

**MYSQL AZURE SETUP GUIDE**

**The Below requirements are needed to establish a connection mysql azure .**

**Prerequisites**

Prerequisiteslink  
To connect your MySQL database to Fivetran, you need:  
  
MySQL version 5.5 or above for non-RDS databases (5.5.40 is the earliest version tested). MySQL version 5.6.13 or above for RDS databases.  
Your database host's IP (for example, 1.2.3.4) or domain (your.server.com)  
Your database's port (usually 3306)  
  
Additionally, if you will be using binary log as your incremental sync mechanism:  
  
If you upgrade your database version to 8.0.23 or above, you must set the binlog\_row\_metadata value to MINIMAL before you do the upgrade. If you set binlog\_row\_metadata to MINIMAL after the upgrade, your existing Azure MySQL connectors will fail and you may need re-sync them.  
A unique replica ID for Fivetran. We need this ID because we connect to your database as a replica. We provide a random replica ID in your setup form, but you can provide your own if you'd prefer or if the form's replica ID conflicts with one of your existing replica IDs.  
  
NOTE: The replica ID is a unique ID within the MySQL replica set. By default, the replica ID is a random integer greater than 1000.  
  
  
  
For the prerequisites connecting via an SSH tunnel, see Fivetran's Connection Options page.

**Setup Guide**

* To keep your data up to date after the initial sync, we use one of the following incremental sync methods:
* Binary log
* Fivetran Teleport Sync PRIVATE PREVIEW
* Each of these methods keeps a record of recent data changes, which allows Fivetran to update only the data that has changed since our last sync.
* To learn the differences between the two mechanisms, see our incremental update documentation.

1. Choose your connection option

* First, decide whether to connect Fivetran to your Azure MySQL database directly or through an SSH tunnel. How you configure security groups will differ based on your connection method.

1. Connect directly (TLS required)

* IMPORTANT: You must have TLS enabled on your database to connect directly to Fivetran.
* Fivetran connects directly to your database instance.

1. Connect via SSH

* Fivetran connects to a separate server in your network that provides an SSH tunnel to your database. You must connect through SSH if your database is contained within an inaccessible subnet. If you have an SSH connection, follow these instructions before you proceed to the next step.

1. Allow Fivetran to access your database

* You must configure your firewall to grant Fivetran access to your database.

1. Open the SQL database firewall settings in the Azure console

* In the Azure console, select your Azure MySQL resource.
* Open the Connection security tab.

1. Add a new firewall rule

* If you are connecting directly, create a new rule using Fivetran's IP as both the Start IP and End IP. If you are connecting through SSH, use your tunnel server's IP.
* Click Save.

1. Create a Fivetran user

* Next, create a Fivetran user for your Azure MySQL database. If you are connecting Fivetran to a read replica, you must create the user on your master database because read replicas are read-only. Your read replica will inherit the user from your master database.
* How you create a user depends on which incremental update mechanism you are using. Follow the instructions below for your incremental update mechanism.
* WARNING: This user must be reserved for Fivetran use only and must be unique to your connector. For more information, see our MySQL documentation.

1. Binary log

* Open a connection to your Azure MySQL database using your favorite SQL tool (for example MySQL Workbench or the "mysql" command in your operating system's terminal window).
* Open a connection to your Azure MySQL database using your favorite SQL tool (for example, MySQL Workbench or the mysql command in your operating system's terminal window).
* Create a Fivetran user and grant replication permissions by running the following SQL commands. Replace <username> and 'password' with a username and password of your choice.
* CREATE USER <username>@'%' IDENTIFIED WITH mysql\_native\_password BY 'password';
* GRANT SELECT, REPLICATION CLIENT, REPLICATION SLAVE ON \*.\* TO
* <username>@'%';
* content\_copy
* NOTE: You must grant the Fivetran user SELECT permissions for all of the columns in the tables that you want to sync. When we do not have SELECT access to all columns in a table, we trigger a re-sync for that table, which slows down your syncs. If you don't want to sync certain columns, you can exclude them from your syncs in the Fivetran dashboard.
* If there are errors when running these commands, you may lack sufficient privileges and should contact your database administrator.

1. Fivetran Teleport Sync PRIVATE PREVIEW

* Open a connection to your MySQL primary database using your favorite SQL tool (for example, MySQL Workbench or the mysql command in your operating system's terminal window).
* Create a Fivetran user and grant SELECT permissions by running the following SQL commands. Replace <username> and password with a username and password of your choice.
* CREATE USER <username>@'%' IDENTIFIED WITH mysql\_native\_password BY 'password';
* -- Option 1: Grant user SELECT permission on all tables and columns
* GRANT SELECT ON \*.\* TO <username>@'%';
* -- Option 2: Grant user SELECT permission on only specified table and columns
* GRANT SELECT ON <tables/columns> TO <username>@'%';
* content\_copy
* If there are errors when running these commands, you may lack sufficient privileges and should contact your database administrator.

1. Verify binary log format is set to ROW (binary log only)

* Azure MySQL's binary log format is set to ROW by default. Verify that your binary log format is ROW. If not, set the binary log format to ROW in your Azure portal. Fivetran needs ROW format binary logs to perform incremental updates.

1. Select schema and tables

* Select which schemas and tables you'd like to sync to your destination.

1. Choose a schema prefix

* Fivetran maps the schemas we discover in your source database to your destination and prepends the destination schema names with a prefix of your choice. For example, if your original database contains schemas foo and bar and if you choose the prefix pre, then your destination schemas will be pre\_foo and pre\_bar.
* Enter user and password in setup formlink
* In your Fivetran setup form, enter your user and password.
* For the User, enter <username>@<servername>, where <servername> is part of your Azure host URL: <servername>.database.windows.net.
* For the Password, enter the password you set when you created the Fivetran user.

1. Configure replica (history mode only)

* If you have connected Fivetran to a read replica and plan to run your connector on history mode, do the following:
* Connect to your read replica as a user with SUPER privileges.
* Check your read replica's slave\_parallel\_workers value.
* If the slave\_parallel\_workers value is 0, you do not need to any additional configuration.
* If the slave\_parallel\_workers value is not 0, do the following:
* Run the following commands to update the slave\_parallel\_type and slave\_preserve\_commit\_order values.
* SET GLOBAL slave\_parallel\_type = 'LOGICAL\_CLOCK';
* SET GLOBAL slave\_preserve\_commit\_order = 1;
* content\_copy
* Next, connect to your master instance as a user with SUPER privileges, then run the following command to set the binlog\_order\_commits to 1.
* SET GLOBAL binlog\_order\_commits = 1;
* content\_copy
* Learn more about these variables in MySQL's replica server variables documentation.

1. Setup tests

* Fivetran performs the following tests to ensure that we can connect to your Azure MySQL database and that it is properly configured:
* The Connecting to SSH Tunnel Test validates the SSH tunnel details you provided in the setup form. It generates a pop-up window where you must verify the SSH fingerprint. It then checks that we can connect to your database using the SSH Tunnel. (We skip this test if you are connecting directly.)
* The Connecting to Host Test verifies that the database host is not private and checks that we can connect to the host.
* The Validating Certificate Test generates a pop-up window where you must choose which certificate you want Fivetran to use. It then validates that certificate and checks that we can connect to your database using TLS. (We skip this test if you are connecting using an SSH tunnel and did not choose to require TLS.)
* The Validating Database User Test validates the database credentials you provided in the setup form.
* (Binary log only) The Checking Database Configuration Test verifies that we can find your database's server ID. It then checks your binary log configuration and confirms that we can connect to the binary log.
* The Validating Database Type Test checks that your database type matches the connector type. For example, this test will fail if you try to set up an Azure MySQL connector with a MySQL RDS database.
* The Validating Speed Setup test checks how quickly Fivetran can fetch data from your source database. The test will show a warning if the speed is low, that is less than 5MB/sec.
* NOTE: The tests may take a few minutes to finish running.

