero of=/dev/null &
[4] 26420
[root@ip-192-168-1-14 ~]# dd if=/dev/zero of=/dev/null &
[5] 26421
[root@ip-192-168-1-14 ~]#
```

```

top - 07:07:21 up 3 min, 2 users, load average: 1.41, 0.48, 0.19
Tasks: 117 total, 6 running, 111 sleeping, 0 stopped, 0 zombie
%Cpu(s): 58.2 us, 40.5 sy, 0.0 ni, 0.0 id, 0.0 wa, 0.0 hi, 0.0 si, 1.3 st
MiB Mem : 949.5 total, 483.5 free, 158.7 used, 307.3 buff/cache
MiB Swap: 0.0 total, 0.0 free, 0.0 used. 647.5 avail Mem

```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
26417	root	20	0	221400	1012	924	R	20.1	0.1	0:06.32	dd
26418	root	20	0	221400	1016	924	R	20.1	0.1	0:04.51	dd
26420	root	20	0	221400	1016	924	R	20.1	0.1	0:04.07	dd
26421	root	20	0	221400	1016	924	R	19.7	0.1	0:03.90	dd
26419	root	20	0	221400	1016	924	R	19.4	0.1	0:04.20	dd
1	root	20	0	106204	17412	10596	S	0.0	1.8	0:01.02	systemd
2	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kthreadd
3	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	rcu_gp
4	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	rcu_par_gp
5	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	slub_flushwq
6	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	netns
7	root	20	0	0	0	0	I	0.0	0.0	0:00.00	kworker/0:0-cgroup_destroy
8	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/0:0H-events_highpri
9	root	20	0	0	0	0	I	0.0	0.0	0:00.11	kworker/u30:0-writeback
10	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	mm_percpu_wq
11	root	20	0	0	0	0	I	0.0	0.0	0:00.00	rcu_tasks_kthread
12	root	20	0	0	0	0	I	0.0	0.0	0:00.00	rcu_tasks_rude_kthread
13	root	20	0	0	0	0	I	0.0	0.0	0:00.00	rcu_tasks_trace_kthread
14	root	20	0	0	0	0	S	0.0	0.0	0:00.15	ksoftirqd/0

Instances (1/3) Info

Last updated less than a minute ago

Find Instance by attribute or tag (case-sensitive)

Running

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
<input type="checkbox"/>	i-0d251636ac1740b2f	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1b	-
<input checked="" type="checkbox"/>	i-07b7d034ae100d613	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1a	-
<input type="checkbox"/>	i-0f95ba4db4c43ea0f	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1a	-

Instances (1/5) Info

Last updated less than a minute ago

Find Instance by attribute or tag (case-sensitive)

Running

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
<input type="checkbox"/>	i-0d251636ac1740b2f	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1b	-
<input type="checkbox"/>	i-025587e3299f1f981	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1b	-
<input checked="" type="checkbox"/>	i-07b7d034ae100d613	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1a	-
<input type="checkbox"/>	i-0f95ba4db4c43ea0f	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1a	-
<input type="checkbox"/>	i-05659e206c949006c	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1a	-

Step-last: when load reduces it terminate the instance

Instances (1/9) Info

Last updated less than a minute ago

Find Instance by attribute or tag (case-sensitive)

All states

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
<input type="checkbox"/>	i-04a88178c3b0248d0	Terminated	t2.micro	-	View alarms +	ap-south-1b	-
<input type="checkbox"/>	i-0c11a96ac263a5f88	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1b	-
<input type="checkbox"/>	i-00b9f879373cad807	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1b	-
<input type="checkbox"/>	i-0b8d65fe41057a826	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1b	-
<input checked="" type="checkbox"/>	i-09c5258875ef67eb8	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1a	-
<input type="checkbox"/>	i-00cfd1c0a40b43f82	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1a	-
<input type="checkbox"/>	i-032cbff97df316fa9	Terminated	t2.micro	-	View alarms +	ap-south-1a	-
<input type="checkbox"/>	i-05457697b2ebaae50	Terminated	t2.micro	-	View alarms +	ap-south-1a	-
<input type="checkbox"/>	i-05dd5c4099bda6e56	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1a	-