

# Create SQL Server Connections

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You can create connections to one or more Microsoft SQL Server databases from Trifacta® Self-Managed Enterprise Edition.

## Pre-requisites

- If you haven't done so already, you must create and deploy an encryption key file for the Trifacta node to be shared by all relational connections. For more information, see *Create Encryption Key File*.
- If you plan to create an SSO connection of this type, additional configuration may be required. See *Enable SSO for Relational Connections*.

## Configure

To create this connection:

- In the Import Data page, click the Plus sign. Then, select the Relational tab. Click the SQL Server card.
- You can also create connections through the Connections page.
- See *Connections Page*.

For additional details on creating a SQL Server connection, see *Enable Relational Connections*.

This connection can also be created using the API.

- For details on values to use when creating via API, see *Connection Types*.
- See *API Reference*.

Modify the following properties as needed:

Property	Description
Host	Enter your hostname. Example:  <code>testsql.database.windows.net</code>
Port	Set this value to 1433.
Connect String options	Insert any additional connection parameters, if needed. See below.
User Name	(basic credential type only) Username to use to connect to the database.

Password	(basic credential type only) Password associated with the above username.
Default Column Data Type Inference	Set to <code>disabled</code> to prevent the platform from applying its own type inference to each column on import. The default value is <code>enabled</code> .
Test Connection	After you have defined the connection credentials type, credentials, and connection string, you can validate those credentials.
Connection Name	Display name of the connection
Connection Description	Description of the connection, which appears in the application.

## Reference

### Connection URL

The properties that you provide are inserted into the following URL, which connects Trifacta Self-Managed Enterprise Edition to the connection:

```
jdbc:sqlserver://<host>:<port>;<prop1>=<val1>;<prop2>=<val2>
```

### Connect string options

The connect string options are optional. If you are passing additional properties and values to complete the connection, the connect string options must be structured in the following manner:

```
;<prop1>=<val1>;<prop2>=<val2>...
```

where:

- `<prop>` : the name of the property
- `<val>` : the value for the property

delimiters:

- `;` : any set of connect string options must begin and end with a semi-colon.
- `=` : property names and values must be separated with an equal sign (=).

### Example connect string options

The following connect string contains several options. Please insert as a single string (no line breaks):

```
;database=<database_name>;encrypt=true;trustServerCertificate=false;
hostNameInCertificate=*.database.windows.net;loginTimeout=30;
```

### Common connect string properties:

Property	Description
database	Set this value to <code>&lt;database_name&gt;</code> , the name of the database to which to connect.
encrypt	Set this value to <code>true</code> . Encrypted communication is required.  <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p><b>NOTE:</b> You must deploy an encryption key file on the Trifacta node. For more information, see <a href="#">Create Encryption Key File</a>.</p> </div>

trustServerCertificate	When set to true, the Trifacta node does not validate the SQL Server TLS/SSL certificate. Default value is false.
hostNameInCertificate	Defines the host name in the server certificate.  <b>NOTE:</b> Do not modify this value unless required.
loginTimeout	Number of seconds that the Trifacta node attempts to login to the database server. Default is 30.

**Delimiters:**

- ; : any set of connect string options must begin and end with a semi-colon.
- ; : all additional property names must be prefixed with a semi-colon.
- = : property names and values must be separated with an equal sign (=).

**Authentication options**

**Kerberos:**

You can use kerberos security for connecting to the database server. Additional configuration is required:

- For more information on enabling single-sign on for databases, see *Enable SSO for Relational Connections*.
- The SSO solution for databases leverages the platform's integration with cluster kerberos. For more information, *Configure for Kerberos Integration*.

**Driver Information**

This connection uses the following driver:

- **Driver name:** com.microsoft.sqlserver.jdbc.SQLServerDriver
- **Driver version:** com.microsoft.sqlserver:mssql-jdbc:7.2.2.jre8
- **Driver documentation:**
  - Overview: <https://docs.microsoft.com/en-us/sql/connect/jdbc/overview-of-the-jdbc-driver?view=sql-server-ver15>
  - Connection URL: <https://docs.microsoft.com/en-us/sql/connect/jdbc/building-the-connection-url?view=sql-server-ver15>
  - Connection properties: <https://docs.microsoft.com/en-us/sql/connect/jdbc/setting-the-connection-properties?view=sql-server-ver15>

**Troubleshooting**

Error message	Description
"The TCP/IP connection to the host <hostname>, port <port> has failed"	The host is not accessible.
"Login failed for user '<username>'."	Permission denied. Please verify your credentials.  <b>Tip:</b> Click the Test Connection button to check the connection credentials.

"The certificate received from the remote server was issued by an untrusted certificate authority"

There was an issue with the trusted certificate on the SQL Server instance.

To disable validation of the certificate, add the following to the connection string options:

```
;trustServerCertificate=true;
```

## Use

For more information, see *Database Browser*.

## Data Conversion

For more information on how values are converted during input and output with this database, see *SQL Server Data Type Conversions*.