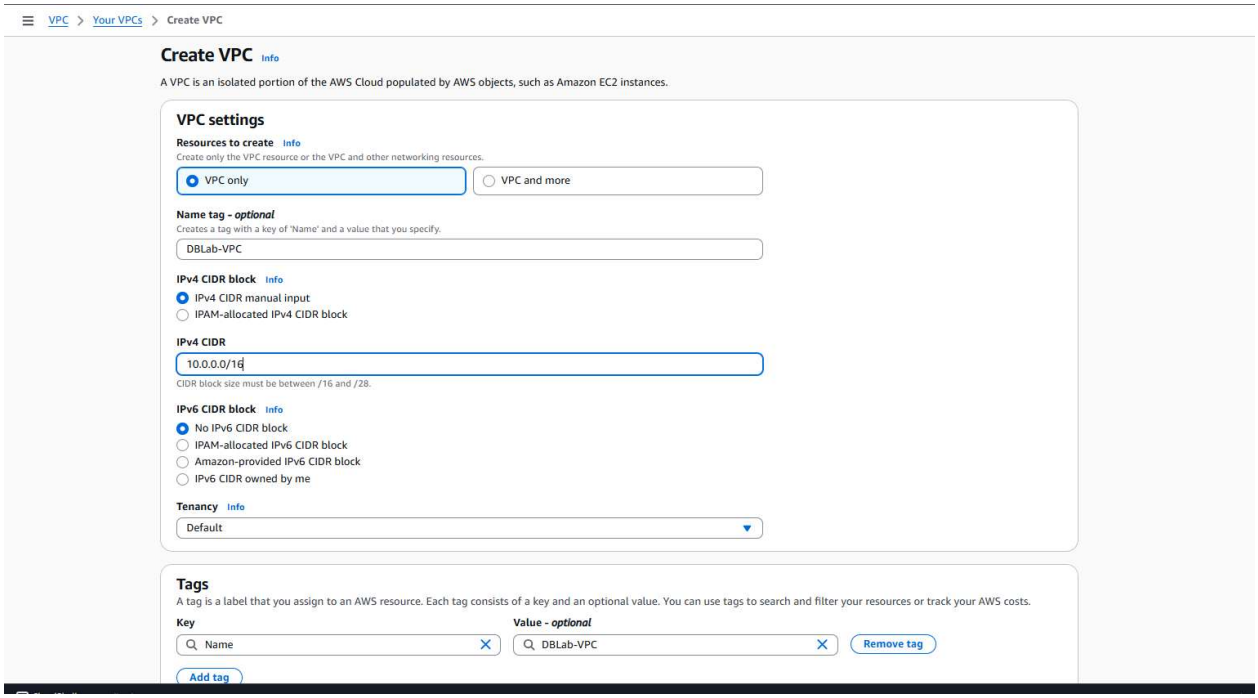
Steps to Set Up MariaDB on EC2 and Connect to RDS MariaDB

1. Create VPC and Subnets

- Create a VPC named `DBLab-VPC` with CIDR `10.0.0.0/16`.
- Create two subnets in the VPC:
  - Public Subnet: `DBLab-Public-Subnet` with CIDR `10.0.1.0/24`.
  - Private Subnet: `DBLab-Private-Subnet` with CIDR `10.0.2.0/24`.
- Attach Internet Gateway and route outbound traffic from the public subnet to the internet.
- Keep the private subnet isolate



Create subnet Info

VPC

VPC ID
Create subnets in this VPC.
vpc-080e0cb701d59a750 (DBLab-VPC)

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.
DBLab-Public-Subnet
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.
Asia Pacific (Mumbai) / aps1-az1 (ap-south-1a)

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.
10.0.0.0/16

IPv4 subnet CIDR block
10.0.1.0/24 256 IPs

VPC > Subnets > Create subnet

Create subnet Info

VPC

VPC ID
Create subnets in this VPC.
vpc-080e0cb701d59a750 (DBLab-VPC)

Associated VPC CIDRs

IPv4 CIDRs
10.0.0.0/16

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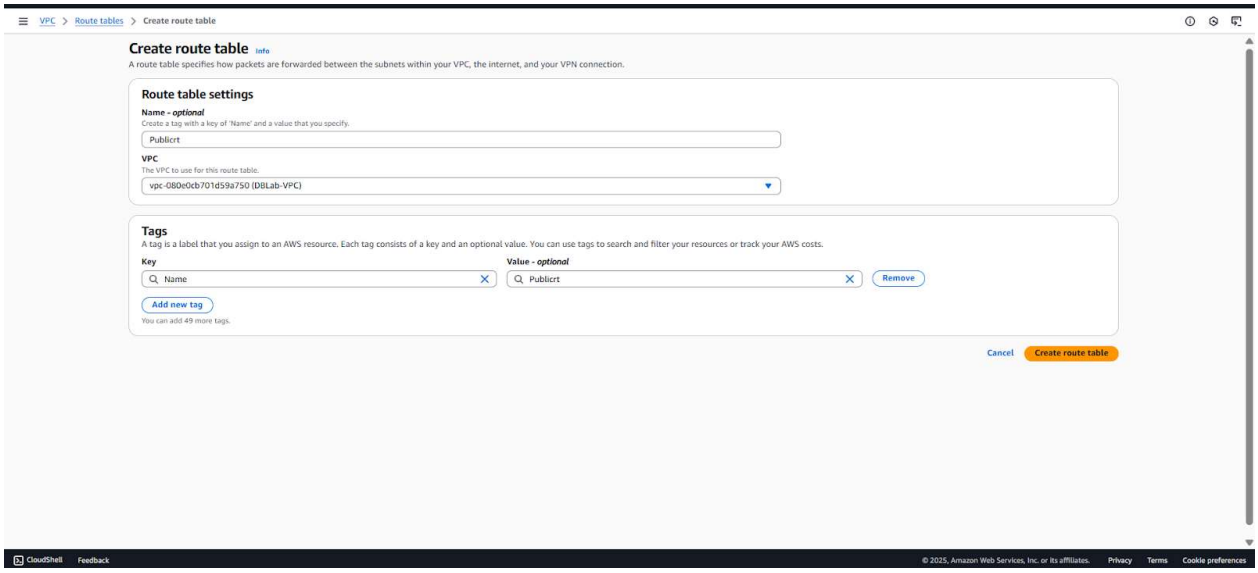
The name can be up to 256 characters long.

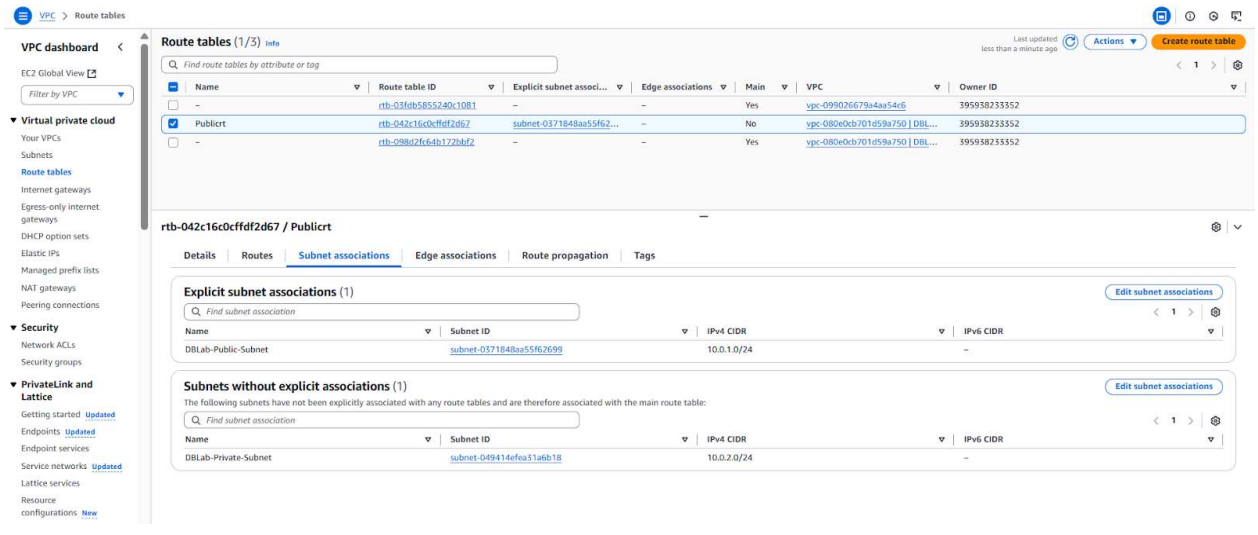
Availability Zone Info
Choose the zone in which your subnet will reside, or let Amazon choose one for you.
Asia Pacific (Mumbai) / aps1-az3 (ap-south-1b)

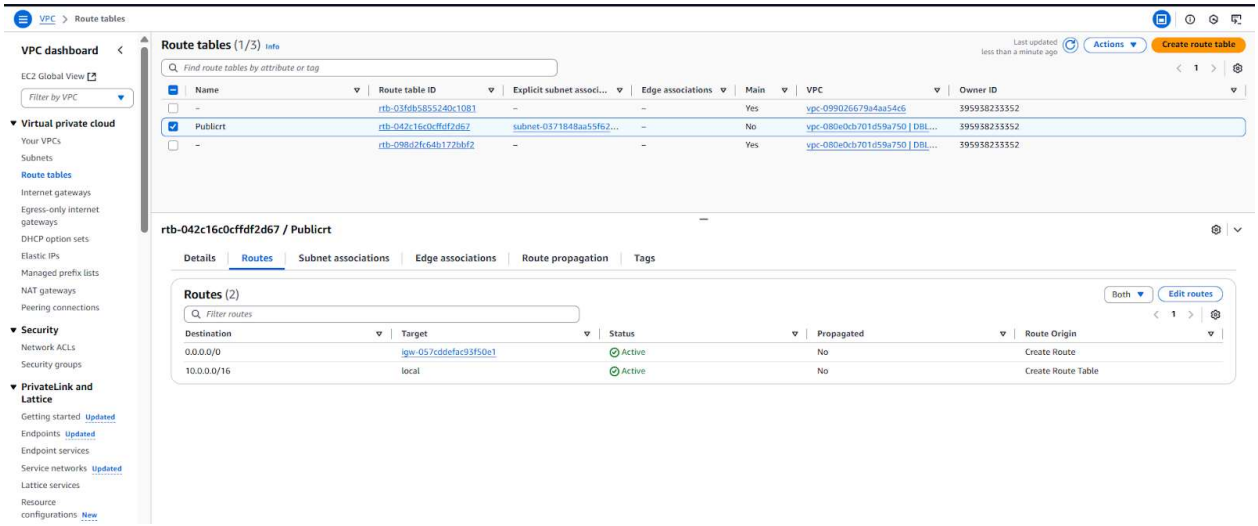
IPv4 VPC CIDR block Info
Choose the VPC's IPv4 CIDR block for the subnet. The subnet's IPv4 CIDR must lie within this block.
10.0.0.0/16

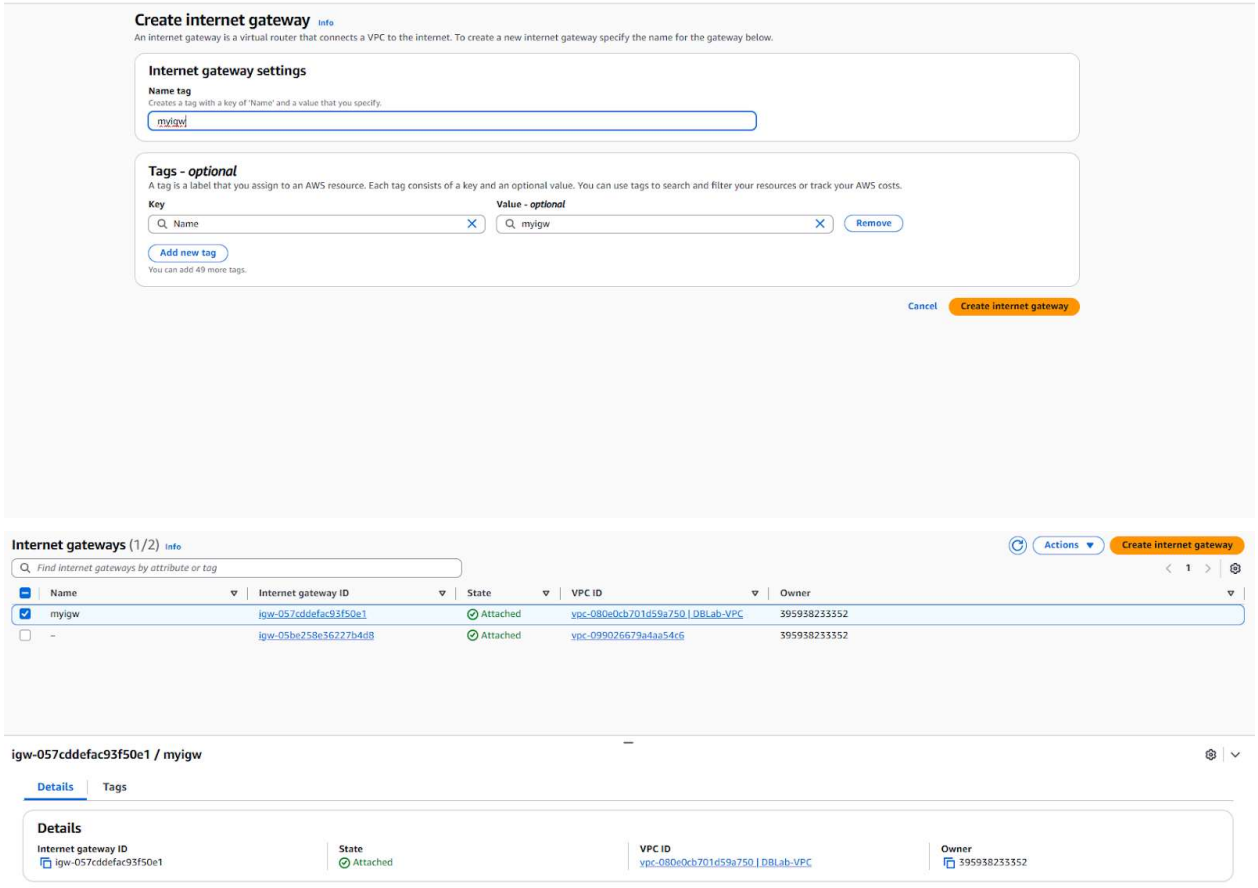
IPv4 subnet CIDR block
10.0.2.0/24 256 IPs

▼ Tags - optional


VPC > Route tables > Create route table
Create route table Info
A route table specifies how packets are forwarded between the subnets within your VPC, the internet, and your VPN connection.
Route table settings
Name - optional
Create a tag with a key of 'Name' and a value that you specify.
Publicrt
VPC
The VPC to use for this route table.
vpc-080e0cb701d59a750 (DBLab-VPC)
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.
Key
Name
Value - optional
Publicrt
Remove
Add new tag
You can add 49 more tags.
Cancel
Create route table
CloudShell
Feedback
© 2025, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences


VPC > Route tables
VPC dashboard
EC2 Global View
Filter by VPC
Virtual private cloud
Your VPCs
Subnets
Route tables
Internet gateways
Egress-only internet gateways
DHCP option sets
Elastic IPs
Managed prefix lists
NAT gateways
Peering connections
Security
Network ACLs
Security groups
PrivateLink and Lattice
Getting started Updated
Endpoints Updated
Endpoint services
Service networks Updated
Lattice services
Resource configurations New
Route tables (1/3) Info
Last updated less than a minute ago
Actions
Create route table
Find route tables by attribute or tag
Name
Route table ID
Explicit subnet associ...
Edge associations
Main
VPC
Owner ID
rtb-03fdb5855240c1081
rtb-042c16c0cffdf2d67
subnet-0371848aa55f62...
rtb-098d2fc64b172bbf2
vpc-099026679a4aa54c6
vpc-080e0cb701d59a750 | DBL...
395938233352
rtb-042c16c0cffdf2d67 / Publicrt
Details
Routes
Subnet associations
Edge associations
Route propagation
Tags
Explicit subnet associations (1)
Edit subnet associations
Find subnet association
Name
Subnet ID
IPv4 CIDR
IPv6 CIDR
DBLab-Public-Subnet
subnet-0371848aa55f62699
10.0.1.0/24
Subnets without explicit associations (1)
The following subnets have not been explicitly associated with any route tables and are therefore associated with the main route table:
DBLab-Private-Subnet
subnet-049414efea31a6b18
10.0.2.0/24


VPC > Route tables
VPC dashboard
Route tables (1/3) Info
Actions
Create route table
rtb-042c16c0cffdf2d67 / Publicrt
Details
Routes
Subnet associations
Edge associations
Route propagation
Tags
Routes (2)
Both
Edit routes
Filter routes
Destination
Target
Status
Propagated
Route Origin
0.0.0.0/0
igw-057cddefac93f50e1
Active
No
Create Route
10.0.0.0/16
local
Active
No
Create Route Table



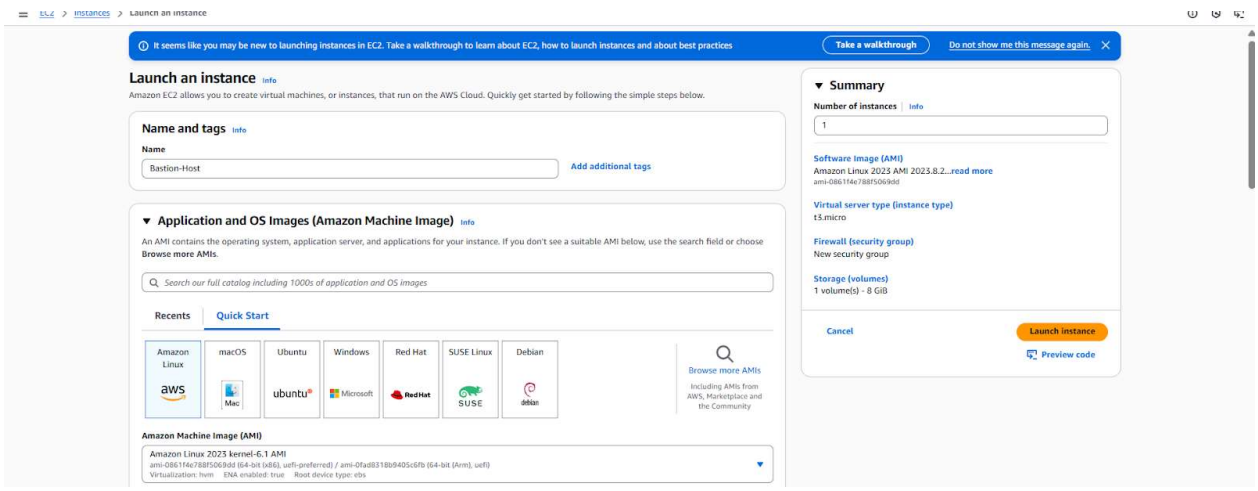
2: Launch Bastion EC2 Instance in Public Subnet

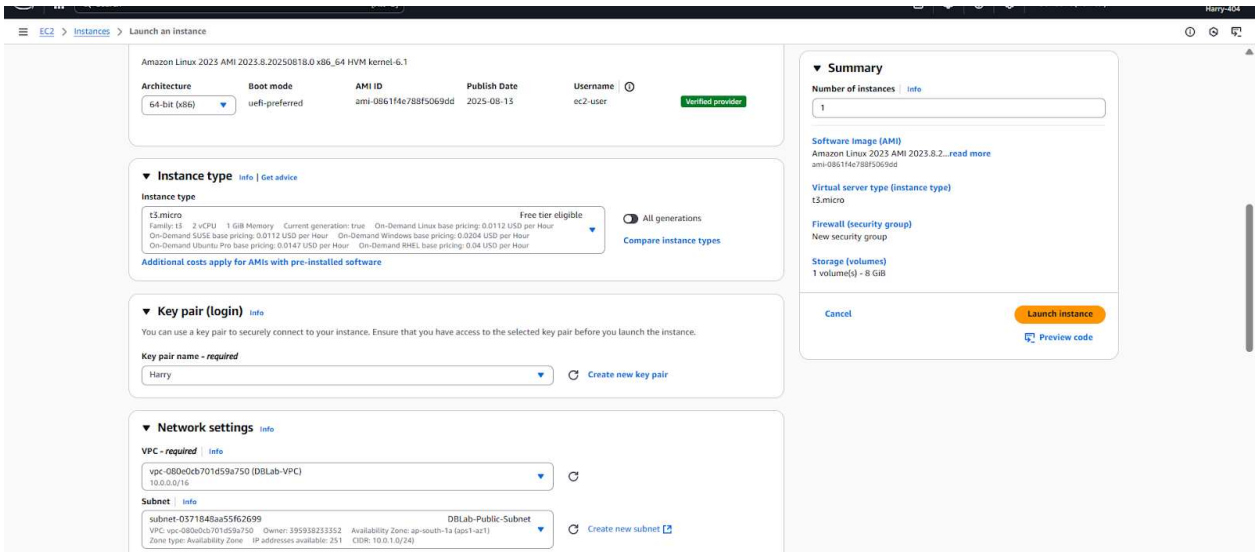
- Launch an EC2 instance in the public subnet with:
  - AMI: Amazon Linux 2023 (or Amazon Linux 2 / Ubuntu).
  - Instance type: `t3.micro` (free tier eligible).
  - Security Group: Allow SSH (port 22) from your IP only.

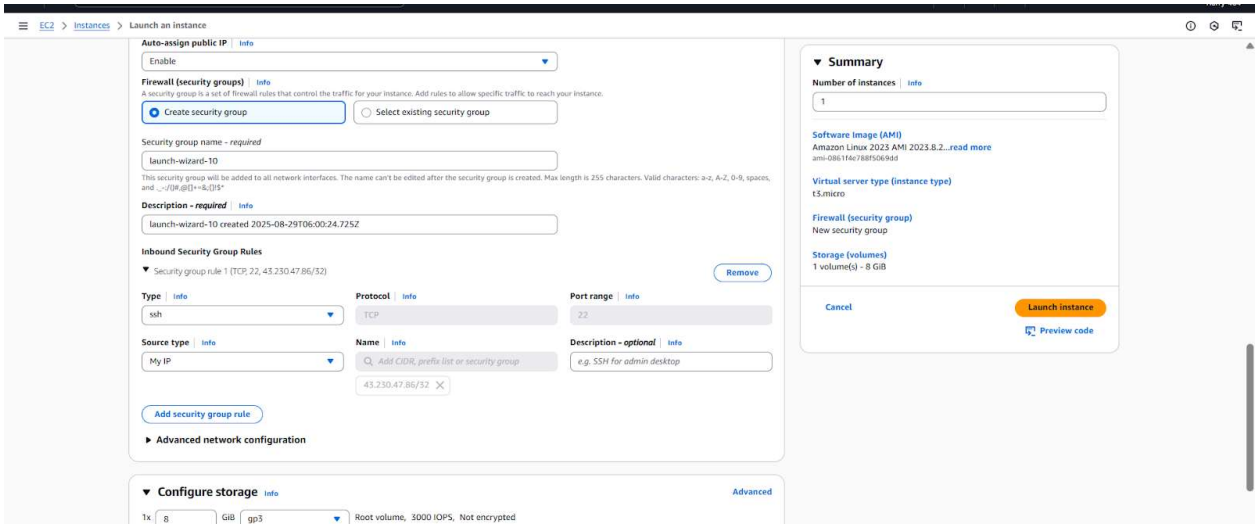
- SSH into the Bastion host:
  `ssh -i "Harry.pem" ec2-user@<EC2-Public-IP>`

- Update the instance and install MariaDB client:

```
sudo dnf update -y
sudo dnf install mariadb105-server
```








```
C:\Users\Hope Foundation>cd Downloads

C:\Users\Hope Foundation\Downloads>ssh -i "Harry.pem" ec2-user@13.232.174.41
       #_
   ~\_  ####_        Amazon Linux 2023
  ~~  \_#####\
  ~~     \###|
  ~~       \#/ ___   https://aws.amazon.com/linux/amazon-linux-2023
   ~~       V~' '->
    ~~~         /
      ~~._.   _/
         _/ _/
       _/m/'
[ec2-user@ip-10-0-1-61 ~]$
```

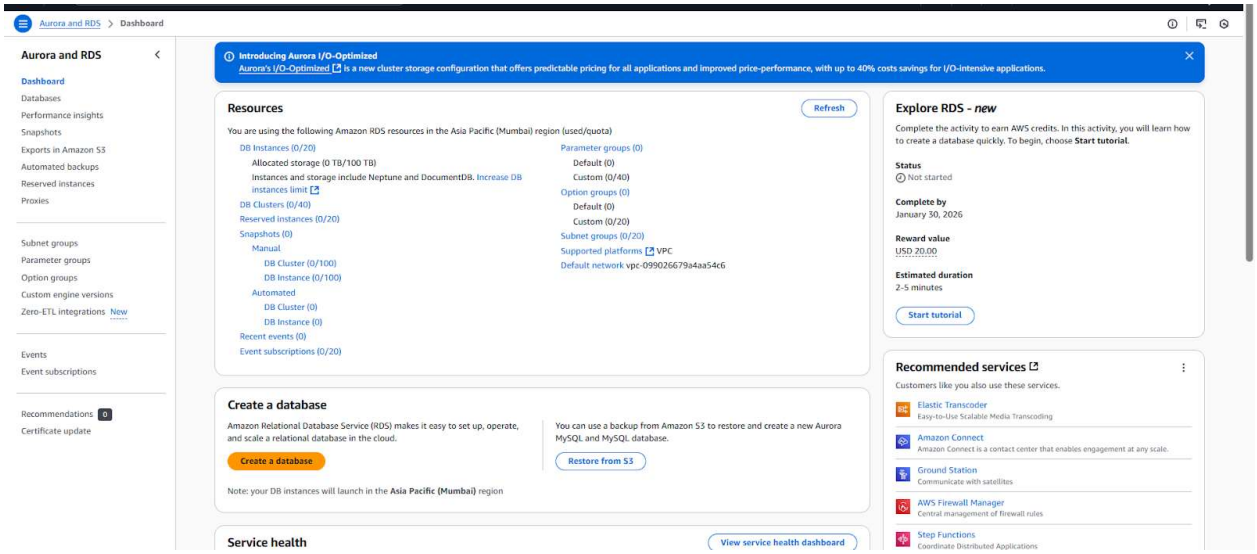
```
Last login: Fri Aug 29 06:08:38 2025 from 43.230.47.86
[ec2-user@ip-10-0-1-61 ~]$ sudo dnf install mariadb105-server
Last metadata expiration check: 0:41:46 ago on Fri Aug 29 06:09:58 2025.
Dependencies resolved.
================================================================================
 Package                 Architecture  Version                    Repository     Size
================================================================================
Installing:
 mariadb105-server       x86_64        3:10.5.29-1.amzn2023.0.1   amazonlinux    10 M
Installing dependencies:
 mariadb-connector-c     x86_64        3.3.10-1.amzn2023.0.1      amazonlinux   211 k
 mariadb-connector-c-config noarch     3.3.10-1.amzn2023.0.1      amazonlinux   9.9 k
 mariadb105              x86_64        3:10.5.29-1.amzn2023.0.1   amazonlinux   1.5 M
 mariadb105-common       x86_64        3:10.5.29-1.amzn2023.0.1   amazonlinux    28 k
 mariadb105-errmsg       x86_64        3:10.5.29-1.amzn2023.0.1   amazonlinux   212 k
 mysql-selinux           noarch        1.0.4-2.amzn2023.0.3       amazonlinux    36 k
 perl-B                  x86_64        1.80-477.amzn2023.0.7      amazonlinux   177 k
 perl-DBD-MariaDB        x86_64        1.22-1.amzn2023.0.4        amazonlinux   153 k
 perl-DBI                x86_64        1.643-7.amzn2023.0.3       amazonlinux   700 k
 perl-Data-Dumper        x86_64        2.174-460.amzn2023.0.2     amazonlinux    55 k
 perl-File-Copy          noarch        2.34-477.amzn2023.0.7      amazonlinux    20 k
 perl-FileHandle         noarch        2.03-477.amzn2023.0.7      amazonlinux    15 k
 perl-Math-BigInt        noarch        1:1.9998.39-2.amzn2023.0.2 amazonlinux   202 k
 perl-Math-BigRat        noarch        0.2624-500.amzn2023.0.2    amazonlinux    42 k
 perl-Math-Complex       noarch        1.59-477.amzn2023.0.7      amazonlinux    46 k
 perl-Sys-Hostname       x86_64        1.23-477.amzn2023.0.7      amazonlinux    16 k
 perl-base               noarch        2.27-477.amzn2023.0.7      amazonlinux    16 k
```

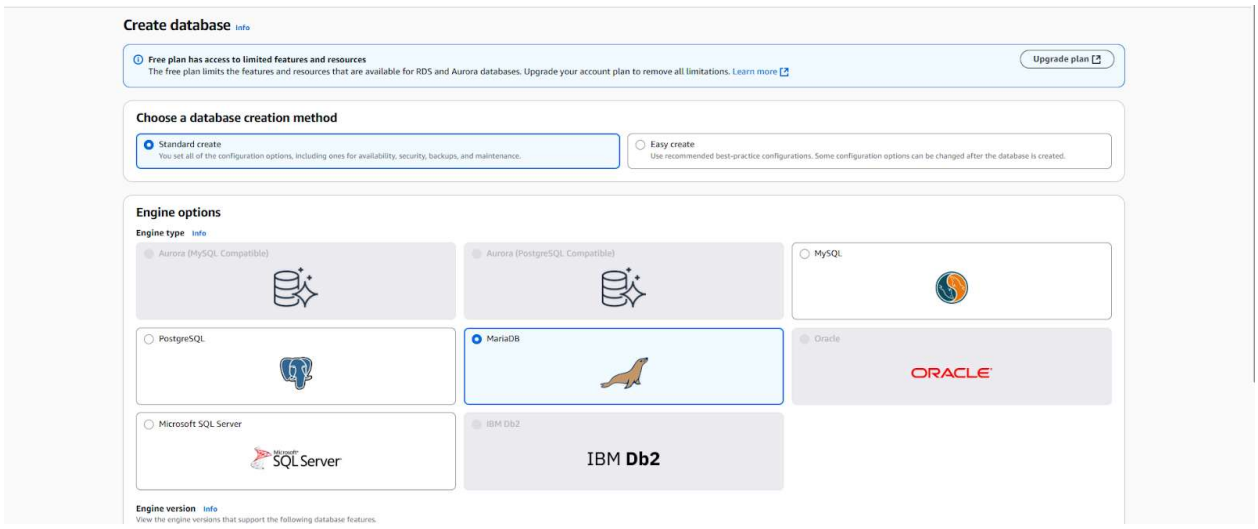
```
Is this ok [y/N]: y
Downloading Packages:
(1/22): mariadb-connector-c-config-3.3.10-1.amzn2023.0.1.noarch.rpm                325 kB/s | 9.9 kB     00:00
(2/22): mariadb-connector-c-3.3.10-1.amzn2023.0.1.x86_64.rpm                       5.2 MB/s | 211 kB     00:00
(3/22): mariadb105-10.5.29-1.amzn2023.0.1.x86_64.rpm                               28 MB/s | 1.5 MB     00:00
(4/22): mariadb105-common-10.5.29-1.amzn2023.0.1.x86_64.rpm                        1.4 MB/s |  28 kB     00:00
(5/22): mariadb105-cracklib-password-check-10.5.29-1.amzn2023.0.1.x86_64.rpm       659 kB/s |  13 kB     00:00
(6/22): mariadb105-errmsg-10.5.29-1.amzn2023.0.1.x86_64.rpm                        5.9 MB/s | 212 kB     00:00
(7/22): mariadb105-gssapi-server-10.5.29-1.amzn2023.0.1.x86_64.rpm                 619 kB/s |  15 kB     00:00
(8/22): mariadb105-backup-10.5.29-1.amzn2023.0.1.x86_64.rpm                        61 MB/s | 6.0 MB     00:00
(9/22): mariadb105-server-utils-10.5.29-1.amzn2023.0.1.x86_64.rpm                  5.9 MB/s | 207 kB     00:00
(10/22): mysql-selinux-1.0.4-2.amzn2023.0.3.noarch.rpm                             1.5 MB/s |  36 kB     00:00
(11/22): perl-B-1.80-477.amzn2023.0.7.x86_64.rpm                                   6.1 MB/s | 177 kB     00:00
(12/22): perl-DBD-MariaDB-1.22-1.amzn2023.0.4.x86_64.rpm                           4.7 MB/s | 153 kB     00:00
(13/22): perl-DBI-1.643-7.amzn2023.0.3.x86_64.rpm                                  17 MB/s | 700 kB     00:00
(14/22): perl-Data-Dumper-2.174-460.amzn2023.0.2.x86_64.rpm                        2.4 MB/s |  55 kB     00:00
(15/22): mariadb105-server-10.5.29-1.amzn2023.0.1.x86_64.rpm                       64 MB/s |  10 MB     00:00
(16/22): perl-File-Copy-2.34-477.amzn2023.0.7.noarch.rpm                           385 kB/s |  20 kB     00:00
(17/22): perl-FileHandle-2.03-477.amzn2023.0.7.noarch.rpm                          310 kB/s |  15 kB     00:00
(18/22): perl-Math-BigRat-0.2624-500.amzn2023.0.2.noarch.rpm                       2.0 MB/s |  42 kB     00:00
(19/22): perl-Math-Complex-1.59-477.amzn2023.0.7.noarch.rpm                        2.0 MB/s |  46 kB     00:00
(20/22): perl-Math-BigInt-1.9998.39-2.amzn2023.0.2.noarch.rpm                      7.0 MB/s | 202 kB     00:00
(21/22): perl-Sys-Hostname-1.23-477.amzn2023.0.7.x86_64.rpm                        806 kB/s |  16 kB     00:00
(22/22): perl-base-2.27-477.amzn2023.0.7.noarch.rpm                                765 kB/s |  16 kB     00:00
--------------------------------------------------------------------------------------------------------------------
Total                                                                               59 MB/s |  20 MB     00:00
```

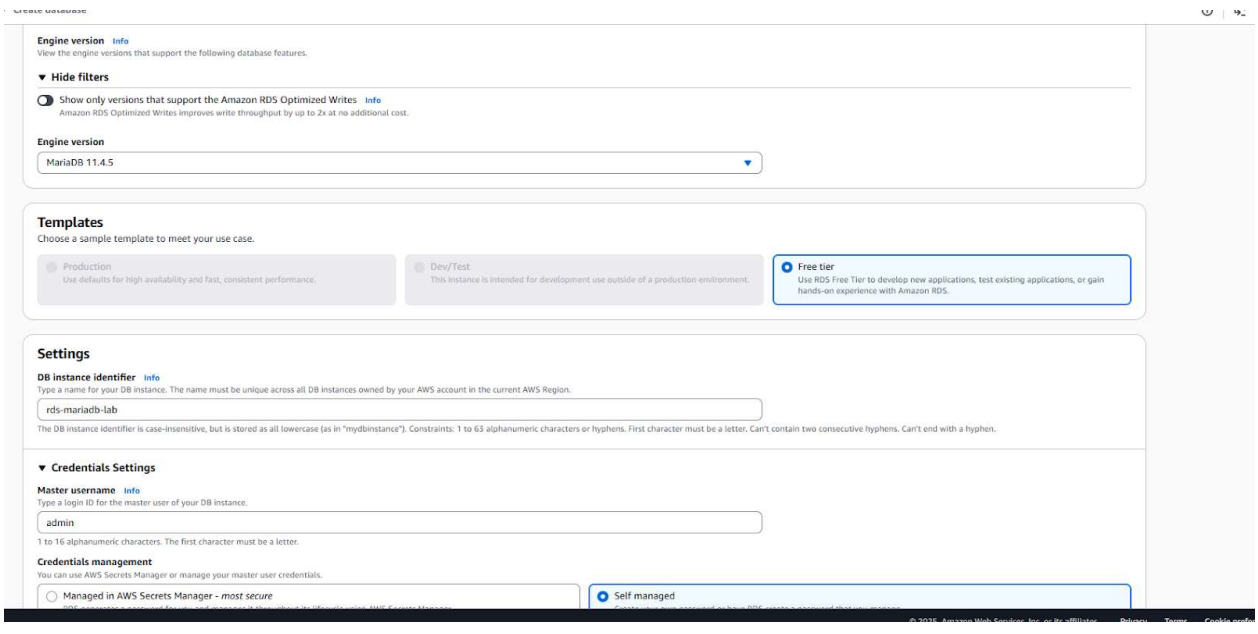
```
Installed:
  mariadb-connector-c-3.3.10-1.amzn2023.0.1.x86_64   mariadb-connector-c-config-3.3.10-1.amzn2023.0.1.noarch
  mariadb105-3:10.5.29-1.amzn2023.0.1.x86_64         mariadb105-backup-3:10.5.29-1.amzn2023.0.1.x86_64
  mariadb105-common-3:10.5.29-1.amzn2023.0.1.x86_64  mariadb105-cracklib-password-check-3:10.5.29-1.amzn2023.0.1.x86_64
  mariadb105-errmsg-3:10.5.29-1.amzn2023.0.1.x86_64  mariadb105-gssapi-server-3:10.5.29-1.amzn2023.0.1.x86_64
  mariadb105-server-3:10.5.29-1.amzn2023.0.1.x86_64  mariadb105-server-utils-3:10.5.29-1.amzn2023.0.1.x86_64
  mysql-selinux-1.0.4-2.amzn2023.0.3.noarch          perl-B-1.80-477.amzn2023.0.7.x86_64
  perl-DBD-MariaDB-1.22-1.amzn2023.0.4.x86_64        perl-DBI-1.643-7.amzn2023.0.3.x86_64
  perl-Data-Dumper-2.174-460.amzn2023.0.2.x86_64     perl-File-Copy-2.34-477.amzn2023.0.7.noarch
  perl-FileHandle-2.03-477.amzn2023.0.7.noarch       perl-Math-BigInt-1:1.9998.39-2.amzn2023.0.2.noarch
  perl-Math-BigRat-0.2624-500.amzn2023.0.2.noarch    perl-Math-Complex-1.59-477.amzn2023.0.7.noarch
  perl-Sys-Hostname-1.23-477.amzn2023.0.7.x86_64     perl-base-2.27-477.amzn2023.0.7.noarch

Complete!
[ec2-user@ip-10-0-1-61 ~]$ sudo systemctl start mariadb
sudo systemctl enable mariadb
Created symlink /etc/systemd/system/mysql.service → /usr/lib/systemd/system/mariadb.service.
Created symlink /etc/systemd/system/mysqld.service → /usr/lib/systemd/system/mariadb.service.
Created symlink /etc/systemd/system/multi-user.target.wants/mariadb.service → /usr/lib/systemd/system/mariadb.service.
[ec2-user@ip-10-0-1-61 ~]$
```

3. Launch Amazon RDS MariaDB Instance

- In AWS RDS Console:
  - Choose Standard Create.
  - Select MariaDB as the engine.
  - Enter `rds-mariadb-lab` as DB instance identifier.
  - Choose instance type `db.t3.micro`.
  - Storage: 20 GB General Purpose SSD (gp2).
  - Place the DB instance inside the private subnet (`DBLab-Private-Subnet`).
  - Set Public access to No.
  - Configure security group rules to allow access on port 3306 from the Bastion EC2 instance security group.


Aurora and RDS > Dashboard
Aurora and RDS
Dashboard
Databases
Performance insights
Snapshots
Exports in Amazon S3
Automated backups
Reserved instances
Proxies
Subnet groups
Parameter groups
Option groups
Custom engine versions
Zero-ETL integrations New
Events
Event subscriptions
Recommendations 0
Certificate update
Introducing Aurora I/O-Optimized
Aurora's I/O-Optimized is a new cluster storage configuration that offers predictable pricing for all applications and improved price-performance, with up to 40% costs savings for I/O-intensive applications.
Resources
Refresh
You are using the following Amazon RDS resources in the Asia Pacific (Mumbai) region (used/quota)
DB Instances (0/20)
Allocated storage (0 TB/100 TB)
Instances and storage include Neptune and DocumentDB. Increase DB instances limit
DB Clusters (0/40)
Reserved instances (0/20)
Snapshots (0)
Manual
DB Cluster (0/100)
DB Instance (0/100)
Automated
DB Cluster (0)
DB Instance (0)
Recent events (0)
Event subscriptions (0/20)
Parameter groups (0)
Default (0)
Custom (0/40)
Option groups (0)
Default (0)
Custom (0/20)
Subnet groups (0/20)
Supported platforms VPC
Default network vpc-099026679a4aa54c6
Explore RDS - new
Complete the activity to earn AWS credits. In this activity, you will learn how to create a database quickly. To begin, choose Start tutorial.
Status
Not started
Complete by
January 30, 2026
Reward value
USD 20.00
Estimated duration
2-5 minutes
Start tutorial
Create a database
Amazon Relational Database Service (RDS) makes it easy to set up, operate, and scale a relational database in the cloud.
Create a database
You can use a backup from Amazon S3 to restore and create a new Aurora MySQL and MySQL database.
Restore from S3
Note: your DB instances will launch in the Asia Pacific (Mumbai) region
Recommended services
Customers like you also use these services.
Elastic Transcoder
Easy-to-Use Scalable Media Transcoding
Amazon Connect
Amazon Connect is a contact center that enables engagement at any scale.
Ground Station
Communicate with satellites
AWS Firewall Manager
Central management of firewall rules
Step Functions
Coordinate Distributed Applications
Service health
View service health dashboard


Create database Info
Free plan has access to limited features and resources
The free plan limits the features and resources that are available for RDS and Aurora databases. Upgrade your account plan to remove all limitations. Learn more
Upgrade plan
Choose a database creation method
Standard create
You set all of the configuration options, including ones for availability, security, backups, and maintenance.
Easy create
Use recommended best-practice configurations. Some configuration options can be changed after the database is created.
Engine options
Engine type Info
Aurora (MySQL Compatible)
Aurora (PostgreSQL Compatible)
MySQL
PostgreSQL
MariaDB
Oracle
ORACLE
Microsoft SQL Server
SQL Server
IBM Db2
IBM Db2
Engine version Info
View the engine versions that support the following database features.


Engine version Info
View the engine versions that support the following database features.
Hide filters
Show only versions that support the Amazon RDS Optimized Writes Info
Amazon RDS Optimized Writes improves write throughput by up to 2x at no additional cost.
Engine version
MariaDB 11.4.5
Templates
Choose a sample template to meet your use case.
Production
Use defaults for high availability and fast, consistent performance.
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.
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.
rds-mariadb-lab
The DB instance identifier is case-insensitive, but is stored as all lowercase (as in "mydbinstance"). Constraints: 1 to 63 alphanumeric characters or hyphens. First character must be a letter. Can't contain two consecutive hyphens. Can't end with a hyphen.
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.
Credentials management
You can use AWS Secrets Manager or manage your master user credentials.
Managed in AWS Secrets Manager - most secure
Self managed

Auto generate password
Amazon RDS can generate a password for you, or you can specify your own password.

Master password | Info

••••••••••••••

Password strength: Very strong

Minimum constraints: At least 8 printable ASCII characters. Can't contain any of the following symbols: / ' " @

Confirm master password | Info

••••••••••••••

Instance configuration

The DB instance configuration options below are limited to those supported by the engine that you selected above.

DB instance class | Info

▼ Hide filters

Show instance classes that support Amazon RDS Optimized Writes Info
Amazon RDS Optimized Writes improves write throughput by up to 2x at no additional cost.

Include previous generation classes

Standard classes (includes m classes)
Memory optimized classes (includes r and x classes)
Burstable classes (includes t classes)

db.t3.micro
2 vCPUs 1 GiB RAM Network: Up to 2,085 Mbps

Storage

Storage type Info
Provisioned IOPS SSD (io2) storage volumes are now available.

General Purpose SSD (gp2)

Storage type Info
Provisioned IOPS SSD (io2) storage volumes are now available.

General Purpose SSD (gp2)
Baseline performance determined by volume size

Allocated storage Info

20 GiB

Allocated storage value must be 20 GiB to 6,144 GiB

▸ Additional storage configuration

Availability & durability

Multi-AZ deployment Info

Create a standby instance (recommended for production usage)
Creates a standby in a different Availability Zone (AZ) to provide data redundancy, eliminate I/O freezes, and minimize latency spikes during system backups.

Do not create a standby instance

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.

Network type Info

To use dual-stack mode, make sure that you associate an IPv6 CIDR block with a subnet in the VPC you specify.

IPv4
Your resources can communicate only over the IPv4 addressing protocol.

Dual-stack mode
Your resources can communicate over IPv4, IPv6, or both.

Virtual private cloud (VPC) Info

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

Default VPC (vpc-099026679a4aa54c6)
3 Subnets, 3 Availability Zones

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.

Network type Info

To use dual-stack mode, make sure that you associate an IPv6 CIDR block with a subnet in the VPC you specify.

- (•) IPv4
  Your resources can communicate only over the IPv4 addressing protocol.
- ( ) Dual-stack mode
  Your resources can communicate over IPv4, IPv6, or both.

Virtual private cloud (VPC) Info

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

Default VPC (vpc-099026679a4aa54c6)
3 Subnets, 3 Availability Zones

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.

default

Public access Info

- ( ) Yes
  RDS assigns a public IP address to the database. Amazon EC2 instances and other resources outside of the VPC can connect to your database. Resources inside the VPC can also connect to the database. Choose one or more VPC security groups that specify which resources can connect to the database.
- (•) No
  RDS doesn't assign a public IP address to the database. Only Amazon EC2 instances and other resources inside the VPC can connect to your database. Choose one or more VPC security groups 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 database. Make sure that the security group rules allow the appropriate incoming traffic.

- (•) Choose existing
  Choose existing VPC security groups
- ( ) Create new
  Create new VPC security group

Existing VPC security groups

Choose one or more options

default ×

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.

EC2 instance Info

Choose the EC2 instance to add as the compute resource for this database. A VPC security group is added to this EC2 instance. A VPC security group is also added to the database with an inbound rule that allows the EC2 instance to access the database.

i-024304de0525b86dd
Bastion-Host

ⓘ **Some VPC settings can't be changed when a compute resource is added**
Adding an EC2 compute resource automatically selects the VPC, DB subnet group, and public access settings for this database. To allow the EC2 instance to access the database, a VPC security group rds-ec2-X is added to the database and another called ec2-rds-X to the EC2 instance. You can remove the new security group for the database only by removing the compute resource.

Network type Info

To use dual-stack mode, make sure that you associate an IPv6 CIDR block with a subnet in the VPC you specify.

- (•) IPv4
  Your resources can communicate only over the IPv4 addressing protocol.
- ( ) Dual-stack mode
  Your resources can communicate over IPv4, IPv6, or both.

Virtual private cloud (VPC) Info

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

DBLab-VPC (vpc-080e0cb701d59a750)
2 Subnets, 2 Availability Zones

Only VPCs with a corresponding DB subnet group are listed.

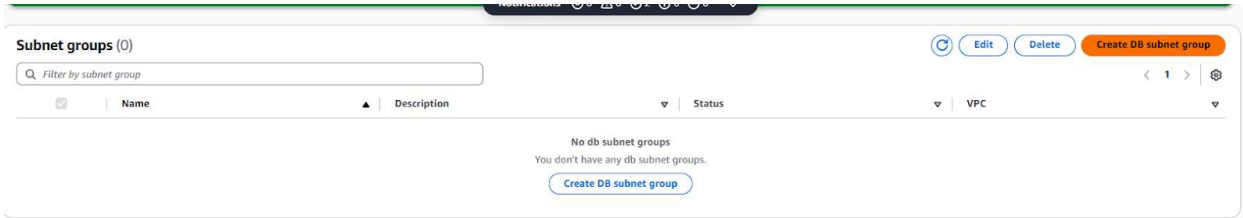
ⓘ After a database is created, you can't change its VPC.

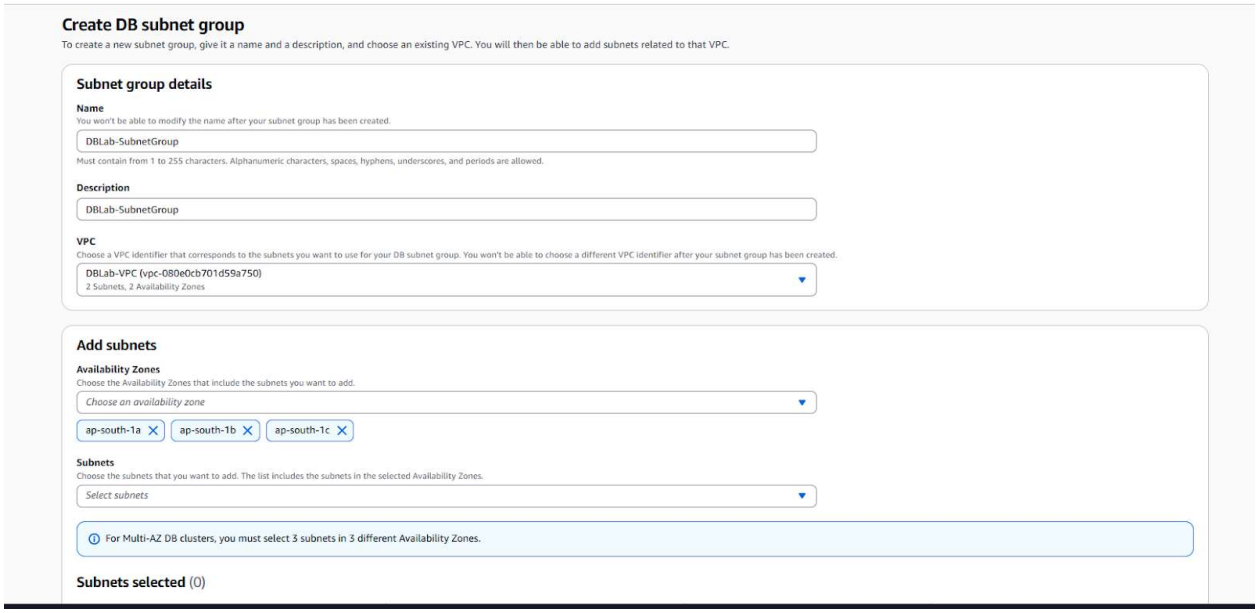
DB subnet group Info

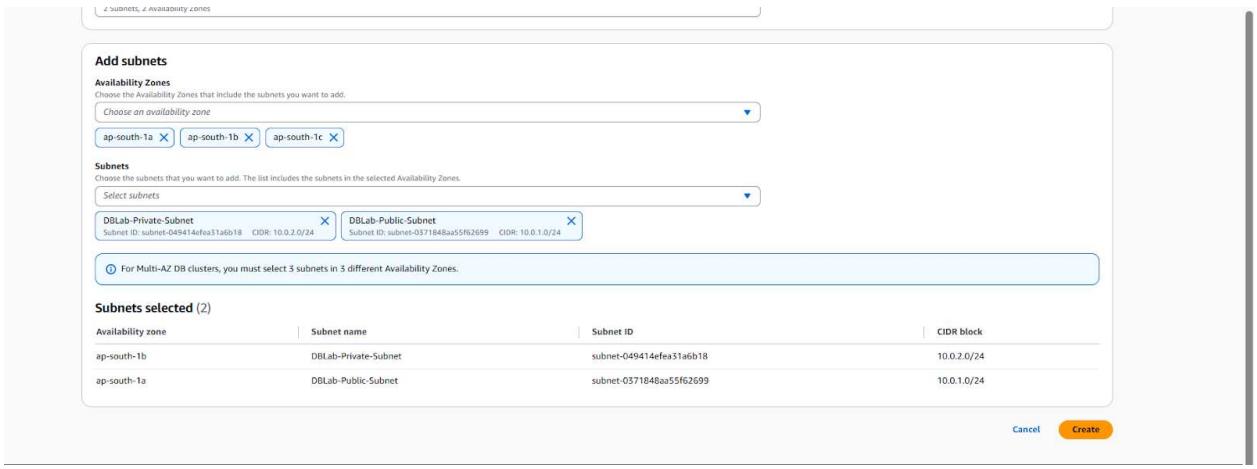
Choose the DB subnet group. The DB subnet group defines which subnets and IP ranges the DB instance can use in the VPC that you selected.

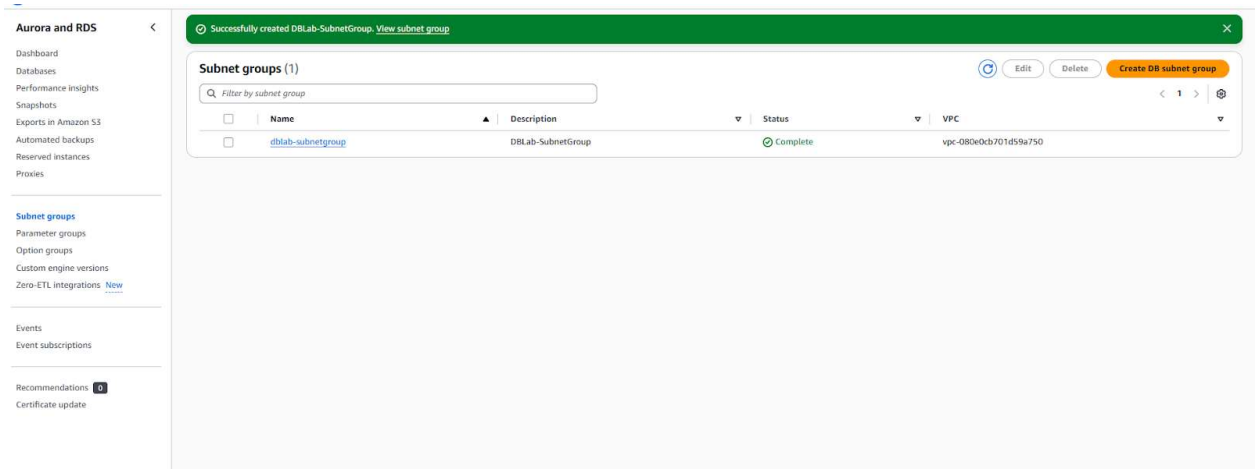
- (•) Choose existing
  Choose existing DB subnet group
- ( ) Automatic setup
  RDS creates a new subnet group for you or reuses an existing subnet group

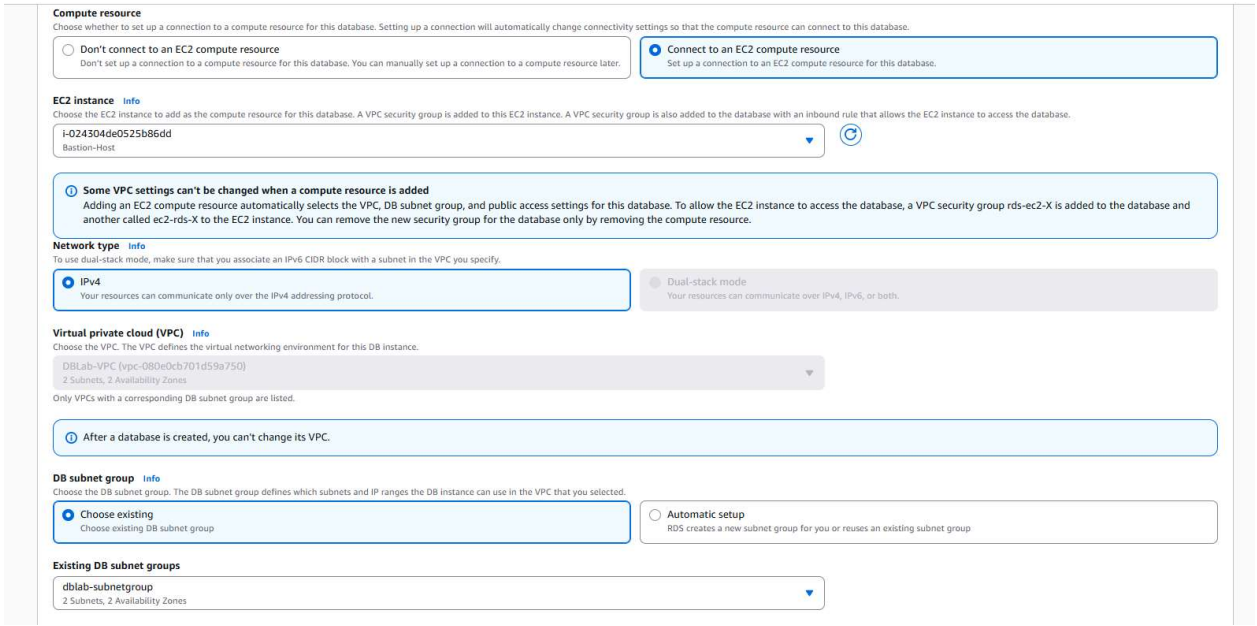
Existing DB subnet groups

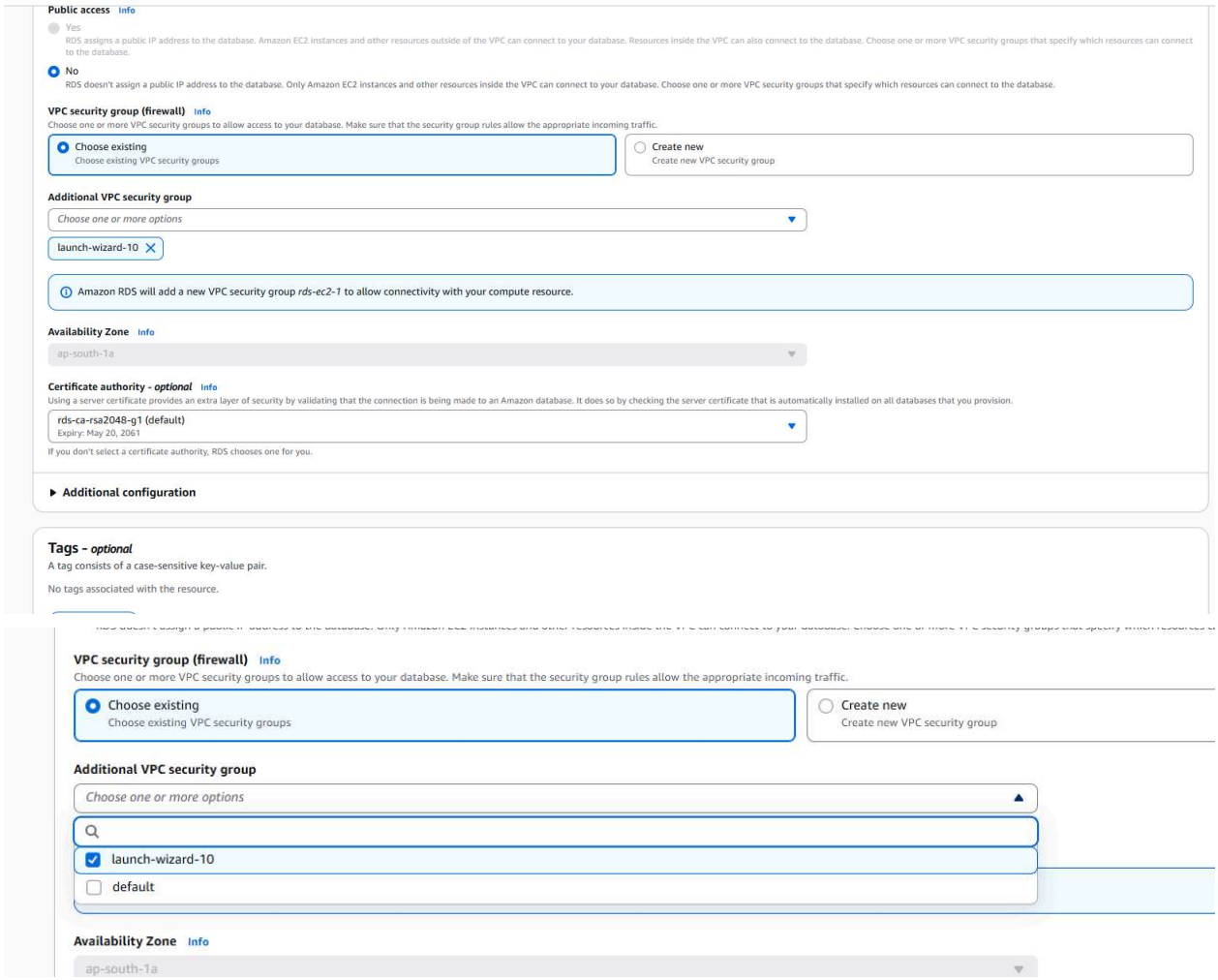

Subnet groups (0)
Edit
Delete
Create DB subnet group
Filter by subnet group
1
Name
Description
Status
VPC
No db subnet groups
You don't have any db subnet groups.
Create DB subnet group


Create DB subnet group
To create a new subnet group, give it a name and a description, and choose an existing VPC. You will then be able to add subnets related to that VPC.
Subnet group details
Name
You won't be able to modify the name after your subnet group has been created.
DBLab-SubnetGroup
Must contain from 1 to 255 characters. Alphanumeric characters, spaces, hyphens, underscores, and periods are allowed.
Description
DBLab-SubnetGroup
VPC
Choose a VPC identifier that corresponds to the subnets you want to use for your DB subnet group. You won't be able to choose a different VPC identifier after your subnet group has been created.
DBLab-VPC (vpc-080e0cb701d59a750)
2 Subnets, 2 Availability Zones
Add subnets
Availability Zones
Choose the Availability Zones that include the subnets you want to add.
Choose an availability zone
ap-south-1a
ap-south-1b
ap-south-1c
Subnets
Choose the subnets that you want to add. The list includes the subnets in the selected Availability Zones.
Select subnets
For Multi-AZ DB clusters, you must select 3 subnets in 3 different Availability Zones.
Subnets selected (0)


Add subnets
Availability Zones
Choose the Availability Zones that include the subnets you want to add.
Choose an availability zone
ap-south-1a
ap-south-1b
ap-south-1c
Subnets
Choose the subnets that you want to add. The list includes the subnets in the selected Availability Zones.
Select subnets
DBLab-Private-Subnet
Subnet ID: subnet-049414efea31a6b18 CIDR: 10.0.2.0/24
DBLab-Public-Subnet
Subnet ID: subnet-0371848aa55f62699 CIDR: 10.0.1.0/24
For Multi-AZ DB clusters, you must select 3 subnets in 3 different Availability Zones.
Subnets selected (2)
Availability zone
Subnet name
Subnet ID
CIDR block
ap-south-1b
DBLab-Private-Subnet
subnet-049414efea31a6b18
10.0.2.0/24
ap-south-1a
DBLab-Public-Subnet
subnet-0371848aa55f62699
10.0.1.0/24
Cancel
Create


Aurora and RDS
Dashboard
Databases
Performance insights
Snapshots
Exports in Amazon S3
Automated backups
Reserved instances
Proxies
Subnet groups
Parameter groups
Option groups
Custom engine versions
Zero-ETL integrations New
Events
Event subscriptions
Recommendations 0
Certificate update
Successfully created DBLab-SubnetGroup. View subnet group
Subnet groups (1)
Edit
Delete
Create DB subnet group
Filter by subnet group
Name
Description
Status
VPC
dblab-subnetgroup
DBLab-SubnetGroup
Complete
vpc-080e0cb701d59a750


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.
EC2 instance Info
Choose the EC2 instance to add as the compute resource for this database. A VPC security group is added to this EC2 instance. A VPC security group is also added to the database with an inbound rule that allows the EC2 instance to access the database.
i-024304de0525b86dd
Bastion-Host
Some VPC settings can't be changed when a compute resource is added
Adding an EC2 compute resource automatically selects the VPC, DB subnet group, and public access settings for this database. To allow the EC2 instance to access the database, a VPC security group rds-ec2-X is added to the database and another called ec2-rds-X to the EC2 instance. You can remove the new security group for the database only by removing the compute resource.
Network type Info
To use dual-stack mode, make sure that you associate an IPv6 CIDR block with a subnet in the VPC you specify.
IPv4
Your resources can communicate only over the IPv4 addressing protocol.
Dual-stack mode
Your resources can communicate over IPv4, IPv6, or both.
Virtual private cloud (VPC) Info
Choose the VPC. The VPC defines the virtual networking environment for this DB instance.
DBLab-VPC (vpc-080e0cb701d59a750)
2 Subnets, 2 Availability Zones
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.
Choose existing
Choose existing DB subnet group
Automatic setup
RDS creates a new subnet group for you or reuses an existing subnet group
Existing DB subnet groups
dblab-subnetgroup
2 Subnets, 2 Availability Zones


Public access Info
Yes
RDS assigns a public IP address to the database. Amazon EC2 instances and other resources outside of the VPC can connect to your database. Resources inside the VPC can also connect to the database. Choose one or more VPC security groups that specify which resources can connect to the database.
No
RDS doesn't assign a public IP address to the database. Only Amazon EC2 instances and other resources inside the VPC can connect to your database. Choose one or more VPC security groups 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 database. Make sure that the security group rules allow the appropriate incoming traffic.
Choose existing
Choose existing VPC security groups
Create new
Create new VPC security group
Additional VPC security group
Choose one or more options
launch-wizard-10
Amazon RDS will add a new VPC security group rds-ec2-1 to allow connectivity with your compute resource.
Availability Zone Info
ap-south-1a
Certificate authority - optional Info
Using a server certificate provides an extra layer of security by validating that the connection is being made to an Amazon database. It does so by checking the server certificate that is automatically installed on all databases that you provision.
rds-ca-rsa2048-g1 (default)
Expiry: May 20, 2061
If you don't select a certificate authority, RDS chooses one for you.
Additional configuration
Tags - optional
A tag consists of a case-sensitive key-value pair.
No tags associated with the resource.

VPC security group (firewall) Info
Choose one or more VPC security groups to allow access to your database. Make sure that the security group rules allow the appropriate incoming traffic.
Choose existing
Choose existing VPC security groups
Create new
Create new VPC security group
Additional VPC security group
Choose one or more options
launch-wizard-10
default
Availability Zone Info
ap-south-1a

Certificate authority - *optional* Info

Using a server certificate provides an extra layer of security by validating that the connection is being made to an Amazon database. It does so by checking the server certificate that is automatically installed on all databases that you provis

rds-ca-rsa2048-g1 (default)
Expiry: May 20, 2061

If you don't select a certificate authority, RDS chooses one for you.

▶ **Additional configuration**

Tags - *optional*

A tag consists of a case-sensitive key-value pair.

No tags associated with the resource.

Add new tag

You can add up to 50 more tags.

Database authentication

Database authentication options Info

- (•) Password authentication
  Authenticates using database passwords.
- ( ) Password and IAM database authentication
  Authenticates using the database password and user credentials through AWS IAM users and roles.

Monitoring Info

Choose monitoring tools for this database. Database Insights provides a combined view of Performance Insights and Enhanced Monitoring for your fleet of databases. **Database Insights** pricing is separate fro
CloudWatch pricing.

( ) Database Insights - Advanced
- Retains 15 months of performance history
- Fleet-level monitoring
- Integration with CloudWatch Application Signals

(•) Database Insights - Standard

Choose monitoring tools for this database. Database Insights provides a combined view of Performance Insights and Enhanced Monitoring for your fleet of databases. **Database Insights** pricing is separate from RDS monthly estimates. See Amazon CloudWatch pricing.

( ) Database Insights - Advanced
- Retains 15 months of performance history
- Fleet-level monitoring
- Integration with CloudWatch Application Signals

(•) Database Insights - Standard

▼ **Additional monitoring settings**
Enhanced Monitoring, CloudWatch Logs and DevOps Guru

Enhanced Monitoring

[ ] Enable Enhanced monitoring
Enabling Enhanced Monitoring metrics are useful when you want to see how different processes or threads use the CPU.

Log exports
Select the log types to publish to Amazon CloudWatch Logs

[ ] Audit log
[ ] Error log
[ ] General log
[ ] iam-db-auth-error log
[ ] Slow query log

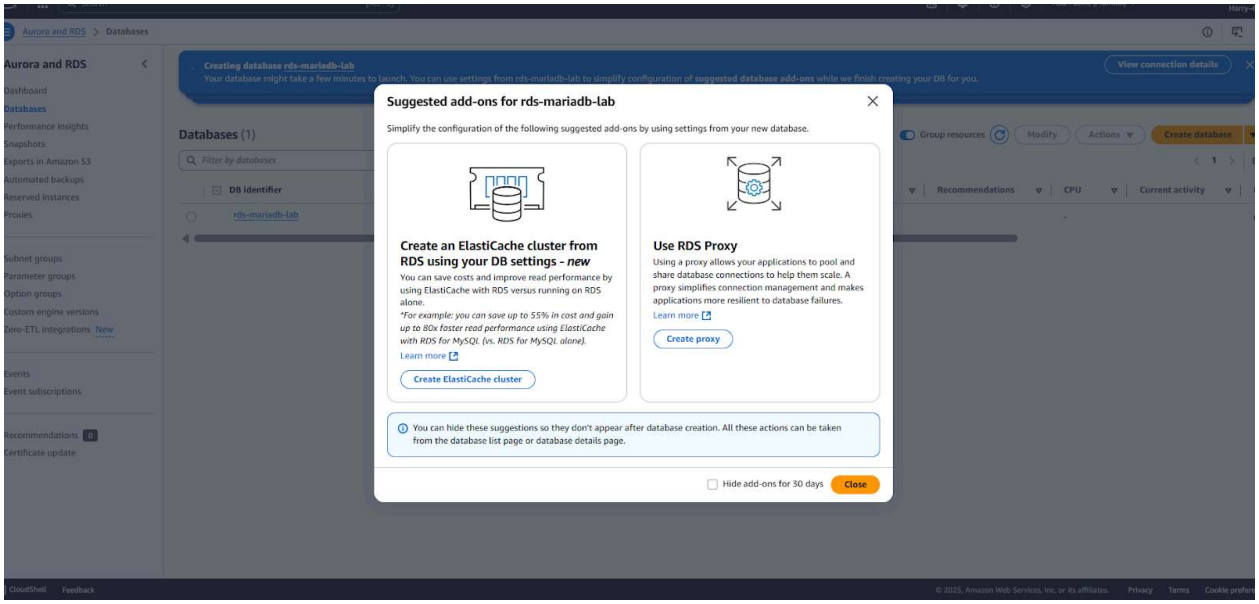
IAM role
The following service-linked role is used for publishing logs to CloudWatch Logs.

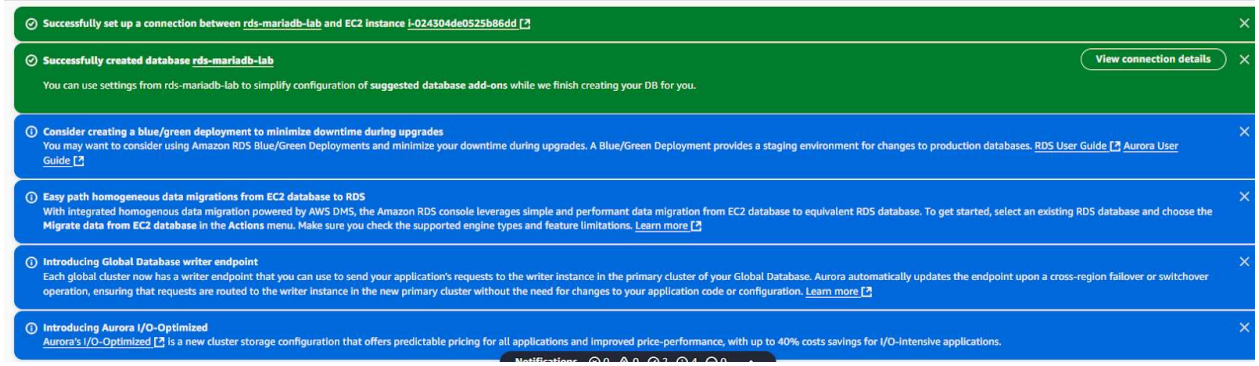
RDS service-linked role

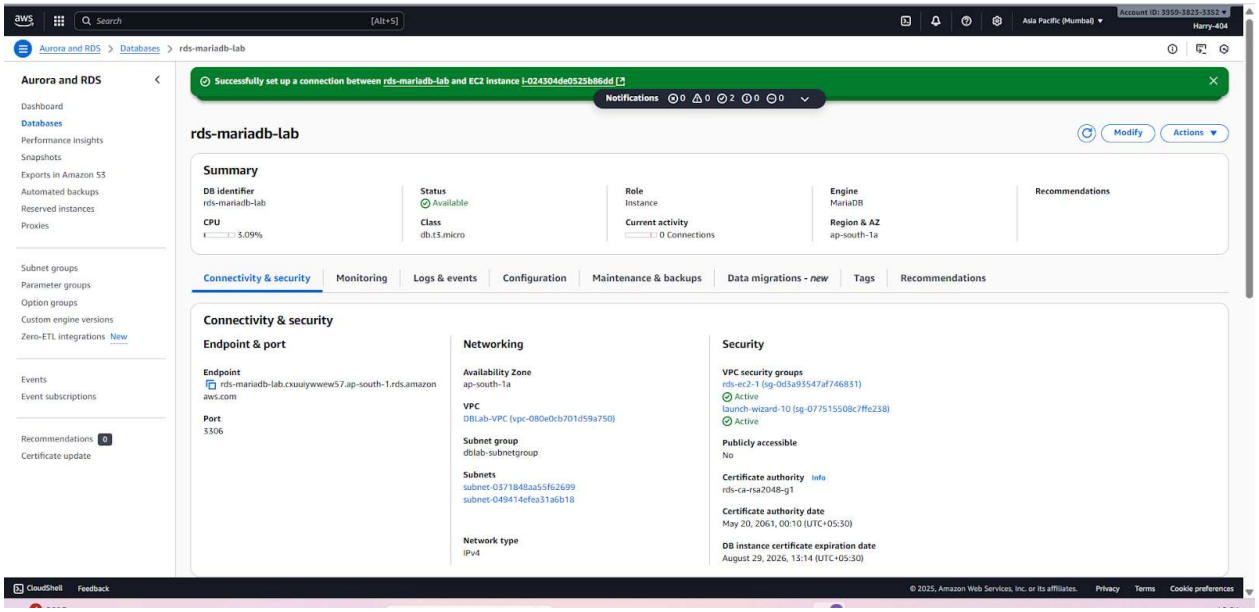
▶ **Additional configuration**
Database options, encryption turned on, backup turned on, backtrack turned off, maintenance, CloudWatch Logs, delete protection turned off.

ⓘ 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


Aurora and RDS > Databases
Aurora and RDS
Dashboard
Databases
Performance insights
Snapshots
Exports in Amazon S3
Automated backups
Reserved instances
Proxies
Subnet groups
Parameter groups
Option groups
Custom engine versions
Zero-ETL integrations New
Events
Event subscriptions
Recommendations 0
Certificate update
Creating database rds-mariadb-lab
Your database might take a few minutes to launch. You can use settings from rds-mariadb-lab to simplify configuration of suggested database add-ons while we finish creating your DB for you.
View connection details
Databases (1)
Filter by databases
DB identifier
rds-mariadb-lab
Group resources
Modify
Actions
Create database
Recommendations
CPU
Current activity
Suggested add-ons for rds-mariadb-lab
Simplify the configuration of the following suggested add-ons by using settings from your new database.
Create an ElastiCache cluster from RDS using your DB settings - new
You can save costs and improve read performance by using ElastiCache with RDS versus running on RDS alone.
*For example: you can save up to 55% in cost and gain up to 80x faster read performance using ElastiCache with RDS for MySQL (vs. RDS for MySQL alone).
Learn more
Create ElastiCache cluster
Use RDS Proxy
Using a proxy allows your applications to pool and share database connections to help them scale. A proxy simplifies connection management and makes applications more resilient to database failures.
Learn more
Create proxy
You can hide these suggestions so they don't appear after database creation. All these actions can be taken from the database list page or database details page.
Hide add-ons for 30 days
Close
CloudShell
Feedback
© 2025, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie prefer


Successfully set up a connection between rds-mariadb-lab and EC2 instance i-024304de0525b86dd
Successfully created database rds-mariadb-lab
View connection details
You can use settings from rds-mariadb-lab to simplify configuration of suggested database add-ons while we finish creating your DB for you.
Consider creating a blue/green deployment to minimize downtime during upgrades
You may want to consider using Amazon RDS Blue/Green Deployments and minimize your downtime during upgrades. A Blue/Green Deployment provides a staging environment for changes to production databases. RDS User Guide Aurora User Guide
Easy path homogeneous data migrations from EC2 database to RDS
With integrated homogenous data migration powered by AWS DMS, the Amazon RDS console leverages simple and performant data migration from EC2 database to equivalent RDS database. To get started, select an existing RDS database and choose the Migrate data from EC2 database in the Actions menu. Make sure you check the supported engine types and feature limitations. Learn more
Introducing Global Database writer endpoint
Each global cluster now has a writer endpoint that you can use to send your application's requests to the writer instance in the primary cluster of your Global Database. Aurora automatically updates the endpoint upon a cross-region failover or switchover operation, ensuring that requests are routed to the writer instance in the new primary cluster without the need for changes to your application code or configuration. Learn more
Introducing Aurora I/O-Optimized
Aurora's I/O-Optimized is a new cluster storage configuration that offers predictable pricing for all applications and improved price-performance, with up to 40% costs savings for I/O-intensive applications.

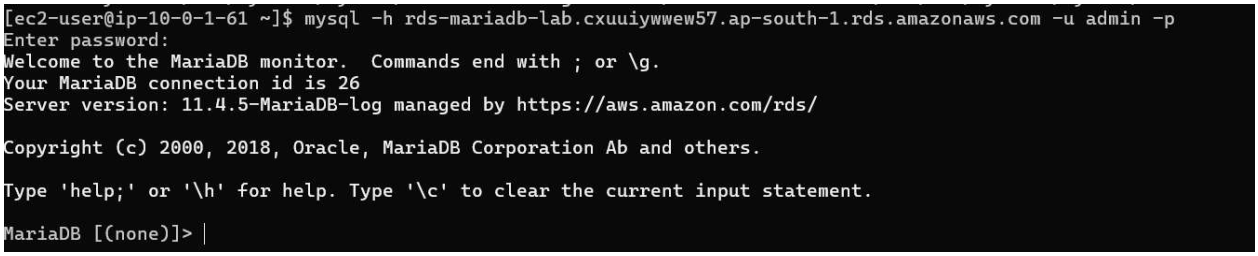

aws
Search
[Alt+S]
Asia Pacific (Mumbai)
Account ID: 3959-3825-3352
Harry-404
Aurora and RDS > Databases > rds-mariadb-lab
Aurora and RDS
Dashboard
Databases
Performance insights
Snapshots
Exports in Amazon S3
Automated backups
Reserved instances
Proxies
Subnet groups
Parameter groups
Option groups
Custom engine versions
Zero-ETL integrations New
Events
Event subscriptions
Recommendations 0
Certificate update
Successfully set up a connection between rds-mariadb-lab and EC2 instance i-024304de0525b86dd
Notifications 0 0 2 0 0
rds-mariadb-lab
Modify
Actions
Summary
DB identifier
rds-mariadb-lab
Status
Available
Role
Instance
Engine
MariaDB
Recommendations
CPU
5.09%
Class
db.t3.micro
Current activity
0 Connections
Region & AZ
ap-south-1a
Connectivity & security
Monitoring
Logs & events
Configuration
Maintenance & backups
Data migrations - new
Tags
Recommendations
Connectivity & security
Endpoint & port
Endpoint
rds-mariadb-lab.cxuuiywwew57.ap-south-1.rds.amazonaws.com
Port
3306
Networking
Availability Zone
ap-south-1a
VPC
DBLab-VPC (vpc-080e0cb701d59a750)
Subnet group
dblab-subnetgroup
Subnets
subnet-0371848aa55f62699
subnet-049414efea31a6b18
Network type
IPv4
Security
VPC security groups
rds-ec2-1 (sg-0d3a93547af746831)
Active
launch-wizard-10 (sg-077515508c7ffe238)
Active
Publicly accessible
No
Certificate authority Info
rds-ca-rsa2048-g1
Certificate authority date
May 20, 2061, 00:10 (UTC+05:30)
DB instance certificate expiration date
August 29, 2026, 13:14 (UTC+05:30)
CloudShell
Feedback
© 2025, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences

4: Connect to RDS from Bastion Host

- SSH to Bastion host as above.
- Connect to MariaDB on RDS instance:

  ```
  mysql -h rds-mariadb-lab.<region>.rds.amazonaws.com -u admin -p
  ```

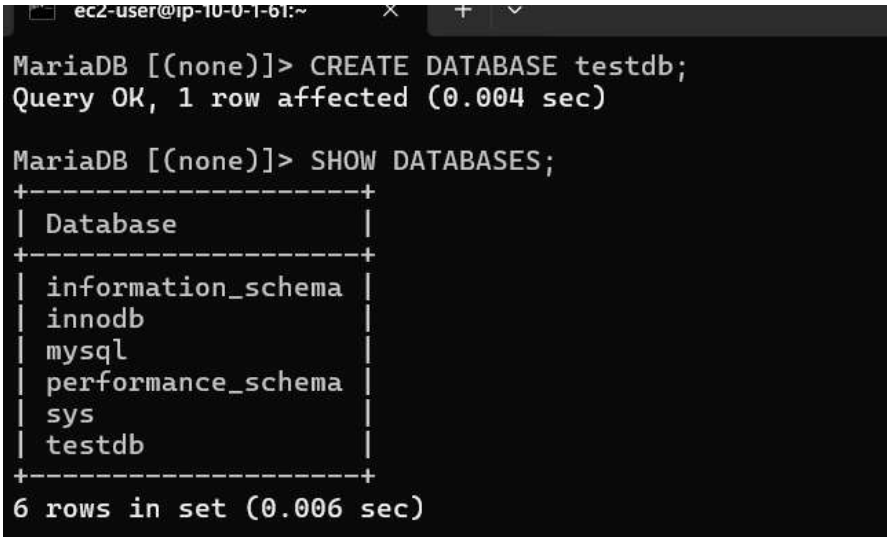
- Enter the master user password set during RDS creation.



5: MariaDB SQL Commands on RDS Instance

- **Create a Database:**

```
CREATE DATABASE testdb;
USE testdb;
SHOW DATABASES;
```



- **Create a Table:**

```sql
CREATE TABLE benchmark (
  id INT AUTO_INCREMENT PRIMARY KEY,
  data VARCHAR(255)
);
```

- **Create Stored Procedure to Insert 10,000 Rows:**

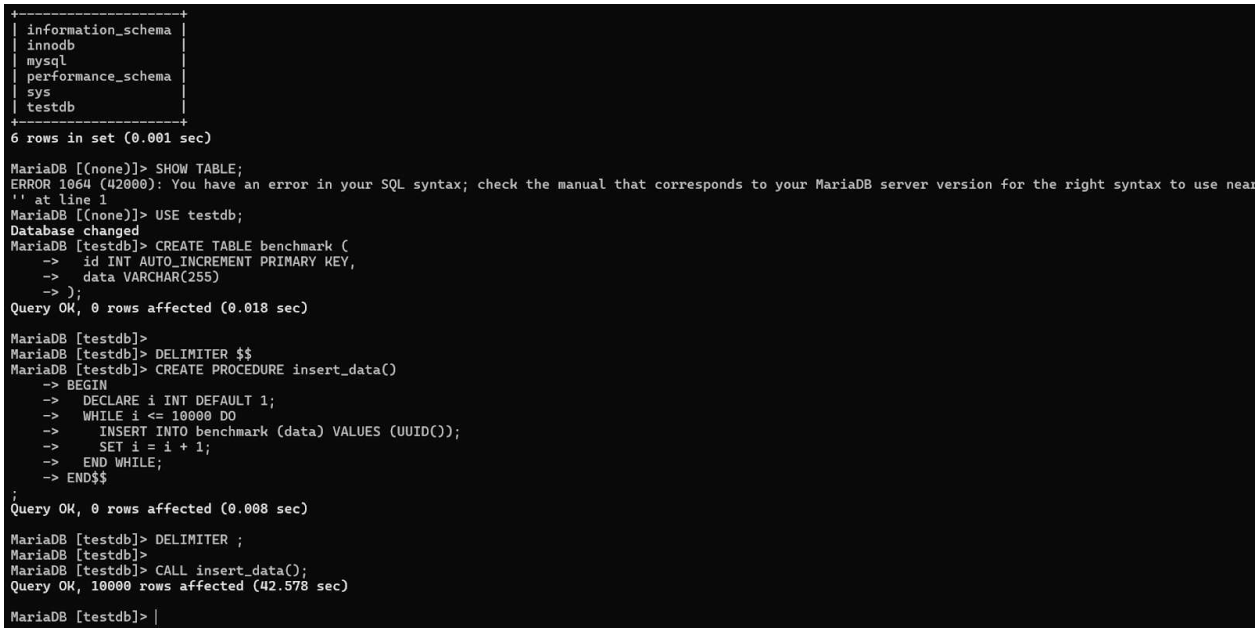
```sql
DELIMITER $$

CREATE PROCEDURE insert_data()
BEGIN
  DECLARE i INT DEFAULT 1;
  WHILE i <= 10000 DO
    INSERT INTO benchmark (data) VALUES (UUID());
    SET i = i + 1;
  END WHILE;
END$$

DELIMITER ;
```

- **Run the Procedure to Insert Data:**

```sql
CALL insert_data();
```

- **Confirm Rows Inserted:**

```sql
SELECT COUNT(*) FROM benchmark;
```



- **Delete Rows and Drop Table/Database**

Delete all rows:

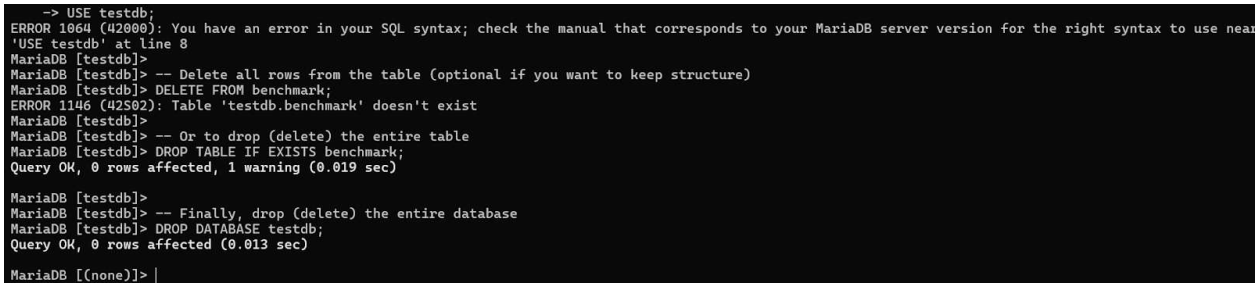
```sql
DELETE FROM benchmark;
```

Drop table:

```sql
DROP TABLE IF EXISTS benchmark;
```

Drop database:

```sql
DROP DATABASE testdb;
```



Delete RDS MariaDB Instance

1. Open AWS Management Console → RDS → Databases.
2. Select your RDS instance `rds-mariadb-lab`.
3. Click Actions → Delete.
4. Optionally, take a final snapshot or skip.
5. Confirm deletion.

Delete EC2 Bastion Host

1. Open AWS Console → EC2 → Instances.
2. Select Bastion instance (e.g. with name tag `Bastion-Host`).
3. Actions → Instance State → Terminate.
4. Confirm.

Clean Up Network Resources

1. Go to VPC Console.
2. Delete Internet Gateway:
    - Detach it from VPC `DBLab-VPC`, then delete.

3. Delete Route Tables if custom-created (e.g. `Publicrt`):
    - Disassociate subnet associations first.
    - Then delete route tables.
4. Delete Subnets:
    - Delete `DBLab-Public-Subnet` and `DBLab-Private-Subnet`.
5. Delete the VPC:
    - Delete `DBLab-VPC`.

Delete Security Groups

1. Go to EC2 → Security Groups.
2. Delete any custom groups created (e.g., `launch-wizard-10`, `rds-ec2-1`).
