

AWS cloud based infrastructure security project Part1

Iam User with Admin Rights Created

The screenshot shows the AWS IAM User Groups page. On the left, there's a sidebar with 'Identity and Access Management (IAM)' selected. The main area displays a table titled 'User groups (2)'. The table has columns for 'Group name', 'Users', 'Permissions', and 'Creation time'. One row shows 'AdminGroup' with '1 User' and 'Not defined' permissions, created '3 minutes ago'. A green banner at the top says 'Policies attached to this user group.' Below the table, another section for 'User groups (2)' shows the same information for 'AdminGroup'.

//////////

Attaching Admin Access user and Policy to AdminGroup

The screenshot shows the AWS IAM User Groups page. The 'Users' tab is selected for the 'AdminGroup' table. It lists one user, 'iam_user_admin_rights', with details like 'User name', 'Groups', 'Last activity', and 'Creation time'. Below the table, the 'Permissions' tab is selected for the 'AdminGroup' summary page. It shows 'Permissions policies (0)'. A button 'Add permissions' is visible on the right.

IAM > User groups > AdminGroup > Add permissions

Attach permission policies to AdminGroup

▶ Current permissions policies (0)

Other permission policies (1/1047)

You can attach up to 10 managed policies to this user group. All of the users in this group inherit the attached permissions.

Filter by Type

Policy name	Type	Used as	Description
<input checked="" type="checkbox"/>  AdministratorAccess	AWS managed - job function	None	Provides full access to AWS services an...
<input type="checkbox"/>  AdministratorAccess-Amplify	AWS managed	None	Grants account administrative permis...

The screenshot shows the AWS IAM console. The left sidebar has 'Identity and Access Management (IAM)' selected under 'Access management'. The main content area shows the 'AdminGroup' user group. A green banner at the top says 'Policies attached to this user group.' Below it, the 'AdminGroup' summary is shown with creation time May 05, 2025, 11:50 (UTC-04:00). The 'Permissions' tab is selected in the navigation bar. Under 'Permissions policies', there is one policy named 'AdministratorAccess'. There are buttons for 'Simulate', 'Remove', and 'Add permissions'.

aws [Alt+S] Global cyberlurf

IAM > User groups > AdminGroup

Policies attached to this user group.

AdminGroup Info

Delete Edit

Summary

User group name: AdminGroup | Creation time: May 05, 2025, 11:50 (UTC-04:00) | ARN: arn:aws:iam::739275456457:group/AdminGroup

ARN

Users (1) Permissions Access Advisor

Permissions policies (1) Info

You can attach up to 10 managed policies.

Filter by Type

Search Policy name Type Attached entities

AdministratorAccess AWS managed - job function 1

Below user admin permissions shown

IAM > Users > iam_user_admin_rights

Delete

iam_user_admin_rights Info

Identity and Access Management (IAM) <

Search IAM

Dashboard

Access management

User groups

Users

Roles

Policies

Identity providers

Account settings

Root access management New

Access reports

Access Analyzer

External access

Unused access

Analyzer settings

Summary

ARN
arn:aws:iam::739275456457:user/iam_user_admin_rights

Console access
⚠ Enabled without MFA

Access key 1
[Create access key](#)

Created
May 05, 2025, 11:50 (UTC-04:00)

Last console sign-in
 ⓘ Never

Permissions Groups (1) Tags Security credentials Last Accessed

Permissions policies (1)

Permissions are defined by policies attached to the user directly or through groups.

Filter by Type

Search All types ▾

Policy name ▾ Type Attached via ▾

Policy name	Type	Attached via
AdministratorAccess	AWS managed - job function	Group AdminGroup

Giving user CLI access

- Step 1
 - Access key best practices & alternatives
 - Step 2 - optional
Set description tag
 - Step 3
Retrieve access keys

Access key best practices & alternatives Info

Avoid using long-term credentials like access keys to improve your security. Consider the following use cases and alternatives.

Use case

Command Line Interface (CLI)

You plan to use this access key to enable the AWS CLI to access your AWS account.

Local code

You plan to use this access key to enable application code in a local development environment to access your AWS account.

- Step 1
 - Access key best practices & alternatives
 - Step 2 - optional
Set description tag
 - Step 3
Retrieve access keys

Set description tag - optional Info

The description for this access key will be attached to this user as a tag and shown alongside the access key.

Description tag value

Describe the purpose of this access key and where it will be used. A good description will help you rotate this access key confidently later.

iamuser_adminrights_key

Maximum 256 characters. Allowed characters are letters, numbers, spaces representable in UTF-8, and: _ . : / = + - @

[Cancel](#)

[Previous](#)

Create access key



Access key created

This is the only time that the secret access key can be viewed or downloaded. You cannot recover it later. However, you can create a new access key any time.

- Step 1
 - Access key best practices & alternatives
 - Step 2 - optional
Set description tag
 - Retrieve access keys

Retrieve access keys Info

Access key

If you lose or forget your secret access key, you cannot retrieve it. Instead, create a new access key and make the old key inactive.

Access key

Secret access key

/////////

Create IAM Roles and Policies

Screenshot of the AWS IAM Roles page showing two existing roles: `AWSServiceRoleForSupport` and `AWSServiceRoleForTrustedAdvisor`. The page includes a search bar, navigation controls, and a table for managing roles.

Roles (2) Info

An IAM role is an identity you can create that has specific permissions with credentials that are valid for short durations. Roles can be assumed by entities that you trust.

Role name	Trusted entities	Last activity
AWSServiceRoleForSupport	AWS Service: support (Service-Linked)	-
AWSServiceRoleForTrustedAdvisor	AWS Service: trustedadvisor (Service)	-

Roles Anywhere Info

Authenticate your non AWS workloads and securely provide access to AWS services.

Access AWS from your non AWS workloads

Operate your non AWS workloads using the same AWS services as your AWS accounts.

X.509 Standard

Use your own existing PKI infrastructure or use AWS.

Temporary credentials

Use temporary credentials with ease and benefit from

Above pic shows current state

Screenshot of the 'Create role' wizard, Step 1: Select trusted entity.

Step 1
 Select trusted entity
 Step 2
 Add permissions
 Step 3
 Name, review, and create

Select trusted entity Info

Trusted entity type

- AWS service**
Allow AWS services like EC2, Lambda, or others to perform actions in this account.
- AWS account**
Allow entities in other AWS accounts belonging to you or a 3rd party to perform actions in this account.
- Web identity**
Allows users federated by the specified external web identity provider to assume this role to perform actions in this account.
- SAML 2.0 federation**
Allow users federated with SAML 2.0 from a corporate directory to perform actions in this account.
- Custom trust policy**
Create a custom trust policy to enable others to perform actions in this account.

Use case
Allow an AWS service like EC2, Lambda, or others to perform actions in this account.

Service or use case

EC2

Choose a use case for the specified service.

Use case

- EC2**
Allows EC2 instances to call AWS services on your behalf.
- EC2 Role for AWS Systems Manager**

- Step 1 Select trusted entity
- Step 2 Add permissions
- Step 3 Name, review, and create**

Name, review, and create

Role details

Role name

Enter a meaningful name to identify this role.

Maximum 64 characters. Use alphanumeric and '+=_,@-_` characters.

Description

Add a short explanation for this role.

Allows EC2 instances to call AWS services on your behalf. Contains full access policies for ec2 and vpc

Maximum 1000 characters. Use letters (A-Z and a-z), numbers (0-9), tabs, new lines, or any of the following characters: _+=,. @-/\[\{\}\]#\$%^&`;"`

Step 1: Select trusted entities

Trust policy

```

1  {
2   "Version": "2012-10-17",
3   "Statement": [
4     {

```

Step 1: Select trusted entities

Trust policy

```

1  {
2   "Version": "2012-10-17",
3   "Statement": [
4     {
5       "Effect": "Allow",
6       "Action": [
7         "sts:AssumeRole"
8       ],
9       "Principal": {
10         "Service": [
11           "ec2.amazonaws.com"
12         ]
13       }
14     }
15   ]
16 }

```

Step 2: Add permissions

Permissions policy summary

Policy name

▲ | Type

▼ | Attached as

[AmazonEC2FullAccess](#)

AWS managed

Permissions policy

[AmazonVPCFullAccess](#)

AWS managed

Permissions policy

Role created below

Identity and Access Management (IAM) > Roles

Role EC2FullAccessRole created.

Roles (3) Info

An IAM role is an identity you can create that has specific permissions with credentials that are valid for short durations. Roles can be assumed by entities that you trust.

Role name	Trusted entities	Last activity
AWSServiceRoleForSupport	AWS Service: support (Service-Linked Role)	-
AWSServiceRoleForTrustedAdvisor	AWS Service: trustedadvisor (Service-Linked Role)	-
EC2FullAccessRole	AWS Service: ec2	-

Roles Anywhere Info

Manage

//////////

2. Create VPC, Subnets, and Network Components

aws | vpc X

IAM >

Identity and Access Management

Search IAM

Services

Show more

- Services
- Features
- Resources New
- Documentation
- Knowledge articles

VPC Isolated Cloud Resources

AWS Firewall Manager Central management of firewall rules

aws | Search [Alt+S] X

VPC > [Your VPCs](#) > Create VPC

Create VPC Info

A VPC is an isolated portion of the AWS Cloud populated by AWS objects, such as Amazon EC2 instances.

VPC settings

Resources to create Info

Create only the VPC resource or the VPC and other networking resources.

VPC only

VPC and more

Name tag - optional

Creates a tag with a key of 'Name' and a value that you specify.

SecureVPC

IPv4 CIDR block Info

- IPv4 CIDR manual input
- IPAM-allocated IPv4 CIDR block

IPv4 CIDR

10.0.0.0/16

CIDR block size must be between /16 and /28.

IPv6 CIDR block Info

- No IPv6 CIDR block
- IPAM-allocated IPv6 CIDR block
- Amazon-provided IPv6 CIDR block
- IPv6 CIDR owned by me

The screenshot shows the AWS VPC dashboard for a VPC named "vpc-04393a46b3381793d / SecureVPC". The "Details" tab is selected, displaying various configuration settings:

VPC ID	State	Block Public Access	DNS hostnames
vpc-04393a46b3381793d	Available	Off	Disabled
DNS resolution	Tenancy	DHCP option set	Main route table
Enabled	default	dopt-093bb18a74158bf64	rtb-07b0c23d72ed27f19
Main network ACL	Default VPC	IPv4 CIDR	IPv6 pool
acl-073866736bb9c5c8a	No	10.0.0.0/16	-
IPv6 CIDR (Network border group)	Network Address Usage metrics	Route 53 Resolver DNS Firewall rule groups	Owner ID
-	Disabled	-	739275456457

Below the details, there are tabs for "Resource map", "CIDRs", "Flow logs", "Tags", and "Integrations". The "Resource map" tab is selected, showing four categories: "VPC", "Subnets (0)", "Route tables (1)", and "Network interfaces (0)".

Adding subnets to above vpc, subnet 1 is public whereas subnet2 is private

The screenshot shows the "Create subnet" page for the VPC "vpc-04393a46b3381793d (SecureVPC)".

VPC
VPC ID: vpc-04393a46b3381793d (SecureVPC)

Associated VPC CIDRs
IPv4 CIDRs: 10.0.0.0/16

Subnet settings
Specify the CIDR blocks and Availability Zone for the subnet.

Subnet 1 of 1

Subnet name
Create a tag with a key of 'Name' and a value that you specify.
my-subnet-01
The name can be up to 256 characters long.

Availability Zone
Choose the zone in which your subnet will reside, or let Amazon choose one for you.

aws | Search [Alt+S] | United States (N. Virginia) |

VPC > Subnets > Create subnet

Subnet name
Create a tag with a key of 'Name' and a value that you specify.

The name can be up to 256 characters long.

Availability Zone [Info](#)
Choose the zone in which your subnet will reside, or let Amazon choose one for you.

IPv4 VPC CIDR block [Info](#)
Choose the VPC's IPv4 CIDR block for the subnet. The subnet's IPv4 CIDR must lie within this block.

IPv4 subnet CIDR block
 256 IPs
< > ^ v

Tags - optional

Key	Value - optional	Remove
<input type="text" value="Name"/>	<input type="text" value="Public Subnet"/>	Remove

[Add new tag](#)
You can add 49 more tags.
[Remove](#)

[Add new subnet](#)

VPC > Subnets > Create subnet

Subnet 2 of 2

Subnet name
Create a tag with a key of 'Name' and a value that you specify.

The name can be up to 256 characters long.

Availability Zone [Info](#)
Choose the zone in which your subnet will reside, or let Amazon choose one for you.

IPv4 VPC CIDR block [Info](#)
Choose the VPC's IPv4 CIDR block for the subnet. The subnet's IPv4 CIDR must lie within this block.

IPv4 subnet CIDR block

< > ^ v

Tags - optional

Key	Value - optional	Remove
<input type="text" value="Name"/>	<input type="text" value="Private_Subnet"/>	Remove

[Add new tag](#)
You can add 49 more tags.
[Remove](#)

subnet-01e808732ef5be66a / Public_Subnet		Actions	
Details			
Subnet ID	<input type="checkbox"/> subnet-01e808732ef5be66a	Subnet ARN	<input type="checkbox"/> arn:aws:ec2:us-east-1:739275456457:subnet/subnet-01e808732ef5be66a
IPv4 CIDR	<input type="checkbox"/> 10.0.0.0/24	State	<input checked="" type="checkbox"/> Available
Availability Zone	<input type="checkbox"/> us-east-1a	IPv6 CIDR	-
Route table	<input type="checkbox"/> rtb-07b0c23d72ed27f19	Available IPv4 addresses	<input type="checkbox"/> 251
Auto-assign IPv6 address	No	Availability Zone ID	<input type="checkbox"/> use1-az2
IPv4 CIDR reservations	-	Network ACL	<input type="checkbox"/> acl-073866736bb9c5c8a
Resource name DNS A record	<input type="checkbox"/> Disabled	Auto-assign customer-owned IPv4 address	No
Resource name DNS AAAA record	<input type="checkbox"/> Disabled	IPv6 CIDR reservations	-
Block Public Access	<input type="checkbox"/> Off	Customer-owned IPv4 pool	-
IPv6 CIDR association ID	-	IPv6-only	No
VPC	<input type="checkbox"/> vpc-04393a46b3381793d SecureVPC	Default subnet	No
Auto-assign public IPv4 address	No	Customer-owned IPv4 pool	-
Outpost ID	-	Hostname type	IP name
Owner	<input type="checkbox"/> 739275456457	Owner	739275456457

Above created subnets in the vpc shown below

Subnets (8) <small>Info</small>							Last updated 4 minutes ago	Actions	Create subnet
	Name	Subnet ID	State	VPC	Block Public...	IPv4 CIDR			
<input type="checkbox"/>	-	subnet-0d608c775a601bc8d	Available	vpc-0ba0dd3be0d9369ed	Off	172.31.0.0/24			
<input type="checkbox"/>	-	subnet-02e7e29fd3fb0e55	Available	vpc-0ba0dd3be0d9369ed	Off	172.31.32.0/			
<input type="checkbox"/>	-	subnet-03f5f0b2f4f93ccb	Available	vpc-0ba0dd3be0d9369ed	Off	172.31.64.0/			
<input type="checkbox"/>	Private_Subnet	subnet-0d6a494c562606cc0	Available	vpc-04393a46b3381793d Sec...	Off	10.0.1.0/24			
<input type="checkbox"/>	-	subnet-0a1c8de1d11a28b40	Available	vpc-0ba0dd3be0d9369ed	Off	172.31.80.0/			
<input type="checkbox"/>	-	subnet-06b559cdea9deb35	Available	vpc-0ba0dd3be0d9369ed	Off	172.31.48.0/			
<input type="checkbox"/>	Public_Subnet	subnet-01e808732ef5be66a	Available	vpc-04393a46b3381793d Sec...	Off	10.0.0.0/24			

11

Create Internet Gateway

aws | Search [Alt+S] | United States (N. Virginia) | cyt

VPC > Internet gateways > Create internet gateway

Create internet gateway Info

An internet gateway is a virtual router that connects a VPC to the internet. To create a new internet gateway specify the name for the gateway below.

Internet gateway settings

Name tag
Creates a tag with a key of 'Name' and a value that you specify.

VPC-Prod-IGW

Tags - optional
A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Key	Value - optional
<input type="text" value="Name"/>	<input type="text" value="VPC-Prod-IGW"/> X

Add new tag Remove

You can add 49 more tags.

Create internet gateway Cancel

VPC > Internet gateways > igw-08f82260b595227ca

The following internet gateway was created: igw-08f82260b595227ca - VPC-Prod-IGW. You can now attach to a VPC to enable the VPC to communicate with the internet. Attach to a VPC

igw-08f82260b595227ca / VPC-Prod-IGW

Details Info

Internet gateway ID	<input type="text" value="igw-08f82260b595227ca"/>	State	<input type="text" value="Detached"/>	VPC ID	-	Owner	<input type="text" value="739275456457"/>
---------------------	--	-------	---------------------------------------	--------	---	-------	---

Tags

<input type="text" value="Search tags"/>	
Key	Value
Name	VPC-Prod-IGW

Manage tags

Attach IGW to VPC

VPC dashboard <

EC2 Global View Filter by VPC

Virtual private cloud

- Your VPCs
- Subnets
- Route tables
- Internet gateways**
- Egress-only internet gateways
- Carrier gateways
- DHCP option sets

Internet gateways (1/2) Info

Name	Internet gateway ID	State	VPC ID
igw-04c9c9bb38894623c	igw-04c9c9bb38894623c	<input checked="" type="radio"/> Attached	vpc-0ba0dd3be0d956
<input checked="" type="checkbox"/> VPC-Prod-IGW	igw-08f82260b595227ca	<input type="radio"/> Detached	-

Actions Create internet gateway

View details Attach to VPC Detach from VPC Manage tags Delete internet gateway

1 > > 1 ...

igw-08f82260b595227ca / VPC-Prod-IGW

Details Tags

Details

Internet gateway ID	<input type="text" value="igw-08f82260b595227ca"/>	State	<input type="text" value="Detached"/>	VPC ID	-	Owner	<input type="text" value="739275456457"/>
---------------------	--	-------	---------------------------------------	--------	---	-------	---

VPC > Internet gateways > Attach to VPC (igw-08f82260b595227ca) [Info](#)

Attach to VPC (igw-08f82260b595227ca)

VPC
Attach an internet gateway to a VPC to enable the VPC to communicate with the internet. Specify the VPC to attach below.

Available VPCs
Attach the internet gateway to this VPC.

X

▶ AWS Command Line Interface command

[Cancel](#) [Attach internet gateway](#)

The screenshot shows the AWS VPC dashboard with the following details:

- Internet gateway:** igw-08f82260b595227ca successfully attached to **VPC ID** `vpc-04393a46b3381793d`.
- Name:** `igw-08f82260b595227ca / VPC-Prod-IGW`
- Actions:** A blue button labeled "Actions ▾".
- Details:** A section showing the Internet gateway ID (`igw-08f82260b595227ca`), State (`Attached`), VPC ID (`vpc-04393a46b3381793d | SecureVPC`), and Owner (`739275456457`).
- Tags:** A section with a search bar and a table:

Key	Value
Name	VPC-Prod-IGW
- Manage tags:** A blue button.

Your VPCs (1/2) [Info](#)

Last updated 1 minute ago [Actions](#) [Create VPC](#)

Name	VPC ID	State	Block Public...	IPv4 CIDR	IPv6 CIDR
-	vpc-0ba0dd3be0d9369ed	Available	Off	172.31.0.0/16	-
<input checked="" type="checkbox"/> SecureVPC	vpc-04393a46b3381793d	Available	Off	10.0.0.0/16	-

Virtual private cloud

Your VPCs

- Subnets
- Route tables
- Internet gateways
- Egress-only internet gateways
- Carrier gateways
- DHCP option sets
- Elastic IPs
- Managed prefix lists
- NAT gateways
- Peering connections
- Route servers [New](#)

Security

Network ACLs

Route Tables:

VPC dashboard < EC2 Global View Filter by VPC

Virtual private cloud Your VPCs Subnets Route tables Internet gateways Egress-only internet gateways Carrier gateways DHCP option sets Elastic IPs Managed prefix lists NAT gateways Peering connections Route servers New Security Network ACLs Security groups

Route tables (1/2) Info Last updated 1 minute ago Actions Create route table

Name	Route table ID	Explicit subnet associ...	Edge associations	Main	VPC
-	rtb-086d9b90c027c5fe2	-	-	Yes	vpc-0ba0dd3be0d9369ed
<input checked="" type="checkbox"/>	rtb-07b0c23d72ed27f19	-	-	Yes	vpc-04393a46b3381793d Sec

rtb-07b0c23d72ed27f19

Details Routes Subnet associations Edge associations Route propagation Tags

Details

Route table ID rtb-07b0c23d72ed27f19	Main Yes	Explicit subnet associations -	Edge associations -
VPC vpc-04393a46b3381793d SecureVPC	Owner ID 739275456457		

VPC dashboard < EC2 Global View Filter by VPC

Virtual private cloud Your VPCs Subnets Route tables Internet gateways Egress-only internet gateways Carrier gateways DHCP option sets Elastic IPs Managed prefix lists NAT gateways Peering connections Route servers New Security Network ACLs Security groups

Route tables (1/2) Info Last updated 1 minute ago Actions Create route table

Name	Route table ID	Explicit subnet associ...	Edge associations	Main	VPC
-	rtb-086d9b90c027c5fe2	-	-	Yes	vpc-0ba0dd3be0d9369ed
<input checked="" type="checkbox"/>	rtb-07b0c23d72ed27f19	-	-	Yes	vpc-04393a46b3381793d Sec

rtb-07b0c23d72ed27f19

Details Routes Subnet associations Edge associations Route propagation Tags

Routes (2)

Destination	Target	Status	Propagated
0.0.0.0/0	igw-08f82260b595227ca	Active	No
10.0.0.0/16	local	Active	No

VPC > Your VPCs > vpc-04393a46b3381793d

Details Info			
VPC ID vpc-04393a46b3381793d	State Available	Block Public Access <input checked="" type="radio"/> Off	DNS hostnames Disabled
DNS resolution Enabled	Tenancy default	DHCP option set dopt-093bb18a74158bf64	Main route table rtb-07b0c23d72ed27f19
Main network ACL acl-073866736bb9c5ca	Default VPC No	IPv4 CIDR 10.0.0.0/16	IPv6 pool -
IPv6 CIDR (Network border group) -	Network Address Usage metrics Disabled	Route 53 Resolver DNS Firewall rule groups -	Owner ID 739275456457

[Resource map](#) | [CIDRs](#) | [Flow logs](#) | [Tags](#) | [Integrations](#)

Resource map [Info](#)

VPC [Show details](#)
Your AWS virtual network

SecureVPC

Subnets (2)
Subnets within this VPC

us-east-1a

- A Public_Subnet
- A Private_Subnet

Route tables (1)
Route network traffic to resources

rtb-07b0c23d72ed27f19

Network conn
Connections to other

VPC-Prod-IGW

For the private subnet either we can create bastion host and then access private ec2 instance thru that or use free option of secure vpn connection. We chose vpn-connection. In this case we did not use NAT gateway due to pricing.

aws Search [Alt+S]

[Firewalls](#) [Firewall policies](#) [Network Firewall rule groups](#) [TLS inspection configurations](#) [Network Firewall resource groups](#)

Virtual private network (VPN)

[Customer gateways](#) [Virtual private gateways](#) [Site-to-Site VPN connections](#) [Client VPN endpoints](#)

AWS Verified Access

Virtual private gateways [Info](#)

[Find resource by attribute or tag](#)

Name	Virtual private gateway ID	Type	VPC
No virtual private gateways			
You do not have any virtual private gateways in this region			
Create virtual private gateway			

Select a virtual private gateway



Create virtual private gateway Info

A virtual private gateway is the VPN concentrator on the Amazon side of the site-to-site VPN connection.

Details

Name tag - optional

Creates a tag with a key of 'Name' and a value that you specify.

Value must be 256 characters or less in length.

Autonomous System Number (ASN)

- Amazon default ASN
- Custom ASN

Tags

A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs. Name tag helps you track your resources more easily. We recommend adding Name tag.

Key

Value - optional

[Remove](#)[Add new tag](#)

You can add up to 49 more tags.

[Cancel](#)[Create virtual private gateway](#)

You successfully created vgw-018573f7165daae40 / VPC-VPN-Gateway.

Virtual private gateways (1) info

Name	Virtual private gateway ID	State	Type	VPC	Amazon A
VPC-VPN-Gateway	vgw-018573f7165daae40	Pending	ipsec.1	-	64512

Select a virtual private gateway

vgw-018573f7165daae40 / VPC-VPN-Gateway Info

[Actions ▲](#)

Details	State	Type	VPC
Virtual private gateway ID vgw-018573f7165daae40	Detached	ipsec.1	-
Amazon ASN 64512			

Tags

Key	Value
Name	VPC-VPN-Gateway

[Manage tags](#)

VPC > Virtual private gateways > vgw-018573f7165daae40 > Attach to VPC

Attach to VPC [Info](#)

Details

Virtual private gateway ID
vgw-018573f7165daae40

Available VPCs

Attach the virtual private gateway to this VPC.

vpc-04393a46b3381793d / SecureVPC

[Cancel](#) [Attach to VPC](#)

You successfully attached vgw-018573f7165daae40 / VPC-VPN-Gateway to vpc-04393a46b3381793d.

Virtual private gateways (1) [Info](#)

[Find resource by attribute or tag](#)

Name	Virtual private gateway ID	State	Type	VPC	Amazon ASN
VPC-VPN-Gateway	vgw-018573f7165daae40	Attaching	ipsec.1	vpc-04393a46b3381793d Secur...	64512

Select a virtual private gateway

|||||

|||||

EC2

Resources

You are using the following Amazon EC2 resources in the United States (N. Virginia) Region:

Instances (running)	0	Auto Scaling Groups	0	Capacity Reservations	0
Dedicated Hosts	0	Elastic IPs	0	Instances	0
Key pairs	0	Load balancers	0	Placement groups	0
Security groups	2	Snapshots	0	Volumes	0

Launch instance

To get started, launch an Amazon EC2 instance, which is a virtual server in the cloud.

[Launch instance](#) [Migrate a server](#)

Service health

[AWS Health Dashboard](#)

Region
United States (N. Virginia)

Status
This service is operating normally.

EC2 Free Tier [Info](#)

Offers for all AWS Regions.

2 EC2 free tier offers in use

End of month forecast
0 offers forecasted to exceed free tier limit.

Exceeds free tier
0 offers exceeded and is now pay-as-you-go pricing.

[View Global EC2 resources](#)

Offer usage (monthly)

Linux EC2 Instances
725.801667 hours remaining 3%

Storage space on EBS
28.85 GB remaining 4%

Key pair

A key pair, consisting of a private key and a public key, is a set of security credentials that you use to prove your identity when connecting to an instance.

Name

The name can include up to 255 ASCII characters. It can't include leading or trailing spaces.

Key pair type

 RSA

 ED25519

Private key file format

 .pem
For use with OpenSSH

 .ppk
For use with PuTTY

Tags - optional

No tags associated with the resource.

[Add new tag](#)

You can add up to 50 more tags.

Launch an instance

[Info](#)

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags

Name

[Add additional tags](#)

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

Quick Start



[Browse more AMIs](#)
Including AMIs from AWS, Marketplace and the Community

Summary

Number of instances

Software Image (AMI)

Amazon Linux 2 Kernel 5.10 AMI...[read more](#)
ami-085386e29e44dacd7

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB

[Cancel](#)
[Launch instance](#)
[Preview code](#)

☰ EC2 > Instances > Launch an instance

Amazon Machine Image (AMI)

Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type
 ami-085386e29e44dacd7 (64-bit (x86)) / ami-00bcd7ae558b8179f (64-bit (Arm))
 Virtualization: hvm ENA enabled: true Root device type: ebs

Description
 Amazon Linux 2 comes with five years support. It provides Linux kernel 5.10 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Glibc 2.26, Binutils 2.29.1, and the latest software packages through extras. This AMI is the successor of the Amazon Linux AMI that is now under maintenance only mode and has been removed from this wizard.

Amazon Linux 2 Kernel 5.10 AMI 2.0.20250428.0 x86_64 HVM gp2

Architecture	AMI ID	Publish Date	Username	Verified provider
64-bit (x86) ▾	ami-085386e29e44dacd7	2025-04-25	ec2-user	Verified provider

▼ Summary

Number of instances | Info
 1

Software Image (AMI)
 Amazon Linux 2 Kernel 5.10 AMI...[read more](#)
 ami-085386e29e44dacd7

Virtual server type (instance type)
 t2.micro

Firewall (security group)
 New security group

Storage (volumes)
 1 volume(s) - 8 GiB

Cancel **Launch ins** **Preview**

▼ Instance type

Info | Get advice

Instance type

t2.micro
 Family: t2 1 vCPU 1 GiB Memory Current generation: true
 On-Demand Windows base pricing: 0.0162 USD per Hour
 On-Demand Ubuntu Pro base pricing: 0.0134 USD per Hour
 On-Demand SUSE base pricing: 0.0116 USD per Hour On-Demand RHEL base pricing: 0.026 USD per Hour
 On-Demand Linux base pricing: 0.0116 USD per Hour

Additional costs apply for AMIs with pre-installed software

▼ Summary

Number of instances | Info
 1

Software Image (AMI)
 Amazon Linux 2 Kernel 5.10 AMI...[read more](#)
 ami-085386e29e44dacd7

Virtual server type (instance type)
 t2.micro

Firewall (security group)
 New security group

Storage (volumes)
 1 volume(s) - 8 GiB

Cancel **Launch ins** **Preview**

Change above network settings as below

Network settings [Info](#)

VPC - required [Info](#)
vpc-04393a46b3381793d (SecureVPC)
10.0.0.0/16

Subnet [Info](#)
subnet-01e808732ef5be66a Public_Subnet
VPC: vpc-04393a46b3381793d Owner: 739275456457 Availability Zone: us-east-1a
Zone type: Availability Zone IP addresses available: 251 CIDR: 10.0.0.0/24

Create new subnet [Info](#)

Auto-assign public IP [Info](#)
Enable

Additional charges apply when outside of free tier allowance

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.

Create security group Select existing security group

Security group name - required
launch-wizard-1

This security group will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters: a-z, A-Z, 0-9, spaces, and _-/()#,@[]+=;&;{}\$*

Description - required [Info](#)
launch-wizard-1 created 2025-05-05T19:12:28.166Z

Summary

Number of instances [Info](#)
1

Software Image (AMI)
Amazon Linux 2 Kernel 5.10 AMI... [read more](#)
ami-085386e29e44dacd7

Virtual server type (instance type)
t2.micro

Firewall (security group)
New security group

Storage (volumes)
1 volume(s) - 8 GiB

[Cancel](#) [Launch instance](#) [Preview code](#)

launch-wizard-1 created 2025-05-05T19:12:28.166Z

Inbound Security Group Rules

▼ Security group rule 1 (TCP, 22, 79.127.147.88/32)

Type Info	Protocol Info	Port range Info	Remove
ssh	TCP	22	Remove

Source type [Info](#)
My IP

Name [Info](#)
 Add CIDR, prefix list or security group

Description - optional [Info](#)
e.g. SSH for admin desktop
79.127.147.88/32 [X](#)

[Add security group rule](#)

► Advanced network configuration

Configure storage [Info](#) Advanced

1x GiB Root volume, Not encrypted

[Free tier eligible customers can get up to 30 GB of EBS General Purpose \(SSD\) or Magnetic storage](#) [X](#)

Summary

Number of instances [Info](#)
1

Software Image (AMI)
Amazon Linux 2 Kernel 5.10 AMI... [read more](#)
ami-085386e29e44dacd7

Virtual server type (instance type)
t2.micro

Firewall (security group)
New security group

Storage (volumes)
1 volume(s) - 8 GiB

[Cancel](#) [Launch instance](#) [Preview code](#)

EC2 Instances Launch an instance

We'll create a new security group called 'launch-wizard-1' with the following rules:

- Allow SSH traffic from [My IP](#) 79.127.147.88/32
- Allow HTTPS traffic from the internet To set up an endpoint, for example when creating a web server
- Allow HTTP traffic from the internet To set up an endpoint, for example when creating a web server

Configure storage [Info](#)

Advanced

1x 8 GiB gp2 Root volume, Not encrypted

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage

[Add new volume](#)

Click refresh to view backup information
The tags that you assign determine whether the instance will be backed up by any Data Lifecycle Manager policies.

0 x File systems [Edit](#)

[Cancel](#) [Launch instance](#) [Preview](#)

EC2 Instances Launch an instance

Success
Successfully initiated launch of instance (i-0c5438acdfbee0e0a)

[Launch log](#)

Next Steps

What would you like to do next with this instance, for example "create alarm" or "create backup"

1 2 3 4 5 6 >

Create billing and free tier usage alerts To manage costs and avoid surprise bills, set up email notifications for billing and free tier usage thresholds. Create billing alerts	Connect to your instance Once your instance is running, log into it from your local computer. Connect to instance Learn more	Connect an RDS database Configure the connection between an EC2 instance and a database to allow traffic flow between them. Connect an RDS database Create a new RDS database Learn more	Create EBS snapshot policy Create a policy that automates the creation, retention, and deletion of EBS snapshots Create EBS snapshot policy
---	---	---	--

EC2 Instances

Instances (1) Info

Last updated less than a minute ago [Connect](#) [Instance state](#) [Actions](#) [Launch instances](#)

Find Instance by attribute or tag (case-sensitive)

Instance state = running [Clear filters](#)

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4
BastionHost	i-0c5438acdfbee0e0a	Running View alarms +	t2.micro	2/2 checks passed	View alarms +	us-east-1a	-

Screenshot of the AWS EC2 Instances page showing a single running instance.

Instance details:

Public IPv4	Elastic IP	IPv6 IPs	Monitoring	Security group name	Key name	Launch time
34.226.154.186	-	-	disabled	launch-wizard-1	key-pair_bastion	2025/05/05 15:31 GMT-4

Launching EC2 for the private subnet, to be accessed via bastion security group

Screenshot of the AWS EC2 Launch an instance page.

Name and tags:

Name: PrivateInstance

Software Image (AMI): Amazon Linux 2023 AMI 2023.7.2...read more
ami-0f88e80871fd81e91

Virtual server type (instance type): t2.micro

Firewall (security group): launch-wizard-1

Storage (volumes): 1 volume(s) - 8 GiB

Buttons: Cancel, Launch instance, Preview code

Amazon Machine Image (AMI)

Amazon Linux 2023 AMI ami-0f88e80871fd81e91 (64-bit (x86), uefi-preferred) / ami-0bc72bd3b8ba0b59d (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.

Amazon Linux 2023 AMI 2023.7.20250428.1 x86_64 HVM kernel-6.1

Architecture	Boot mode	AMI ID	Publish Date	Username	Verified provider
64-bit (x86)	uefi-preferred	ami-0f88e80871fd81e91	2025-04-30	ec2-user	Verified provider

Instance type [Info](#) | [Get advice](#)

Instance type

t2.micro Family: t2 1 vCPU 1 GiB Memory Current generation: true On-Demand Windows base pricing: 0.0162 USD per Hour On-Demand Ubuntu Pro base pricing: 0.0134 USD per Hour On-Demand SUSE base pricing: 0.0116 USD per Hour On-Demand RHEL base pricing: 0.026 USD per Hour On-Demand Linux base pricing: 0.0116 USD per Hour	Free tier eligible
---	--------------------

All generations

[Compare instance types](#)

Additional costs apply for AMIs with pre-installed software

Summary

Number of instances: 1

Software Image (AMI)
Amazon Linux 2023 AMI 2023.7.2... [read more](#)
ami-0f88e80871fd81e91

Virtual server type (instance type)
t2.micro

Firewall (security group)
launch-wizard-1

Storage (volumes)
1 volume(s) - 8 GiB

[Cancel](#) [Launch instance](#) [Preview](#)

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 - required

key-pair_bastion	<input checked="" type="button"/> Create new key pair
------------------	---

Network settings [Info](#)

VPC - required [Info](#)

vpc-04393a46b3381793d (SecureVPC) 10.0.0.0/16	<input checked="" type="button"/>
--	-----------------------------------

Subnet [Info](#)

subnet-0d6a494c562606cc0 VPC: vpc-04393a46b3381793d Owner: 739275456457 Availability Zone: us-east-1a Zone type: Availability Zone IP addresses available: 251 CIDR: 10.0.1.0/24	Private_Subnet <input checked="" type="button"/> Create new subnet
--	---

Auto-assign public IP [Info](#)

Disable

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.

<input type="radio"/> Create security group	<input checked="" type="radio"/> Select existing security group
---	---

Common security groups [Info](#)

Launch instance [Preview code](#)

Common security groups | [Info](#)

Select security groups ▾

launch-wizard-1 sg-04b3845aa597141b1 X
VPC: vpc-04393a46b3381793d

Compare security group rules

Security groups that you add or remove here will be added to or removed from all your network interfaces.

Advanced network configuration

Network interface 1

Device index	Network interface	Description
0	New interface	

Subnet | [Info](#)
subnet-0d6a494c562606cc0
IP addresses available: 251

Security groups | [Info](#)
Select security groups ▾

Auto-assign public IP | [Info](#)
Disable

Show all selected (1)

Primary IP | [Info](#)

Secondary IP | [Info](#)

IPv6 IPs | [Info](#)

Summary

Number of instances | [Info](#)
1

Software Image (AMI)
Amazon Linux 2023 AMI 2023.7.2...[read more](#)
ami-0f88e80871fd81e91

Virtual server type (instance type)
t2.micro

Firewall (security group)
launch-wizard-1

Storage (volumes)
1 volume(s) - 8 GiB

aws | Search [Alt+S] | United States (N. Virginia) ▾

EC2 > Instances > Launch an instance

Success
Successfully initiated launch of instance (i-0238a168d9f7921cc)

Launch log

Next Steps

What would you like to do next with this instance, for example "create alarm" or "create backup"

1 2 3 4 5 6

Create billing and free tier usage alerts
To manage costs and avoid surprise bills, set up

Connect to your instance
Once your instance is running, log into it from your local computer.

Connect an RDS database
Configure the connection between an EC2 instance and a database to allow traffic flow

Create EBS snapshot policy
Create a policy that automates the creation, retention, and deletion of EBS snapshots

aws | Search [Alt+S] | United States (N. Virginia) ▾

EC2 > Instances

Instances (2) Info

Last updated less than a minute ago

Find Instance by attribute or tag (case-sensitive)

Instance state = running X Clear filters

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Pu
<input type="checkbox"/>	PrivateInstance	i-0238a168d9f7921cc	Running	t2.micro	Initializing	View alarms +	us-east-1a	-
<input type="checkbox"/>	BastionHost	i-0c5438acdfbee0ea	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1a	-

Instances

- Instances
- Instance Types
- Launch Templates
- Spot Requests

The screenshot shows the AWS EC2 Instances page. On the left, there's a sidebar with 'EC2' selected. The main area displays 'Instances (2) Info' with a search bar and filter options. Two instances are listed: one in 'us-east-1a' with IP 34.226.154.186 and another in 'us-east-1a' with IP 34.226.154.186. Both instances are in the 'running' state, have disabled monitoring, and are part of the 'launch-wizard-1' security group.

Sshing into the bastion

```
(kali㉿kali)-[~/aws_projects/aws_cloud_security_infra_project]
$ ssh -i key-pair_bastion.pem ec2-user@34.226.154.186
WARNING: UNPROTECTED PRIVATE KEY FILE!
Permissions 0644 for 'key-pair_bastion.pem' are too open.
It is required that your private key files are NOT accessible by others.
This private key will be ignored.
Load key "key-pair_bastion.pem": bad permissions - people and entities read-only permission.
ec2-user@34.226.154.186: Permission denied (publickey,gssapi-keyex,gssapi-with-mic).

(kali㉿kali)-[~/aws_projects/aws_cloud_security_infra_project]
$ chmod 400 key-pair_bastion.pem
The End

(kali㉿kali)-[~/aws_projects/aws_cloud_security_infra_project]
$ ssh -i key-pair_bastion.pem ec2-user@34.226.154.186
Amazon Linux 2
Congratulations on completing the fIAWS challenge!
Please visit https://scottissummitroute.com
AL2 End of Life is 2026-06-30.
Please end tell your friends about it if you learned something from this challenge.
There is also more flow3.cloud! Check that out.
A newer version of Amazon Linux is available!
Amazon Linux 2023, GA and supported until 2028-03-15.
https://aws.amazon.com/linux/amazon-linux-2023/
[ec2-user@ip-10-0-0-141 ~]$
```

```
[ec2-user@ip-10-0-0-141 ~]$ uname -a
Linux ip-10-0-0-141.ec2.internal 5.10.236-227.928.amzn2.x86_64 #1 SMP Sat Apr 19 16:54:57 UTC 2025 x86_64 x86_64 x86_64 GNU/Linux
[ec2-user@ip-10-0-0-141 ~]$ whoami
ec2-user
```

Above we sshd into the bastion host (jump machine), now sshing into the private subnet ec2 instance, note the private ip of the private subnet machine, see below

EC2 > Instances > i-0238a168d9f7921cc

EC2

Dashboard

EC2 Global View

Events

Instances

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Instance summary for i-0238a168d9f7921cc (PrivateInstance) [Info](#)

Updated less than a minute ago

Instance ID	Public IPv4 address	Private IPv4 addresses
i-0238a168d9f7921cc	-	10.0.1.85
IPv6 address	Instance state	Public IPv4 DNS
-	Running	-
Hostname type	Private IP DNS name (IPv4 only)	Elastic IP addresses
IP name: ip-10-0-1-85.ec2.internal	ip-10-0-1-85.ec2.internal	-
Answer private resource DNS name	Instance type	AWS Compute Optimizer finding
-	t2.micro	Opt-in to AWS Compute Optimizer for recommendation
Auto-assigned IP address	VPC ID	
-	voc-04393a46b3381793d (SecureVPC)	

Below ssh-d into the private subnet ec2 @10.1.0.85 from bastion.

```
[ec2-user@ip-10-0-0-141 ~]$ ssh -i key.pem ec2-user@10.0.1.85
, #_
~\_###_ Amazon Linux 2023
~~\_\#\#\#\#
~~ \#\#\# My IP Information: Are you using a VPN?
~~ \#\#\# https://aws.amazon.com/linux/amazon-linux-2023
~~ \#/ , _> WorldStream BY
~~ ._. / Services Software Systems
~~ /_ / MaxMind
[ec2-user@ip-10-0-1-85 ~]$ uname -a
Linux ip-10-0-1-85.ec2.internal 6.1.134-150.224.amzn2023.x86_64 #1 SMP PREEMPT_DYNAMIC Tue Apr 22 22:24:52 UTC 2025 x86_64 x86_64 x86_64 GNU/Linux
[ec2-user@ip-10-0-1-85 ~]$
```

```
[ec2-user@ip-10-0-1-85 ~]$ ls  
welcome_message.txt  
[ec2-user@ip-10-0-1-85 ~]$ cat welcome_message.txt Check out what's new in the latest release of Kali Linux!  
#####  
WELCOME TO PRIVATE SUBNET EC2  
#####  
[ec2-user@ip-10-0-1-85 ~]$ █
```

3. Launch EC2 and Setup Auto Scaling

The screenshot shows the AWS EC2 'Launch an instance' wizard. The top navigation bar includes the AWS logo, search bar, and 'Instances' link. The main title 'Launch an instance' is followed by a brief description: 'Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.' The first step, 'Name and tags', is completed with the name 'ASG-Base-Instance'. The second step, 'Application and OS Images (Amazon Machine Image)', is currently selected. It displays a catalog of AMIs, including 'Amazon Linux', 'macOS', 'Ubuntu', 'Windows', 'Red Hat', 'SUSE Linux', and 'Debian'. A search bar at the top of this section allows users to search for specific AMIs. To the right of the catalog, there's a summary panel showing the selected instance type (t2.micro), security group (default), and storage (1 volume(s) - 8 GiB). Buttons for 'Cancel', 'Launch instance', and 'Preview config' are also present.

EC2 > Instances > Launch an instance

Launch an instance Info

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags Info

Name

ASG-Base-Instance Add additional tags

▼ 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

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

Recents **Quick Start**

Amazon Linux	macOS	Ubuntu	Windows	Red Hat	SUSE Linux	Debian

> [Browse more AMIs](#)
Including AMIs from AWS, Marketplace and the Community

Summary Info

Number of instances 1

Software Image (AMI)
Amazon Linux 2023 AMI 2023.7.2... [read more](#)
ami-0f88e80871fd81e91

Virtual server type (instance type)
t2.micro

Firewall (security group)
default

Storage (volumes)
1 volume(s) - 8 GiB

[Cancel](#) Launch instance [Preview config](#)

The screenshot shows the AWS EC2 Instances Launch an instance page. At the top, there's a search bar and navigation links for EC2 and Instances. The main area is titled "Amazon Machine Image (AMI)" and shows a selected item: "Amazon Linux 2023 AMI" (ami-0f88e80871fd81e91). Below it, a "Description" section provides details about the OS. A table lists instance specifications: Architecture (64-bit x86), Boot mode (uefi-preferred), AMI ID (ami-0f88e80871fd81e91), Publish Date (2025-04-30), Username (ec2-user), and a "Verified provider" badge. The "Virtual server type (instance type)" is set to "t2.micro". In the bottom right corner, there are "Cancel" and "Launch instances" buttons, with "Launch instances" being highlighted.

EC2 > Instances > Launch an instance

▼ 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 - required

[Create new key pair](#)

▼ Summary

Number of instances	Info
1	

Network settings

VPC - required | Info
vpc-04393a46b3381793d (SecureVPC)
10.0.0.0/16

Subnet | Info
subnet-0d6a494c562606cc0 Private_Subnet
VPC: vpc-04393a46b3381793d Owner: 739275456457 Availability Zone: us-east-1a
Zone type: Availability Zone IP addresses available: 250 CIDR: 10.0.1.0/24

Auto-assign public IP | Info
Disable

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.
Create security group | Select existing security group

Common security groups | Info
Select security groups

Compare security group rules

Security groups that you add or remove here will be added to or removed from all your network interfaces.

Advanced network configuration

Summary

Number of instances | Info
1

Software Image (AMI)
Amazon Linux 2023 AMI 2023.7.2...read more
ami-0f88e80871fd81e91

Virtual server type (instance type)
t2.micro

Firewall (security group)
launch-wizard-1

Storage (volumes)
1 volume(s) - 8 GiB

Cancel | Launch inst... | Preview

Configure storage

Advanced

1x 8 GiB gp3 Root volume, 3000 IOPS, Not encrypted

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage

Add new volume

Click refresh to view backup information
The tags that you assign determine whether the instance will be backed up by any Data Lifecycle Manager policies.

Firewall (security group)
default

Storage (volumes)
1 volume(s) - 8 GiB

Cancel | Launch inst... | Preview

EC2

Instances (3) | Info

Last updated less than a minute ago | Connect | Instance state | Actions | Launch instances

Find Instance by attribute or tag (case-sensitive)

All states

Instance state = running

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Put
<input type="checkbox"/>	PrivateInstance	i-0238a168d9f7921cc	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1a	-
<input type="checkbox"/>	BastionHost	i-0c5438acdbee0e0a	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1a	-
<input type="checkbox"/>	ASG-Base-Inst...	i-006840fd7ba6275be	Running	t2.micro	Initializing	View alarms +	us-east-1a	-

EC2

- Dashboard
- EC2 Global View
- Events
- Instances**
 - Instances
 - Instance Types
 - Launch Templates
 - Spot Requests
 - Savings Plans
 - Reserved Instances
 - Dedicated Hosts
 - Capacity Reservations
- Images**
 - AMIs
 - AMI Catalog
- Elastic Block Store**
 - Volumes
 - Snapshots
 - Lifecycle Manager

Instance summary for i-006840fd7ba6275be (ASG-Base-Instance) [Info](#)

Updated less than a minute ago

Instance ID	i-006840fd7ba6275be	Public IPv4 address	-	Private IPv4 addresses	10.0.1.237
IPv6 address	-	Instance state	Running	Public IPv4 DNS	-
Hostname type	IP name: ip-10-0-1-237.ec2.internal	Private IP DNS name (IPv4 only)	ip-10-0-1-237.ec2.internal	Elastic IP addresses	-
Answer private resource DNS name	-	Instance type	t2.micro	AWS Compute Optimizer finding	Opt-in to AWS Compute Optimizer for recommendation s.
Auto-assigned IP address	-	VPC ID	vpc-04393a46b3381793d (SecureVPC)	 Learn more	Learn more
IAM Role	-	Subnet ID	subnet-0d6a494c562606cc0 (Private_Subnet)	Auto Scaling Group name	-
IMDSv2	Required	Instance ARN	arn:aws:ec2:us-east-1:739275456457:instance/i-006840fd7ba6275be	Managed	false
Operator	-				

EC2

- Dashboard
- EC2 Global View
- Events
- Instances**
 - Instances
 - Instance Types
 - Launch Templates
 - Spot Requests
 - Savings Plans
 - Reserved Instances
 - Dedicated Hosts
 - Capacity Reservations
- Images**
 - AMIs
 - AMI Catalog
- Elastic Block Store**
 - Volumes
 - Snapshots
 - Lifecycle Manager

Security details

IAM Role	-	Owner ID	739275456457	Launch time	Wed May 07 2025 16:29:44 GMT-0400 (Eastern Daylight Time)
Security groups	sg-04b3845aa597141b1 (launch-wizard-1)				

Inbound rules

Name	Security group rule ID	Port range	Protocol	Source	Security groups
-	sgr-0c68f153fafc4d464	22	TCP	10.0.0.0/24	launch-wizard-1
-	sgr-01517e6cd4bbf341a	22	TCP	185.184.192.248/32	launch-wizard-1

Outbound rules

Name	Security group rule ID	Port range	Protocol	Destination	Security groups
-	sgr-0d61c123132049a30	All	All	0.0.0.0/0	launch-wizard-1

Security group rules

Security group rule ID	Port range	Protocol	Source	Security groups	Description
58f153fafc4d464	22	TCP	10.0.0.0/24	launch-wizard-1	private_ec2_inbound_ssh
517e6cd4bbf341a	22	TCP	185.184.192.248/32	launch-wizard-1	bastion_ec2_inbound_ssh

Outbound rules

Security group rule ID	Port range	Protocol	Destination	Security groups
sgr-0d61c123132049a30	All	All	0.0.0.0/0	launch-wizard-1

Adding autoscaling to ASG-Base-Instance

The screenshot shows the AWS EC2 Resources page. On the left, there's a sidebar with navigation links for EC2 (Dashboard, EC2 Global View, Events), Instances (Instances, Instance Types, Launch Templates), and Images (AMIs). The main content area is titled "Resources" and displays the following summary statistics:

Category	Value
Instances (running)	3
Auto Scaling Groups	0
Capacity Reservations	0
Dedicated Hosts	0
Elastic IPs	0
Instances	4
Key pairs	1
Load balancers	0
Placement groups	0
Security groups	3
Snapshots	0
Volumes	3

On the right side, there's a sidebar titled "EC2 Free Tier" with a link to "View Global EC2 resources". It also shows a "2 EC2 free tier offers" section with a note about end-of-month forecasts and a "Exceeds free tier" section with a note about offers exceeding a limit.

The screenshot shows the AWS EC2 Launch Templates landing page. The left sidebar includes links for EC2 (Dashboard, EC2 Global View, Events), Instances (Instances, Instance Types, Launch Templates), and Images (AMIs). The main content area has a dark header "Compute" and a large banner with the title "EC2 launch templates" and the subtitle "Streamline, simplify and standardize instance launches". Below the banner, there's a description of how launch templates can automate instance launches and simplify permission policies. A call-to-action button "Create launch template" is visible. The "Benefits and features" section is also present.

The screenshot shows the "Create launch template" wizard. The first step, "Launch template name and description", is displayed. It includes a "Launch template name - required" field containing "ASG-Launch-Template", a "Template version description" field containing "A prod webserver for MyApp", and two checkboxes: "Auto Scaling guidance" (with an "Info" link) and "Provide guidance to help me set up a template that I can use with EC2 Auto Scaling". The second step, "Summary", is shown on the right, displaying the selected "Software Image (AMI)".

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.

Scroll down in above pic and copy paste ami id of 3rd ec2 we launched earlier called **ASG-Base-Instance** and hit enter and then click select, see pics below

After selecting it will appear under the previous screen

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.

[Search our full catalog including 1000s of application and OS images](#)

AMI from catalog [Recents](#) [Quick Start](#)

Name	Verified provider	Free tier eligible
Amazon Linux 2023 AMI		

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.

Amazon Linux 2023 AMI 2023.7.20250428.1 x86_64 HVM kernel-6.1

Image ID
ami-0f88e80871fd81e91

Username [ec2-user](#)

Catalog	Published	Architecture	Virtualization	Root device type	ENI Enabled
Quick Start AMIs	2025-04-30T19:33:14.000Z	x86_64	hvm	ebs	Yes

[Browse more AMIs](#)
Including AMIs from AWS, Marketplace and the Community

[Cancel](#) [Create launch template](#)

Instance type [Info](#) | [Get advice](#)

Instance type

t2.micro	Free tier eligible
Family: t2 1 vCPU 1 GiB Memory Current generation: true On-Demand Windows base pricing: 0.0162 USD per Hour On-Demand Ubuntu Pro base pricing: 0.0134 USD per Hour On-Demand SUSE base pricing: 0.0116 USD per Hour On-Demand RHEL base pricing: 0.026 USD per Hour On-Demand Linux base pricing: 0.0116 USD per Hour	<input checked="" type="radio"/> 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

[Create new key pair](#)

Network settings [Info](#)

Subnet [Info](#)

subnet-0d6a494c562606cc0	Private_Subnet
VPC: vpc-04393a46b3381793d Owner: 739275456457 Availability Zone: us-east-1a Zone type: Availability Zone IP addresses available: 249 CIDR: 10.0.1.0/24	Create new subnet

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

Firewall (security groups) [Info](#)

Summary

Software Image (AMI)
Amazon Linux 2023 AMI
ami-0f88e80871fd81e91

Virtual server type (instance type)
-

Firewall (security group)
-

Storage (volumes)
1 volume(s) - 8 GiB

[Cancel](#) [Create launch template](#)

AWS | Search [Alt+S] | United States (N. Virginia) | ⓘ

Subnet | [Info](#)

subnet-0d6a494c562606cc0 Private_Subnet
 VPC: vpc-04393aa46b3381793d Owner: 739275456457 Availability Zone: us-east-1a
 Zone type: Availability Zone IP addresses available: 249 CIDR: 10.0.1.0/24

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

Common security groups | [Info](#)

Select security groups

launch-wizard-1 sg-04b3845aa597141b1 X
 VPC: vpc-04393aa46b3381793d

Security groups that you add or remove here will be added to or removed from all your network interfaces.

Advanced network configuration

Summary

Software Image (AMI)
 Amazon Linux 2023 AMI ami-0f88e80871fd81e91

Virtual server type (instance type)
 t2.micro

Firewall (security group)
 launch-wizard-1

Storage (volumes)
 1 volume(s) - 8 GiB

[Cancel](#) [Create launch template](#)

AWS | Search [Alt+S] | United States (N. Virginia) | ⓘ

Storage (volumes) | [Info](#)

EBS Volumes [Hide details](#)

Success
 Successfully created ASG-Launch-Template(lt-09dd70ff840021feb).

Actions log

Next Steps

Launch an instance
 With On-Demand Instances, you pay for compute capacity by the second (for Linux, with a minimum of 60 seconds) or by the hour (for all other operating systems) with no long-term commitments or upfront payments. Launch an On-Demand Instance from your launch template.

[Launch instance from this template](#)

Create an Auto Scaling group from your template
 Amazon EC2 Auto Scaling helps you maintain application availability and allows you to scale your Amazon EC2 capacity up or down automatically according to conditions you define. You can use Auto Scaling to help ensure that you are running your desired number of Amazon EC2 instances during demand spikes to maintain performance and decrease capacity during lulls to reduce costs.

[Create Auto Scaling group](#)

Create Spot Fleet
 A Spot Instance is an unused EC2 instance that is available for less than the On-Demand price. Because Spot Instances enable you to request unused EC2 instances at steep discounts, you can lower your Amazon EC2 costs significantly. The hourly price for a Spot Instance (of each instance type in each Availability Zone) is set by Amazon EC2, and adjusted gradually based on the long-term supply of and demand for Spot Instances. Spot instances are well-suited for data-analysis, batch jobs, background processing, and optional tasks.

[Create Spot Fleet](#)

After creating above template for autoscaling, now create autoscaling group

aws | Search [Alt+S] United States (N. Virginia) ▾

☰ 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 ⓘ
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-Private-EC2
Must be unique to this account in the current Region and no more than 255 characters.

Launch template ⓘ
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.
ASG-Launch-Template
Create a launch template ⓘ

Version
1 ⏺ ⓘ
Create a launch template version ⓘ

aws | Search [Alt+S] United States (N. Virginia) ▾

☰ EC2 > Auto Scaling groups > Create Auto Scaling group

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.
ASG-Launch-Template
Create a launch template ⓘ

Version
1 ⏺ ⓘ
Create a launch template version ⓘ

Description 01	Launch template ASG-Launch-Template ⓘ lt-09dd70ff840021feb	Instance type t2.micro
AMI ID ami-0f88e80871fd81e91	Security groups -	Request Spot Instances No
Key pair name key-pair_bastion	Security group IDs sg-04b3845aa597141b1 ⓘ	

Additional details

Storage (volumes) -	Date created Wed May 07 2025 17:58:54 GMT-0400 (Eastern Daylight Time)
-------------------------------	--

aws Search [Alt+S] United States (N. Virginia) ▾

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

Instance type requirements Info

You can keep the same instance attributes or instance type from your launch template, or you can choose to override the launch template by specifying different instance attributes or manually adding instance types.

Launch template ASG-Launch-Template [Info] lt-09dd70ff840021feb

Version 1

Description 01

Instance type 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-04393a46b3381793d (SecureVPC)
10.0.0.0/16

Create a VPC [Info]

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-0d6a494c562606cc0 (Private_Subnet) X

EC2 > Auto Scaling groups > Create Auto Scaling group

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-04393a46b3381793d (SecureVPC)
10.0.0.0/16

Create a VPC [Info]

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-0d6a494c562606cc0 (Private_Subnet) X

Create a subnet [Info]

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.

Cancel Skip to review Previous Next

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-04393a46b3381793d (SecureVPC)
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



us-east-1a | subnet-0d6a494c562606cc0 (Private_Subnet) X
10.0.1.0/24

[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.

[Cancel](#)

[Skip to review](#)

[Previous](#)

[Next](#)

- 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

Integrate with other services - optional Info

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.

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.

Select VPC Lattice service to attach

No VPC Lattice service

VPC Lattice will not manage your Auto Scaling group's network access and connectivity with other services.

Attach to VPC Lattice service

Incoming requests associated with specified VPC Lattice target groups will be routed to your Auto Scaling group.

[Create new VPC Lattice service](#)

aws | Search [Alt+S] United States (N. Virginia) ▾

☰ EC2 > Auto Scaling groups > Create Auto Scaling group ⓘ

Application Recovery Controller (ARC) zonal shift - new ⓘ
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 ⓘ
 Turn on Elastic Load Balancing health checks
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.
 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 ⓘ
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.
300 seconds

aws | Search [Alt+S] United States (N. Virginia) ▾

☰ 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

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

Group size ⓘ
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.
3

Scaling ⓘ
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 1	Max desired capacity 3
Equal or less than desired capacity	Equal or greater than desired capacity

Automatic scaling - optional

aws | Search [Alt+S] | United States (N. Virginia) | ⓘ

☰ EC2 > Auto Scaling groups > Create Auto Scaling group

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.

Instance maintenance policy Info

Control your Auto Scaling group's availability during instance replacement events. This includes health checks, instance refreshes, maximum instance lifetime features and events that happen automatically to keep your group balanced, called rebalancing events.

Choose a replacement behavior depending on your availability requirements

Mixed behavior

No policy
For rebalancing events, new instances will launch before terminating others. For all other events, instances terminate and launch at the same time.

Prioritize availability

Launch before terminating
Launch new instances and wait for them to be ready before terminating others. This allows you to go above your desired capacity by a given percentage and may temporarily increase costs.

Control costs

Terminate and launch
Terminate and launch instances at the same time. This allows you to go below your desired capacity by a given percentage and may temporarily reduce availability.

Flexible

Custom behavior
Set custom values for the minimum and maximum amount of available capacity. This gives you greater flexibility in setting how far below or over your desired capacity EC2 Auto Scaling goes when replacing instances.

Additional capacity settings

Capacity Reservation preference | Info

Select whether you want Auto Scaling to launch instances into an existing Capacity Reservation or Capacity Reservation resource group.

Default
Auto Scaling uses the Capacity Reservation preference from your launch template.

None
Instances will not be launched into a Capacity Reservation.

Capacity Reservations only
Instances will only be launched into a Capacity Reservation. If capacity isn't available, the instances fail to launch.

Capacity Reservations first
Instances will attempt to launch into a Capacity Reservation first. If capacity isn't available, instances will run in On-Demand capacity.

aws | Search [Alt+S] | United States (N. Virginia) | ⓘ

☰ EC2 > Auto Scaling groups > Create Auto Scaling group

Additional capacity settings

Capacity Reservation preference | Info

Select whether you want Auto Scaling to launch instances into an existing Capacity Reservation or Capacity Reservation resource group.

Default
Auto Scaling uses the Capacity Reservation preference from your launch template.

None
Instances will not be launched into a Capacity Reservation.

Capacity Reservations only
Instances will only be launched into a Capacity Reservation. If capacity isn't available, the instances fail to launch.

Capacity Reservations first
Instances will attempt to launch into a Capacity Reservation first. If capacity isn't available, instances will run in On-Demand capacity.

Additional settings

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

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](#) [Skip to review](#) [Previous](#) [Next](#)

Screenshot of the AWS EC2 Auto Scaling groups page. The page shows one Auto Scaling group named "ASG-Private-EC2" with the following details:

Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max	Availability Zones
ASG-Private-EC2	ASG-Launch-Template Version 1	0	Updating capacity...	3	1	3	us-east-1a

Tested one of the autoscaling group ec2 instances by sshing from bastion, it worked

```
(kali㉿kali)-[~/aws_projects/aws_cloud_security_infra_project]
$ ssh -i key-pair_bastion.pem ec2-user@18.209.168.80
Last login: Wed May  7 19:53:08 2025 from 185-184-192-248.hosted-by-worldstream.net
,
#_
~\_\####_ Amazon Linux 2
~\_\#####\
~\_\#\#\| AL2 End of Life is 2026-06-30.
~\_\#/ __
~\_\V~'__→ A newer version of Amazon Linux is available!
~\_\_. / Amazon Linux 2023, GA and supported until 2028-03-15.
~\_\_/_ / https://aws.amazon.com/linux/amazon-linux-2023/
[ec2-user@ip-10-0-0-141 ~]$ ssh -i key.pem ec2-user@10.0.1.71
The authenticity of host '10.0.1.71 (10.0.1.71)' can't be established.
ECDSA key fingerprint is SHA256:Pxp+9vFa3E0q3MBAFOF1dJTiSFXg4mhvQFDAM5K6oNg.
ECDSA key fingerprint is MD5:08:96:12:0e:f8:31:73:74:43:b9:03:49:06:d6:b3:c3.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '10.0.1.71' (ECDSA) to the list of known hosts.
,
#_
~\_\####_ Amazon Linux 2023
~\_\#####\
~\_\#\#\| Check out what's new in the latest release of Kali Linux!
~\_\#/ __
~\_\V~'__→ https://aws.amazon.com/linux/amazon-linux-2023
[ec2-user@ip-10-0-1-71 ~]$
```

Below instance shows that it is linked to autoscaling group

EC2

- Dashboard
- EC2 Global View
- Events
- Instances**
 - Instances
 - Instance Types
 - Launch Templates
 - Spot Requests
 - Savings Plans
 - Reserved Instances
 - Dedicated Hosts
 - Capacity Reservations
- Images**
 - AMIs
 - AMI Catalog
- Elastic Block Store**
 - Volumes
 - Snapshots
 - Lifecycle Manager

Instance summary for i-0f437303003db8782 [Info](#)

Updated 2 minutes ago

Instance ID	i-0f437303003db8782	Public IPv4 address	-	Private IPv4 addresses	10.0.1.71
IPv6 address	-	Instance state	Running	Public IPv4 DNS	-
Hostname type	IP name: ip-10-0-1-71.ec2.internal	Private IP DNS name (IPv4 only)	ip-10-0-1-71.ec2.internal	AWS Compute Optimizer finding	Opt-in to AWS Compute Optimizer for recommendations.
Answer private resource DNS name	-	Instance type	t2.micro	Elastic IP addresses	-
Auto-assigned IP address	-	VPC ID	vpc-04393a46b3381793d (SecureVPC)	Auto Scaling Group name	ASG-Private-EC2
IAM Role	-	Subnet ID	subnet-0d6a494c562606cc0 (Private_Subnet)	Managed	false
IMDSv2	Required	Instance ARN	arn:aws:ec2:us-east-1:739275456457:instance/i-0f437303003db8782	Operator	-
Operator	-				

EC2

- Dashboard
- EC2 Global View
- Events
- Instances**
 - Instances**
 - Instance Types
 - Launch Templates
 - Spot Requests
 - Savings Plans
 - Reserved Instances
 - Dedicated Hosts
 - Capacity Reservations

Instances (6) [Info](#)

Last updated less than a minute ago

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Pub
<input type="checkbox"/>	PrivateInstance	i-0238a168d9f7921cc	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1a	-
<input type="checkbox"/>	BastionHost	i-0c5438acdfe0e0a	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1a	-
<input type="checkbox"/>	ASG-Base-Inst...	i-006840fd7ba6275be	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1a	-
<input type="checkbox"/>		i-0f437303003db8782	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1a	-
<input type="checkbox"/>		i-0a571b6513504fcde	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1a	-
<input type="checkbox"/>		i-000db2cbbbf43ba3c	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1a	-

[Launch instances](#)