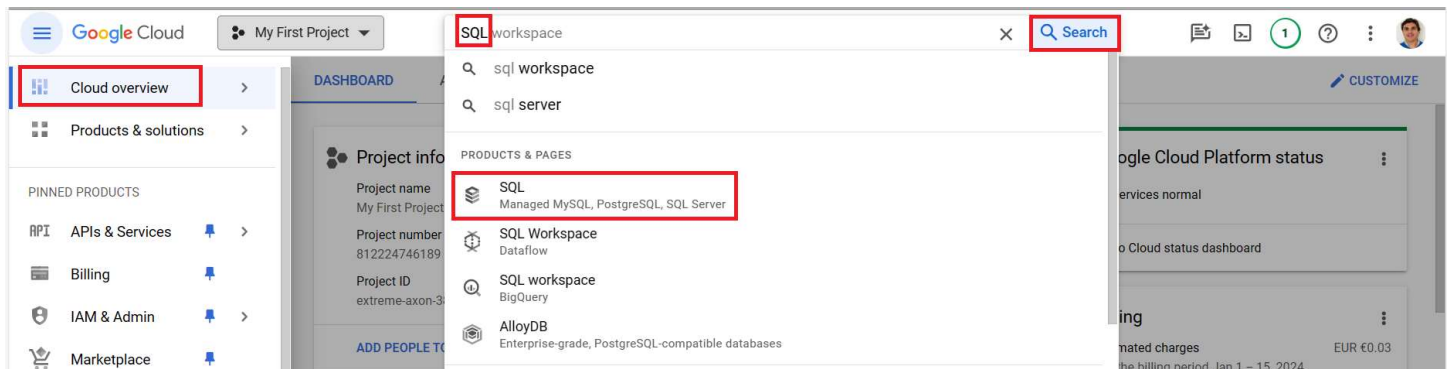


How to create Google Cloud SQL Server instance and connect from SSMS, VSCode and Visual Studio 2022 Community Edition

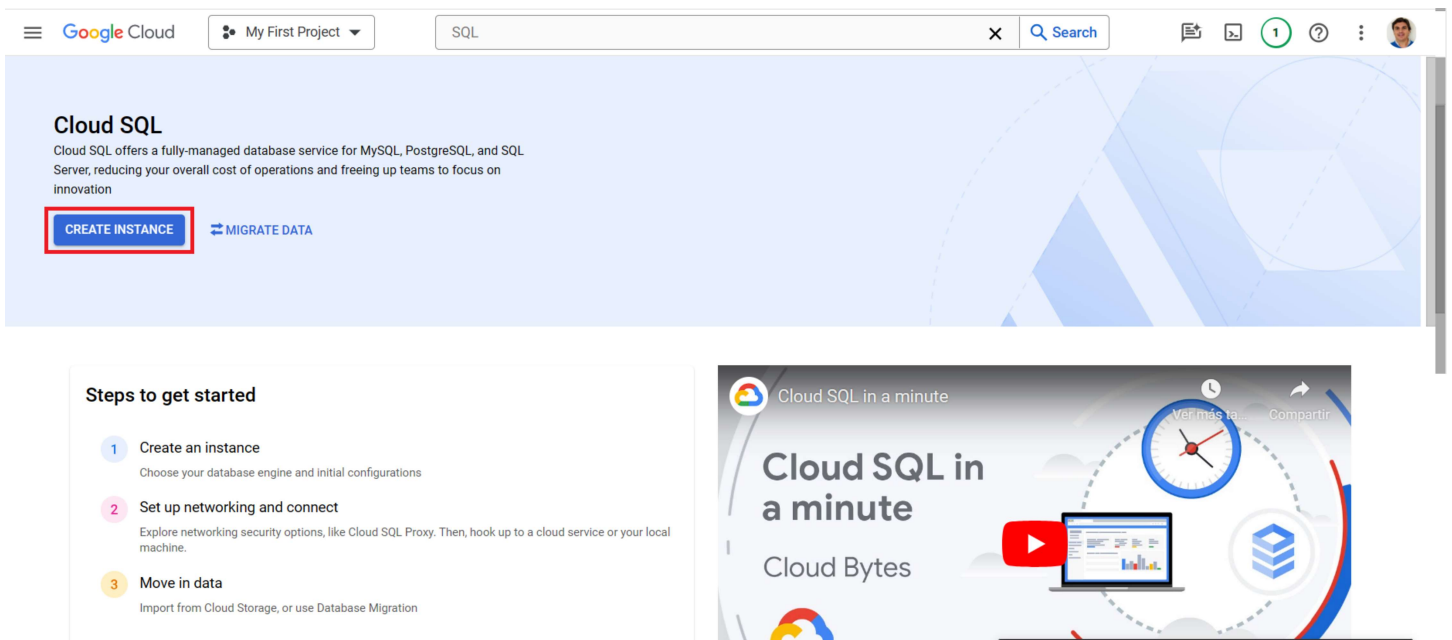
See this video: <https://www.youtube.com/watch?v=ELTI7eS1Kdk>

1. Create Google Cloud SQL Server instance

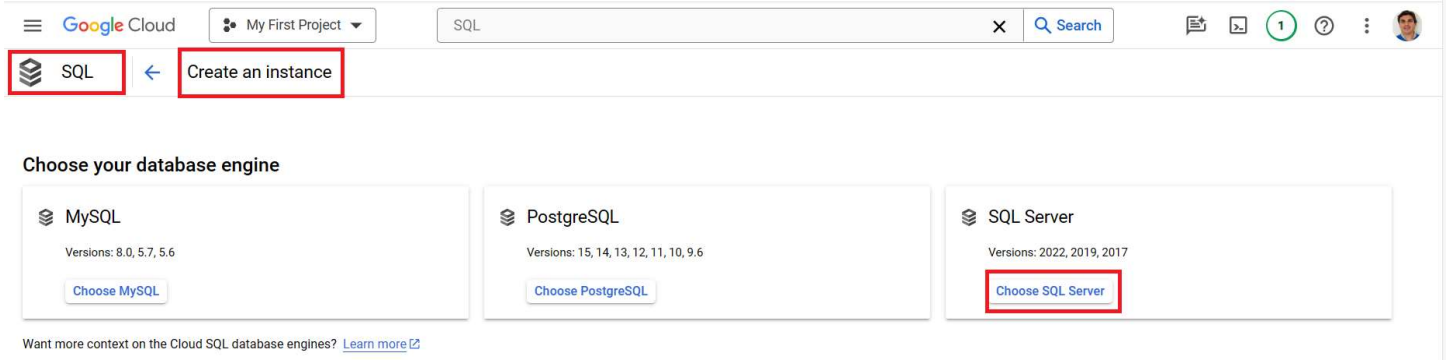
We search for SQL in the components searching text box



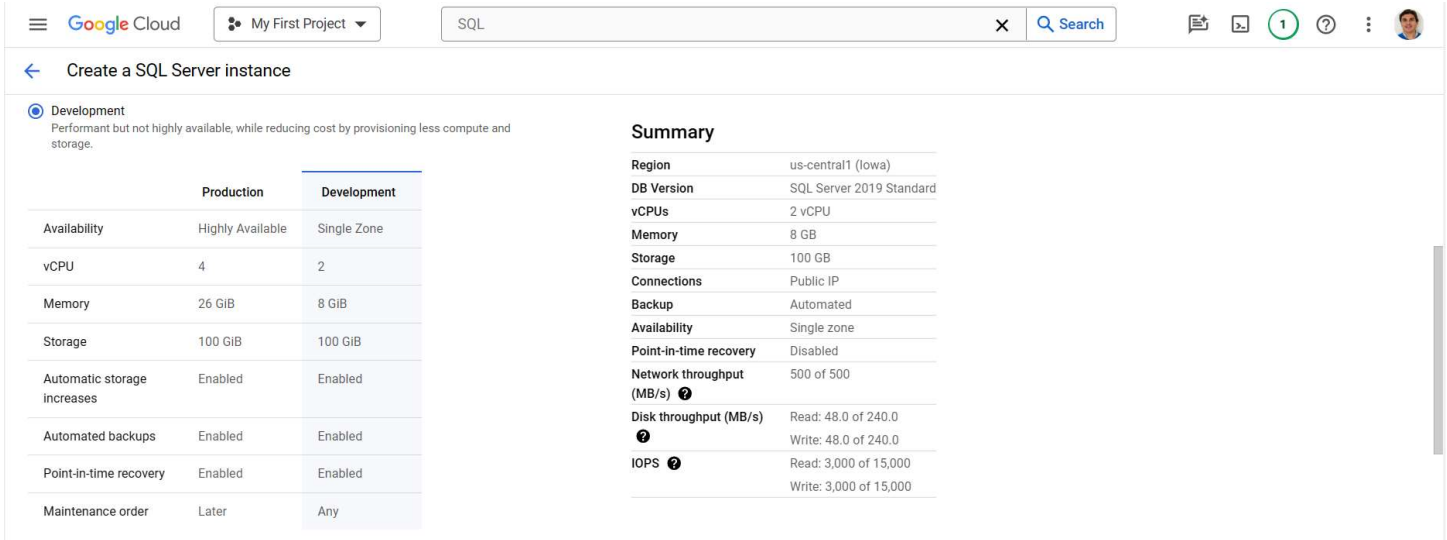
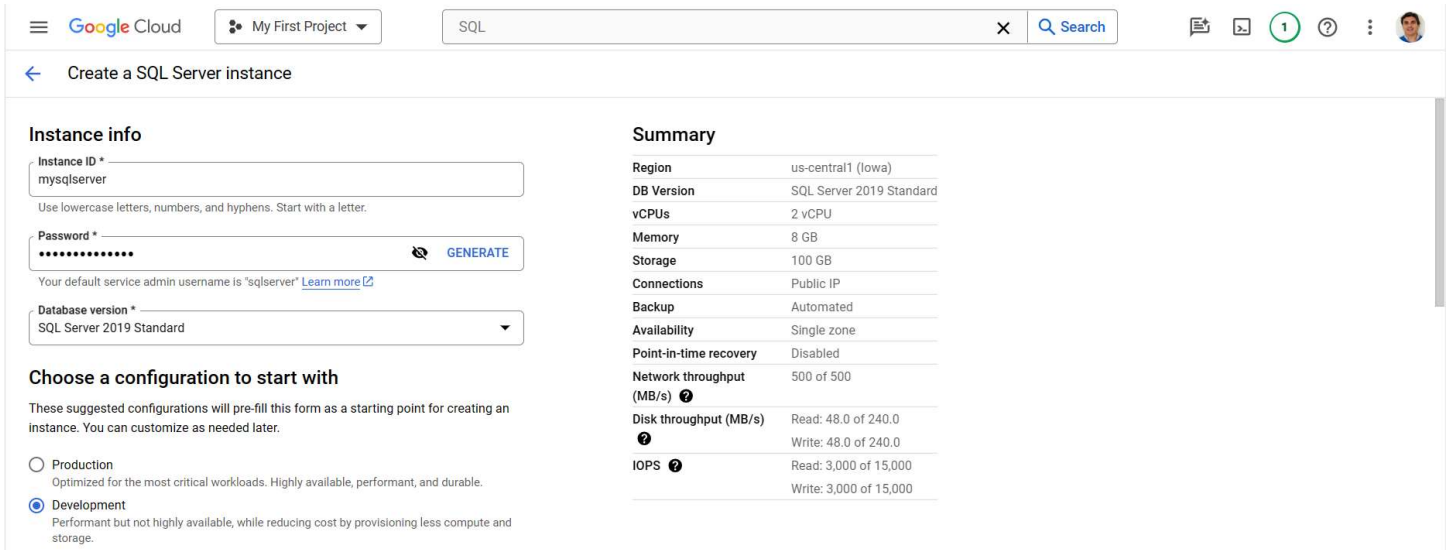
We select SQL->Managed MySQL, PostgreSQL, SQL Server



We choose SQL Server option



We input the server name, database password and Development option



We select a Single zone and input the Region/location

Google Cloud

My First Project

SQL

X

Search

1

?

← Create a SQL Server instance

Choose region and zonal availability

For better performance, keep your data close to the services that need it. Region is permanent, while zone can be changed any time.

Region

europa-southwest1 (Madrid)

Zonal availability

☒ Single zone

In case of outage, no failover. Not recommended for production.

☐ Multiple zones (Highly available)

Automatic failover to another zone within your selected region. Recommended for production instances. Increases cost.

Primary zone

Any

^ HIDE ZONES

Summary

Region	europa-southwest1 (Madrid)
DB Version	SQL Server 2019 Standard
vCPUs	2 vCPU
Memory	8 GB
Storage	100 GB
Connections	Public IP
Backup	Automated
Availability	Single zone
Point-in-time recovery	Disabled
Network throughput (MB/s)	500 of 500
Disk throughput (MB/s)	Read: 48.0 of 240.0 Write: 48.0 of 240.0
IOPS	Read: 3,000 of 15,000 Write: 3,000 of 15,000

Customize your instance

You can also customize instance configurations later

^ SHOW CONFIGURATION OPTIONS

We select the CPU/Memory and storage capacity

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?

← Create a SQL Server instance

Machine configuration

Machine shapes

Choose from the most commonly used shapes or choose a custom shape. Make sure your selection has enough memory to hold your largest table.

☒ 1 vCPU, 3.75 GB

☐ 2 vCPU, 8 GB

☐ 4 vCPU, 16 GB

☐ 8 vCPU, 32 GB

☐ Custom

^ MULTITHREADING SETTING

Storage

Storage type

SSD

Storage capacity

10 - 65,536 GB. Higher capacity improves performance, up to the limits set by the machine type. Capacity can't be decreased later.

☒ 20 GB

☐ 100 GB

Summary

Region	europa-southwest1 (Madrid)
DB Version	SQL Server 2019 Standard
vCPUs	1 vCPU
Memory	3.75 GB
Storage	20 GB
Connections	Public IP
Backup	Automated
Availability	Single zone
Point-in-time recovery	Disabled
Network throughput (MB/s)	250 of 250
Disk throughput (MB/s)	Read: 9.6 of 200.0 Write: 9.6 of 200.0
IOPS	Read: 600 of 12,000 Write: 600 of 10,000

We select the Public IP in the Connection details

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1

?

← Create a SQL Server instance

Connections

Choose how you want your source to connect to this instance, then define which networks are authorized to connect. [Learn more](#)

You can use the Cloud SQL Proxy for extra security with either option. [Learn more](#)

Instance IP assignment

☐ Private IP

Assigns an internal, Google-hosted VPC IP address. Requires additional APIs and permissions. Can't be disabled once enabled. [Learn more](#)

☒ Public IP

Assigns an external, internet-accessible IP address. Requires using an authorized network or the Cloud SQL Proxy to connect to this instance. [Learn more](#)

Authorized networks

You can specify CIDR ranges to allow IP addresses in those ranges to access your instance. [Learn more](#)

Summary

Region	europa-southwest1 (Madrid)
DB Version	SQL Server 2019 Standard
vCPUs	1 vCPU
Memory	3.75 GB
Storage	20 GB
Connections	Public IP
Backup	Automated
Availability	Single zone
Point-in-time recovery	Disabled
Network throughput (MB/s)	250 of 250
Disk throughput (MB/s)	Read: 9.6 of 200.0 Write: 9.6 of 200.0
IOPS	Read: 600 of 12,000 Write: 600 of 10,000

We add my laptop local IP and we press the **Add a Network** button

Google Cloud My First Project SQL Search

Create a SQL Server instance

Authorized networks
You can specify CIDR ranges to allow IP addresses in those ranges to access your instance. [Learn more](#)

New network

Name
myhomelP

Use CIDR notation

Network *
88.1.112.152
Example: 199.27.25.0/24

DONE

ADD A NETWORK

Authentication
No Active Directory domain selected

Summary

Region	europa-southwest1 (Madrid)
DB Version	SQL Server 2019 Standard
vCPUs	1 vCPU
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Storage	20 GB
Connections	Public IP
Backup	Automated
Availability	Single zone
Point-in-time recovery	Disabled
Network throughput (MB/s)	250 of 250
Disk throughput (MB/s)	Read: 9.6 of 200.0 Write: 9.6 of 200.0
IOPS	Read: 600 of 12,000 Write: 600 of 10,000

IMPORTANT NOTE: to get you local laptop IP navigate to the <https://www.whatismyip.com/>

https://www.whatismyip.com

WhatIsMyIP.com Search.. Pricing API Sign Up Login Help

What Is My IP? IP Address Lookup IP WHOIS Lookup DNS Lookup Internet Speed Test Tools

Ads by Google

Stop seeing this ad Why this ad?

Plan Online

What Is My IP?

My Public IPv4: 88.1.112.152

My Public IPv6: Not Detected

My IP Location: Madrid, MD ES

My ISP: Telefonica de Espana Sau

The screenshot shows the 'Create a SQL Server instance' page in the Google Cloud console. The 'Connections' section is expanded, showing options for 'Instance IP assignment'. The 'Public IP' option is selected, which assigns an external, internet-accessible IP address. Below this, the 'Authorized networks' section is visible, showing a single network named 'myhomelP (88.1.112.152)'. To the right, a 'Summary' table lists the instance configuration: Region (europe-southwest1 (Madrid)), DB Version (SQL Server 2019 Standard), vCPUs (1 vCPU), Memory (3.75 GB), Storage (20 GB), Connections (Public IP), Backup (Automated), Availability (Single zone), Point-in-time recovery (Disabled), Network throughput (250 of 250 MB/s), Disk throughput (Read: 9.6 of 200.0 MB/s, Write: 9.6 of 200.0 MB/s), and IOPS (Read: 600 of 12,000, Write: 600 of 10,000).

Region	europe-southwest1 (Madrid)
DB Version	SQL Server 2019 Standard
vCPUs	1 vCPU
Memory	3.75 GB
Storage	20 GB
Connections	Public IP
Backup	Automated
Availability	Single zone
Point-in-time recovery	Disabled
Network throughput (MB/s)	250 of 250
Disk throughput (MB/s)	Read: 9.6 of 200.0 Write: 9.6 of 200.0
IOPS	Read: 600 of 12,000 Write: 600 of 10,000

We unselect the Enable deletion protection option

In Featured Flag Setting we select Enable SQL Server Audit

The screenshot shows the 'Create a SQL Server instance' page in the Google Cloud console, specifically the 'Flags and parameters' section. The 'Featured flag settings' are expanded, showing 'Default collation' set to 'SQL_Latin1_General_CP1_CI_AS' and 'Timezone' set to 'UTC'. Below these, the 'Audit logging' section is visible, with the 'Enable SQL Server Audit' checkbox selected. To the right, the same 'Summary' table as in the previous screenshot is displayed.

Region	europe-southwest1 (Madrid)
DB Version	SQL Server 2019 Standard
vCPUs	1 vCPU
Memory	3.75 GB
Storage	20 GB
Connections	Public IP
Backup	Automated
Availability	Single zone
Point-in-time recovery	Disabled
Network throughput (MB/s)	250 of 250
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IOPS	Read: 600 of 12,000 Write: 600 of 10,000

My IP Location: Madrid, MD ES

Google Cloud

My First Project

SQL

Search

1

Create a SQL Server instance

Audit logging

Track and log events that occur in your database. Audit logs are stored in your instance before they're automatically uploaded to Cloud Storage. [Learn more](#)

☒ Enable SQL Server Audit

Make sure you have sufficient storage, or automatic storage increases enabled, to avoid running out of disk space.

Choose where to store audit logs

Audit logs will get automatically uploaded to this Cloud Storage location

Bucket or folder *

BROWSE

Browse for a Cloud Storage location or enter the path to one (bucket/folder). A service account will be granted write access to the selected bucket, which will be reflected in your permissions.

ADVANCED OPTIONS

Labels

No labels set

HIDE CONFIGURATION OPTIONS

CREATE INSTANCE

CANCEL

Summary

Region	europa-southwest1 (Madrid)
DB Version	SQL Server 2019 Standard
vCPUs	1 vCPU
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Storage	20 GB
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Point-in-time recovery	Disabled
Network throughput (MB/s)	250 of 250
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We create a new bucket for database logs

https://md2pdf.netlify.app

6/16

Create a bucket

- **Name your bucket**

Pick a **globally unique, permanent name**. [Naming guidelines](#) 

Tip: Don't include any sensitive information

✓ **LABELS (OPTIONAL)**

CONTINUE

- **Choose where to store your data**

Location: us (multiple regions in United States)

Location type: Multi-region

- **Choose a storage class for your data**

Default storage class: Standard

- **Choose how to control access to objects**

Public access prevention: On

Access control: Uniform

- **Choose how to protect object data**

Protection tools: None

Data encryption: Google-managed

CREATE

CANCEL

We create a new folder inside the bucket

Select folder



mydatabaselogs ▼


[Create new folder](#)

No objects found

SELECT

CANCEL

Create folder

Cloud Storage uses a flat namespace, so uploading objects to a folder simply appends a path prefix to object names. [Learn more](#) 

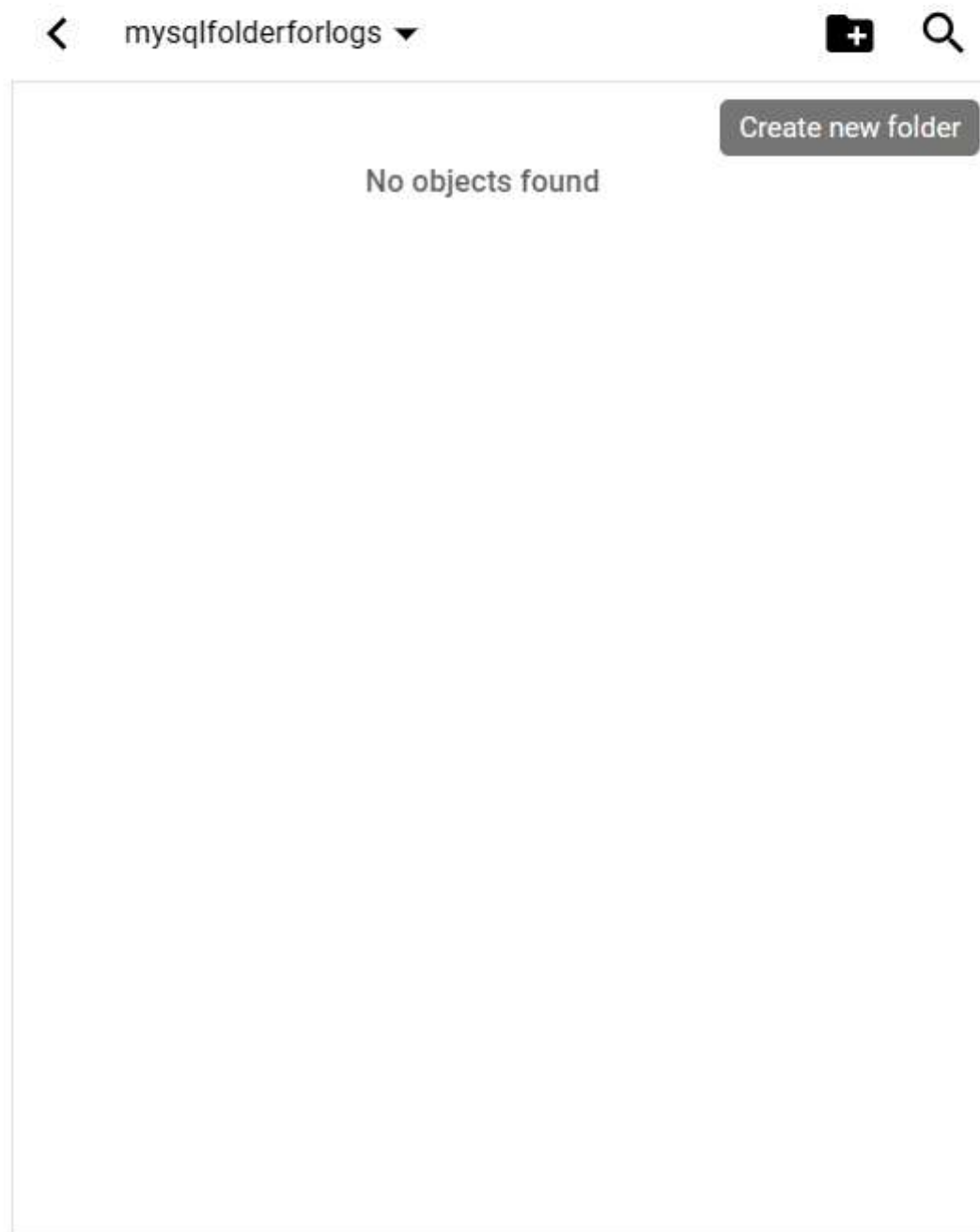
Name *

CANCEL

CREATE

We select the folder inside the bucket

Select folder



We verify we select the folder

✓ Enable SQL Server Audit

Make sure you have sufficient storage, or automatic storage increases enabled, to avoid running out of disk space

Choose where to store audit logs

Audit logs will get automatically uploaded to this Cloud Storage location

Bucket or folder *

✓ mydatabaselogs/mysqlfolderforlogs/

BROWSE

Browse for a Cloud Storage location or enter the path to one (bucket/folder). A service account will be granted write access to the selected bucket, which will be reflected in your permissions.

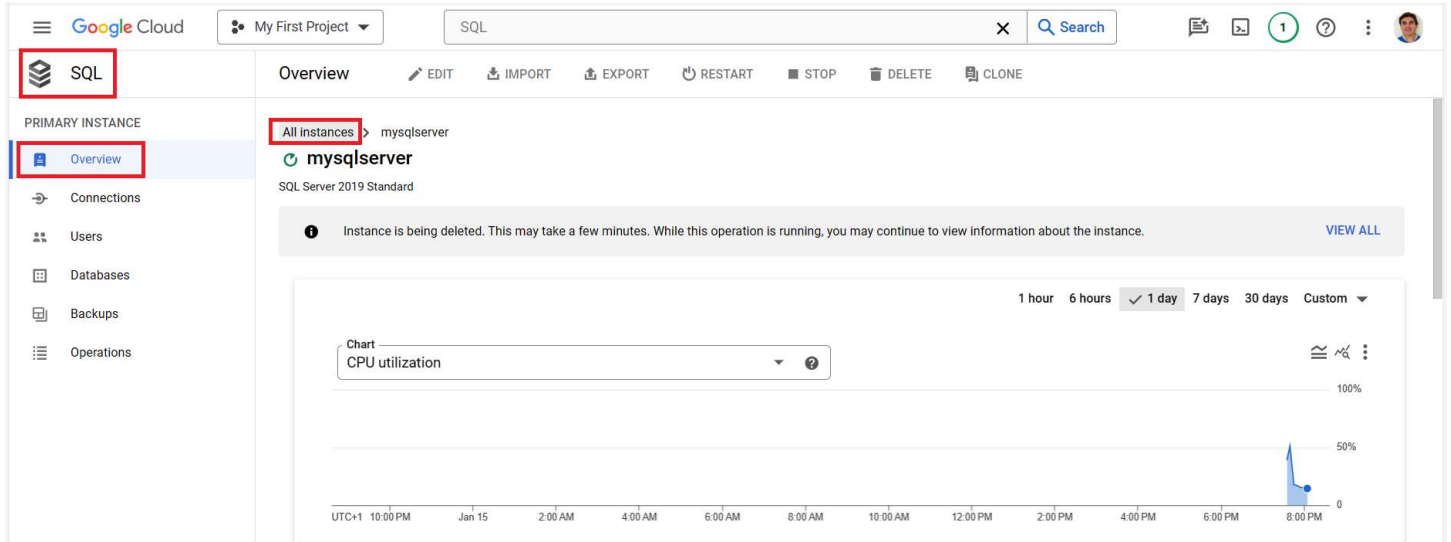
Finally we press the **CREATE INSTANCE** button

We verify we are creating a nw SQL Server instance

The screenshot displays the Google Cloud SQL console for a project named 'My First Project'. The 'SQL' section is active, showing the 'mysqlserver' instance. The instance is in the 'Creating' state, with a message indicating it may take a few minutes. A chart for 'CPU utilization' is shown, currently at 100%. A sidebar on the left lists navigation options: Overview, Connections, Users, Databases, Backups, and Operations. A bottom section shows 'Connect to this instance' with a 'Connection name' field. A right-hand panel displays 'Uploads and My First Project operations' with a list of recent actions:

Uploads and My First Project operations	
Creating mysqlserver	0 min 23 sec
Deleted mysqlserver	8:04:44 PM GMT+1
Created mysqlserver	7:36:59 PM GMT+1
Deleted mysqlservergooglecloud	4:07:26 PM GMT+1
Edited mysqlservergooglecloud	4:03:38 PM GMT+1

We can see the new SQL Server instance in the list



We can press the **Column display options** button to add more fields info

The screenshot shows the 'Instances' page in Google Cloud. A table lists the instance 'mysqlserver'. The 'Column display options' button (three vertical bars) is highlighted in the top right corner of the table.

Instance ID	Cloud SQL edition	Status	Maintenance	Type	Public IP address	Internal connection method	Private IP address	Instance connection name	Actions
mysqlserver	Enterprise	—	—	SQL Server 2019 Standard	34.175.99.106			extreme-axon-381209:eu...	

The most important info to copy for connecting to the database is the Public IP and the database user

The screenshot shows the 'Connect to this instance' and 'Configuration' sections for the 'mysqlserver' instance. The 'Public IP address' (34.175.99.106) is highlighted in the connection details. The configuration section shows 1 vCPU, 3.75 GB memory, and 20 GB SSD storage. The database version is SQL Server 2019 Standard CU22. Other settings include 'Auto storage increase is enabled', 'Automated backups are enabled', and 'Point-in-time recovery is disabled'.

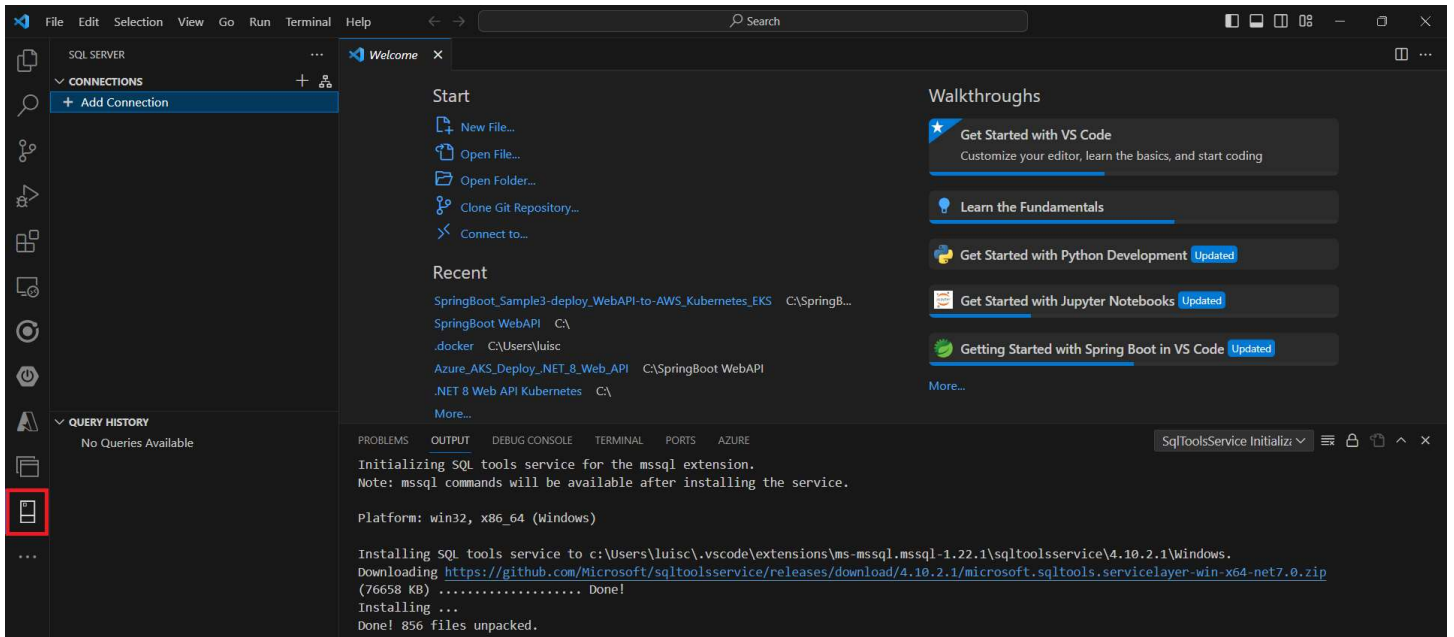
2. Connect to Google Cloud SQL instance from SSMS

We run SSMS and we enter the SQL Server name and password

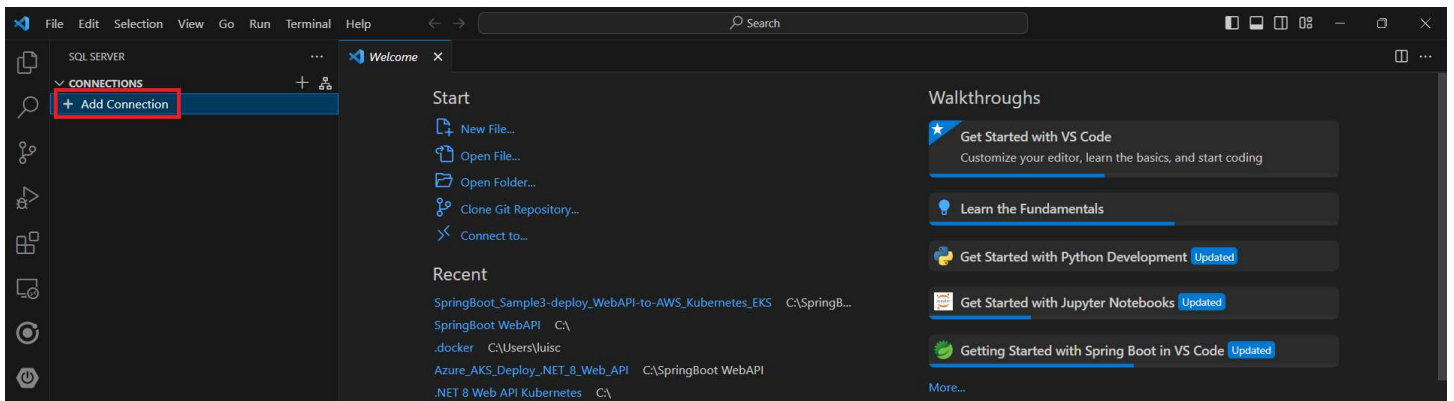
We can create a new database

3. Connect to Google Cloud SQL instance from VSCode

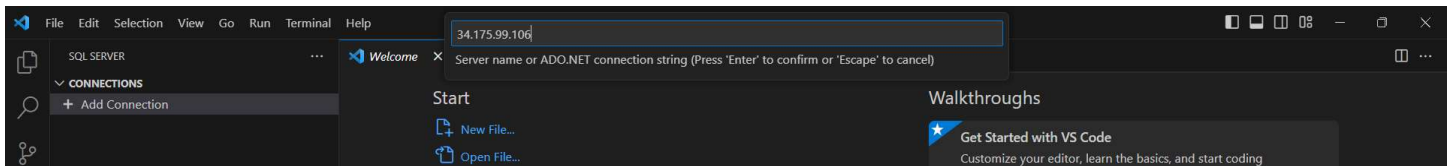
We VSCode and we press **SQL Server** button in the left hand side menu



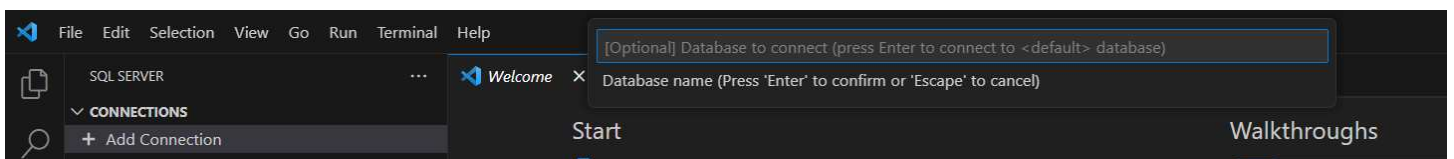
We create a new connection



We input the Public IP in the server name

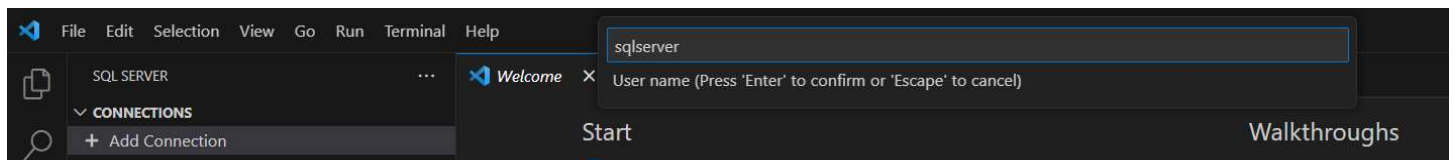


We do not input any database name, we just press enter button

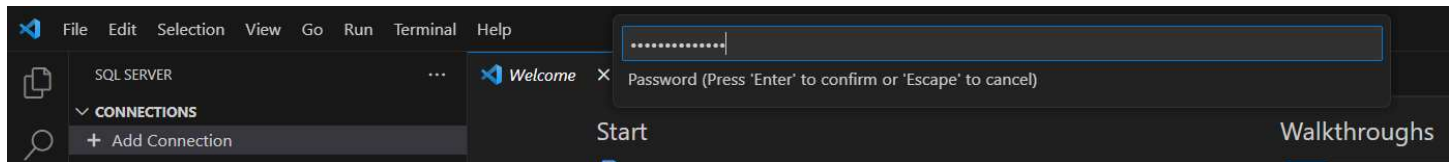


We select SQL login option

We input the `sqlserver` user



We input the database password

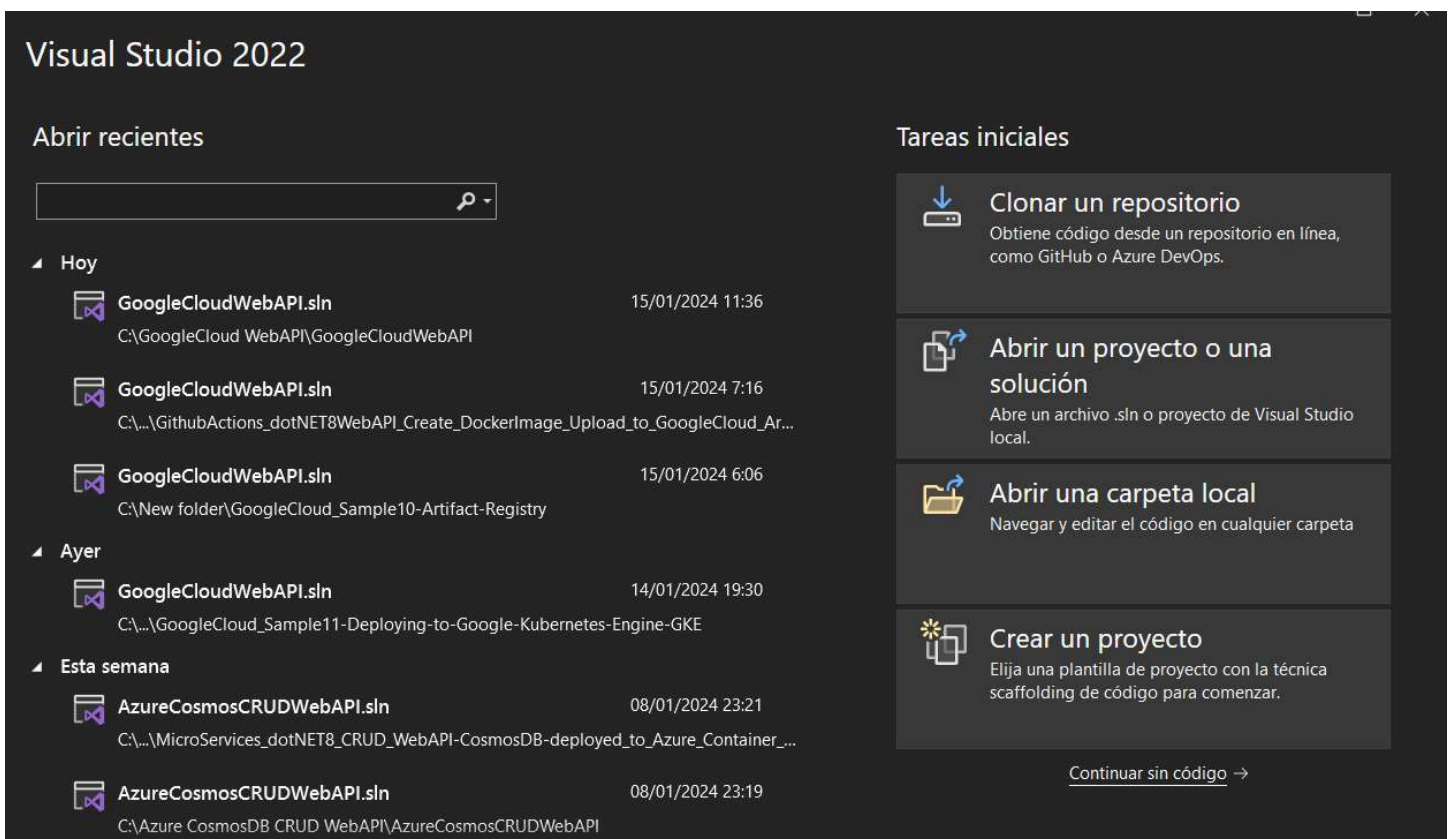


We leave the default value for profile name

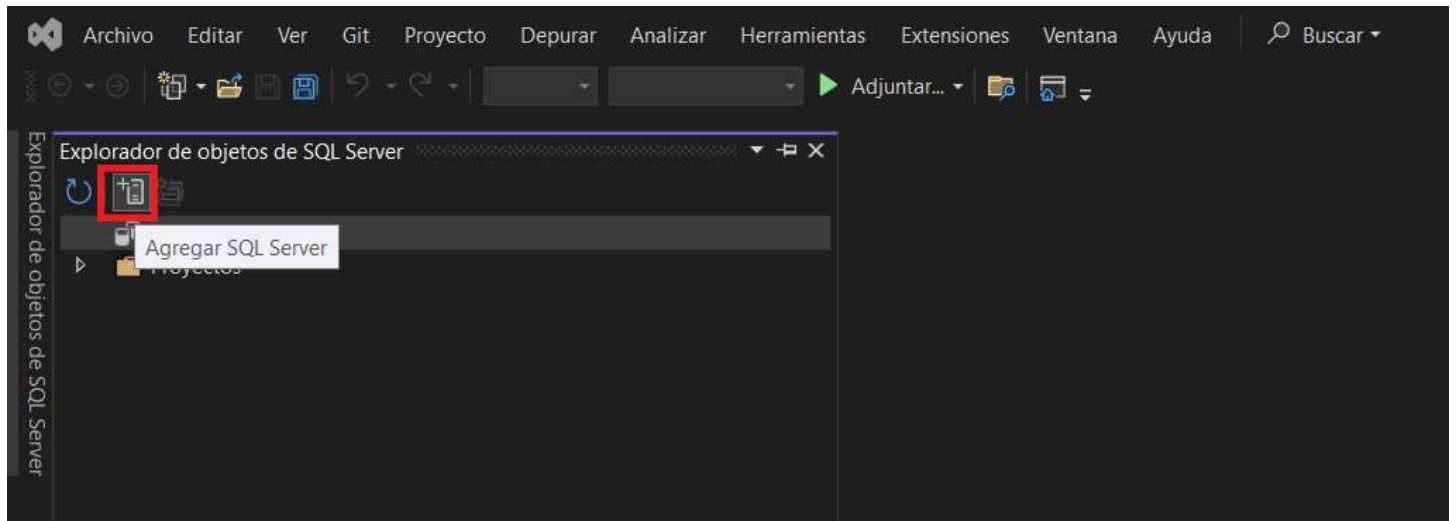
We also press **Enable Trust Server Certificate**

We verify the SQL Server connection

4. Connect to Google Cloud SQL instance from Visual Studio 2022 Community Edition



We add a new SQL Server connection



We input the connection data

We verify the new SQL Server connection

