Connection options for external applications

MySQL | PostgreSQL (https://cloud.google.com/sql/docs/postgres/external-connection-methods) | SQL Server

This page describes the options for connecting from an application running outside of the Google Cloud, including a mysql client, to your Cloud SQL instance.

Note: If you are connecting from within the Google Cloud, use the instructions for your Google Cloud service:

- Connecting from App Engine (https://cloud.google.com/sql/docs/mysql/connect-app-engine)
- Connecting from Compute Engine (https://cloud.google.com/sql/docs/mysql/connect-compute-engine)
- Connecting from Google Kubernetes Engine (https://cloud.google.com/sql/docs/mysql/connect-kubernetes-engine)
- Connecting from Cloud Functions (https://cloud.google.com/sql/docs/mysql/connect-functions)
- Connecting from Cloud Run (https://cloud.google.com/sql/docs/mysql/connect-run)

The following table compares the options for connecting from an external application:

Connection option	Secure, encrypted?	More information	Notes
Public IP address with SSL	Yes	• Configuring SSL for Instances (https://cloud.google.com/sql/docs/mysql/configure-ssl-instance) • Configuring access for IP connections (https://cloud.google.com/sql/docs/mysql/connect-external-app#appaccessIP) • Connect mysql client using SSL (https://cloud.google.com/sql/docs/mysql/connect-admin-ip#connect-ssl)	SSL certificate managem
Public IP	No	• Configuring access for IP connections	Not recommended for pr

address without SSL		(https://cloud.google.com/sql/docs/mysql/connect-external-app#appaccessIP)	
Cloud SQL Proxy	Yes	• Connecting from an external application using the Cloud SQL Proxy (https://cloud.google.com/sql/docs/mysql/connect-external-app#proxy) • Connecting mysql Client Using the Cloud SQL Proxy (https://cloud.google.com/sql/docs/mysql/connect-admin-proxy) • About the Cloud SQL Proxy (https://cloud.google.com/sql/docs/mysql/sql-proxy)	Not available for First Ge
Cloud SQL Proxy Docker image	Yes	• Connecting mysql Client Using the Cloud SQL Proxy Docker Image (https://cloud.google.com/sql/docs/mysql/connect-docker) • About the Cloud SQL Proxy (https://cloud.google.com/sql/docs/mysql/sql-proxy)	Not available for First Ge
JDBC Socket Library	Yes	• External connections with Java (https://cloud.google.com/sql/docs/mysql/connect-external-app#java) • JDBC socket factory GitHub page (https://github.com/GoogleCloudPlatform/cloud-sql-jdbc-socket-factory)	Java programming langu Not available for First Ge
Go Proxy Library	Yes	• External connections with Go (https://cloud.google.com/sql/docs/mysql/connect-external-app#go) • Cloud SQL Proxy GitHub page (https://github.com/GoogleCloudPlatform/cloudsql-proxy#to-use-inside-a-go-program)	Go programming langua Not available for First Ge
Cloud Shell	No	• Using the mysql client in the Cloud Shell (https://cloud.google.com/sql/docs/mysql/connect-admin-ip#cloud-shell)	Uses the Cloud SQL Prox (https://cloud.google.co proxy) to easily connect from th Console. Best for quick a requiring the `mysql` comr

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