

[MySQL](#) (/sql/docs/mysql/connect-admin-ip) | **PostgreSQL** | [SQL Server](#)
(/sql/docs/sqlserver/connect-admin-ip)

This page describes how to connect a [psql client](#) (<https://www.postgresql.org/docs/9.6/static/app-psql.html>), either by running it locally on your client machine or in the Cloud Shell, to your Cloud SQL instance.

On Windows, enter these commands before executing the **psql** command:

```
GCLIENTENCODING=utf-8  
65001
```

Need help? For help troubleshooting the proxy, see [Troubleshooting Cloud SQL Proxy connections](#) (/sql/docs/postgres/sql-proxy#troubleshooting). Or, see our [Cloud SQL Support page](#) (/sql/docs/postgres/support).

For information about connecting a client to a Cloud SQL instance using the Cloud SQL Proxy, see [Connecting psql to the Cloud SQL Proxy](#) (/sql/docs/postgres/connect-admin-proxy). For information about connecting using private IP, see [using private IP connectivity](#) (/sql/docs/postgres/configure-private-ip).

Before you can start using a client, you must have:

- Created a Cloud SQL instance, including configuring the default user.

See [Creating Instances](#) (/sql/docs/postgres/create-instance) and [Configuring the default user account](#) (/sql/docs/postgres/create-manage-users#user-root).

- Determined how you will connect to your instance.

For the connection options and how to choose from among them, see [Connection Options for External Applications](#) (/sql/docs/postgres/external-connection-methods).

Using a local client to connect to your Cloud SQL instance involves three high-level tasks:

1. Install the client (#install-mysql-client).
2. Configure access to your Cloud SQL instance (#configure-instance-mysql).
3. Connect to your Cloud SQL instance (#connect).

To install the client:

To configure access to your instance:

1. From the client machine, use [What's my IP](http://ipv4.whatismyv6.com) (<http://ipv4.whatismyv6.com>) to see the IP address of the client machine.
2. Copy that IP address.
3. Go to the Cloud SQL Instances page in the Google Cloud Console.
[Go to the Cloud SQL Instances page](https://console.cloud.google.com/sql/instances) (<https://console.cloud.google.com/sql/instances>)
4. Click the instance to open its **Overview** page, and record its IP address.
5. Select the **Connections** tab.
6. Under **Authorized networks**, click **Add network** and enter the IP address of the machine where the client is installed.

★ **Note:** The IP address of the instance and the psql client IP address you authorize must both be IPv4.

7. Click **Done**. Then click **Save** at the bottom of the page to save your changes.
8. Connect to your instance, either [with SSL](#) (#connect-ssl) or [without SSL](#) (#connect).

This procedure configures an unencrypted connection to your database. If your database contains sensitive data, you can [connect to your instance using SSL](#) (#connect-ssl).

To connect to your instance:

1. Confirm that you have [installed the client](#) (#install-mysql-client) and [configured access to your instance](#) (#configure-instance-mysql).

2. Start the psql client:

3. Enter your password.

4. You should see the psql prompt.

To connect using SSL, you need:

- A Certificate Authority (CA) certificate in a **server-ca.pem** file.
- A client public key certificate in a **client-cert.pem** file.
- A client private key in a **client-key.pem** file.

If you lack a client certificate and a corresponding private key, [create a new client certificate \(/sql/docs/postgres/configure-ssl-instance#new-client\)](#).

Before you begin, confirm that you have [installed the client \(#install-mysql-client\)](#) and [configured access to your instance \(#configure-instance-mysql\)](#).

To connect to your instance using SSL:

1. Start the psql client:

For example:

An SSL mode of `verify-full` is not required; `verify-ca` is enough because the CA is instance-specific.

You might also want to create a Connection Service File to manage your connection parameters, especially if you are connecting to more than one instance. For more information, see the [PostgreSQL documentation](https://www.postgresql.org/docs/9.6/static/libpq-pgservice.html) (<https://www.postgresql.org/docs/9.6/static/libpq-pgservice.html>)

2. Enter the password.
3. You can confirm that the connection is encrypted by looking for the cipher in the connection information:

1. Go to the Google Cloud Console.

[Go to the Google Cloud Console](https://console.cloud.google.com/) (<https://console.cloud.google.com/>)

2. Click the Cloud Shell icon



towards the right in the tool bar.

The Cloud Shell takes a few moments to initialize.

3. At the Cloud Shell prompt, use the built-in client to connect to your Cloud SQL instance:

4. Enter your password.

The `gcloud sql` command group does not support connecting to a Cloud SQL instance using SSL/TLS.

- Learn about the two levels of access control (/sql/docs/postgres/instance-access-control) for Cloud SQL instances.
- Create users (/sql/docs/postgres/create-manage-users) and databases (/sql/docs/postgres/create-manage-databases).
- Learn about options for connecting to your instance from your application (/sql/docs/postgres/external-connection-methods).
- Learn about how the psql client works with SSL (https://www.postgresql.org/docs/9.6/static/libpq-ssl.html).
- Learn about options for support (/sql/docs/support).