



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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Experiment - 9

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Semester: 5th
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1. Aim:

To design and interact with cloud-based data storage systems using AWS RDS, Google Firebase, and Azure Cosmos DB, focusing on relational modeling, real-time synchronization, and distributed data access.

2. Output

The screenshot shows the AWS RDS 'Create master user' configuration page. It includes fields for Master Username (admin), Master password (Info), and Confirm master password (Info). It also features sections for Credential Management (with options for AWS Secrets Manager, Self managed, or Auto generate password), Password strength (Strong), and Instance configuration (with a note about limited options).

Master Username: admin

Master password: Info

Confirm master password: Info

Credentials management

- Managed in AWS Secrets Manager - *most secure*
RDS generates a password for you and manages it throughout its lifecycle using AWS Secrets Manager.
- Self managed
Create your own password or have RDS create a password that you manage.
- Auto generate password
Amazon RDS can generate a password for you, or you can specify your own password.

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

Instance configuration

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

Creating database sql2022
Your database might take a few minutes to launch. You can use settings from sql2022 to simplify configuration of [suggested database add-ons](#) while we finish creating your DB for you.

RDS > Databases

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](#)

Databases (1)

DB identifier	Status	Role	Engine	Region & AZ	Size	Recommendations
sql2022	Creating	Instance	SQL Server Standard Edition	us-east-1b	db.m5.large	

Successfully created database sql2022
You can use settings from sql2022 to simplify configuration of [suggested database add-ons](#) while we finish creating your DB for you.

RDS > Databases > sql2022

sql2022

Summary

DB identifier sql2022	Status Configuring-enhance d-monitoring	Role Instance	Engine SQL Server Standard Edition	Recommendations
CPU -	Class db.m5.large	Current activity	Region & AZ us-east-1b	

Connectivity & security **Monitoring** **Logs & events** **Configuration** **Maintenance & backups** **Tags** **Recommendations**

SQLQuery1.sql - sql2022.ccbkoco727za.us-east-1.rds.amazonaws.com.master (admin (86)) - Microsoft SQL Server Management Studio

Object Explorer

- Connect < master
- sq2022.ccbkoco727za.us-east-1.rds.amazonaws.com (SQL Server 1)
 - Databases
 - master
 - model
 - msdb
 - tempdb
 - Database Snapshots
 - rdsadmin
 - r2schools
 - Database Diagrams
 - Tables
 - Views
 - External Resources
 - Synonyms
 - Programmability
 - Query Store
 - Service Broker
 - Storage
 - Security
 - Security
 - Logins
 - Server Roles
 - Credentials
 - Cryptographic Providers
 - Audits

Login - New

Select a page

- General
- Server Roles
- User Mapping
- Securables
- Status

Connection

Server: EC2AMAZ-OLA51TB
Connection: admin

Progress

Script **Help**

Login name: r2admin

SQL Server authentication

Password: Confirm password:

Specify old password

Old password:

Enforce password policy

Enforce password expiration

User must change password at next login

Mapped to certificate

Mapped to asymmetric key

Map to Credential

Mapped Credentials

ModifyInboundSecurityGroupRules

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#ModifyInboundSecurityGroupRules:securityGroupId=sg-0d8472b8adce9cf6e

aws Services Search [Alt+S]

EC2 > Security Groups > sg-0d8472b8adce9cf6e - default > Edit inbound rules

Edit inbound rules Info

Inbound rules control the incoming traffic that's allowed to reach the instance.

Inbound rules Info

Security group rule ID	Type <small>Info</small>	Protocol <small>Info</small>	Port range	Source <small>Info</small>	Description - optional <small>Info</small>
sgr-0cbad942ac2402cbe	All traffic	All	All	Custom	sg-0d8472b8adce9cf6e X
-	MSSQL	TCP	1433	My IP	49.43.226.187/32 X

Add rule

Amazon RDS

RDS > Databases > sql2022

sql2022

Summary

DB identifier	Status	Role
sql2022	Available	Instance
CPU	Class	Current activity
3.36%	db.m5.large	0.00 sessions

Engine SQL Server Edition

Region & us-east-1

Subnet groups

Parameter groups

Option groups

Custom engine versions

Zero-ETL integrations New

Events

Event subscriptions

Connectivity & security

Monitoring

Logs & events

Configuration

Maintenance & backups

Connectivity & security

Endpoint & port

Endpoint sql2022.ccbkoco727za.us-east-1.

Networking

Availability Zone

us-east-1b

Security

VPC security groups

default (sg-0d8472b8adce9cf6e)