

3. Core Concepts

Replication is the process of copying a database to another server, and then keeping the two copies in sync, so that they behave as near as possible.

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Replicating data from Salesforce means that as data is updated on the [salesforce.com](https://www.salesforce.com) platform, the data is replicated within an on-premise database or staging area during specific increments in time. For example, customer data is added, updated, or deleted in Salesforce CRM and the changes are already replicated or synchronized with an on-premise database. Functionally the synchronization from Salesforce CRM to database is same as how the synchronization works with outlook and your phone.

Replication applications such as DBSync Cloud Replication helps medium and large enterprises to maintain a local copy of the core-business data either On-Premise or in a staging area. Such access lets enterprises report the data as required based on a specific requirement or as per regulations. It also helps in mirroring your Salesforce CRM or maintain copies of the data for Historical data maintenance and general good disaster recovery operations

Key Functions

Key functions of DBSync Cloud Replication are explained in the table below with descriptions of each functions.

Run Process	Actions Performed
Update Database Schema	Creates Salesforce schema into Database for the selected Salesforce objects. The application will evaluate the schema difference between a particular Salesforce instance schema and generate "ALTER TABLE" command to add the columns. One table is created with a Prefix of SF to Salesforce objects in the database. The system will not remove any existing columns for a given table to maintain historical data.
Salesforce to Database (Clean Copy)	Inserts a clean copy of selected Salesforce object records into respective Database Tables & Columns. Once the command is executed, the system do a dump of all of the Salesforce data for the selected Salesforce Objects with their data and structures intact into a target or staging On-Premise database.
Salesforce to Database (Incremental)	Performs an incremental sync from Salesforce to Database based on the changes / edits made in Salesforce. Once initiated, the application will query all tables / objects in Salesforce.com which have been created or modified since the last synch query and will perform an update or insert in Database tables based on the association between Salesforce and Database table last synch Timestamp.
Database to Salesforce (By Control Flag)	Identifies changes in the Database and updates Salesforce records based on the database column do_sync_flag attributes. The value of do_sync_flag can be Y, S or D. 'Y' specifies that the record has been synchronized between Salesforce.com and Database. 'S' is used to as a request from an external system to indicate that the record needs to be synchronized from Database to Salesforce.com 'D' indicates that the record was deleted in Salesforce.com This functionality (Database ? Salesforce) is not supported with Cassandra Database.