

Data Transmission Service

Quick Start

Product Documentation



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Data Subscription

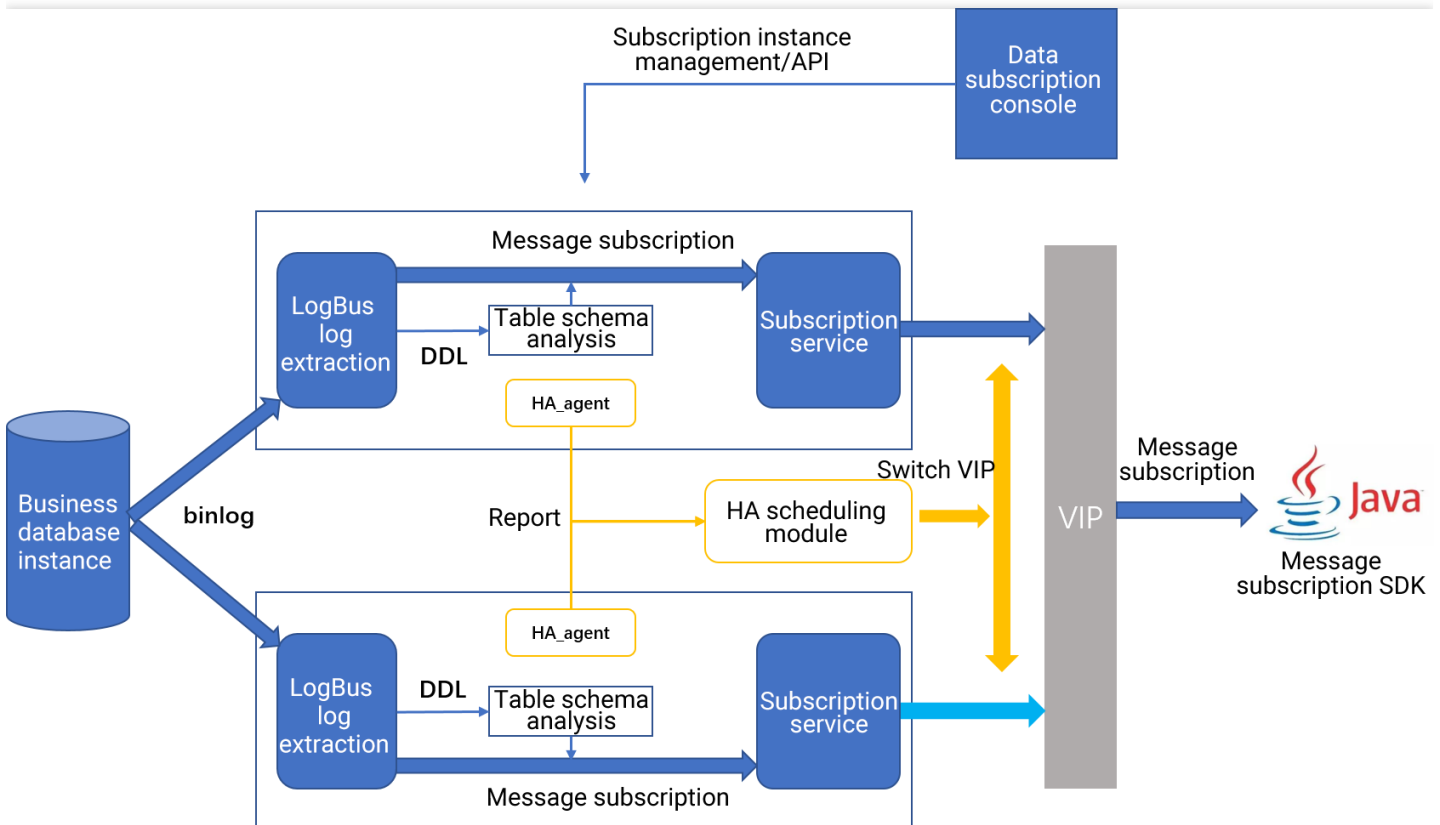
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DTS provides a binlog-based incremental data subscription feature that allows you to subscribe to incrementally updated data in TencentDB in just a few steps:

1. Purchase and create a subscription channel for your TencentDB instance in the [DTS Console](#).
2. Use the DTS data subscription SDK to connect to this subscription channel to subscribe to and consume incremental data.

How Subscription Works

Data subscription is implemented by simulating a slave database to get the corresponding binlog content from the master database for analysis in the following architecture. While parsing the binlogs and analyzing data according to the database/table configured in the subscription channel, it has almost no impact on the master database.



- Currently, the subscribed message content in the past day is retained by default.
- If subscription is made at the instance level, subsequently added databases/tables will also appear in the subscription channel, so there is no need to additionally configure the channel.
- If subscription is made at the database level, subsequently added tables will also appear in the subscription channel, so there is no need to additionally configure the channel. In this scheme, if a new database is added, you need to configure the channel.
- The data subscription service currently supports TencentDB for MySQL 5.6 and 5.7.
- Data subscription does not support views, triggers, and foreign keys.
- The initial configuration of data subscription requires adjustment of the relevant `binlog_row_image` parameter. Data subscription will automatically kill old sessions according to the conditions met to make the parameters take effect immediately.

Directions

Step 1. Create a data subscription channel

1. Log in to the [DTS Console](#), select **Data Subscription** on the left sidebar, and click **Create Subscription** to start configuring the subscription channel.
2. On the pop-up page, select the region where the source TencentDB instance resides and click **Buy Now**.
3. After the service is activated, return to the data subscription page, click **Initialize configurations**, and complete initial configuration for the purchased data subscription channel.
4. On the configuration page, select the source TencentDB instance and click **Next**.

1 Select an instance > **2 Select subscribed operations and tables**

Data Subscription Task Setting

Subscription ID subs-4an09557z6

Subscription Name name-4an09557z6

Instance Type CDB for MySQL

MySQL Instance * The master instance of high-availability edition MySQL 5.6 and 5.7 are supported

Service Port *

Port value range: 1024-65535

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5. Select your desired data sync type and database/table to be synced.

- The granularity for subscribed objects divides into database level and table level, i.e., you can choose to subscribe to certain databases or tables.
- The types of subscribed data include `data update` , `structure update` , and `all` .
If only data update and subscribed object are selected, you can only subscribe to three types of data changes: `insert` , `delete` , and `update` .
To subscribe to structure update (DDL), you need to select structure change as the sync type. DTS will pull all structure changes in the entire TencentDB instance, and you need to filter out the desired data by using the SDK.
If `all` is selected, both data update and structure update will be subscribed to.

✓ **Select an instance** > **2 Select subscribed operations and tables**

Subscription ID subs-4an09557z6

Subscription Name name-4an09557z6

MySQL Instance kaylal_src (cdb-f707hjh)

Subscribed Operations * Data Update Structure Update All

Structure update includes the structure creation, deletion, and modification of all objects subscribed to the entire instance.

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6. After confirming the subscribed object and type, click **Start** to enable the subscription channel.

Step 2. Modify the consumption starting time point

DTS allows you to modify the consumption starting time point at any time during the consumption process. Once the modification is completed, the downstream SDK will begin pulling incremental data starting from the new starting time point.

Currently, DTS only supports modifying the consumption starting time point in the console. You cannot specify it in the SDK.

The modification steps are as follows:

1. Stop the SDK consumption process.

In the [Data Subscription](#) list, click a subscription ID or **View subscription settings** in the "Operation" column to enter the subscription configuration page. If **Consumer Source (IP)** is none, the process has stopped.

2. Modify the consumption starting time point.

In the [Data Subscription](#) list, move the cursor to the consumption starting time point of the subscription and the "Modify consumption start time" icon will appear. Click the icon to enter the modification page.

The new consumption starting time point must fall within the data range of the subscription channel.

Modify consumption start time



The consumption start time must be within the available time range of subscription channel data.

Subscription ID subs-4an09557z6

Consumption time * 2020-05-06 17:03:48



OK

Cancel

3. Restart the SDK consumption process.

After the consumption starting time point is modified, you can restart the local SDK consumption process. Then, the SDK will begin subscribing to incremental data starting from the new time point.

Step 3. Modify the subscribed object

DTS allows you to dynamically add/delete subscribed objects during the consumption process.

- If a subscribed object is added, the subscription channel will pull its incremental data starting from the current time.
- If a subscribed object is deleted, the SDK will no longer subscribe to its data.

The modification steps are as follows:

1. In the [Data Subscription](#) list, select **More > Modify subscribed object** in the "Operation" column to enter the subscription configuration page.

2. On the subscription configuration page, modify the subscribed object and click **Save**.

1 Select an instance > **2** Select subscribed operations and tables

Subscription ID: subs-0p01200tpq

Subscription Name: name-0p01200tpq

MySQL Instance: kaylal_dest (cdb-q2ugubdx)

Subscribed Operations * Data Update Structure Update All

Structure update includes the structure creation, deletion, and modification of all objects subscribed to the entire instance.

Task Configuration * ⓘ Up to 200 results are shown after searching databases and tables. To view more database and tables, please specify the database/table name for targeted search.

Select databases and tables

Search database name, supporting regex

ⓘ This instance doesn't have database

Select All Clear Reset

Selected (0 databases, 0 tables)

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Step 4. Use the SDK to consume data

For more information, please see [SDK User Guide](#).

Sample Subscriptions

[Pulling changes in a subscribed table to a local file](#)

[Pulling changes in a subscribed table to Redis](#)

[Pulling changes in a subscribed table to Kafka](#)

Data Migration

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DTS can be used to migrate MySQL, Redis, MongoDB, and PostgreSQL databases.

MySQL Database Migration

Continuous data replication is available from self-built MySQL databases to TencentDB. You can perform online hot migration of your data in a non-stop manner. MySQL databases with public IP/port, connected to Tencent Cloud via Direct Connect in local IDCs, or created on CVM instances can be migrated. Currently, DTS does not support migration for TencentDB for MySQL Basic Edition. In addition, **TencentDB instances associated with disaster recovery instances do not support DTS for the time being. If you need to migrate them, please [submit a ticket](#).** (You are recommended to limit the time of incremental migration to no more than 15 days. Plus, be sure to click "Complete Migration" after the master and slave are in sync.)

Redis Migration

For more information, see [Redis Data Migration](#).

Notes on Migration

- To ensure migration efficiency, cross-region migration is not supported for CVM-created instances.
- To migrate instances over a public network, make sure that the source instance is accessible from the public network.
- Only instances that are running normally can be migrated, while instances with no password initialized or with ongoing tasks cannot be migrated.
- The target instance must be empty with no data. During the migration process, the instance will be locked and writes will not be allowed.
- After the successfully migrated data is verified by your business, the connection to the source instance can be closed and then switched to the target instance.

PostgreSQL Database Migration

Continuous data replication is available from self-built PostgreSQL databases to TencentDB. You can perform online hot migration of your data in a non-stop manner. PostgreSQL databases with public

IP/port, connected to Tencent Cloud via Direct Connect in local IDCs, or created on CVM instances can be migrated. Currently, data migration is only supported for PostgreSQL databases on version 9.3.x or 9.5.x. Incremental sync is not supported for v9.3.x and can be used in v9.5.x only through an online sync plugin.

MongoDB Migration

For more information, see [MongoDB Database Migration](#).

Notes on Migration

- To ensure migration efficiency, cross-region migration is not supported for CVM-created instances.
- For the migration of public network instances, please make sure that the source instance service is accessible in public network environments.
- After the successfully migrated data is verified by your business, the connection to the source instance can be closed and then switched to the target instance.
- Online migration is not supported for self-built single-node instances as they have no oplog.