

This quickstart shows you how to perform basic operations in Cloud Spanner using the Google Cloud Console. In the quickstart, you will:

- Create a Cloud Spanner instance, database, and table.
- Add a schema.
- Write and modify data.
- Run a query.

**Note:** For information on the cost of using Cloud Spanner, see [Pricing \(/spanner/pricing\)](/spanner/pricing).

1. [Sign in \(https://accounts.google.com/Login\)](https://accounts.google.com/Login) to your Google Account.

If you don't already have one, [sign up for a new account \(https://accounts.google.com/SignUp\)](https://accounts.google.com/SignUp).

2. In the Cloud Console, on the project selector page, select or create a Cloud project.

★ **Note:** If you don't plan to keep the resources that you create in this procedure, create a project instead of selecting an existing project. After you finish these steps, you can delete the project, removing all resources associated with the project.

[Go to the project selector page \(https://console.cloud.google.com/projectselector2/home/dashboard\)](https://console.cloud.google.com/projectselector2/home/dashboard)

3. Make sure that billing is enabled for your Google Cloud project. [Learn how to confirm billing is enabled for your project \(/billing/docs/how-to/modify-project\)](/billing/docs/how-to/modify-project).

When you first use Cloud Spanner, you must create an instance, which is an allocation of resources that are used by Cloud Spanner databases in that instance.

1. Go to the Cloud Spanner **Instances** page in the Cloud Console.

[Go to the instances page](https://console.cloud.google.com/spanner/instances) (<https://console.cloud.google.com/spanner/instances>)

2. Click **Create instance**.
3. For the instance name, enter **Test Instance**.
4. For the instance ID, enter **test-instance**.
5. Use a **Regional** configuration.
6. Choose any regional configuration from the drop-down menu.

Your instance configuration determines the geographic location where your instances are stored and replicated.

7. Use **1** for the node count.

Your instance creation page now looks like this:

←
Create an instance

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### Name your instance

An instance has both a name and an ID. The name is for display purposes only. The ID is a permanent and unique identifier.

Instance name \*  
  
Name must be 4-30 characters long

Instance ID \*  
  
Lowercase letters, numbers, hyphens allowed

### Choose a configuration

Determines where your nodes and data are located. Permanent. Affects cost, performance, and replication. [Compare region configurations](#)

Regional  
 Multi-region

### Allocate nodes

Add nodes to increase data throughput and queries per second (QPS). Affects billing.

Nodes \*

▼ **NODE GUIDANCE**

**CREATE**    CANCEL

### Summary

Storage cost depends on GB stored per month. Nodes cost is an hourly charge for the number of nodes in your instance.

<b>Configuration</b>	us-west1 (Oregon)
<b>Replicas</b>	3 read-write replicas in 3 separate zones within the region us-west1
<b>Availability</b>	99.99% availability SLA
<b>Node cost</b>	\$0.90 per hour
<b>Storage cost</b>	\$0.30 per GB/month

## 8. Click **Create**.

Your instance appears in the instance list.

1. Go to the Cloud Spanner **Instances** page in the Cloud Console.

[Go to the instances page \(https://console.cloud.google.com/spanner/instances\)](https://console.cloud.google.com/spanner/instances)

2. Click the **Test Instance** instance.
3. Click **Create database**.
4. For the database name, enter **example-db**.

Your database creation page now looks like this:

← Create a database in test-instance

1 Name your database ^

Enter a permanent name for your database.

Name

example-db

Continue

2 Define your database schema (optional) ∨

Cancel

5. Click **Continue**.

6. Skip the **Define your database schema** step for now. You'll define your schema in the next section of this quickstart.

7. Click **Create**.

The Cloud Console displays the **Database details** page after the database is created.

The Cloud Console provides two ways to create, alter, and delete tables and indexes in a database:

- By using the default Database editor to specify each part of tables, columns, and indexes.
- By switching the editor to **Edit as text** mode and entering SQL statements in Cloud Spanner Data Definition Language (DDL) syntax.

This quickstart uses DDL.

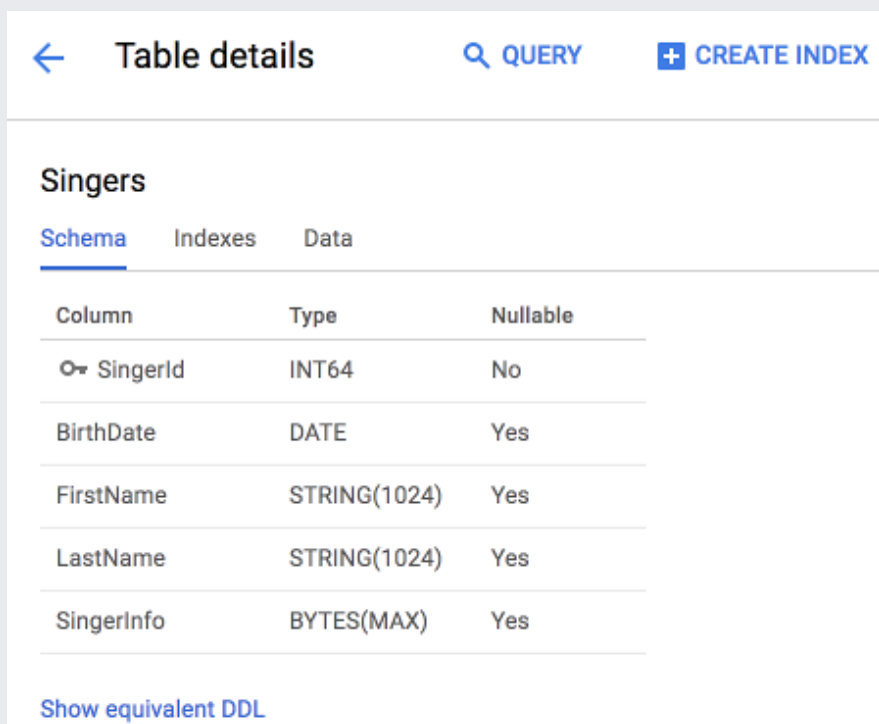
1. In the left pane of the Cloud Console, click the **example-db** database.

2. Click **Create table**.


3. Click the **Edit as text** toggle.
4. In the **DDL statement** field, enter:

5. Click **Create**.

This process might take a few minutes. When the operation is complete, the Cloud Console displays the details of the table that you created:



The screenshot shows the 'Table details' page for a table named 'Singers'. At the top, there is a navigation bar with a back arrow, the title 'Table details', and two buttons: 'QUERY' and 'CREATE INDEX'. Below the navigation bar, the table name 'Singers' is displayed. Underneath, there are three tabs: 'Schema' (which is selected and underlined), 'Indexes', and 'Data'. The 'Schema' tab contains a table with three columns: 'Column', 'Type', and 'Nullable'. The table lists the following columns: 'SingerId' (INT64, No), 'BirthDate' (DATE, Yes), 'FirstName' (STRING(1024), Yes), 'LastName' (STRING(1024), Yes), and 'SingerInfo' (BYTES(MAX), Yes). At the bottom of the 'Schema' tab, there is a link that says 'Show equivalent DDL'.

Column	Type	Nullable
 SingerId	INT64	No
BirthDate	DATE	Yes
FirstName	STRING(1024)	Yes
LastName	STRING(1024)	Yes
SingerInfo	BYTES(MAX)	Yes

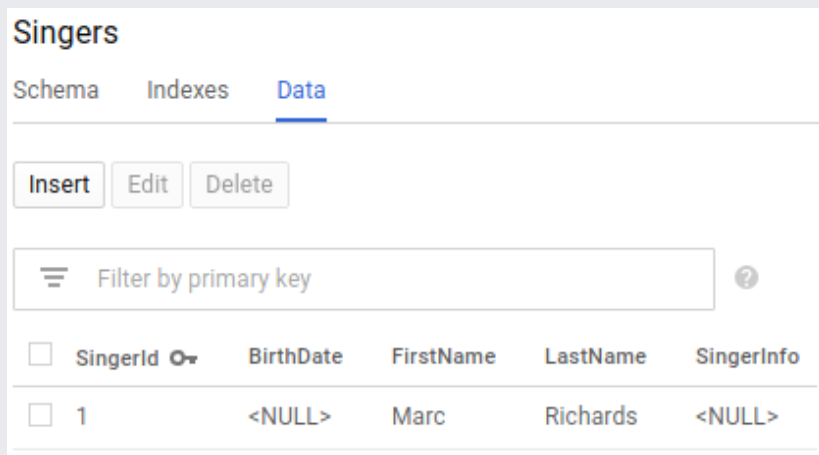
The Cloud Console provides an interface for inserting, editing, and deleting data.

1. In the left pane of the Cloud Console, click **Singers**.
2. Click **Data**.
3. Click **Insert**.
4. Enter the following values:

Field	Value
SingerID:INT64	1
BirthDate:DATE	[leave blank]
FirstName:STRING	Marc
LastName:STRING	Richards
SingerInfo:BYTES	[leave blank]

5. Click **Save**.

The **Singers** table now has one row:



Singers

Schema Indexes **Data**

Insert Edit Delete

Filter by primary key

<input type="checkbox"/>	SingerId	BirthDate	FirstName	LastName	SingerInfo
<input type="checkbox"/>	1	<NULL>	Marc	Richards	<NULL>

6. Click **Insert** to add an additional row.
7. Enter the following values:

Field	Value
SingerID:INT64	2

Field	Value
BirthDate:DATE	[leave blank]
FirstName:STRING	Catalina
LastName:STRING	Smith
SingerInfo:BYTES	[leave blank]

8. Click **Save**.

The **Singers** table now has two rows:

Singers

Schema Indexes **Data**

Insert Edit Delete

Filter by primary key

<input type="checkbox"/>	SingerId	BirthDate	FirstName	LastName	SingerInfo
<input type="checkbox"/>	1	<NULL>	Marc	Richards	<NULL>
<input type="checkbox"/>	2	<NULL>	Catalina	Smith	<NULL>

You can also insert empty string values when you enter data.

1. In the left pane, click **Singers**.
2. Click **Data**.
3. Click **Insert**.
4. Enter the following values:

Field	Value
SingerID:INT64	3
BirthDate:DATE	[leave blank]
FirstName:STRING	Kena

Field	Value
LastName:STRING	[check Empty string]
SingerInfo:BYTES	[leave blank]

5. Click **Save**.

The **Singers** table now has three rows, and the row for **SingerID 3** has a **LastName** that is an empty string:

Singers

Schema Indexes **Data**

Insert Edit Delete

Filter by primary key

<input type="checkbox"/>	SingerId	BirthDate	FirstName	LastName	SingerInfo
<input type="checkbox"/>	1	<NULL>	Marc	Richards	<NULL>
<input type="checkbox"/>	2	<NULL>	Catalina	Smith	<NULL>
<input checked="" type="checkbox"/>	3	<NULL>	Kena		<NULL>

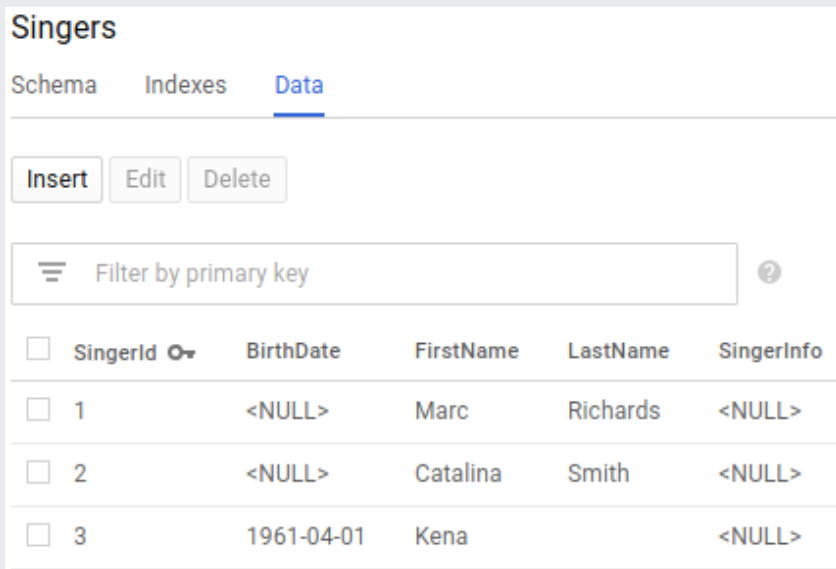
1. In the left pane of the Cloud Console, click **Singers**.
2. Click **Data**.
3. Check the box next to the row for **SingerId 3**, then click **Edit**.
4. Enter the following value:

Field	Value
BirthDate:DATE	1961-04-01
[all other fields]	[leave as-is]

5. Click **Save**.



The row for **SingerId 3** in the **Singers** table now has a **BirthDate** value:



Singers

Schema Indexes **Data**

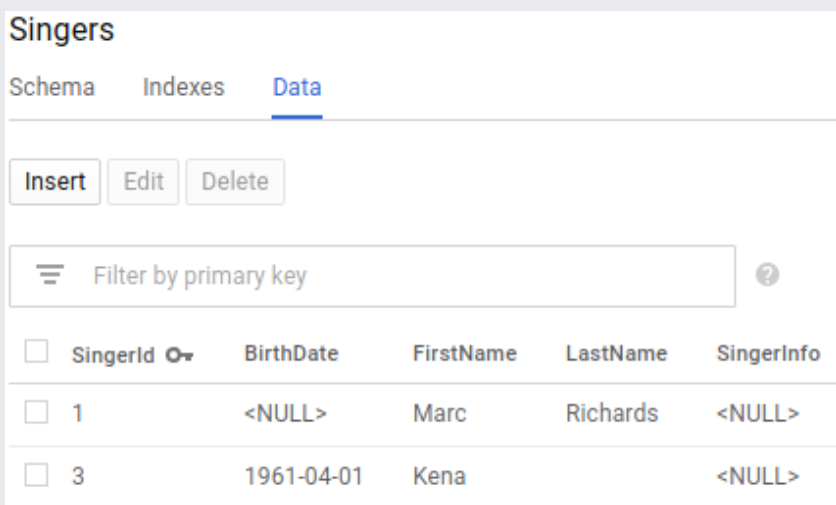
Insert Edit Delete

Filter by primary key

<input type="checkbox"/>	SingerId	BirthDate	FirstName	LastName	SingerInfo
<input type="checkbox"/>	1	<NULL>	Marc	Richards	<NULL>
<input type="checkbox"/>	2	<NULL>	Catalina	Smith	<NULL>
<input type="checkbox"/>	3	1961-04-01	Kena		<NULL>

1. In the left pane of the Cloud Console, click **Singers**.
2. Click **Data**.
3. Check the box next to the row for **SingerId 2**, then click **Delete**.
4. In the dialog that appears, click **OK**.

The **Singers** table now has two rows:



Singers

Schema Indexes **Data**

Insert Edit Delete

Filter by primary key

<input type="checkbox"/>	SingerId	BirthDate	FirstName	LastName	SingerInfo
<input type="checkbox"/>	1	<NULL>	Marc	Richards	<NULL>
<input type="checkbox"/>	3	1961-04-01	Kena		<NULL>

You can now execute a SQL statement on the query page.

1. In the left pane of the Cloud Console, click **example-db** to navigate to the **Database details** page.
2. On the **Database details** page, click **Query**.
3. For the query, enter:

4. Click **Run query**.

The Cloud Console displays the result of your query:


Schema	Results table	Explanation		
Query complete (2.44ms elapsed)				
SingerId	FirstName	LastName	SingerInfo	BirthDate
1	Marc	Richards		
3	Kena			1961-04-01

Congratulations! You've successfully created a Cloud Spanner database and executed a SQL statement using the query editor!

To avoid additional charges to your Google Cloud account, delete the database and the instance that you created.

1. Go to the Cloud Spanner **Instances** page in the Google Cloud Console.


[Go to the instances page](https://console.cloud.google.com/spanner/instances) (https://console.cloud.google.com/spanner/instances)

2. Click **Test Instance**.
3. Click **example-db**.
4. In the **Database details** page, click **Delete**  

5. Confirm that you want to delete the database and click **Delete**.

Deleting an instance automatically deletes all databases created in that instance.

1. Go to the Cloud Spanner **Instances** page in the Google Cloud Console.

[Go to the instances page](https://console.cloud.google.com/spanner/instances) (<https://console.cloud.google.com/spanner/instances>)

2. Click **Test Instance**.
3. Click **Delete**  

4. Confirm that you want to delete the instance and click **Delete**.

- Learn about [Instances](/spanner/docs/instances) (/spanner/docs/instances).
- Understand the Cloud Spanner [Schema and Data Model](/spanner/docs/schema-and-data-model) (/spanner/docs/schema-and-data-model).
- Learn more about [Data Definition Language \(DDL\)](/spanner/docs/data-definition-language) (/spanner/docs/data-definition-language).
- Learn more about [Query Execution Plans](/spanner/docs/query-execution-plans) (/spanner/docs/query-execution-plans).
- Learn how to use Cloud Spanner with [C#](/spanner/docs/getting-started/csharp/) (/spanner/docs/getting-started/csharp/), [Go](/spanner/docs/getting-started/go/) (/spanner/docs/getting-started/go/), [Java](/spanner/docs/getting-started/java/) (/spanner/docs/getting-started/java/), [Node.js](/spanner/docs/getting-started/nodejs/) (/spanner/docs/getting-started/nodejs/), [PHP](/spanner/docs/getting-started/php/) (/spanner/docs/getting-started/php/), [Python](/spanner/docs/getting-started/python/) (/spanner/docs/getting-started/python/), [Ruby](/spanner/docs/getting-started/ruby/) (/spanner/docs/getting-started/ruby/), [REST](/spanner/docs/getting-started/rest/) (/spanner/docs/getting-started/rest/), or [gcloud](/spanner/docs/getting-started/gcloud/) (/spanner/docs/getting-started/gcloud/).

