

Learn about Cloud Spanner replication, including replica types and their roles in reads and writes.

[\(/spanner/docs/replication\)](#)

Learn about Cloud Spanner instances and nodes, and the tradeoffs between regional and multi-region instance configurations.

[\(/spanner/docs/instances\)](#)

Learn all about Cloud Spanner's schema and data model.

[\(/spanner/docs/schema-and-data-model\)](#)

Learn how to design Cloud Spanner schemas and load data into Cloud Spanner.

[\(/spanner/docs/schema-design\)](#)

Learn how to update the schema of an existing database.

[\(/spanner/docs/schema-updates\)](#)

Learn how to increase query performance by using secondary indexes.

[\(/spanner/docs/secondary-indexes\)](#)

Learn about Cloud Spanner's supported data types and their properties.

[\(/spanner/docs/data-types\)](#)

Learn how to read Cloud Spanner data outside the context of read-only and read-write transactions.

[\(/spanner/docs/reads\)](#)

Learn about read-write and read-only transactions.

[\(/spanner/docs/transactions\)](#)

Learn about executing large-scale data updates without running into transaction limits.

[\(/spanner/docs/dml-partitioned\)](#)

Best practices for writing and executing DML statements.

[\(/spanner/docs/dml-best-practices\)](#)

Read about timestamp bounds, which tell Cloud Spanner how to choose a timestamp at which to read data.

[\(/spanner/docs/timestamp-bounds\)](#)

Learn how to automatically write the commit timestamp of a transaction into a column.

[\(/spanner/docs/commit-timestamp\)](#)

Read about TrueTime's benefits for Cloud Spanner and Cloud Spanner's external consistency property.
([/spanner/docs/true-time-external-consistency](#))

Read about the permissions and roles that you can set at the project, Cloud Spanner instance, and Cloud Spanner database levels.
([/spanner/docs/iam](#))

Learn about the audit logs that Cloud Spanner writes as a part of Stackdriver Logging, including Admin Activity and Data Access logs.
([/spanner/docs/audit-logging](#))

Learn best practices for optimizing SQL query performance in Cloud Spanner.
([/spanner/docs/sql-best-practices](#))

Understand Cloud Spanner query execution plans.
([/spanner/docs/query-execution-plans](#))

Learn how to efficiently load data into Cloud Spanner.
([/spanner/docs/bulk-loading](#))

Understand the CPU utilization metrics available in the Cloud Console and Stackdriver Monitoring.
(/spanner/docs/cpu-utilization)

Understand the latency metrics available in the Cloud Console and Stackdriver Monitoring.
(/spanner/docs/latency)

Learn about sessions. Applies to creators of Cloud Spanner client libraries and users of the Cloud Spanner REST API.
(/spanner/docs/sessions)