ClickHouse Connection

Use it to connect to a ClickHouse database.

Connection parameters

When setting up a new connection, provide the following information:

- **Caption:** Select one of the two options from the dropdown list:
  - **Auto-caption**: A name generated automatically by the platform
  - **Custom caption**: A user-defined name for the connection
- **Connection string:** This can be entered manually or in a separate dialog by clicking the **...** **More** button. The string format is `host[:port][:database]`.
  - The *port* and *database* parameters are optional.
  - The default port is `9000`.
  - The default database is `default`.
- **Test**: Use this button to test the specified connection settings.

  > **Note:** If the **Login prompt** option (see below) is active, you will be asked for login/password when testing the connection.

- **Username**: The username for the database user. The default name is `default`.
- **Password**: The password for the database user. By default, there is no password.
- **Login prompt**: When selected, the password entered in the setup wizard is not saved. You will be prompted for a password once when you first use a Database import or Database export node. You will not be asked for the password again until you deactivate the connection node. The login/password dialog has a 60-second timeout.

> **Note:** When running in batch mode, from the Scheduler, or through Megaladata Integrator with this option enabled, the system will attempt to connect *without a password*. The logs will indicate that a password was not specified.

- **SSL settings**: Click the **...** **More** button to open a dialog for configuring a secure connection.
  - **Use SSL**: When selected, data is transmitted using the SSL/TLS protocol.
  - **Check server certificate**: By default, the **Full** check is enabled. You can disable it by selecting **Off**.
  - **CA certificate**: The path to the root certificate file.
  - **User certificate**: The path to the client certificate file.

    - **Private key**: The path to the private key file.
    - **Private key password**: The password for the private key. This is empty by default.
- **Cluster**: Select from the list of clusters available for the specified connection.
- **Use local time zone**: This option, enabled by default, converts DateTime columns from local time to UTC and back.
- **Data compression method**:
    - **Without compression** (default)
    - **LZ4**
- **Network send timeout (s)** and **Network receive timeout (s)**
- **Show system tables**: When selected, the database's system tables (accessible to the user) will be visible in the import wizards that employ this connection.
- **Quote names**: Use this option if database object names (e.g., table or field names) contain spaces or reserved characters.
- **Do not use DBMS client**: This option is unavailable as the built-in driver is always used for ClickHouse connections.
- **Single session work mode**: Select it if you need to restrict multiple sessions.
- **Session wait timeout (s)**:
- **Connection timeout (s)**: The maximum time allowed for a connection to be established, with a default of 20 seconds.
    - If an import or export operation is in error-ignoring mode and the connection fails to establish within the specified time, an error will be logged to the **Execution status** output port of the **Database** import/export node.
    - In normal mode, a timeout will cause the node execution to fail.
- **Lock timeout (s)**: Supported in ClickHouse versions 20.4.2 and later. This sets the time to wait for a lock on a resource (table or row) to be released. You can enter a positive integer or select from a dropdown list:
    - **Default:** Uses the database server's default setting.
    - **∞:** Sets the maximum timeout of 24 days.
    - **Numeric values:** 5, 10, 20, 30, 60, or 120 seconds.
- **Comment**: Use this field to add any notes or comments on the connection.

Important considerations

- Connection pooling is not used.
- When exporting data to a new table, a Log engine table is created.
- Due to Clickhouse limitations:
    - Transactions are not supported.
    - The supported date range is from 1970 to 2106.
    - Updating existing records in a table is not supported.
    - Deletion by key is only supported for tables using an engine from the MergeTree family.

> **Note:** In MergeTree tables, data mutation operations are not atomic. As these operations are involved in deletion-by-key export process, completing record deletion upon activation of the export node is not guaranteed. As the user doesn't control the mutation duration, a subsequent data selection query may return old records. This should be considered when designing your workflows.

Compatibility

This connection is compatible with ClickHouse DB versions 19.1 and higher.

See also: ClickHouse Documents

Read on: Firebird