VPC settings Resources to create Info Create only the VPC resource or the VPC and other networking resources. VPC and more VPC only Name tag auto-generation Info Enter a value for the Name tag. This value will be used to auto-generate Name tags for all resources in the VPC. Auto-generate project IPv4 CIDR block Info Determine the starting IP and the size of your VPC using CIDR notation. 10.0.0.0/16 65,536 IPs CIDR block size must be between /16 and /28. IPv6 CIDR block Info No IPv6 CIDR block Amazon-provided IPv6 CIDR block Tenancy Info Default Number of Availability Zones (AZs) Info

Choose the number of AZs in which to provision subnets. We recommend at least two AZs for high availability.

1	2	3
---	---	---

Customize AZs

Number of public subnets Info

The number of public subnets to add to your VPC. Use public subnets for web applications that need to be publicly accessible over the internet.

0 2

Number of private subnets Info

The number of private subnets to add to your VPC. Use private subnets to secure backend resources that don't need public access.

0 2 4

▼ Customize subnets CIDR blocks

Public subnet CIDR block in us-east-1a

10.0.0.0/24 256 IPs

Public subnet CIDR block in us-east-1b

10.0.2.0/24 256 IPs

Private subnet CIDR block in us-east-1a

10.0.1.0/24 256 IPs

Private subnet CIDR block in us-east-1b

10.0.3.0/24 256 IPs

NAT gateways (\$) Info

Choose the number of Availability Zones (AZs) in which to create NAT gateways. Note that there is a charge for each NAT gateway

None	In 1 AZ	1 per AZ
------	---------	----------

VPC endpoints Info

Endpoints can help reduce NAT gateway charges and improve security by accessing S3 directly from the VPC. By default, full access policy is used. You can customize this policy at any time.

None	S3 Gateway
------	------------

DNS options Info

Enable DNS hostnames

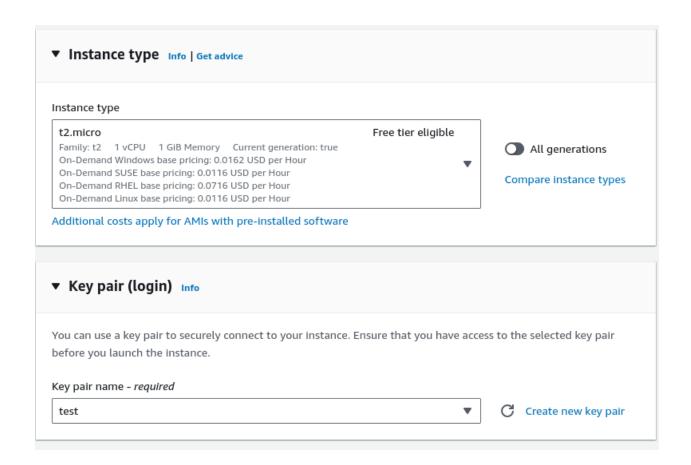
Enable DNS resolution

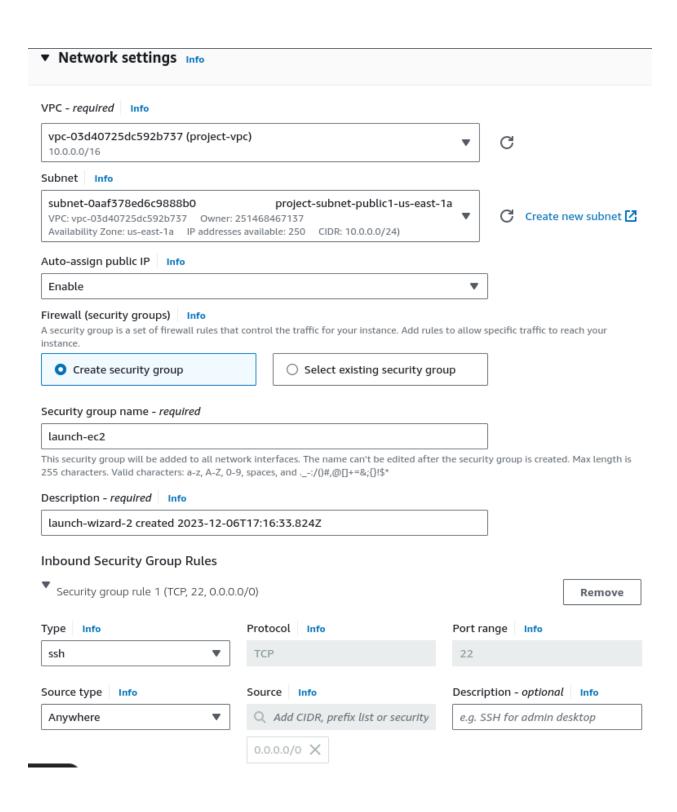
Name and tags Info Name Add additional tags test Writer ▼ Application and OS Images (Amazon Machine Image) Info An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below Q Search our full catalog including 1000s of application and OS images **Quick Start** SUSE Li Amazon macOS Ubuntu Windows Red Hat Linux Browse more AMIs aws Including AMIs from ubuntu[®] Microsoft Red Hat Mac AWS, Marketplace and sus the Community Amazon Machine Image (AMI) Ubuntu Server 22.04 LTS (HVM), SSD Volume Type Free tier eligible ami-0fc5d935ebf8bc3bc (64-bit (x86)) / ami-016485166ec7fa705 (64-bit (Arm)) Virtualization: hvm ENA enabled: true Root device type: ebs Description Canonical, Ubuntu, 22.04 LTS, amd64 jammy image build on 2023-09-19 Architecture AMI ID

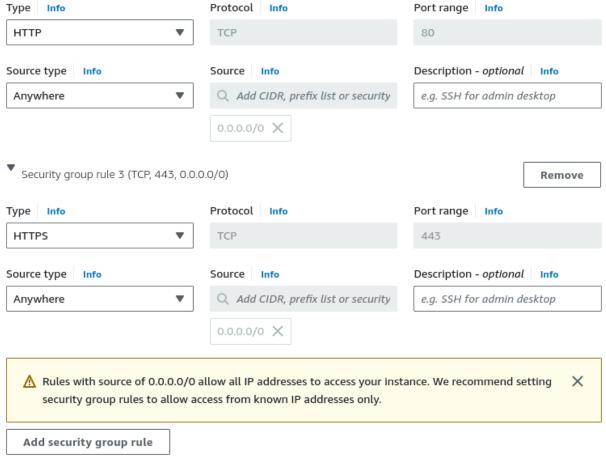
ami-0fc5d935ebf8bc3bc

64-bit (x86)

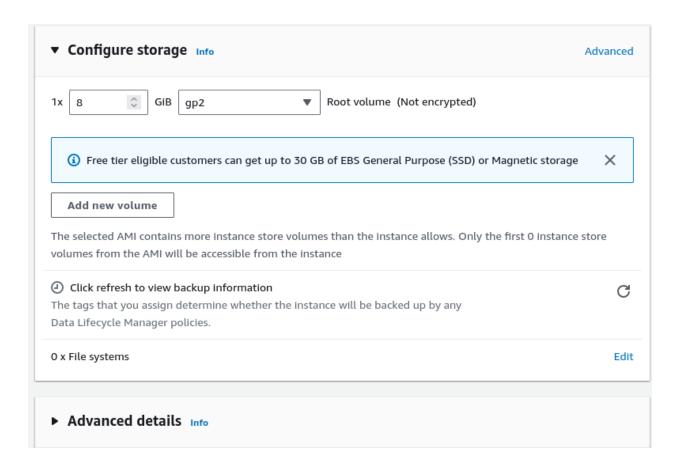
Verified provider



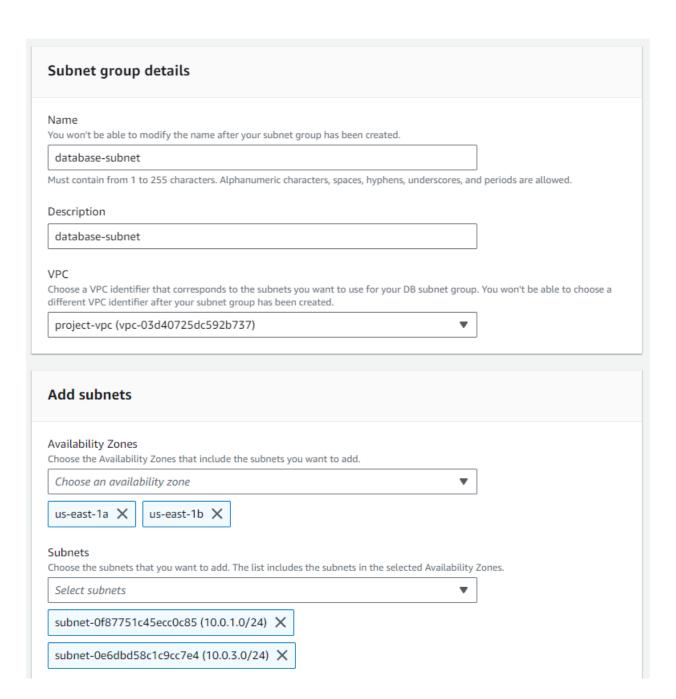


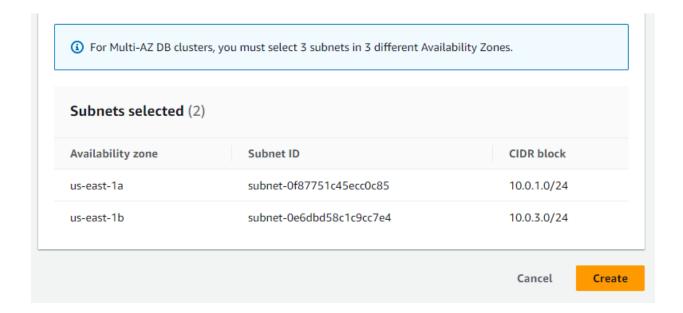


▶ Advanced network configuration



Subnet Groups





Choose a database creation method Info

Standard create

You set all of the configuration options, including ones for availability, security, backups, and maintenance.

O Easy create

Use recommended best-practice configurations. Some configuration options can be changed after the database is created.

Engine options

Engine type Info

O Aurora (MySQL Compatible)



Aurora (PostgreSQL Compatible)



MySQL



MariaDB



PostgreSQL



Oracle



Microsoft SQL Server



O IBM Db2

IBM **Db2**

Microsoft SQL Server	○ IBM Db2
SQL Server	IBM Db2
lition	
MySQL Community	
Known issues/limitations	
Review the Known issues/limitations 🖸 to le	earn about potential compatibility issues with specific
	earn about potential compatibility issues with specific
Review the Known issues/limitations 🖸 to le	earn about potential compatibility issues with specific
Review the Known issues/limitations (2) to le database versions.	earn about potential compatibility issues with specific
Review the Known issues/limitations to le database versions. Hide filters Show versions that support the Multi-AZ DB clust	ter Info
Review the Known issues/limitations to le database versions. Hide filters Show versions that support the Multi-AZ DB clust	t er Info nce and two readable standby DB instances. Multi-AZ DB clusters
Review the Known issues/limitations to led database versions. Hide filters Show versions that support the Multi-AZ DB clust Create a A Multi-AZ DB cluster with one primary DB instate provide up to 2x faster transaction commit latency and a Show versions that support the Amazon RDS Opti	ter Info nce and two readable standby DB instances. Multi-AZ DB cluster utomatic failover in typically under 35 seconds. timized Writes Info
Review the Known issues/limitations to led database versions. Hide filters Show versions that support the Multi-AZ DB cluster with one primary DB instate provide up to 2x faster transaction commit latency and a	ter Info nce and two readable standby DB instances. Multi-AZ DB cluster utomatic failover in typically under 35 seconds. timized Writes Info

Templates

Choose a sample template to meet your use case.

Production

Use defaults for high availability and fast, consistent performance.

O Dev/Test

This instance is intended for development use outside of a production environment.

Free tier

Use RDS Free Tier to develop new applications, test existing applications, or gain hands-on experience with Amazon RDS. Info

Availability and durability

Deployment options Info

The deployment options below are limited to those supported by the engine you selected above.

Multi-AZ DB Cluster

Creates a DB cluster with a primary DB instance and two readable standby DB instances, with each DB instance in a different Availability Zone (AZ). Provides high availability, data redundancy and increases capacity to serve read workloads.

Creates a primary DB instance and a standby DB instance in a different AZ. Provides high availability and data redundancy, but the standby DB instance doesn't support connections for read workloads.

Single DB instance

Creates a single DB instance with no standby DB instances.

Settings

DB instance identifier Info

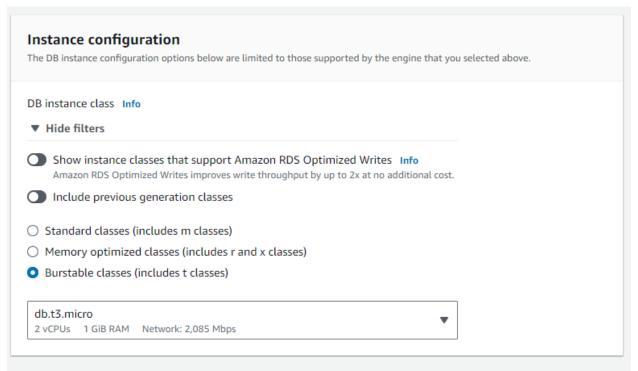
Type a name for your DB instance. The name must be unique across all DB instances owned by your AWS account in the current AWS Region.

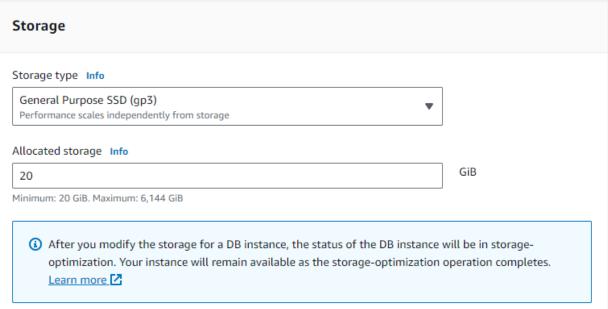
database-1

The DB instance identifier is case-insensitive, but is stored as all lowercase (as in "mydbinstance"). Constraints: 1 to 60 alphanumeric characters or hyphens. First character must be a letter. Can't contain two consecutive hyphens. Can't end with a hyphen.

▼ Credentials Settings

▼ Credentials Settings
Master username Info
Type a login ID for the master user of your DB instance.
admin
1 to 16 alphanumeric characters. The first character must be a letter.
☐ Manage master credentials in AWS Secrets Manager
Manage master user credentials in Secrets Manager. RDS can generate a password for you and manage it throughout its lifecycle.
③ If you manage the master user credentials in Secrets Manager, some RDS features aren't supported. <u>Learn more</u> ☑
☐ Auto generate a password
Amazon RDS can generate a password for you, or you can specify your own password.
Master password Info
•••••
Constraints: At least 8 printable ASCII characters. Can't contain any of the following: / (slash), '(single quote), "(double quote) and @ (at sign).
Confirm master password Info
•••••





Advanced settings

Baseline IOPS of 3,000 IOPS and storage throughput of 125 MiBps are included for allocated storage less than 400 GiB.

▶ Storage autoscaling

Connectivity Info

Compute resource

Choose whether to set up a connection to a compute resource for this database. Setting up a connection will automatically change connectivity settings so that the compute resource can connect to this database.

Don't connect to an EC2 compute resource Don't set up a connection to a compute resource for this database. You can manually set up a connection to a compute resource later. Connect to an EC2 compute resource
 Set up a connection to an EC2 compute resource for this database.

Virtual private cloud (VPC) Info

Choose the VPC. The VPC defines the virtual networking environment for this DB instance.



Only VPCs with a corresponding DB subnet group are listed.

After a database is created, you can't change its VPC.

DB subnet group Info

Choose the DB subnet group. The DB subnet group defines which subnets and IP ranges the DB instance can use in the VPC that you selected.



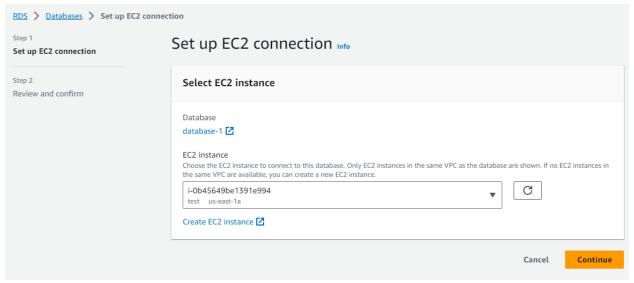
Public access Info	
	instances and other resources outside of the VPC can connect to the database. Choose one or more VPC security groups that specify
 No RDS doesn't assign a public IP address to the database. Only A connect to your database. Choose one or more VPC security g 	Amazon EC2 instances and other resources inside the VPC can roups that specify which resources can connect to the database.
VPC security group (firewall) Info Choose one or more VPC security groups to allow access to your d appropriate incoming traffic.	latabase. Make sure that the security group rules allow the
 Choose existing Choose existing VPC security groups 	Create new Create new VPC security group
Existing VPC security groups	
Choose one or more options	▼
launch-ec2 X	
RDS Proxy RDS Proxy is a fully managed, highly available database proxy tha	at improves application scalability, resiliency, and security.
☐ Create an RDS Proxy Info RDS automatically creates an IAM role and a Secrets Manager information, see Amazon RDS Proxy pricing ☐.	secret for the proxy. RDS Proxy has additional costs. For more
Certificate authority - optional Info Using a server certificate provides an extra layer of security by valid to does so by checking the server certificate that is automatically in	idating that the connection is being made to an Amazon database. nstalled on all databases that you provision.
rds-ca-2019 (default) Expiry: Aug 22, 2024	▼
If you don't select a certificate authority, RDS chooses one for you	L.
▼ Additional configuration	
Database port Info TCP/IP port that the database will use for application connections	5.
3306	

Database authentication	on
Database authentication optio	ns Info
 Password authentication Authenticates using database p 	asswords.
 Password and IAM databas Authenticates using the databa roles. 	e authentication se password and user credentials through AWS IAM users and
 Password and Kerberos aut Choose a directory in which you instance using Kerberos Auther 	u want to allow authorized users to authenticate with this DB
Monitoring	
☐ Enable Enhanced monitoring Enabling Enhanced monitoring	ng metrics are useful when you want to see how different processes or threads use the CPU.
▼ Additional configura Database options, encryption to protection turned on.	ation urned off, backup turned off, backtrack turned off, maintenance, CloudWatch Logs, delete
Database options	
Initial database name Info	
If you do not specify a database na	me, Amazon RDS does not create a database.
DB parameter group Info	
1	

Option group Info
default:mysql-8-0 ▼
Backup
Enable automated backups Creates a point-in-time snapshot of your database
Encryption
☐ Enable encryption Choose to encrypt the given instance. Master key IDs and aliases appear in the list after they have been created using the AWS Key Management Service console. Info
Log exports
Select the log types to publish to Amazon CloudWatch Logs Audit log Error log
☐ General log ☐ Slow query log
IAM role The following service-linked role is used for publishing logs to CloudWatch Logs.
RDS service-linked role
Maintenance Auto minor version upgrade Info
Enable auto minor version upgrade Enabling auto minor version upgrade will automatically upgrade to new minor versions as they are released. The automatic upgrades occur during the maintenance window for the database.
Maintenance window Info Select the period you want pending modifications or maintenance applied to the database by Amazon RDS.
Choose a windowNo preference

Deletion protection ✓ Enable deletion protection Protects the database from being deleted accidentally. While this option is enabled, you can't delete the database. ③ You are responsible for ensuring that you have all of the necessary rights for any third-party products or services that you use with AWS services. Cancel Create database

After



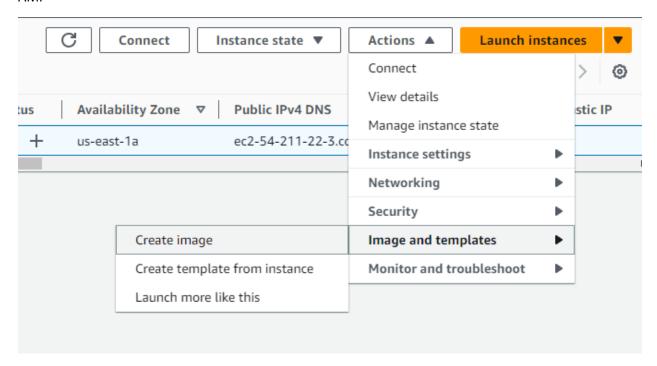
Db.php

```
<?php

$servername = "database-1.cfd6zgfjgogz.us-east-1.rds.amazonaws.com";
$username = "admin";
$password = "msis.12\( \begin{align*} \begin{align*} \end{align*} \\ \text{State} \text{ connection} \\ \text{Scon} = mysqli_connect(\servername,\susername,\spassword,\setatb);

// Check connection
if (!\scon) {
    die("Connection failed: " . mysqli_connect_error());
}</pre>
```

AMI



Create image Info An image (also referred to as an AMI) defines the programs and settings that are applied when you launch an EC2 instance. You can create an image from the configur. Instance ID i i-0b45649be1391e994 (test) Image name EcomServerAMI Maximum 127 characters. Can't be modified after creation. Image description - optional EcomServerAMI Maximum 255 characters No reboot

Load Balancer

1.Target Group

Specify group details

Your load balancer routes requests to the targets in a target group and performs health checks on the targets.

Basic configuration

Settings in this section can't be changed after the target group is created.

Choose a target type

Instances

- Supports load balancing to instances within a specific VPC.
- Facilitates the use of Amazon EC2 Auto Scaling to manage and scale your EC2 capacity.

O IP addresses

- Supports load balancing to VPC and on-premises resources.
- · Facilitates routing to multiple IP addresses and network interfaces on the same instance.
- · Offers flexibility with microservice based architectures, simplifying inter-application communication.
- · Supports IPv6 targets, enabling end-to-end IPv6 communication, and IPv4-to-IPv6 NAT.

O Lambda function

- · Facilitates routing to a single Lambda function.
- · Accessible to Application Load Balancers only.

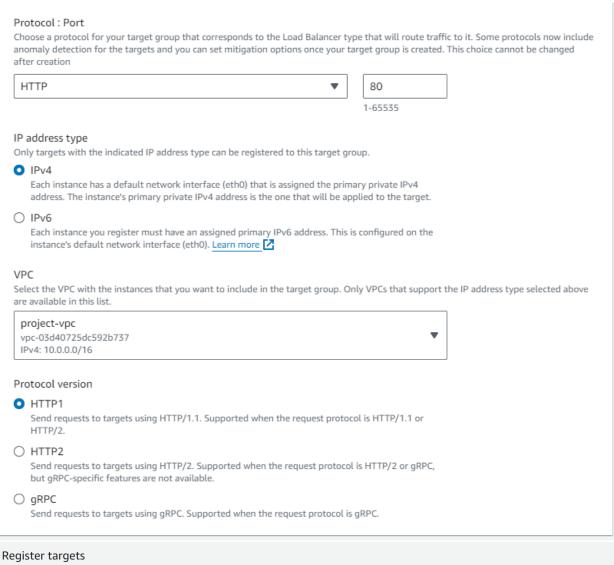
O Application Load Balancer

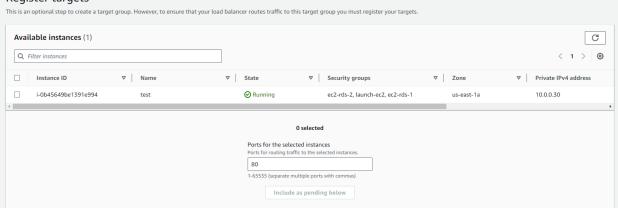
- Offers the flexibility for a Network Load Balancer to accept and route TCP requests within a specific VPC.
- Facilitates using static IP addresses and PrivateLink with an Application Load Balancer.

Target group name

ecomtargetgroup

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

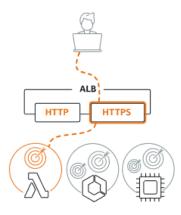




2.Load Balancer

Load balancer types

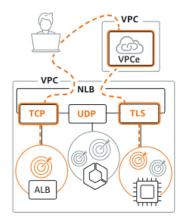
Application Load Balancer Info



Choose an Application Load
Balancer when you need a flexible
feature set for your applications
with HTTP and HTTPS traffic.
Operating at the request level,
Application Load Balancers provide
advanced routing and visibility
features targeted at application
architectures, including
microservices and containers.

Create

Network Load Balancer



Choose a Network Load Balancer when you need ultra-high performance, TLS offloading at scale, centralized certificate deployment, support for UDP, and static IP addresses for your applications. Operating at the connection level, Network Load Balancers are capable of handling millions of requests per second securely while maintaining ultra-low latencies.

Create

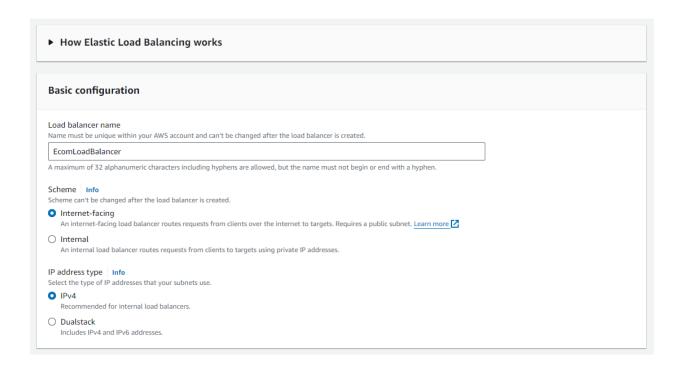
Gateway Load Balancer

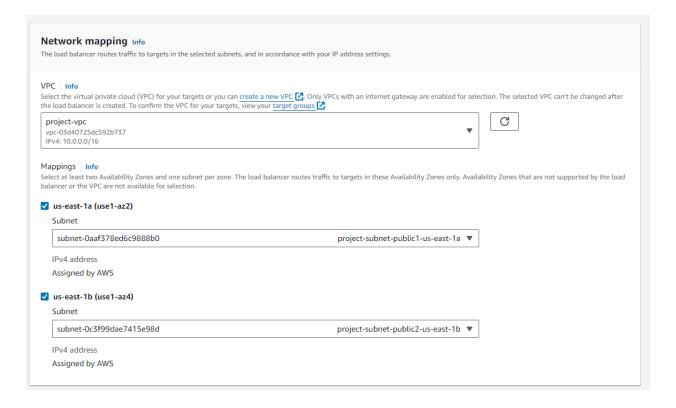


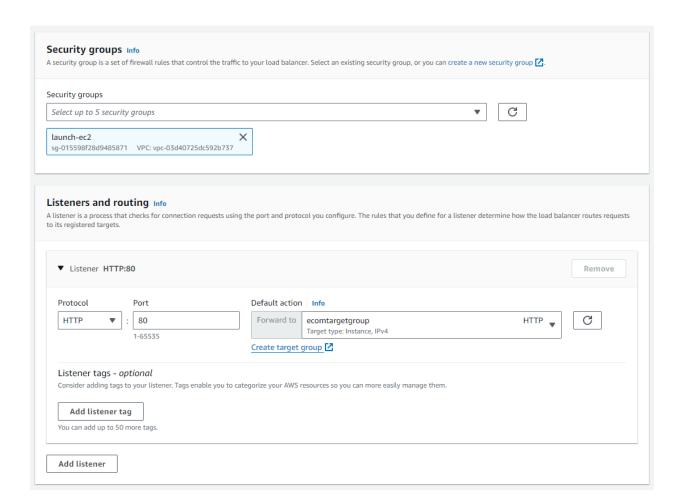
Choose a Gateway Load Balancer when you need to deploy and manage a fleet of third-party virtual appliances that support GENEVE. These appliances enable you to improve security, compliance, and policy controls.

Create

▶ Classic Load Balancer - previous generation







▼ Add-on services - optiona Additional AWS services can be integra Services" tab for the selected load bala	ted with this load balancer at launch. You can also	add these and other services after your load balan	ncer is created by reviewing the "Integrated
AWS Global Accelerator Info Create an accelerator to get static applications. Additional charges a	: IP addresses and improve the performanc	e and availability of your	
		urces so you can more easily manage them. The 'K duction.	ey' is required, but 'Value' is optional. For
Summary Review and confirm your configurations. Es	timate cost 🛂		
Basic configuration Edit EcomLoadBalancer • Internet-facing • IPv4	• launch-ec2 sg-015598f28d9485871	Network mapping Edit VPC vpc-03d40725dc592b737 project-vpc ■ us-east-1a subnet-0aaf378ed6c9888b0 project-subnet-public1-us-east-1a ■ us-east-1b subnet-0c3f99dae7415e98d project-subnet-public2-us-east-1b	Listeners and routing Edit • HTTP:80 defaults to ecomtargetgroup
Add-on services Edit		Tags Edit None	
Attributes	he applied to your load balancer. You can	view and edit them after creating the load	halancer

Launch Template

Launch template name and description

Launch template name - required

EcomWebApp

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

Template version description

A prod webserver for MyApp

Max 255 chars

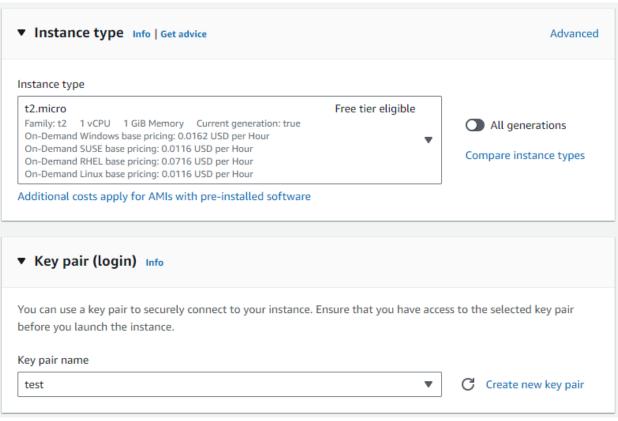
Auto Scaling guidance Info

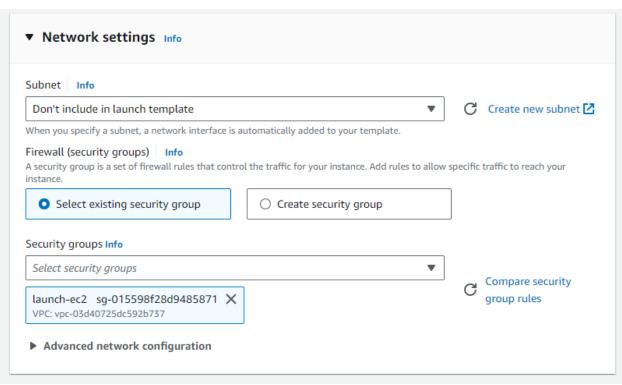
Select this if you intend to use this template with EC2 Auto Scaling

Provide guidance to help me set up a template that I can use with EC2 Auto Scaling

- ► Template tags
- Source template

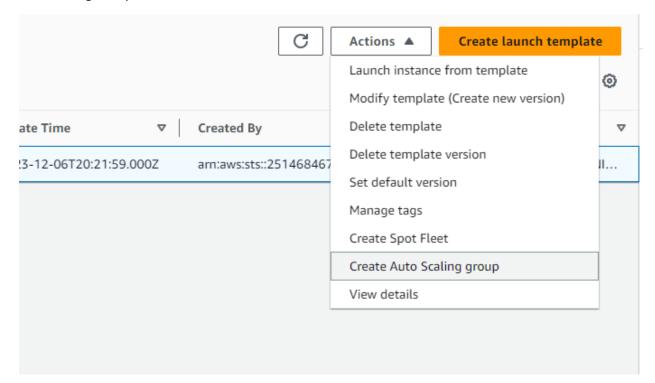
▼ Application and	OS Images (Amazon Machine Image) - required	Info
•	contains the software configuration (operating system, applic aunch your instance. Search or Browse for AMIs if you don't se	
Q Search our full catal	og including 1000s of application and OS images	
Recents My AM	S Quick Start	
Owned by me	○ Shared with me	Q
		Browse more AMIs Including AMIs from AWS, Marketplace and the Community
Amazon Machine Image (AMI)	
EcomServerAMI ami-0d980c6dd74649fa0 2023-12-06T20:00:14.000Z	Virtualization: hvm ENA enabled: true Root device type: ebs	•
Description		
EcomServerAMI		
Architecture	AMI ID	
x86_64	ami-0d980c6dd74649fa0	







Auto Scaling Group



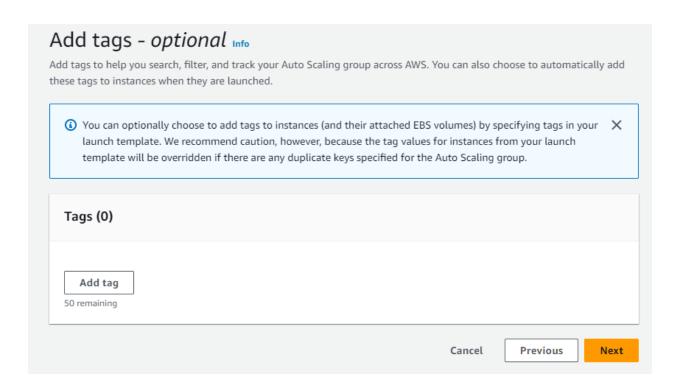
	oup name entify the group.
EcomWebScal	ng
lust be unique to	this account in the current Region and no more than 255 characters.
launch t	unts created after May 31, 2023, the EC2 console only supports creating Auto Scaling groups with emplates. Creating Auto Scaling groups with launch configurations is not recommended but still via the CLI and API until December 31, 2023.
launch t available aunch templat	emplates. Creating Auto Scaling groups with launch configurations is not recommended but still via the CLI and API until December 31, 2023.
launch t available aunch templat hoose a launch t	emplates. Creating Auto Scaling groups with launch configurations is not recommended but still via the CLI and API until December 31, 2023.

/ou can know the same instance attails	nts Info	amplate or you can choose to everide the lavert towards
	utes or instance type from your launch t utes or manually adding instance types.	emplate, or you can choose to override the launch template
aunch template	Version	Description
EcomWebApp 🗹	Default	-
t-013d2a2d37d017c81		
nstance type		
2.micro		
Network Info		
	se multiple Availability Zones and default subnets are suitable for ge	let EC2 Auto Scaling balance your instances across ting started quickly.
he zones. The default VPC and /PC		
he zones. The default VPC and /PC	al network for your Auto Scaling group.	
the zones. The default VPC and VPC Choose the VPC that defines the virture vpc-03d40725dc592b737 (pro	al network for your Auto Scaling group.	
the zones. The default VPC and of PC Thoose the VPC that defines the virture vpc-03d40725dc592b737 (produce. 10.0.0.0/16 Create a VPC	al network for your Auto Scaling group.	
PC Choose the VPC that defines the virture vpc-03d40725dc592b737 (pro 10.0.0.0/16 Create a VPC Availability Zones and subnets	al network for your Auto Scaling group.	ting started quickly.
the zones. The default VPC and of IPC Thoose the VPC that defines the virture vpc-03d40725dc592b737 (pro 10.0.0.0/16 Treate a VPC Availability Zones and subnets	al network for your Auto Scaling group. ject-vpc) Jubnets your Auto Scaling group can use	n the chosen VPC.
the zones. The default VPC and of the zones. The default VPC and of the zones the VPC that defines the virture vpc-03d40725dc592b737 (production 10.0.0.0/16 Create a VPC Availability Zones and subnets Define which Availability Zones and subnets	default subnets are suitable for geral network for your Auto Scaling group. ject-vpc) ubnets your Auto Scaling group can use bnets	n the chosen VPC.
the zones. The default VPC and of the zones. The default VPC and of the zones the VPC that defines the virture vpc-03d40725dc592b737 (production).0.0.0/16 Treate a VPC Availability Zones and subnets Define which Availability Zones and subnets Select Availability Zones and subnets.	default subnets are suitable for geral network for your Auto Scaling group. ject-vpc) ubnets your Auto Scaling group can use bnets	n the chosen VPC.
the zones. The default VPC and of the zones. The default VPC and of the zones the VPC that defines the virture vpc-03d40725dc592b737 (pro 10.0.0.0/16 Create a VPC Availability Zones and subnets Define which Availability Zones and subnets Select Availability Zones and subnet-asset-1a subnet-0f87751c4 subnet-private1-us-east-1a 10.0.1.0/24	default subnets are suitable for geral network for your Auto Scaling group. giect-vpc) ubnets your Auto Scaling group can use bnets Secc0c85 (project-	n the chosen VPC.
he zones. The default VPC and of IPC Choose the VPC that defines the virture vpc-03d40725dc592b737 (pro 10.0.0.0/16 Create a VPC Availability Zones and subnets Define which Availability Zones and subnets Select Availability Zones and subnet-of Select Availability Zones and subnet-of Select Availability Zones and subnet-private1-us-east-1a)	default subnets are suitable for geral network for your Auto Scaling group. giect-vpc) ubnets your Auto Scaling group can use bnets Secc0c85 (project-	n the chosen VPC.

se the options below to attach your A ou define.	uto Scaling group to an existing load balancer, or to a new load balancer that
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 balelect the load balancers that you want to att Choose from your load balancer to This option allows you to attach Applic Gateway Load Balancers. 	target groups Choose from Classic Load Balancers
Choose from your load balancer t This option allows you to attach Applic Gateway Load Balancers. xisting load balancer target groups	target groups Choose from Classic Load Balancers

Monitoring Info		
	cs collection within CloudWatch	
Default instance warm The amount of time that (data is not reliable yet.	up Info CloudWatch metrics for new instances do not contribute to the group's ago	gregated instance metrics, as their usage
☐ Enable default inst	ance warmup	
	Cancel Skip to rev	riew Previous Next
	Cancet Skip to rev	riew
Set the initial size of the A	uto Casling arous. After creating the arous year and shapes its size to as	
	uto Scaling group. After creating the group, you can change its size to fin	eet demand, either manually or by using
Desired capacity type Choose the unit of measu configured with a set of ir Units (number of ins	rement for the desired capacity value. vCPUs and Memory(GiB) are only stance attributes.	
Desired capacity type Choose the unit of measu configured with a set of ir	rement for the desired capacity value. vCPUs and Memory(GiB) are only stance attributes.	
Desired capacity type Choose the unit of measu configured with a set of ir Units (number of ins: Desired capacity Specify your group size.	rement for the desired capacity value. vCPUs and Memory(GiB) are only stance attributes.	
Desired capacity type Choose the unit of measu configured with a set of ir Units (number of ins Desired capacity Specify your group size. 2 Scaling Info	rement for the desired capacity value. vCPUs and Memory(GiB) are only stance attributes.	
Desired capacity type Choose the unit of measu configured with a set of ir Units (number of ins: Desired capacity Specify your group size. 2 Scaling Info You can resize your Auto S Scaling limits	rement for the desired capacity value. vCPUs and Memory(GiB) are only stance attributes. cances) caling group manually or automatically to meet changes in demand.	
Desired capacity type Choose the unit of measu configured with a set of ir Units (number of ins: Desired capacity Specify your group size. 2 Scaling Info You can resize your Auto S Scaling limits Set limits on how much you	rement for the desired capacity value. vCPUs and Memory(GiB) are only sistance attributes.	
Desired capacity type Choose the unit of measu configured with a set of ir Units (number of ins: Desired capacity Specify your group size. 2 Scaling Info You can resize your Auto S Scaling limits	rement for the desired capacity value. vCPUs and Memory(GiB) are only so stance attributes. Frances) Caling group manually or automatically to meet changes in demand. Four desired capacity can be increased or decreased.	

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	
Web Server Tracking Policy	
better scaling performance.	ow or high. If using EC2 metrics, consider enabling detailed monitoring for
Average CPU utilization	▼
Target value	
60	
Instance warmup Info	
Instance warmup Info 300 seconds Disable scale in to create only a scale-out policy	nfo
Instance warmup Info 300 seconds Disable scale in to create only a scale-out policy Add notifications – optional Info	nfo Auto Scaling launches or terminates the EC2 instances in your Auto
Instance warmup Info 300 seconds Disable scale in to create only a scale-out policy Add notifications – optional Info Send notifications to SNS topics whenever Amazon EC2 A	



Running

