

Connecting with Go

This guide explains how to establish a connection between a Go application and a MySQL database using the `go-sql-driver/mysql` package. It walks through the necessary setup, configuration, and execution of a simple SQL query.

Variables

Certain parameters must be provided to establish a successful connection to a MySQL database. Below is a breakdown of each required variable, its purpose, and where to find it. Here’s what each variable represents:

Variable	Description	Purpose
USER	MySQL username, from the Elestio service overview page	Identifies the database user who has permission to access the MySQL database.
PASSWORD	MySQL password, from the Elestio service overview page	The authentication key is required for the specified USER to access the database.
HOST	Hostname for MySQL connection, from the Elestio service overview page	The address of the server hosting the MySQL database.
PORT	Port for MySQL connection, from the Elestio service overview page	The network port used to connect to MySQL. The default port is 3306.
DATABASE	Database Name for MySQL connection, from the Elestio service overview page	The name of the database being accessed. A MySQL instance can contain multiple databases.

These values can usually be found in the Elestio service overview details, as shown in the image below. Make sure to take a copy of these details and add them to the code moving ahead.



mysql-rpccp1

MySQL

Cluster

Running

Open terminal

Delete node

Overview

Tools

Metrics

Monitoring

Logs

Audit

Security

Alerts

Notes

Termination protection

Disabled. VM can be powered off and terminated.

Protection deactivated



Database Admin

Display your database credentials

Hide DB Credentials

Host	mysql-rpccp1-u7774.vm.elestio.app	
Port	24306	
User	root	
Password	*****	Show password
CLI	mysql --host=mysql-rpccp1-u7774.vm.elestio.app --port=24306 --user=root --password=*****	Show password

Prerequisites

• Install Go

- Check if Go is installed by running: `go version`
- If not installed, download it from golang.org and install.

• Install the MySQL Driver

- Use the following command to install the go-sql-driver/mysql driver: `go get -u github.com/go-sql-driver/mysql`

Code

Once all prerequisites are set up, create a new file named `mysql_connect.go` and add the following code:

```
package main

import (
    "database/sql"
```

```

    "fmt"
    "log"

    "github.com/go-sql-driver/mysql"
)

func main() {
    user := "USER"
    password := "PASSWORD"
    host := "HOST"
    port := "PORT"
    database := "DATABASE"

    // Construct DSN (Data Source Name)
    dsn := fmt.Sprintf("%s:%s@tcp(%s:%s)/%s", user, password, host, port, database)

    // Open a connection
    db, err := sql.Open("mysql", dsn)
    if err != nil {
        log.Fatalf("Connection failed: %v", err)
    }
    defer db.Close()

    // Ping to verify connection
    if err := db.Ping(); err != nil {
        log.Fatalf("Ping failed: %v", err)
    }
    fmt.Println("Connected to MySQL")

    // Run a test query to check the MySQL version
    var version string
    err = db.QueryRow("SELECT VERSION()").Scan(&version)
    if err != nil {
        log.Fatalf("Query execution failed: %v", err)
    }
    fmt.Printf("MySQL Version: %s\n", version)
}

```

To execute the script, open the terminal and navigate to the directory where `mysql_connect.go` is located. Once in the correct directory, run the script with the commands:

```
go mod init example.com/mysqlconnect  
go run mysql_connect.go
```

If the connection is successful, the terminal will display output similar to:

```
Connected to MySQL  
MySQL Version: 8.0.36
```

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