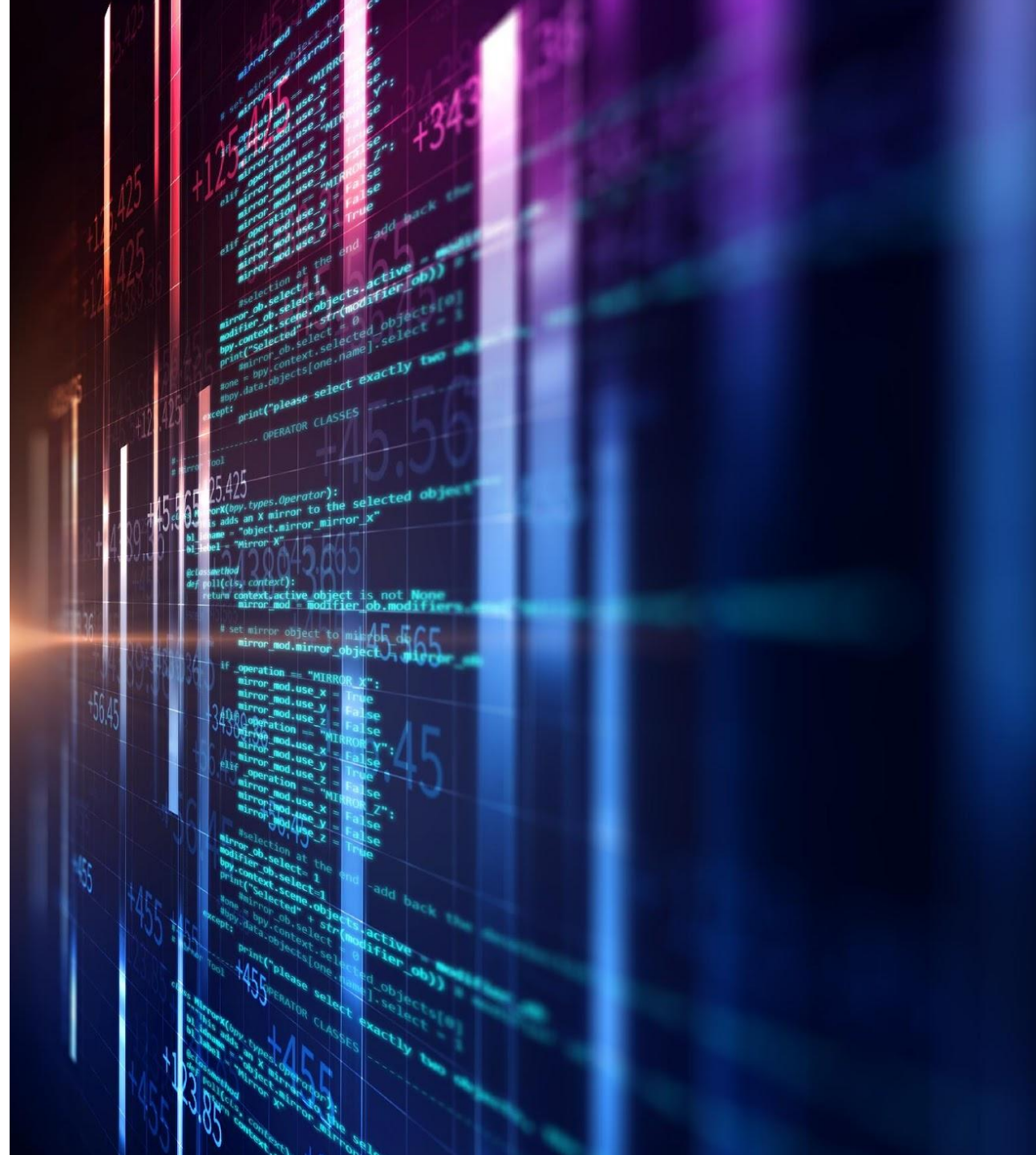


Setting up a MySQL Database

Brandon Krakowsky



Setting Up a MySQL Database



MySQL Database Set-Up Options

- In order to connect to a MySQL database from Java, you must have a MySQL database server running
- There are multiple ways of setting up and configuring a MySQL database server. Here are SOME of the ways:
 - Set up a MySQL database server **on your local machine**
 - Set up a MySQL database **in the cloud using Amazon Web Services**
 - Set up a MySQL database **in the cloud using Google Cloud**



Set Up a MySQL Database Server On Your Local Machine

- MySQL can be downloaded from the website: <https://dev.mysql.com/downloads/mysql/>
- Install MySQL by following the on-screen instructions
- Start up the MySQL Command Line Client

Reference <https://dev.mysql.com/doc> for more information about MySQL



Set Up a MySQL Database Server On Your Local Machine

- You will need to create a new database and table(s) after logging in. You can use SQL (Structured Query Language) to do this.
- Create a database using the CREATE DATABASE statement:
`CREATE DATABASE <database_name>;`
- Show all existing databases with the SHOW DATABASES statement:
`SHOW DATABASES;`
- Select the database to use with the USE statement:
`USE <database_name>;`
- Delete the database with the DROP DATABASE statement:
`DROP DATABASE <database_name>;`

Reference <https://dev.mysql.com/doc> for more information about MySQL



Set Up a MySQL Database Server On Your Local Machine

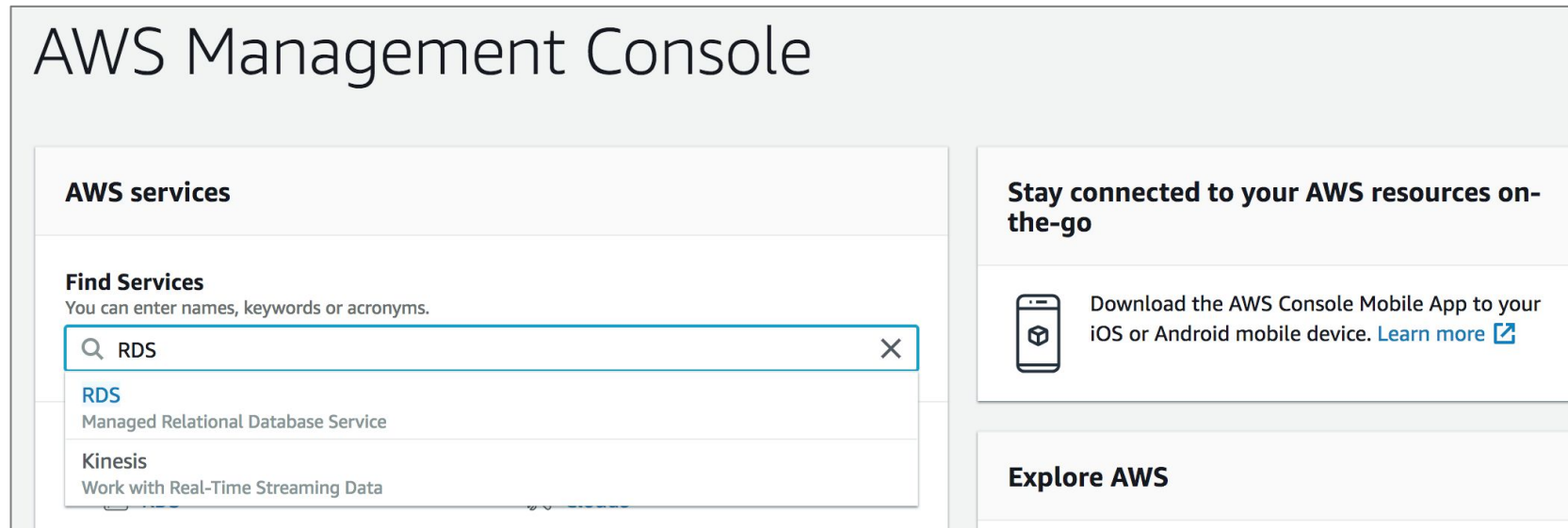
- Create a table in the database with the CREATE TABLE statement:
`CREATE TABLE <table_name> (<column1> <datatype>, <column2> <datatype>,);`
- To list all tables you have defined in the database, use the SHOW TABLES statement:
`SHOW TABLES;`
- To list details of a table, use the DESCRIBE statement:
`DESCRIBE < table_name>;`
- To delete a table, use the DROP TABLE statement:
`DROP TABLE <table_name>;`

Reference <https://dev.mysql.com/doc> for more information about MySQL



Set Up a MySQL Database In the Cloud Using AWS

- Sign into the AWS console: <http://console.aws.amazon.com>
- In the AWS management console:
 - Find “RDS” in the services



Reference <https://docs.aws.amazon.com/rds/index.html> for more information about Amazon RDS

Set Up a MySQL Database In the Cloud Using AWS

- In the Create database section:
 - Choose “Create database”
- In the Engine options section:
 - Select “MySQL”
- In the Settings section:
 - Write the name for “DB instance Identifier” (e.g. cit590example)
 - Choose the master username and password

Reference <https://docs.aws.amazon.com/rds/index.html> for more information about Amazon RDS



Set Up a MySQL Database In the Cloud Using AWS

- In the DB instance size section:
 - It is recommended to use "db.t3.small"
 - You can always change it later
- In the Storage section:
 - It is recommended to select "General Purpose (SSD)" and uncheck "Enable storage autoscaling"

Reference <https://docs.aws.amazon.com/rds/index.html> for more information about Amazon RDS



Set Up a MySQL Database In the Cloud Using AWS

- In the Connectivity section:
 - It is recommended to use default VPC, select “default” for “Subnet group”, choose “Yes” for “Publicly accessible”, select “default” for the “VPC security group”, and set “Availability zone” to “No preference”
- In the Additional Configuration section:
 - Set “Initial database name” to the name of your database
 - Use default values for the remaining settings
- Scroll to the bottom of the page and click “Create database” to launch the instance

Reference <https://docs.aws.amazon.com/rds/index.html> for more information about Amazon RDS

Set Up a MySQL Database In the Cloud Using Google Cloud

- Sign into the Google Cloud console: <https://console.cloud.google.com/>
- Create a Cloud project
- Install and initialize the Cloud SDK from the website: <https://cloud.google.com/sdk/docs>
- In the Cloud SQL Instances page on the Google Cloud console:
 - Choose “Create instance”
 - Choose “MySQL”
 - Write the name (e.g. cit590example)
 - Choose the root and password
 - Choose the region and zone for your instance under “Location”
 - Scroll to the bottom of the page and click “Create” to launch the instance

Reference <https://cloud.google.com/sql/docs/mysql> for more information about Cloud SQL for MySQL



Set Up a MySQL Database In the Cloud Using Google Cloud

- In the Cloud SQL Instances page on the Google Cloud console:
 - Choose the instance that you would like to add the database to.
 - Choose the “DATABASES” tab
 - Choose “Create database”
 - Choose the name of your database
 - Scroll to the bottom of the page and click “Create” to create your database on the Cloud SQL instance

Reference <https://cloud.google.com/sql/docs/mysql> for more information about Cloud SQL for MySQL