

Connecting with Python

This guide explains how to establish a connection between a Python application and a MySQL database using the `mysql-connector-python` 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
<code>USER</code>	MySQL username, from the Elestio service overview page	Identifies the database user who has permission to access the MySQL database.
<code>PASSWORD</code>	MySQL password, from the Elestio service overview page	The authentication key is required for the specified USER to access the database.
<code>HOST</code>	Hostname for MySQL connection, from the Elestio service overview page	The address of the server hosting the MySQL database.
<code>PORT</code>	Port for MySQL connection, from the Elestio service overview page	The network port used to connect to MySQL. The default port is 3306.
<code>DATABASE</code>	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 it 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 Python

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

• Install the `mysql-connector-python` Package

- The `mysql-connector-python` package enables Python applications to interact with MySQL. Install it using: `pip install mysql-connector-python`

Code

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

```
import mysql.connector

# Database connection configuration
config = {
    "host": "HOST",
```

```

"user": "USER",
"password": "PASSWORD",
"database": "DATABASE",
"port": PORT
}

try:
    # Establish the connection
    connection = mysql.connector.connect(**config)
    print("Connected to MySQL")

    # Create a cursor and execute a test query
    cursor = connection.cursor()
    cursor.execute("SELECT VERSION()")

    # Fetch and print the result
    version = cursor.fetchone()
    print("MySQL Version:", version[0])

except mysql.connector.Error as err:
    print("Connection failed:", err)

finally:
    if 'cursor' in locals():
        cursor.close()
    if 'connection' in locals() and connection.is_connected():
        connection.close()
        print("Connection closed")

```

To execute the script, open the terminal or command prompt and navigate to the directory where `mysql_connect.py` is located. Once in the correct directory, run the script with the command:

```
python mysql_connect.py
```

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

```

Connected to MySQL
MySQL Version: 8.0.41
Connection closed

```

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