Creating read replicas

MySQL | PostgreSQL (https://cloud.google.com/sql/docs/postgres/replication/create-replica) | SQL Server

This page describes how to create a read replica for a Cloud SQL instance.

A read replica is a copy of the master that reflects changes to the master instance in almost real time. You create a replica to offload read requests or analytics traffic from the master. You can create multiple read replicas for a single master instance.

Read replicas are read-only. You cannot write to them.

Note: Read replicas do not provide failover capability. To provide failover capability for a Second Generation instance, see Configuring an Instance for High Availability (https://cloud.google.com/sql/docs/mysql/configure-ha).

For more information about how replication works, see Requirements and Tips for Configuring Replication (https://cloud.google.com/sql/docs/mysql/replication/tips#read-replica).

Note: All references to binary logging in this document apply to the master instance. Cloud SQL does not support binary logging for the replica instance.

Before you begin

If you are creating the first replica for this instance, ensure that the instance meets the requirements for master instances. Learn more (https://cloud.google.com/sql/docs/mysql/replication/tips/#read-replica).

Creating a read replica

The steps for creating a read replica are different for Second Generation (#create-2nd-gen) and First Generation (#create-1st-gen) instances.

Note: Second Generation is replacing First Generation; support for First Generation instances ends January 30, 2020. To upgrade a First Generation instance to Second Generation, see Upgrading a First Generation Instance to Second Generation (https://cloud.google.com/sql/docs/mysql/upgrade-2nd-gen).

Read replica for a Second Generation master

To create a read replica for Second Generation master:

CONSOLE (2ND GEN) MORE

1. Go to the Cloud SQL Instances page in the Google Cloud Console.

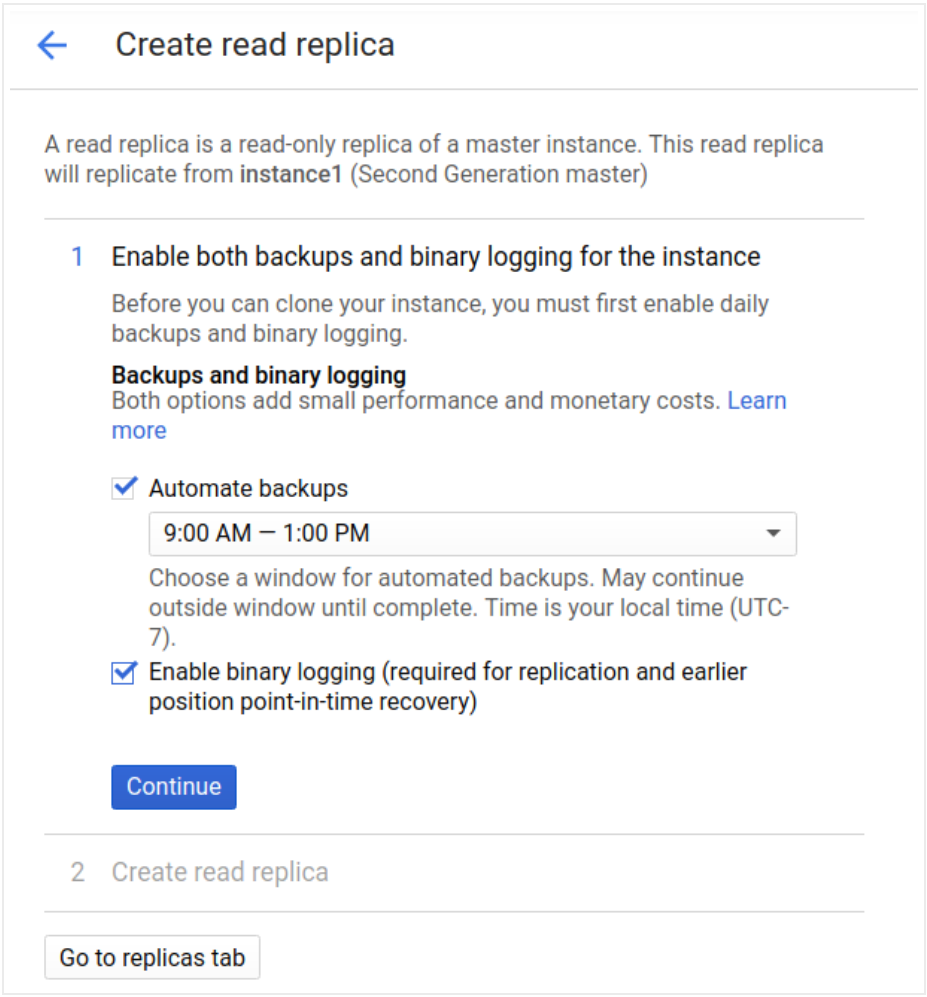
   GO TO THE CLOUD SQL INSTANCES PAGE (HTTPS://CONSOLE.CLOUD.GOOGLE.COM/SQL/INSTANC

2. Find the instance you want to create a replica for, and open its more actions menu at the far right of its listing.

3. Select **Create read replica**.

   If you do not see that choice, the instance is a replica; you cannot create a replica of a replica.

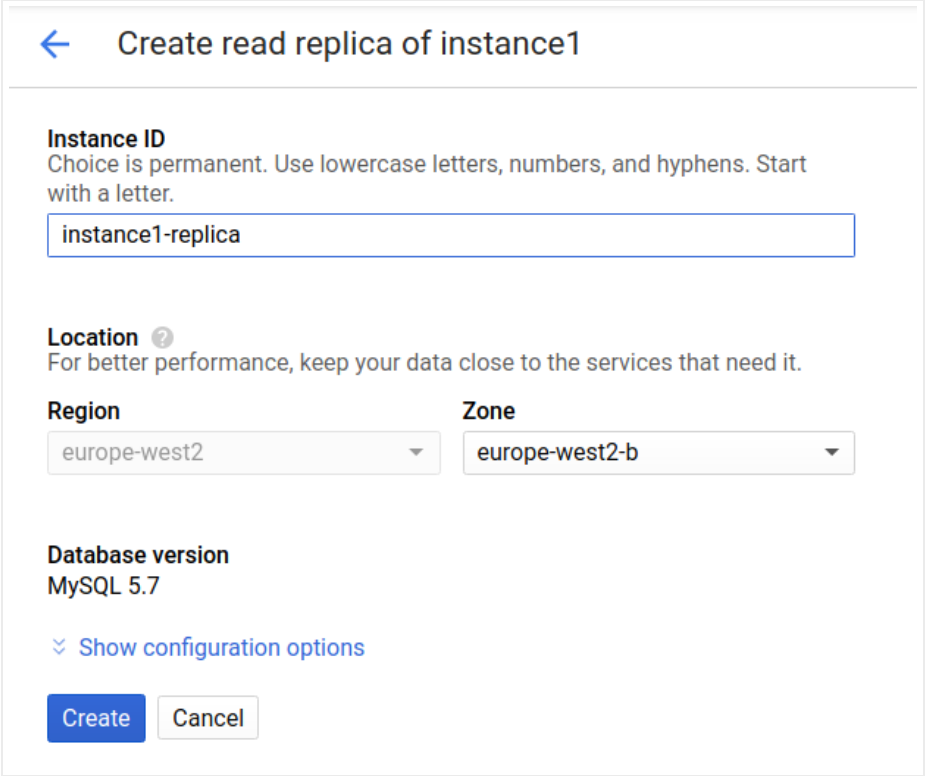
4. If the instance had backups and binary logging enabled, continue with step 6 (#2ndgen-create-step) . Otherwise, select **Automate backups** and **Enable binary logging**, and click **Continue**.



5. Click **Save and restart** to restart the instance.

   Enabling binary logging causes the instance to be restarted.

6. In the **Create read replica** page, update the instance ID, if needed, and any other configuration options, as required.



7. Click **Create**.

   Cloud SQL creates a backup, if needed, and creates the replica. You are returned to the instance page for the master.

Read replica for a First Generation master

To create a read replica for First Generation master:

Note: Second Generation is replacing First Generation; support for First Generation instances ends January 30, 2020. To upgrade a First Generation instance to Second Generation, see Upgrading a First Generation Instance to Second Generation (https://cloud.google.com/sql/docs/mysql/upgrade-2nd-gen).

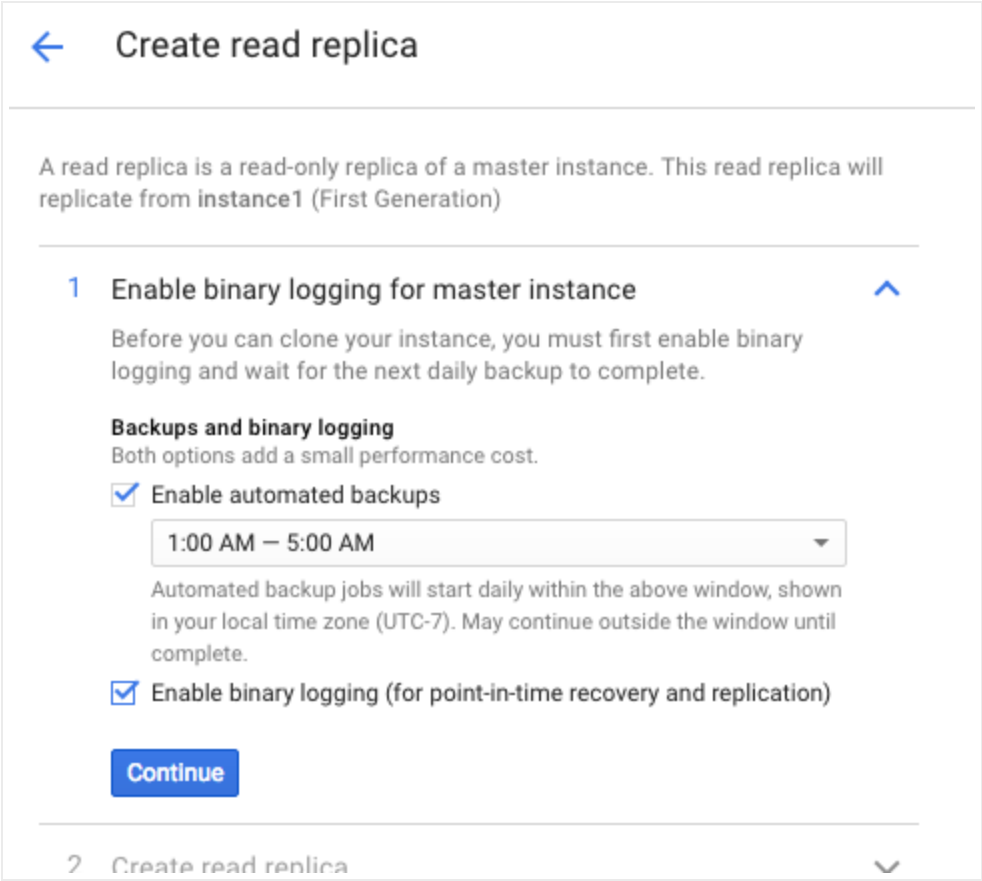
CONSOLE (1ST GEN) MORE

1. 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/INSTANC

2. Find the instance you want to create a replica for, and open its more actions menu at the far right of its listing.

3. Select **Create read replica**.
4. If the instance had backups and binary logging enabled, continue with step 7 (#1stgen-create-step). Otherwise, select **Automate backups** and **Enable binary logging**, and click **Continue**.



5. Click **Save and restart** to enable binary logging and restart the instance.

   Enabling binary logging causes the instance to be restarted.
6. If the instance did not have any backups, you must now wait for a backup to be created.
   It could take up to 24 hours for the backup to be created, depending on the backup window of the instance.
7. In the **Create read replica** page, update the instance ID, if needed, and any other settings as required.

8. Click **Create**.

   Cloud SQL creates the replica, and you are returned to the instance page for the master.

What's next

- Learn about requirements and best practices for replication (https://cloud.google.com/sql/docs/mysql/replication/tips).
- Learn how to manage replicas (https://cloud.google.com/sql/docs/mysql/replication/manage-replicas).

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