

AWS Relational Database Service



AWS RDS

Amazon Relational Database Service (RDS) which is a fully-managed service provided by AWS for deploying, scaling, and maintaining relational databases in the cloud. RDS supports multiple database engines such as MySQL, MariaDB, PostgreSQL, Oracle, and Microsoft SQL Server.

In this Amazon RDS Session, we will be discussing the concepts of Amazon Relational Database Service. We will learn what is Amazon RDS and how to create an AWS RDS from scratch and connect it to the tools.

AWS RDS

What is Amazon RDS?

Amazon RDS is a service that provides database connectivity through the Internet. RDS makes it very simple and easy to set up a relational database in the cloud.

Instead of concentrating on database features, you can concentrate more on the application to provide high availability, security, and compatibility. RDS is a fully managed RDBMS service.

AWS RDS

What is a relational database?

A relational database is a collection of information that organizes data in predefined relationships where data is stored in one or more tables (or "relations") of columns and rows, making it easy to see and understand how different data structures relate to each other. Relationships are a logical connection between different tables, established on the basis of interaction among these tables.

AWS RDS

Benefits of Amazon RDS



AWS RDS

Reduced Administration Burden

- ✓ You can easily deploy the database from project conception to production using RDS.
- ✓ There is no need to install any database software and provide the infrastructure.
- ✓ AWS automatically installs the latest software patches to the RDS instance which you have launched.

AWS RDS

Cost-effective

- ✓ You just pay for what you use, and nothing more. just the monthly usage payment.

Security

- ✓ Using AWS Key Management Service (KMS), you can create encryption keys for maintaining security and authorized access to your database.

AWS RDS

High Availability and Durability

- ✓ The automated recovery feature of RDS enables point-in-time recovery for your database instance.
- ✓ Multi-AZs provide high availability and durability across the globe.

Scalability

- ✓ It just takes a few minutes to scale your infrastructure up or down, and you can scale up to a maximum of 32 vCPUs and 244 GiB.

AWS RDS

Free Tier

AWS gives you a free tier usage of Amazon RDS for 750 hours over 12 months.

AWS RDS

AWS RDS Database Engines

There are six database engines that RDS provides, and they are

- Amazon Aurora
- PostgreSQL
- MySQL
- MariaDB
- Oracle Database
- Microsoft SQL Server

AWS RDS

Amazon Aurora

Amazon Aurora is a MySQL and PostgreSQL compatible relational database that is built for the cloud for providing the simplicity and cost-effectiveness of open-source databases with the availability and performance of traditional enterprise databases.

5 times faster than standard MySQL
3 times faster than standard PostgreSQL

AWS RDS

AWS RDS PostgreSQL

You can deploy scalable and highly available PostgreSQL relational databases using RDS and connect them. It only takes minutes to deploy a PostgreSQL instance. RDS PostgreSQL provides the same functionalities as traditional PostgreSQL, so you can just dump or upload your local database into the RDS.

AWS RDS

AWS RDS MariaDB

MariaDB is created by the original creators of MySQL and it is very popular in creating PHP-based applications. All versions of MariaDB are covered by Amazon RDS.

AWS RDS Oracle

Oracle's relational database is called Oracle Database.

AWS RDS

AWS RDS Microsoft SQL Server

Microsoft's relational database is called the SQL Server. Multiple editions of SQL Server (2008 R2, 2012, 2014, 2016, and 2017), including Express, Web, Standard, and Enterprise, are merged with Amazon RDS, so whatever code your application is built with can be applied in the RDS.