

Multiple Source Query Plugin for Squirrel SQL

User Manual

Overview

The multiple source query plugin allows SquirrelSQL users to create a virtual data source that may consist of multiple data sources on different servers and platforms. The user can enter one SQL query to combine and join information from multiple sources.

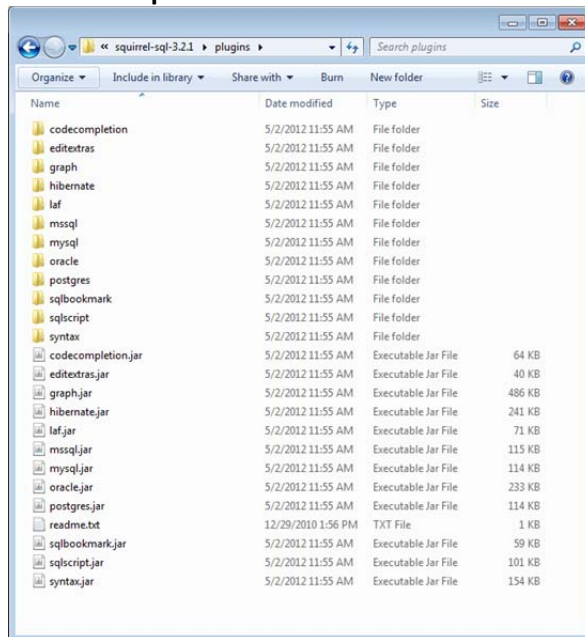
Benefits

- ✓ The plugin allows SquirrelSQL to natively support multiple source queries.
- ✓ No data source or server changes are required.
- ✓ The plugin supports standard SQL including joins, group by, aggregation, LIMIT, and ordering where tables may come from one or more sources.
- ✓ The plugin will perform function translation where a user requests a function that is not supported on a certain source.

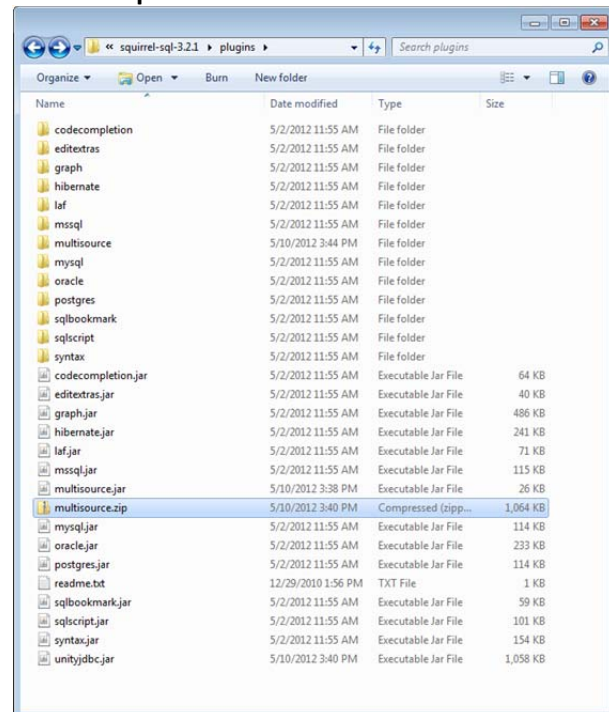
Installation

- 1) Download and install SquirrelSQL.
- 2) Download the plugin at <http://people.ok.ubc.ca/rlawrenc/multisource.zip>.
- 3) Unzip the **multisource.zip** into the directory squirrel/plugins.

Before Unzip

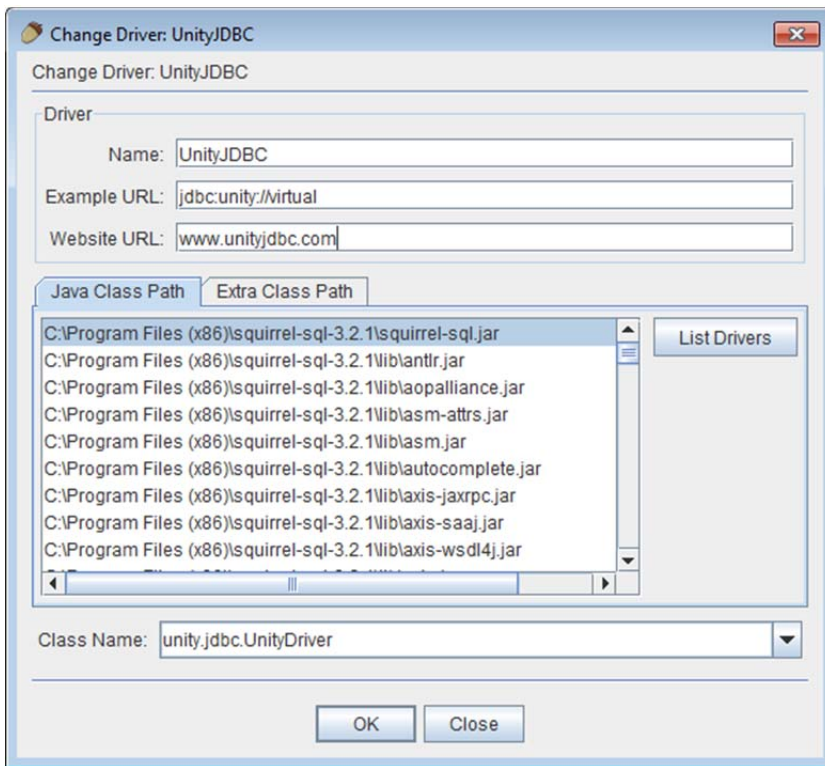


After Unzip



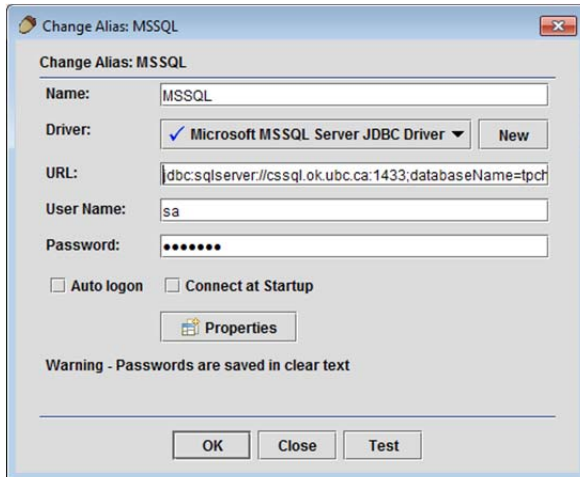
- 4) Copy the **unityjdbc.jar** into the **squirrel/lib** directory or **JAVA_HOME/jre/lib/ext** directory.

- 5) For any other JDBC drivers used (say the driver for MySQL), they must be in the **squirrel/lib** directory or **JAVA_HOME/jre/lib/ext** directory as well.
- 6) Start Squirrel. The multisource plugin should be visible in the plugin list.
- 7) Register the UnityJDBC driver in the driver list.



How It Works

- 1) Register data source aliases as usual. Here we have created connections to a Microsoft SQL Server database, a MySQL database, an Oracle database, and a PostgreSQL database all containing the TPC-H benchmark schema. Note that any database with a JDBC driver is supported including those accessible using the JDBC-ODBC bridge.



Change Alias: MSSQL

Name: MSSQL

Driver: ☒ Microsoft MSSQL Server JDBC Driver New

URL: jdbc:sqlserver://cssql.ok.ubc.ca:1433;databaseName=tpch

User Name: sa

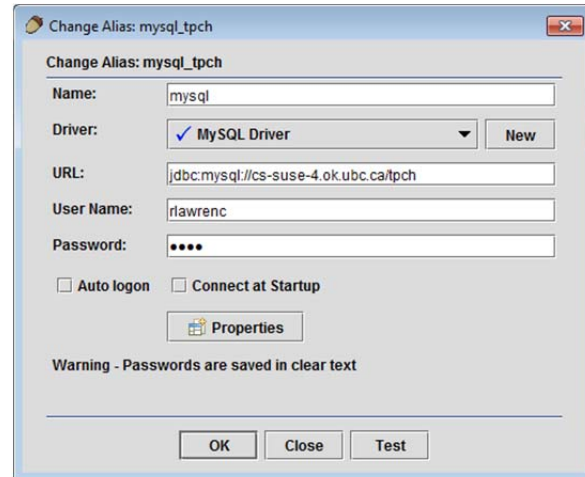
Password:

☐ Auto logon ☐ Connect at Startup

Properties

Warning - Passwords are saved in clear text

OK Close Test



Change Alias: mysql_tpch

Name: mysql

Driver: ☒ MySQL Driver New

URL: jdbc:mysql://cs-suse-4.ok.ubc.ca/tpch

User Name: rlawrenc

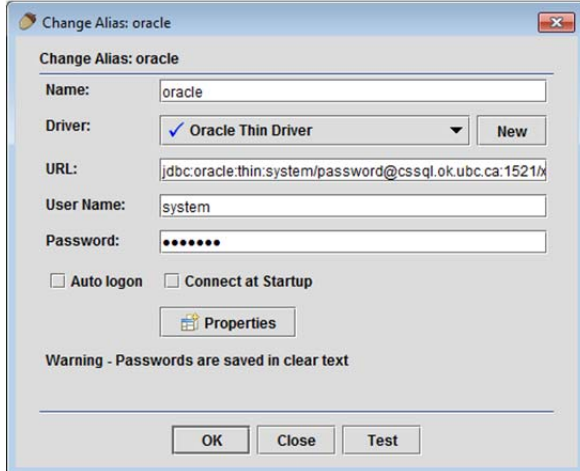
Password:

☐ Auto logon ☐ Connect at Startup

Properties

Warning - Passwords are saved in clear text

OK Close Test



Change Alias: oracle

Name: oracle

Driver: ☒ Oracle Thin Driver New

URL: jdbc:oracle:thin:system/password@cssql.ok.ubc.ca:1521/x

User Name: system

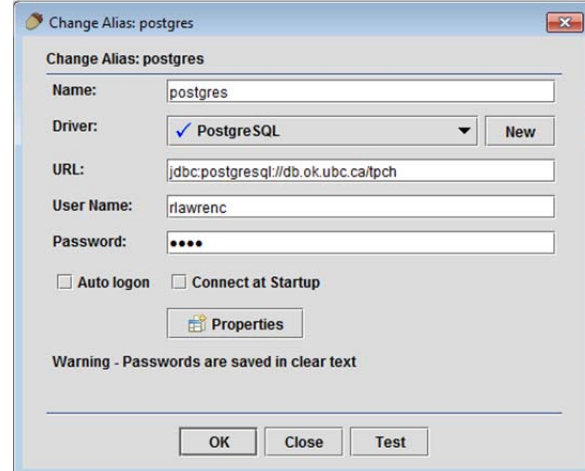
Password:

☐ Auto logon ☐ Connect at Startup

Properties

Warning - Passwords are saved in clear text

OK Close Test



Change Alias: postgres

Name: postgres

Driver: ☒ PostgreSQL New

URL: jdbc:postgresql://db.ok.ubc.ca/tpch

User Name: rlawrenc

Password:

☐ Auto logon ☐ Connect at Startup

Properties

Warning - Passwords are saved in clear text

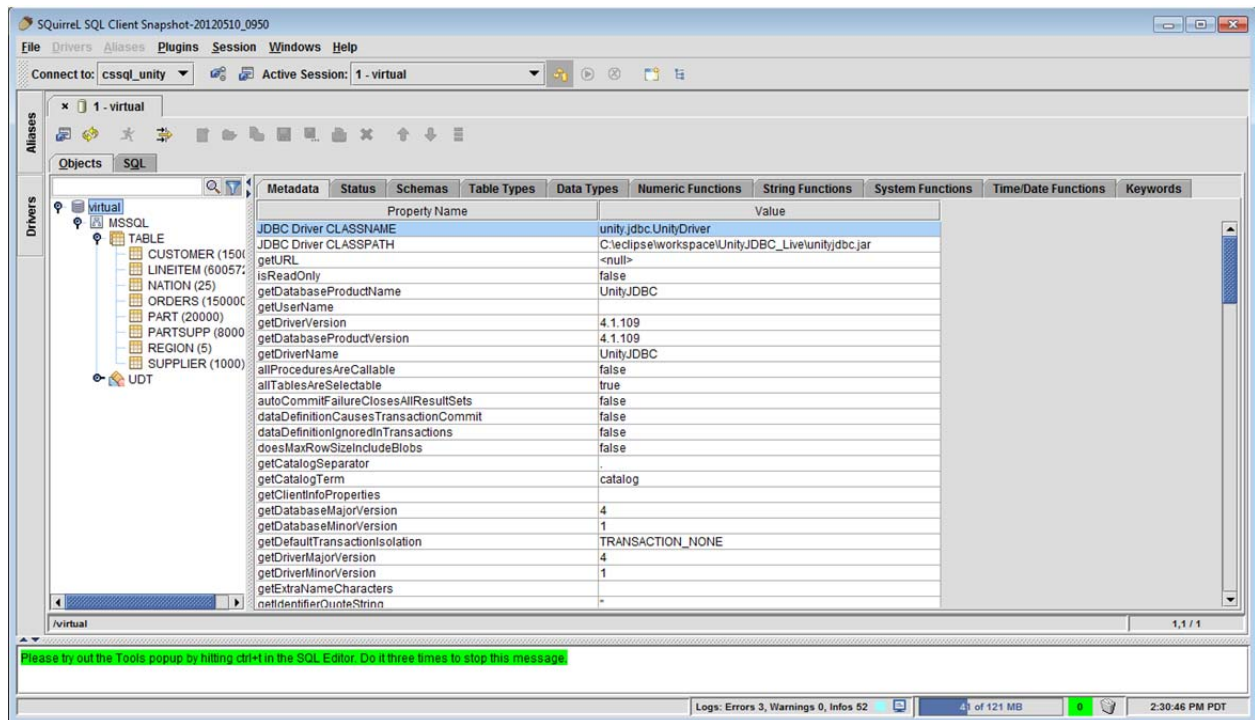
OK Close Test

-
- Add Alias**
- Name:
- Driver: ☒ UnityJDBC
- URL:
- User Name:
- Password:
- ☐ Auto logon ☐ Connect at Startup
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- Warning - Passwords are saved in clear text
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- Before add MSSQL source:**

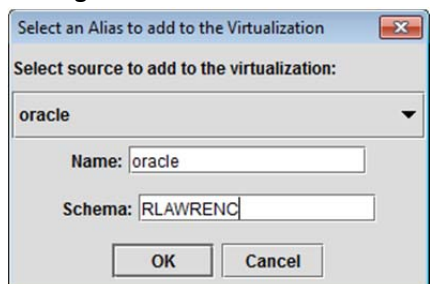


After add Microsoft source. Tables of MSSQL sources are visible in object tree view.

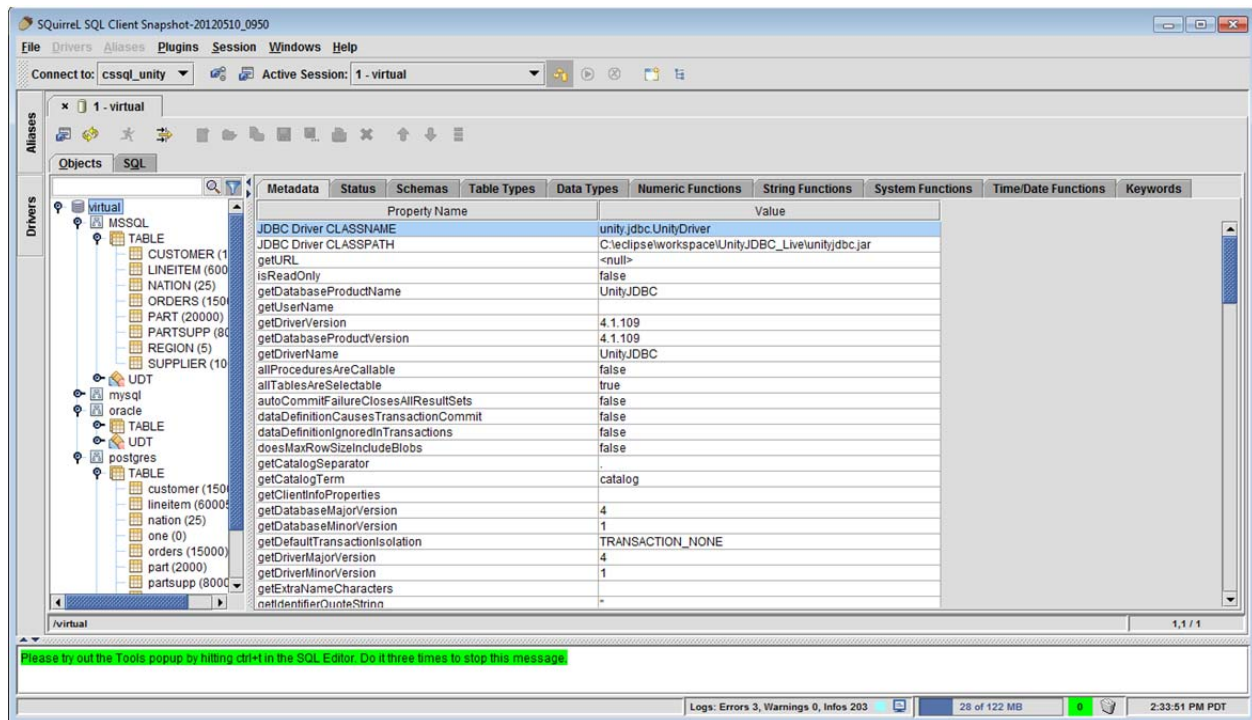


- 4) User can add as many sources as they wish. You can also rename the source in the virtual view. It does not have to be the same as the alias name used by SquirrelL. When adding Oracle sources, make sure to specify a schema so that system tables and tables from all schemas are not extracted.

Adding an Oracle Source with a Schema

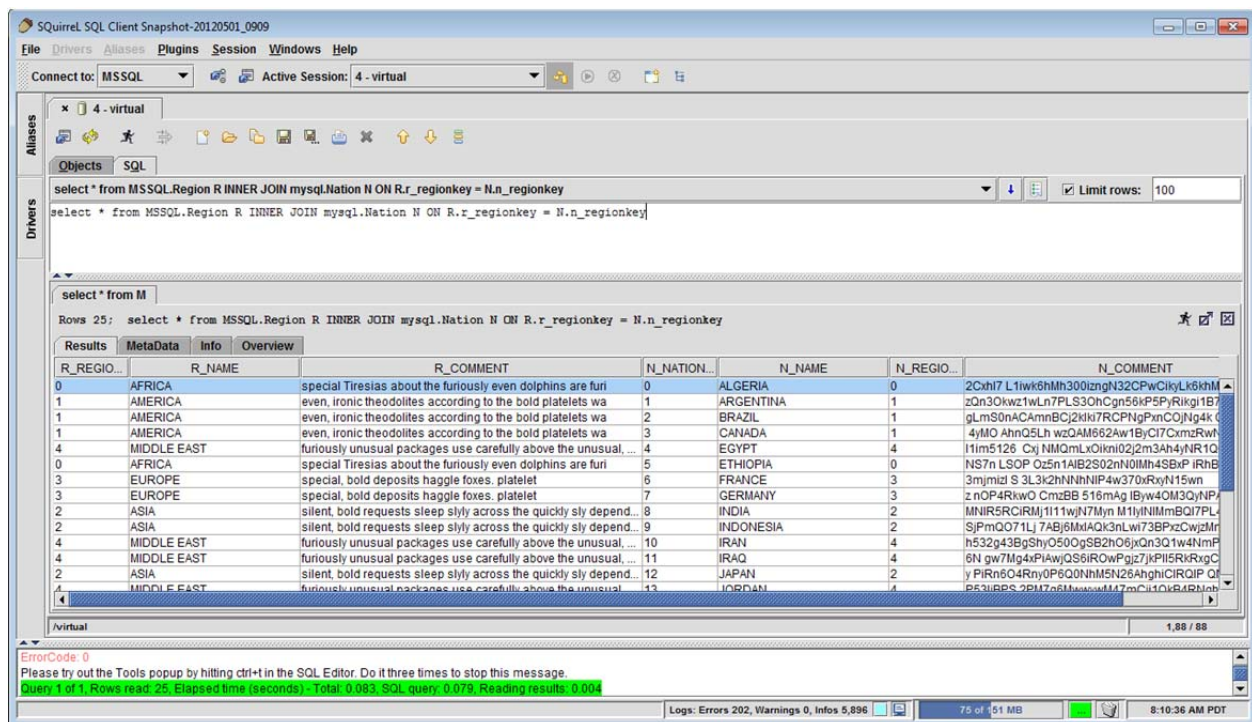


Object Tree View with all Four Sources Added



5) The user can execute an SQL query that spans multiple sources and get a single result. The virtualization is transparent to the user and SquirrelL.

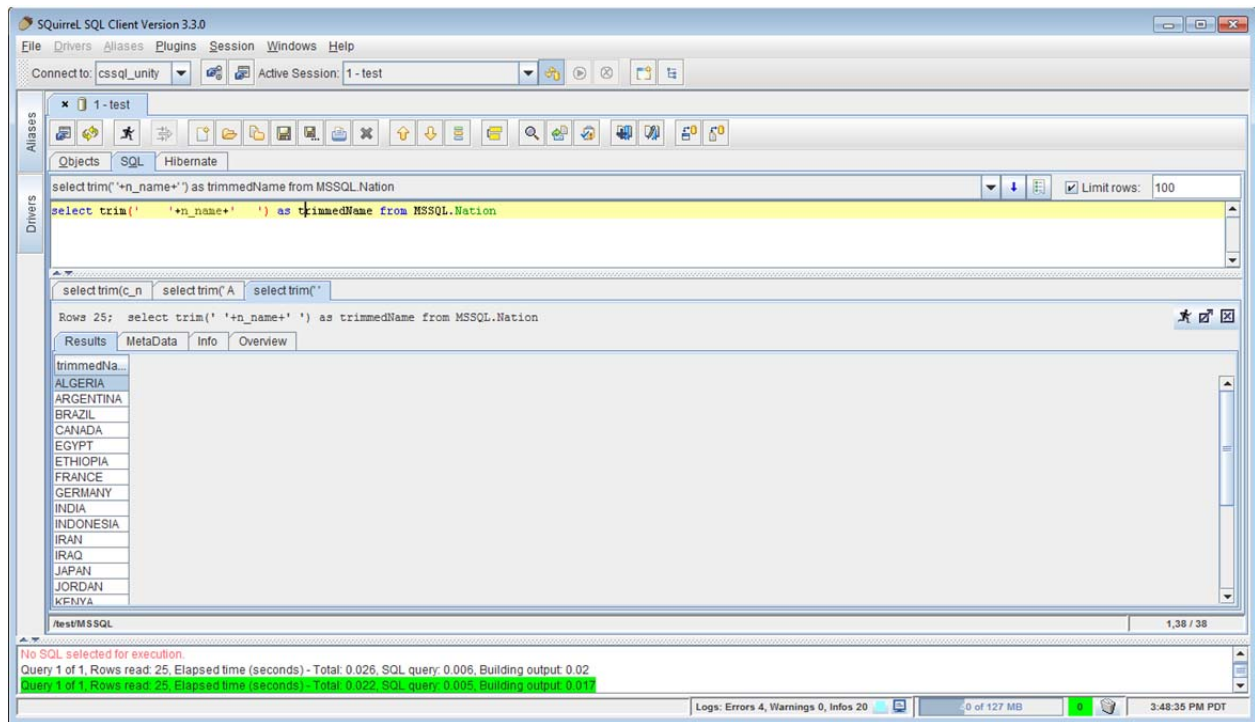
Join across two data sources.



A Translation Example

The UnityJDBC driver used to perform the virtualization will also translate functions that are not implemented by certain sources. For example, MSSQL does not support TRIM(), but you can do the same result using RTRIM(LTRIM()). Unity will automatically translate a TRIM() function specified in a MSSQL query to the correct syntax supported by the database.

Example TRIM() Translation for MSSQL



This translation is supported for common databases and can be freely extended by user-defined functions and translations for each database dialect.

Plugin Limits

The plugin source code, like all of Squirrel, is released under the GNU Lesser General Public License. The UnityJDBC virtualization driver is released under a commercial license. However, the UnityJDBC driver included in the plugin is fully functioning with no time limits allowing an unlimited number of sources and queries. The only limitation is the size of the result set is limited to the first 100 rows. (Note there is no limit on the number of rows extracted from each source. So `select count(*) from table` with a 1 million row table is fine as it only returns one result row.) Use `LIMIT 100` to get the first 100 results of a query.

For More Information and Technical Support Contact:

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