

Grup 1 - Lab 274

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Lab 274 de yaptığımız çalışma ile bulduğumuz farklılıklar.

- AWS Aurora SQL bir database engine'dir. Genel itibarıyla RDS servisi ile benzerdir ancak performans ve yedekleme gibi alanlarda sunduğu üstün özelliklerle RDS'ten daha hızlı ve güvenli olarak nitelendirilebilir. RDS konsolda database engine olarak Aurora seçme opsiyonumuz bulunmaktadır. Aurora, AWS tarafından oluşturulmuş bir database engine'dir. Otomatik upgrade opsiyonumuz bulunmakta olup versiyon güncellemelerini otomatik yapabilme şansımız bulunmaktadır.
- AWS Aurora storage seçiminde direkt olarak bir değişiklik veya ekleme yapamıyoruz izin vermiyor fakat sonrasında modify dediğimizde değişiklik yapabiliyoruz.
- Amazon RDS hizmeti, free tier kullanımını desteklerken, Amazon Aurora SQL bunu desteklemez. RDS tarafında ise Windows SQL ve Oracle ücretlidir.

Araştırmalarımız sonucu bulduğumuz değerlendirmeler.

- Amazon Aurora SQL, Amazon RDS hizmetinin bir türevidir ve geliştirilmiş özellikler sunar.
- Amazon RDS: Amazon RDS, farklı ilişkisel veritabanı motorları için yönetilen bir hizmet sunar (örneğin MySQL, PostgreSQL, Oracle, SQL Server). Performans motorun türüne ve yapılandırılmaya bağlıdır.
- Amazon Aurora SQL: Amazon Aurora, özel olarak tasarlanmış yüksek performanslı ve ölçeklenebilir bir veritabanı motorudur. Geleneksel MySQL ve PostgreSQL'e göre daha yüksek performans sunar. Okuma işlemlerinde özellikle etkilidir.
- Amazon RDS: Yedekleme ve geri yükleme işlemleri standart RDS hizmetiyle aynıdır.
- Amazon Aurora SQL: Aurora, daha hızlı yedekleme ve geri yükleme süreçleri sunar. Yedekler daha hızlı oluşturulabilir ve geri yükleme daha hızlıdır.
- Amazon RDS: RDS ve Aurora arasında maliyet farklılıkları olabilir. Aurora genellikle daha yüksek performans sunsa da, buna bağlı olarak maliyeti de daha yüksek olabilir.
- Amazon RDS: Amazon RDS, master-slave tabanlı replication (çoklayıcı) sunar.
- Amazon Aurora SQL: Aurora, log-based replication (günlüğe dayalı çoğaltma) kullanır. Bu, daha hızlı ve güvenilir veri çoğaltma sağlar.

Bulduğumuz farklılıkların resimleri;

aws

Services

Search

[Option+S]

Cloud9

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RDS

Settings

DB cluster identifier [Info](#)

Enter a name for your DB cluster. The name must be unique across all DB clusters owned by your AWS account in the current AWS Region.

The DB cluster identifier is case-insensitive, but is stored as all lowercase (as in "mydbcluster"). 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

Master username [Info](#)

Type a login ID for the master user of your DB instance.

1 to 32 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.

ⓘ

If you manage the master user credentials in Secrets Manager, some RDS features aren't supported.

[Learn more](#)

☐ 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](#)

Cluster storage configuration - new [Info](#)

Choose the storage configuration for the Aurora DB cluster that best fits your application's price predictability and price performance needs.

Configuration options

Database instance, storage, and I/O charges vary depending on the configuration. [Learn more](#)

☒ Aurora Standard

- Cost-effective pricing for many applications with moderate I/O usage (I/O costs <25% of total database costs).
- Pay-per-request I/O charges apply. DB instance and storage prices don't include I/O usage.

☐ Aurora I/O-Optimized

- Predictable pricing for all applications. Improved price performance for I/O-intensive applications (I/O costs >25% of total database costs).
- No additional charges for read/write I/O operations. DB instance and storage prices include I/O usage.

ⓘ

Selected Aurora MySQL version doesn't support the Aurora I/O-Optimized configuration

Choose the latest version of Aurora MySQL (v 3.03.1 onwards) to use the new cluster configuration.

[Learn more](#)

Instance configuration

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RDS

Create database

Create database

Choose a database creation method

Info

☒ 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




☐ MariaDB




☐ PostgreSQL



☐ Oracle



☐ Microsoft SQL Server



Engine version

Info

View the engine versions that support the following database features.

▼ Hide filters

☐ Show versions that support the global database feature

Allows a single Amazon Aurora database to span multiple AWS Regions.

☐ Show versions that support the parallel query feature

Improves the performance of analytic queries by pushing processing down to the Aurora storage layer.

☐ Show versions that support Serverless v2

Offers instance scaling for even the most demanding workloads.

Available versions (15/16)

Info

Aurora (MySQL 5.7) 2.11.2

▼

Templates

Choose a sample template to meet your use case.

☐ Production

Useful for high-availability and fault-resistant

☒ Dev/Test

This instance is intended for development use outside

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aurora

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▼ Credentials Settings

Master username

Info

Type a login ID for the master user of your DB instance.

admin

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●

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Learn more

Instance configuration

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Instance configuration

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

DB instance class [Info](#)

☐ Memory optimized classes (includes r classes)
☒ Burstable classes (includes t classes)

db.t3.small
2 vCPUs 2 GiB RAM Network: 2.085 Mbps

☐ Include previous generation classes

Availability & durability

Multi-AZ deployment [Info](#)

☐ Create an Aurora Replica or Reader node in a different AZ (recommended for scaled availability)
Creates an Aurora Replica for fast failover and high availability.
☒ Don't create an Aurora Replica

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 cluster.

LabVPC (vpc-0f2e20c02c3d0601c)
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 cluster can use in the VPC that you selected.

dbsubnetgroup
2 Subnets, 2 Availability Zones

Public access [Info](#)

☐ Yes
RDS assigns a public IP address to the cluster. Amazon EC2 instances and other resources outside of the VPC can connect to your cluster. Resources inside the VPC can also connect to the cluster. Choose yes to open VPC security groups that are of public IP.

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▼ Additional configuration

Database options, encryption turned off, failover, backup turned on, backtrack turned off, maintenance, CloudWatch Logs, delete protection turned off.

Database options

Initial database name [Info](#)

world

If you do not specify a database name, Amazon RDS does not create a database.

DB cluster parameter group [Info](#)

default:aurora-mysql5.7

DB parameter group [Info](#)

default:aurora-mysql5.7

Option group [Info](#)

default:aurora-mysql-5-7

Failover priority

No preference

Backup

Backup retention period [Info](#)

The number of days (1-35) for which automatic backups are kept.

1 day

☒ Copy tags to snapshots

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](#)

Backtrack

Backtrack lets you quickly rewind the DB cluster to a specific point in time, without having to create another DB cluster. [Info](#)

☐ Enable Backtrack

Enabling Backtrack will charge you for storing the changes you make for backtracking.

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

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Option group

Info

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

RDS service-linked role

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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 window

☒ No preference

Deletion protection

☐ Enable deletion protection

Protects the database from being deleted accidentally. While this option is enabled, you can't delete the database.

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

Session ID: user2636260-Muhammed_Karaj_1-094320789661a8d4bInstance ID: 1-00f068a2906c7d958

Terminate

sh-4.2\$ sudo yum install mariadb -y

Loaded plugins: extras_suggestions, langpacks, priorities, update-motd

amzn2-core

Resolving Dependencies

--> Running transaction check

--> Package mariadb.x86_64 1:5.5.68-1.amzn2.0.1 will be installed

--> Finished Dependency Resolution

Dependencies Resolved

Package	Arch	Version	Repository	Size
Installing:				
mariadb	x86_64	1:5.5.68-1.amzn2.0.1	amzn2-core	8.8 M

Transaction Summary

Install 1 Package

Total download size: 8.8 M

Installed size: 49 M

Downloading packages:

mariadb-5.5.68-1.amzn2.0.1.x86_64.rpm

Running transaction check

Running transaction test

Transaction test succeeded

Running transaction

Installing : mariadb-5.5.68-1.amzn2.0.1.x86_64

Verifying : 1:mariadb-5.5.68-1.amzn2.0.1.x86_64

Installed:

Mariadb.x86_64 1:5.5.68-1.amzn2.0.1

Complete!

sh-4.2\$

sh-4.2\$

Session ID: user2636260-Muhammed_Karaj_1-094320789661a8d4b

Sesle at

Videoyu Durdur

Katırmalar

Sohbet

Yeni Paylaşım

Paylaşım Duraklet

Ek Açıklama Ekle

Uzaklan Kontrol

Uygulamalar

Daha fazla

Ekran paylaşımı yapagörünce

Paylaşım Durdur

Terminate

mysql

performance_schema

sys

world

rows in set (0.00 sec)

mysql [(none)]> USE world;

Database changed

mysql [world]> CREATE TABLE 'country' (

--> 'Code' CHAR(3) NOT NULL DEFAULT '',

--> 'Name' CHAR(52) NOT NULL DEFAULT '',

--> 'Continent' ENUM('Asia', 'Europe', 'North America', 'Africa', 'Oceania', 'Antarctica', 'South America') NOT NULL DEFAULT 'Asia',

--> 'Region' CHAR(26) NOT NULL DEFAULT '',

--> 'SurfaceArea' FLOAT(10,2) NOT NULL DEFAULT '0.00',

--> 'IndepYear' SMALLINT(4) DEFAULT NULL,

--> 'Population' INT(11) NOT NULL DEFAULT '0',

--> 'LifeExpectancy' FLOAT(3,1) DEFAULT NULL,

--> 'GNP' FLOAT(10,2) DEFAULT NULL,

--> 'GNPold' FLOAT(10,2) DEFAULT NULL,

--> 'LocalName' CHAR(45) NOT NULL DEFAULT '',

--> 'GovernmentForm' CHAR(45) NOT NULL DEFAULT '',

--> 'Capital' INT(11) DEFAULT NULL,

--> 'Code2' CHAR(2) NOT NULL DEFAULT '',

--> PRIMARY KEY ('Code')

-->);

Query OK, 0 rows affected (0.04 sec)

mysql [world]> INSERT INTO 'country' VALUES ('GAB','Gabon','Africa','Central Africa',267668.00,1960,1226000,50.1,5493.00,5279.00,'Le Gabon','Republic',902,'GA');

Query OK, 1 row affected (0.03 sec)

mysql [world]>

mysql [world]> INSERT INTO 'country' VALUES ('IRL','Ireland','Europe','British Islands',70273.00,1921,3775100,76.8,75921.00,73132.00,'Ireland/Éire','Republic',1447,'IE');

Query OK, 1 row affected (0.02 sec)

mysql [world]>

mysql [world]> INSERT INTO 'country' VALUES ('THA','Thailand','Asia','Southeast Asia',513115.00,1350,61399000,68.6,116416.00,153907.00,'Prathet Thai','Constitutional Monarchy',3320,'TH');

Query OK, 1 row affected (0.00 sec)

mysql [world]>

mysql [world]> INSERT INTO 'country' VALUES ('CRI','Costa Rica','North America','Central America',51100.00,1821,4023000,75.8,10226.00,9757.00,'Costa Rica','Republic',584,'CR');

Query OK, 1 row affected (0.00 sec)

mysql [world]>

mysql [world]> INSERT INTO 'country' VALUES ('AUS','Australia','Oceania','Australia and New Zealand',7741220.00,1901,18886000,79.8,351182.00,392911.00,'Australia','Constitutional Monarchy, Federation',135,'AU');

Query OK, 1 row affected (0.01 sec)

mysql [world]> SELECT * FROM country WHERE GNP > 35000 and Population > 10000000;

Code	Name	Continent	Region	SurfaceArea	IndepYear	Population	LifeExpectancy	GNP	GNPold	LocalName	GovernmentForm	Capital	Code2
AUS	Australia	Oceania	Australia and New Zealand	7741220.00	1901	18886000	79.8	351182.00	392911.00	Australia	Constitutional Monarchy, Federation	135	AU
THA	Thailand	Asia	Southeast Asia	513115.00	1350	61399000	68.6	116416.00	153907.00	Prathet Thai	Constitutional Monarchy	3320	TH

rows in set (0.01 sec)

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rows in set (0.00 sec)

mysql [world]>

Amazon aurora da sonradan modify dediğimizde açılan sayfada storage değiştirebiliyoruz.

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