<u>Cloud SQL</u> (https://cloud.google.com/sql/) <u>Documentation</u> (https://cloud.google.com/sql/docs/) <u>SQL Server</u> (https://cloud.google.com/sql/docs/sqlserver/) <u>Guides</u>

Overview of backups

<u>MySQL</u> (https://cloud.google.com/sql/docs/mysql/backup-recovery/backups) | <u>PostgreSQL</u> (https://cloud.google.com/sql/docs/postgres/backup-recovery/backups) | **SQL Server**

Beta

This feature is in a pre-release state and might change or have limited support. For more information, see the <u>product launch stages</u> (https://cloud.google.com/products/#product-launch-stages).

This page describes how backups of your Cloud SQL instance work, and how you can use them to restore your data to the same or another instance.

For step-by-step directions for scheduling backups or creating an on-demand backup, see <u>Creating and Managing On-Demand and Automatic Backups</u> (https://cloud.google.com/sql/docs/sqlserver/backup-recovery/backing-up).

What backups provide

Backups provide a way to restore your Cloud SQL instance to recover lost data or recover from a problem with your instance. You should enable automated backups for any instance that contains data that you need to protect from loss or damage.

What backups cost

Cloud SQL retains automated backups for each instance.

About backup size

Cloud SQL backups are incremental; they contain only data that has changed since the previous backup was taken. This means that your oldest backup is a similar size to your database, but the sizes of subsequent backups depend on the rate of change of your data. When the oldest backup is deleted, the size of the next oldest backup increases so that a full backup still exists.

Types of backups

Cloud SQL performs two types of backups:

- <u>On-demand backups</u> (#on-demand-backups)
- <u>Automated backups</u> (#automated-backups)

On-demand backups

You can create a backup at any time. This could be useful if you are about to perform a risky operation on your database, or if you need a backup and you do not want to wait for the backup window. You can create on-demand backups for any instance, whether the instance has automatic backups enabled or not.

On-demand backups are not automatically deleted the way automated backups are. They persist until you delete them or until their instance is deleted. Because they are not automatically deleted, on-demand backups can have a long-term effect on your billing charges if you do not delete them.

Automated backups

When you enable automated backups, you specify a 4-hour backup window. The backup starts during the backup window. When possible, schedule backups when your instance has the least activity.

Where backups are stored

Backups locations include:

- <u>Default locations</u> (#default-backup-location) that Cloud SQL selects, based on the location of the original instance
- <u>Custom locations</u> (#custom-backup-location) that you choose when you do not want to use the default location

Default backup locations

By default, Cloud SQL stores backup data in two regions for redundancy. If there are two regions in a continent, the backup data remains on the same continent. Because there is only one region in Australia, backup data from the Sydney region is stored in a location in Asia. For the São Paulo region, backup data is stored in a US-based location.

Note: You cannot restore from any backup, including multi-region backups, if the region where the backup was originally taken is unavailable.

Custom backup locations

When you select a custom location for your backup data, Google stores the backup data in that location. For a complete list of valid regional values, see <u>Instance Locations</u> (https://cloud.google.com/sql/docs/mysql/locations#location-r). For a complete list of multi-regional values, see <u>Multi-regional locations</u> (https://cloud.google.com/sql/docs/mysql/location-mr).

See Setting and viewing a custom location for backups

(https://cloud.google.com/sql/docs/sqlserver/backup-recovery/backing-up#locationbackups).

Can I export a backup?

No, you cannot export a backup. You can only export instance data. See <u>Exporting data from</u> <u>Cloud SQL</u> (https://cloud.google.com/sql/docs/sqlserver/import-export/exporting).

About the special backup user

Cloud SQL creates a special database user, **cloudsqladmin**, for each instance, and generates a unique instance-specific password for it. Cloud SQL logs in as the **cloudsqladmin** user to

perform automated backups.

How backups affect instance operations

Writes and other operations are unaffected by backup operations.

What's next

- <u>Schedule automated backups</u> (https://cloud.google.com/sql/docs/sqlserver/backup-recovery/backing-up#schedulebackups).
- <u>Create an on-demand backup</u> (https://cloud.google.com/sql/docs/sqlserver/backup-recovery/backing-up#on-demand).
- <u>Restore from a backup</u> (https://cloud.google.com/sql/docs/sqlserver/backup-recovery/restoring#restorebackups).

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